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# **Rocca Savelli (Aventine Hill). Contribution to the knowledge on defence systems for family goods in Rome during the late Middle Ages**

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## **Abstract**

This paper concerns the results of the archaeological investigations at the Savelli fortress on the Aventine Hill in Rome. This fortification surrounds a well-known park of the city: the Giardino degli Aranci. The research has been addressed to improve the knowledge on a topic of great historical interest: the architectural typologies developed by Roman aristocratic families in order to defend their properties. Locating Rocca Savelli within a specific architectural typology is problematic, due to the lack of research on this site. The research team of the Department of History and Cultures of the University of Bologna has surveyed the remains, studied their building features and documented stratigraphic data. This paper summarises the preliminary results of such research effort. The structures still conserved above the ground level can be dated back to the second half of the 13th century and are the output of craftsmen specialised in building with local tuff. The fortification was most likely built by the Savelli family in order to defend its dwelling on the Aventine Hill. The next step of the research will be addressed to in-depth analyses of data collected during the fieldwork. The aim is to better specify the original features of the structure and its later modifications. At a later stage, it will be possible to understand the economic, cultural and ideological background of the people connected to the fortification (patrons, builders and inhabitants). Ultimately, the project will include geophysical prospections and small excavations across the park to investigate the presence of further structures conserved below the present ground level.

## **Keywords**

topographic survey, architectural archaeology, fortifications, towers, tuff coursed rubblework.

## **Introduction**

From the 11th century, a strong demographic increase brought to a denser urban tissue. This originated in a wide architectural renewal involving infrastructures (town walls, roads, etc.) and buildings: from churches and monasteries to the palaces of religious and civil powers, to private buildings, fortresses and towers (Augenti 2020, 29-36).

In this period, the wealthiest families in Rome controlled entire sectors of the city through a system of fortifications and towers. Based on various needs, different architectural solutions were put in place. Towers were chosen when it was necessary to control a single road or a series of strategic points in a wider area. For example, the Frangipane family controlled the Palatine Hill through such system (Augenti 2020, 28, 33; Carocci 2010; Di Carpegna Falconieri 1994; Hubert 1990).

Closed defensive systems, composed of regularly disposed towers connected by walls and battlements, are more complex. An example of this is the fortification built by the Caetani

family on the Appia Road, next to the Mausoleum of Cecilia Metella. The structure built by the Savellis on the Aventine Hill may have been similar, although some questions must yet be clarified: did the size of the fortification change through time? Was it built in order to protect a group of previous buildings? Or was the area empty, allowing the establishing of a complex settlement, whose only remains are represented by the defensive system? And yet, were the structures inside the fortification built at a later moment? Such questions have oriented this study, although it is obvious that fully understanding this typology of fortifications will require a wider dataset of sites.<sup>1</sup> In the following sections, the paper provides a summary of what is known on the history of this settlement, particularly focusing on the results of architectural-archaeological investigation.

Regarding the medieval period, the first document mentioning the structure may date back to the 10th century, with the mention of an '*antiquo palacio*' (ancient palace) which hosted Otto III (Bruno 2013, 389). The emperor needed a stronghold to directly control Rome (and the Church): a symbol of legitimate and universal dominion. However, several scholars have argued that the Palatino Hill is more plausible as the imperial seat in the city. The debate is still open, since no extensive excavation has ever been organised at the Savelli Park. At the same time, no remain of the Ottonian dwelling has been identified on the Palatine at present.<sup>2</sup>

Through the late medieval written evidence, it is possible to achieve a clearer image. Documents signed by Cencio Savelli (elected pope in 1216 as Honorius III) in 1216-1217 suggest the presence of a family dwelling on the Aventine Hill (Krautheimer 1981, 394, 461). The documentation does not provide any detail on the structure or its spatial relationship with the most important monument in the area: the Basilica of Saint Sabina. On 5th June 1222, Cencio Savelli assigned this church and other surrounding buildings to the Order of the Preachers (later known as the Dominican Order). These friars added the bell tower and the cloister (Docci, Chiavoni 2017, 72-73; Krautheimer, Corbett, Frankl 1970, 72-98; Acampora 2017, 186-188).

The most useful document for this research dates back to the second half of the 13th century. On 24th February 1279, Cardinal Giacomo Savelli wrote down his will: among the list of his properties, the document mentions a fortification on the Aventine Hill called '*munitionem montis qui supra Marmoratam*' (Reg. Hon. IV, 580). Marmorata is an early medieval place name. It initially indicated the left bank of the Tiber, west from the Aventine. Later, it was used to indicate the entire valley between the Aventine and the Mount Testaccio (Maischberger 1996, 223). Therefore, a fortification owned by the Savellis on the Aventine Hill was present in 1279 (Delogu 1983, 711; Krautheimer 1981, 461). Besides the fortress, the family owned houses and towers, although some of them were ruins:

<sup>1</sup> The architectural-archaeological survey was carried out on September 2016 by the Department of History, Culture and Civilisations (archaeological section) of the University of Bologna. Organiser: Enrico Giorgi, data collection and elaboration: Andrea Fiorini, Michele Massoni, Michele Silani.

<sup>2</sup> Augenti 1996, 74-75; Santangeli Valenzani 2001, 163-168; Sereni 2017, 192-193. However, the human presence in the area of Rocca Savelli in the early Middle Ages is testified by the ceramic finds brought to light during the 1991-1992 and 2006 excavations by the local Soprintendenza (Ciarocchi, Ricci 2017, 177, 179).



*'domos, turres seu ruinas turrium quas habemus ab ecclesia Sancte Marie de Grandellis supra versus Marmoratam et in Marmorata et munitionem montis qui supra Marmoratam [est], sive fuerint patrimoniales sive fuerint per nos acquisite; alias vero domos et turres seu ruinas turrium quas habemus a dicta ecclesia Sancte Marie citra versus Ripam in tota regione Ripe et munitionem (sic) Montis Fabiorum seu de Sasso domine Mabilie sorori nostre' (Reg. Hon. IV, 580).*

These properties covered a relatively wide area, bordered by the Theatre of Marcellus on north ('munitionem Montis Fabiorum') and the following sites, on south: the 'regione Ripe', the church of Saint Mary de Gradellis (once located at the bottom of the hill, along its northern ramparts, close to the left bank of the Tiber) and the Marmorata.

The last information taken into account here is from the chronicles of Tolomeo from Lucca: in 1284, Jacopo Savelli promoted several restorations on the Aventine and he founded a considerable structure ('palatium papale' = papal palace) next to Saint Sabina. Once elected pope as Honorius IV (1285), he moved there:

*'Anno Domini MCCLXXXIII<sup>o</sup> [...] Iacobus de Sabello [...] Hic montem Aventinum edifiitiis restaurat; fecit enim palatium papale apud Sanctam Sabinam, ibidemque moratur quamdiu vixit, et multa alia hedificia' (MGH, Tholomei, 204).*

About the analysis of the surviving structures, Donatella Fiorani, Daniela Esposito and Roberto Marta have particularly examined their masonry techniques, although neglecting stratigraphic evidence. Their results can be summarised as follows: in order to build the fortification, the Savellis made use of a particular kind of tuff called lionato: a name related to its yellowish-reddish colour. This material was quarried in small rectangular blocks with sub-regular thickness. Before being assembled in the masonry, such building elements were carefully selected in order to give the fabric a homogenous appearance, both in terms of colour and layout. Coursed rubblework techniques (locally known as 'tecnica a tufelli') date back to the 13th century, when this kind of masonry was widely used in Rome. It was common during the Roman period, but it was reintroduced in the late 12th century. During the 13th century, blocks became increasingly regular. However, this process reversed during the 14th-early 15th century, when blocks also tended to be bigger (Fiorani 1996, 154, n. 57; Esposito 1998, 23-24, 74-75, 153-156, 311; Marta 1989, 44-46).

## Methodology

The data utilised in this study have been acquired applying the main methodological foundations of the architectural archaeology: analyses of masonry techniques, stratigraphic relationships between different building components, comprehension of building phases, in-depth analyses of building materials (Boato 2008; Brogiolo, Cagnana 2012; Francovich, Parenti 1988). The archaeological investigation has been based on 3D surveys of the architectural remains. After a first topographic approach with Total Station, the survey has been carried out through a Laser Scanner, following procedures already applied in other projects of the University of Bologna (Toniolo, Bergami, Silani 2019; Fiorini 2018; 2019). The topographic documentation of the Savelli Fortress has also required detailed photogrammetric surveys of all the frontages of the structure.

## Results

Rocca Savelli is an architectural complex featured by a squared shape (ca. 98x100 m). It is composed of six building compounds (from now on, 'BC'), 38 frontages and 11 architectural elements (Fig. 1). BC1 is a gate tower projecting from the walls and belonging to the so-called '*a gola aperta*' typology (a kind of tower open on the inside). BC2 and 4 are towers located at the corners of the fortification, which have been consistently modified through time. BC5 is a significantly bigger structure placed in the middle of the north-west side of the fortification. The overall surface of this building (now reused as a terrace) is more than 100 m<sup>2</sup>. It most likely represented the main tower of the fortress, which allowed the visual control of a vast landscape,

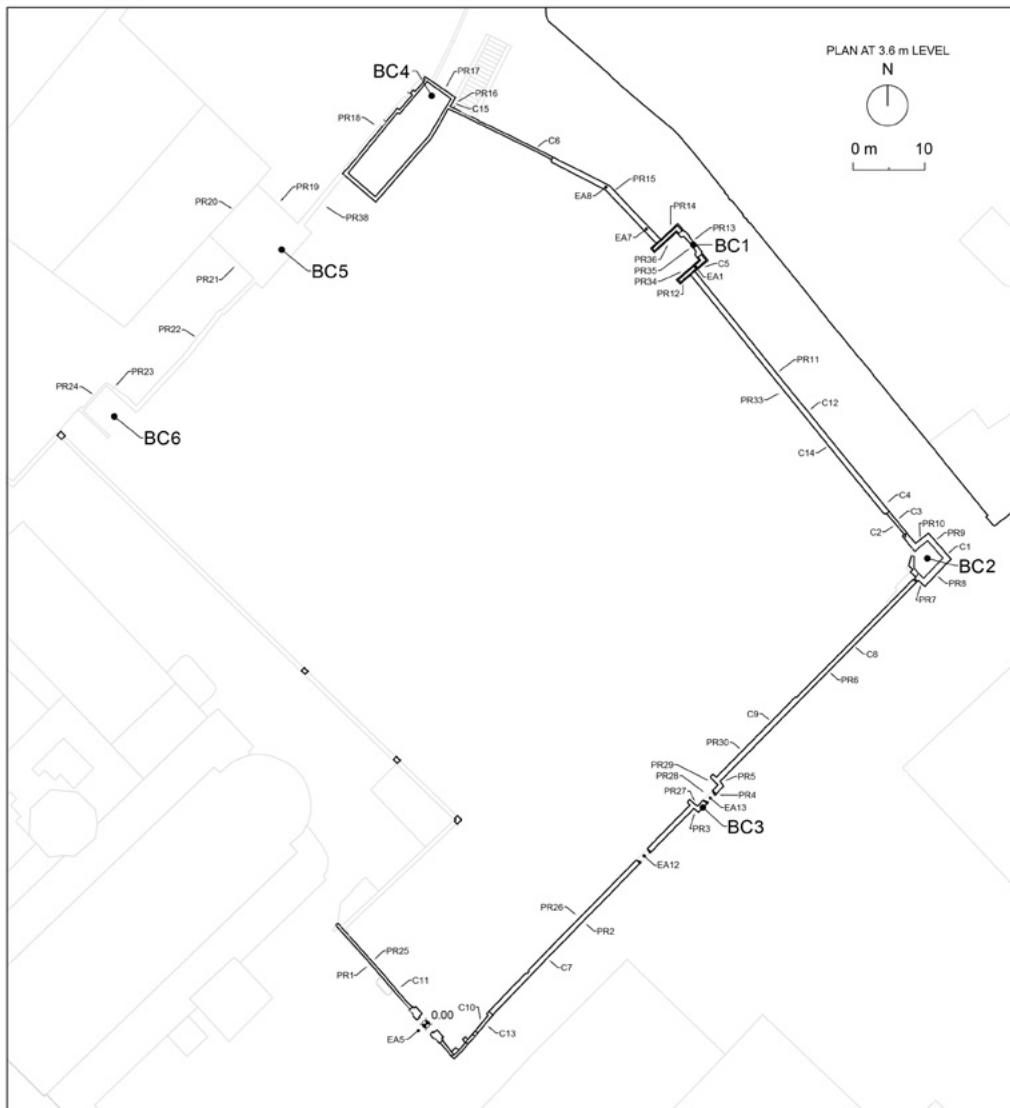


Figure 1. Plan of the architectural complex and its building compounds.

comprising a portion of the Tiber. BC5 is mirrored by BC3 on the opposite side of the site: a small tower placed in the middle of the walls. Ultimately, the remains of another tower can be identified on the north-west corner of the fortification (BC6). Nowadays, the structure has been reused as a terrace. The area surrounded by such defensive system covers about 7,000 m<sup>2</sup>.

The most ancient structures are located in the southern corner of the fortress (Fig. 1). These remains are composed of a brief portion of masonry in roughly refined tuff blocks, with no refining of the external surface. These building components are small and laid in horizontal rows. The thickness of the mortar joints varies across the masonry (Type B2). In Rome and its surroundings, these techniques (so-called '*a bozzette tufacee*') introduced the arrival of 'regular' coursed rubblework in the 13th century. The walls in small blocks of tuff (Phase 2) are stratigraphically later than this early structure. Therefore, it is possible to propose for Type B2 a chronology around the first half of the 13th century. Regarding the function of these structures, it is possible to suggest two hypotheses to be verified through further archaeological investigations (GPR and excavations among them): they may either be the perimeter of a pre-existing fortification or a part of a residential complex. Furthermore, the presence of buildings next to the church of Saint Sabina would not contrast with written evidence (Fig. 2. Krautheimer 1981, 394, 461).

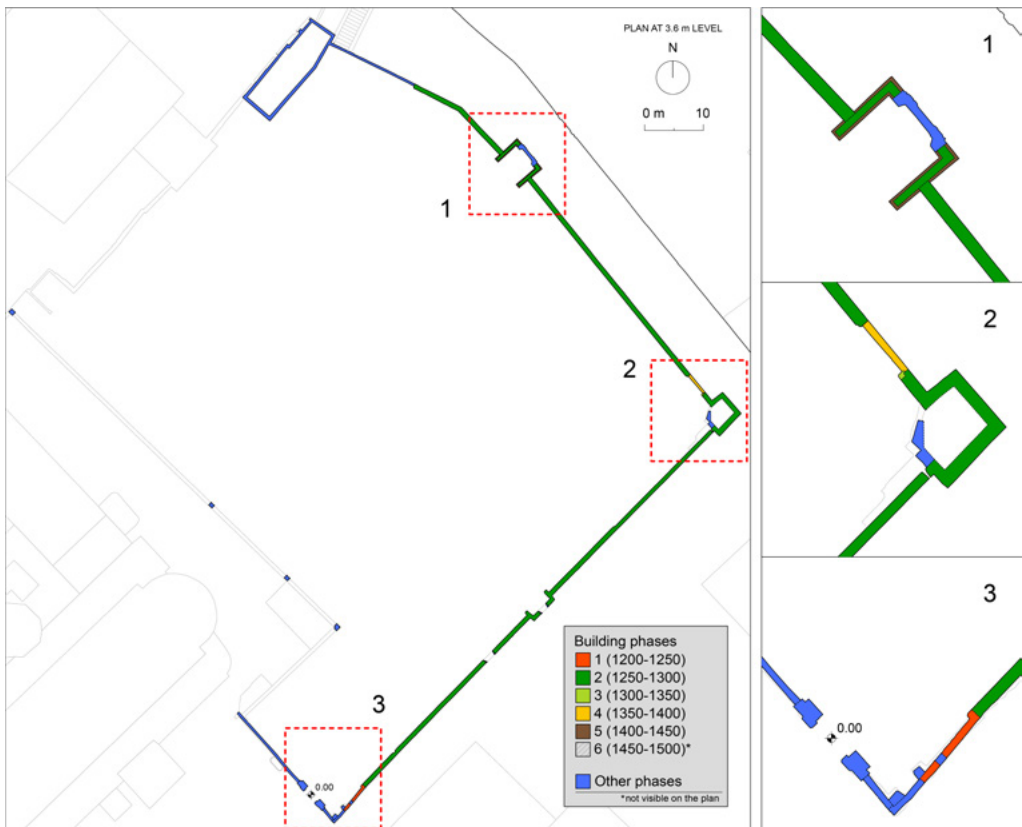


Figure 2. Plan of the architectural complex and its building phases.



Figure 3. South-east frontage (PR2) - detail: connection between the walls in small blocks (right) and the earlier structure in roughly refined rubble (left).

As mentioned above, the southern portion of the walls of the second phase is supported by the remains of the first one. This later structure was built with a more complex technique, assembled by specialised builders. It can be unambiguously compared with 13th century structures (Fiorani 1996, 154, n. 57; Esposito 1998, 23-24, 74-75, 153-156, 311; Marta 1989, 44-46.). Building elements had been accurately refined, in terms of both shape and surface. Such small blocks are laid in horizontal rows, leaving thin mortar joints (Type A1) (Fig. 3).

The presence of small sub-regular blocks instead of more irregular rubble is indicative of the high socio-economic level of the patron (Bianchi 1995). This is confirmed by the first mention of a fortress owned by the Savellis on the Aventine Hill (1279). Based on these data, the second half of the 13th century is the most suitable chronology for the foundation of the fortress (Fig. 4).

By analysing stratigraphic evidence and architectural features, it has been possible to reconstruct the sequence of the building activities related to the second building phase. The patrons' aim was probably overseeing a strategic point of the city and protecting their properties: the buildings within the walls, next to the apse of Saint Sabina. Indeed, the inner surface of the fortification is perfectly plane and was most likely artificially regularised. Patrons



Figure 4. South-east frontage (PR2). detail and main masonry types. The most ancient structures are indicated through the codes 'B2' (Phase 1, first half of the 13th century) and A1 (Phase 2, second half of the 13th century).

also decided to have the fortification built with stones. The stone supply came from nearby quarries. The area where the fortress was built is mainly composed of gravels, sands and clays, therefore it must be excluded as the quarrying place. However, a vast area stretching north-east and south-east from the fortress seems well-suited as a possible tuff quarry, as documented by geological maps (Fig. 5).<sup>3</sup>

Consequently, utilising tuff as a building material may depend on the proximity to its quarries. At the same time, a part of the building materials of the structure may have been reused from previous buildings.<sup>4</sup> After having found the stone deposits, stonemasons must have quarried blocks out through axes or saws. Specialised stonecutters later refined blocks in order to eliminate irregularities. There are no traces related to the refining technique usually known as *anathyrosis* (in Italian, '*nastrino*'= ribbon), which is typical of specialised stonecutters. However, the considerable regularity of the building components must be related to the sapient refining of highly specialised craftsmen (Fiorini 2019).

Blocks do not seem to have been further refined on the side related to the surface of the wall. The tool utilised in shaping blocks was probably some kind of stonemason's hammer, which left traces. This part of the refining process may have been performed either in the quarry or at the building place. In the first case, the operative chain was more efficient: building materials reached the building place when they were ready to be assembled in the masonry. Transport should not have been particularly difficult, since tuff is a relatively light material compared to other kinds of stone. At the same time, the area was plane and did not require pack animals. Most likely, oxen were used to drag building materials, loaded on wagons (Fiorani 1996, 87; Esposito 1998, 74).

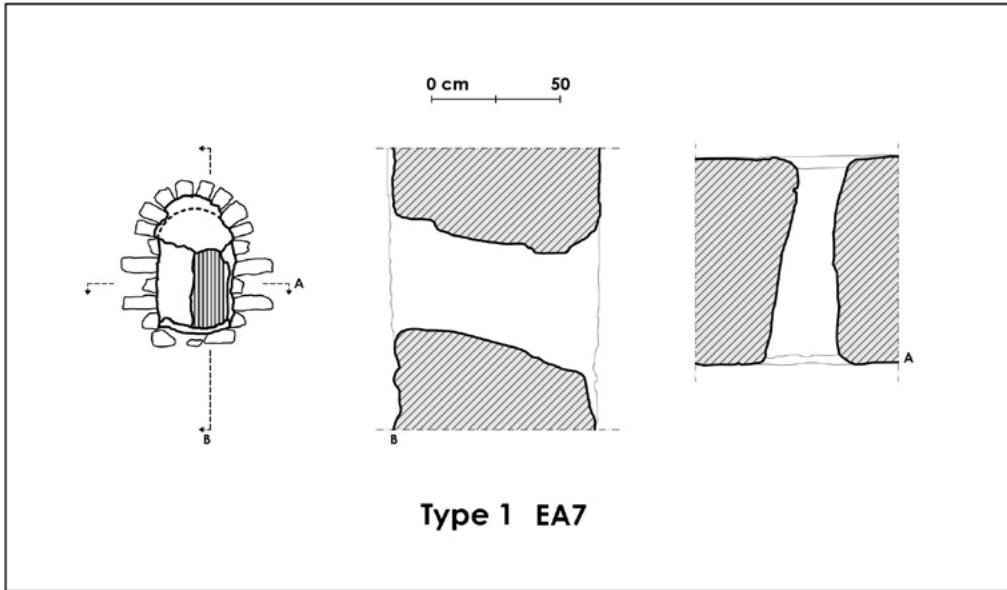
About the openings of phase 2, just a few ones have not been altered by deteriorations or later modifications. Among these architectural elements, some small windows are worthy of mention since well connected to the masonry (therefore contemporary with the fortress).



Figure 5. Distribution of lithic tuff around the archaeological site (figure elaborated from the Geological Map of the Metropolitan City of Rome).

<sup>3</sup> <https://g3w-suite.cittametropolitanaroma.it/it/map/carta-geologica-litologica/> (accessed: 10/04/2021).

<sup>4</sup> When observed from close distance, building components do not seem to show traces of previous mortar, as normally expected for reused materials.



*Figure 6. Opening from the second half of the 13th century (Phase 2).*

These small openings were probably used to oversee the north-east moat (nowadays, Clivo di Rocca Savella) and the nearby road alongside the south-east frontage (Via di Santa Sabina). The architectural element 7 (from now on, 'EA') belongs to this typology (Fig. 6).<sup>5</sup>

It is possible to notice several 14th century restorations (Phases 3-4), when the scarps of the BC1 gate tower were partially coated with bricks (Phase 5) (Fig. 7).

The second half of the 15th century represented a crucial moment of the building history of the fortress (Phase 6). After some restorations, investments kept maintaining the structural efficiency of the fortification, also by strengthening the defensive systems. In this period, the fortress was provided with a multitude of gun slits (Type 1 and 2). Indeed, these architectural elements had been built piercing the 13th century walls (Phase 2). The EA8 belongs to the first typology,<sup>6</sup> while EA1 can be associated to the second one (Fig. 8).<sup>7</sup> This functional component can be compared to other architectural elements from the 15th-16th century.

By analysing the medieval gun slits, it is possible to clarify the function of some openings of the fortress. The first type is featured by a 'manoeuvring chamber' that narrows down to a width of 6-7 cm. Consequently, the opening was able to host weapons of no more than

<sup>5</sup> The EA7 opening is characterised by the following features. Inner frontage: rectangular opening covered by a lowered arch composed of eight building elements. These blocks have been carefully refined and cannot be differentiated from the other elements composing the two jambs. Inside: the opening is inwardly splayed. External frontage: vertical, rectangular opening.

<sup>6</sup> EA8 shows the following features. Inner frontage: rectangular. Inside: trapezoidal, inwardly splayed. External frontage: rectangular opening.

<sup>7</sup> EA1 shows traces of a lock on the outside and is composed of a single stone element.



60mm calibre (the inner diameter of the barrel). Considering the height of the opening from the ground, the most suitable choice was a sort of small portable cannon, used between the 15th and the first quarter of the 16th centuries. It had a long barrel and it was provided with an element (*crocco*) or a bracket used to dock the cannon to the wall (Fig. 9).

All the gates surveyed around the fortress were built later than phase 2, since they required piercing the walls. These elements show architectural and building features clearly linked to the modern period. The monumental gate (EA5) comes from Villa Balestra (16th century) and was reassembled in Rocca Savelli in 1937. A photograph from the 1920s shows the absence of this architectural element along the walls (Fig. 10).



Figure 7. The gate tower (BC1), along the north-east side of the fortress.

Another modern opening (EA6, Type 1) can be found on the south-west frontage and belongs to a well-known typology in 17th century Italy. In Rome, an example of this very common type conserved at 31 Via dei Chiavari is particularly interesting. It was a gate (nowadays reused as a window), composed of jambs and arch in Peperino tuff, while the keystone and the capitals are made with travertine. This architectural element dates back to the first half of the 17th century, since an epigraph located on the capitals mentions Stefano Zanetti (the owner). He inherited the building from his uncle Antonio in December 1623 (Fig. 11. Bianchi 1998, 320-323).

The chrono-typological repertoire of masonry techniques is composed of three main categories: masonry in building components refined with a chisel (A); masonry in roughly refined building components (B); masonry in coarse or barely refined building components (C).

Two further categories are related to brickwork (D) or masonry in mixed materials (E) (Fig. 12). Each category groups together a series of masonry techniques, with differences in terms of refining, size of the building components and layout (Tab. 1).

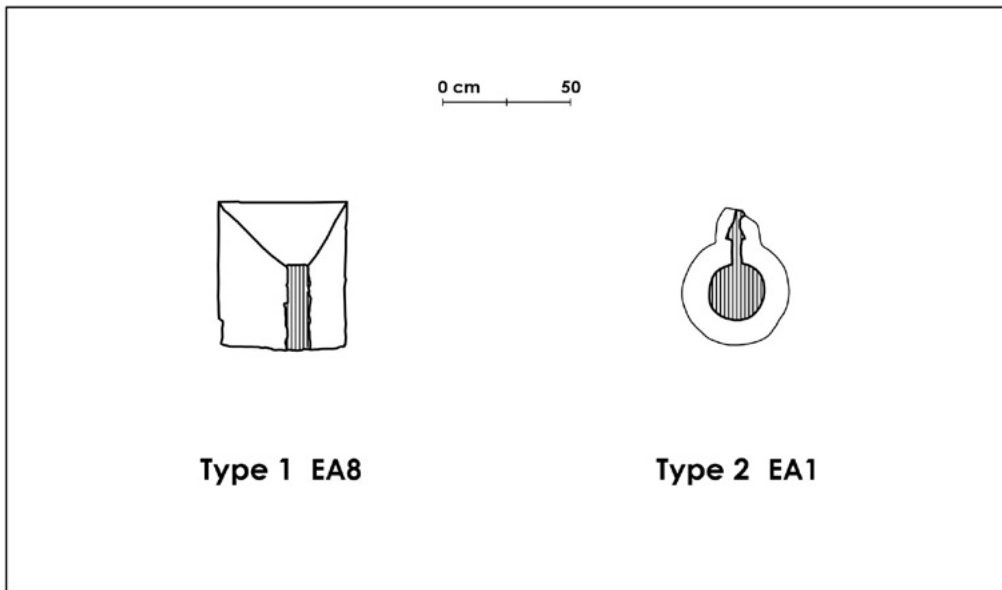


Figure 8. Openings from the second half of the 15th century (Phase 6).

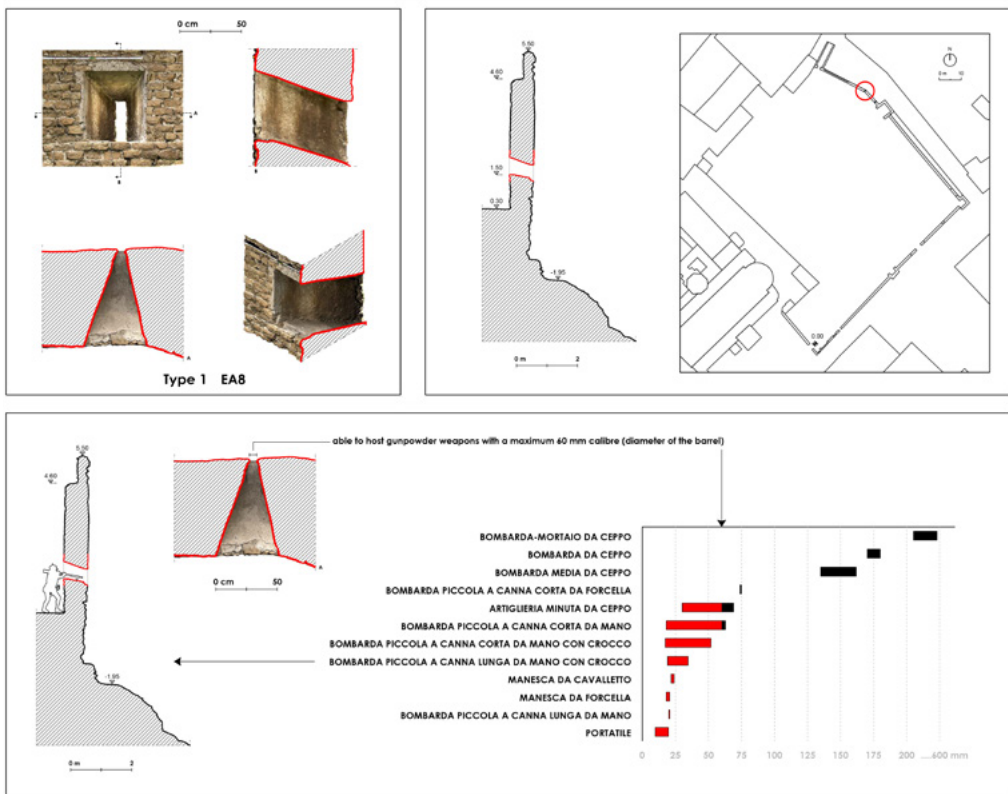


Figure 9. Analysis of the compatibility of modern weaponry with the openings built during the second half of the 15th century (Phase 6).

## ROCCA SAVELLI (AVENTINE HILL)

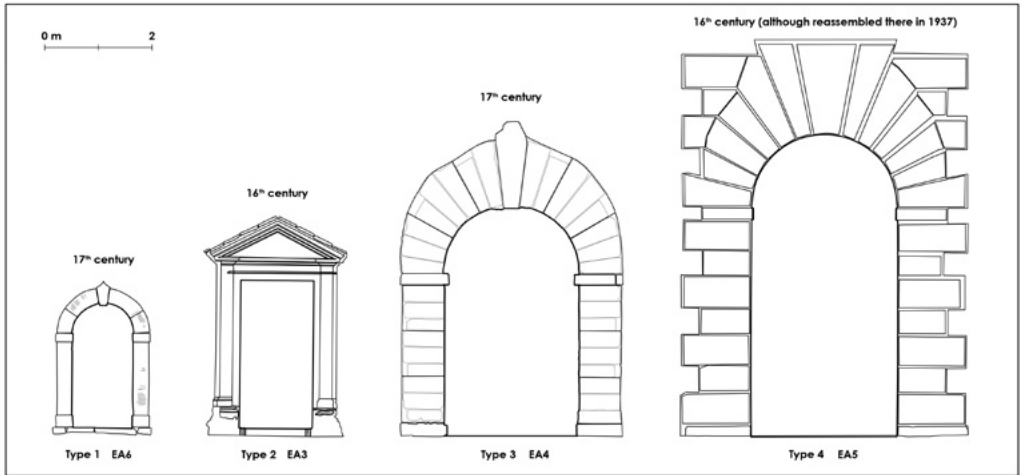


Figure 10. Doors and gates from the modern period surveyed at the fortress.

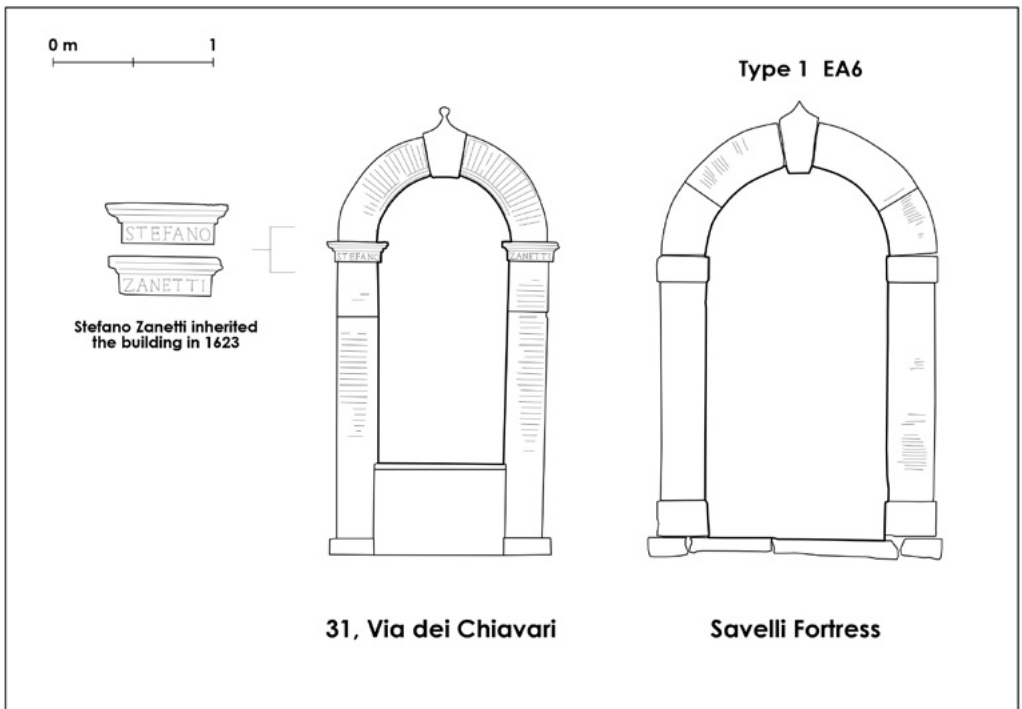


Figure 11. Comparison between the gate of the fortress and a directly dated match from the City.

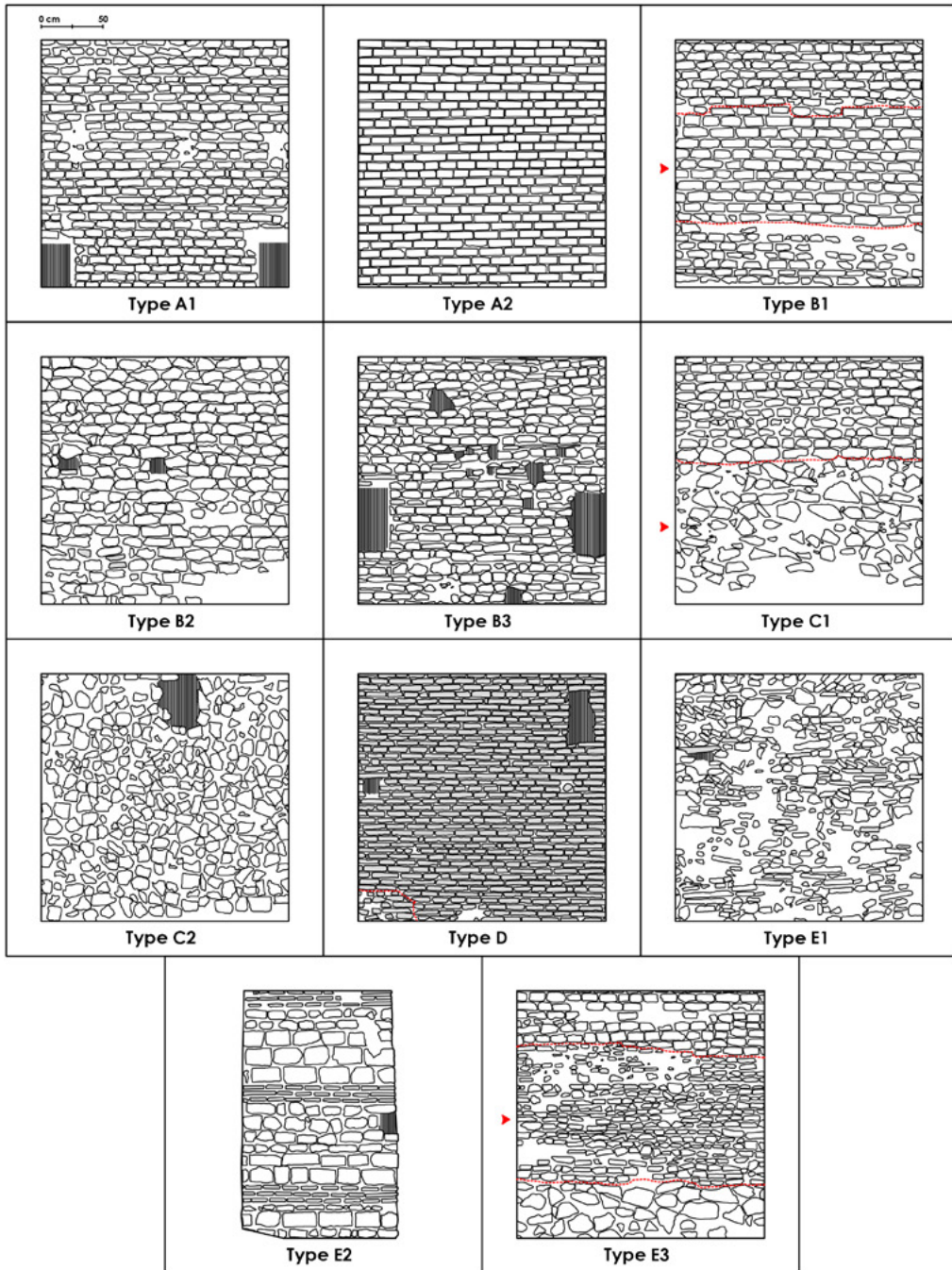


Figure 12. Chrono-typological repertoire of masonry techniques. The earliest typologies are indicated by the following codes: B2 (Phase 1, first half of the 13th century); A1 (Phase 2, second half of the 13th century), B3 (Phase 4, second half of the 14th century), D (Phase 5, 15th century).

## ROCCA SAVELLI (AVENTINE HILL)

*Table 1. Description of the different masonry types.*

Type	Description
A1	Structures built with carefully refined small rectangular blocks featured by a flat surface. Blocks (commonly defined 'tufelli') are laid on thin mortar joints. These walls are the output of a building organisation where stonecutters had a preeminent role.
A2	Structures built with carefully refined rectangular blocks. Blocks are reused, rusticated and small-sized. They have been regularly laid on thin mortar joints. The reuse of previous structures is demonstrated by some elements: an inhomogeneous deterioration of the surface, fractures and traces of pointed tools that re-worked previously refined blocks.
B1	Structures built with roughly refined, rectangular blocks, lacking in refining of the surface. Blocks are small and laid in regular rows on thin mortar joints.
B2	This type is similar to the ones above, although its building components are more irregular. Therefore, its mortar joints are characterised by a varying thickness.
B3	Structures built with roughly refined building elements. Blocks are small, reused and with a flat surface. They are laid in regular rows, on mortar joints featured by a varying thickness.
C1	Structures built with barely refined and heterogeneously-sized blocks, irregularly assembled on mortar joints with a varying thickness. The building organisation did not require the presence of a stonecutter. Walls were exclusively assembled by masons.
C2	This type is similar to the one above, although its blocks are smaller.
D	Structures built with reused bricks, prevalently laid as stretchers and in regular rows. The layout is irregular and with thin mortar joints. This technique seems to have pointed towards a rationalisation of the resources available, selecting and assembling reused materials.
E1	Structures in mixed materials: roughly refined stone blocks and a minor presence of bricks. Blocks are small, reused and lacking in refining of their surface. They were irregularly assembled, leaving mortar joints with varying thickness. Bricks are also reused and were utilised in fragments.
E2	Structures in mixed materials: roughly refined stone blocks and bricks. The first ones are heterogeneously-sized and had their surface roughly flattened out. They are laid in regular rows on mortar joints with varying thickness. Brick instead, are laid in bands composed of regular rows. They are mostly laid as headers, generating an irregular layout with medium mortar joints.
E3	Structures in mixed materials: barely refined stone blocks and a minor presence of bricks. Blocks are reused, small and lack in refining of their surface. They are laid in irregular rows on mortar joints with varying thickness. Bricks were reused and assembled in fragments on irregularly thick mortar joints.

### Conclusions

This study has demonstrated that Rocca Savelli can be classified in the typology of the fortified enclosures: the entire perimeter of the walls was built in the same period. However, data do not allow a full understanding of the initial project. It is still necessary to clarify if the fortification hosted other contemporary buildings in its inside.

Moreover, another fascinating hypothesis cannot be excluded: the fortification functioned as a defence for an earlier residential settlement located on the hill, built before the 13th century foundation. This possibility still awaits further evidence: something that encourages future investigations.

Furthermore, it will be necessary to extend the focus to other aristocratic defensive structures: for example, the apparently similar Caetani *castrum*.

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