

## House-towers in Campi Flegrei: History, conservation and re-use

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**ABSTRACT:** Besides the well-known renewed system of coastal towers, due to the increasing risk of Turkish pirate raids, a dense network of inland towers rose in the first decades of XVI century. These were often characterized by the concomitant presence of both a defensive function and a residential one. Following a chronological sequence, the paper focuses on three case-studies of this typology, the Guevara, Ranieri and di Franco towers, outlining historical notes and guidelines for conservation. Nowadays, the survival of those buildings as emblematical signs of territorial anthropization urge to face many issues. Above all, it's necessary to reflect on the meaning of their conservation today, adapting those fragile typologies to modern standards (safety, accessibility, plant engineering).

### 1 HISTORICAL ASPECTS

#### 1.1 *The defensive program in Campi Flegrei area*

Already in the early decades of the sixteenth century an intense construction activity began in Spanish viceroyalty of Naples, linked to the achievement of defensive structures and determined by frequent and devastating pirate raids on the southern coasts. This architectural production, occasional but significant, transforms itself from the already Thirty years of the XVI century, with the viceroy Don Pedro de Toledo, in an overall project of restoration of government existing fortifications or building of a substantial number of new towers, testified moreover by the realization on behalf of the same viceroy of a residence complex and tower named Toledo in Pozzuoli.

From 1563 onwards, when the viceroy Don Perafan de Ribera Duke of Alcalá gave the instructions and ways to governors and local authorities, it was launched another program of strategical and defensive building designed essentially for a diffused coast defence, consisting also in this case in the construction of towers.

The implementation of this real network of warning and control, more than an effective territorial defence, for which there are significant testimony and information in cartography at the time (see, for example,

the well-known map of the cartographer Mario Cartaro from Viterbo, of 1584 and 1613), was given to Spanish engineers or '*tavolari*' (Starace 1999), but also to architects and craftsmen from central and northern Italy, updated on the technical design and schemes of strategic and military installations.

An almost exclusive attention to the area near the coast was soon put beside by a similar activity that relates to the hinterland, not so much exposed to attacks from the sea as to endemic banditry in the Spanish viceroyalty territories.

The area of Campi Flegrei was largely involved in this activity, both in the coastal belt and in the hinterland, with a system of towers connected visually with each other and placed on a triangular pattern-based (Faglia 1975, Faglia 1977, Andreucci 1988) so as to allow the opportunity to transmit and receive optical signals. This complex system, which also incorporates and integrates several existing structures, show a wide extension coming to the islands of Ischia and Procida (with the Guevara tower, already built in Aragonese age and probably one of the first examples of this type made, and the Quattrocchi tower), but also to areas close to the city of Naples and neighbouring villages (as in the case of Ranieri tower built on the Posillipo hill between the villages of Ancari and Villanova) or to territories near Caserta.

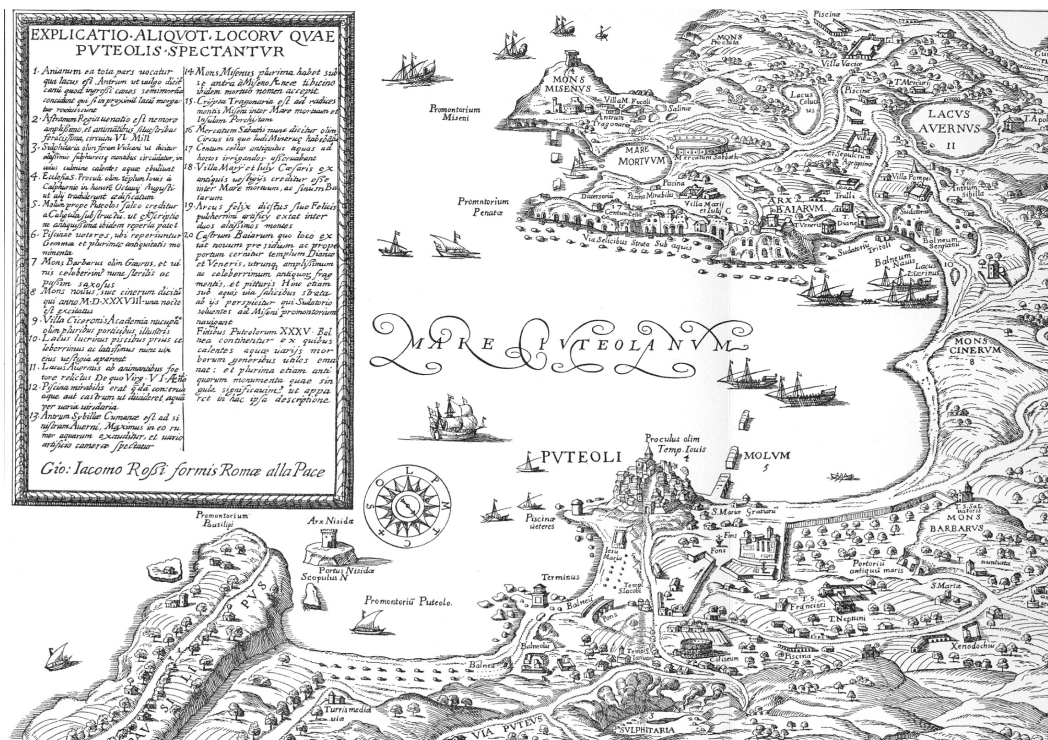


Figure 1. Campi Flegrei view from East by F. Villamena (1652), based on the Cartaro view (1584).

The towers, certainly built on the basis of the above-mentioned edicts and orders and probably paid by town or local authorities, were also erected to exclusive private initiative in defence of estates or agricultural or religious settlements (the tower Santa Chiara in the Monte Ruscello area near Pozzuoli, put in defence of a property donated in fourteenth century by Queen Sancha de Mallorca to the Clarisse Order). Moreover, although due to this system of control and reticular presidium, the towers started at this stage to carry out a precise, if not prevalent, residential function (Santoro 1991) and could be used by noble or notable families that realized them in the inland, taking also features typical of this type of buildings.

Some characteristics of this impressive architectural production (which in several cases survives unfortunately only in toponyms or little news or documentary traces) make possible the identification of a specific type.

These towers had in fact a square or rectangular plan, no longer circular as those built in southern Italy in Angevin age, while their volumetric shape, strongly vertical to perform their specific functions, segments in two levels besides basement, slightly sloped, with

some simple rectangular apertures in some cases crowned with arcs, string-courses with torus shape and an embattled crowning, projecting on the facades, supported by corbels. The above described characteristics, already functionally obsolete compared to the technologies of war that included the use of artillery, seem however to be superfluous compared to a function, particularly in the towers built inland, that was more an early warning and alarm than a real territorial defence. So these particular characters had more formal and compositional value, being architectures with specific residential use, as well as to the meaning of a symbolic political power and territorial control; shape quotes rather than real architectural and technique innovations.

Paradoxically, despite their impressive volumetric and material configuration, the towers built in southern Italy, more than other types, during the centuries after their building suffered a lot of irreversible neglect, damages or heavy transformations. Having lost their specific function, completely distorted their contexts and spatial relationships, the fragility of these artefacts, whose nature has been adapted to most different uses, is evident in its most dramatic and extreme ways.

## 2 CASE STUDIES

### 2.1 *The Guevara house-tower and its environment*

Preservation and enhancement of Guevara Tower in Ischia poses a fundamental question, to which follow other themes that characterize the yard of knowledge and the architectural and environmental restoration: the question is whether it's still possible to intervene with the aim of recovering – or rebuild – a ratio of functional and cultural context, or instead we are faced with a *dead monument*, which can only, through smarter operations of de-restauration, restore the role of silent witness messages lost forever.

The building is now as a tower with a square base and high slope base, divided into three levels above ground, a basement, and, below it, a level of tanks. The external surfaces are regularized by a plaster recent that saves the lower part of the base until the share of floor; their uniformity is interrupted only by the emerging of elements in stone trachytic: large square blocks framing all openings, *redondone*, which marks the transition zone between the slope and the upper, crowning triple shelf corbels. It fits into a context of bathing establishments and houses in an area of recent urbanization, device than the old village and Castle, although it with immediate visual report.

Indeed, it is a fortified residence, built by Don Francesco Guevara at the end of the fifteenth century in a site that was a present situation morphological ideal for the construction of a garden of delights in line with the Renaissance landscape culture (Pontano 1498): a ridge hillside that slopes to the sea, a source freshwater between the rocks underlying, a condition of intimacy and security protected by the proximity of the Castle (fortified citadel built on a rock where there was the main village of island). Today, you can restore the united configuration of this extraordinary environment only through a process recomposition of the few signs, *fragments* fled to change, and equally fragmentary historical descriptions.

In particular, in fresco that decorates the ceiling of a room on the first floor of the tower is depicted an old view of the places, dated not later than the first century of life of the complex (Algranati 1930). The pictorial touches two key issues: the characterization of the parties that define the land of Guevara and the relationship between the site and the Castle. The site looks like a compact mass of rock and green that slopes toward the sea, where they recognize the tower, the road overhanging the cliff, the wall that closes the *Garden of Nymphs* towards the sea, towards the pier the rocks, small tower guards; this contrasts typical landscape of urban space in the city of the island.

This description graphics finds substantial confirmations in the map of the island of Ischia engraved by Mario Cartaro in 1586 (Jasolino 1588): it appears the name “Garden of the Nymphs”, the icon associated



Figure 2. Guevara tower in its current environment.

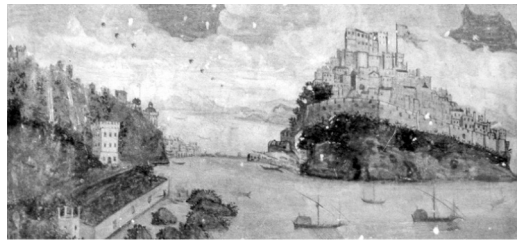


Figure 3. Guevara tower and the Castle painted in a fresco of the tower.

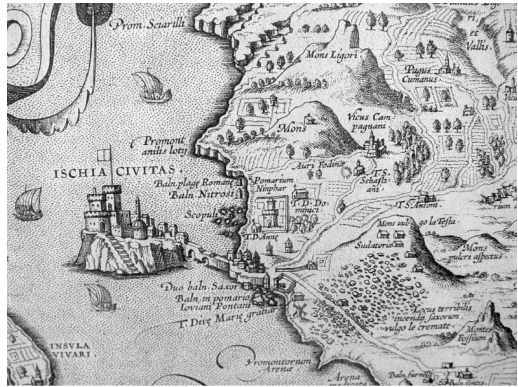


Figure 4. Abramo Ortelio Carta geografica dell'isola d'Ischia, printed in Antwerp in 1590. Among the engravings based on the map of Cartaro, it is distinguished by the wealth of detail.

with a more complex tower of others that dot the island territory, and a sign of bound, almost a fence.

The complex is preserved unit at least until mid-nineteenth century: an anonymous manuscript, which was attributed to the canon of the Cathedral of Ischia Vincenzo Onorato, which was dated around the mid-nineteenth century, it provides a detailed description



Figure 5. Details of the tower in photos of the late 70's.



Figure 6. Guevara tower in its current state.

of the tower which actually confirmed as depicted in ancient views (Anonymous nineteenth century). In subsequent years, we will launch a series of fractions and changes of ownership that will dismember the site and will overturn the distinguishing features of the tower: the condition of isolation, inaccessibility from the earth, the privileged relationship with the sea, the Castle, the Village *extra moenia*.

The building will be abandoned and adapted to different uses: when acquiring municipal heritage, in the late '70s, in some quarters of the first floor had been obtained an apartment, while almost everywhere there were traces of bivouacs as testimony to the use of the remaining space as areas of service to the surrounding agricultural funds.

Having exhausted the functional reasons held together the parts of this site, and this with the historic cornerstones of the surrounding, between the tower and the castle was established in corsican about a century, a new relationship, both aesthetic and perceptual: for the common fate that has given the two monuments charm of a decadent and solitary architectonic image, witnesses also the same building tradition that the degradation of surface structures emphasized. Until 1980 or so, the building appeared to be a solid regular geometric corroded by time, characterized by dark walls of volcanic rock in local, and by contrast between

stones in the masonry, as shown by the disintegration of the mortars, and the sign of hard blocks trachyte. The traditional plaster, made with lime and malta loaded with inert of the same kind of materials that make up the walls, in the absence of maintenance, took part in the gradual process of erosion of the building, leaving wide open gashes in the stratigraphy of masonry.

In the early '80, the tower was the subject of an intervention which led to the replacement of all the plaster, all the floors, all window frames, the sealing of joints in sight, the horizontal stiffening through the interposition of armed concrete blocks between vaults and floors and, not least, final removal of white marble coat of arms that about five hundred years was above the entrance portal. In that speech, emptying substantial physical and symbolic, followed the installation of electrical standpoint, with pipes running height of a man, mounted directly in walls without any discrimination between plaster replacement and surfaces frescoed sixteenth century.

A theme of architectural restoration, and then design a compatible systems, treatment of plaster replacement that are rapidly degrading, conservation fresco that decorates the entrance, and the scale of some circles the first plan, archaeological exploration of the search for meaning for many currently mute testimony: the seat of a latrine on the second floor, a pit wall of the first floor, the staircase that descends to a rampant over and under the basement, then stop abruptly. However, a job that did not sense if detached from a large-scale project: the reappropriation of the Ninfarium, now disfigured by establishments bathing facilities, the upgrading of the environmental setting

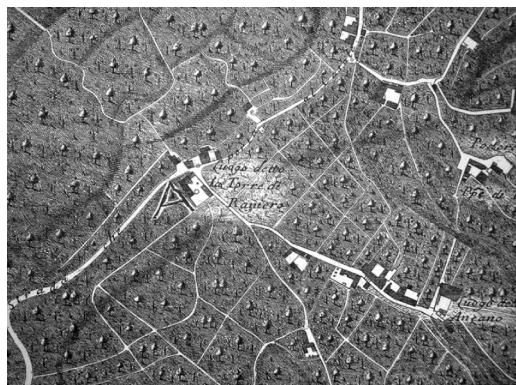


Figure 7. The Ranieri tower in the Topographic Map by Duke of Noja (1775).

and the construction of a liaison with the ancient center. Only in this context, then, you can think of finding a new use compatible.

## 2.2 The Ranieri tower in Posillipo hill

Due to these provisions regard new defensive construction and especially towers on either coastline that inland, Ranieri tower looks like an ideal hub between different parts of the territory. Just for the immediate visual communication with the main military garrisons of Soccavo, Nisida and Baia on the western side and until Castel dell'Ovo and Castel Sant'Elmo on the eastern side, it was an exceptional strategic point of the whole Gulf defensive line.

At the same time the tower had to be an element of defense for the rural village of Ancari where it stood.

Until 1980, Ranieri Tower looked as an aggregate of at least three main parts, historically distinguished.

The first part dates back to the initial building, in the sixteenth century., the tower properly defined. A square based plan, about 20 meters high, with the slope base, four floors above ground including two in the base, the masonry showed traces of plaster on which building date is uncertain. The top level windows are arc shaped and beside there are loopholes for rifle. Inside a tuff spiral staircase brought in the third and fourth level and the terrace; the lack of stair traces to lower floors suggests that the connection to these were entrusted to removable ladders and hatches in case of attack.

Over the slope the two levels above are marked by a tuff torus, while the crown is embattled in tuff that architecturally harmonizes the building. The exit of the spiral staircase in the top is barely visible from below. The thresholds of windows, both with arc and wooden lintel are piperno.

Another important construction phase of the complex is presumably of the eighteenth century. With the



Figure 8. The Ranieri tower in 1982.

changing military requirements, but confirming the strategic importance of the site, on the west side were built vaulted rooms up to the third level of the tower. The window on this front then became access to the coverage of the new building, which probably served to increase the amount of men in the barracks. From poor documentation is plausible to suppose that the room covered by a large vault and with great dimensions access, were partly stables and partly dedicated to the preservation of wine and food.

Last construction phase of some importance is a further building orthogonal than the elongated shape now assumed by the whole house-tower at the end of the eighteenth century. Even this masonry was tuff built, as an evolution toward a type of farm when the defensive rule is definitively passed.

The site continues to live throughout the nineteenth century as farmhouse in rural scenery of this part of the city, up to suffer the decline of agricultural activities that characterizes urban development of the district since the second half of the nineteenth century.

The fractionation of ownership was losing more sense to house-tower complex as a characteristic feature of a farm with farmland and vineyards.

During the Second World War there was a bomb alarm installed and antiaircraft artillery station. The opening of the new road of Via Manzoni in early 900 and the Via Petrarca after the second World War show the complex isolated and reduced to traffic island. In 1980 ownership of the monument, which is still divided between several owners and occupants will be formally unified by a buyer. He can only take note of all buildings that in the meantime have occupied the



Figure 9. Present images of the Ranieri house-tower.

inner courtyard, and the changes made by the inhabitants of the last decades of house-tower. The interiors were divided with partitions of various kinds, shells had lost the waterproof characteristics required, with the result that many of the horizontal wooden structures were compromised or even broken. The plant was built for needs of people who still used of the few inhabitable rooms.

The owner called in November of 1980 to the Superintendency restriction which until then had not yet been placed on the complex. A few days after the earthquake of 23 November 1980 seriously damaged structures forcing the evacuation of four families still residents in the four rooms of the lower part of the building.

The emergency led to demolish some buildings nearby the tower. The chronology of events overlaps between crashes and demolitions, between projects submitted and those required by Superintendence, in a sequence that lends itself to various interpretations, some of which are not relevant to architecture.

The justifications for tower restoration were obviously those of the post-earthquake needs, but how the same were embarked on often show excessive ease in interpretation and revival of volumes on which take start judicial initiatives too.

Between the good faith of the owner, who boasted advice of eminent Neapolitans professors, and even the chairman of "Italia Nostra" which sent an enthusiastic letter for the restoration of Ranieri Tower, and the suspicions by the Municipality and the Superintendency which formed committees (one of them chaired by Roberto Di Stefano), the site has been repeatedly seized and released.

The danger of speculation to be avoided a few years ago has made sure that no restoration project was carried out, neither finishing that started in 1980, which was stylistic restoration.

The building in the appearance of grotesque 'half ruin' shows once again that the lack not only of project, mainly a serious conservation program for delicate and complex objects, brings to decay and unacceptable degradation.



Figure 10. The West front of di Franco house-tower (photo S. Basile 2003).

### 2.3 *The di Franco house-tower: historical notes and analysis of stony materials for conservation*

The di Franco tower, located on the slopes of Camaldoli hill, stands out as a significant case-study among the house-towers laying in the area of the ancient hamlet of Soccavo, near Naples. Its historical and documental value is particularly significant, since the tower came nowadays in original conditions about materials and structures, representing a rare "undisturbed" specimen of this typology.

In fact, unlike other similar buildings in the same area – first of all the nearby San Domenico tower – the di Franco house-tower has not undergone radical restorations or restructurings that have irreversibly altered its constructive characters, and it still retains much of its original substance, even in the limited and inevitable changes occurred in almost five centuries of history. Then the tower appears as one of the last surviving witnesses of a widespread typology of buildings in the Campi Flegrei, which counted, just in the hamlet of Soccavo, some other examples, as the quoted San Domenico tower and the Di Lopa tower, this last survived only by toponymic datum (Di Bonito 1984).

The di Franco tower was probably built in the first half of XVI century, by di Franco family, who was already settled in the area of Soccavo at the end of XV. Similarly to other house-towers in Campi Flegrei, the di Franco tower has a quadrangular plan on a scarp base, with "piperno" toothed stones on the edges,

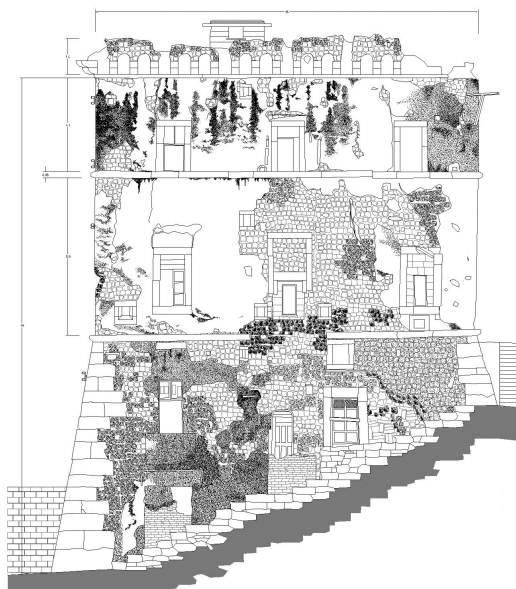


Figure 11. Survey of the East front of di Franco house-tower (drawing by S. Basile 2004).

which also mark the courses of contiguous masonry tuff (Russo 1999). Above the scarp base, the tower has two floors, both marked by a piperno torus (so called “redondone”). The whole tower has four levels above the ground, with the first two in the scarp base, all served by a single flight of stairs occupying the cavity between two walls at the center of the tower. The crowning is marked by corbels supporting a series of small blind arches, as a persistence of the ancient constructional elements of medieval towers (Santoro 1991).

If the plan seems so closely tied to contemporary examples of the area, and mainly to Santa Chiara, San Domenico and Ranieri towers, more differences appear about the windows and the width of the fronts, which suggest a more marked residential function for di Franco tower. In fact, the individual arched windows that characterize all the other quoted cases, are substituted in di Franco tower by at least two rectangular openings for each of the two levels above the scarp base, all marked by piperno frames (Fig. 10). The two quoted rectangular windows become three in the East front, which presents major alterations due to the changing conditions of use of the tower, which have greatly altered the geometry of original openings, also causing significant structural damages in the masonry of the first floor above the scarp base (Fig. 11).

Different assumptions were made about the former function of di Franco tower, as well as about the role of the whole house-tower's system in Campi Flegrei. Some scholars have proposed to consider them as a



Figure 12. Detail of *Fidelissima urbis Neapolitanae* view by Alessandro Baratta (1629), with the hamlet of Soccavo and the di Franco house-tower on the right.

part of a larger defensive system, bound to coastal towers, in which the inland house-towers constituted a subsidiary element of the complex visual reporting system, based on a triangular mesh (Faglia 1977).

Following this theory, the house-towers in Campi Flegrei could constitute a connection element with the coastal towers system, designed to overcome the considerable asperity of coastline, in order to transmit the alarm signal faster to Ranieri tower, regarded as a central element of the defensive system against pirate raids. Then, the inland towers should play the role of a redundant visual reporting system, needed also by the frequent failures made by tower soldiers in case of attacks, often documented in the chronicles of that times (Andreucci 1988). This last hypothesis was challenged by other scholars, ascribing the inland house-tower's system to the limited function of a local defence against the widespread phenomenon of banditry, which was very intense in the first half of XVI century (Santoro 1991).

Latest researches lead back the origin of the tower to the quoted di Franco family, owner of the major “piperno” quarries, settled just close to the tower at the slope of Camaldoli hill (Basile 2004). The di Franco family – probably committed in the works of Aragonese walls in Naples since the second half of XV century – built the tower with both the functions of housing and defensive against the bandits assaults, in relation to the nearby quarries, particularly profitable in that period (Cardone 1993).

A clear image of di Franco tower in the first years of XVII century is visible in the *Fidelissima urbis Neapolitanae* view of Naples by Alessandro Baratta (1629), where we can easily recognize its main body, with the battlemented crowning and the three windows of the second level, likely corresponding to those three still surviving in the East front (Fig. 12). The same view

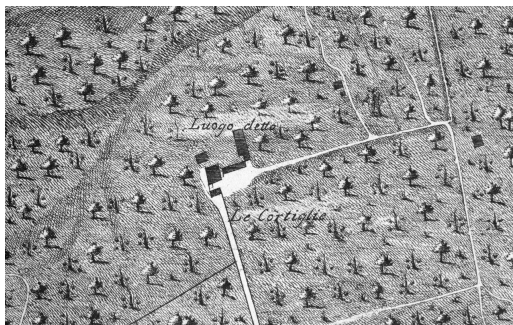


Figure 13. The di Franco house-tower, named as “Luogo detto le Cortiglie”, in the Topographic Map by Duke of Noja (1775).

also shows the presence of a single floor porticoed building, placed against the tower on the northeast side, still recognizable, along with other buildings, even on the Mappa Topografica by the Duke of Noja (1775), where the whole site is marked by the name of “Le Cortiglie” (Fig. 13).

Nowadays the tower presents extensive phenomena of structural failure and decay, as well as improper uses due to the high subdivision of the property, occurred in the last decades of XX century. Shared in apartments and used as housing, the di Franco tower was subsequently declared uninhabitable for serious static damages caused by the earthquake of November 1980. Listed as architectural heritage since 1989, the tower is now uninhabited in the higher levels and used to store agricultural tools in the rooms of the scarp base.

The research carried out as part of University of Naples – thanks to the cooperation between the Department of History and Restoration and the Department of Earth Sciences – has allowed in-depth analysis of important aspects concerning the stony materials of di Franco tower, from plaster mortars to yellow tuff and “piperno”, through direct taking of samples. The attention was focused in particular to the piperno stone, because of its close link to the history of the tower, due to the quoted presence of nearby quarries owned by di Franco family. Therefore, the investigations have allowed to define some characteristics mean (Fig. 14), as the specific gravity (5.66 KN/m<sup>3</sup>) and the porosity (28.15%), up to identify the probable origin of the piperno used to build the tower in XVI century, locating it at the level 3/5 H of piperno formation in the region of Soccavo (Calcaterra et al. 2005).

These data appear as indispensable references for a necessary and urgent project for the conservation of di Franco tower. The plan, in fact, based on the principles of critical and conservative restoration, will certainly face the necessary and limited additions to the lacunas of ancient materials, ensuring compliance with

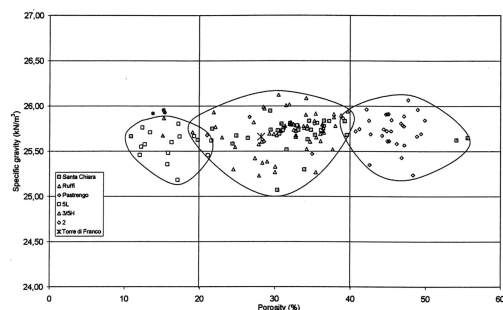


Figure 14. Diagram of specific gravity and porosity of some piperno samples taken in the whole area of Campi Flegrei. The sample from di Franco house-tower is marked by an X.

the basic demands of recognizability, but especially physico-chemical compatibility.

### 3 CONCLUSIONS

Nowadays, the conservation state of the house-towers in Campi Flegrei reflects the different ways of their adaptation to the former function decay. At first, the relationships and connections among the towers and the territorial precincts appear mostly altered, with deeply modified surrounding spaces, approach ways and properties. The house-towers seem to have different but unhappy destinies: radical transformations, restorations with heavy reintegrations and overlapping, neglect and inappropriate functions. Besides, their strong typological connotation and structures oppose a deep resistance to new uses. For these reasons, the survival of those buildings to their functional obsolescence and the permanence as emblematical signs of territorial anthropization urge to reflect on ancient settlement reasons, on the historical evolution of environments relationships, and, finally, on the meaning of their conservation, adapting those fragile typologies to modern standards (safety, accessibility, plant engineering).

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