

# CONSERVATION OF 20<sup>TH</sup>-CENTURY ARCHITECTURE IN PORTUGAL.

## THE LESSON OF ÁLVARO SIZA

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### ABSTRACT

Álvaro Siza (1933-) has built an important architectural heritage recognized in Portugal and abroad, namely in prizes, publications, inventories<sup>1</sup>, listing processes<sup>2</sup>, or in the latest proposal by ICOMOS-Portugal for the inscription of a number of his works in the World Heritage List. In recent years, Siza has carried out conservation projects and works of several 20<sup>th</sup>-century buildings (mostly his former projects), namely at Boa Nova Tea House (1992; 2012-2014), Serralves Villa (2001-2004), Bouça Neighborhood (2000-2006), Faculty of Architecture of the University of Porto (2016-2018) and, more recently, the Swimming Pool at Quinta da Conceição (2016-2018) and the Swimming Pool in Leça (2017-2018).

### 1. INTRODUCTION

Despite its international recognition, 20<sup>th</sup>- century architecture in Portugal is a heritage at risk – or “prizewinning ruins”<sup>3</sup> – since it belongs to a recent past that has not yet been sufficiently recognized in the country, either by the management and safeguarding organizations<sup>4</sup> or by the general public opinion. In fact, few buildings are protected and many are threatened, both by the advanced degradation due to lack of use and maintenance, and by interventions of intrusive transformation. Nevertheless, some positive initiatives have been carried out in the form of inventories, such as the ‘Survey on 20<sup>th</sup>-century architecture’ (IAP20), among others<sup>5</sup>. Moreover, the number of seminars, exhibitions and publications on these subjects has been gradually increasing.

In the international context, 20<sup>th</sup>- century architecture preservation has been a matter of intense debate over the last three decades, with the consensus achieved in the general recognition that existing philosophical approaches are broadly applicable and should follow an architectural reflection based on a casuistic approach; still, there are some specific technical challenges, which require careful consideration<sup>6</sup>. However, some authors maintain that there has been a prevailing trend (particularly in relation to so-called iconic buildings) to give

special privilege to the formal value by restoring an ‘original’ image and neglecting its material and intangible values (aging, uses, transformations), as well as its integrity, authenticity and aura. Others defend the concept of ‘progressive authenticity’<sup>7</sup>, referring to some material signs and alterations that can be preserved as part of the history of the building in time. Regarding this subject, the Madrid Document settles some principles for the conservation of 20<sup>th</sup>-century architecture, namely prior in-depth knowledge of material signs, “including physical location, design, construction systems and technical equipment, fabric, aesthetic quality and use”, as well as of its intangible values, such as “historic, social, scientific or spiritual associations, or creative genius”<sup>8</sup>.

On this matter, Álvaro Siza agrees that in “recovery/conservation works there is a compulsory request which is (...) the absolute integrity. No changes should be performed unless (...) in special or exceptional cases”<sup>9</sup>, resisting to the tendency of leaving the ‘signature’ of the architect in his intervention<sup>10</sup>. According to Siza, one of the most challenging issues in the conservation of ‘modern’ architecture is the problem of the repair of industrialized materials and namely of the exposed concrete<sup>11</sup>. In fact, modernist buildings apply new industrialised technology and materials – which are normally more vulnerable or age faster than pre-industrial construction – and require specific research and knowledge of their condition and deterioration processes<sup>12</sup> as well as the implementation of maintenance plans. Hence, Siza has been calling the attention to the lack of a culture and habits of maintenance as a determinant feature to the conservation of architectural works: “carrying out constant maintenance is also a question of economics”<sup>13</sup>. However, in his opinion, generally, “The passage of time in buildings is part of their quality; it increases the density of the buildings”, except when there is a “lowering, for economic reasons either of the quality of the materials and the execution or the lack of maintenance”<sup>14</sup>.

Siza also refers to the recent tendency of “architecture being ‘partitioned’, being the architect requested to design only the

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S01 exterior image, then come the engineers and finally the decorators”<sup>15</sup>. Instead, he defends of the relation between inside and outside, being architecture necessarily a ‘total work’, from the setting to the detail.

S02 Moreover, Siza mentions as one of the most threatening issues in the safeguarding of 20th-century architecture the building services installations demanded by current exigencies of comfort, energetic efficiency and building regulations and standards (e.g. accessibility, health and safety, fire safety, earthquakes, and energy efficiency) which may be intrusive or incompatible with the pre-existing structure<sup>16</sup>. In Portugal, this problem has recently been minimized by a recent law which refers to the obligation for regulations governing buildings with more than 30 years old (DL 53/2014 of 8 April); nevertheless, on the other hand, this document can be dangerous because of the facilitation that it provides for conducting transformation interventions.

## S03 S04 S05 S06 S07 **2. RECENT WORKS BY ALVARO SIZA**

S08 As aforementioned, in recent years, Siza has been carrying out conservation projects in several 20<sup>th</sup>- century buildings, mostly his former projects.

S09 Since there is very few published information on this projects, the methodology of this paper is based on archives research, analysis and direct observation of built works, as well as interviews with Álvaro Siza, his Engineers, contractors and collaborators.

S10 S11 Among his recent works, the Bouça Neighbourhood (1<sup>st</sup> phase 1975-1978; conservation 2000-2006) is an interesting case study because the conservation work is contemporaneous to the construction of the last phase of the initial project, and thus including the adaptation to new comfort exigencies and living standards, such as the introduction of ETICS insulation system in the façades and changes in the kitchen.

S12 S13 S14 Since 2016, Siza has been also developing projects for the conservation of other among his former works: the Quinta da Conceição Swimming Pool (project, 1958-1965; conservation, 2016-2018) and Marés Swimming Pool (project 1961-1966; conservation, 2017-2018) one of his masterpieces listed as National Monument since 2011.

S15 S16 S17 S18 P The Marés Swimming Pool poses the problem of the repair of exposed concrete in a maritime position, which, according to Siza, is a complex issue because localized repairs (in his opinion, preferable to integral replacement of existing concrete) are necessarily visible. In his words, he decided to perform “minimum intervention because it’s not desirable (and it

wouldn’t be possible) to hide what is determined by the passage of time”<sup>17</sup>.

In the present article, three conservation works developed by Álvaro Siza in buildings with different characters and uses (Serralves Villa, Boa Nova Tea House and Faculty of Architecture of the University of Porto) are selected for further analysis and considerations. Hence, these examples allow to better illustrate and demonstrate the lesson of Álvaro Siza on the conservation of 20<sup>th</sup>-century architecture.

### 2.1. Serralves Villa (2001-2004)

In 2000 Álvaro Siza starts the conservation project at the Serralves Villa, one of the most remarkable examples of an Art Deco detached house in Portugal (later adapted for temporary exhibitions). Constructed between 1925-1944, and listed in 1996 as a Building of Public Interest, it consists in a mixed construction of stonewalls with limestone plaster, concrete slabs, wooden roof structure covered by tiles, steel frame windows, and interior surfaces in limestone stucco or floors in marble and wood. The project had the participation of Charles Siclis and José Marques da Silva, as well as the contributions of Carlos Alberto Cabral, Jacques Émile Ruhlmann, Alfred Porteneuve and Jacques Greber (gardens)<sup>18</sup>.

Responding to the owner request of maintaining the building configuration<sup>19</sup>, the intervention is circumscribed to punctual and surgical works: introduction of bathrooms and kitchen to support events (in the basement), updating of technical installations and devices (acoustics, lighting, air conditioning, thermal comfort). Hence, the works followed the criterion of maximum preservation of exterior and interior features. Regarding exterior plasters, conservation laboratory tests were performed on the composition and grain size of existing mortars, with the aim of establishing the most compatible solutions for their repair<sup>20</sup>. These localized repairs are consistent with the accurate conservation of the window extruded steel frames (only where strictly necessary, replaced with a similar design), wooden blinds and opening mechanisms, marble and wooden floors, among other elements that are almost fully preserved. Moreover, in the restoration of the interior conveys the the idea was of never touching the walls (with exhibition displays or other elements) in order to preserve the extreme quality of the interior finishing, except regarding the improvement of the infrastructure networks. At the moment, Siza is studying the introduction of air conditioning in the first floor for the installation of the Juan Miró’s collection.



**Figure 1.** Álvaro Siza, Serralves Villa, Porto, Portugal, conservation 2000-2004. © Simone Ruivo, 2017.

## 2.2. Boa Nova Tea House (1992; 2011-2014)

Siza starts this project in 1958-1963<sup>21</sup> as a young trainee of Fernando Távora, following the setting proposed by his master and the requirements of the first concessionaire, namely the design of furniture, lightening, technical areas and the layout of the kitchen. The building is listed as a National Monument since 2011. In 1991, under a new concessionaire, Siza carries out conservation works which comprised the treatment of surfaces and the updating of technical spaces. After his first intentions of changing the project (namely some wooden surface elements in the interior space) designed by a much younger self, Siza was able to recognize the building's coherence as a whole and therefore, he decided to maintain the integrity of the original design<sup>22</sup>. In his words, this work changed is perception towards conservation, acknowledging that the interior force of the project should guide the intervention under the criterion of preserving the building's unity and integrity. More recently, in 2011, the building was abandoned, exposed to decay and suffered a series of thefts, including the robbery of all the copper guttering and some pieces of furniture. In 2012,

Álvaro Siza started a conservation project for a new concession for a twenty-year period to a famous Portuguese chef. The recent intervention comprised the conservation of all the doors and windows, the production of furniture replicas, the localized repair of exposed concrete, the replacement the roof and copper gutters by similar ones, the update of the technical spaces and kitchen, as well as some mechanical elements that now operate with electric motors such as the retractable windows allowing the dining room to be completely open to the outside, creating a continuity between the inside and the surrounding landscape. The concrete was repaired with a protective painting and a formwork. Regarding the concrete dosage, it was as close as possible with Secil's company<sup>23</sup>. In addition, it was also requested the introduction of air conditioning, which, according to the author was dispensable in such an maritime position. In 2014, the building reopened to the public, unfortunately solely as a restaurant without the tea house space (one of the most prominent features of its original concept, use and ambience) which now serves as another dining room.



Figure 2. Álvaro Siza, Boa Nova Tea House, Porto, Portugal, conservation 2012-2014. © Simone Ruivo, 2017.

### 2.3. Faculty of Architecture, University of Porto (2006-2018)

The building of the Faculty of Architecture of the University of Porto<sup>24</sup> (FAUP) was designed by Álvaro Siza and built between 1986-1993. Currently, FAUP and Carlos Ramos Pavilion are listed as buildings with a special interest in the Heritage Charter of the Porto Municipal Master Plan.

The constructive system of the FAUP buildings consists of load-bearing walls and slabs in reinforced concrete. The roofs of the main buildings and the towers are covered with zinc standing seam system, consisting of a light concrete slab, thermal insulation of black cork agglomerate and a zinc sheet cladding. At the Carlos Ramos Pavilion, an inverted flat roof was used, composed of a light concrete slab, an asphalt membrane for waterproofing purposes, thermal insulation in extruded polystyrene sheets, a geotextile blanket and a heavy protective layer of gravel. Recently (2016-2017), works were performed for the recovery of the external envelope of the FAUP buildings (roofs, façades and window frames) funded by the Rectory of the University of Porto<sup>25</sup>. This work solved some problems in roofs,

walls and exterior window frames, arising from the natural ageing process, since it had not previously been subjected to any conservation/maintenance works since its construction. In the coverings, the cork agglomerate was rotting and the zinc flashing was becoming deformed, which has led to some infiltrations. The solution was to apply water repellent paint to the light concrete slab, to replace the cork agglomerate with extruded polystyrene and to finish with the application of a studded rubber waterproof membrane, over which new zinc flashing is then insert paragraph the damages in the exterior walls, those were essentially cracks, stains, biological colonisation, detachments of the surface layer, blisters and perforations. The different types of damages were mapped and correspond to four different levels of intervention. Moreover, the main anomaly identified in the exterior window frames were the wear and tear and detachment of the paint, with some areas presenting signs of iron corrosion. Thus, these elements were freshly painted both on the outside and the inside, including the replacement of the parts that are necessary to ensure the windows' proper functioning.



**Figure 3.** Álvaro Siza, Faculty of Architecture, Porto, Portugal, conservation 2016-2017. © Simone Ruivo, 2017.

Currently, Siza is developing a conservation project for Carlos Ramos Pavilion in FAUP, which an important and iconic work built in 1986. The intervention will preserve all external and internal features, with exception of the linoleum floor (replaced by a similar one), the sanitary installations and other technical devices, as well as the distribution of luminaires to adapt to a more flexible use of interior spaces.

### 5. FINAL NOTE: THE LESSON OF SIZA

Álvaro Siza has undoubtedly a relevant contribution in the safeguarding of 20<sup>th</sup>-century architecture in Portugal, not only because of the important legacy of his own works, but also because of his conservation interventions and for his public contributions for the defense of this recent heritage, namely in newspapers, conferences, interviews and publications.

Through the analysis of the works presented in this paper, it's important to retain some aspects of the lesson of Álvaro Siza in the conservation of 20<sup>th</sup>- century architecture: the respect for the pre-existing building's integrity and design (even of his former projects), the careful attention to the introduction

of new installations and devices, the accuracy of surgical and localized repair works (namely on coverings and exposed concrete) and the argument for a continuous maintenance as a mean to protect the buildings authenticity and its' transmission for the future generations.

In Portugal, Siza has thus an important influence in architectural conservation defending that "recovering a building means scrupulously restoring and adapting to the (almost always slightly different) needs"<sup>26</sup>. This pedagogy is very important in the preservation practice in Portugal, where there has been, in some interventions, an excessive affirmation of the new, either because of an exaggerated an exaggerated minimalism related to an architectural trend, or to the use (sometimes uncritically) of contrasting contemporary materials such as glass, iron or corten steel.

Furthermore, considering his international recognition in prizes (Pritzker Prize in 1992, among others) and publications, Siza's influence and pedagogy on theory and practice of preservation goes far beyond the Portuguese borders. Hence, the lesson of Siza on preservation of 20<sup>th</sup>- century architecture

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**Figure 4.** Interview to Álvaro Siza by Teresa C. Ferreira, Siza's Office in Rua do Aleixo Porto, Portugal, January 2018. © Simone Ruivo, 2018.

presents conservation as a management of change respecting the works integrity and significance, thus demonstrating the relevance of a careful analysis of the preexistence combined with a qualified architectural design.

## NOTES

1 Several works by Álvaro Siza are identified in the Architectural Heritage Inventory System (SIPA - [www.monumentos.pt](http://www.monumentos.pt)), in the 20th Century Architec-

ture Survey (IAPX20 - [www.iapx20.pt](http://www.iapx20.pt)) and in Municipal Heritage Inventories (such as the Porto's PDM Heritage Charter [www.mipweb.cm-porto.pt](http://www.mipweb.cm-porto.pt)).

2 Boa Nova Tea House, National Monument, DL 16/2011; Marés Swimming Pool, National Monument, DL 16/2011; Casal de Santa Maria / Serralves Park and Museum, National Monument, DL 31-G / 2012; Church of Santa Maria and Parish Centre, Monument of Public Interest, DL 288/2013; Portuguese Pavilion in Expo'98, Monument of Public Interest, DL 240/2010, among others. Cf. [www.dgpc.pt](http://www.dgpc.pt).

3 André Tavares, "Prize-winning ruins", accessed on February 09, 2018, <https://www.domusweb.it/en/architecture/2012/03/14/prizewinning-ruins.html>.

4 Very few monuments from the 20<sup>th</sup> - century are listed as national monument (12 in the beginning of 2013). For further information see Ana Tostões "Património moderno : conservação e reutilização como um recurso", *Revista Património*, 1, Lisboa, DGPC, 2013, 44-53.

5 See among others: Ana Tostões, Annette Becker and Wilfried Wang (coord.), *Arquitectura do Século XX - Portugal* (Catálogo da Exposição), Frankfurt /Lisboa, 1998; Ana Tostões (coord.), *Arquitectura Moderna Portuguesa 1920-1970*, Lisboa, IPPAR, 2004; Ana Tostões (coord.), *IAPXX - Inquérito à Arquitectura do Século XX em Portugal*, Lisboa, Ordem dos Arquitectos, 2006.

6 Susan MacDonald, "Modern Matters: Breaking the Barriers to Conserving Modern Heritage. Conservation Perspectives", *The Getty Conservation Institute Newsletter*, 28, 1, Los Angeles, The Getty Conservation Institute, 2013, 8.

7 Pamela Jerome, "Restoring Frank Lloyd Wright's Solomon R. Guggenheim's Museum", accessed on February 09, 2018, [https://www.aicomos.com/wp-content/uploads/2009\\_Unloved\\_Modern\\_Jerome\\_Pamela\\_Frank\\_Lloyd\\_Paper.pdf](https://www.aicomos.com/wp-content/uploads/2009_Unloved_Modern_Jerome_Pamela_Frank_Lloyd_Paper.pdf).

8 ICOMOS ISCAH20, *Madrid Document: Approaches for the Conservation of Twentieth-Century Architectural Heritage*, 2011, 1.

9 Álvaro Siza, "Conferencia para el CAH2", *Intervention Approaches in the 20th-Century Architectural Heritage*, International Conference CAH20th, Madrid, 2011, 188.

10 Álvaro Siza, "Recuperação e Manutenção", *A intervenção no património. Práticas de conservação e reabilitação*, Porto, FEUP, 2005, 21.

11 Álvaro Siza Interview by Teresa C. Ferreira, *Construção Magazine* 83, 2018, 7.

12 See, among others: Carolina Di Biase (a cura di), *Il degrado del calcestruzzo nell'architettura del Novecento*, Santarcangelo di Romagna, Maggioli, 2009; Susan Macdonald and Gail Ostergren, *Conserving Twentieth-Century Built Heritage: a Bibliography*, Los Angeles, The Getty Conservation Institute, 2011.

13 Álvaro Siza, Interview by Teresa C. Ferreira, in Ferreira, T. C. and Rocha, P. F. *Saber manter os edifícios: pensar, desenhar, construir.e da Universidade do Porto. Faculdade de Engenharia da Universidade do Porto*, Porto, Afrontamento/ CEAU-FAUP/ CEES-FEUP, 2017, 141.

14 Álvaro Siza, "Entrevista a Álvaro Siza por Teresa C. Ferreira", in Ferreira, Teresa C. and Rocha, Patrícia. *Saber manter os edifícios: pensar, desenhar, construir.e da Universidade do Porto. Faculdade de Engenharia da Universidade do Porto*, Porto, Afrontamento/ CEAU-FAUP/ CEES-FEUP, 2017, 151.

15 Álvaro Siza, Interview by Teresa Cunha Ferreira, *Construção Magazine* 83, 2018, 7.

16 Álvaro Siza, Interview by Teresa Cunha Ferreira, 14 January 2018, s.p.

17 Álvaro Siza, Interview by Teresa Cunha Ferreira, 14 January 2018, s.p.

18 See André Tavares, *Os fantasmas de Serralves*, Porto, Dafne Editora, 2007.

19 Renovation of the Serralves Villa, Archive of the Serralves Foundation, 2001, PT/FS/ASV/37.

20 See Universidade do Minho – Laboratório de Engenharia Civil, *Caracterização dos rebocos exteriores da Casa de Serralves*, Proc. 241.03, 2003; Vasco Peixoto de Freitas, *Parecer sobre as soluções de revestimento de fachadas previstas na Casa de Serralves*, Relatório HT 2046.03, 2003. Information kindly provided by Filipe Ferreira, AOF.

21 For further detail see, among others, Luís Trigueiros (ed.) *Casa de Chá da Boa Nova*, Lisboa, Ed. BLAU, 1992; about the conservation works see Álvaro Siza, “Conferencia para el CAH20”, *Intervention Approaches in the 20th-Century Architectural Heritage*, International Conference CAH20th, Madrid, 2011; Roberto Cremascoli, “Il maestro torna sui suoi passi. The master retraces his steps”, *Abitare*, 545, 2015, 70-77.

22 Álvaro Siza, “Conferencia para el CAH2”, *Intervention Approaches in the 20th-Century Architectural Heritage*, International Conference CAH20th, Madrid, 2011, 186-188.

23 Álvaro Siza, Interview by Teresa Cunha Ferreira, *Construção Magazine* 83, 2018, 7.

24 See Álvaro Siza and Adalberto Dias, *Edifício da Faculdade de Arquitectura da Universidade do Porto. Percursos do Projecto*. Porto, Publicações Faup, 2003.

25 The work had budget of 395,062.95 euros and was performed under the coordination of Álvaro Siza, Eliseu Gonçalves and José Luis Gomes.

26 Álvaro Siza, “Construção e Recuperação. A Propósito da Defesa de Património e de Arquitectura Moderna em Portugal”, *Vértice*, 452, Coimbra, 1983, 3.

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