

Open for works. A way to disseminate the restoration.

Restoration of Antoni Gaudí's Casa Batlló, a UNESCO World Heritage Site.

Type of intervention

Restoration Rehabilitation / Renovation

Concerned elements on the intervention project

- 1. Foundations and underground structures
- 2. Vertical structures
- 3. Horizontal structures and vertical connections
- 4. Roof and terraces
- 5. Façade and building envelope
- 6. Finishes and completion elements
- 7. Integrate services
- 8. General strategies for building recovery

Site Casa Batlló, Passeig de Gracia 43, Barcelona, Catalunya, Spain

Objectives The restoration of main floor has tried to find a way to develop the original unifying power of each fragment that contained it, evaluating in a way proportional to how well each has survived.

Property Private

Designer Berta Hausmann Castellà, Hugo Fernández Faguet, Pere Amilibia, Xavier Villanueva, Joan Olona, Mireia Bosch, and Ignasi Villanueva.

Date Project development: 2019
Works: 2019-2020



Background to the intervention

Casa Batlló, World Heritage, is one of the most emblematic buildings of Barcelona, not only for its exceptional location on one of the main tourist and business areas, but also because it was designed by the architect Antoni Gaudí.

The building was previous, but in 1904 the family Batlló became the new owners of the House, and so, they hired Gaudí for rehabilitating the building to host several tenements. Its strategic position favoured that the Building, over time, adopted new uses that required internal reforms. In addition, during the last decades of 20th century, tourist interest about Casa Batlló grew immensely, and that led to far-reaching changes in the House to adapt for public use.

The modifications over time to the piano nobile, brought about both by the uses and the inhabitants between the 1950s and 1990s, created a substantial reduction in the value of the whole of the space as a composition. Thus, the stuccoes, the wainscoting, the carpentry, had an individual value, that had been blurred with the significant alterations of the original project by Antoni Gaudí.

The restoration of this main floor has tried to find a way to develop the original unifying power of each fragment that contained it, evaluating in a way proportional to how well each has survived.

Up until the year 2018, the entire piano nobile had an earthy-gray Paint finish, with lines of “trencadís” drawn on top, while the living room believed to have been Mr. Batlló’s office was painted a dark color with lines drawn in glitter². In this way, the painted finishes of the walls during this time represented a flat, immaterial visual character, and it was necessary to return “the materiality and the tactile experiences that evoke an awareness of temporal depth and the continuity of time.

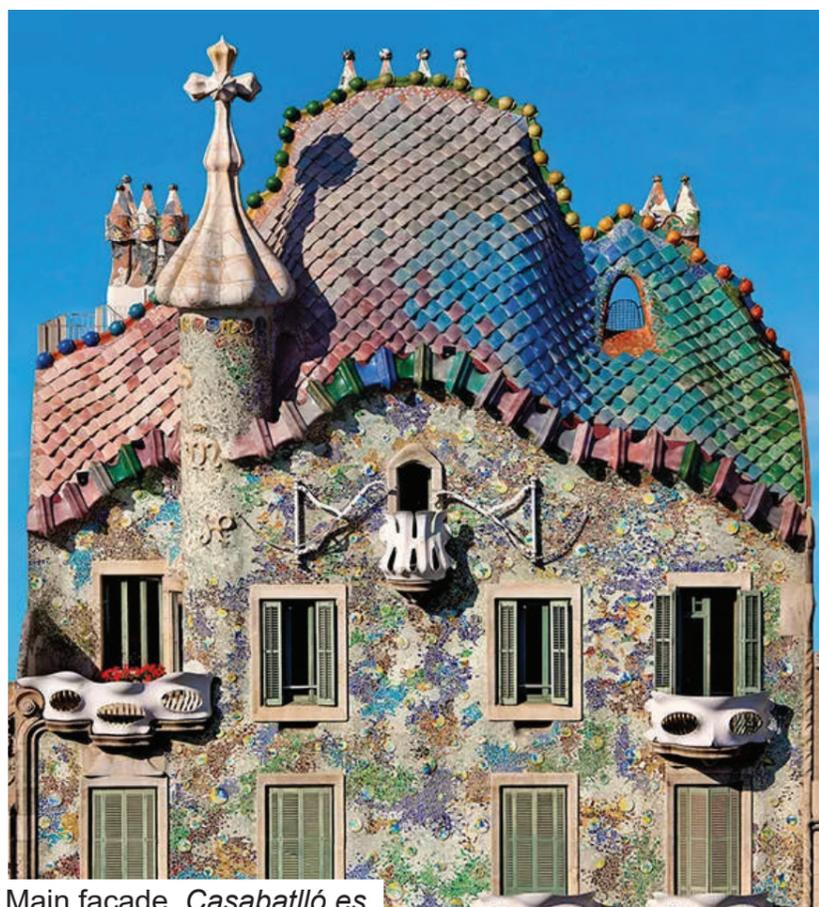


Fig.1 Next to the Amatller house you can see the facade of the house before the intervention of Antoni Gaudí 1904-1906
Historical engraving (web of Casa Batlló <https://www.casabatllo.es/en/antoni-gaudi/casa-batllo/history/> 10.25.2021)

Description of the building

Residential building built between 1875-1877 by the architect Emili Sala i Cortés, with a ground floor plus four (4) floors and a flat roof. Between 1904 and 1906 it underwent a complete reform projected and executed by the architect Antoni Gaudí. The main and rear façades, and staircase are intervened, a new private access is generated for the noble floor, a new floor is raised and therefore a new roof is made, all with a transformation of the ornamental language.

Currently, it enjoys the highest levels of protection as cultural heritage, since in 1969 it was registered in the Register of Cultural Assets of National Interest (BCIN), and since 2005 it is also a UNESCO World Heritage Site.



Main façade. Casabatlló.es

The diagnosis of the building (values and state)

Up until the year 2018, the entire piano nobile had an earthy-gray Paint finish, with lines of “trencadís” drawn on top, while the living room believed to have been Mr. Batlló’s office was painted a dark color with lines drawn in glitter. In this way, the painted finishes of the walls during this time represented a flat, immaterial visual character, and it was necessary to return “the materiality and the tactile experiences that evoke an awareness of temporal depth and the continuity of time.



Fig.2 Evolution of the entrance hall to the main floor:
2.1 Original condition, year 1906; 2.2 Previous state, year 2014;
2.3 Restoration, year 2019. Arxiu Mas (2.1), Joan Olona (2.2, 2.3)

The superposition of the layout plans of the piano nobile from 2014 with the survey carried out in the early 1950s by the Friends of Gaudí, clearly indicates the alterations that have occurred in the floor belonging to the Batlló-Godó family.

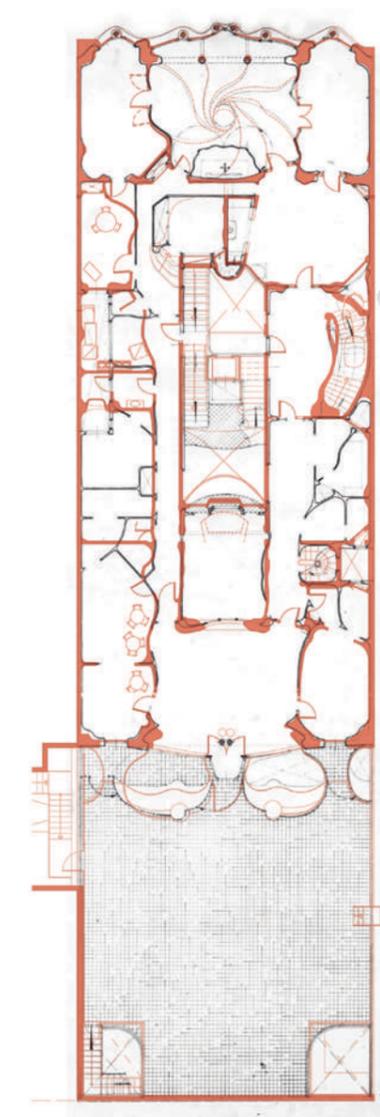


Fig.3 Main floor layout plan: superposition in red from the 2014 survey, in black, drafted by the Friends of Gaudí.
Joan Olona, Mireia Bosch

Similarly, historical images of the piano nobile as it was in 1927 show us partitions, doors, stuccoes and railings that in the period between 1955 and 1990 were altered and/or eliminated.

The changes over time of the piano nobile, the alterations caused by the users, caused a substantial reduction of the potential unity of the composition.

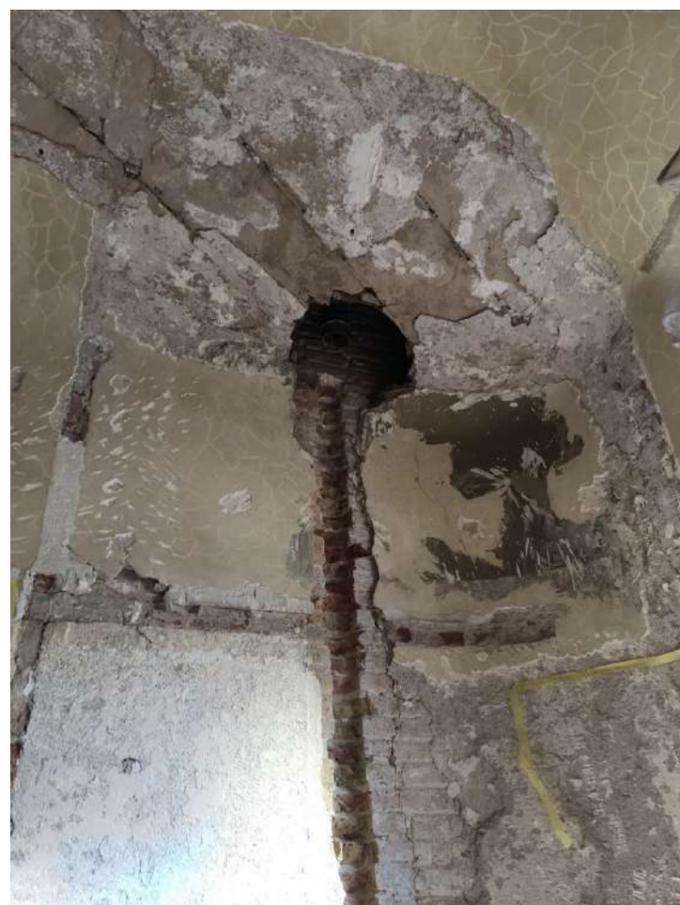


Fig 4. Previous condition of the North corner of the North room main facade. A vertical cut, missing stucco and underlying remains that appeared under layers of paint can be see.

Joan Olona

In July 2017, on the third floor, small samples had been extracted to rate the stucco quality and colour range of the different rooms of one of the apartments on the third floor. In the laboratory, photomicrographs and X-ray diffractions showed lime mortar stucco of remarkable quality.

A second round of samples were taken from strategic places of the main floor, this time expanding the types of tests to try to obtain the maximum information, from below numerous layers of paint from the 1960s to the present day. The results showed that the technique used consisted of a multitoneal lime stucco, where in addition to the three traditional coating layers, incisions were made to etch the “trencadís” which were then filled again with mortar of lime, and the result finished with a layer of waxes.

The formal richness is not only due to the technique itself, but also due to the quality of the finish, the particularity of the pattern and the multitoneal distribution.

A third round of inspections was launched, in which a team of restorers began to strip small areas of wall, and thus verify the whole surface. The restoration of these first areas showed where the wooden wainscoting had been, and the discovery was also made of the original wainscot numbering, in graphite pencil, on the wall of the different rooms, and even the drawing of the upper undulation of the skirting, made during the construction phase of Gaudí 's work.



Fig 4. Wainscot stratigraphy: original graphite pencil markings with original slab geometry and numbering. Joan Olona



Fig 6. Statigraphy layers of paint on original finish and wainscot numbering.

Restoration works

After the process had been underway for more than a year, with scientific data obtained in the laboratory, from the samples and from wall and ceiling trial holes, enough information had been gathered to go beyond the initial hypotheses. It had become clear that the building conserved under layer after layer of paint, surprising finishes that only had to be revealed.

The replacement of the coatings was carried out differentiating the restoration of the large gaps, with the reproduction of the original stucco technique, while specific repairs were filled with a neutral finish. In both cases, the chromatic intervention allows the integration of the parts with respect to the whole, while also allowing a visual distinction from close range. Throughout the processes, the alterations were documented one by one prior to restoration in order to facilitate the understanding of this intervention.



Fig 7. Documentation criteria. Coloured dots identify the different reintegration interventions.

Mireia Bosch

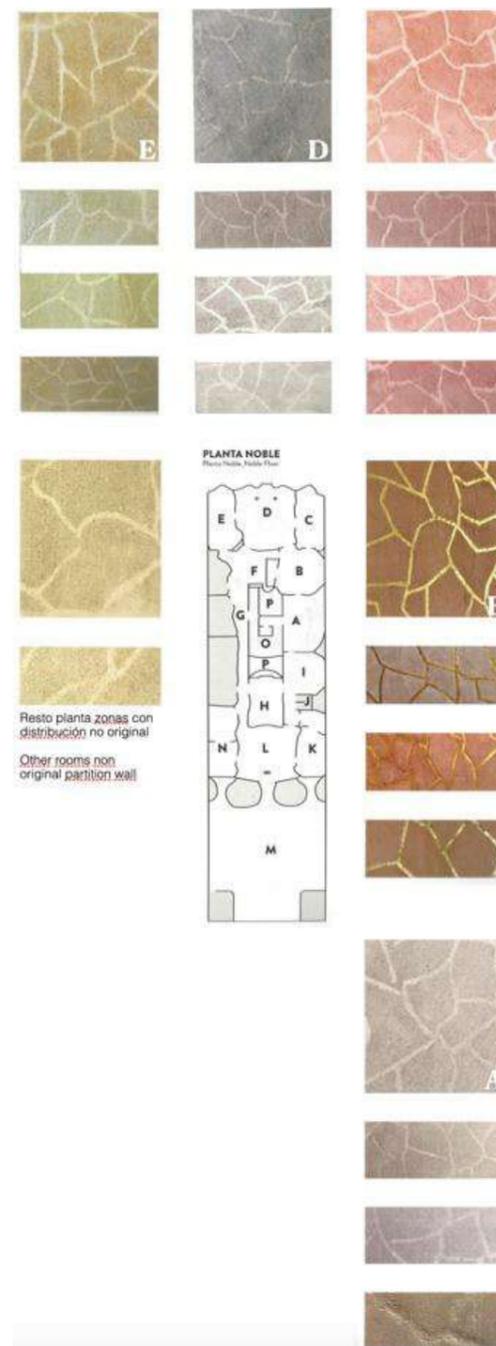


Fig 8. Plan of the original restored stucco. *Joan Olona, Mireia Bosch* according the *Restoration Guide of Casa Batlló*.

This enormous remodelling, together with the misinformation about the uses of the rooms in the Bonet Garí plans, represented a challenge in the restoration of all these spaces. The changes over time of the piano nobile, the alterations caused by the users, caused a substantial reduction of the potential unity of the composition.

The elimination of the wainscoting in almost the entire piano nobile (all but the elevator lobby) caused half of the vertical walls to be significantly altered. On the ceilings and the upper part of the walls, the stucco pre-sented an uneven degree of conservation: grooves cut in some areas, sporadic or large gaps, making it impossible to read as a composition, while the ceilings, in areas where they were still preserved, showed a good state of conservation of the original finishes. (The wooden flooring is a reproduction of the original, laid in the 1990s).

There was no question of showing the building in the imperfect state that which had developed over the course of history or the arbitrary refurbishments that had brought it to its present condition. However, taking into account that any intervention that resembled the original finishes could be considered historically false, the restorations and reconstructions needed to be as close to art as possible, so as to preserve not only the building materials as a historical fact, but also the building techniques. The artisanship was a conservation priority, their reproductions and materializations were historical achievements to preserve and continue.

The first was that any intervention should always be easily recognizable, but without disturbing the unity of composition that was the precise aim of the reconstruction.

The second attempted to understand the principle of integration of gaps, and maintained the reasoning that any

intervention should not take precedence over the original finishes, to avoid the mutilation of the whole if an inappropriate material was added.

The third related to the patina and its connection with time. The value of this layer as a sedimentation of time on the architectural work is indisputable and must be maintained and differentiated from the new interventions.

The uniqueness of the finishes of the main floor with respect to other contemporary interiors does not depend on its material consistency, nor on its historical value, but on its technical-artistic condition, which would entail that once this condition was lost, only a relic would remain.



Fig 9.1. Reintegration works of gaps in.



Fig 9.2. Left, painting state prior to restoration; right, surface restored



Fig 9.3. Gold leaf reintegration detail.

In this way the discoveries occurred and were explained step by step. It was a unique moment, where the original finishes of the house were being revealed, having never before been documented or explained. Thus, a plan and compatibility study of having visitors together with the restoration work was carried out, in order to offer the enjoyment of living the restoration live: not only could the visitor contemplate the discoveries, but a canal was enabled to stream the works in real time all over the world. Graphic and textual information was designed to make the work understandable in a didactic way.



Fig 10.1. Screen adapted for spaces to protect but also allow the visitor to see during the restoration process.
Oscar Criado - Archivo Casa Batlló



Fig 10.2 & 10.3. A series of perspex partitions allowed the viewing of, and almost physical contact with the restoration, in order to meet the demand for visualization and transparency of the work that was being carried out.

Assessment of the results

Study, analysis, and recovery of the stucco technique carried out at Casa Batlló.

Compatibility of the visit with the execution of the works.

Dissemination of technical knowledge, through the visibility of on-site restoration works and enabling a streaming channel, the presence of specialized personnel to answer questions from visitors and with graphic and written information to make the work more understandable at a didactic level

References

<https://www.casabatllo.es/en/>

https://www.youtube.com/watch?v=p-xfmiU_rjA

<https://polipapers.upv.es/index.php/loggia/article/view/14042/13300>

<https://polipapers.upv.es/index.php/loggia/article/view/14039/13299>

<https://polipapers.upv.es/index.php/loggia/article/view/14066/13301>

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