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Preserving the heritage of local private railways: rolling stock and fixed installations beyond the Italian State network

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Abstract: This study examines the preservation of Italy's non-state railway heritage, focusing on historically private and regional lines that retain significant testimonies of twentieth-century railway engineering. Unlike the national railway network, these lines often preserve original rolling stock, signalling systems, electric traction infrastructure, and operational technologies, thanks to their relative isolation from later standardization processes. Their exceptional heterogeneity reflects complex corporate histories, financial constraints, and repeated adaptations over time. However, the absence of a central coordinating body has hindered coherent conservation strategies. The paper explores possible approaches for safeguarding this fragile heritage, particularly fixed installations and historical traffic-management systems.
Keywords: licensed railways / railway heritage / rolling stock / fixed installations

INTRODUCTION

The idea for this contribution stems from an observation: namely, the extraordinary conservation work carried out in recent years in Italy by the Fondazione delle Ferrovie dello Stato. This foundation has successfully enhanced an invaluable heritage spread across the national territory,

simultaneously giving value to a technical legacy whose preservation was previously left to the awareness of individual, often isolated, figures.

However, it is widely agreed that the railway heritage is not limited to the national network, but encompasses, among other things, the heritage of railways licensed to private operators.

1. PROPERTY AND LICENSED RAILWAYS

Examining the issues related to the conservation of the heritage of Italian secondary railways requires some preliminary considerations on the administrative and patrimonial features of these infrastructures (Sandulli, 1964; Ribolzi, 1968; Parisio, 2008; Santoni, 2025). Indeed, the present investigation intends to focus on the railway lines commonly referred to as "ferrovie concesse" (licensed or private railways), distinguishing them from the railways operated by the Ferrovie dello Stato, which since 1905 had brought under a single administrative unit the operations previously granted in to the Società Italiana per le Strade ferrate del Mediterraneo, the Società Italiana per le strade ferrate Meridionali, and the Società per le strade ferrate della Sicilia (Kalla-Bishop, 1971: 49 et seq.; Giuntini, 2001: 55; Maggi, 2003: 106).

The dichotomy between public and private railways is already present in Annex F of Law No. 2248 of March 20, 1865, concerning the administrative unification of the Kingdom of Italy. The law stipulated that licenses of public railways to private companies would have a limited duration, upon the expiration of which the State would take over the management of the railway and the ownership of its related immovable property—the so-called reversibility (Article 248). Movable property—such as vehicles, tools, and materials—would instead remain with the concessionaires, unless the license itself granted the concessionaires the right to demand purchase by the State (Article 249).

Even the legislative text that comprehensively defined the subject of licensed railways, namely Royal Decree No. 1447 of May 9, 1912, confirmed the regulatory solution of redemption by the State (Articles 188 et seq.). This allowed the granting authority to terminate the concession relationship with the transfer of all instrumental operating assets to the State, while also allowing the concessionaire to demand the purchase of

the rolling stock by the State (Ribolzi, 1968: 268). The provision in question is useful for drawing a fundamental dividing line between the regime governing fixed installations and that of the rolling stock of railways granted to private industry.

It must be said, indeed, that the financial situation of the companies operating licensed railways was often characterized by crises that prompted proposals to sell the rolling stock to the State even during the term of the license. As Maggi (2003: 143) observes, the average operating coefficient of licensed railways was extremely critical, with several lines operating at loss.

Following the establishment of the regions as administrative entities with a growing number of competencies, the future of licensed railways was varied and diversified. They often underwent periods of administration by a commissioner appointed and overseen by the Ministry of Transport, a solution always pursuant to the aforementioned Royal Decree of 1912.

There is no room here to dwell on the complex administrative vicissitudes that have affected Italian licensed railways. It is more fitting to merely consider the effects of these processes, focusing on the form through which private railways entered the 21st century.

Following a well-known legislative intervention concerning the transfer of competence in local public transport to the Regions, implemented by Legislative Decree No. 422 of November 19, 1997, the Regions' assumption of the role of granting authorities for the lines was sealed. This laid the foundation for the "[...] free transfer of assets, systems, and infrastructure to the regions both for railways formerly under government commissarial management [...], and for railways granted in license to entities other than Ferrovie dello Stato S.p.a." (Article 4).[1]

These premises clarify the substantial leading role of the Regional authority in managing the assets of former licensed railways. Furthermore, one cannot overlook the most recent trend in the administration of most of these lines, which has led to the entrustment of services to companies

[1] My trans.

affiliated in various ways with the FS group. In certain instances, such as the Torino-Ceres railway and the Ferrovia Centrale Umbra, this has resulted in the use of Ferrovie dello Stato rolling stock and highly significant efforts to homogenize the infrastructure to match the features of the national network.

2. HETEROGENEITY OF PRIVATE RAILWAYS' ASSETS

Given the breadth of the notion of railway heritage, it is necessary to briefly delimit which elements of the heritage this study intends to address. As this is a preliminary study underlying a broader ongoing research project, it has been restricted to licensed railways that are still active, even if only partially, or which, despite being partially suspended, have not been subject to dismantling and demolition activities.

Regarding the assets to be examined, as it is well known, different approaches are viable (Burman and Stratton, 1997: 18 et seq.). The most immediate reference is rolling stock, including motor vehicles and trailers for passenger, freight, or maintenance transport. This is followed by a focus on the key elements of the track layout, namely the most significant civil and structural engineering works, passenger buildings, trackmen's houses, warehouses, depots, and workshops, as well as their related furnishings, fixtures, and equipment. Alongside this group of assets, for which conservation practices are already well established, the components of the railway superstructure and railway management systems must also be taken into account. Indeed, when defining the historical identity of a railway facility, it is difficult to exclude the systems and equipment that make railway operations possible in practice: the fixed installations. These include: superstructure assets, namely track and switches components; traffic control apparatuses; mechanical and electrical signal boxes; telephone and telegraph communication systems; water supply and lighting systems; signaling elements, high signals—both mechanical and light signals—low signals; control systems for the signals themselves, and level crossings; electrification assets, namely poles, anchorages, disconnectors, electrical substations, and related equipment. The overview can be ended concludes with a brief mention of archival resources and assets, which, being a central confluence missing—as occurred with the historical archives of the Ferrovie dello Stato—remain in in the custody of operators or other local authorities.

The array of assets outlined here refers to elements that are profoundly different from one another, yet capable of expressing, in various ways as previously mentioned, the distinct historical and cultural identity of a private railway. For a broad overview on various types of fixed installation that can be found on secondary lines see Angelini (1975: 143).

The highly heterogeneous nature of these assets is evident, consequently requiring the application of diverse conservation methods and strategies.

Current Italian legislation safeguarding cultural heritage finds its core in Legislative Decree No. 42 of January 22, 2004 (the so-called Code of Cultural Heritage and Landscape), which implements the constitutional interest in preserving cultural heritage, now also for the benefit of future generations (Article 9 of the Italian Constitution). This wide-ranging regulation imposes specific duties on public and private entities that, regardless of formal ownership, come into contact with assets belonging to the cultural heritage. Indeed, beyond the owner, the norm also refers to possessors and holders, thereby encompassing the multiplicity of ownership forms in which railway assets currently exist.

Reference to the Code of Cultural Heritage and Landscape is also made by a decisive legislative intervention for the purposes of this discussion: Law No. 128 of August 9, 2017 which represents the first major legislative recognition of the cultural and touristic value of railways. Article 2, paragraph 5 of this law provides that "[t]he railway routes, the stations identified as stopping places, the engineering works of the railway sections for tourist use, and their appurtenances may be used and enhanced for the purposes of this law and without new or increased burdens on public finance, without prejudice to compliance with the code of cultural heritage and landscape, referred to in Legislative Decree No. 42 of January 22, 2004." The subsequent paragraph 6 states that "in identifying the routes referred to in this article, particular attention shall be paid to the presence of artifacts and properties of cultural and artistic value which, for example, have been used as cinematic filming locations."

2.1 Identification of relevant assets

To put into practice the spirit and intentions of current cultural heritage protection legislation, a coherent and careful procedure for the census and evaluation of assets must be consolidated for licensed railways as well, since protection activities are carried out firstly through the identification of assets, pursuant to Article 3 of the aforementioned Code. It is particularly necessary that, especially during major modernizations, assets requiring protection are identified.

It seems appropriate that the census should be carried out on the basis of prior historical-technical research on the line and the vehicles in question. In this regard, it should be noted that most, if not all, of Italy's former licensed railways have been the subject of monographic studies which, following a proven framework among transport historians, also explore aspects of infrastructure and rolling stock.

The work of recognizing and inventorying is preliminary to the obvious selection of assets, for which it seems useful to propose the following criteria. These may, on a case-by-case basis, be supplemented by others deemed necessary according to the specific circumstances.

The first criterion is that of historicity, understood both as the age of the asset in question and its capacity to express a particular merit justifying its preservation. This is followed by the criterion of uniqueness or scarcity of available pieces, which is particularly relevant when indiscriminate conservation is not possible and a limited number of pieces must be selected: it will be necessary to examine how many specimens of the same asset exist. Within a railway infrastructure, it is reasonable to often find similar assets in large quantities: catenary poles, signals, machinery, furnishings, etc.

Among similar elements, the state of conservation is also significant, suggesting the protection of assets in the best condition, as well as the criterion of integrity, whereby priority will be given to assets remaining in their original state or having undergone the fewest accretions or alterations. For assets of which several examples survive, where comprehensive preservation is not feasible, in addition to the selection criteria outlined above, consideration should be given to preserving an adequate number of spare parts for those assets selected for full conservation, in order to support future restoration interventions.

An example of how an element may be characterized by later additions and alterations. Depicted here is the Catalano station signal, originally of the mechanical type; the original structure was subsequently modified through the addition of electrical equipment and two signal lights. (photo taken by M. Boddi, M. J. Santoni collection).

A further evaluation, decisive especially when the identification of assets occurs during infrastructure modernization interventions, concerns whether *in situ* conservation is compatible with railway operations. They might not interfere at all (such as an old signal control apparatus that can be deactivated thus remaining where installed), or relocation may be required (as with old electrical apparatuses that can be stored elsewhere to make room for new equipment). Conversely, one might encounter cases where preservation is entirely unfeasible, either *in situ* or by relocating the object, necessitating its destruction or reduction.

It should be noted that in recent times there have been virtuous initiatives to map the heritage of private railways. For the suppressed and dismantled Alto Pistoiese railway, an exhaustive reconnaissance of the heritage has been published (Prioreschi, 2016). The Sangritana railway promoted a broader intervention to reorganize and enhance its archival and patrimonial resources, raising considerable hope for a renewed awareness

towards the issue. The Roman company Atac, which inherited the documentary heritage of Roman public transport system and private railways in Lazio region, has also promoted commendable work to organize and inventory its papers and photographic archives.

It is now appropriate to delve into the reasoning of this study, clarifying the motivations for proposing a wide array of assets that make the heritage of licensed railways worthy of protection and consideration. Being unable, for the sake of brevity, to offer an exhaustive overview of the conservation situation affecting every former licensed railway, specific examples will be drawn from various lines managed by different administrations.

3. VARIOUS SCENARIOS IN PRESERVATION OF PRIVATE RAILWAY'S ASSETS

3.1. Real Estate

It is curious to note how, when the suppression of one of the most evocative private lines, the Spoleto-Norcia (Cioci, 1987: 100 et seq.), was proposed, the Minister of Transport Oscar Luigi Scalfaro took care to specify that the line's engineering works would not be demolished, as they constituted a particularly virtuous engineering example: "[n]or can one imagine maintaining the operation of the railway, so burdensome for the State, solely for the aesthetic aspect of its bridges and tunnels—which, moreover, will not be demolished—especially since tourist traffic is completely absent from the railway itself".[2]

For real estate assets, conservation and reuse practices are certainly more conventional than for other railway heritage assets, yet we are far from a consolidated practice like that currently underway on the lines managed by the FS.

Case 1 – The Torino Ponte Mosca station was the terminus of the railway to Ciriè and Ceres (Sartori-Borotto, 1987) until 1987, before being permanently disconnected from the network in 2006. Since then, the station area, besides hosting some activities of the Gruppo Torinese

[2] Senato della Repubblica. Assemblea, *Resoconto stenografico. Allegato*. V legislatura, seduta n. 21, 25 settembre 1968, p. 1286, my trans.

Trasporti, has been the seat of the workshops of the Museo Ferroviario Piemontese.

The railway yard of Torino Ponte Mosca station in the 1960s (photo taken by M. Boddi, M. J. Santoni collection).

The museum's organization has aimed to maintain the characteristic atmosphere of the nineteenth-century station, preserving some of the original nineteenth-century roofing and the track layout, which is unique because it is not parallel to the passenger building.

Given the absolutely central nature of the station's location, the area has often opened itself to daydreams of real estate speculation or conversions being incompatible with the maintenance of railway facilities. Most recently, the area seemingly appears concretely destined to house a transport museum.

Case 2 – The Centocelle depot and workshops in Rome were built in 1913 to serve as the principle maintenance facility for the Rome-Fiuggi-Alatri-Frosinone electric railway, which was under construction (Angeleri, Curci and Bianchi, 1982: 134 et seq.; Camilloni, Panella and Vannozzi, 2017: 5 et seq.). The line, which has been interested by a progressive

closure during the last decades of the twentieth century, has been limited to Centocelle, in the southern suburbs of Rome, since 2015.

The internal yard of Centocelle depot today, still preserving the original poles and overhead line (photo taken by P. Paciorri, 2026).

The facilities are still active, even though traffic on the remaining portion of the line has been interrupted since March 4, 2026, following a collision between two trains. In addition to the buildings for housing and repairing vehicles, the yard hosts the old Centocelle station, used until 1972, and one of the original electrical conversion substations. Some of the internal tracks are still equipped with the original poles supporting the contact line, of the type that appears in the well-known photographs of the American allies arriving in Rome, who transited precisely along the via Casilina and were photographed near the Centocelle area. The area will be affected by the construction of the facilities for the depot serving the new Termini-Tor Vergata tramway line, resulting in the construction of a brand new maintaining complex for the modern rolling stock. The original project envisaged the complete demolition of the existing buildings. This proposal was subsequently partially revised following observations made by the Heritage Authority, which led to project modifications. Although

these amendments pursue the commendable objective of preserving some of the most significant buildings, they do not take into consideration the conservation of portions of the fixed installations, nor of some of the characteristic workshop[3]. Very few proposals have been put forward regarding the preservation of the movable assets housed within the buildings, including furnishings, fixtures, equipment, memorabilia, and, furthermore, rolling stock. The line still operates trainsets which, although refurbished in the early 1960s, were originally converted from rolling stock dating from the late 1920s and early 1940s (Formigari and Muscolino, 1982: 327 et seq.).

3.2. Rolling stock

On the rolling stock front, licensed lines frequently required the design of *ad hoc* vehicles suited to the specific characteristics of the lines (various gauges, light rails, tight curve radii, and different types of electrical power supply). Furthermore, the frequent financial difficulties faced by management companies, or the resource constraints government commissioners were forced to endure, prompted the purchase of used rolling stock from the State or from other railways. This allows one to appreciate a variety of vehicles utilized that is not found on the national network or on networks where the concept of economies of scale suggested the opportunity to standardize the types of vehicles used as much as possible.

Case 1 – In the Italian landscape, the most striking case of coexistence of numerous types of rolling stock within the same administration and line is that of La Ferroviaria Italiana, the concessionary company for the Arezzo-Stia and Arezzo-Sinalunga lines until 1988, and, following a period of commissarial management of the railways, from 1992, with some significant metamorphoses in the corporate structure (Senesi, 2016: 211 et seq.). Starting in the late 1970s, the company adopted a specific strategy involving the purchase of rolling stock withdrawn by other railway administrations, which would then be appropriately rebuilt by the company's workshops (located in Arezzo Pescaiola) or by private

[3] Roma Capitale. Dipartimento mobilità sostenibile e trasporti (2026). Progetto definintivo linea Termini-Tor Vergata e deposito di Centocelle. Deposito di Centocelle. Architettonico e relazione tecnica. Roma.

industries (especially Soc. Fervet, based in Castelfranco Veneto) (Muscolino, 1979:179 et seq.; Rohrer, 1983: 189 et seq.). Preference was given to rolling stock with squared bodies, which were easier for bodywork and modifications (Muratori and Cocchi, 1991: 120). This policy led to the acquisition of an extremely heterogeneous rolling stock fleet, including, among others: the EDz 12-14 locomotives, built in 1924 and coming from the discontinued Birbano-Agordo railway; the characteristic EBDz 19-20 electric railcars, with bodies externally clad in wooden slats, from the administration of the Ferrovie e Tramvie Vicentine (Vicenza-Valdagno line); four E.626 locomotives from the Ferrovie dello Stato; several E.623 and E.624 type electric railcars from the Ferrovie dello Stato; and the British war surplus locomotive Ne 700.003, built for the London Midland and Scottish Railway in 1941. A large portion of the rolling stock, particularly trailer cars, has been scrapped in recent years, resulting in the loss of vehicles that had by then become unique examples of their kind. This was the case, among others, with the ABiz 62.901 and 902 coaches built by Officine Moncenisio, originally operated on the Aosta–Pré-Saint-Didier railway and scrapped in 2024, as well as with a significant number of trailer and powered vehicles that had effectively documented the remarkable expertise of the Arezzo railway workshops and the Italian private industry in the refurbishment and adaptation of rolling stock.

Case 2 – The Rome-Civita Castellana-Viterbo railway was one of the few licensed railways to maintain the integrity of its original rolling stock, built by Tecnomasio Italiano Brown Boveri and the Officine Stanga of Padua in 1931 and 1932 (Curci, 1982: 33; De Filippi, 1995: 145). The vehicles, featuring the squared lines typical of rolling stock of the period, were equipped with electro-pneumatically operated doors in order to adapt to the metro-style characteristics of the underground section of the railway in Rome (Santoni, 2020: 141). This stock, after being replaced by 2010, was then sent for scrapping between 2017 and 2018, without even taking the precaution of preserving the vehicles that still featured their original characteristics, such as original wooden seats and interior furnishings. In fact, following requests from several enthusiast groups to preserve a number of trailers selected among those that best retained their original features (such as car no. 77), vehicles that were ultimately saved were severely compromised — such as electric motor car no. 25 — or heavily altered by subsequent refurbishments, as in the case of driving trailer no. 80 (Santoni, 2021: 307 et seq.).The last two working electric railcars, used

for shunting duties in support of the workshop until 2021, have been parked outdoors since 2022, risking serious deterioration despite being over ninety years old. Currently, recovery projects promoted by enthusiasts exist, and good availability has been found at the regional level; no alternative option seems conceivable for vehicles still in a good state of conservation and over ninety years old.

Motor cars 22 and 26 photographed in 2019, while still in service at the Catalano workshops (photo taken by M.J Santoni).

constitutes an invaluable asset, allowing one to appreciate the historical value of lines that, even if open to tourist traffic only to a small extent, still retain a significant atmosphere today (Altara, 1992: 139 et seq.). While certainly unable to address the preservation problem of the entirety of these fascinating lines' heritage—evoked even by David Herbert Lawrence in his book *Sea and Sardinia* (1921)—we limit ourselves to mentioning the peculiar case of a steam locomotive, which is the sole preserved example of a Mallet Borsig locomotive (Durrant, 1974). This is locomotive no. 10, belonging to the Società per le Ferrovie Adriatico Appennino and operating on the Porto San Giorgio-Fermo-Amandola railway (950 mm gauge) since 1911, was transferred in the early 1930s to the Rome-Viterbo railway gauge transformation site and modified for standard gauge. It was then reconverted to 950 mm gauge and transferred in 1937 to the Nurra mining railway in Sardinia. Finally, in 1964, the machine was sold to the

Ferrovie Complementari Sarde, where it served, through varying fortunes, until 1967. Set aside since that year, it currently sits in the yard of the Monserrato station, engulfed in rust (Martinelli and Riccardi, 2019: 14; Davies, 2002: 92).

Case 4 – Concurrently, another locomotive originating from the Ferrovie Adriatico Appennino network, namely electric locomotive no. 29, had a very different experience, making it one of the vehicles that has received the most attention and care in the history of preserving the assets of Italian private railways. Originally built with a 950 mm gauge for the Abruzzo network in 1924 by Tecnomasio Italiano Brown Boveri, with bogies by Carminati e Toselli, was sold and entered service on the Genova-Casella railway in 1962. This followed a modification of its gauge and the conversion of the original baggage area into a passenger compartment. Currently, this locomotive is part of the historical train of the Genova-Casella railway (Rohrer, 1983: 148; Bozzano, Pastore and Serra, 2016: 183 et seq.; Dell'Amico et al., 2021: 18).

Locomotive No. 29 (originally built for Ferrovie Adriatico Appennino), pictured at Sardorella stop on the Genova-Casella narrow gauge line (photo taken by R. Rava, 1995).

Lateral view of locomotive No. 29, taken at the Genova Piazza Manin station (photo taken by R. Rava, 2017).

3.3. Fixed installations

As regards fixed installations, while the national network underwent various and regular cycles of modernizing its equipment and traffic management systems, and operation optimization constituted a clear strategy, on private railways, traffic regulation systems and relics that have disappeared elsewhere have often remained active until the present day. This was due both to economic reasons and the lack of justification for massive investments given the particularly modest traffic volume.

Case 1 – The Rome-Civita Castellana-Viterbo railway, especially in its northernmost section (Catalano-Viterbo), has retained most of its original fixed installations to this day. Due to the limited infrastructural modernization interventions the railway has undergone, the entire signaling system from 1932 remains in operation. This consists of semaphore signals controlled by central double-wire mechanical interlocking systems, anchored to the walls of the station buildings and equipped with counterweighted tension compensators (the components

were built by the Officine Meccaniche di Savona "Servettaz Basevi"). Some of these signals have also been adapted by local workshops as light signals. As far as the electrification is concerned, the Catalano-Viterbo section of the railway, is still equipped with the original 1932 poles installed by Tecnomasio Italiano Brown Boveri of Milan. Despite the client's request to design an electrification system that was as economical as possible and composed of the fewest number of parts, it has endured for over 90 years. Furthermore, in order to harmonize the catenary poles with the surrounding landscape, it was originally decided that the poles should be painted green (Santoni, 2020: 249). [4] In the sections where the railway follows the route of the pre-existing narrow-gauge single-phase powered tramway, poles installed in 1912-1913 are present, having been reused for cost-saving purposes (Santoni, 2021: 300). The imminent modernization works of the railway, which have already begun in some sections, have decreed the end of these obsolete apparatuses, for which it seems appropriate to evaluate conservation strategies compatible with safe railway operations.

Motor car No. 26 next to a pole originally installed in 1913, when the preexisting narrow gauge tramway line was built (photo taken by M.J. Santoni, 2018).

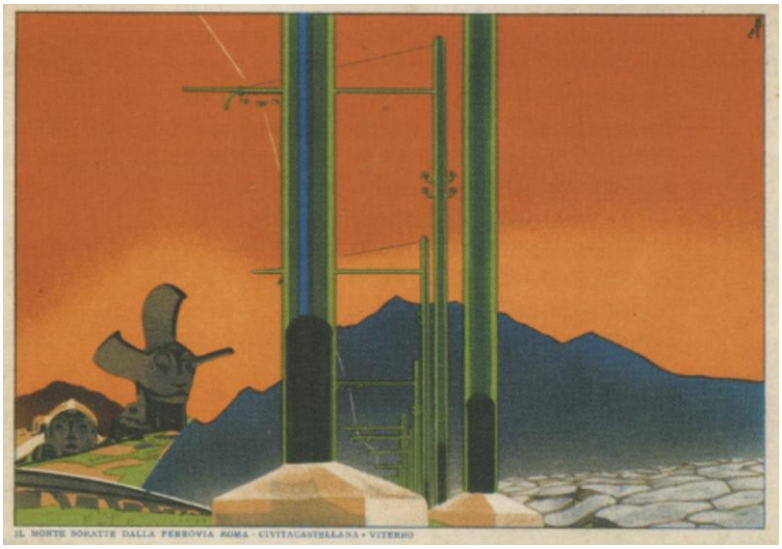
[4] Archivio storico Atac (Rome), Fondo SRFN, Letter from Società Romana per le ferrovie del Nord to Impresa Besenzanica, dated August, 4, 1932, busta 1292.

This photo of the preexisting tramway line depicts a pole of the same model, in front of «La Quercia» cathedral in Viterbo (unknown author, M.J. Santoni collection, 1915).

The semaphore of Vitorchiano station (photo taken by M.J. Santoni, 2024).

The interlocking system at Fabrica di Roma (photo taken by M.J. Santoni, 2019).

The double wire transmission that controls the semaphore in Vignanello station (photo taken by M.J. Santoni, 2024).



Painting by Duilio Cambellotti, commissioned by the Società Romana per le Ferrovie del Nord. Running parallel to the ancient stone pavement of the Via Flaminia is the railway line, while the horizon, dominated by the silhouette of Mount Soratte, is punctuated by a regular sequence of slender electrification poles, which were in fact painted green to blend harmoniously into the rural landscape of Sabina and Tuscia (from postcard, M.J. Santoni collection, 1932)

Case 2 – The Ciriè electric conversion substation was built concurrently with the electrification of the railway connecting Turin to the Lanzo valleys. The plant was constructed by Tecnomasio Italiano Brown Boveri, with the usual objective of maximum cost-effectiveness. The workshop represents a milestone in the history of Italian electric traction, as the Torino-Ceres line was the first to utilize direct current for traction. The 483 m² building has retained its original internal equipment, although, since the 1980s, the original electrification system (4000 V DC) was abandoned to be completely rebuilt and upgraded to the 3000 V DC standard (Tajani, 1939, 175 et seq.; Condolo, 2008: 69 et seq.). It is slated to be included in a widespread museum designed to gather the historical testaments of the line. An observatory dedicated to the preservation of line's heritage has been founded (De Meo, 2025: 27).

Case 3 – During the twentieth century, the Società delle Ferrovie Adriatico Appennino, later Ferrovia Adriatico Sangritana, managed an extensive network of secondary railways that, in some cases, failed to survive the years of mass motorization, such as the Voghera-Varzi railway (closed on August 1st 1966) and the Fermana railway (closed on August 27th 1956). The historic line from Castel di Sangro to Lanciano—following the closure of its branches to Atessa and Ortona—resisted, not without difficulty, until the early 2000s. Suspended from service between 2004 and 2006, the line was partially dismantled upstream to allow the reuse of the railway bed during road works. Furthermore, the original Castel di Sangro terminus was demolished. After various proposals regarding the use of the trackbed, the *Binaria* project was recently presented, which envisages converting part of the route into a cycle path by covering the existing track with various layers. The project, which undeniably raises some perplexity since it inhibits the restoration of the old route—especially between Lanciano and San Vito, where its scenic value was particularly high, partly due to the presence of a famous viaduct over the sea—prompts questions regarding the future of many fixed installation remnants still present along the line. This includes the characteristic yard of the old Lanciano Station, which preserves its track layout intact, along with the original poles and historical workshops, which would thus be isolated from the rest of the network. It is noteworthy to remark that the Sangritana railway has experienced an extremely successful initiative, named "Treno della Valle" aimed at enhancing both the historic line and the landscapes through which it runs (Di Pietro and Marino, 2000: 146 et seq.; Cioci, 2023: 207 et seq.).

Rare image of the San Vito viaduct, when the line still was equipped with narrow gauge (unknown author, M.J. Santoni collection).

A photograph from the same spot, taken at the end of the 60s, and after the reconstruction with 1435 mm gauge (unknown author, M.J. Santoni collection).

San Vito Viaduct in 2024. According to «Binaria» project, the tracks, which have survived despite the closure of the line, are expected to be covered with several layers of material in order to convert the former railway into a cycle path (photo taken by M.J. Santoni).

4. RECONSTRUCTIVE APPROACHES AND CONCLUSIONS

As it has been observed, while a well-established practice of preserving architectural heritage exists, a comparable commitment to the study and conservation of other categories of heritage associated with private railways still remains far from being achieved.

It is therefore appropriate to draw the principal strands of the discussion in order to formulate several proposals for the concrete implementation of conservation strategies.

Since infrastructure and rolling-stock management companies are often burdened with pressing administrative responsibilities and, in many cases, lack departments specifically devoted to the preservation of corporate historical heritage, the involvement of the third sector appears indispensable. Furthermore, Article 8 of the law on tourist railways itself advocates that "[t]he subjects managing tourist transport services and related commercial activities referred to in Article 5 [should avail

themselves], through specific agreements, of the collaboration of associations and voluntary organizations with specific experience and competence in the railway, tourism, cultural, and environmental sectors."

Moreover, it is a consolidated practice to involve groups of citizens in the care and active administration of portions of heritage, and administrative law has been engaged for years in studying the best ways to materialize this collaboration between willing private citizens and the administration. The reflections characterizing legal debate in recent years have not been devoid of critical considerations regarding the possible dark sides of involving "active" citizen groups, but voices agree in asserting that the benefits of such practices far outweigh the potential negative aspects. The most widespread form of railway heritage management by active citizens concerns the real estate assets of state railways that are no longer instrumental to operations. The most widely used legal instrument has been the *comodato d'uso gratuito* (loan for use), regulated by Article 1803 of the Italian Civil Code, which allows the parties—public and private—to modulate reciprocal obligations according to the specific protection and conservation needs of the asset in question. Given the unique location of railway assets, often close to dangerous and restricted areas, the contractual instrument can easily incorporate conduct rules incumbent on the borrower and all appropriate requirements to ensure the safe enjoyment of the spaces. This will be possible by including in the contractual terms all appropriate references to the relevant railway safety regulations (as the fundamental Presidential Decree No. 753 of July 11, 1980, providing rules concerning the policing, safety, and proper operation of railway services and other transport services in Italy), as well as specific provisions requiring abstention from conduct that could potentially create risks or prove incompatible with railway operations (Santoni, 2025: 309).

Reuse practices have proven profoundly beneficial in preventing the degradation of a substantial portion of national railway assets. According to an estimate contained in the 2021 edition of the FS Group's Sustainability Report, on a network spanning over 16,700 km overall—of which 1,280 are suspended from commercial service—as of 2021, there were 390 cases of reused railway properties, accounting for approximately 156,704 m² of covered space and 3,674,206 m² of land and external areas. This success was made possible in part by the often strategic position characterizing railway buildings within urban contexts.

For the purposes of this study, the well-established experience on the national railway network provides insights that are perfectly adaptable to the reality of former private railways. The use of the *contratto di comodato* to entrust the use of unutilized spaces to citizens, either as individuals or in groups, appears particularly effective.

A different strategy will be needed for the enhancement of relics and testimonies of railway engineering, for whose preservation the involvement of the third sector once again seems essential. While it appears difficult to hypothesize that the care of the licensed railways' heritage could be assumed by a central entity, it has to be noted that the national territory is dotted with numerous associations—of varying legal forms—aiming to promote railway culture and the memory of local lines. In our view, a dynamic synergy among these entities, railway administrations, and local authorities could constitute the most optimal recipe for enhancing this heritage. Working on the ground is not limited to raising awareness within circles close to the railway; it means surveying and bringing together the various stakeholders who dedicate their activities to local promotion: *pro loco* associations, local banks, foundations, and cultural institutes are indispensable players in the recovery and support, including financial, of restoration initiatives, given the fundamental importance local interest lines hold for small towns and provinces.

It cannot be ruled out that, in a scenario of growing attention towards the protection and promotion of railway culture, the establishment of foundations for the protection of private railway's heritage might also be replicated at the local level. This is certainly a more suitable solution for railway administrations of considerable size, but the presence of entities that, suitably federated, follow in the footsteps of the experience charted by the Fondazione FS seems highly beneficial.

If one thing is certain, it is that finding a solution to this problem is in the best interest of preserving Italy's railway heritage, whose integrity is seriously threatened by a widespread and undeniable lack of concern for the future of former licensed railways. These lines, which have often struggled with undeniable financial constraints and operational difficulties, perhaps represent the finest example of the essential bond between the social function of the railway and its connection with local communities and territories.

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