

Villa Borromeo-Arese, a mansion located in Cesano Maderno (MI), is an outstanding example of late Lombard baroque style. Subsequent modifications and renovation work on the original structure have not had a determining effect on its appearance. Work began on the villa in the mid seventeenth century and an important role in promoting and supervising the works during the initial, decisive building phase, which lasted until around 1770, was played by Count Bartolomeo Arese, a leading dignitary of the Court of Spain and elected President of the Senate of Milan in 1660. Right from the start, the mansion was a typical suburban villa, built on the outskirts of the old medieval town of Cesano. The considerable architectural qualities of the building and the admirable layout of the enormous park were probably based on a

single, unitary design of outstanding artistic and professional level. Over 3,000 square metres of precious frescoes depicting mythological, religious and historical scenes decorate the approximately one hundred wonderful rooms of the palace. The approximately 2,500 square metres of Piazza Esedra lie in

FLOOR RENOVATION

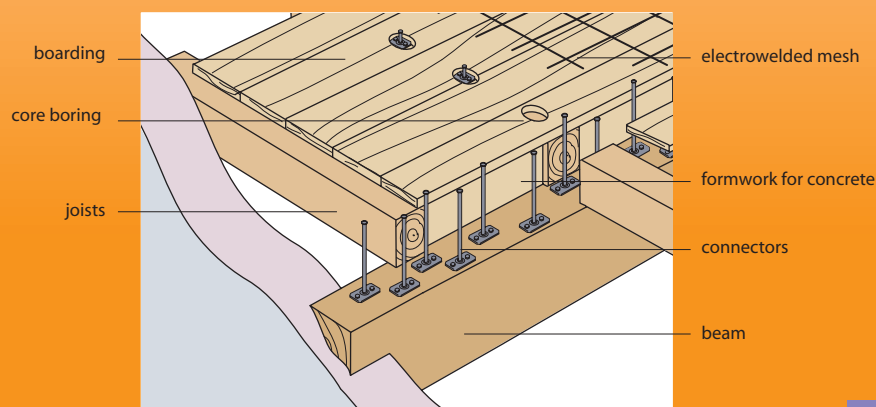
Villa Borromeo Arese
Cesano Maderno (MI)

front of the building. This square, decorated in the pure baroque-mannerist style, is an ideal amphitheatre capable of containing over one thousand people for the numerous open-air events that are held there every year. Behind the Villa stretches the beautiful Park measuring 90,000 square metres. The prestige of the Villa and the vast power welded by the family that owned it, were just two of the reasons why it became a venue for important political and social events. During the eighteenth century, princes, cardinals, nobles and high-ranking military stayed in its rooms. This political and social vivacity went hand in hand with a similar fervour in completing, decorating and maintaining the complex. The political and military troubles that bathed Lombardy in blood during the mid-nineteenth century signalled the beginning of a long phase of neglect for the villa. The pillage and destruction that followed its confiscation by Austria did serious damage to the structure. Only at the end of the conflict were everyday life and repair and maintenance work resumed but without the drive and fervour of before. At the end of the nineteenth century, part of the building was rented to the Town Council which installed its offices and the local school there. The park was also rented out to tenant farmers who turned it into farmland. Only at the beginning of the twentieth century, thanks to the younger generation of the family, was the villa used again for regular events which, for a certain period, halted the process of neglect and decay. After the First World War, Count Guido began a period of regular maintenance of the complex which was marked by the flourishing of activities and ceremonies attended by political, civil, military and religious leaders of the time. The most recent phase of the history of the villa was somewhat less public as the children of Count Guido, Renato and Giustina, made it their home for a long period. During the last years of his life, Count Renato considered transferring it to the Borough of Cesano Maderno. In 1987, the Villa became public property and restoration work is currently in the completion stage.



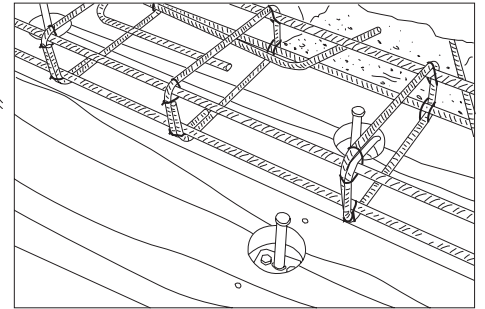
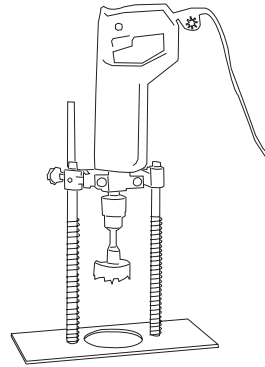
Description of the work done on the wooden floors

The renovation of the floors of the building presented considerable difficulties: the primary aim was to preserve and renew the existing floors in order to make them suitable for the new use to which the rooms were to be put and which required an increase in load capacity and rigidity (some parts of the building are now used by a university). The load capacities of a residential building are different from those of a public building, especially when some areas are planned to be used as a library. The old floors were built either with a double frame of beams and joists or with a single frame of beams and 3 cm thick boards nailed over them.



We will now examine the work done on the double frame floors.
We proceeded as follows:

1. Removal of flooring and any substrate over the floor
2. Removal of the floorboards on the main beam



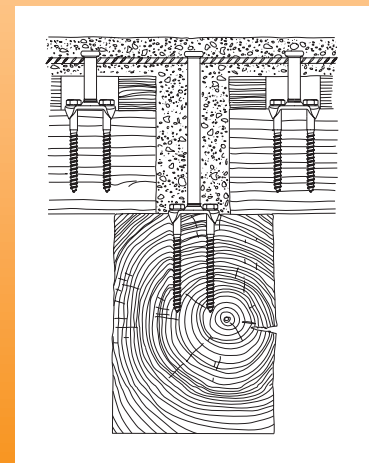
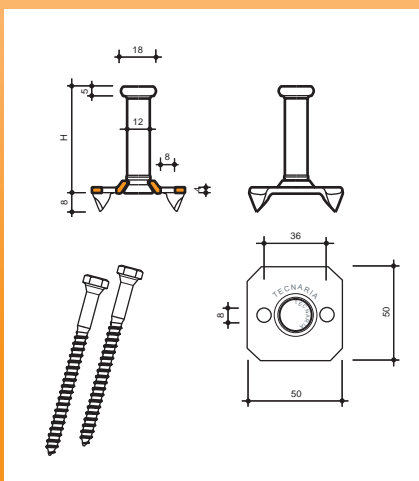
3. Partial cutting of the overlying joists in order to leave an approximately 15cm wide channel over the beams
4. Extrados cleaned
5. Holes drilled at the indicated distances for the connector screws
6. Connectors fixed
7. Frame or reinforcing material laid (where required)
8. Installation of formwork for retaining the concrete poured into the channel over the beams
9. Shoring the beams and joists
10. Laying the electro-welded mesh
11. Pouring the concrete



The ideal solution for renovating the floors was to achieve the required rigidity by applying a thin slab of concrete (about 5 cm thick) which was made to collaborate with the wooden elements by means of Tecnaria connectors. Before pouring the concrete, these elements were secured by inserting special sleeper screws into the wooden beams. These connecting elements (with a height of approximately $2/3$ of that of the concrete slab) make the beams integral and mechanically joined to the concrete slab, thereby offering a unitary static response and elevated floor performance.

A suitable sized electro-welded mesh was always inserted in the concrete slab. This achieved considerable increases in the rigidity and load bearing capacity of the floors, together with reduced impact vibrations and creep. Given the presence of frescoes of considerably artistic value, retaining the original level of the floors was a crucial condition.

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Contractors: Edilfrair S.p.A. Sassa Scalo (AQ)
Genovesi Costruzioni s.a.s. Limbiate (MI)



connector in direct contact with the beam and on the joists

TECNARIA