# Periodica Polytechnica Architecture

46(1), pp. 46-56, 2015 DOI: 10.3311/PPar.8292 Creative Commons Attribution **①**  Historical-Critical Knowledge and Restoration Projects in Architecture: the Case of St John the Baptist in Castelvecchio Calvisio (L'Aquila, Italy)

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RESEARCH ARTICLE

## Abstract

Every action carried out on a historical building should be based on appropriately informed assumptions, as much with respect to the specific architectural and construction features of the building as to its state of preservation. The case of the church of St John the Baptist illustrates how critical examination of the architecture can suggest (even in the absence of urgent problems) methods of intervention that promote the use of cultural heritage, and at the same time improve conditions for conservation of the building's masonry and any artworks therein. Historical-critical study conducted on the basis of direct investigation of the church's structures and its archives restores a historical image which, in many respects but not in all, is to be considered completed from a formal point of view. Having survived invasive (and destructive) interventions during the mid-twentieth century, and subsequent restoration in the late 1990s, the church has some unresolved formal, functional, and conservation issues, the reconciliation of which suggest a preliminary proposal to be drawn on the basis of targeted inspections.

## Keywords

Castelvecchio Calvisio (L'Aquila, Italy), restoration, conservation, architectural project

# 1 Introduction

The need to respond to the various conservation requirements posed by a building of historical and artistic interest should be examined in the context of a single architectural governance, and through a project founded on prior knowledge of the architectural work; this should extended to formal, typological, construction, and components related to the use of the building, as well as its state of preservation (Doglioni, 2008:pp.85-104). Indeed, from a deep comprehension of architecture can be found a true legitimisation of the project proposal, with reference both to conservation and to the disclosure of formal and historical values. These have been the goals of Italian restoration, which have also been adopted in other parts of Europe, since the end of the Second World War, and pursued by means of direct action on materials with the ultimate goal of transmitting assets with historic and artistic value into the future (The Venice Charter for the Conservation and Restoration of Monuments and Sites, 1964, art. 9, and the Italian Charter for Restoration, 1972, art. 4). Direct investigation of architecture is still considered essential to the comprehension of the architectural work for restorations, which can only be accomplished in relation to the physical object itself. This is despite some recent interpretive approaches and resulting modes of action that tend today to undermine the safeguarding of the material identity of the work in favour of an immediate realization of the intangible cultural aspects (Fiorani, 2014). While not seeking to discuss the merits of the theoretical systematization of restoration, it is widely accepted that aside from any attempt theoretically to manage the project, this approach risks losing the very assets for which the survival of the property is considered necessary.

# 2 St John the Baptist at Castelvecchio Calvisio (Aq)

The church of St. John the Baptist in Castelvecchio Calvisio in the L'Aquila province of Italy, is both a religious building serving the local community and a rich document of history and art. It lends itself well to illustrating the issues mentioned above regarding the results of historical-constructive study, and the consequent preliminary intervention proposal. Fortunately, the earthquake that struck the area in 2009 did not inflict

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significant damage to the church, except for some minor collapses in the side arches of the *vela* (,wing' type) bell tower at the front, which were promptly rebuilt (Fig. 1); this was probably due to the recent seismic improvements made at the top of the perimeter wall. By contrast, the earthquake had more serious consequences in the area, exacerbating already precarious conditions caused by abandonment, which is in part responsible for the conservation problems shared by other smaller historical centres (Crisan, Fiorani, Kealy, Musso ed., 2015).

A superficial visual inspection of the site indicates neither the presence of specific degradation nor a significant impairment of the space, so any potential intervention would seem mainly to face issues that are outstandingly preservative, rather than fundamentally unresolved critical problems. The previous restoration favoured the ordinary use of the property, in particular performing urgent structural and functional work; by contrast, the historical-critical analysis of the building suggests a different exploration of the potentials derived from interpreting the architecture, allowing the pursuit of a more extensive improvement of both the conditions of conservation, and use of the church and its components.



Fig. 1 View of the entrance façade.

# 3 Architectural description of the building

The parish church of St. John the Baptist stands on the southern edge of the village of Castelvecchio Calvisio, just outside the elliptical walls that enclose the village, on a rocky spur of Monte Mattone. The place of worship and its annexes are divided between on different levels, with the main entrance and the churchyard on a lower level than the road to the north of the building (*via della Chiesa*); the building as a whole, however, comprises two floors, one built and another cut into the rock, now unreachable. The foundation stone emerges partially at the base of the steep west face, while the southern wall stands on the same bedrock, appropriately regularized (Fig. 2).

The church has a central nave that is oriented from east to west, aligned with the principal access and an aisle on the left side. Both are divided into four bays, separated by three pillars of mixtilinear section, with altars placed against the second and third pillars in an oblique position, facing the entrance (Fig. 3). On the right a final span, built on a pentagonal plan, forms a kind of termination 'strut' to the building. The latter is separated from the nave by a diaphragm wall rotated by 82° relative to the alignment of the pillars, with a high base wall on which is placed a gilded wooden altar on two tiers. Two small lateral doors open onto service rooms, some of which were added between the end of the 19th century and beginning of the 20th, sloping progressively towards the west, comprising the sacristy, probably completed during 1921<sup>1</sup>, the toilets and a storage space behind the oratory with direct access from outside. A third annex, which coincides with the floor plan of the tower interposed between the right of the strut and the perimeter wall of the town, is directly connected to the church; presumably it was used as a sacristy at least until the first half of the nineteenth century. At this time, a wooden staircase connecting it with the upper level was built<sup>2</sup>, while today it is a private garage, only accessible from outside.

At the south-western end of the building is located a former chapel dedicated to *Madonna del Suffragio* (Our Lady of Suffrage), headquarters of the eponymous confraternity. The oratory was built on the extension of the aisle at the end of the nineteenth century and completed by the first decade of the next century.

<sup>1</sup> Decree of authorisation for the sale of a piece of antique furniture, January 18, 1921, and related correspondence, in ASBSAE, *Castelvecchio Calvisio*. *Church of St. John the Baptist* and in ACSR, *Min. PI, Gen. Dir. AA. BB. AA., Division II (1929-1933), Monuments*, b. 120, *Aquila. City and Province A-C (1929-1933)*, issue 6 "Aquila. 1929. Castelvecchio Calvisio. Main church. *Antique sale.*"

**<sup>2</sup>** «Deed of agreement, ability and final measurement» for the construction of a wooden staircase, May 26, 1838 (ASA, Intendenza, Series I, cat. X, b. 1229 A [1835-1850], issue 7 «Castel Vecchio Carapelle. On the renovation of the Royal parish Church in Castelvecchio Carapelle»).

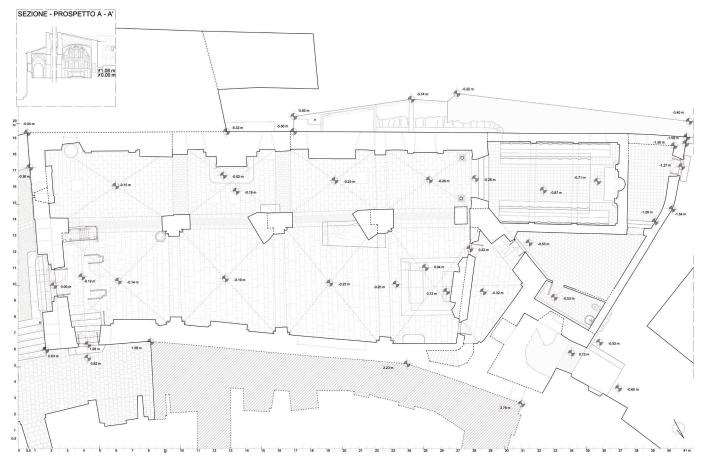


Fig. 2 Plan (+ 1.08 m)

The lower levels of the building are taken up by tunnels dug into the limestone rubble foundation, partly enclosed in houses at the lower level, and a layer below the third and fourth bay side that was almost certainly used for burials<sup>3</sup>, of unknown configuration. A supposed 'crypt' was unearthed during the restoration of the 1990s (Morico, 2003:p.122), but the only confirmed findings relate to a wooden coffin under the floor, near the left aisle<sup>4</sup>. A trace of this and other burials inside the church are some limestone flagstones (approximately 70x70cm), laid in place of the original tombstones during the recent renovation of the interior flooring.

In addition to the underground areas, the material consistency and the state of the attic spaces are also to be ascertained, at least in the area corresponding to the western tower, the nave, and at the side of the second bay, which is accessed through a small door in the upper part of the north wall.



Fig. 3 View of the central nave towards the main altar.

# 4 Historical overview

The first written evidence of a confirmed place of worship in Castelvecchio Calvisio occurs in 1478 in relation to the erection of a baptismal font at the *«ecclesia S. Mariae de Carapellis»*<sup>5</sup>, identified in the current church of St. John the Baptist (Antinori, XXXIX, 2, 493). There is a small amount of information on the church that can be inferred from historical

**<sup>3</sup>** The use of the church for burials was noted from the recollections of priests, June 26, 1767 and December 19, 1752, in CADS, ASCDS, II, *Particular administration of the diocese*, B, *Parishes*, b. 3 (1726-1946), *«Carapelle Calvisio - including Castelvecchio Carapelle. Different deeds».* 

<sup>4</sup> AFBSAE, n. neg. 42722.

**<sup>5</sup>** SASS, Archive of 'Casa SS. Annunziata', Ecclesiastical Parchments, issue 7, n. 65.

studies on the territory (Giustizia, Clementi, Feller, Mattiocco, Cercone, Berardi, 1988) as well as some analysis of its urban fabric and construction characteristics (Soprintendenza BAAAS per l'Abruzzo, 1983:pp.188,285-288; Zordan et al., 2002:pp.53-166; Chiarizia, 1987:pp.471-473). Not much else can be gleaned from other popular works (Marsili, 1984) nor from a reconstruction of the major political and administrative events (Morico, 2003).

While the more recent history of the church is more easily be explored both through direct investigation of the structures and of the archival records, the only element that can shed light on the architectural remains that precede the structure's adaptation for religious purposes during the second half of the fifteenth century comes from evidence of construction. Two square towers are clearly identifiable, one coinciding with the second span of the aisle, and the other interposed between the church and the walls to the west, as well as the aforementioned element with its termination 'strut'. All these structures with defensive and control functions of the territory have been sometimes identified as a castello6 (castle) or a palazzetto fortificato (fortified house) (Soprintendenza BAAAS per l'Abruzzo, 1983:p.286; Marsili, 1984:p.19; Chiarizia, 1987:p.470). Taken together, they may be hypothesized to have been some kind of external fortification on the outside of the surrounding twelfth and thirteenth century walls; the relationship between the different parts cannot be unambiguously determined based only on a high-level visual inspection.

With its new parochial function - attested to by the transfer of the baptismal font from the church of *San Cipriano* (St. Cipriano) outside the village, to the church of *S. Maria di Carapelle* (St. Mary of Carapelle) - there would then have followed an extensive transformation of the walls, no longer used defensively. This would have concluded in the sixteenth century with the establishment of a single space coinciding with the current central nave, followed over the next few centuries by the definitive two-nave reconfiguration of the existing structures.

Extensive documentation from the nineteenth century and the first half of the twentieth century give accounts of the frequent maintenance of the roof and interior finish, including *«riquad-rature colorate alla volta ad uso d'arte»*<sup>7</sup> (coloured squaring on the vault surfaces, which was a contemporaneous constructive practice), the construction of the pulpit (1833) and the choir

on the counterfacade. The new paintings involved the entire church, with the obvious intent of emphasizing the uniformity of the interior space that had been achieved during the seventeenth century intervention, at the expense of the pre-existing wall decorations, which are barely discernible from faint traces of fresco that survive on the first and final pillars, as well as along the side walls. The surfaces that had been decorated with linear motifs to emphasize the geometry of the vaults and arches had been covered by successive layers of greyish whitewash or plaster, and the nineteenth-century decoration was only restored in the 1990s. It has not been possible to determine whether the whitewash was in relation to the mid-twentieth century restoration, or whether it was carried out during a presumed re-roofing at the beginning of the century8. In any case, the whitewash or plaster finish completely covered the surviving painted decorations, as can be observed in some areas where the grey-white finish had fallen off, which is documented in some photographs taken before the removal of the finish9.

# 5 Restorations and recent adaptations

Restoration work carried out by the L'Aquila's Civil Engineering Department between 1954 and 1957 definitely impacted the complex structure, causing the permanent loss of the battlements that once existed on the crown of the south tower, and altering the modern image of the building. The wooden roof was replaced with a brick and cement structure, after completion of a top layer and short perimeter pillars of reinforced concrete, inserted into a partial groove in the top of the walls, as is observed in the attics (Fig. 4). Archival documents indicate, among other work, the demolition and reconstruction of the floor and fixtures, the removal of the plaster and its rebuilding from scratch, and the removal of eight baroque altars. The projects are listed in surveys dated 1947 and 195410; the first was prepared by the Superintendent of Monuments and Galleries of L'Aquila, and the second by the Civil Engineering department. However, no proof of the effective execution of the either of them has been found, since the historical archives of the current Superintendent B.A.P. and those of the Civil Engineering Department are still unusable as a result of the 2009 earthquake.

**<sup>6</sup>** Report by Antonio De Dominicis, November 4, 1947 in SBSAE, Castelvecchio Calvisio. Church of St. John the Baptist and ACSR, Min. PI, Gen. Dir. AA. BB. AA., Division II (1945-1955), Monuments, b. 25, Aquila Province (1930-1951), issue 6 «Aquila 1947-1948. Castelvecchio Calvisio. Parish church».

**<sup>7</sup>** «Expert report for work on the masonry art of the churches of Castel Vecchio Carapelle», July 20, 1847, in CADS, ASCDS, II, Particular administration of the diocese, B, Parishes, b. 3 (1726-1946), Carapelle Calvisio. Different deeds, issue «General state of the churches of the town of Castel Vecchio Carapelle [...]».

**<sup>8</sup>** Expert report, May 18, 1905, in ASA, *Prefecture*, s. II, *Special business of the towns*, vers. VII, b. 168, Carapelle (1891-1905, issue *«Canonical church parishes. Subject: restoration of the roof of the Church of St. Savior in Castelvecchio Calvisio (1905)».* 

**<sup>9</sup>** AFBSAE, n. negs. 19858, 19859.

**<sup>10</sup>** Expert report of the Superintendent for Monuments and Galleries of L'Aquila, October 21, 1947, in ACSR, *Min. P.I., Dir. Gen. AA.BB.AA., Divisione II (1945-1955), Monumenti*, b. 25, *Aquila and province (1930-1951)*, issue 6 «*Aquila. 1947-1948. Castelvecchio Calvisio. Parish church*» and expert report of the Civil Engineers, April 24, 1954, in ASBSAE, *Castelvecchio Calvisio. Church of St. John the Baptist.* 



Fig. 4 View of the attic space above the final span of the central nave.

Despite knowing where the removed altars ended up, the partial destruction of the surviving fixtures has certainly undermined the original relationship between the parties, having, for example, reduced the canteen to a mutilated shape that has lost any formal connotation, removed some altar steps, and conserved, instead, the aforementioned counter-altar. The projected intentions, translated into practical action by the Civil Engineering Department, would already seem to be summarised in the report accompanying the 1947 survey. Here, where it is revealed that: «the church is infested with a number of supposedly baroque altars with low quality pictorial decorations [...] a very brief examination of the building reveals an architectural complex of little artistic value, but the presence within the church of an important carved and gilded wooden altar, and some wooden statues from the fourteen hundreds and fifteen hundreds [...] are of some interest and should not be overlooked»<sup>11</sup>.

At the turn of the current century, in view of the principal liturgical function of the building, it was decided to install equipment (electrical wiring, lighting, a burglar alarm, and automated bells). Slightly earlier to this, a small space for toilets was situated in the sacristy. Finally, mobile infrared lamps were introduced in the immediate vicinity of the pews to counteract harsh winter temperatures. While these devices meet the congregation's intermittent needs for comfort, they nevertheless have compatibility problems with the conservation of gilded wooden altars, paintings on canvas, and coloured wooden statues, as well as archival material that is kept in area behind the oratory.

If, in general, the inclusion of various components and the creation of hidden wiring has had some effect on the material integrity of the structures, then consideration of the lighting system is particularly urgent, for which a comprehensive review is essential in reference both to the type (halogen spotlights) and the placement of the lighting fixtures.

As previously recorded, the structural integrity of the church has been the subject of particular attention, safeguarded by inserting metal chains at the top of the two longitudinal walls that surround the main aisle. At first glance, it appears that these protections proved their effectiveness, because there are no signs of instability in the walls even following the 2009 earthquake. Similarly, any overload resulting from the replacement of the wooden roof with one of concrete does not seem to have compromised the effectiveness of the church's superstructure.

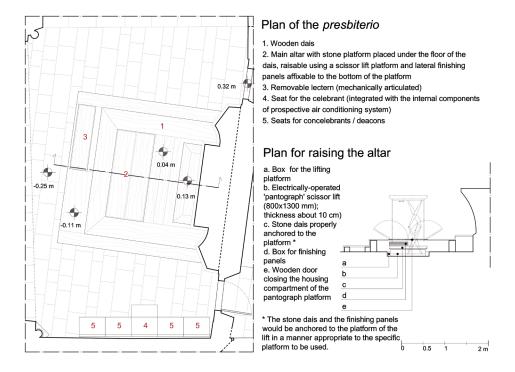
## 6 Preliminary restoration proposal

Although it is structural conditions that cause the greatest concern in the contingency phase of the post-earthquake recovery the territory is still experiencing, no critical issues have emerged in this regard. The consequences of an earthquake with dynamic characteristics differing from earthquakes in the past requires evaluation with appropriate modelling and verification, above all, with respect to maintaining the reinforced concrete beams connected to the pseudo frame at the top (the girders and pillars inserted into grooves at the tops of the walls). These are in fact now prohibited by Italian law, but are difficult to remove without substantial demolition and reconstruction.

It also appears necessary to carry out further investigation and direct testing, both to gain a better historical and architectural understanding of the building (which should include inspections of the underfloor and attics areas that are not currently accessible) and so that a better comprehension of the causes of any degradation can better influence an informed intervention plan. While missing this indispensable cognitive phase, the proposal set out below seeks to balance the obvious conservation and functional problems, linked in particular to the liturgical demands of the space, with an evaluation in the light of a historical-critical interpretation.

In one respect, understanding the building's architecture, and assumptions about its transformation provides the necessary conceptual tools, for example, to curb the potential 'archaeological' temptation to expose traces of the original sloping floor of the nave. This was attributable to the first phase of liturgical adaptation but was at the same time the likely legacy of the original use of the facilities on the floor plan of the original defensive core, which perhaps housed a stall for animals. To testify to this past, now assimilated into the most recent and precise architectural imaging, are the heights of the bases of the columns pertaining to the fifteenth and sixteenth century columns. These were built on the original floor and cut (or hidden) by the regularization and partial elevation of the flooring, probably in the second half of the seventeenth century. This period saw, infact, the conclusion of the process of reconfiguration of the religious architecture into the definitive redefinition of the place of worship. This is marked by the oblique arrangement of the two altars placed against the pillars along the nave, and the rotation of the back wall, which taken together, hark back to

**<sup>11</sup>** Accompaniment to the expert report of 1947 by A. De Dominicis, November 4, 1947 (see above note).



**Fig. 5** Proposal for rearrangement of the *presbiterio*.

the united bi-nave space, made up of structures from different eras that have been adapted over time. Clearly, the need to present a regular, level internal floor prevailed in the choices that governed the image of the baroque church, which is what we are now presented with, unless some individual formally classified and architectural elements are lost. This same principle of homogeneity was reiterated when the flooring was replaced twenty years ago using limestone slabs.

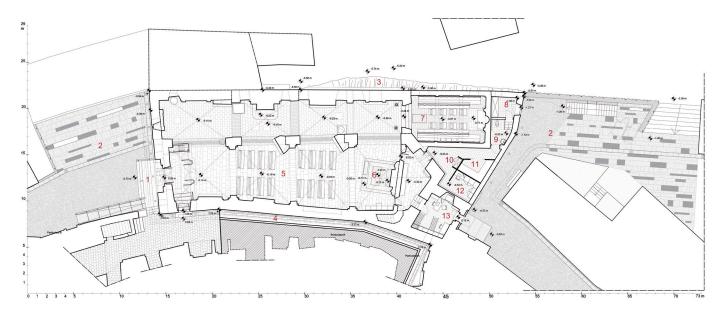
By contrast, if the recognition of a consolidated seventeenth century articulation should avoid interventions to restore earlier phases, it is precisely this internal spatial identity that requires the development of a different solution for the presbiterio (chancel). The current solution for the chancel, although complying with the requirements of liturgical adaptation<sup>12</sup>, partially obscures the view of the baroque altar, impacting on the perspective of the space due to the central placement of that same altar. The introduction of elements «not fixed, or 'mobile', carefully designed and defined» (CEI, 1996, point 16) would allow the restoration of that view, consistent with occasional use of the space itself (Fig. 5). Partial distributive modifications and changes to intended use would guarantee better conditions for conservation of existing work in the building, as well as a more rational use of the different spaces. This would also take into account the specific requirements of the asset by the local community<sup>13</sup>, and the intrinsic characteristics of its

individual parts, as well as in terms of more economic management of the spaces and their accessibility.

In this regard, the inadequacy of the church's supplementary spaces (sacristy, toilets, storage of church paraphernalia, parochial archives) is revealed, as is the lack of a weekday chapel and an area reserved for Eucharistic worship - although the presence of the latter two items is not mandatory, but merely desirable in medium and large churches. The current sacristy (created by enclosing an external town space, opening towards the west, and delimited on three sides respectively by the latenineteenth-century oratory, the termination strut and the adjacent western tower and the storage space behind the oratory) requires an improved subdivision of the internal space. Disregarding the evidently poor architectural contributions to the pre-existing external structures provided by the later addition (and the absence of any formal or artistic enhancement to be gained from the extension), the enclosing wall has indisputably become part of the consolidated image of the immediate urban context; the possibilities for intervention are therefore limited to the interior of the annex itself. That said, the location of the toilets between the original termination strut and the west tower should certainly be reviewed, as this is a 'nerve centre' for understanding the history of the complex. Various unwieldy and unused furnishings scattered around in the interior could be transferred elsewhere or donated to museums after appropriate evaluation. The majority of them are located in the room behind the chapel, which also contains paper archives of undoubted value. The location and the direct accessibility from the outside of the latter room indicate that it could be the possible location of a room for facilities, and a toilet. In the sacristy proper, a private environment for the officiant could then be set up, as well as a small storage room (Fig. 6).

**<sup>12</sup>** From a liturgical point of view, the chancel and its present equipment are precisely located both in relation to the elevation introduced by the wooden platform (that should match the height of an original stone predella) and also in relation to the recommended location of the "3 prominent places" (the altar, the lectern and the seat of the president) (CEI, 1996, points 16-19).

**<sup>13</sup>** Before the 2009 earthquake, the resident population amounted to a little fewer than two hundred inhabitants.



**Fig. 6** Plan with an indication of the intended uses and the major actions. 1) Reconfiguration of the main entrance, 2) organisation of the outbuildings, 3) removal of the cement superstructure and stabilisation of the rocky outcrop, 4) perimeter gap, 5) disassembly and reassembly of the interior flooring of the church and improvement of technical equipment, 6) reconfiguration of the *presbiterio*, 7) side chapel, 8) location of technical equipment, 9) toilets, 10) sacristy, 11) church equipment storage, 12) reserved space, 12) parish archive/office.

The western tower, fundamental to comprehending the sequence of the church's early construction history, and used until the nineteenth century as an ancillary space, requires reintegrating in its entirety into the context of the church, to which the upper storey of the tower belongs. The ground floor of the tower is currently used by a private garage and the door that led into the area behind the main altar was blocked up probably after the construction of the new sacristy; the vault structures still retain the passageway connecting the two levels of the tower<sup>14</sup> which is accessed by a well-documented wooden stairway, now missing. The reopening of the blocked door would allow direct access to the service rooms above, while the current entranceway (from outside), properly resized for the improvement of nearby structural conditions, could be used for public input. The space would lend itself to accommodating an office and the parish archive due both to its size and distribution characteristics and to its historical-constructive importance, which sets it apart from the other parts and accessories; among other things, it retains the surviving flooring in herringbone pattern brick. From the ground floor of the tower, it is possible, if necessary, to reach the top level by restoring the vertical connection through the aforementioned opening in the vault using movable stairs integrated into the interior design of the archive (Figs. 7-8).

The place of worship does not have a side chapel<sup>15</sup>, but the former oratory, its original function having been changed, could be used for celebration of daily rites, in particular during the

winter season, which would be compatible with the architectural and distributive features. Adequately prepared, this could even allow Eucharistic adoration, ensuring the conditions for intimate reflection and at the same time, giving the monumental entrance porch the appropriate 'highlighting' suggested by its religious significance. The height difference between the chapel floor and the main body of the church, of about 60 cm, could be overcome with the use of a platform lift from the floor, as an alternative to the difficult construction of a stairlift.

A new design for the main entrance would also allow accessibility to the church by the disabled, and would lend itself to better-managed access to the churchyard from *via della Chiesa*, from which there is access the churchyard itself through a gap in the city walls, close to the facade. A ramp from the churchyard could connect the current street level with a new landing at the height of the masonry base of the eastern façade. For the construction of the new masonry walls, materials and technologies could be used that ensure appropriate integration with the natural environment. The new walls could use the same breach in the limestone foundation and thus create a perfect reminder of the geo-morphological character of the terrace in which the churchyard sits; while at the same time the manner of execution could shape the geometric rigidity of the new walls (Fig. 9).

The same attention to the characteristics of the site indicates the possibility of removing the concrete containment super-structure of the rock upon which the southern perimeter sits (currently concealed by landscaping) for which the use of less invasive techniques to stabilize the soil would be evaluated. Closely connected to the uses described above, an adaptation of the systems will ensure prioritised conditions for the conservation of the structures and valuable artefacts that are present in

**<sup>14</sup>** See note 2.

**<sup>15</sup>** The side chapel is a «space for weekday celebration and if necessary for the winter, distinct from the principal space and equipped with all the elements necessary for worship» (CEI, 1996, point 23).

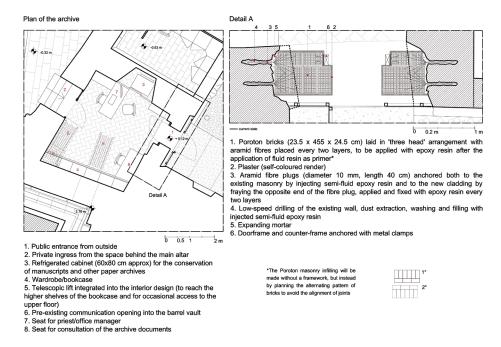


Fig. 7 Project plan for the ground floor of the western tower and details.

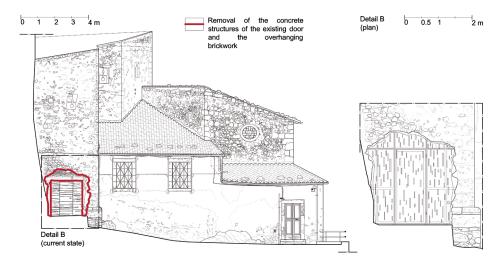
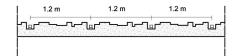
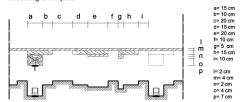


Fig. 8 Current state and project details of the western facade. The external closure of the new opening, obtained from redimensioning the existing entranceway, will be finished using 'Corten' steel plates. These will be cut with laser technology and mounted flush with the external face profiles with a stainless steel box; the external plastering will be limited to new 'poroton' bricks, recessed to be flush with outer wall, leaving visible a 'trimmed' profile resulting from the removal of the cement door jambs.

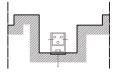
The concrete partition walls planned for the churchyard and public space behind the oratory can be achieved by modular form casting. Each module (1.2m) is equal to the distance between the metal uprights mounted in the depart recesses of the well



The shape of the visible surfaces will be obtained through various protrusions conforming to the shape of the wooden forms, to be carried out according to the plan.



The uprights are usable for affixing the guardrails of the ramps and stairs and, being hollow inside, could also support the outdoor illuminations.

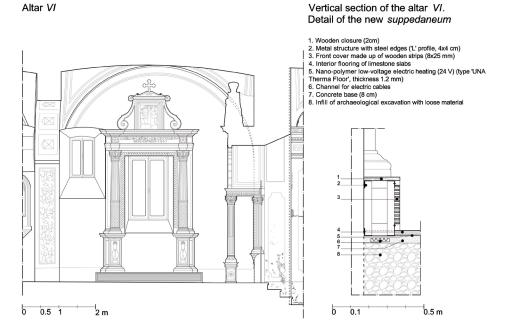


The colour and material finish of the new concrete walls will be derived from the use of white cement and an aggregate of medium grain size obtained by mechanical grinding of the local stone used in the façade. The correct amount of colours and aggregates added to the concrete mix will be obtained by means of test samples.

The highlighting of aggregate on the visible part of the wall will be ensured by decommissioning the moulding after 20 days and jet washing the exposed surface. Appropriate preliminary tests will determine the particle size to be used; the use of a medium-size aggregate (0.5 -diameter <2 cm) should mitigate the rigidity of geometric shapes by giving an irregular profile to the linear edges of the recesses and protrusions.</p>

Fig. 9 Technical aspects of new external reinforced concrete partitions.

Fig. 10 Reintegration proposal for the predella of the altar against the south perimeter wall in the last recess on the left.



the church. Despite the absence of useful data about the exact shape and dimensions of the electrical wiring, the possibility of a low-voltage electric heating system could be considered; this would consist of polymer strips containing semiconductor nanoparticles to be placed under the floor, with the objective of keeping the temperature some degrees higher than the winter minimum<sup>16</sup>. For intermittent liturgical use of the church (Christmas, Easter and other occasional celebrations), the system could be enhanced by increasing the strips to be activated in case of need. The removal of the recent flooring is clearly necessary anyway, in view of the investigation of the structures that were unearthed, but poorly documented<sup>17</sup>, during the last restoration. These structures were left partially open along the two aisles; in particular, a large portion of the original limestone paving stones is visible by the last pillar, bounded by various dividing walls, but about which it is not possible to draw any conclusions. For better clarity, it is proposed to dismantle these elements and replace them using methods similar to those already present. This will comprise limestone slabs laid with minimal jointing, shaped in situ, thus ensuring a shared perceptual uniformity despite the presence of the different sizes, texture and surface finishing (mechanical grinding and finishing by chisel) of the slabs used, thus to distinguish some of the more notable parts, corresponding to the wall structures found below the floor.

To heat the weekday chapel for ordinary use, and the sacristy, in both of which the reconstruction of the flooring has

been well planned, it would be possible to install a system of water-filled floor radiators. Conversely, to prevent compromising the brick floor of the west tower, a radiant skirting board could be partially integrated into the fixed decor of the parish office; for the modest paper archive, finally, it would be sufficient to install a refrigerated cabinet, placed conveniently into the existing recess in the southern wall (Fig. 7).

During the restoration work of the 1990s, the late-nineteenth century decorations were restored, which at the time had been covered with a layer of grey-white plaster. The altars had also been affected by repainting<sup>18</sup>, probably before the aforementioned mutilations of the mid-twentieth century. For the removed altars and plinths, arrangements for reintegration will be evaluated on a case-by-case basis. In particular, on reflection, the final wall-mounted altar along the lateral aisle, completed around the beginning of the seventeenth century and its upper part transformed into a window in the nineteenth century, does not allow for the replacement of the altar platform due to the new meaning given to the original element by its historical transformation. It would also be inappropriate to add a new structure, which would interfere with the porch near the entrance to the chapel. However, the issue of the connection between the altar and the floor remains to be solved. In fact, the base of the altar is about 30 cm above the ground and was originally built on a plinth (predella), traces of which survive at the bottom of the altar. The insertion of a metal-framed box, equipped with a slatted wooden front panel, would repair the existing discontinuity by reclaiming just the vertical development of the original predella, and address the previously

**<sup>16</sup>** I am grateful to architect Riccardo Fibbi for the useful suggestions around the adaptation of technical systems.

**<sup>17</sup>** The carrying out of any scientific investigations or surveys on these structures has yet to be properly verified in the documents of the historical archive of the BAP Superintendence for Abruzzo kept at the *Forte Spagnolo* in L'Aquila, which is still inaccessible.

**<sup>18</sup>** AFBSAE, negs. n. 19876, 19881, 19898, 19884, 19886, 19887, 19890, 19895, 19897, 19899, 19900, 19893.

mentioned issues of geometric-distributive compatibility. The small space inside the new structure could then be used for the housing of junction boxes and other electrical components (Fig. 10). In any case, beyond the possibilities offered by new shapes, which could be added to or reintegrated in consideration of principal formal and architectural values, the existing seating and channelling should be verified prior to planning, should be reused in the first instance.

The internal finishing from the second half of the nineteenth century leaves no doubt of the consistency of the fragmentary early paintings which don't seem affected by any chemical-physical or mechanical process of degradation; thus they should only be properly restored. Differently, water damage is revealed on the north wall abutting the ground and it requires an appropriate conservation work. A perimeter cavity could reduce the presence of damp, and at the same time, could allow the embedding of urban technological networks (relating to the supply of electricity, telecommunications, public lighting, etc.), subject to the specific management needs of the individual services. This proposed general solution should be considered in the light of existing infrastructure and underground utilities; and in this specific case, critical conservation and the need to remove cables and supports from the building facades should be evaluated in relation to the urban-scale rationalization of the water supply and sanitation courses, and implemented within the delicate phase of post-seismic reconstruction<sup>19</sup>.

The confirmed infiltration of water that occurred in the past through the roof of the former oratory was the main cause of the poor condition of the walls, which have well-characterized plastic articulation and painted decoration. Although little artistic value, they are still essential in defining an internal space inspired by the architecture of the late Baroque religious confraternities. Unlike the main church space, an intervention on the roof of the chapel seems to have eliminated, at source, the damp from the inner surfaces, which are waiting to be duly restored; however, the constructive features of the intersected barrel vault and the origin of the cracks in the vault itself remain to be clarified.

The degradation phenomena detected on the painted plaster and stucco on the frames and capitals appear to be due to a combination of physical-chemical mechanisms and the mechanical disintegration of the materials (gaps, exfoliation and erosion of the paint film, disintegration, and efflorescence). In addition, there is damage caused by lack of maintenance (a lack of brackets for the gilded wood frames) and inappropriate reintegration of the missing parts (inappropriate restoration of gaps and damage in the paintings). With consideration after preliminary cleaning, the intervention will be aimed at the consolidation of the media and of the plastic components of the

architectural order, as well as the final treatment in undertones of the incomplete geometric decorations and the reintroduction of missing components (Fig. 11). The manner of execution, as ever not always easy to verify, would in this case also be derived merely from theoretical reflection, according to which a slight distinguishability could be implemented. In order for the newly-constructed corbels, replacing those that have been lost, to appear similar to the originals in terms of size, shape and final gilding, they will also have similar decorative motifs to those on the surviving elements; in particular the revival of acanthus leaves carved into the lower surface of the volute. Originally achieved using bas relief, this could be achieved by employing a different carving technique, for example the technique known as a fondo incassato (fully embedded); the 'simplified form' alone is not considered appropriate because of perceptual imbalances that could arise from a different play of light on the newly-integrated corbels and on the existing ones.



Fig. 11 Details of the internal southern wall of the former oratory of Our Lady of Suffrage.

#### 7 Conclusions

As we have seen, recent work on the church has ensured its ordinary use; however, it has also been shown how historical knowledge and theoretical reflection could, almost implicitly, orient the direction of work on the building towards the imparting of its cultural content, while remaining compatible with its necessary functions and ensuring the preservation of its structures and artworks. From an urban scale, to that of the building and to the fine details, the proposed interventions can only be performed within a single architectural restoration project. This ensures, beyond the specific technical and operational problems of each conservation (from structural consolidation to the restoration of the altar, or of the architectural surfaces), that all the components, which contribute to the formation of the church's image, are considered together in a consistent manner. This promotes not only the realization of direct actions on the structures but also of mediated measures, such as a calibrated management of the space, and constitutes a form of guarantee of better conditions for the cultural fruition of the monument.

**<sup>19</sup>** The *«technological tunnel»* hypothesis has already been taken into account by professionals, as reflected in the annexes to the reconstruction plan.

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