

## **THE SETTLEMENTS' DESIGN OF THE BOALHOSA'S AGRICULTURAL COLONY. A dialectical perspective: between tradition and the construction of modernity.**

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### **Abstract**

*The design of the settlement in the Agricultural Colony of Boalhosa results from an understanding that privileges compact solutions, making the most of the conditions of the topography and respecting the morphology of the natural landscape. In turn, the architectures associated with this design were designed taking advantage of these conditions, considering them as a fundamental data of the preexistence. However, this understanding did not fail to concern itself with the principles of modern architecture, thus seeking solutions capable of establishing a relationship of continuity between tradition and innovation, between the roots of the vernacular and the paradigm of the modern. By valuing the site's specificities and exploring new technical possibilities, this search adopts a strategy that is typical of Critical Regionalism, to mediate the impact of universal civilization with elements derived indirectly from the peculiarities of a particular place (Frampton, 1983). Not excluding possible relationships with notable examples of the movements Garden City and City Beautiful, in the urban and architectural solution seems to prevail, above all, an attitude of adaptation to the place and agreement with the materials and language of the region.*

**Keywords:** Agriculture colonies, Settlements design, Housing, Modern Architecture, Portuguese Architecture.

The Agricultural Colony of Boalhosa was designed and built during the Salazar regime under the guidance of the Internal Colonization Board (Junta de Colonização Interna - JCI), an organism specifically created for the management of the agrarian reform in Portugal. This colony is a singular experience because it was one of the last agricultural colonies to be settled in the final period of the colonization process, thus representing the culmination of a process of research, experiments and trials for diverse forms, in order to find an ideal settlement model for the rural territory, based on the balance between built and agricultural and natural spaces, following the ideologies of the regime and the socioeconomic

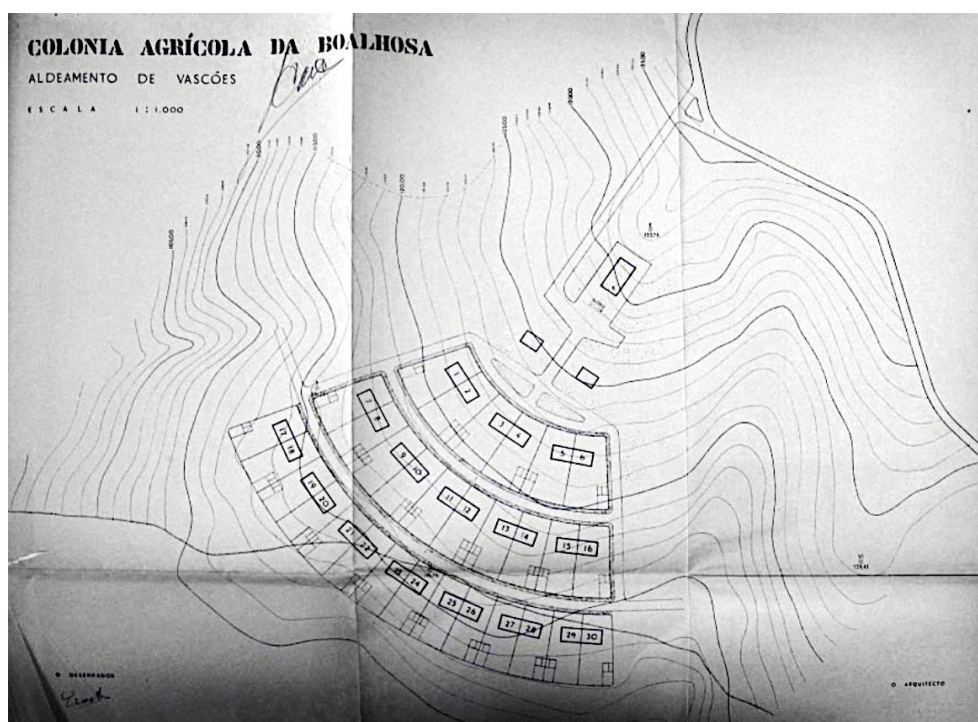
efficiency. Further, it is also an exemplary case regarding the way it was formalized.

The relationship established between the settlement and the place of the colony, and between the settlement's choice and the geographical circumstance, allowed the ability to interpret the pre-existence and to dialogue with the topographical conditions and other widely visible components of the natural landscape. In addition, is recognizable a careful approach based on the use of the traditional methods and materials of the region, both in the settler's dwellings and in the public facilities, together with a formal experimentalism that produces elements of modernity, aiming to find a more modern expression, able to represent the regime and the economic development instruments in order to revive the country.

The Boalhosa's colony, together with the colonies carried out under the general internal colonization project, would enable a colonization model suitable for the expansion of the industrial agriculture, thus contributing for the application in Portugal of the "green revolution" solutions which were transforming the rural territories in the nearby countries (Freire, 2011). Additionally, it was expected that such projects could turn into a spreading focus of the technological innovations that would contribute to improve the practices of conventional farmers (Freire, 2014). In this sense, the design of the settlement as well as the organization and expression of their buildings, have early assumed a strategic importance to achieve these objectives. However, it's worth mentioning that this need to find a plan to re-use the land and to build a new rural society is also an opportunity to think about the urban planning and the architectural issues.

The Boalhosa settlement adopted the "concentrated" model (Girão, 1941), and follows a strategy that gave preference to group solutions, considered more advantageous both for the use and location of the farming land, and for the greater proximity to the collective services and facilities. The Lobo and Antunes' study, which argued that in rural areas the house grouping should be preferential in order to mitigate a series of deficiencies consequent of the buildings isolation and the lack of basic infrastructure and collective facilities (Lobo & Antunes, 1960) was subsequently validated following the completion of the Internal Colonization Board projects.

By adopting this type of solution, the colony's agricultural *casais* were composed by several plots organized in order to form more compact neighbourhoods, however not in the same way as population clusters or urbanized settlements with adequate infrastructure and collective facilities. The configuration of the settlements has, however, a certain urban complexity, which seems influenced by models originated in the garden city and the design of its structure is organized in order to define a spatial system constituted by streets and square, in order to reinforce the unity of the settlement and promote a community environment. The location of the streets and buildings follows directly the contour lines, thus taking full advantage of the topographic conditions, minimizing the earthworks and conserving the natural landscape morphology (Figure1).



**Figure 1.** Plan of the settlement. Boalhosa Agricultural Colony. *Junta de Colonização Interna*, 1956.

By taking advantage of the steep slope of the terrain it was still possible to open the living area towards the south-facing valley. Following this site planning the houses were organized in a semi-detached configuration, including barns and

stables, thus guaranteeing both the rational distribution of spaces and the social and architectural representation of each building.

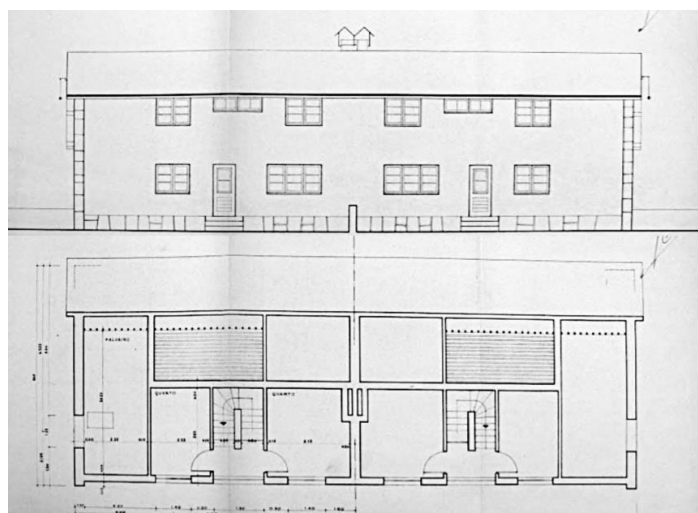
Regarding the settlement, it was designed and built according to the concentrated model. Unlike the dispersed model, adopted in previous cases, the houses and public facilities are grouped in a single place and separated from the agricultural lands. This configuration was aimed at rationalizing the infrastructural system and, at the same time, strengthening the sense of community, thus forming a small civic centre and a socialization space. The first proposal opted for an open design which indicates the possibility of enlarging the settlement, since the streets are not closed. In the first version of the built proposal, the implementation of the settlement was designed by adapting it into the existing morphological configuration of the land. The design of the streets thus follows the configuration of the contour lines forming a coherent and well-articulated set. The streets, which enclosed the complex and established the connection with the local road network, were realized later, after the elaboration of the urbanization plan, allowing also a more direct connection between the threshing-floor and the settlement, as well as the creation of a new road. The urbanization plan complements the infrastructural works already programmed in the previous project, and introduces significant changes at the urban design level. The square and the central street are widened, thus providing a larger and qualified social space. Trees are planted in the settlement's surrounding turning it more sheltered and better integrated into the landscape. Later, was presented an alteration project of the agricultural facilities of the *casais*, which proposed a new conformation of the streets through the construction of a continuous row to close the southern top of the plots. This project was not carried out.

From the analysis of the supporting texts of the urban and architectural projects of the Colony of Boalhosa, we verified, however, that there is no direct reference to foreign models. The only reference that associates the colonies settlements' model with the garden city was found in the Aldeia Nova do Barroso projects: "*By this way we reduce the danger of fire considerably, with the advantage of giving to the whole the general appearance of a garden village, rather than a simple huddle of uninteresting houses.*" (JCI, 1944, p. 58). Nevertheless, it seems consensual in the bibliographical references found on this subject

(Fernandes, 2003; Ramos, 2005; Rapazote, 2012; Guerreiro, 2015) the idea that the settlements are related with the model of the garden city, as well as the fact that there are a set of aspects that seem to relate the Portuguese colonies settlements with it, including the use of an organic design adapted to the topography. Not excluding the possibility that certain international references may have served as an example or influenced some aspects of their urban and architectural design, it seems to us, however, that in the specific case of the Boalhosa colony other factors were more determinants. One is the meticulous observation of the place by the designers, who spent several days camped there to better understand their natural conditions and qualities, which also explains the careful geographical location of the settlement (Guerreiro, 2015). Another is the reading and interpretation of the spatial and architectural references existing in the region, in order to find a design and scale suited to the settlement's size, as well as an architectural expression resulting from the articulation of the modernist principles with the regional specificity, revealing signs of modernism and a certain proximity to the critical regionalism of the fifties.

As in other colonies of the Internal Colonization Board, in the architectures of the colony of Boalhosa were applied principles that considered the regional specificities and the particular conditions of the site. In addition to the consideration taken with matters regarding architectural expression, organisation and sizing, the projects and subsequent constructions make use of regional building techniques and materials with the intention of achieving lower construction costs and guaranteeing building quality. The housing and agricultural facilities are arranged into a single volumetric unit that can be regarded as a rational whole while also permitting greater representativeness from an architectural and social point of view. Compared with the residential buildings of the first colonies of Milagres and Martim Rei, which were simpler in their compositional design and with a certain superficiality in the use of the regional variations, those of Boalhosa reinterpret better the spatial organization models of the rural buildings of the region, managing to obtain also an image of greater constructive solidity. However, they did not manage to provide a definitive answer to the premises raised in "The Problem of the Portuguese House" (Távora, 1947). A total of five projects were developed for houses of the

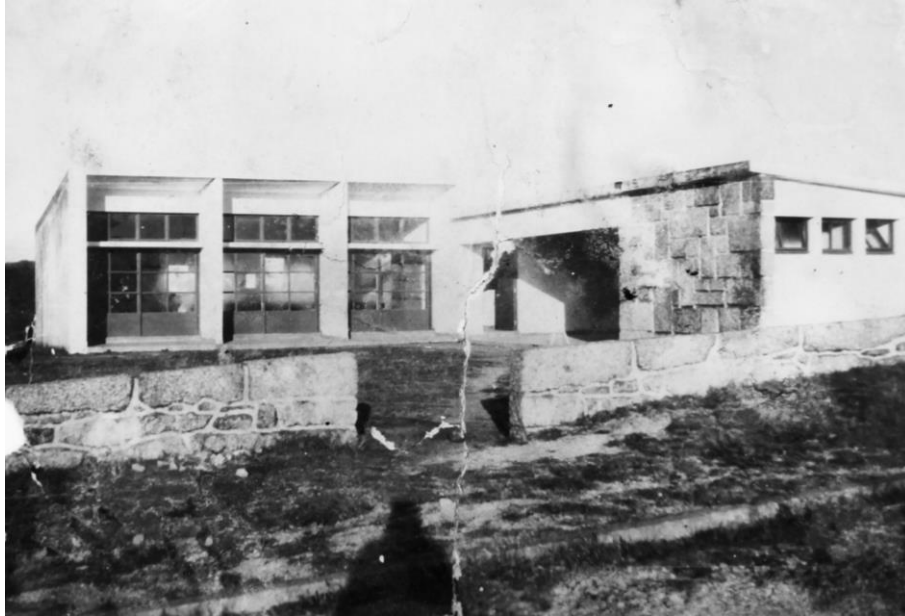
Boalhosa colony, from which only one was full realized and used to built the houses of the Vascões settlement. The first of these projects, designed in 1946 by the architect Maurício Trindade Chaga, was developed after a phase of research and experimentation in the first colonies of the Internal Colonization Board, which lasted approximately a decade. In this project are renewed the basic assumptions applied on the design of the first houses associated with the dispersed settlement model. The adoption of the concentrated model imposes not only the compaction of the settlement, but also of its buildings, by connecting the agricultural dependencies and stables with the main volume of the housing. In this case, since it was necessary to define a typified solution for the colony using references to the characteristics of region rural dwellings, the envisaged architectural language was strongly marked by the use of materials and construction techniques of the traditional northern buildings. In the following project of 1954, designed by the architect Henrique Albino for the dwellings of the Vascões settlement, the typology becomes semi-detached and the buildings are reorganized in order to adapt to the local topography and to give relevance to the spaces of familiar conviviality while maintaining the use of the local materials to define their image. The architect José Luiz Pinto Machado produces in 1956 the project that will guide the construction of the Vascões settlement buildings (Figure 2).



**Figure 2.** Plan and elevation of the main volume of the *Casa*. Project by architect José Luiz Pinto Machado. Boalhosa Agricultural Colony. *Junta de Colonização Interna*, 1956.

The solution found follows the premises of the previous project, adopting the semi-detached type and paying special attention to the relationship between the buildings and the place. However, compared with the previous project, the spatial, formal and functional options are clearly distinct and more appropriate. Not only they allow a greater rationalization of the dimensions of the inner spaces and a better articulation between housing and agricultural function, but also, they present a more balanced and coherent volumetric solution, combining in a single and continuous volume a unitary structure integrating the living and the working spaces, separating only the facilities for the treatment of the residues. After the 1958's fourth project, designed by the architect José Neves de Oliveira for the houses of the Lameira do Real settlement, the last proposal for the extension of the Vascões settlement buildings will be developed in 1960, foreseeing an increase in the agricultural structures that are separated from the house, once again resorting to the use of stone for the external walls in order to obtain a certain consistency with the previous project.

The architecture of the houses built for the settlement of Boalhosa seems to have been formalized on the basis of a similar compromise to the one used by the Carlos Ramos generation (Almeida and Maia, 1986, 112). In reality, this compromise seems more focused on reconciling functional needs with local aspects, and less on the singular mediation between tradition and modernity, being the modern component introduced in the public facilities architectural design. Like in the case of other colonies, such as Barroso, this mediation does, indeed, appear in the public facilities, where it is recognizable the use of modern vocabulary references, namely in the Primary School and in the Teacher's House. The first of these buildings combines two volumes at right angles, forming a simple and rational geometric composition, sized and organized to receive the essential characteristics and take advantage of the sun exposure. The roofs are flat and slightly sloping, while the windows facing the external courtyard are open to the ground level, showing the presence of a distinct language from the traditional one, which is used on the surfaces of the stonewalls (Figure 3).

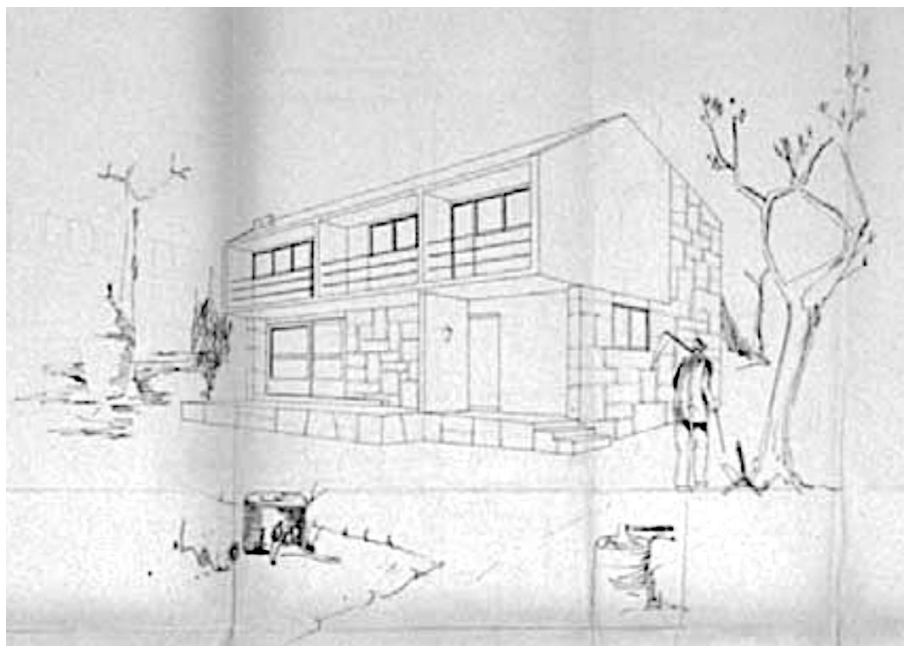


**Figure 3.** Primary school photographed in 1964. Boalhosa Agricultural Colony © *Municipal Archive of Paredes de Coura*.

In the second of these buildings the functional organization and the solar orientation are maintained. The roof takes the traditional tilted form, however, there are elements of modern architecture, although some of them have been modified before the execution of the project, such as the living room window, which has been replaced by a door and a window. On the first floor, the vertical and horizontal planes of the balconies are projected outwards, highlighting the geometric values of the rooms' windows and providing, at the same time, a shadow and privacy (Figure 4).

In the only unbuilt public facility, the Vascões settlement chapel, seems at first sight that the modernist distinctive features are no longer included, substituted by a simple and essential attitude, less experimental and disinterested in mediation between traditional and modern. However, analysing carefully the building's architectural drawings, it can be observed that these distinctive features exist, even if apparently diminished by the stone masonry that, contrasting with the simplicity of the white walls, enhance the "(...) architectural taste of the region (...)" (Sequeira, 1952, p.3).





**Figure 4.** Teacher's house by architect António Trigo. Boalhosa Agricultural Colony. *Junta de Colonização Interna*, 1957.

The layout of the chapel, although rooted in the sensibility of tradition, unveils a purified and balanced solution of pure and straight forms. These forms are the geometric generators that determine and order the architectural, aesthetic and structural genesis of this building. The elevations confirm the premises of the plan, showing a single volume composition, whose symmetry is broken by the sacristy and baptistery lateral volumes. The asymmetric effect in the front elevation results from the distance of the bell tower from the main façade. This architectural element comes from the vertical extension of the stonewall of the Baptistery, thus forming a distinct solution from those adopted in other colonies, where the towers are normally incorporated and placed in the main façade.

The public facilities followed the same assumptions used for the construction of the residential buildings, namely the logic of organization and use of space used in the architecture of the rural environment, as well as the inclusion of regional materials to ensure an economically sustainable construction and formal solutions adapted to the climatic characteristics of the region. However, in these cases the architectural expression is oriented towards a new direction, aimed at



The characteristics described up to now, which demonstrate the use of critical regionalism design approaches and the use of an architectural language of mediation between traditional and modern, represent the distinctive elements of the urban and architectural design of the Boalhosa settlement. The achievement of these results is due not only to the research and experimentation carried out through the projects and the construction of the first colonies of the JCI, but also and above all to the application of a specific design method. Apart from considering the guidelines regarding the selection of the settlement model, this method was developed from the direct contact of the architects with the place, through a careful examination of the topographic features and of the landscape. Taking advantage of the fact that the design solutions had to be renewed several times, the method tries to define an alternative architectural language of mediation, anticipating issues that will be developed and deepened after the Portuguese Popular Architecture survey.

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