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ETFAS towns: rural architecture in Sardinia through the archival drawings

Abstract

The Authority for Land Use and Agriculture in Sardinia (Ente per la Trasformazione Fondiaria e Agraria in Sardegna – ETFAS) was founded in May 1951 with the goal of reforming agriculture on the Italian island and building infrastructure, towns and centres that would serve the public and social life of settlement assignees. Archival research carried out at the Laore Sardegna Archive of Cagliari and the Archive of the Modern of Mendrisio has brought to light an important number of drawings through the forms of institutional representation encoded in plans, elevations and sections by the architects tasked with the creation of the towns. Particular attention has been given to the representation of public buildings, presented here in a few original drawings and sketches by architects Figini and Pollini for the Porto Conte town in the Alghero territory, and for the service center of Monte Cadelanu in the Sulcis, by architects Zanuso and Crescini.
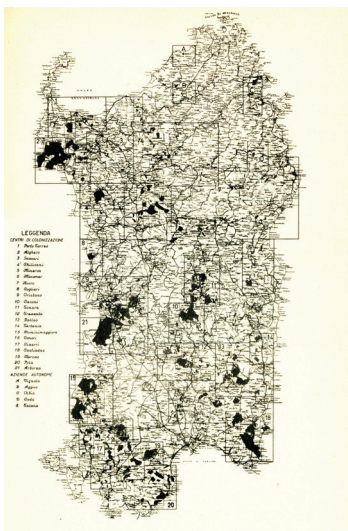
Fig. 1
Map of ETFAS settlement centers and autonomous farms [Source: ETFAS 1962, p. 4]

The surveys published to date on ETFAS towns and service centers are limited to a small number of contributions mainly concerning urban and planning aspects[1]; on the other hand, there is a lack of critical contributions related to architectural projects, particularly on spaces for education and social life, which constitute important evidence of single experimentations within the framework of a programmatic initiative implemented in Sardinia after World War II. The analysis of the institution's archival fonds[2] revealed through the design drawings unexpected spatial and typological qualities that this paper aims to explore.

The Authority for Land Use and Agriculture in Sardinia (Ente per la Trasformazione Fondiaria e Agraria in Sardegna – ETFAS)[3] was founded in May 1951 as part of the national land use reform contained in Italy's 'Stralcio Act'. Its goal was land reclamation and the construction of infrastructure, farmhouses, towns and centres for improving the lives of the farmer assignees. However, its primary purpose was to reform agriculture in the region through a real work of 'human transformation' (ETFAS 1958, p. 6). The plans for hamlets and towns are characterised by the provision of shared infrastructure that varies according to the context, based on the 'peculiar geographical and environmental situation of Sardinia, which is rich in very marked zonal diversities, with profound dissimilarities between even contiguous areas, created for historical and economic geological reasons' (ETFAS 1962, p. 2).

In a fragmented patchwork of about 92 hectares of land (fig.1) five autonomous farms and twenty-one settlement centers[4] were established, for which a master plan of services had been planned for the construction of seven residential towns, thirty-three service centers[5], fifty isolated rural
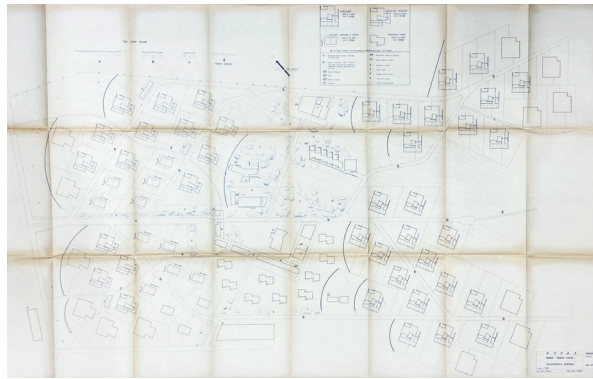
Fig. 2
Master plan of the town of Porto Conte, L. Figini and G. Pollini (1953).
[Source: Agenzia LAORE Archive, ETFAS fonds].
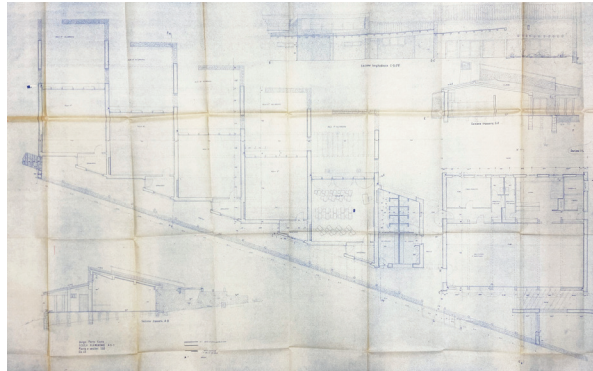
Fig. 3
Plan and sections of the elementary school in the town of Porto Conte, L. Figini and G. Pollini (1953).
[Source: Agenzia LAORE Archive, ETFAS fonds].

schools and fifteen chapels. The residential hamlets were, however, an exception to the rural settlements planned by the authority, which were usually of the "scattered house" type; it therefore became necessary to equip the territory with service centers for the agrarian inhabitants, to be located barycentrically to the farms.

The approach to the context, understood as a collection of land-based, social and economic factors, was the foundation upon which the designs for these new settlements were developed, starting from the initial studies carried out by the UN organisation UNRRA CASAS for the Nurra area, in the implementation of the Sardinian re-population plan within which the UNRRA interdisciplinary team was working (including architect Fernando Clemente[6] and engineer Oreste Noto (Casu 2001).

Despite the fact that the design assumptions were informed by high standards, especially found in school architectures inspired by contemporary international experiences (Roth 1950), the ETFAS towns system encountered a gradual and generalized abandonment by the allottees, as Di Felice (2005) notes: «already during the 1950s, before the lure of the large factories of the North was felt, numerous colonial families preferred to abandon the reform lands, while others were terminated by the same entity».

In the architectural debate of the time, the critical issues of the new Sardinian rural towns emerge clearly in the words of Giuseppina Marcialis[7] (1957):

Settlements rise at considerable distances, separated by immense expanses of deserted and uncultivated land that offer no direct possibilities of connection for the time being; moreover, Sardinian peasants traditionally live in centers in whose community life they actively participate [...]. Social centers are located in the geometric center of gravity of a settlement, but often at an excessive distance from houses [...].

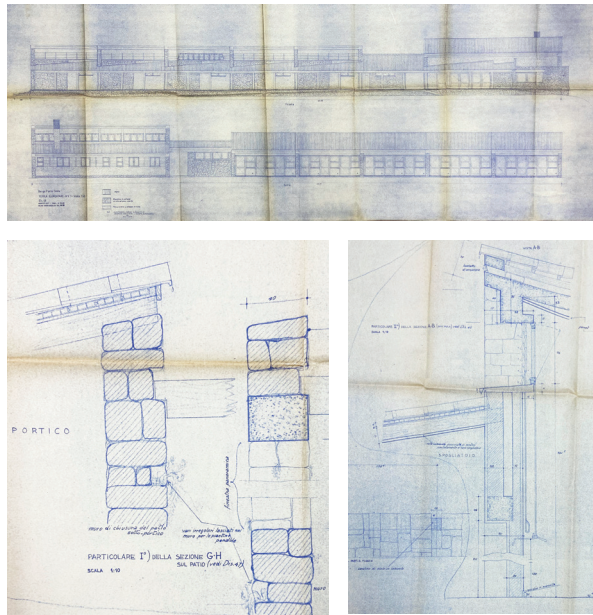The general plan for the services proposed by the Entity included the

Fig. 4
Main elevations of the elementary school in the town of Porto Conte, L. Figini and G. Pollini (1953).
[Source: Agenzia LAORE Archive, ETFAS fonds].

Fig. 5
Construction detail of the primary school in the town of Porto Conte, L. Figini and G. Pollini (1953).
[Source: Agenzia LAORE Archive, ETFAS fonds].

Fig. 6
Construction detail of the primary school in the town of Porto Conte, L. Figini and G. Pollini (1953).
[Source: Agenzia LAORE Archive, ETFAS fonds].

creation of seven residential towns, 33 service centres, 50 isolated rural schools and 15 chapels. The towns and the service centres had a general zoning framework whose main schema included: a social centre, a primary school, a nursery school, a retail space, a post office and barracks.

In just a few years, the town system would come up against its progressive general abandonment by the assignees, a reflection of the critical issues detected well in advance by Giuseppina Marcialis (1957) in relation to the creation of the first clusters:

The inhabited centres are notably far from one another, separated by immense expanses of deserted and uncultivated land that do not, for now, offer the direct possibility of connection; moreover, Sardinian farmers traditionally live in centres where they actively participate in community life [...]. The social centres are located in the geometric centre of gravity of a settlement, but often too far from the homes.

By contrast, archival research has brought to light case studies that demonstrate all their expressive potential, going well beyond the meaning of drafts and drawings created as technical documents in the institutional forms of architectural representation (plans, elevations and sections).

The first – unrealized[8] – design by Luigi Figini and Gino Pollini for the town of Porto Conte is presented exclusively in drawings of public buildings, which make clear the attention to detail that went into them. The plan was designed on behalf of ETFAS in the early years of its operation. The executive drawings of the public buildings denote the extreme attention to detail, both graphic and textual. The nature of the site and the reasons for the project are described in the project's explanatory report[9] as follows:

Between the sea and the hilly bumps of reclamation, an attempt was made to insert the lines and volumes of the plan within the undulating lines of the landscape in the most natural way, so that it would almost come to be part of it, in all unity and without overpowering it; to complete it almost, if possible [...].

The master plan[10], dated December 1952, (fig.2) represents the entire town in 1:500 scale with the communal buildings placed at the heart of the village, whose hierarchies are dictated by the orography of the site.
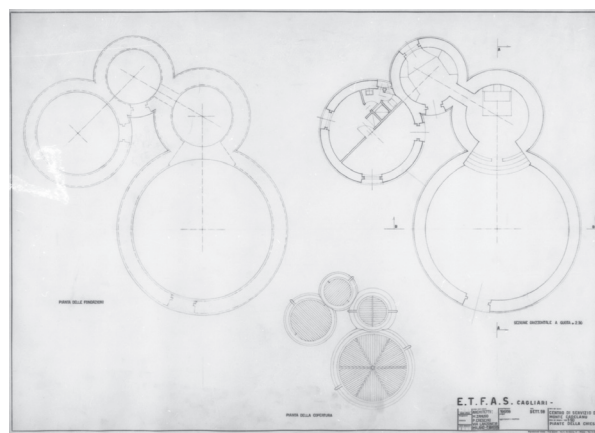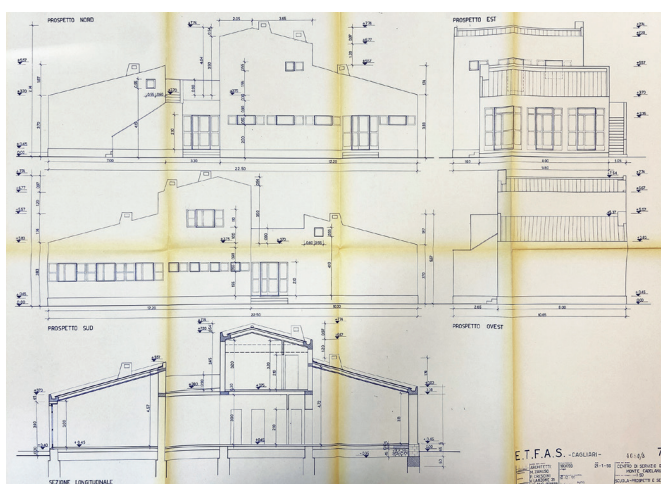
Fig. 7
Plan for the town of Monte Cadelanu with an alternate (unbuilt) version of the church, M. Zanuso and P. Crescini (1958).
[Source: Archive of the Modern, ETFAS fonds].

Fig. 8
Elevations and main section of the school Plan for the town of Monte Cadelanu, M. Zanuso and P. Crescini (1959).
[Source: Agenzia LAORE Archive, ETFAS fonds].

Fig. 9
Plans of the alternate (unbuilt) version of the church of the town of Monte Cadelanu, M. Zanuso and P. Crescini (1958).
[Source: Archive of the Modern, ETFAS fonds].

At the lowest elevation the town's square is closed to the southwest by a U-shaped colonnaded building that hosts various businesses: a bakery for bread, a post office, offices for the town delegation, a medical clinic and a café; an axis road extends to the northeast until rising in elevation and reaching the village church, which crowns the public road upon which the crèche, nursery school, and primary school are placed crosswise.

The project drawings for educational buildings show the spatial layout that integrates the interiors with the landscape through solutions designed to make the teaching spaces flexible through mobile partitions and niches for various activities. The idea of an outdoor classroom is a theme that reappears in different ways. In the building for the crèche, it's a single space at the end, determined by an overhead covering and masonry partitions. The same solution is echoed at the Olivetti crèche in Ivrea[11], while at the primary school the minimal classroom spaces are conceived of as an aggregation of staggered cells composed of an indoor room and an outdoor patio that are grouped one after another, nestled into a longitudinal portico to mark the edge of the building in the north-west elevation (fig. 3). A common element seen throughout the project's architecture is exposed stonework walls alternating with walls covered in rustic plaster (fig. 4), as are the pitched roofs that mark the spaces within the buildings. The volumetric variations created by the angles of the pitched roofs, as seen in the detail drawings (fig. 5), have numerous window openings that, with various solar screen systems and types of windows, make it possible to modulate the entry of natural light and ensure the circulation of air in the rooms. These detailed drawings also provide a few precious indications as 'irregular compart-

Fig. 10
Elevation of the main facade of the alternate (unbuilt) version of the church of the town of Monte Cadelanu, M. Zanuso and P. Crescini (undated).
[Source: Archive of the Modern, ETFAS fonds].

ments left in the wall for pendulous plantings' and 'panoramic windows'[12] (fig. 6) in the patio that, positioned at various heights, unite the built environment and the natural one[13].

Archival research has also brought to light the preparatory documents for the unpublished plan[14] built for the ETFAS service centre in Monte Cadelanu[15], part of the Cixerri Settlement (fig. 7), by Marco Zanuso and Pietro Crescini[16]. The ETFAS fonds stores the folder with the executive plan containing heliographic copies of documents and drawings, dated between January and December of 1959, of the executive project with the heliographies, while the Archive of the Modern of the Architecture Academy of Mendrisio holds in the Zanuso fonds[17] nine graphic works (on microfilm cells stored on aperture cards)[18] dated between September 1958 and May 1959. The project, completed after 1962, belongs to the last phase of ETFAS construction works and is built on a flat area bordered by rows of wind-breaking trees in the direction of the Mistral. The service centre includes a small school with a single classroom, plus a library and lodging for the teacher, a market and a church.

The school[19] (fig. 8) is distinguished by its domestic dimension and again, as found in almost all ETFAS schools, prioritizes continuity with the surrounding context:

[...] In the two heads, the southeastern side of the building contains the teaching room overlooking a large raised square for outdoor teaching, and the northwestern side contains the library and meeting room with a separate entrance [...], around the building a large trapezoidal-shaped space available for games and practical gardening exercises [20].

A rather unique variation (compared to the other buildings) was previously designed for the church, made up of multiple spaces with circular floor plans (fig. 9), evoking a probable archetype of Nuragic villages[21]. Four secant conical volumes[22] of varied heights are arranged in pairs: in the first, the space for the faithful is connected via its central axis with the area containing the altar raised on a three-step platform, while the second group, rotated compared to the first which is on the south-eastern side, holds, respectively, the sacristy and the priest's living quarters, complete with an independent entrance from outside. An ample portal, offset compared to the central axis of the main body, serves as the entry point to the church, almost as if in search of a relationship with the side of the forecourt overlooking the other community buildings. The vertical surfaces of the volumes extend upward, hiding sunken wooden roofs that are thus invisible from the outside and are marked by radial vertical slits that extend into concave overhanging gutter spouts to redirect rainwater.

The graphic representation that best embodies this version of the church is the elevation without a title block (fig. 9), most likely in graphite, in which the evocative strength of the drawing enabled the viewer to imagine slices of life embodied by the two presumably female figures that walk toward the entrance, which is composed of a pointed arch topped by a rosette. In the esoteric drawing, it is still possible to contextualise the work in the Sardinian landscape, though quite abstract, through what seem to be two prickly pear cacti.

The two projects for Porto Conte and Monte Cadelanu presented herein are testimony to the expression of post-WWII modernism, whose style incorporated codified rural elements in an effort to re-establish dialogue with the landscape. The narrative suggestions expressed by the architects through

graphic marks, which open up to an interpretation that runs parallel to the need to respond to the constructive procedure for which they were produced, are meaningful, composing far-reaching images and visions for the community that soon would inhabit those places.

Notes

[1] For an in-depth analysis about the urbanistic events of ETFAS see Casu 2001a, and Casu 2001b. For a broader historical overview of land reform in Sardinia, see Di Felice 2005.

[2] The ETFAS fonds, deposited at the LAORE Agency in Cagliari, is currently available for consultation. It has no chronological order; the only accompanying tool produced during the census phase is a general archive consistency list in which chronological details and title related to the original preservation unit are indicated. There has been no digitization of the documentary material, with the exception of a few drawing boards of religious architecture published as part of the Ministry of Culture's *Architectures of the Second Century* census on the platform http://architetturecontemporanee.beniculturali.it/architetture/ [Last accessed August 21, 2022].
The archive is not included in the SIUSA database.

[3] ETFAS was formed in May 1951, as a result of the national land use reform approved by Italian Parliament with law n. 841 of 21.10.1950, known as the 'Stralcio Act' (Legge Stralcio) or the 'Segni Act' (Legge Segni).

[4] The map drawn up by the Authority shows the uneven distribution of acquired land – fielded in black – in which the settlement centers fall, marked by progressive numbers called out in legends and geometric perimeters indicating their area of influence. Autonomous farms, on the other hand, are marked by letters of the alphabet.

[5] For the towns and service centers actually implemented, see ETFAS 1962, p. 41.

[6] Fernando Clemente (1917-1998) was a student of G. Michelucci, from whom he learned of Lewis Mumford's principles of 'neighbourhood units' and the requests of the Movimento Comunità (Community Movement) founded by Adriano Olivetti, eventually applying them to his designs for ETFAS. Along with Oreste Noto, Clemente created the town of Tottubella (1953-56) in the settlement centre of Sassari. See Casu 2001a, p. 65.

[7] Giuseppina Marcialis (1933-2018) graduated from the Polytechnic University of Milan with a degree in architecture that same year. She was a teacher in addition to an architect and urban planner, getting her start in Rome as the assistant to Piccinato and Benevolo, then in Florence as an outside lecturer. She filled that same role at the IUAV University of Venice starting in 1976, which she joined in 1975 as Vice Chancellor.

[8] The plan, drawn up on behalf of UNRRA CASAS, was meant to meet the settlement needs of the refugees of the Istrian-Dalmatian exodus on the island, leaving to ETFAS the sole assignment of land and the creation of public buildings, as can be learned from Deliberation no. 208 dated 21 September 1952 (LAORE Archive, ETFAS fonds, sh. E, fold. n°27). For more on the Porto Conte plan by Figini and Pollini, see Blasi 1963. To understand why the town wasn't constructed see Casu 2001a.

[9] The excerpt from the report is taken from Gregotti and Marzari 1996, pp. 364-365.

[10] (LAORE Archive, ETFAS fonds, sh. E, fold. n°27, draw. 394). The version of the master plan is the one presented at the IX CIAM in 1953 in the session of the Mediterranean area.

[11] Built between 1939 and 1942. See Savi 1980.

[12] (LAORE Archive, ETFAS fonds, sh. E, fold. n°27, draw. 51).

[13] See Figini 1950.

[14] The project appears in the list of works by Zanuso in De Giorgi 1999.

[15] Which would meet the needs of a community of about 150 residents.

[16] In 1957, architect Pietro Crescini (1921-2007), a regular collaborator of Marco Zanuso as of 1956 and his business partner from 1977 to 1999, drafted the project for the service centre in Baratz in the settlement centre of Sassari, later renamed Villassunta, on behalf of ETFAS. For a biographical note on Crescini, see Triunveri 2020.

17<https://www.archiviodelmoderno.org/fondi-archivistici/schede-dei-fondi/fondo-marco-zanuso-1960-1998> [Last accessed August 21, 2022].

[18] According to the classification attributed by Studio Zanuso, which over the years

had worked on transferring less recent projects onto that type of media, eliminating paper documents.

[19] In the version for the executive project (LAORE Archive, ETFAS fonds, sh. A, fold. n°48, draw. 7).

20 From the general report of the executive project (LAORE Archive, ETFAS fonds, sh. A, fold. n°48).

[21] The version of the church with the circular buildings is represented in the master plan stored at the Modernism Archive on microfilm (Archive of the Modern, Zanuso fonds, pos. MZ Arch Micr 25). In the executive plan the church appears as it was actually built (LAORE Archive, ETFAS fonds, sh. A, fold. n°48, draw. 11).

[22] The project shares different elements with that of Zanuso and Crescini drafted in January of that same year as part of the invitation-only competition (won by Mario Salvadè) for the church and the parish complex in Campione d'Italia, despite being more detailed with its seven volumes and a bell tower, all arranged into a circular plan. The project documents are stored at the Marco Zanuso fonds at the Archive of the Modern (cat.: MZ Arch. 22).

References

BLASI C. (1963) – *Figini e Pollini (1950-1962)*. Edizioni di Comunità, Milan.

CASU A. (2001a) – "Le campagne e la riforma agraria: piani per nuove comunità". In: A. Casu, A. Lino e A. Sanna (edited by), *La città ricostruita: le vicende urbanistiche in Sardegna del secondo dopoguerra*.

CUEC, Cagliari.

CASU, A. (2001b) – "Le campagne tra continuità ed elementi di rottura". Parametro, 235, 45-50.

DE GIORGI, M. (edited by) (1999) – *Marco Zanuso Architetto*. Skira, Milan.

DI FELICE, M. L. (2005) – *Terra e Lavoro: uomini e istituzioni nell'esperienza della riforma agraria in Sardegna (1950-1962)*. Carocci, Rome.

ETFAS (1958) – *Servizio sociale*. Electa, Milan.

ETFAS (1962) – *Case rurali e borghi*. Centro Sardo di documentazione, Cagliari.

FIGINI L. (1950) – *L'elemento verde e l'abitazione.* Editoriale Domus, Milan.

GREGOTTI V. e MARZARI G. (edited by) (1996) – *Luigi Figini e Gino Pollini. Opera completa*. Electa, Milan.

MARCIALIS G. (1957) – "Considerazioni sulle nuove borgate rurali in Sardegna". Casabella Continuità, 216, 87-90.

ROTH A. (1950) – *The New School, Das Neue Schulhaus, La Nouvelle Ecole.* Girsberger, Zurich.

TRIUNVERI E. (2020) – "Il mestiere di architetto secondo Marco Zanuso: viaggio attraverso le carte del suo archivio". In: L. Crespi, L. Tedeschi e A. Viati Navone (edited by), *Marco Zanuso. Architettura e Design*. Officina libraria, Milan.

SAVI, V. (1980) – *Figini e Pollini. Architetture 1927-1989.* Electa, Milan.

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