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AN INTEGRATED RESTORATION PROCESS

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THE CASE OF THE ORATORY OF SAN ROCCO IN SORAGNA (PARMA): FROM ABANDONMENT TO HEALTH FACILITY. AN INTEGRATED RESTORATION PROCESS

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Abstract

It's well known that the identification of the most appropriate use for historical heritage, is a fundamental instrument of conservation, which in maintenance, even before in "restoration intervention", find the first guarantee of success.

In this paper, the participated restoration process which involved the abandoned convent of San Rocco in Soragna (Parma) is presented, with the aim of showing the application of "integrated conservation process" principles to an interesting episode of cultural heritage.

Starting from historical and structural analysis of this really compromised and damaged structure, the project of reuse is presented, which, starting from a deep interaction between social and functional aspects, gathering local and social needs, has led to the creation of a territorial health structure, a small-size health facility, thus becoming a response to the municipality's needs, making the most of the historical vocation of the building.

Moreover, the adopted approach counterposes with the current tendency of multiplying interventions by proposing a diversification of uses instead: higher flexibility of spaces, and functions operating at different times of day will lead to a more effective and extended functioning of the complex, resulting in an overall better use (and, thus) preservation of the building in the long-term.

Keywords: Integrated restoration; reuse; consolidation; oratory; health facility

1. Introduction

Within our cities we notice that some buildings or spaces have lost their function over time, often for changes in technological, cultural and economic developments, which had led to their progressive abandonment [1]. This process does not exclude even historically relevant buildings, which also played a crucial identity role in the community, being the witnesses of the culture of the time. Today these buildings are empty containers, waiting for a new function which could recall their original importance. The recovery of these buildings has to start from the context in which they are located, but also from their spatial "vocation".

The strategy that best integrates the aesthetic-testimonial instance and the use of the building is represented by reuse, which is able to enhance the space and adapt it to the needs required by the new intended use.

The need for a new use can lead to the transformation interventions, which must always pursue the principles of minimum intervention and compatibility with the materials and of the use of the building itself.

The principles which guide any restoration process arise from a critical analysis aimed to formulate a value judgment on each architectural element of the building and on its whole organization.

An example of this process is the restoration of the former convent of San Rocco in Soragna (Parma, Italy), located on the back of the more famous Rocca Meli Lupi, which has always maintained a role of service for the citizens, reinventing itself over time with multiple functions (Convent, Women's orphanage, elementary schools).

The community has always been the main user of the place during the centuries. The implementation of an "adaptive reuse" project, has tried, in this case, to combine historical analysis, cultural investigations and functional needs for the community, by a delicate balance between conservation of the main architectural aspects and the insertion of a new use aimed at giving back to this complex its original pivotal role. The issue, indeed, is to revitalize these abandoned spaces, while maintaining their nature and collective memory. [2]



Fig. 1: Aerial photo of the complex.

2. The case study: Convent of San Rocco in Soragna (Parma)

The former convent of San Rocco, founded in 1640 by the marquis Diofebo Meli Lupi, is located in Soragna, near Parma. Intended to accommodate a congregation of Carmelites, the convent only hosted the friars until 1769, when Guillaume-Léon du Tillot suppressed the religious order. Since then, the building has undergone a long series of transformations in shape and use, which have concluded in 2010 with its final abandonment.

The structure is composed by three main buildings, dating back to different historical periods. The most ancient and authentic one is the porticoed one, connecting the entrance of the complex to the main body (Block A in the Fig. 2). Despite today the upper level presents plain rectangular windows, before 1780 – year when the convent was rearranged to host a female orphanage – it was configured as a loggia.

The main wing of the building (Block B in the Fig. 2), orthogonal to the previous one, was also included in the original plan. However, due to the several changes in use over the times, it has been heavily modified to better suit the renovated functions. In this regard, the positioning of the stairs appears particularly relevant: while the stair beside the bell tower – although rebuilt in 1933 – still stands in its original location, the second element of vertical connection (dated back to the first half of the 19th century, according to historical documentation) is currently located in the center of the building, differently from its original location on the north-eastern corner.

Finally, the third Block (Block C in the Fig. 2), also organized on two levels, constitutes a 20th century addition.

The study of the complex was articulated considering the three buildings before described, as well as the buildings facing the church (Block D in the Fig. 2), those leaning against the west side of the church

(Block E in the Fig. 2) and those on the back (Block F in the Fig. 2). In particular, these latter buildings are characterized by a very interesting proto-industrial design to which, over time, a portion in reinforced concrete has been added.

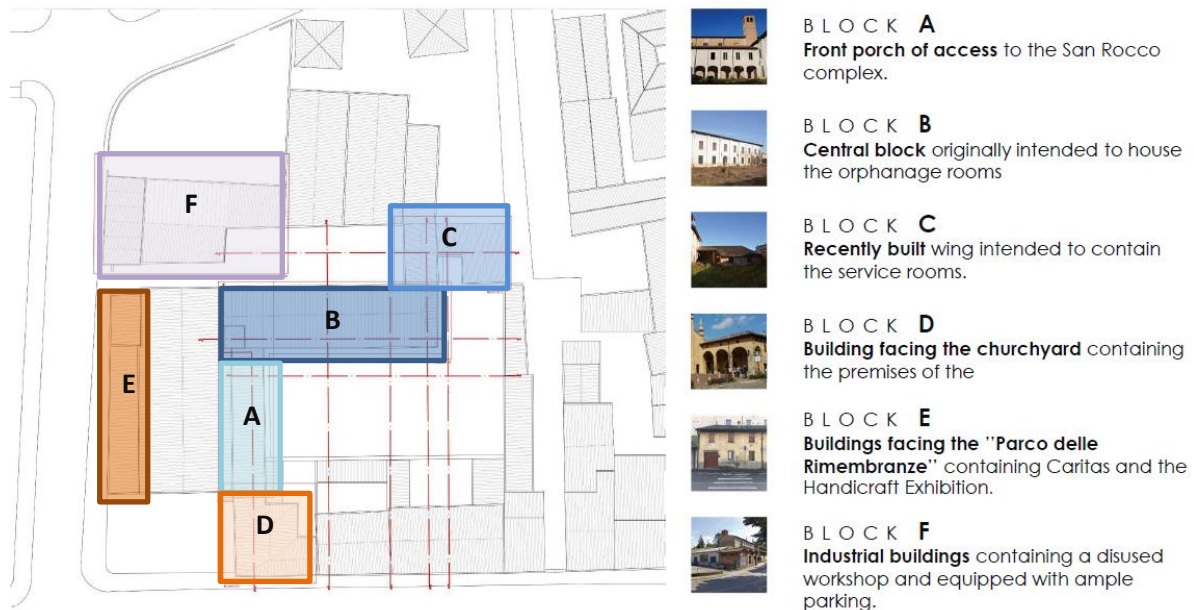


Fig. 2: On the left the roof floor plan of the complex, where the portions of buildings subject to intervention are indicated. On the Right there is a photo and a brief description of the block.

2.1. Geometric and constructive survey: the state of damage

Over the last fifty years, several works have been carried out with the aim of strengthening the building, thus allowing its reuse. Conversely, most of these interventions have actually contributed to the current state of damage of the building, as they have diffusely compromised its original features together with its stability.

Moreover, the lack of use and maintenance have further worsened the situation, leading to the current state of generalized deterioration and structural disorder.

In particular, from the geometrical and damage analysis, the masonry emerged as the main critical issue: the poor quality of the original materials and arrangements has been indeed worsened by an harmful intervention of integration - with the insertion (from the ground level up to -150 cm) of perforated brick on the external walls and on part of the main spine wall – in the mid of 1970. (Fig. 3 on left)

As for the block A, the vaulted corridor presents a foundation failure mechanism, underlined by the loss of curvature in correspondence with the central pillar. In addition, the original arched wall at the second level has been deeply modified during centuries, which now sees a bad distribution of the point loads of the beams of, (which frequently unload in the middle of the architraves of the added openings).

Moreover, the vaults (in block A and B) - despite the presence of retaining elements (original tie rods are inserted in each span, even without bolted end-plate) - present a widespread crack pattern, which is particularly heavy in the north-eastern corner of the block B.

In the north-eastern corner the poor construction quality of the vault, which presents an incorrect texture precisely in correspondence with the shutters (Fig. 3 central) was certainly aggravated by subsequent interventions, such as the enlargement of the windows, and by some changes to the general conformation of the plan building.

Moreover, the vaults (in block A and B) – despite the presence of retaining elements (original tie rods are inserted in each span, even without bolted end-plate) – nowadays present a widespread crack pattern, which is particularly heavy in the north-eastern corner of the block B.

In particular, the barrel vault presents important deformations and the collapse of the final part of the vault and the damage of the external wall, which has led to the insertion of a temporary prop (Fig. 3 on right). It clearly shows the activation of a thrust mechanism in correspondence to the graft of the transverse body in which there is an evident bending mechanism, combined to a mechanism of corner failure. An interesting interpretation of the described mechanism has been given basing on some historical drawings of the building (Fig. 4). In particular, the documents testify to the former existence of an additional wing of the complex leaning against the façade that is currently bending, as well as of a stream of water in proximity of the subsiding corner. The demolition of such historic portion combined

with the horizontal thrust of the barrel vault, the occasional seismic activities and the subsiding earth could very well justify the seriousness of the identified mechanisms.



Fig. 3: On the left the masonry of poor build quality. The center photo show the bad construction quality of the vault. On the Right the the north-eastern corner with the collapse of the vault which has led to the insertion of a temporary prop.

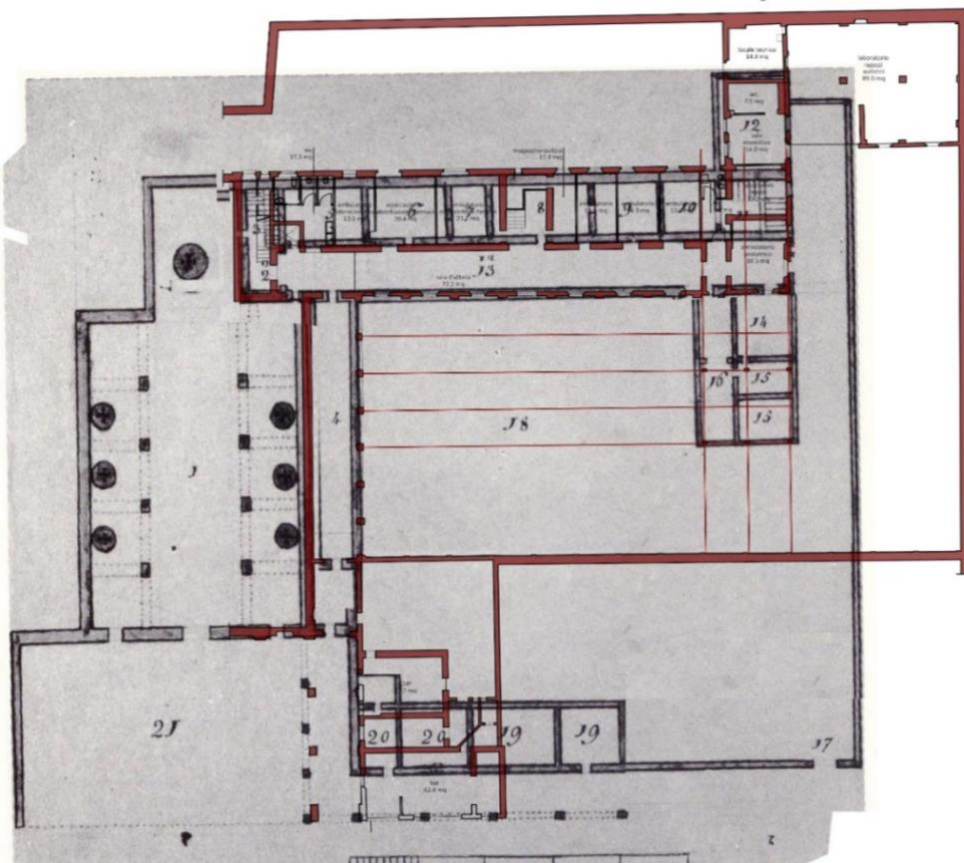


Fig. 4: The main transformations can be seen from the overlapping of the reliefs. In particular, the complete demolition of the wing that separated the court can be observed. This wing held back the thrust of the vault, currently heavily damaged and propped up both on the extrados and in correspondence with the ancient wing.

The horizontals and spine walls in this portion are in fact not well clamped to the surrounding walls, which are in fact subject to possible overturning. To complicate the static situation of the vault was the construction in 1958 of a reinforced concrete slab above the vault itself and above the lateral wooden floors.

To complete the description, the roof of body B, which was originally asymmetrical and pushing, saw the insertion of trusses following the demolition of the spine wall that continued up from the corridor below. The truss chains are currently weighed down by rafters and tiles of the false ceiling which cause an evident bending mechanism, punctually aggravated by the rotting of some beam heads (due to lack

of maintenance of the roof). In addition, the pushing hip rafter of the east elevation have generated deep cracks in the corner walls visible in the fronts, aggravating the tilting mechanism evident in the corner. Less interesting, from the point of view of instability and conservation, is block C: while the original part (north wing of the original complex) deserves an in-depth study and conservation, presenting similar problems to the rest of the building (lack of masonry quality and heavy transformations of the floors), the more recent leaning building does not present relevant architectural and historical characteristics, thus allowing its demolition.

2.2. Problems and opportunities for reuse: SWOT analysis

<p>STRENGTHS</p> <ul style="list-style-type: none"> • Flexible spaces • Valuable architectural elements • Monumental aspect • Green spaces • Position • Social and socio-cultural identity 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> • State of abandonment • Incongruous interventions • Bad build quality • Active kinematics
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Different uses • Programming • Increase in services • Design ideas 	<p>THREATS</p> <ul style="list-style-type: none"> • Increased urban load • Economic burden of interventions

Fig. 5: Swot analysis carried out for the portion of the former convent of San Rocco.

At the end of the survey and analysis process, it is possible to summarize some main aspects, in a sort of “SWOT Analysis”, which can serve as a guide for the restoration process of the complex.

From the architectural point of view, the complex shows some interesting and valuable elements, to be conserved, as the ancient vaults of the two main wings (A and B) which strongly characterize the spaces and their possible future organization, despite representing – meanwhile – the main critical structural (and strengthening) issue. At the same time, the lack of any original finishes (such as floorings and plasters), almost in the totality of the complex, constitutes an opportunity in inserting a new function into this “container” a

new use, which is facilitated also by the outdoor spaces, constituted by an interesting ancient (and partially lost) cloister which offers a double perspective for utilization: one more public and the other more intimate.

Finally, the main reason for the reuse of the complex stays in the community of Soragna, which, particularly fond of the place, asks to re-inhabit this abandoned space, not as simple visitors, but as daily “users”. Therefore, by a dialogue with the municipal administration and with others involved authorities, the different functions which could be included within the building have been carefully considered, starting from the analysis of the territorial context and of the different functions already present around the complex. In particular, from territorial analysis it appeared clear the need, for this little town, of an adequate health facility: the only health structure nowadays used by the population of Soragna is, indeed, that of the city of Fidenza (11Km away), which actually resulted insufficient to meet the needs of such a large catchment area.

Moreover, the volumes of the complex have the potential to absorb multiple functions including health facilities, thus determining the hoped-for situation of a multiple use of the spaces by ensuring the opening of the structure at different times in the day. It’s clear, indeed, that constant use, also in time, ensures the maintenance of the structure, which can demonstrate, in this way, its extra-municipal attractive capacity.

3. From abandonment to a new life: the Health facility

Starting from the previous analyses, the project of the restoration of the complex has been carried out, inspired by “an adaptive reuse” strategy, in continuity with the original functions, which have seen the preponderance – in times – of public use compared to the private one.

The project foreseen the refunctioning of the complex into a Healthcare and Welfare Center consisting in a small Health Center. The main function was then flanked by a center for accompanying the work of people with autistic disabilities and by a multipurpose space which can host different citizen organizations. Moreover, the new headquarters of the Italian Red Cross and Civil Protection of Soragna have been located into the surrounding block (E and F), thus triggering a virtuous process of interest in the now forgotten property.

3.1. Multiple functions for a continuous reuse (and maintenance)

The insertion of all these functions, strongly linked and complementary, has required an urban reorganization, with the rethinking of the road layout able to ensure better viability and urban quality and better connect the complex to neighboring countries (thus increasing their use and attractiveness). As stated before, the strategies adopted are derived from an historical and social analysis, aimed at enhancing the complex through the re-appropriation, by the community, of the identity spaces.



Fig. 6: Project masterplan showing the changes in urban planning.

At the building scale, the project for the new Health facility [3] [4] [5] is articulated around three functional main components, which have independent paths and can operate autonomously at different times. This fact guarantees a differentiated use in the various hours of the day and it allows a greater usability by the citizens, thus constituting a guarantee of maintenance. Indeed, the organization of the routes has been designed in order to ensure separate entrances for each main block, meanwhile taking advantage of common areas where the different functions can be integrated. As can be seen by the figure (Fig. 7), the former convent hosts the Health-care center, presenting a subdivision of the rooms, once organized for the performance of educational and ordinary administration activities, functional to accommodate clinics and offices still connected by the ancient vaulted corridor. Where the large hall dedicated to the orphans' dormitory was built, there is now a flexible space, suitable for hosting a boardroom for use by the community and the activities present within the complex.

Finally, the service room located on the edge of the court (Block C) has undergone alterations and renovations throughout its life, resulting today without any historical-architectural value, but maintaining its intimate position unaltered. Hence, it becomes clear the interesting possibility of placing, in the most secluded and intimate space of the complex, in a backward and subsequent portion, a work center dedicated to children with autistic disabilities (in blue, Fig.7).

In a collective spirit of social sharing and re-appropriation of the spaces by the community, the other spaces of the complex were therefore considered, trying to identify complementary and compatible uses, which together guaranteed the two fundamental conditions for the success of the project itself: maximum use with minimal transformations.

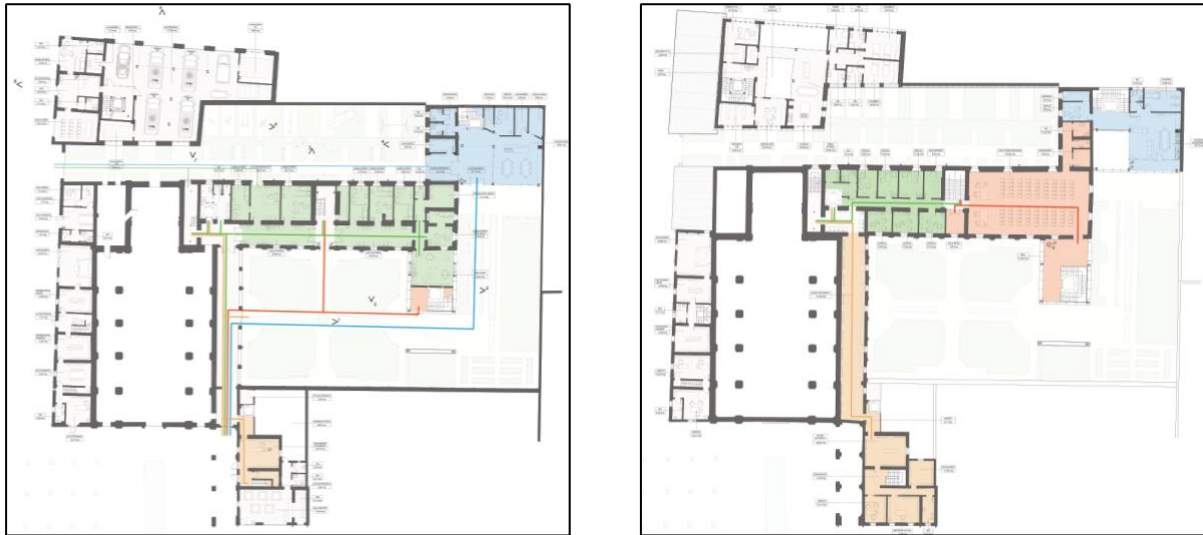


Fig. 7: Distributive plans of the project with indications of the routes and functional subdivision: in green the Health house, in orange the spaces for exhibition, in blue the Center for autistic children, in red the civic room and in white at the back of the structure the new civil protection office and Red Cross.

To complete the new Health center, and to better organize the new functions, the new headquarters of the Civil Protection have been inserted at the northern end of the block (Block F) while the reorganization of the internal spaces and the relocation of the existing functions are carried out on the remaining portions of the property, in order to ensure better efficiency of the entire distribution (Blocks A, D, E).

This combination of intentions and functions is particularly virtuous, not only from a social point of view, but, even more, for the conservation of the building itself. In fact, it was decided to apply a diversification of uses and flexibility of spaces, trying to guarantee a continuous use of the structure throughout the day, which would ultimately lead to greater vitality of the building and its neighborhood.

The proposal combines a collaboration between public and private in the management of uses, which can be seen as a further guarantee of growth of the "interests" involved in the maintenance of the asset and its long-term conservation. It is in this perspective, that the opportunity to identify shared interests and flexible uses takes on greater weight, with the ultimate goal of triggering a virtuous cycle of participation in conservation through the appeal of use. Finally, considering the size of the complex, it is possible to think of the construction organized through successive excerpts that, after making the building safe, provide one independent development to the individual units.

3.2. Multiple functions for a continuous reuse (and maintenance)

Once fixed the main purpose, the project has been then developed in detail, considering the peculiar destinations of the volumes, trying to fit the request of the community and those prescribed by the law (Tab.1).

SECTORS	LAYOUT PROPOSAL	FREQUENCY
Clinical area TOT. 6 SURGERIES	3 Group Medicine clinics	5 day/week
	1 Pediatric / specialist clinic	5 day/week (3 pediatrician + 2 psychiatrist)
	1 Nursing clinic	5 day/week
	1 Observation-therapy clinic	5 day/week
Public area TOT. 3 LOCAL	2 Waiting rooms	/
	1 Local CUP	5-6 day/week
	1 Drug Distribution / Acceptance	6 day/week
Social welfare area TOT. 6 OFFICES	1 Office responsible for the service	5-6 day/week
	1 Senior Social Worker Office	5-6 day/week
	1 Office for Social Workers for minors - adults	5-6 day/week
	1 Administrative office	5-6 day/week
	1 Office responsible for home assistance service	5-6 day/week
	1 Home assistance service office	5-6 day/week

Tab. 1: Summary table of the intended uses included in the new health house in Soragna. On the right the histogram showing the relationship between the areas provided for by the law [5].

Even the regional legislation [4] [5] suggests the inclusion of multiple functions in these Health structures, taking advantage of common spaces.

The distribution of the various functions is described in detail below. As can be seen by the plans (Fig.8), the ancient access is maintained at the ground floor, through the cross-vaulted arcade (block A) from which the various paths (dedicated to each single function) start: the clinics, the multipurpose room, the center for autistic disabilities and the exhibition hall of the institution shows handicraft.

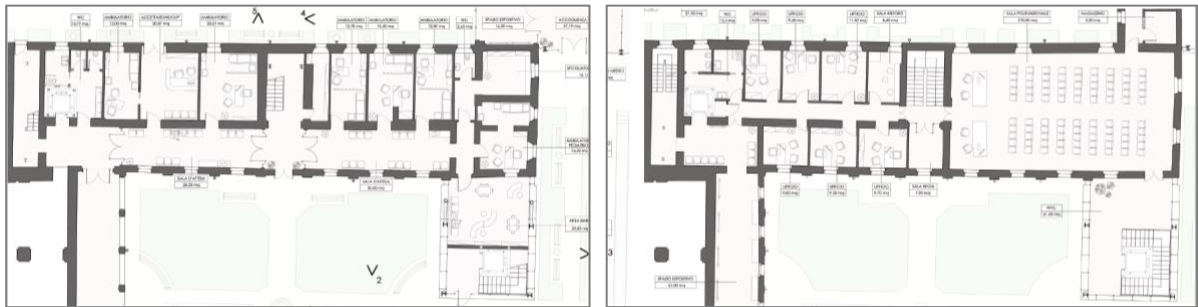


Fig. 8: Distributive plans of the Health house: on the left the ground floor (with the surgeries and the distributive spaces) and on the right the first floor (with the multifunctional room and the offices). The new block (for the new stairs and the elevator) is in the North-eastern corner, on the original demolished block sedime.

Walking along the long portico can be reached the public space of the Health facility (the barrel vaulted corridor) which hosts the waiting room for surgeries. The services and reception are located at the entrance of the corridor, while nursing and observation therapy clinics and the specialistic ones, are respectively located on the west and the east side of the central stairs, conserved in this central position for functional reason, but completely redesigned with new structure and materials (in virtue of the previous historical analysis). At the same floor, the pediatric and psychiatric clinic are located in a more secluded position, equipped with a special waiting room to accommodate children, with the insertion of a new volume at the north eastern corner of the block B, to recall the original court configuration (Fig.9)

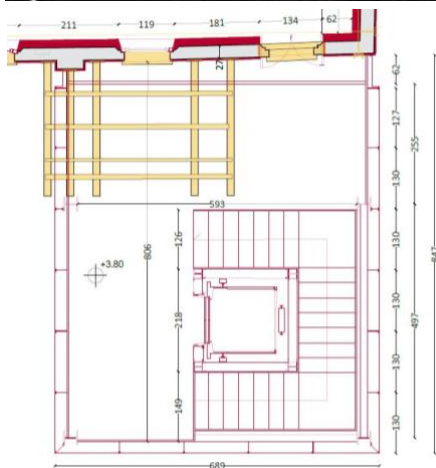
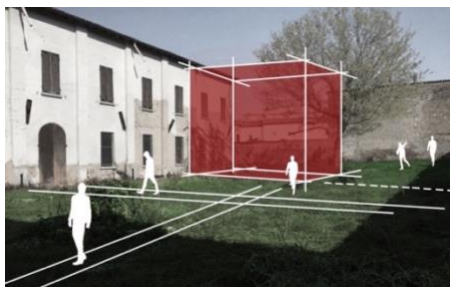


Figure 9: On the left: first floor plan of the new stair case, inserted in the new volume at the north-eastren corner of the block B, recovering the ancient sedime of the court configuration. On the right: the perforated steel panels employed by Kerstine Tompson Architects at Wertheim Factory (Melbourne), which suggest the hypothesized materials for the new volume.

Indeed, the historical and structural analysis, has represented the pretext for the restoration process which, attempting to balance the structural, historical and functional needs, as seen the insertion of a new block in place of the original demolished one.

This solution has multiple positive outcomes: from a structural perspective, the replacement of the provisional props – that are currently supporting the south façade – with permanent steel ones incorporated in the new construction, would effectively contrast the ongoing dangerous bending mechanism previously described. Moreover, the added block would facilitate the positioning of a further vertical connection (stair and elevator) between the two levels of the complex, granting an overall better fruition of the complex: through this structure, the new multipurpose room would have an independent entrance, also helping in managing the different flows of users moving within the complex on a daily basis at different times. Finally, as already underlined, this new volume helps in creating a pediatric waiting room directly overlooking the garden, thus allowing to separate the kids from the other patients, with facility granting benefits both in terms of general comfort of the users and epidemic control.

However, the relevance of the new path is also related to the achievement of full compliance with the current regulations in terms of accessibility and fire prevention. On one hand, the positioning of an elevator allows to address the issue of architectural barriers, on the other, the whole stairway configures as an exit route, meeting the safety requirements for public halls.

Finally, the new construction would re-propose the primigenial idea of the never completed cloister, suggesting a better historical reading of the complex. This particular feature will also help in better delimiting the two adjoining areas currently composing the garden, which, according to the proposal, would have two different uses: despite maintaining a direct connection between the two of them, the area comprehended within the entrance porch and the new wing, would be destined to public use, at disposal of the local community, while the portion of garden facing the new employment-training laboratory (block C), would be rather private, for exclusive use of the autistic kids' foundation, as expressly requested for this function (Fig.10).

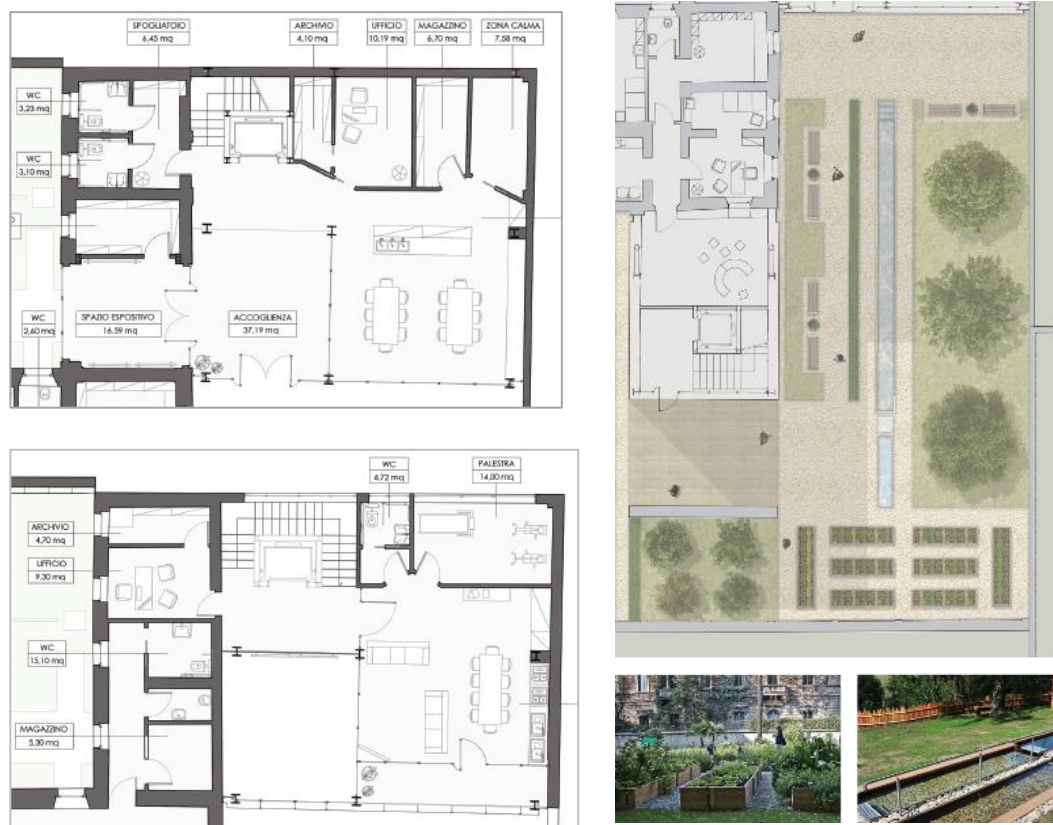


Fig. 10: Distributive plans of the new block C dedicated to the job start-up center for autistic subjects.

This block, considering the historical analysis, has been completely re-designed with the same materials and formal language used for the stairs previously described: articulated in two levels, the entrance hosts an exhibition room (with double volume), while the remaining part is dedicated to the services and laboratory area, positioned close to the historic boundary wall.

4. Conclusion

At the end of this research it became clear that for the town of Soragna the Complex of San Rocco is a "shared" asset and a fundamental memory for the community, which has always remained at the service of citizens.

Deprived for a long time of due attention and subject to interventions which actually damaged the structure, the municipal administration today intends to rehabilitate this abandoned space recovering its original value.

The community was, and still is, the main user of the built heritage; this implies that the conservation of architectural heritage requires an "adaptive reuse" capable of connecting historical-structural and functional needs.

In this sense, the proposed intervention is particularly delicate and requires a careful search for balance between conservation and re-functionalization through a multi and inter-disciplinary approach, capable of intertwining the results of historical analysis with structural and functional ones.

Acquiring awareness and mastery of the topic, through an in-depth initial knowledge phase and a comparison with the other specialized figures involved in the process, the project has tried to correctly manage the analysis results, determining conscious interventions, aimed at enhancing the intrinsic potential of the building, both resolving structural and historical issues of the complex.

The historic vocation of the building at the service of the city was the basis of the project, this together with modern needs are able to give an impulse to the entire district by constituting an avant-garde pole for local health. At the same time, a careful reading of the context and the needs of the community dictated the guidelines for the re-appropriation of the monument by the citizens. [6] This took place through the determination of a plurality of functions that make it possible to exploit its spaces at different times of the day, thus ensuring the first guarantee of conservation: widespread use (and continuous maintenance).

Acknowledgements

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