

Camillo Boito's "Capannone" for the Accademia di Brera in Milan: Reuse of a Railway Depot



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Abstract The work concerns the project for the transfer of some departments of the Brera Academy to the area of Scalo Farini located in the centre of Milan. The area is central to the transformations of Milan, and the relocation of the departments of the Academy solves the problem of its development as a school. The transfer occupies the large post office warehouse in the centre of the area, which is the subject of a conservation and evaluation process for the insertion of the new functions.

Keywords Reuse · Preservation · Railway · Depot · Academy of arts

In the heart of Milan, a stone's throw from the Monumental Cemetery, still today we find the physical existence of the two long "wings with a saw-toothed perimeter line" of the former goods depot that unambiguously draw attention to the imprint left by the decommissioned Farini marshalling yard on the city's historical fabric. The building, revamped several times, especially at the end where the subsequent additions are instantly decipherable, constitutes the last physical witness of the history of the transformations that occurred due to the changing routes of the railway system (Aa 1933; Guarisco 2015; Guarisco et al. 2017).

After the early nineteenth-century, in rail transport routes run by private individuals and prevalently for use by travellers, with the establishment of the state railway company, the Ferrovie dello Stato (1 July 1905, Giolitti government), and under the management of the Ministry of Public Works, came the first reorganization of the entire rail network in Milan, and in particular, the fundamental reorganization of the marshalling yard (Rigato 2017–2018). On p. 87: "To expedite the running of the trains, especially in the major stations, it adopted the separation and specialization of transport in passenger and goods, while previously such specialization had never been put into effect" and its buildings. The Central Station became significant and was repositioned towards the edge of the city, while the stations of Lambrate and

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Fig. 1 Example of the characteristics of the “Hennebique system” structures in a logo for postal envelopes of the Porcheddu company

Porta Vittoria were being built. The points of interchange for goods in use up to that point, in addition to the large Sempione yard (1883–1884), were located near the city gates: Genova (1868–1870), Garibaldi (1873) and Rome (1896). The state railways, as part of a sweeping plan to reorganize the entire railway network of Milan, created the Farini marshalling yard (a transfer of the by-then insufficient one of Garibaldi) and that of Porta Romana (as a result of the decommissioning of Sempione, 1931), and the yards near the railway stations of Porta Vittoria and Porta Genova.

The Farini marshalling yard maintains its original north-west alignment, remaining today among the trajectories of greater accessibility to the centre of Milan. Destined to grow exponentially from the date of its construction, it lies at a crucial point of the city, in the immediate vicinity of one of the historical gates and the passenger station of Porta Garibaldi. Over the last 20 years, the physical aspect of the entire area has changed profoundly: large swathes have been razed, the towers of the Bosco Verticale—“the Vertical Forest”—have risen, Piazza Gae Aulenti was fashioned with new buildings surrounding it that generate a skyline of corporate towers very similar to those of metropolises around the world. Beyond this area, the old marshalling yard has remained (now covering an area of 618,733 m²) which, in its growth, has extended as far as the Monumental Cemetery (Figs. 1 and 2).

With the *Marshalling Yards Program Agreement* (2017, but the planning process for the abandoned areas had already begun in 2005), it was stipulated *inter alia* that “the marshalling yards [...] can accommodate cultural activities, even of a private nature, tied to music, art, and architecture, by developing the existing buildings wherever possible” (point L, p. 27) with the launch of procedures to regenerate the abandoned areas. It was within this framework that the *Steering Document*¹ appeared,

¹On 22 December 2017, a letter of intent was signed between the Municipality, FS-Sistemi urbani and the Accademia di Brera, and thereafter (3 May 2018), a more specific convention for the use of part of the large former goods depot as new premises for teaching activities as an expansion of the Academy’s historical seat. In the follow-up to research already begun some years earlier (Monica L., Scarrocchia S. 2015), the Academy charged the Polytechnic University of Milan (Head Monica L., consultants Guarisco G., Natri A. and Acito M.) to prepare a Steering Document that could lay the foundations for the subsequent project phases. On 27 February 2019, in the presence of

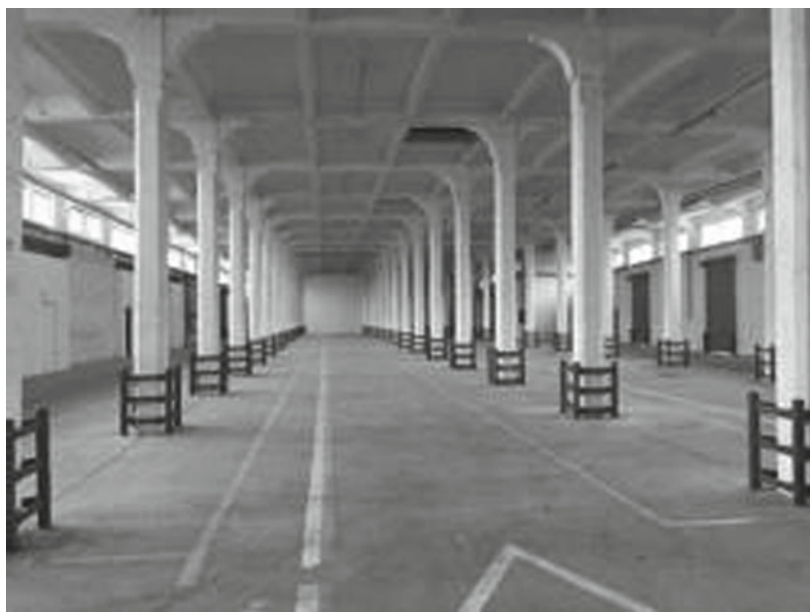


Fig. 2 A view of the inside of the depots today

produced in November 2018 with verification of the feasibility to reuse the former depots for some educational and workshop activities of the Accademia di Brera.

Despite relentless consultation of the accessible archives and research on bibliographical bases, up till now it has proved impossible to establish the exact date of construction of the former depots (1910–1914?), even though the research has produced an advancement of knowledge in this regard.

After the state took over the national railway network, the executive committee of the municipality set up a new commission presided over by the Rector of the Polytechnic (the engineer Giuseppe Colombo) which drafted a definitive development plan adopted immediately by the railways. It was in the plan of the municipal engineers Pavia-Masera (1909–1912) that the structure of the Farini marshalling yard, a “new low-speed freight yard” appeared for the first time in all its grandness (Cusatelli 2019). Its mixtilinear profile combines a curve in the northern part (to delimit increases in the number of rails) with a straight line parallel to the tracks which arrives almost as far as the Bovisa gasworks. The works to construct the yard proceeded rapidly: the two wings of the general depots appeared for the first time in the IGM map of 1914 (Figs. 3 and 4).

If the materials available at the Milano-Greco railway (Ministero delle Comunicazioni n.d.; Canella 2010; 6 table Archive of the FF.SS.) archives do not for the moment allow confirmation of the date when the works were completed, the

the authorities, the ceremony to inaugurate the Accademia's academic year took place inside the marshalling yard, in an area made safe especially for the occasion.

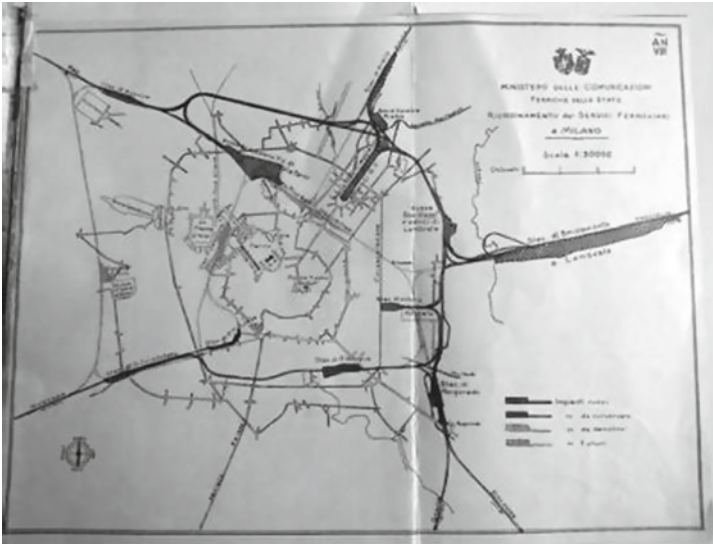


Fig. 3 Ministry of Communications—Ferrovie dello Stato, Riordinamento dei servizi ferroviari a Milano, General Plan (n.d.), Raccolta Bertarelli Milan

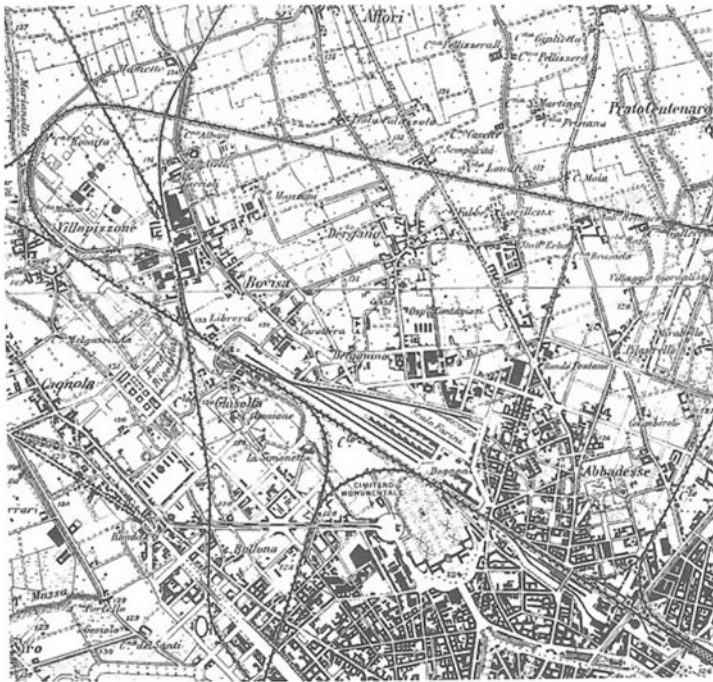


Fig. 4 Istituto Geografico Militare, Panel Bollate and Milan West, 1914, IGM Archive

newspaper *Corriere della Sera* reported the inauguration of the marshalling yard not long after WWI (16 September 1921). The journalist described the depots thus as: "Enormous and ready to accept an upper story that is already likely and for which everything has already been arranged, these depots cover an area of 22,000 m², without counting the 6,000 m² of open-air loading bays, and are constructed with a saw-toothed perimeter line to make loading and unloading easier on the intermediate and external groups of rails", since the declaration that they were already in use, with every probability, they were constructed at the time of the Great War and "could be relied upon to accommodate many soldiers and machinery" (Elia et al. 2015).² Later on, the depots appeared in operation in the photographs of a volume that celebrated the conclusion of the works on the Central Station³ (1934) (*La Stazione Centrale di Milano 1931*).

The two long wings are typologically related to industrial sheds and so today can justifiably be considered of interest to industrial archaeology. From the outside they appear as a repeating series of walls with large openings arranged above a high "plinth" (to permit the passage of goods at a height) surmounted by the indispensable canopies, installed (in different periods) to avoid the work being hampered by bad weather. The spaces are equally repetitive inside, rhythmically broken up by the "forest" of pillars surmounted by beams in reinforced concrete. In this respect, it should be noted that this construction system, which has seen widespread use in large buildings that had to be erected quickly, is related to the so-called "*beton armé Système Hennebique*" (Riccardo and Signorelli 1990).

The dissemination and evolution of reinforced concrete techniques in Italy with reference to the Hennebique System, introduced by G.A. Porcheddu, agent and general licensee for north Italy,⁴ took place in the years between the end of the nineteenth century and the first decades of the twentieth century. Among the first uses of this technique in Milan, albeit limited to horizontal structures (decking), was the realization (1897–1901, 1898 contract) of the building for the Società Assicurazioni Generali Venezia, which still exists today in Piazza Cordusio and was designed by the architect Luca Beltrami in collaboration with the engineer Luigi Tenenti. This building, with its traditional wall structure, sees the use of floors (originally envisaged as beams and vaulting) made from reinforced concrete according to two structural typologies: the first consisting of slabs with main and secondary ribs (to be used for the upper storeys) for smaller ceilings; the second consisting of flat intrados which required a double slab to be used for the larger ceilings to cover the halls on the ground floor (Figs. 5, 6 and 7).

²See: Elia M.M., Cantamessa L., Petrucci E. (2015). "Fortunately, the Italian State Railways in the previous two years the war, had begun work to develop the 'strategic' lines and installations with some interventions that dated back as far as 1908 when, as a result of the burgeoning fears of a possible attack by Austria upon expiry of the Triple Alliance, the FS decided of its own accord to scale up the marshalling yard at Mestre".

³*La Stazione Centrale di Milano—Inaugurata l'anno IX E.F.*, official illustrated supplement authorized by the Ministry of Communications, Milan 1931, p. 58.

⁴The Porcheddu company's clients included the state railways.

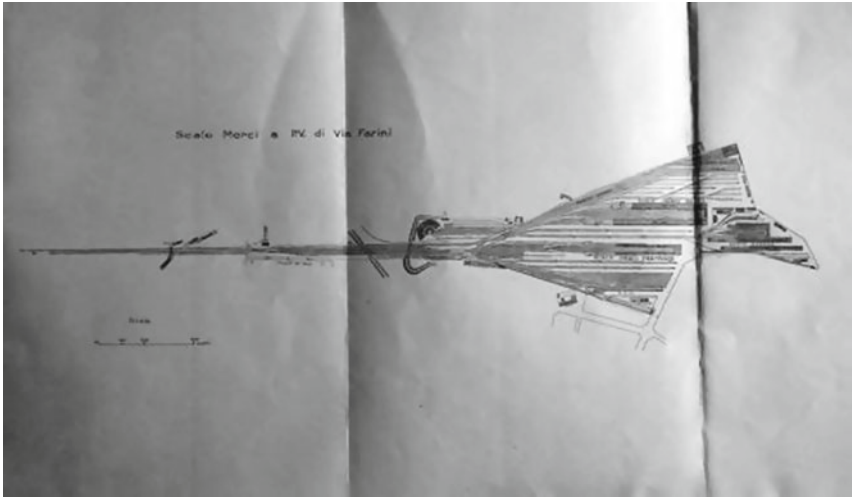


Fig. 5 Ministry of Communications—Ferrovie dello Stato, Farini Railway yard, Project plan, undated, Raccolta Bertarelli Milan



Fig. 6 Original view of the Warehouse building, undated, (La Stazione Centrale di Milano 1931)

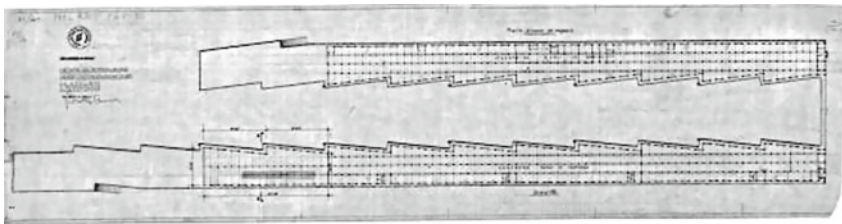


Fig. 7 State Railways Project Office, Plan of the Warehouse building, undated, FF.SS. Archive Milan

Again in Milan, one of the first and most important examples of a structure realized in reinforced concrete with large ceilings is the *Grande Salone*—the Great Hall—(built in 1900) in the courtyard of the Brera building. Measuring 15 × 25 m, it was intended for a classroom that had to temporarily accept works of sculpture submitted for the 1900 Brera Exhibition (*Il nuovo grande salone di Brera 1900*). The work was designed and completed by the architect Augusto Brusconi⁵ of the Regional Technical Office for the Conservation of Monuments.

Despite Hennebique's patent expiring in 1903, the structures of the depots are practically a plastic recreation of the structure represented in the A.G. Porcheddu company logo with which they advertised the Hennebique system, as proof of the strong monopoly that the company had acquired as a patent licensee. In fact, comparing the image of the company logo with an image of the depot structures, we can recognize in both the classic typology of pillars, beams and slabs in reinforced concrete used for industrial buildings, as an evolution that saw for this type of building the passage from constructions of a nineteenth-century type (several aisles with perimeter walls in brick and structures generally in iron) to buildings that adopted reinforced concrete for the horizontal structures (possibly with reinforced concrete pillars in the inner zones) but with façades still in masonry.

The structural elements which were also part of the new architectural language and that characterized the industrial building were the pillar, with characteristic rounded corners, of a generally reduced size (40 × 40 cm, 50 × 50 cm); the main beams depressed by the ceiling slab, with chamfered corners and connected to the pillars via corbels; the secondary beams to stiffen the slabs and fit into the main beams; slabs of reduced thickness and dimensions which could be rectangular or square. Clearly, compared to the previous examples mentioned, in the case of the structures of the two wings, we are in the presence of a further evolution of this type, which also saw industrial buildings freed from load-bearing perimeter walls, almost certainly due to the need to have large openings around the perimeter to facilitate the movement of goods.

Another consideration must be made regarding the use of the Hennebique system by the two Milanese designers Beltrami and Brusconi, the authors of several restoration works, as a matter of common knowledge. The Office (established in 1892 but in operation from 1893 until 1908 when the Superintendencies were set up), is located at the Brera, where two other institutional seats coexist: the administration of the homonymous picture gallery (Corrado Ricci) and the administration of the academy (Camillo Boito). From an examination of the Corrado Ricci archive (Guarisco 1995), a series of private letters to Boito came to light (September 1912) from which it emerges the opinion of both on the members of the Regional Technical Office. Ricci, who was preparing the First Conference of Honorary Inspectors and Superintendents (which took place in Rome in 1912), sought Boito's approval and support for the initiative. But Boito, who saw in the conference the enactment of a

⁵Among other things, the architect Augusto Brusconi would be the leading light of the project "for the general organization of higher education institutes" in Milan, and later on, in the establishment of the new Polytechnic seat of Città Studi.

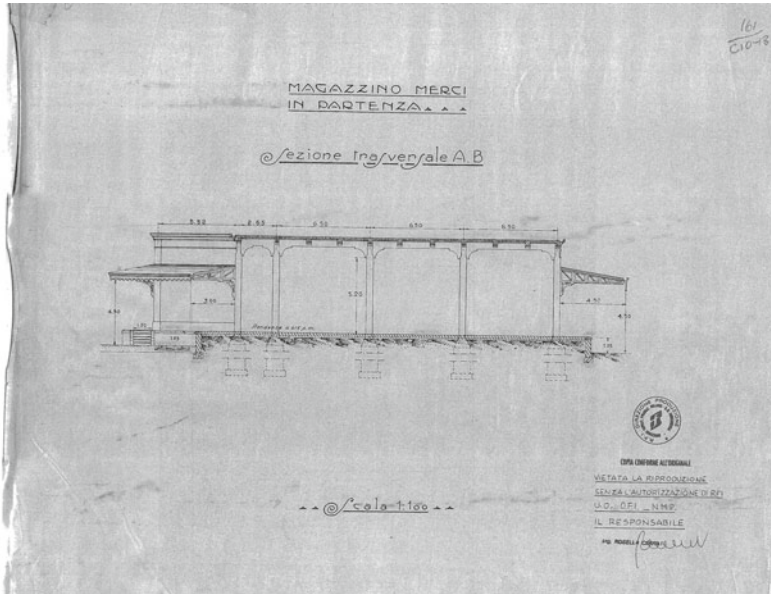


Fig. 8 State Railways Project Office, Cross section, (n.d.), FF.SS. Archive, Milan

“pompous little school” which he considered “unseemly”, obliged Ricci to make a pungent and ironic defense through which in the end he would have obtained Boito’s blessing. The question would seem of no interest, unless for the fact that Ricci, to bring Boito over to his side, attacked in no uncertain terms first the representatives of the Technical Office and then Boito himself.⁶ In short, the atmosphere was not exactly placid. Of course, Boito, in 1912 (he died in 1914), must have already seen (if not directly commissioned?) the project, and the execution of Brusconi’s works in the courtyard of the Brera for the construction of that building which already used the Hennebique system, and was supposed to host the 1900 exhibition, and then the *Gipsoteca*—plaster cast gallery—too inconsequential within the picture gallery (which Ricci directed from 1898 to 1903) (Figs. 8 and 9).⁷

At this point, and with this reference framework, also the now famous phrase of Boito becomes clear: “Oh this blessed shed! It would be our anchor of salvation for the Academy and for the exhibition [that of 1900], it would put everything in place for the teachers and the pupils and the artists: I dream of nothing else than the shed,”⁸ and

⁶See: Guarisco G. (1995). Ricci to Boito, 27 September 1912: “From the walls of the Palazzo di Brera exude a kind of poisonous humidity that attacks the mood. Beltrami, Brusconi, Moretti, and Modigliani have all come and been touched by it [...]. Reading your ferocious penultimate letter, I said: Sadly, even Boito has become Beltramiated, Brusconiated, Morettiated, and Modiglianiated.” The correspondence is kept in the C. Ricci Collection at the Classense Library of Ravenna, under nos. 4010, 4011, 4012, 4013.

⁷See: Pini (2009–2010).

⁸C. Ricci Collection, Correspondence, no. 4041.

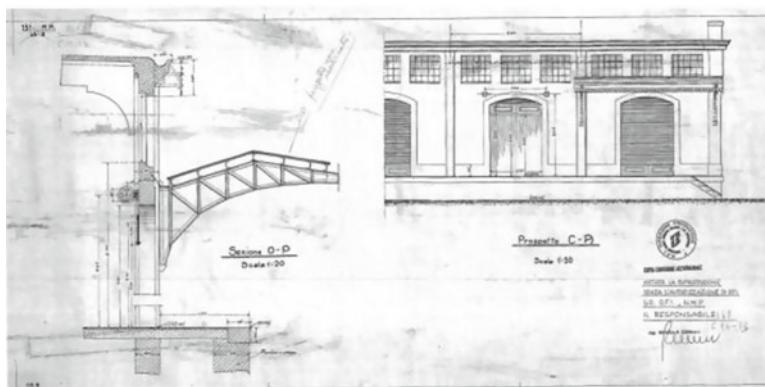


Fig. 9 State Railways Project Office, Front and section (n.d.), FF.SS. Archive, Milan

thus the assumption (which only further extensive research can confirm) that Boito was well aware of the Hennebique system (and this is not something extraordinary, seeing that Brusconi was building it before his eyes) seems evident, but also its use for the construction of large buildings, such as the “shed” referred to. From here to say that the shed wanted by Boito for the academy and its teachings were the Grande Salone or the former Farini depot is still somewhat impulsive since the research does not offer any concrete proof, either regarding the designers or the dates.

It should now be acknowledged that this hypothesis is the result of a close collaboration between contiguous disciplinary areas (restoration, architectural design and structural engineering) that have difficulties seeing eye to eye, but which—when they do—produce unexpected results on the research front.

The first fact-finding investigation of the former Farini depots produced a long series of not negligible particulars in the planning phase to verify the impact for reuse as the seat for some lessons of the Accademia di Brera. Owing to the importance of some of the protagonists of Milanese cultural history in the nineteenth century when it comes to architecture and monuments (Boito, Beltrami, Brusconi, etc.) and due to the importance of the Hennebique construction system used here in a precocious and singular manner, it was already frankly stated in the *Steering Document* that only interventions aiming at the practical conservation of the edifice as it has come down to us would be eligible.

In order to proceed in accordance with the rules laid down in the *Cultural Heritage Code* (2004), an initial phase of cultural valorization would be followed by a physical valorization by reusing the extant remains. It is not only to honour Boito's work and that first Restoration Charter (1883) that the conservation of the existing building will be carried out. It is a homage to a school, the Politecnico di Milano (where Boito himself promoted the teaching of restoration much sooner than in the rest of the Country), the continuity of working relationships with the Accademia di Brera (renewed in these studies) and, ultimately, the joint search in the former depots for spaces suitable to teaching activities that are which in both institutions of top quality.

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