

Conservation / Sustainable Design

Heritage Challenges
in Historic Urban Landscapes

VIII EAAE CONSERVATION
NETWORK WORKSHOP



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This book presents the papers
written by 43 participants following
the 8th Workshop CONSERVATION/
SUSTAINABLE DESIGN organized
by the Conservation Network of the
European Association for
Architectural Education and the
UNESCO Chair “Heritage, Cities and
Landscapes. Sustainable
Management, Conservation,
Planning and Design”.

The workshop was hosted in the
Faculty of Architecture of the
University of Porto between 21st
and 24th of September 2022 and was
attended by 49 participants from
23 Universities, representing 9
countries: Portugal, Italy, Romania,
Spain, Ireland, United Kingdom,
Brazil, Belgium and Montenegro.

The views and opinions expressed
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The present-day context demands sustainable design practices by preserving and enhancing pre-existing features. This contextual approach is pursued by Álvaro Siza's designs for the Historic Centre of Porto, from 1968 to 2000, recognising Fernando Távora's lessons on the intervention in the historic city drawn from the "Study of the Urban Renewal of Barredo" (CMP 1969).

During this period, Siza presented two unbuilt proposals for Ponte Avenue, aimed at solving the urban void created by demolitions in the 1940s. These demolitions were carried out as part of a sanitisation policy influenced by earlier proposals by architects such as Marcello Piacentini in 1938 and Giovanni Muzzio in 1940, along with a political-ideological strategy promoted by the dictatorial regime to monumentalise the Cathedral. This vision is partially sustained in Siza's 1968 proposal, commissioned for the eastern side of the avenue. In contrast, Siza's design in the 2000s, which aimed for a contemporary morpho-typological reconstruction of the old fabric, focused on healing urban scars. The three decade-long span between Siza's designs reflects the evolving perspectives in spatial planning and preservation in pre-existing built contexts.

Moreover, in the 1970s, Álvaro Siza was actively engaged in several projects within the Historic Centre of Porto, including a collaboration with the Commission for Urban Renewal of the Ribeira/Barredo Area (CRUARB), for the intervention of two buildings in Reboleira Street (1977). Additionally, in the Lada neighbourhood, situated in the Ribeira district, Siza aimed to revitalise a deteriorated area through a combination of renovation and new construction (1976). These designs demonstrate Álvaro Siza's respect for authenticity and cultural values while providing valuable insights into sustainable intervention, balancing preservation and contemporary creation.



FIG.1 View of the Historic Centre of Porto, as seen from the Luiz I Bridge, 2023 (Tiago Trindade Cruz).

INTRODUCTION

The complexity of the historic urban landscape of Porto, resulting from the centuries-old layering of tangible and intangible values over a challenging geography, is defined by sharp topography with rough granite stone. Álvaro Siza's designs have met complex challenges due to Porto's distinctive qualities expressing a "non-conformist" character (Fleck 1995: 10). Hence, the reflexive approach is evident in the abundance of interpretive sketches by Siza, documenting designs within the historic city.

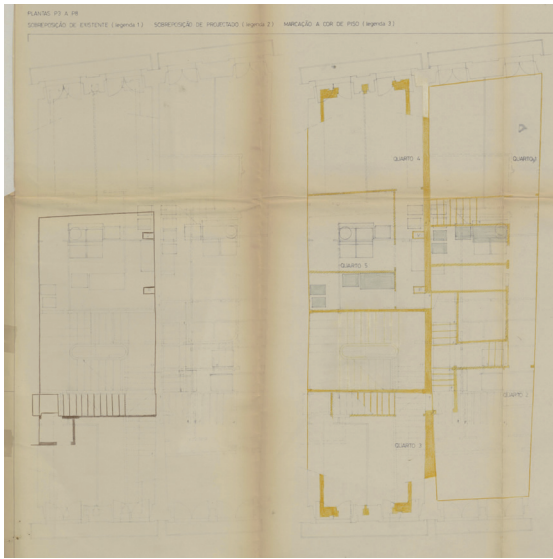
Siza's work has been broadly studied in hundreds of monographs, chapters, journal articles and dissertations. Some authors have studied his interventions in the historic centre of Porto, which are mainly focused on his designs for Ponte Avenue (Barata 2009; Besteiro 2012; Coelho 2001 and Ferreira 2012). However, very few have delved deeper into his projects for the historic centre in the 1970s, namely for Largo Lada neighbourhood (1976), which provide interesting reflections on mobility and accessibility. Furthermore, a knowledge gap remains on Siza's collaborations with the Commission for Urban Renewal of the Ribeira/Barredo Area (CRUARB) namely by intervening in two buildings on Reboleira Street.

This article thus aims to provide new perspectives on Álvaro Siza's work by examining three designs for interventions in the pre-existing context of the Historic Centre of Porto (FIG. 1) – Ponte Avenue, Lada Neighbourhood and Reboleira Street. These case studies cover a wide range of scales and scopes, providing valuable insights on Siza's principles and methods and showing the evolution of his approaches over time.

METHODOLOGY

The research methodology relies on the cross-analysis of diverse sources, supported by an exhaustive examination of relevant literature and archival materials, including previously unpublished documents.

Archive research was conducted mainly at the Historical Archive of Porto – Casa do Infante and at the Canadian Centre for Architecture (Álvaro Siza Fonds). Additional sources consulted included audiovisual media and written press. Assuming that heritage intervention design involves a complex process that ranges from the prior study of pre-existence to the material execution of the project, archival research focuses not only on the final drawings but also the whole design process. Thus, the written documentation consulted includes correspondence, descriptive reports, budgets, and constructive specifications.



On the other hand, graphic contents include photographs, models, sketches and project drawings (plans, elevations, sections, as well as construction details), offering a deeper understanding of technical aspects that have been instrumental in examining the various aspects and details of the proposal (FIGG. 2-3).

In addition, since most of the case studies presented in this paper have not been built, it was essential to understand the public discussion they generated. In the case of Ponte Avenue, both proposals (1968 and 2000) received widespread media coverage (namely articles and chronicles in newspapers and magazines) also involving conferences and exhibitions.

The analysis of bibliographic and archive documents has been completed by on-site observation, interpretation and documentation of the current state of the study areas through photographic surveys and drawings.

FIGG. 2-3
 Plots 191 and 192 (P3 and general overlay up to P8), scale 1/50, details. Barredo Commissariat, Porto. Drawing by Álvaro Siza. Historical Archive of Porto (GUIA-08-2007-938; p 152/3).

HISTORIC CENTRE OF PORTO (HCP): GENERAL CONTEXT
 — THE BASIS FOR THE RENOVATION
 OF THE HCP: THE ERUB BY FERNANDO TÁVORA

Porto has a rich history in heritage safeguarding, which, according to Ferreira and Silva (2019: 419), has been integrated into urban development strategies. Regarding conservation/sustainable design, the Management Plan of the Historic Centre of Porto (CMP 2021) acknowledges four distinct phases of urban regeneration over the past fifty years. These phases range from the demolition-based regeneration policy (i) to the current emphasis on comprehensive conservation,

encompassing housing, commerce, services, hotels, and local accommodations (iv). The turning point came with the 1974 revolution, which led to major political, economic and social changes, overcoming the public health policies and leading to the relocation of families residing in dilapidated buildings (ii). From the 1980s to the end of the century, urban revitalisation efforts were focused on rehabilitating buildings, improving public spaces, expanding social housing, and enhancing community facilities (iii). These initiatives aimed to preserve architectural heritage, improve residents' quality of life, foster social inclusion, and create sustainable communities.

Particularly noteworthy is the “Estudo de Renovação Urbana do Barredo” [Urban Renewal Study for Barredo] (ERUB) (CMP 1969). This study provided an innovative approach to integrated urban rehabilitation, advancing with a multidisciplinary strategy, focusing on the social dimension, and extending heritage values to current buildings, in an “articulation between architecture and man, based on the relationship between the public and the private” (Moniz, Correia and Gonçalves 2014: 320). It was coordinated by Fernando Távora and developed under the Directorate of Housing Services – Housing Construction Department of the Municipal Council of Porto, from 1968 to 1969. This document includes a pilot plan for a sector due to the urgent need for renovation. However, despite the limited extent of the study, it aimed for a broad perspective:

It is a global operation that affects the heart and flesh of men, their physical, spiritual and economic life, the habits and life of a community that thinks about flowers and infrastructures, that touches the houses and the streets, that does not forget the detail of the lamp while conceiving the whole as a landscape value inserted in an urban context. (Távora 1969).

The work was based on previous research conducted by students of the Social Service Institute in 1963 and 1968, focusing on the socio-economic framework, and by architecture students at the School of Fine Arts of Porto in 1967/1968, which focused on the material/physical framework. The “urban surveys” aimed to link architectural education with practical implementation. They offered a theoretical foundation for comprehending and tackling the social and physical dimensions of urban development (Moniz, Correia and Gonçalves 2014). Fourteen blocks were identified, of which two were selected as pilot studies (Q.I and Q.III). Although not directly implemented in practice, this study had a significant influence on the subsequent work of the CRUARB from 1974 onwards, becoming a role model for later interventions in national historic centres: “... a pioneering study of the methodologies envisaged in the concept, still contemporary today, of ‘Integrated Urban Rehabilitation’” (Aguiar 2010: 226). Contrary to a previous way of thinking, based on demolitions, the new approach promoted a contextualist reading, in line with the review of heritage included in the Venice Charter (1964), “... proposing a safeguard based on the cautious physical recovery of the built, but closely linked to objective responses to satisfy the needs of comfort, hygiene, quality of life of the human community that lived there” (Aguiar 2010: 226), balancing the vision of the whole with that of detail and the preservation of values while responding to contemporary needs (Ferreira 2018: 20).

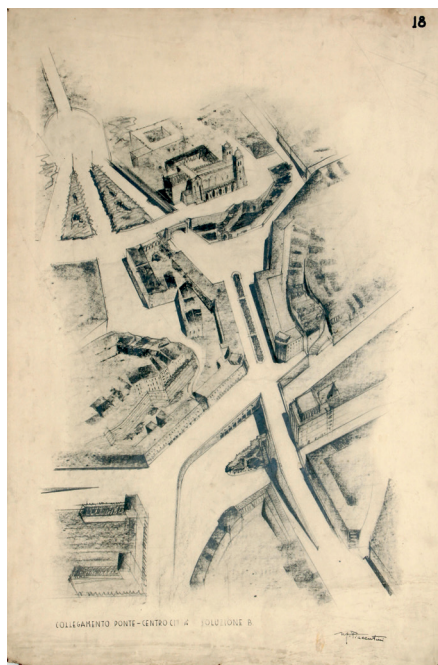
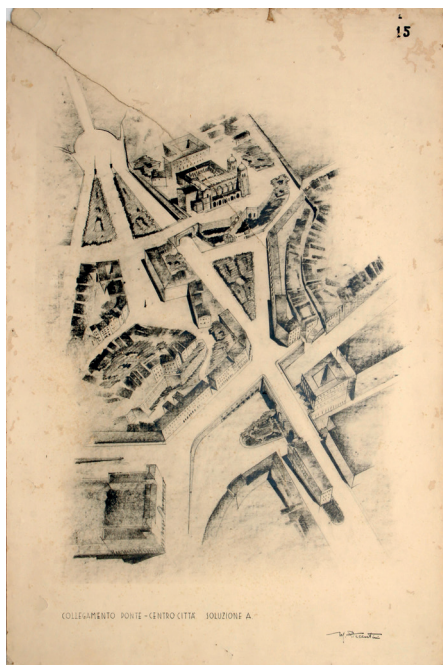
The challenge was to “continue, ... innovating” (ERUB: 33) by implementing a “third way” (Távora 1992: 102).

Távora’s study for Barredo proposed an alternative to the demolitions considered in the 1962 Master Plan. CRUARB adopted this methodology, which allowed for the future inscription of the Historic Centre of Porto on the World Heritage List in 1996.

— PONTE AVENUE: AN URBAN SCAR

Álvaro Siza’s proposals for Ponte Avenue are framed among the dozens of urbanistic studies developed for the area in response to the urban void resulting from the demolitions as a result of public health policy in the 1940s, which lacked a comprehensive plan. The opening of Ponte Avenue followed the construction of the Luiz I Bridge, inaugurated in 1886, connecting the cities of Porto and Vila Nova de Gaia. Moreover, the arrival of the train to the São Bento Station (that replaced the old convent of São Bento da Avé-Maria), called for the opening of a new urban axis towards the bridge, despite the existence of a rocky massif between the two elements. This new connection also contributed to the transfer of the city centre, from the marginal strip to the “Praça Nova”. However, the traffic problem in Almeida Garrett Place was aggravated as it began to serve as a crossroads between the north-south and east-west axes of the city. Naturally, this issue also came to be a point of analysis, reflecting on the vehicle traffic on this road or at the entry point to a possible parking area. Numerous proposals were formulated, including those by Barry Parker (1867-1947), in 1916, Marcello Piacentini (1881-1960), in 1938, and Giovanni Muzzio (1893-1982), in 1940.

Against the backdrop of the centenary celebrations of 1940, the “Quadro de Projecto de Melhoramentos do Largo da Sé” [Improvement Design Plan for the Cathedral Square] was put forward in 1939, with an urgent need to demolish several blocks in the Corpo da Guarda Hill and in the terrace surrounding the Cathedral, for reasons linked to sanitation, new accessibility and isolation of the Cathedral, the Episcopal Palace — at the time the provisional seat of municipal power — and the Guerra Junqueiro House-Museum. Coordinated by Arménio Losa (1908-1988), this plan resulted in “an urbanising gesture that creates accesses and implants symbolic furnishings” (Costa 2001: 73). Emerging in the wake of the restoration intervention of the Cathedral itself by the General Directorate for National Buildings and Monuments, which had been ongoing since 1929, it included works and demolitions, aimed at relieving the two monumental buildings of the city and to create the Cathedral Terrace, opening “a geometrized and ‘clean’ Terrace involving the Cathedral and the Episcopal Palace” (Costa 2001: 73).



FIGG. 4-5
 Perspective of the urbanisation study of the Corpo da Guarda Hill area, for the connection between the Luíz I Bridge and the city centre, solution a (left) and b (right). Drawings by Marcello Piacentini. Historical Archive of Porto.

This was followed, as mentioned above, by the demolitions in the Cathedral neighbourhood, in order to tear the avenue from the bridge.

Despite the potentially transformative character of this action, it took place without such procedures “corresponding to an integrated project of urban renewal and without the accompaniment of archaeological actions and registration of what was demolished” (Carvalho 1990: 94).

The site’s significance led to invitations being extended to Marcello Piacentini and Giovanni Muzzio after the demolitions had started, who drew up proposals for the site in 1938 and 1940, respectively (FIGG. 4-6). Multiple versions were proposed in both cases, suggesting extensive demolition campaigns in the Cathedral neighbourhood. Meanwhile, Ponte Avenue’s temporary roadway was opened to the public in 1954. Later proposals by Fernando Távora (1955) and Luís Cunha (1959) were analysed by Siza in the Design Report (1968) for his own intervention. These proposals (FIG. 7) stood out from previous studies and provided the foundation for the current understanding of the problem (Siza 1968), even though they followed different guidelines in certain respects.

For Siza, Távora’s proposal was remarkable for its emphasis on the Avenue and the refusal to construct buildings along its margins. Siza noted that Távora’s proposal had the most interesting landscape treatment and did not foresee significant construction volume (Siza *apud* Santos 1991). On the other hand, Luís Cunha’s proposal, while sharing the same premise, suggested an axial building in a z-shape that would connect the tops of the blocks and house offices and commercial areas in the central zone. Although this proposal had the potential for return on investment, Siza considered it would result in architecture that was “severely constrained” (Siza 1968). Távora described his proposal as focusing on determining how to treat the avenue’s marginal strips and

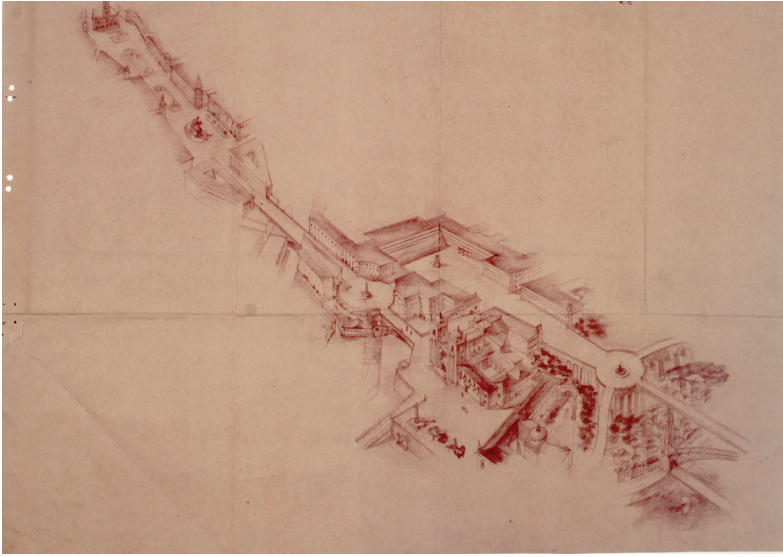


FIG. 6 Perspective of the Luíz I Bridge connection with the city centre. Drawings by Giovanni Muzio. Historical Archive of Porto.

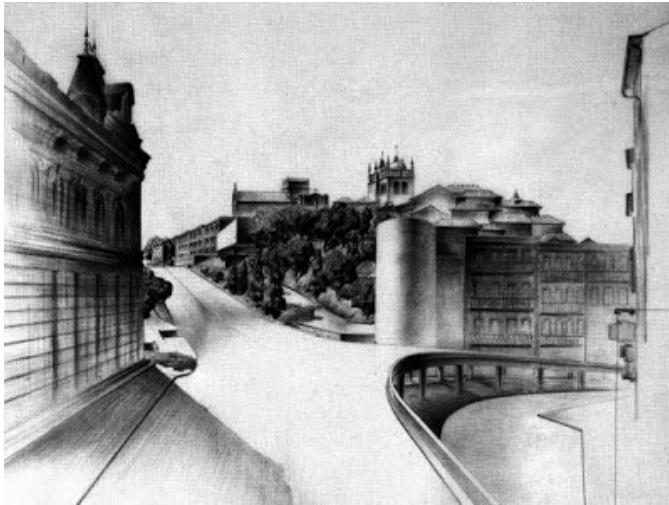


FIG. 7 Távora's plan for Ponte Avenue. Historical Archive of Porto.

trimmings. Following his analysis, Siza came to the conclusion that all the proposals were rejected because they obstructed the view of the cathedral, which was against the criteria of the General Directorate for National Buildings and Monuments based in Lisbon (Siza *apud* Santos 1991).

In the context of the 1962 Master Plan, outlined by Robert Auzelle (1913-1983), several solutions were presented. Siza stated that “... the Auzelle Plan proposed a dense area of viaducts that served no purpose because they funnelled into the tops of the avenue and were also poorly accepted by the National Monuments” (Siza *apud* Santos 1991). Following this line of reasoning, according to Manuel Mendes, Siza’s project for an Office Building is one of the projects that materialise the criticism of the Auzelle Plan (1962), by demonstrating “the idea of a town constructed on superpositions, bringing the old and the new into harmony, an organic system of exchanges and shifts between the cultural material wealth of a particular tradition and the contributions

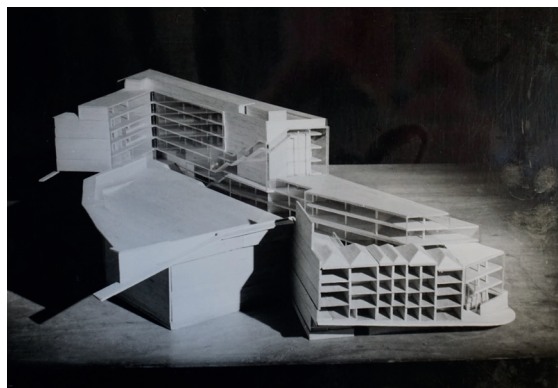
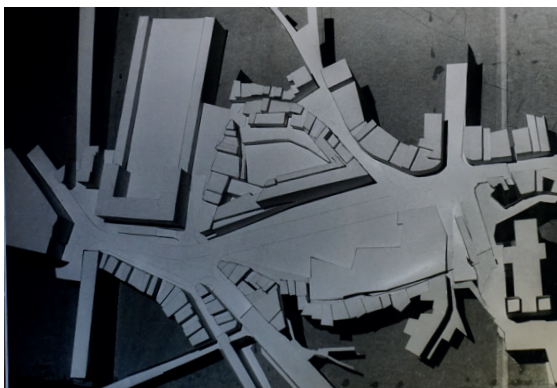
that come from outside it” (Mendes 1987: 71), in contrast with a “plan of such rigid and perverse rationalism, bureaucratic, an academic stereotype of the great metropolis” (Mendes 1987: 71).

ÁLVARO SIZA’S INTERVENTIONS IN THE
HISTORIC CENTRE OF PORTO
— PONTE AVENUE 1968 PROPOSAL

The first proposal Siza designed was an office building for the east side of the avenue, as suggested by Robert Auzelle (Azevedo 1990). However, it evolved into a comprehensive spatial planning concept (FIGG. 8-9). In this early stage, Siza also addressed the requirement of preserving the lateral visibility of the Cathedral (Siza 2001a), emphasising its importance as a heritage site (Costa and Figueira 2001).

Siza’s preliminary design, presented in October 1968, includes a covered parking lot (four floors) and a commercial and office area. The plan is based on a continuous sheltered pedestrian path connecting Almeida Garrett Place to the vicinity of the Cathedral Hill and Luiz I Bridge, allowing the building to be crossed obliquely. After the proposal was approved, the execution project moved forward. At the time, the Municipal Council of Porto intended to sell the land with the completed project. The buyer would have to fully comply with it, “to ensure the coherence and quality that the characteristics of the site demanded” (Siza 1975). Considering the scale and urban impact of the intervention, there is a proposal for a new longitudinal profile for the avenue and principles for the organisation of the surrounding area. Siza took into account the ongoing study by the Spatial Planning Department for Ponte Avenue, especially concerning its transformation into a one-way street. This analysis of the traffic patterns informs guidelines for traffic regulation and the placement of parking lots. Additionally, the connection with Escura Street is enhanced through the removal of the Saraiva de Carvalho viaduct and the redesign of the wall supporting the Vímara Peres monument.

According to Álvaro Siza, the planned eleven-floor building incorporates a concrete structure covered entirely by glazed metal frames. The frames are fixed and made of treated glass, either single or double-glazed and are equipped with interior blinds or special curtains. Additionally, the building features a comprehensive air conditioning system, with independent control at each vent to address the climatic conditions of the city (Siza 1975). The glazed exterior allows for the reflection of the old houses (Azevedo 1990), while the design of the elevations varies based on the scale and context of the block. Different openings are proposed for Mouzinho da Silveira Street and Ponte Avenue to suit their respective importance (Azevedo 1990).



The project had to take into consideration the high costs of expropriation and the dismantling of the existing rocky massif (Siza 1975). Siza proposes that the structure, roofs, and a portion of the exterior cladding of the expropriated houses be retained (Siza 1975). The vertical communication within the building is divided into two separate sets: one for the units to be restored on the north side, and another for the new construction and the restored units on the south side (Siza 1968).

The project did not proceed, and on 15 June 1988, the newspaper “O Comércio do Porto” reported that CRUARB was involved in the urbanisation of the scarp of Ponte Avenue, with 27 projects outlined for the site. Later on, however, Siza received a new invitation, which resulted in his second proposal for the site.

FIGG. 8-9
Siza’s first plan for Ponte Avenue, 1968. Historical Archive of Porto (GUIA-08-2007-938).

— PONTE AVENUE 2000 PROPOSAL

In this new design, Siza demonstrates a revised understanding of the role of the monuments in the city. The approach no longer advocates for demolitions to “liberate” a monument, as this action often compromises its character and deprives the urban space of its meaning (Siza 2000). In accordance, he aligns his intervention with Távora’s project for the Casa dos 24 (2002) in the Cathedral neighbourhood. “The design for the Casa dos 24, by Professor Fernando Távora, ... embodies this new concept [of complementarity between monument and urban fabric] and can, in this sense, be considered the foundation stone of the Ponte Avenue design now being presented” (Siza 2001b).

In his second proposal for Ponte Avenue (FIG. 10), Siza kept the memory of the demolitions, focusing on the preservation of the mass of rock. On the west side of the avenue, over a total gross area of about 29 thousand square metres, Siza proposed the construction of a car park (13,000 square metres, with capacity for 370 vehicles), housing (48 units), commerce, and a city museum. Perceptions and constraints

FIG. 10 Siza's second plan for Ponte Avenue, 2000. Punkto.

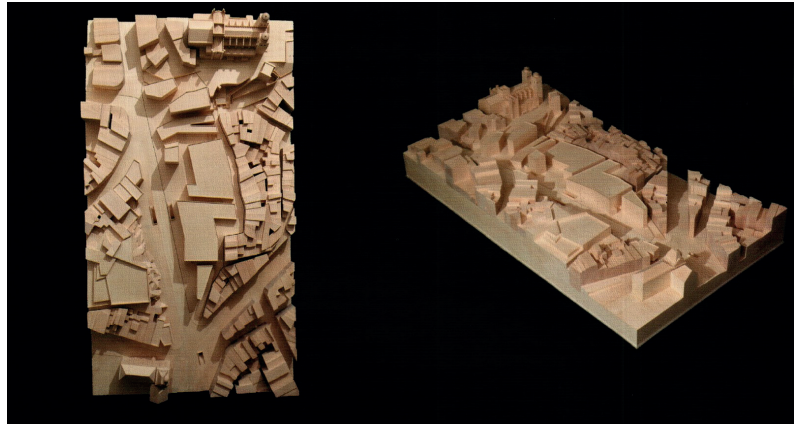


FIG. 11 Ponte Avenue, looking North towards the city centre and São Bento Station, 2023 (Tiago Trindade Cruz).

regarding the city have evolved (Besteiro 2012: 17). Siza recognizes this change and emphasises the newfound understanding of the interplay between monuments and the urban fabric. Preservation now prioritises the maintenance of the diverse historical elements (Siza 2000). The avenue was accepted as a “rip [that is] impossible to close” (Seara 2011: 12), exhibiting the scarp as evidence of the transformations that occurred in the place.

According to Siza, referring to the rocky outcrop, “time has already made them beautiful – there is patina, there is vegetation in the interstices of the rocks – and it seems to me, at this moment, that this outcrop should be left as an interesting aspect and as a mark of history, because this opening is part of the history of Porto and is a great gesture with consequences, in some aspects difficult, but that marked the city and that should be left just like the idea to which the gesture corresponded” (Siza *apud* Besteiro 2012: 35). On the other hand, the location of the new metro stations is also one of the conditioning factors of the project. With the closure of the upper level of the Luíz I Bridge to car traffic, the Avenue will only lead traffic to and from Batalha, freeing itself from the previous intersection (FIG. 11). This also justifies the placement of the entrance to the parking lot where it turns into Saraiva de Carvalho Street.

The buildings are connected underground, despite appearing as separate volumes. Their design emphasises integration within the context, establishing connections and maintaining appropriate scales. The approach to the Cathedral from Ponte Avenue is highlighted, with two mixed-use volumes (residential and commercial) framing diagonal access leading to the Galilee. Additionally, the connection with Corpo da Guarda Street is promoted, enhancing the connection with Ponte Avenue. The museum volume, which interfaces with this street, includes commercial spaces that activate the public realm, serving as a functional replacement for the old São Sebastião market, slated for demolition. On the east side of the avenue, next to São Bento Station, a volume encloses the nineteenth-century buildings. Another volume completes the intervention proposal near the entrance to Chã Street. Both consist of four floors, with three dedicated to housing and one for commercial use, facing the street.

Largo da Lada is defined by an intricate and demanding topography, which has historically been negotiated by stairs, ramps, and archways (FIG. 12). Within this complex geographical context and facing a situation of both physical and social decay, Álvaro Siza outlines a proposal that comprehensively interprets the essence of the place, transcending individual monuments and buildings. Following Távora's approach in the ERUB, the proposal encompasses the entirety of the historic quarters:

The reconstruction of these relationships and movements, and the rebuild of visual relationships, not only referring to the neighbouring buildings but to the entire landscape, to Ribeira Place with the architecture of Nasoni, to the rammed earth floors and the ashlar walls, constitutes the proposed basis for defining the design. (Siza 1976a).

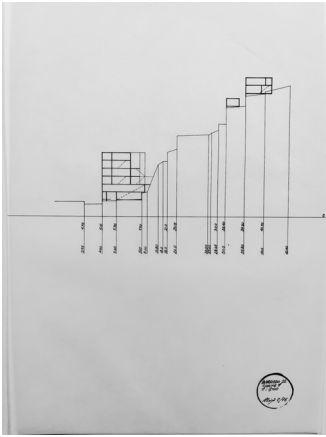
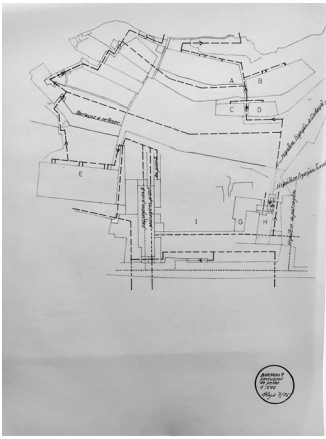
The study involved collaboration between the CRUARB, the consulting architect and the designers to evaluate the plot's potential. The project was driven by a sense of responsibility towards the marginalised and exploited population, with the key objective of improving the living conditions of the residents (Siza 1976a). Siza's proposal aimed at regenerating a deteriorated area through a combination of renovation and new construction. The Preliminary Study for Largo da Lada (FIGG. 13-14) outlined the initial approach, acknowledging the absence of a clear plan and aligning with the principles of the Barredo Operation.

Despite presenting an open programme for new constructions, it started with defined objectives, namely the inclusion of areas for housing (with various typologies, from one bedroom to five bedrooms) and for social or commercial equipment. The latter should be thought of in terms of future appropriation by the population, in its progressive organisation and Association. Following the methodology of the Preliminary Study for Lada Neighbourhood, which sought to identify the positive aspects of living in Barredo, there was an attempt to retain the experience of the Social Work Sector. This was in line with the designers' point of view on the equipment distribution, which proposed a continuous layout and incorporated areas for collective use, connected to the outdoor spaces (Siza 1976a). In the proposal for the total area to be built (4,130 sq m), there would be 2,500 sq m for housing and 1,630 sq m for equipment.

This study led to a descriptive map, instrumental in its approach. The proposal is thus accompanied by diagrams and sketches. In addition, photographs show the gradual demolition of the buildings on the hillside (at the beginning of the twentieth century), with the abandonment of the terraces and the interruption of the connecting path to the city centre. From this analysis, some facts emerge, such as the reduction of the height in the Lada Neighbourhood, in order to favour the interior ventilation of a densely occupied area. Furthermore, the basis for the proposal of housing construction on the platforms is still preserved, or the establishment of connections and paths. Regarding natural ventilation, the study sketches also show that the initial proposal of a continuous frontage in Lada Neighbourhood (set back from the wall) is gradually changing towards a lower density, bringing discontinuity (FIGG. 15-16).



FIG. 12 View of Lada Neighbourhood, located in the Ribeira District, as seen from the Luiz I Bridge, 2023 (Tiago Trindade Cruz).



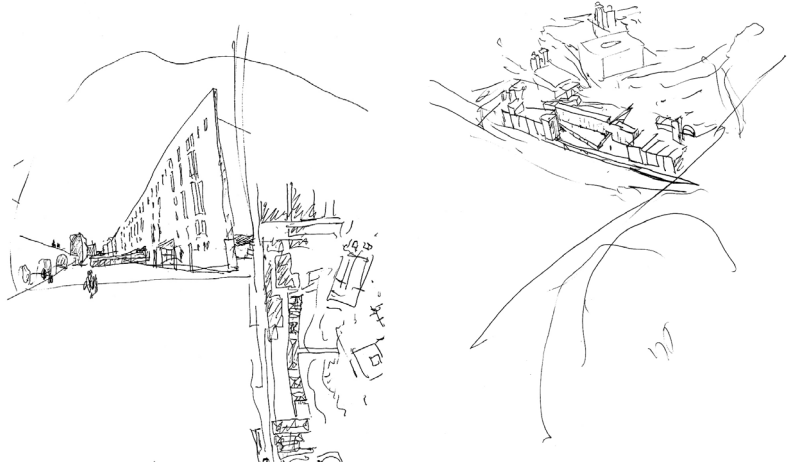
FIGG. 13-14
Lada Neighbourhood [Urban development plan for Lada Square and redevelopment of Barredo Quarter], Porto, Portugal, 1976. Álvaro Siza Fonds, Collection Centre Canadien d'Architecture/Canadian Centre for Architecture, Montréal. Images courtesy of José Miguel Rodrigues.

FIGG. 15-16
Sketch proposal for a building on Lada Neighbourhood, Porto, Portugal (left) and studies for Lada Neighbourhood (right). Sketches by Álvaro Siza, 1976 (Fleck 2001: 15; Siza 1994: 231).

Awareness of the marginalisation of the inhabitants has already been raised. In fact, the preliminary study for Lada Neighbourhood also starts with the premise of “... responding to the objective and effort of recovery and reintegration into the life of the city” (Siza 1976a). Seeking to overcome the physical segregation to which this part of the city had been subjected, the solution does not involve a volumetric and language replacement of what was destroyed, but makes use, however, of the pre-existing features as a memory and foundation of the work. On this point, Siza explains the architectural language to be proposed: “neither mimetic nor detached from the weight of the quality and age of this area of Porto” (Siza 1976a).

Concerning relationships and movements, the preliminary study aims to reorganise the Lada Neighbourhood and Barredo, showing particularly sensitivity to the repositioning of abandoned or closed links, to break the isolation and re-establish relationships. Given that the local population did not own vehicles, the study favoured pedestrian connections.

Among the proposals resulting from the study, the connection between the Barredo hillside and the Codeçal stairs is put forward. Regarding the architectural language, the proposal takes on a contemporary expression, rejecting pastiche. In a global reading, the intervention proposal represents, as Siza states, “... an approach to an urban design that intends to transcend the criteria of restoration or of physical elimination of the existing city” (Siza 1976d: 100).



Siza's intervention in two buildings of Reboleira Street is part of a plan implemented in the Historic Centre of Porto. It aligns with the principles and objectives established for the intervention project in Lada Neighbourhood, which emphasises a rigorous methodology involving a comprehensive study of the area.

To provide background for Siza's intervention, additional projects were examined (by António Madureira, Bernardo Ferrão, and Paula Silva), specifically through the work files documenting interventions in the Historic Centre from 1974 to 2000. These files were published by the Municipal Council of Porto in "Works carried out from 1974 to 2000" (2001) (designs conserved in Porto Historical Archive – Casa do Infante).

Similar to the intervention carried out in Lada Neighbourhood, Siza's proposal for Reboleira Street aligns with the spirit of the interventions conducted within the framework of the CRUARB programme (FIG. 17). Careful consideration was given to the analysis of the buildings and their typologies, aiming to preserve memories and elements of the structures. These architectural remnants were ingeniously incorporated as valuable design elements, serving as the foundation for the project.

Siza's intervention on buildings at numbers 191 and 192 in Reboleira Street (FIGG. 18-19) began with a thorough survey of their condition, including detailed elevations and cross-sections at a scale of 1/50. Based on these surveys, Siza created a general layout of the plans (P3 to P8). In his project, Siza employed a meticulous, analytical method, overlaying the different plans of the buildings (FIGG. 2-3). The buildings were already connected at the time of the intervention, so he focused on functional integration, proposing a passage in the lobby. The aim was to preserve as much as possible of the existing structure and the morpho-typology of the spaces, partitions, and finishings (FIG. 20).

In the intervention report, Siza states that "although the recovery of certain elements is sometimes expensive if considered in isolation, it avoids a scarcely foreseeable extension of the work, if not complete demolition, with the consequent loss of material and cultural values" (Siza 1976c).

One noteworthy aspect of this project is the attention given to the windows. The carpentry work, spanning 38 openings, ranges from simple restoration to complete replacement (FIG. 21). The project envisaged the use of wood from demolitions, sourced from the Barredo Commissariat. Existing fittings were either restored or replaced with matching elements identified in speciality shops. Brass metallic pieces were also introduced (Siza, 1976b). The intervention in the lobby of building no. 192 also included metalized iron walkways, steel grid flooring and iron pipe railings, as well as a metalized iron profile windowsill (FIG. 22). In the detailed drawings we find the "detail of slate slabs for façade cladding" (FIG. 23). The interior doors and respective frames were made of treated pine wood and pine plywood (1 cm thick), to be painted.



FIG. 17 Buildings with interventions by Álvaro Siza, located on Reboleira Street, with their façades overlooking the Douro River, along the Bacalhoeiros Wall, as seen from the Vila Nova de Gaia Riverside, 2023 (David Ordóñez-Castañón).

CONCLUSION

It is not enough not to demolish the Torre dos Clérigos, it is not enough not to demolish the Barredo. It is not necessary to destroy to transform. To transform it, it is necessary and indispensable not to destroy the city (Siza 1980).

This article highlights the lessons that can be drawn from Siza's proposals for the Historic Centre of Porto, encompassing a sustainable design perspective. By introducing a fresh perspective, this study elucidates the innovative methodologies and design approaches employed in Siza's interventions, spanning various stages from conceptualisation to construction and scales from individual buildings to spatial planning. Additionally, it offers a comprehensive analysis of lesser-explored interventions, particularly in Lada Neighbourhood and the parcels on Reboleira Street. Offering valuable insights into their significance and impact within a comprehensive and interconnected framework that embraces social and economic development while acknowledging urban heritage as a crucial social, cultural, and economic asset for city progression.

Between the two proposals – more than three decades separating the first and the last – allows us to follow the evolution of Siza's thinking. The initial plan (1968) focused on preserving the Cathedral's visibility and addressing the voids left by demolitions. In contrast, the second plan (2000) aimed to rebuild the old fabric from a contemporary perspective, with an emphasis on healing urban scars. Despite generating significant public debate, neither the 1968 nor the 2000 proposals were ever realised.

FIGG. 18-19
Buildings with interventions
by Álvaro Siza, located on Reboleira
Street, 2023 (David Ordóñez-
Castañón).



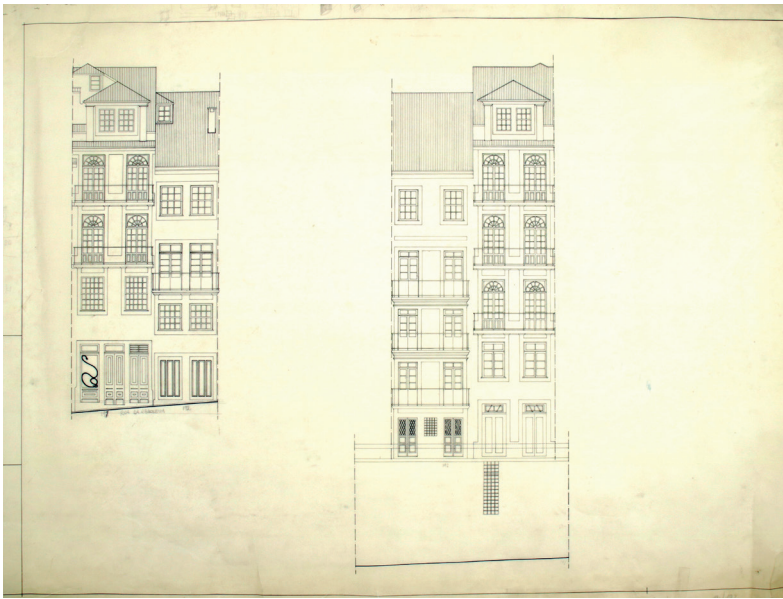


FIG. 20 Buildings no. 191 and no. 192 (façades). Barredo Commissariat, Porto. Drawing by Álvaro Siza. Historical Archive of Porto (GUIA-11-2007-ARM-F-30-PARC191192-003).

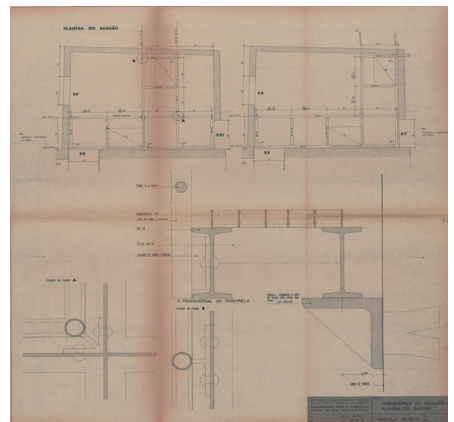
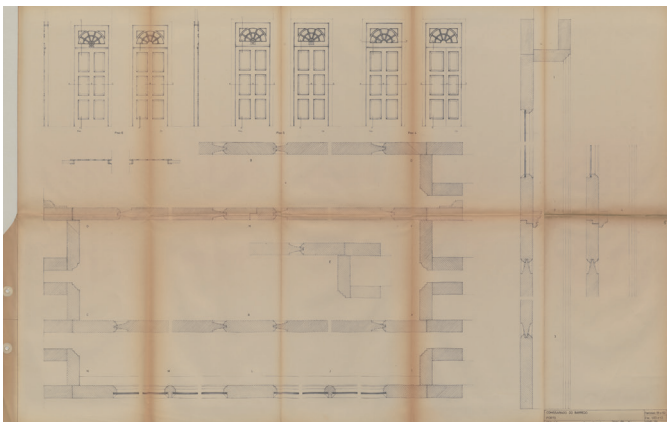


FIG. 21 Buildings no. 191 and no. 192 (interior frames), scale 1/20 and 1/2. Barredo Commissariat, Porto. Drawing by Álvaro Siza. Historical Archive of Porto (GUIA-08-2007-938; p 82).

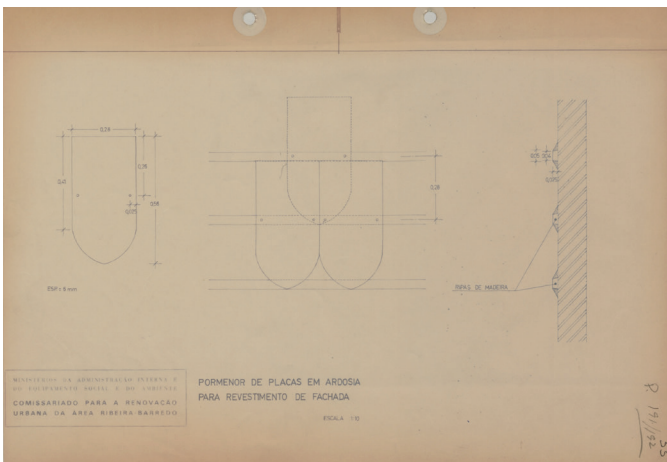


FIG. 22 Buildings no. 191 and no. 192 (details of the iron walkway), scale 1/20 and 1/1. Barredo Commissariat, Porto. Drawing by Álvaro Siza. Historical Archive of Porto (GUIA-08-2007-938; p 52).

FIG. 23 Buildings no. 191 and no. 192 (detail of slate slabs for façade cladding), scale 1/10. Barredo Commissariat, Porto. Historical Archive of Porto (GUIA-08-2007-938; p 55).

Additionally, the renovation of the buildings at no. 191 and no. 192 in Reboleira Street demonstrates in-depth knowledge and research conducted on the construction methods employed in Porto's bourgeois houses, with a strong emphasis on sustainability. This includes a meticulous analysis of materials, design principles and construction techniques, asserting the imperative for a precise and rigorous approach to intervention (Teixeira and Póvoas 2022). The preservation of the typomorphological matrix, the reuse of materials – notably the wood salvaged from the demolitions for the window frames – and the meticulous attention to construction details while preserving original solutions, combined with a subtle incorporation of modern elements, demonstrate a profound regard and respect for both material and cultural values (Siza 1976c).

In Lada Neighbourhood, Siza undertakes the dual task of preserving and regenerating urban continuities and the visual identity of the historic urban landscape, while placing a strong emphasis on sustainability and environmental consciousness. The architect carefully examines the intricate relationship between the existing structures and the proposed volumetric additions, emphasising the importance of maintaining the morphology and the architectural character of the historic area. Within this evolving setting, defined by its intricate and demanding topography, a range of solutions were implemented in the creation of staircases, ramps, and archways. The regeneration proposals for Lada involve a combination of renovation and new construction, guided by social considerations that are neither imitative nor detached from the quality and age of this specific area of Porto (Siza 1976a). These proposals respect the pre-existing elements and topography, while also preserving or establishing new paths and connections.

These cases represent a valuable contribution to the development of methodologies that support informed interventions, preserving identified values while enhancing functional performance and contemporary comfort levels (Ferreira 2018: 23). Overall, the discussion surrounding these interventions aims to create a shared design methodology employing a dynamic process that combines traditional techniques with available and future technical advancements (CMP 2021: 21). Hence, Álvaro Siza's projects for the Historic Centre of Porto (1968-2000) provide us with lessons on contextual design in historic areas by integrating pre-existing features (topography, morpho-typology, local materials) in the design proposals. They provide interesting solutions for contemporary intervention in historic contexts, while taking into account local community values and aspirations.

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