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Proposal of a Methodological Universal Guide to (Re)discover the Heritage: Palazzo Gastaldi-Lavagna

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Received: 27 July 2020; Accepted: 31 August 2020; Published: 2 September 2020

Abstract: This paper analyzes the theme of the knowledge project as an element guide of the restoration project. In view of the constant evolution of technologies related to diagnostics (in the laboratory and in situ), the research exposes the importance of a comprehensive acquisition of preliminary information as a project design phase tool, in order to solve doubts, verify hypotheses preventing the timeline and control economical aspects during the construction phase. The case study analyzes the restoration of an eighteenth-century apartment in a noble palace of Imperia City that has been neglected for years. From a first phase of analysis and knowledge, the project action sought to integrate contemporary needs with the historical features, in respect of the existing and its conservation. The proposed intervention aims to show how the survey of the building (geometric, material and decorative) combined with the investigations on the existing unit (archival, historical-architectural, technical-constructive and geological-petrographic) and the diagnosis of the pathological picture are necessary knowledge to guide and control actions of the final phase of the project.

Keywords: analysis; knowledge; diagnostic tests; framework of needs; conservation

1. Introduction

In the state-of-the-art, the reading of the historical artifact is recognized as a system of limited, perishable, irreproducible and irreversible resources; in this precious fragility, the design action manifests itself as a disturbing event, necessarily careful not to deny the essence of the factory but called, at the same time, to integrate the existing and allow it to respond to new needs. To intervene, it is necessary to know [1]. Within this design universe, the importance of the knowledge phase of the building object as a preliminary and founding element for the choice of intervention actions is becoming increasingly clear [2]. In a conservation and restoration project, the analysis of all the building's components and its whole knowledge are the keys to guide designers at an awareness design project of the protection, conservation and restoration of a building. Knowledge necessary to "explain" the actions of the final project phase are the investigations combined with a survey of the building and diagnosis of the pathological screening. In fact, a high level of knowledge makes it possible to understand the transformability thresholds to which the historical building may be subject, in view of sustainable operations that respect it in its authenticity. It is clear that the use of diagnostic tools related to a careful investigation phase are necessary and fundamentally prerequisite to best achieve these objectives. As Dezzi Bardeschi says: "Preliminary investigations are fundamental, which even in too many interventions are completely neglected. Yet these are excellent investments, since there is a direct relationship—certainly, not the direct proportionality—between minimization of the intervention and accuracy of the preliminary investigations. Among the latter, the historical reading conducted on direct sources (the building first) is compulsory" [1]. The minimization of the intervention, not only

from a material point of view but, also, from an economic and timing nature, is optimized, plus the preliminary diagnostic framework is deepened and complete. The source, the main, fundamental and essential reference, turns out to be the factory, intended as writing to read and interpret. As expressed, in fact, in the writings of Paolo Torsello, the historical building is a text that contains in its nature the messages that must necessarily be investigated and understood [3]. The goal is therefore to decipher and understand the meaning of the analyzed text under different aspects: historical, dimensional, material, technical construction, spatial, formal and even cultural. "Only if you enter the sometimes-unexpected meanders of ancient buildings, and let the bricks, stones, beams, paintings, organisms and shapes say their unchanged word, only in this way the monument—considered as a fact of life—reveals his reason. And not only his own, but also that of the one who made it and wanted it [4]."A diagnosis of the existing that allows to evaluate its state of conservation and to implement, in relation to this, design strategies that respect the building and its "hic et nunc": its unique and unrepeatable existence in the place where it is located and the history to which it has been subjected during its duration. A "hic et nunc", which is also linked to the most recent thoughts expressed in the documents and directives of the International Council of Monuments and Sites (ICOMOS), where it is emphasized how the value of architectural heritage is not only in its appearance but, also, in the integrity of all its components as a unique product of the specific building technology of its time [5]. A uniqueness that appears linked not only to the material and construction technologies but, also, to those "external signs that natural time imprints on it" and to that "sedimentation of history" defined by Ruskin as key factors to enrich and give value to a building. The ability of the designer is therefore manifested in the reading and interpretation of this broad and in-depth knowledge and in being able to translate the analytical phase of knowledge of the monument into a practical act through the formulation of specific design choices [6] that respect its integrity and uniqueness of sprit.

Proposal of a Methodological Universal Guide in Carrying out the Process of Renovation of a Historic Building

Despite the wide panorama of styles, techniques, materials and construction methods of an international historical building, the different phases of analysis and diagnosis show themselves as a universal and standardizable guide tool to be adopted for the restoration processes of all different historical buildings.

The proposed methodology shows a preliminary phase of fundamental knowledge to achieve restoration design choices aimed at the conservation of the existing and the design of the new. The knowledge therefore consists of three different steps (Figure 1):

1. The first phase concerns the survey of the building (geometric, material and decorative) to obtain a complete representation of the property in all its dimensional, qualitative and quantitative aspects. The reading of the material degradation and the reading of the deformations and cracks present will also be performed, marking the length, direction, thickness, depth, distribution and frequency.
2. The second phase concerns the analysis of the existing archival, historical-architectural, technical-constructive and geological-petrographic types. These investigations on the factory also affect the legal aspects in which one operates with the reading of the constraints that act on the building. The goal is a historical-artistic understanding of the property through the identification of its reasons, its history and its "hic et nunc" in order to protect, recover and enhance the elements and characteristics that make it so.
3. The third phase, consequent to the first two, concerns the diagnostic campaign on the factory through in situ and laboratory investigations and tests. These analyses investigate the structural aspects (crack sensors, mono and biaxial inclinometers, sensors for monitoring structural failures and analyses with computer programs) and material ones (stratigraphic analysis, microscope analysis, petrographic analysis on thin sections, X-ray fluorescence, digital microscopy, hygrometric survey and water content determination). The results obtained from this last phase will be necessary knowledge to guide and control the actions of the final phase of the project.

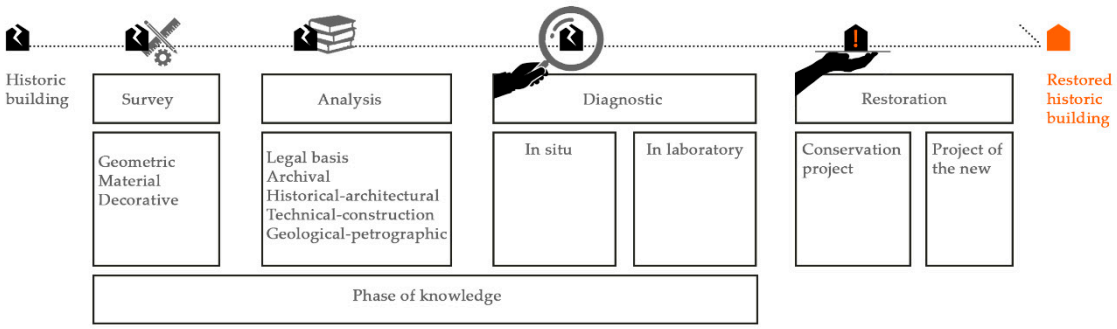


Figure 1. Scheme of the methodological guide proposed for the renovation process of a historic building.

This methodical universal guide was summarized in a case study that best showed how concrete procedural and operational actions defined in the project can be dictated by the constraints expressed by the existing, which emerged through investigations, analyses and experimental tests in situ and in the laboratory. The research conducted featured an eighteenth-century Imperia noble house located in Palazzo Gastaldi Lavagna and in a state of neglect for more than 10 years. The conservation project described highlights the constant need for a comparison with the historical, material and technical nature of the factory, highlighting the level of complexity characterizing these types of interventions. From the first phase of the survey of the building and of the degradation phenomena present, the drafting of a preliminary diagnosis plan to be carried out on particular points and specific elements has allowed to reveal hidden characteristics, values and constraints, leading to an essential cognitive framework for the definition of the best design actions to be implemented onsite.

The case study is presented here according to the step of the proposed methodology, excluding the structural analyses already investigated and solved on the entire building in various recent restoration works. Starting from the awareness of an already consolidated structure, the case study focused mainly on the analyses and restoration of the other architectural, decorative and material aspects of the apartment.

2. Palazzo Gastaldi-Lavagna: Survey and Historical Analysis

The Parasio, district of the city of Imperia, is today one of the maximum examples of the best preserved medieval old town in Liguria and one of the symbols of the city. However, Imperia has a recent past and is made up of what were once two distinct urban centers: Porto Maurizio (of which the Parasio represents the ancient heart) and Oneglia. This dichotomy is still easily legible in the urban layout of the city, which is clearly composed of two smaller inhabited centers, sewn together with twentieth-century urban operations. The Parasio (or Parrasio) district has very ancient origins, and the town is developed on a rocky promontory close to the sea, with the typical structure of a village fortress having "access doors" and characterized by the presence of ancient convents, churches, palaces and oratories of different brotherhoods (Figure 2).

Figure 2. Image of the Parasio district.

The climatic reality of the area, characterized by constant mild temperatures during most of the year, allowed, over the centuries, the development in the neighboring territories of the cultivation of the olive tree. The economic activity linked to the production of oil allowed the birth of a "commercial oligarchy", composed of a small number of noble families holding a monopoly. This particular socioeconomic condition led, at the end of the seventeenth century, to the construction of large noble palaces on Genoese taste, designed to best represent the wealth and prestige of the different families. Palazzo Gastaldi represents the most important expression of the Baroque urban buildings present in Parasio and was defined as "the most beautiful example of Baroque residential housing" [7]. Located in the southern part of the village, the building now appears to be composed of the union of two buildings with different architectural tastes and historical construction periods (Figure 3): Palazzo Gastaldi (eighteenth century) and Palazzo Lavagna (nineteenth century). Almost the entire area of the village is today subject to landscape constraints, and there are numerous specific architectural constraints, including those related to the building. Its protection notification dates back to 15 November 1933, and this act includes it in the descriptive lists required by the Law n.1089 of 1939 for the Protection of things of historical and artistic interest, saving it only in part from heavy building interventions that, over time, have compromised part of the internal decorative apparatus. The housing unit under study, however, has a particular crystallization over time, showing details dating back to the period of the construction of the building.

(**a**) (**b**) (**c**)

Figure 3. (**a**) East elevation of Palazzo Gastaldi-Lavagna, (**b**) north elevation and (**c**) west elevation.

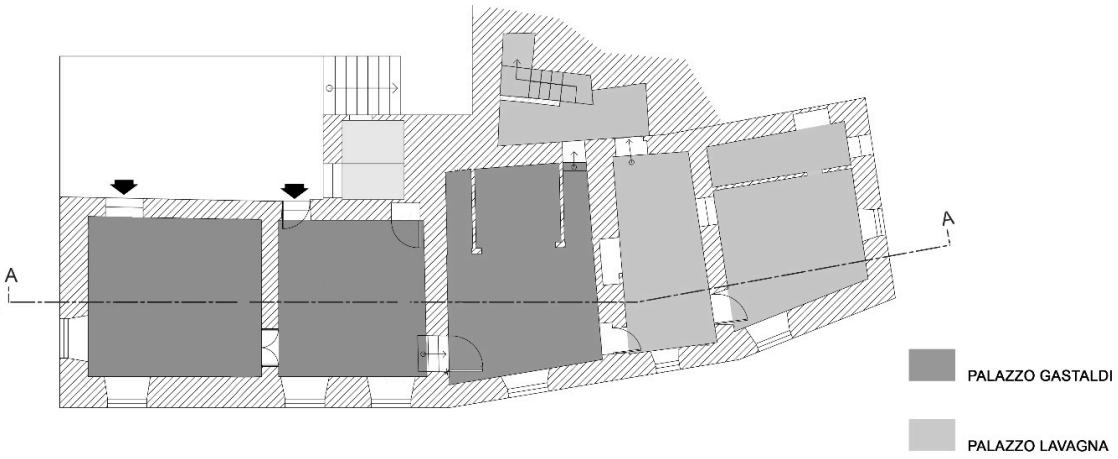
2.1. Morphological Interpretation

At the time of the start of the restoration project, the apartment had medium-good conservation conditions. There were no heating systems, and the last building works inside it were carried out around 1920. Not inhabited for about 10 years, the emergence of forms of degradation linked to abandonment was visible inside the apartment (Figure 4).

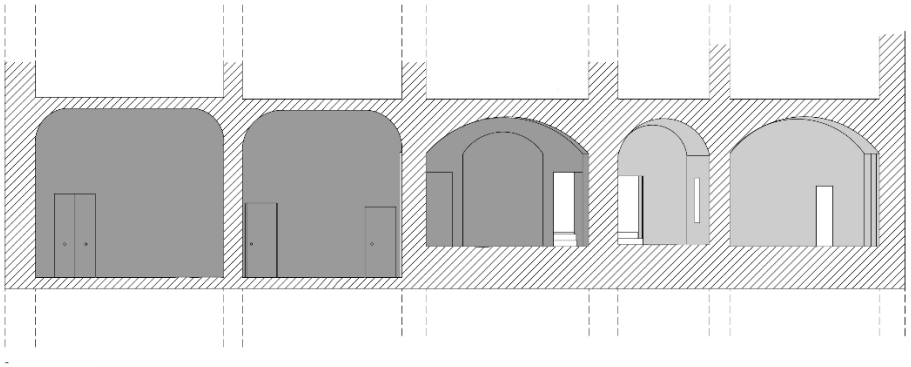
(**a**) (**b**) (**c**) (**d**) (**e**) (**f**)

Figure 4. Existing state of conservation of different rooms of the apartment: (**a**) First room, (**b**) second room, (**c**) room with alcove. (**d**) third room, (**e**) bathroom and (**f**) kitchen.

The conformation of the apartment best represents the history and evolution of the building, as this consists of three rooms in the Gastaldi Palace connected to others (of the Lavagna building), only in more recent times. This division is clearly visible also in the volumes and in the internal decorative apparatus, presenting the first three rooms' dimensions and characteristics not common to the others (Figure 5). The floor plan has a not-completely-regular rectangular shape, and the apartment has two distinct entrances.



(**a**)



(**b**)

Figure 5. (**a**) Plan of the apartment and (**b**) section of the apartment.

The accommodation consists of four rooms plus a bathroom (obtained in ancient service stairs), kitchen and relative pantry connected to each other with a "enfilade" system, a typical eighteenth-century distribution system. The first hall is characterized by a frescoed vault with fake perspective architectures, floral decorations, monochrome angels and cherubs that hold a garland in the central medallion. The walls of the room are completely covered by dozens of overlaps of plastering and painting in the process of exfoliation. The fixtures are from different eras: the entrance door shows motifs with curved lines typical of the eighteenth-century period, coeval with the windows and the wooden profiles decorated with gold leaf appear on the internal profile of the splay, a characteristic that is also found in the following rooms (Figure 6).

(**a**) (**b**) (**c**)

Figure 6. (**a**) First room with the entrance door, (**b**) window and (**c**) frescoed vault detail.

The second room, in direct connection with the first, has a frescoed vault with a central putto and floral decorations, while the walls are characterized by three medallions with floral frames depicting Tobia and the Angel, San Giovanni Battista and the Wedding of Tobia with Sara. Unlike the previous room, there is a horizontal wooden molding that delimits a decorative basement band running along the entire perimeter of the room (Figure 7).

(**a**) (**b**)

Figure 7. (**a**) Second room with frescoed vault and wall medallion. (**b**) Detail of the fresco depicting the wedding of Tobia with Sara.

The third room has a large alcove bordered by a painted wooden molding with decorations and light-colored human figures on a dark background. On the sides of the alcove, there are two small openings delimited by gold-colored moldings. The entire room is devoid of visible wall decorations, because it is covered with dozens of overlapping paints that completely cover the ancient polychrome-frescoed plaster underneath, which emerges only in some places due to the exfoliation of the various layers of paint.

In light of the complexity of the subsequent design and construction phases, it was decided, using the existing geometric survey, to proceed with a photographic campaign with subsequent straightening to obtain a photogrammetric survey on which to carry out a material survey

and degradation analysis (Figure 8), which could constitute a precise basis for the diagnostic campaign and, subsequently, for the control and calculation of the measures and accounting of the planned interventions.

Figure 8. Survey carried out for the first room.

2.2. Historical Recontruction from Archival Evidence

The historical analysis of the factory has seen the research and reading of the bibliography and archival documents concerning the building. The goal was to identify the possible function of the rooms, in order to understand significant information for the subsequent diagnostic campaign. Information regarding the interior of the building was found in the document "Porto Maurizio in the eighteenth century", by Gianni De Moro: "Palazzo Gastaldi was among the twenty most richly furnished of the time. These residences were characterized by, on the ground floor, the first room consisted of a large "sportego", often embellished with tombstones, statues, busts or frescoes, and large staircases. In various positions, depending on the particular structure of the building, there was the "peschera" or cistern for rainwater, placed in connection through a complex of earthenware or lead pipes, with the roof gutters. On the first floor, which was accessed through large marble stairways with columns, balustrade for handrail and columns on each landing, there are the reception rooms, the lords' bedrooms and, isolated pantry and kitchen The reception hall of Palazzo Gastaldi was decorated with an unusual wall ornamentation, based on landscapes, frescoed by Carrega, representing Roman ruins. Unfortunately, the hall of Palazzo Gastaldi, whose decoration concluded with in the large eagle of the family coat of arms, has disappeared. In the part owned by Canon Giacomo and his nephew Guglielmo there was a room with the walls completely covered with shells. On the second floor there are generally other rooms belonging to the owners: rooms for children, relatives and guests, study library, toilets, solarium. Finally, on the third floor, just below the roof, there are the servants' lodgings and other storage rooms or pantries for dry supplies." [7]

From the document, important information is deduced regarding the rooms located inside the ancient Gastaldi building; not part of the "noble floor", however, they present decorations and features that suggest their use as a representation. For the room with an alcove, whose presence declares the use of a bedroom, it could have been a summer room, used in the warmer seasons when the high temperatures made the main floor too hot to sleep. For the adjacent room, and in direct communication with the bedroom, some documents suggest its liturgical use [8]. This function would be credited by the presence of a sacred theme for the cycle of frescoes and by a letter written by Napoleon Bonaparte to his wife Josephine during his stay in Porto Maurizio in April 1794, in which the French general wrote of staying at Palazzo Gastaldi in a bedroom in direct communication with a richly frescoed private chapel. Further confirmation can be found in the "Historical Notes" of the Notary Gazo, which reports, inside the building, the existence of two chapels: one dedicated to the SS. Crucifix, owned by Canon Giacomo Gastaldi, and one owned by his brother, Pasquale Gastaldi, dedicated to N.S. of Mercy, of which, to date, no traces remain [9]. In light of the latter document, it is presumable to believe that the third room (Room 1), whose function is not clear, was also a private chapel or reception lounge, as indicated in the document of De Moro.

3. Diagnostic Project

In order to obtain significant information for the development and definition of the restoration design choices, a campaign of different investigations was planned, both in situ and in the laboratory. Stratigraphic analyses were performed "in situ" in order to understand the different overlapping layers of plaster, paint or hidden pictorial decorations. The sampling points were chosen thanks to the information obtained from the historical analysis, from the geometric and material surveys made and from the observations of the signs directly present in the building. Laboratory investigations instead concerned three different elements: flooring, fixtures and wooden moldings. The various investigations, described separately below, were conducted in parallel to obtain information necessary to highlight further possible insights.

3.1. Stratigraphical Analysis of the Masonry and Plastering

This type of investigation was carried out by making samples of different sizes in specific areas of the walls of the accommodation (walls and ceiling), removing each unit layer-by-layer, both mortar and painting, with manual or mechanical processes (scalpel, hammers, etc.) or a chemical one (with inorganic salt solution in deionized water) to highlight any decorations or painting prior to the restoration and dating back to the time of the construction of the building. In relation to the characteristics of the environments analyzed and the execution costs, the tests were carried out in significant numbers in the first three rooms. Four small tests were performed for the first chamber; two were made in the central part of the walls, at a height of about 1.5 m, and two in the upper part, at a height of about 3.5 m (starting point of the vault) (Figure 9).

(**a**) (**b**)

Figure 9. (**a**) Before the stratigraphical analysis (first room) and (**b**) after the stratigraphical analysis.

Inside the second room, in light of the richness of the wall decorations, the greatest number of essays was performed. On the wall without frescoed medallions, two cleaning tests were carried out: a vertical strip of about 100 × 10 cm in the upper part and a horizontal strip of about 25 × 10 cm in the lower part, in order to understand the possible reason for the absence of decorations or their possible presence below the layers present.

Two tests were carried out on the wall with the medallion depicting "Tobias and the Angel": a horizontal strip of about 100 × 10 cm and a vertical strip of about 100 × 8 cm, while on the wall with San Giovanni Battista, a vertical strip of about 100 × 6 cm and a horizontal one of about 25 × 20 cm. Three tests were carried out in the alcove room: one inside the alcove and two in the adjacent space.

All the tests carried out have made it possible to identify the presence of wall decorations hidden over time by numerous layers of painting. In the first room, it is evident that, originally, the whole room was decorated with festoon or landscape motifs and that only later was this painted, leaving only the decorations of the vault visible (Figure 10).

(**a**) (**b**) (**c**)

Figure 10. (**a**) Test performed in the first room with detail (height 1.5 m), (**b**) second test performed in the first room with detail (height 1.5 m) and (**c**) test performed in the first room (height 3.5 m, starting point of the vault).

In the second room, different results were obtained in relation to the different points analyzed, leading also, in this case, to the discovery of a complex wall decoration. The tests revealed a water-green plaster in the upper part of the horizontal wooden molding that characterizes the walls and a red ocher one in the lower part (Figure 11). From these results, it was possible to understand that the wooden fascia is most likely coeval with the creation of plaster and frescoes and used as decoration to delimit the basement band. A hypothesis that has been also been confirmed by the presence of iron elements (at a regular distance) drowned in the masonry of the other rooms and positioned at the same height as the wooden band in the second room, a sign that this type of decoration was present and was lost over time.

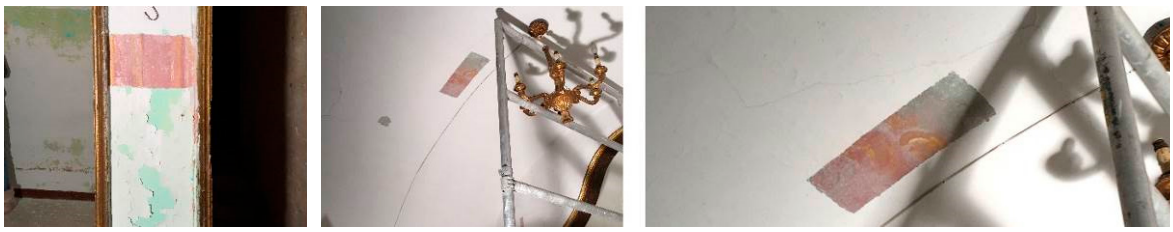
(**a**) (**b**) (**c**)

Figure 11. (**a**) Test performed in the second room (wall with San Giovanni Battista: vertical strip of 100 × 6 cm), (**b**) detail of the test with different plaster coloring in the lower and upper parts of the wooden molding and (**c**) test performed in the second room (wall with San Giovanni Battista: horizontal strip of 100 × 10 cm).

About the latter, in the wall now free of fresco medallions, further tests have shown the presence of complex imitation marble decorations and scrolls (Figure 12).

Figure 12. Execution of stratigraphic investigations in the lower part of the wall without frescoed medallions (second room).

The lack of decorative elements on this wall is, however, justifiable with the presence of two metal hooks placed above and parallel to the decoration of the vault, which would have served as support for a hanging element: a possible altar or family coat of arms (as documented for other noble buildings of the village). Finally, some small tests on the frescoed vault have revealed the presence of a different color below the visible one. It is therefore believed that the vault, in light of the cracks present, has been compensated for some pictorial layers after the earthquake that hit the area in 1887, causing damage to the structure and the detachment of parts of the vault itself. In the third chamber, the tests conducted showed that the original plaster of the alcove compartment has a simple yellow ocher color, without any type of decoration. Of greater interest is the adjacent room, which shows a frescoed base plaster tending to the colors of red ocher, with decorations in the warm tones of yellow, dark red and, on the vault, also of aqua green (Figure 13). Additionally, in this case, it is clear that the room was originally totally decorated with motifs similar in color to the two adjacent rooms, showing how all three rooms had been designed and decorated in continuity.



(**a**) (**b**)

Figure 13. (**a**) Test performed on the wall of the room with the alcove, and (**b**) test performed on the vault of the room with the alcove with detail.

3.2. Diagnostic Investigations on Floor Mortars

In view of a design hypothesis that involved the removal of the existing floor, analyses have been conducted to provide more information regarding its materials and construction period. The aim was to understand if this flooring was coeval with the construction of the building (eighteenth century) or a remaking of a later period and, therefore, expendable for the construction of a new flooring.

Taking a sample, this was sent to the LARA laboratory (Laboratory of Archaeological Research Analysis) Technical Consultancy and Diagnostics for Restoration (Genoa, Italy), where the investigations under the stereoscopic optical microscope in reflected light revealed a compound with light beige color, tenacious and characterized by a binder based on carbonate lime with an uneven texture and micritic structure (<4 μ) and low fluorescence in UV light for the impurities present (Figure 14).

(**a**) (**b**) (**c**)

Figure 14. (**a**) Floor sample with detail: (**b**) 40× photomicrograph (thin section, crossed nicols) and (**c**) 40× photomicrograph (thin section, ultraviolet light transmitted).

The sandy fraction, poorly classified, shows an average microconglomerate dimensional aspect (2–4 mm), with a few granules even centimetric. The clasts were made up of abundant limestones, clayey shale, subordinate calcite and quartz, traces of arenaceous granules of rounded-to-subangular shapes, with medium-high sphericity, an association that finds confirmation with the local geolithological conditions. From these characteristics, the compound resulted in a mixture made with local materials and datable around the end of the nineteenth century, being free of clinker wrecks typical of the cements used subsequently. This is not compliant with the types of flooring of the eighteenth century and, therefore, with high probability, was nineteenth-century reconstruction carried out after the 1887 earthquake.

3.3. Stratigraphical Analysis of the Wooden Elements

The stratigraphic analyses carried out on the wooden elements involved windows, doors and related internal moldings. The first investigations were conducted on the windows of evident eighteenth-century workmanship, on which traces of ancient polychrome decorations were found. It was therefore decided to proceed with the study of the wooden moldings of the doors and windows in order to obtain a complete and exhaustive knowledge profile of the state of affairs; from the analyses, it was, in fact, possible to understand the materials, state of conservation and period of realization of the analyzed elements to make the restoration project in compliance with the existing and its possible integration, replacements or possible removals. The investigation was carried out with manual, mechanical and/or chemical processes (with gradual variations of an acid solution), bringing to light the deeper layers. The original decorations, hidden beneath different layers of paint, were found to be rich in decorations with floral motifs (Figure 15) with green-blue shades similar to the designs that emerged on the windows and with the decorative wall system.

Figure 15. Stratigraphical analysis of the wooden moldings (entrance door, first room).

4. Restoration Project

Considering the information obtained during the diagnostic phase, the restoration project has been developed into two orders of actions: the conservation project of the existing and the new project (as an additional value), trying to understand the necessary intervention threshold capable of responding to the new framework of needs and not to exceed the limit beyond which the intervention

becomes abuse and misunderstanding of the text. The conservation project was, therefore, aimed at preserving, leaving visible and legible all those traces of writing and rewriting of the architecture present in the material of which it is composed, as forms of memory and permanence of its identity [10]. The intervention was mainly based on the recovery of the original construction and typological elements through the use of materials that are chemically and typologically compatible with the existing ones; the intended uses of the individual rooms have been maintained, which have been equipped with the necessary plant engineering, according to current regulatory requirements and current guidelines on energy containment, while respecting the conservation of all valuable elements, both of a constructive and decorative type.

4.1. Conservation Project

"The greatest glory of a building is not in its stones, nor in its gold. Its glory is in its Age, and in that deep sense of voicefulness, of stern watching, of mysterious sympathy . . . which we feel in walls that have long been washed by the passing waves of humanity. (. . .) It is in that golden stain of time, that we are to look for the real light, and color, and preciousness of architecture" [11].

Following the concept expressed by John Ruskin in the book "The seven lamps of architecture", the conservation project wanted to follow a line of total respect, conservation and protection of the historical matter rich in that "golden stain of time" described by the English theorist. For the already visible frescoed surfaces and for those found during the stratigraphic investigation, a specific restoration project was therefore prepared by a restorer officially enrolled in the register. For the painted wall surfaces, the removal of all the superficial layers of paint in exfoliation up to the achievement of the original pictorial layer still present was provided; these were then treated with a transparent anti-dust protective layer able to maintain the pigmentation present (Figure 16); for this operation, a consolidating and transparent fixative primer (based on stabilized potassium silicate) was chosen for the anti-dust, consolidating treatment of the surfaces.

(**a**) (**b**) (**c**)

Figure 16. (**a**) Restoration of the walls of the second room, (**b**) restoration of the walls of the first room and (**c**) restoration of the walls of the room with the alcove.

The windows were restored after disassembly and removal of the damaged paint by sanding; the damaged pieces were replaced using seasoned wood of the same essence until their complete restoration. The existing glasses were removed and replaced, as regards the mirrors already being replaced or those missing or broken, while cleaned and reused for the original ones; the restoration ended with a fixative primer. For the doors, restoration was planned with a relacquering having a color similar to that already present, while the gilded moldings positioned around the splayings of the windows have been cleaned and integrated with elements of the same wood where the state of degradation did not allow their conservation. For the door moldings, whose stratigraphic tests

showed the presence of painted decorations, the stripping was instead carried out with appropriate techniques to not deteriorate the wood and bring to light the original pictorial decoration, subsequently integrated and protected. Finally, the last operation involved the removal of the dark patina present on the molding of the alcove with an acid solution, bringing to light the bright color of the hidden paint (Figure 17).

(**a**) (**b**) (**c**) (**d**) (**e**)

Figure 17. (**a**) Example of the restoration of the windows, (**b**) example of the restoration of the doors, (**c**) example of the restoration of the wooden window moldings, (**d**) example of the restoration of the wooden door moldings and (**e**) restoration of the wooden moldings of the alcove.

4.2. Project of the New

At the beginning of the works, the accommodation was already equipped with a meter for the supply of electricity and other supply lines (water, gas and telephone) centralized and distributed already during the general restoration of the building. The intervention provided for the passage under the track on the floor for all the systems. This choice was feasible in the light of the results obtained from the analyses carried out on the pavement, which demonstrated its subsequent realization and its possibility to be expendable. Its removal and subsequent remaking in a mixture was carried out with the use of aggregates of a size similar to the existing ones (Figure 18). The mixture was obtained with local aggregates found in neighboring quarries and lime as a binder. The use of lime (and not cement) is related to the historical and chemical compatibility of the material with respect to existing ones.

(**a**) (**b**) (**c**)

Figure 18. (**a**) Floor before starting work (room with alcove), (**b**) demolition of the floor and (**c**) new floor.

The new floor was carried out onsite with a continuous surface and subsequent application of a final protective treatment, carried out by impregnating the floor with natural oils and waxes. This choice, in addition to reproposing the current flooring, must be sought in its physical-mechanical characteristics that give it impact resistance, easy maintenance and a low humidity content, as well as the ability to accumulate heat and release it slowly. This makes this floor the ideal compromise between compatibility in the logic of the restoration and energy redevelopment of the accommodation. For this reason, this choice has been extended to all rooms, except for the service rooms, such as the bathroom, kitchen and pantry, for which the current type has been preserved. Finally, the electrical system was built with passages under the floor for the main lines, while the continuation in the external lines was made with copper pipes for the walls with frescoed surfaces in order not to make cuts in the walls and, therefore, a loss of the material (Figure 19).

Figure 19. Image of the completed work with new functions for the different rooms.

5. Results and Conclusions

In light of the final result, the importance of a correct diagnostic campaign within a restoration project is evident. The diagnosis phase has made possible to detect historical-artistic pre-existences of significant importance for the project choices done. However, the limited or lack of tests on some elements, due to excessive timing or high construction costs, did not allow to obtain information and data necessary to proceed with their possible correct restoration operations. Therefore, information on the entrance doors remains unknown, which could hide a painted decoration re-emerged for other wooden elements. Furthermore, the stratigraphic essays on the plasters, carried out for small portions of the surface, did not allow us to understand the design of the hidden decoration, leaving the theme of the wall frescoes in doubtful interpretation, which, for the first room, could represent being broken through on Roman ruins and give the room the function of a "reception lounge", as described in the documents of G. De Moro. Further investigations are, therefore, a key point to proceed in the knowledge of the artefact and its complete reading and interpretation, in the awareness that: "The data is always available for new readings, soliciting other and more refined analysis techniques; it remains partially buried and hidden in the deep layers of sedimentation and waits for new "archaeometries" to reveal its presence and meanings" [12].

In conclusion, this article wants to highlight two important issues, from which to proceed for further reflections.

The first one is that the phase of knowledge and investigation is a key point—fundamental step—to proceed in a complete reading and correct interpretation of the artefact, in the awareness that: "The data is always available for new readings, soliciting other and more refined analysis techniques; it remains partially buried and hidden in the deep layers of sedimentation and waits for new "archaeometries" to reveal its presence and meanings" [12]. The lack of analysis involves the loss of materials and historical values that are unrepeatable and represented the soul of the place and symbols of local artisans who, through centuries-old traditions of craftsmanship and skills, have formed that intangible cultural heritage of the "community" that enriches a place.

A need for protection recently expressed in the international panorama by United Nations Educational, Scientific and Cultural Organization (UNESCO), which, since 2003, has included local craftsmanship among the intangible cultural assets to be preserved, in the awareness that: "The importance of intangible cultural heritage is not the cultural manifestation itself but rather the wealth of knowledge and skills that is transmitted through it from one generation to the next" [13].

"There are two reciprocal duties to be constantly respected in the workings of man, which link the living and the dead. Living and working we must always think of those who will come after us, and as far as possible we must make sure that our action benefits us as much as they do. Only by fulfilling these two duties towards the past and the future will each generation be able to reach the maximum of happiness [11]."

Secondly, this research can be seen as an example of the importance of close analyses of case study materials for developing new frameworks for bringing fresh approaches to cultural heritage conservation, together with use of conservation—restoration—as a critical urban sustainable development principle. "The increasing emphasis over sustainable development is more relevant in the context of cultural heritage as it's one of the few areas which have an effect upon all three pillars of sustainability: economy is associated with the commercial nature of these artifacts; society is at the core of cultural heritage as it represents historic and social affiliations; and environment (in terms of environmental changes and challenges) has a direct impact on these artifacts due to their old age and inherent fragility [14]." Defining a methodology of analysis, diagnosis and knowledge of the built heritage to be restored, such as the one proposed here, therefore appears to be a priority in the panorama of national and international restoration, in order to protect every aspect (material and immaterial) of the cultural heritage. The objective is to be a methodology as standardized as possible and exportable to the different existing cases in order to incentivize sustainable urban development with the restoration of "urban voids" and the recovery of abandoned buildings, with the consequent safeguarding of the territory and the environment.

Author Contributions: D.B., A.C. conceived and designed the experiments; D.B. and A.C. analyzed the data; D.B. and A.C. wrote the paper. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

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