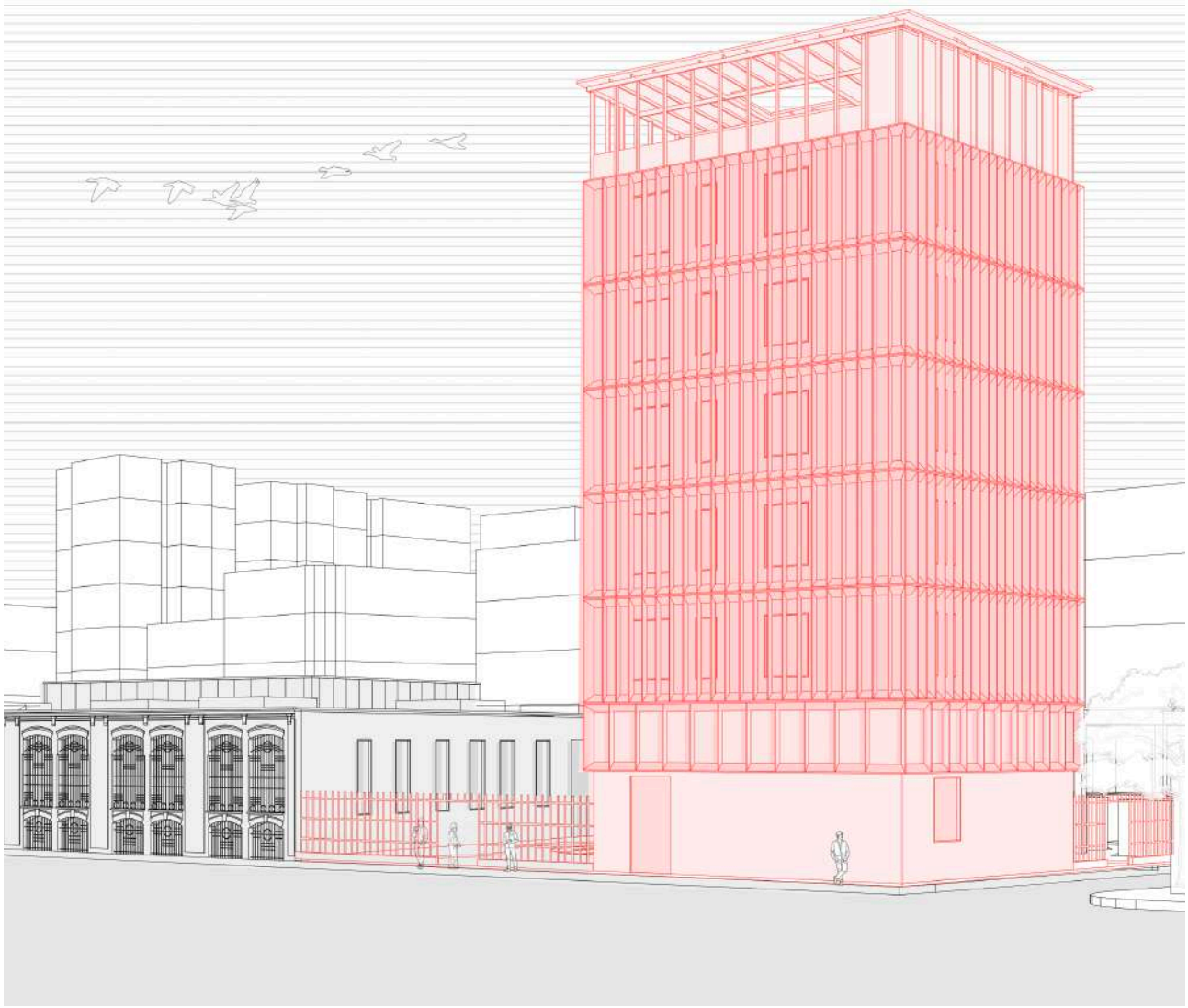
Exploring the Cultural and Spatial Value of Industrial Heritage

-Adaptive reuse of the “The Former National Wallpaper Factory”



Politecnico di Torino
Department of Architecture and Design
Thesis of the master’s degree in Architecture Construction City

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-Adaptive reuse of “The former national wallpaper factory”

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EXPLORING THE CULTURAL AND SPATIAL VALUE OF INDUSTRIAL HERITIGES

- ADAPTIVE REUSE OF THE FORMER NATIONAL WALLPAPER FACTORY

Abstract

This study makes the transformation of an industrial site in Turin, Italy, a case to explore the evolution, gain value, and renewal strategies of industrial factories in the context of urban regeneration. The factories built during that period can be seen as symbols of productivity and modernisation. Industrial buildings played a crucial role in shaping urban spatial structures during the Industrial Revolution. However, with changes in industrial systems and social demands, many factories were abandoned, resulting in spatial waste and the loss of cultural memory. Reviving these sites is crucial for preserving urban identity and promoting sustainable development. The research focuses on the following dimensions—spatial adaptation, value reconstruction, and regional revitalisation—and applies these concepts to the adaptive reuse of the Former National Wallpaper Factory in Turin. It argues that adaptive reuse serves as a core strategy for industrial heritage. The main principles include preserving historical and cultural values through design and transformation, enhancing spatial experience with a human - centered approach, and integrating public functions to stimulate urban vitality. Overall, the design focus of industrial regeneration is shifting from form-driven to experience-oriented, reflecting a growing integration of heritage preservation, spatial innovation, and social revitalization in contemporary urban renewal.

Keywords: Industrial building, Conservation intervention, Spatial adaptation, Multifunctional design, Regional revitalisation, Value reconstruction

Introduction

EXPLORING THE CULTURAL AND SPATIAL VALUE OF INDUSTRIAL HERITAGE
- ADAPTIVE REUSE OF THE FORMER NATIONAL WALLPAPER FACTORY

Introduction

The project is located in Turin, Italy, on the site of the Former National Wallpaper Factory. Designed by architect Pietro Fenoglio in 1906, the building is one of the earliest examples in Italy to employ the Hennebique reinforced concrete system. It occupies a block enclosed by Corso Vigevano, Via Cigna, Via Pinerolo, and Via Piossasco. The building is characterized by a composition of arched facades with two-storey arched openings, combining Neo-Medieval and Art Nouveau elements that reflect a dialogue between industrial functionality and decorative aesthetics. Following the decline of industrial production, the factory closed in 1975 and remained vacant for many years. It is currently used as a temporary boxing club, with several subdivided spaces adapted as apartments and event spaces. Within the context of contemporary urban regeneration and industrial heritage reuse, the project aims to revitalize this heritage industrial factory through space and function reconfiguration, reintegrating it into the daily life of the community.

The proposal aims to transform the Former National Wallpaper Factory into a mixed-use complex integrating residential, educational and commercial space for the local community. The project includes a gym, restaurant, market, plaza, and apartment. The design strategy emphasizes preserving the original structure and facades to protect the historical fabric while introducing modern interventions to reorganize the interior, enhancing openness, spatial continuity, and social interaction. Ultimately, the project seeks to explore how industrial heritage can be reactivated in the modern context, merging commerce, education, and community participation to revitalize the building's social function and contribution to the city.

Fig 1: The entrance of the formal national wallpaper factory. (2025). Photograph by the author.

Industrial Archaeology

EXPLORING THE CULTURAL AND SPATIAL VALUE OF INDUSTRIAL HERITAGE
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1.Industrial Archaeology

1.1 Industrial heritage as a resource

1.1.1 The reason for retrofit of industrial heritage

The Industrial Revolution, originating in late 18th-century Britain and swiftly expanding across Western Europe, marked a radical shift in society. While it drove economic and social transformation, its legacy remains—what we now call industrial heritage—has long been left out of the main stories about heritage.

Today, industrial heritage serves a dual purpose: A reflection of the forces that have shaped modernity and a place of untapped potential within fragmented post-industrial urban landscapes. Despite their historical significance, abandoned factories, railways, and warehouses are often considered outdated, their futures threatened by shifting economic priorities and redevelopment strategies.

With the rise of abandoned factories and increasing urban uncertainty, the question of "why protect industrial heritage" has become urgent. Traditional frameworks often focus on aesthetic or commemorative value, overlooking the social, technological, and emotional dimensions these sites embody. Although communities recognize their cultural significance, conservation efforts are frequently constrained by economic and planning realities. In this context, adaptive reuse emerges as a crucial strategy. It is not merely a technical intervention but requires understanding the symbolic meanings and socio-political dynamics of these spaces. Restoring industrial heritage entails confronting the contradictions of modernity—progress and decline, innovation and loss. Industrial heritage should not be treated as waste but regarded as a testament to labour, memory, and urban transformation. Protecting it is not an act of nostalgia but a forward-looking practice aimed at reinvigorating contemporary cities with cultural and spatial value.

1.1.2 The cultural and spatial value on industrial factory

The spatial and cultural reuse of industrial buildings has become a core strategy in the preservation and restoration of abandoned industrial heritage. A challenge lies in transforming factory spaces to align with contemporary urban life while retaining their intrinsic character. Unlike other building typologies, industrial factories are marked by simplicity, functionality, and structural clarity. It was designed primarily to serve production needs; these buildings emphasize efficiency, minimalism, and rational spatial organization. They also have a simple, functional design that highlights their unique architectural value.

This design approach—featuring solid construction and adaptable layouts—not only enhances their functional resilience but also makes them particularly suitable for adaptive reuse. Their clear spatial logic and relatively uncomplicated volumes provide greater flexibility for sustainable interventions. Moreover, the historical and cultural significance embedded in industrial factories contributes meaningfully to community identity. The factory's past gives the site new energy and cultural value. It also provides opportunities for economic and social growth.

Neglecting the dual spatial and cultural value of industrial buildings by treating them merely as obsolete modern structures risks both physical decay and cultural erasure. Such an approach not only leads to the unnecessary demolition of potentially valuable assets but also contradicts contemporary principles of sustainability. Therefore, recognizing and harnessing the architectural and historical potential of industrial buildings is essential for their meaningful preservation and sustainable reintegration into the urban fabric.

1.1.3 The typicality of industrial factory buildings as research objects

Renovating industrial factories shows how space can be flexible and culturally important. Their large spans, strong structures, and adaptable layouts make them suitable for urban renewal. Beyond architectural qualities, these buildings embody industrial memory and the cultural identity of specific historical periods.

A notable example is the Lingotto complex in Turin, Italy. At first, it was originally an early 20th-century Fiat factory known for its rooftop test track, which became a symbol of functionalist industrial design. Then, Renzo Piano's adaptive reuse turned Lingotto into a multifunctional centre with retail, conference spaces, hotels, and cultural venues. The project preserved its industrial heritage while also helping to revive the local economy and urban environment. Lingotto, described in magazines and newspapers as the 'major Italian redevelopment site' [1] .

Similarly, global cases such as Matadero Madrid in Spain and De Hallen

1* Stefanoni, G. (1994). Lingotto: From factory to multifunctional center. Casabella, (19), 58–63.

Fig 2: The entrance of Lingotto. (2025). Photograph by the author.

Fig 3: Hoax Amsterdam. The entrance of the De Hallen Amsterdam: The landmark inspired by the building's entrance and commemorates its history as a tram terminal. Accessed May 30, 2025, <https://www.hoax-amsterdam.com/en/project/de-hallen/>.

Fig 4: Matadero Madrid. The entrance of the Matadero Madrid. Accessed May 30, 2025,<https://www.mataderomadrid.org/>.

Amsterdam illustrate successful transformations of former factories into creative parks that combine office, art, commerce, and cultural exhibition spaces. De Hallen Amsterdam, originally the main depot and maintenance workshop for Amsterdam's public tram system, and Matadero Madrid, formerly the Madrid Municipal Slaughterhouse and Livestock Market. Both now serve as active drivers of urban renewal by bringing in new industries and cultural activities.
These projects show the cultural and spatial value of industrial heritage, turning factories from purely productive sites into social and cultural spaces. They highlight the role of industrial factories in research and urban redevelopment.

1.2 Industrial heritage in Turin

1.2.1 Overview of industrial decline and its architectural impact

The industrial decline in Turin, which accelerated from the late 20th century, marked a profound transformation in the city's economic structure and urban landscape. Once a major hub for automotive manufacturing and heavy industry, Turin experienced widespread factory closures, significant job losses, and extensive deindustrialization that left a lasting imprint on its built environment.
This decline resulted in the abandonment and underuse of vast industrial facilities and associated workers' housing, many characterized by their functional and durable architectural forms. This industrial heritage often became isolated and disconnected from the surrounding urban fabric, creating extensive areas of abandoned land that posed considerable challenges for urban regeneration. Nevertheless, the industrial heritage also offers valuable opportunities for adaptive reuse and conservation. Numerous former factories and warehouses have been successfully repurposed into cultural centres, residential lofts, and mixed-use developments, thereby integrating Turin's industrial past into its contemporary urban identity. The architectural consequences of industrial decline thus reflect both the challenges of decay and the potential for renewal, playing a critical role in shaping Turin's sustainable urban revitalization efforts.
Therefore, effectively integrating these sites into the urban fabric requires identifying possible spatial and functional connections between them and the existing built environment.
Turin's urban regeneration strategy is deeply rooted in its distinctive

post-industrial development context. One obstacle is the highly rigid administrative approval procedures linked to the city's master planning, where any modification requires extensive time and lacks support for flexible, temporary land-use development. Under the current conditions of high uncertainty in urban development, amid dramatic shifts in the global economic, environmental, and political landscape, there is an urgent need to adopt interventions to reduce risks and accelerate the activation of urban spaces.

Another major reason for underinvestment lies in the vast scale and quantity of areas awaiting regeneration. Some sites are included in long-term redevelopment plans, but many remain unused, presenting significant potential for intervention. From a contemporary perspective, these areas can largely be categorized as "terrain vagues" [2] . Due to prolonged abandonment, these lands have become spiritually detached from the urban system, reflecting a critique of established urban logic while simultaneously harbouring potential alternative developmental possibilities.

2* Solà-Morales, I. de. (1995). Terrain vagues. In Anyplace (pp. 118–123). Cambridge, MA: MIT Press. "Terrain vagues": A term coined by Ignasi de Solà-Morales in his 1995 article Terrain vagues in Anyplace, to describe spaces "no longer belonging to the city."

Case studies

EXPLORING THE CULTURAL AND SPATIAL VALUE OF INDUSTRIAL HERITAGE
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2. Case Studies

2.1 Case studies in Turin

2.1.1 Torino Lingotto Plant

The Lingotto plant was conceived by Fiat's founder, Giovanni Agnelli, in 1912 as a response to the inefficiencies of Turin's fragmented industrial landscape. The aim was to centralize production in a single site and implement a vertically integrated Fordist assembly model. Designed by engineer Giacomo Mattè-Trucco, construction began in 1916. The factory featured a five-story linear production process: raw materials entered at ground level, and vehicles progressed upward through successive stages of assembly, culminating in final testing on a rooftop track. This rooftop circuit, approximately one kilometer in length, allowed cars to be tested at speeds of up to 90 km/h via two helical ramps connecting the different levels. Although operational by the mid-1920s, the complex was not fully completed until around 1929–1930. By 1936, the factory employed approximately 16,800 workers and had produced a range of iconic models, including the Fiat Topolino, Balilla, and X1/9. With the rise of more modern facilities such as the Mirafiori plant in the 1970s, Lingotto began to lose its industrial relevance.

In 1982, an international architectural competition was launched for the redevelopment of the Lingotto factory; however, all submitted proposals were ultimately rejected as they failed to meet the expectations of the project. In 1985, renowned Italian architect Renzo Piano was officially commissioned to oversee the transformation of the building. Piano's approach preserved the historical facade while completely reconfiguring the interior to accommodate a new range of urban functions. The renovation was implemented in several phases: the first phase saw the construction of an exposition and exhibition center, which was inaugurated in 1992; in 1994, a conference center and concert hall were added, followed by the completion of two hotels, office spaces, and retail areas in 1995. Today, Lingotto has become a multifunctional urban complex that includes a mall, a cinema, a gym, educational spaces, and offices. While the building's industrial function has been fundamentally transformed, core architectural elements—such as the original spiral ramp and the rooftop test track—have been retained and repurposed. The rooftop track, once used for vehicle testing, now serves as a pedestrian walkway for cultural activities, symbolizing a bridge between industrial heritage and contemporary urban life.

Now the transformation of Lingotto shows the conflict between "deindustrialization" and "reurbanization" in modern city development. The renovated building is different from its past as a factory. Most Industrial characteristics have been removed, or turned into modern elements. As for its function, Lingotto has changed from a place of production to one of consumption, through shopping and exhibitions, and later as a cultural center. This transformation reflects as a strategy used in many cities today: By redesigning and redeveloping certain parts of their industrial past, cities can reshape their identity and create new meanings for those abandoned spaces in the city corner.

Fig 5. Corriere di Torino. A rooftop racetrack: The Fiat Lingotto factory in Turin, Italy (1923). Accessed May 30, 2025. <https://torino.corriere.it/economia/cards/il-marchio-fiat-in-125-anni-di-storia-dal-primo-stabilimento-che-produceva-24-vetture-ad-agnelli-marchionne-e-tavares/nel-1916-nasce-la-fabbrica-del-lingotto-nbsp.shtm>.

Fig 6: The Test ramp for the car in Lingotto. Photograph by the author, 2025.

Fig 7: Lingotto in 1931. Courtesy of Centro Storico FIAT. Accessed May 30, 2025. <https://www.corriere.it/gallery/cultura/03-2011/archivio%20fiat/1/immagini-archivio-storico-fiat_a29d9c46-45a6-11e0-be93-d37b38d5ef64.shtml>.

Fig 8: Colombino, A., & Vanolo, A. (2016). The '8 gallery' logo in front of the entrance. In Turin and Lingotto: resilience, forgetting and the reinvention of place (p.10).

Fig 9: The exclusive tropical garden. (2025). Photograph by the author.

Fig 10: Lingotto Parking lot. (2025). Photograph by the author.

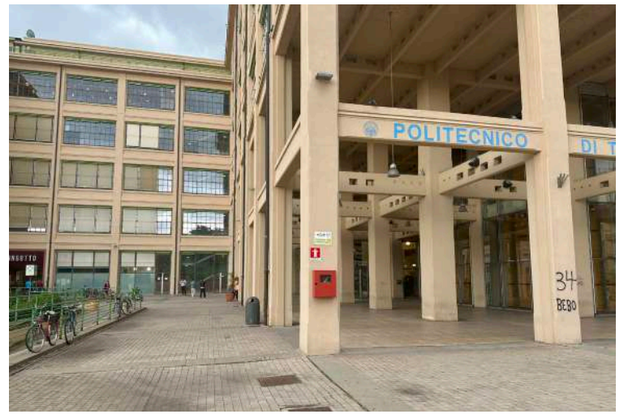


Fig 11: Politecnico di Torino in Lingotto. (2025). Photograph by the author.

Fig 12: Pam in Lingotto. (2025). Photograph by the author.

Fig 13: The elevator at the entrance of the Lingotto shopping mall. (2025). Photograph by the author.

Fig 14: Exhibition area with store both side. (2025). Photograph by the author.

Fig 15: The entrance to the Lingotto shopping mall.directly to the first floor. (2025). Photograph by the author.

Two similar buildings in Turin were analyzed, and their spatial organization was presented through charts and diagrams to inform and optimize the project's layout.

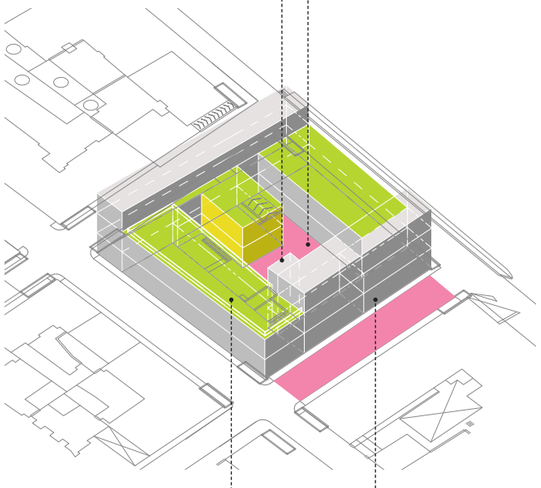
2.1.2 Square of the Crafts

The formal Concerie Fiorio complex [3] in Turin consists of two main buildings: the original tannery, whose construction began in 1837, and the early 20th-century warehouse at Via Jacopo Durandi 13, designed by architect Pietro Fenoglio. The warehouse features a flexible layout, brick facades, and interiors suitable for adaptive reuse. The complex exemplifies Turin's industrial growth, reflecting innovation in construction and architectural

3* Ex Concerie Fiorio, Turin,designed by Pietro Fenoglio in 1900. Accessed November 13, 2025. <https://piazzadeimestieri.it/chi-siamo/ex-concerie-fiorio/>.

Fig 16: The plaza next to the building. (2025) Photograph by the author.

design, and marks the transformation of the urban landscape, where factories became defining features of the city's early 1900s character. Nowadays, the building accommodates a variety of functions, including offices, laboratories, educational spaces, and studios, reflecting its growing role in Turin's innovation network and fostering collaboration among students.



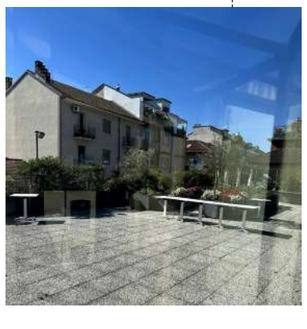
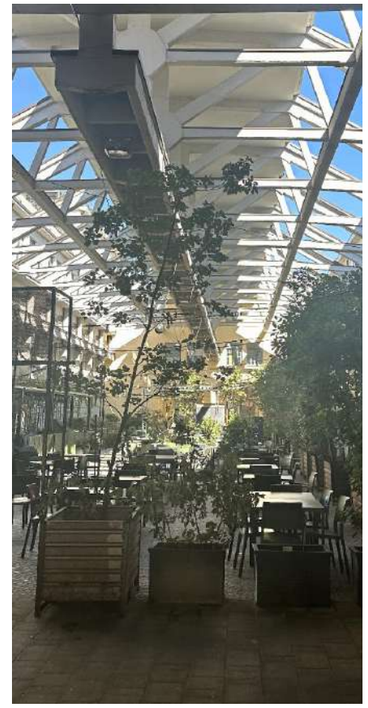


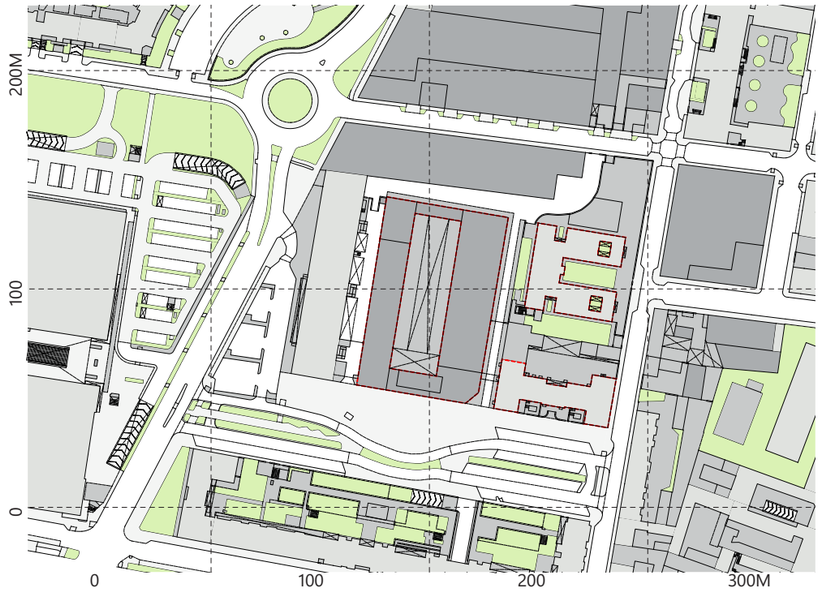
Fig 17-20: Current Situation of the formal Concerie Fiorio complex. (2025). Photograph by the author.

Fig 21: The structure encloses a court-yard-like open space between the two buildings. (2025). Photograph by the author.

2.1.3 Impact Study Center

The Impact Study Center is located in northern Turin, within a mixed-use urban district characterized by the adaptive reuse of former industrial sites now hosting educational, cultural, and innovation-oriented facilities. The center is housed within the formal INCET complex, originally founded in 1888 as the National Electric Cable Factory and abandoned after 1968. The site underwent a comprehensive redevelopment that integrated heritage preservation with new functions. Interventions included structural consolidation, environmental remediation, and the creation of multifunctional spaces such as offices, gym, co-working





Industial Commercial Warehouse
Building
Facilities
Green area
Small building
Site

areas, open space and the innovation hub. The project supporting activities in research, education, and policy innovation focused on social and sustainable development. The formal reconstruction of this building not only preserved its industrial character but also created new functions. In general, it can also be seen as an important example of Turin's post-industrial urban revitalization. It shows the city's shift from a manufacturing center to a multifunctional, innovation-driven urban environment.

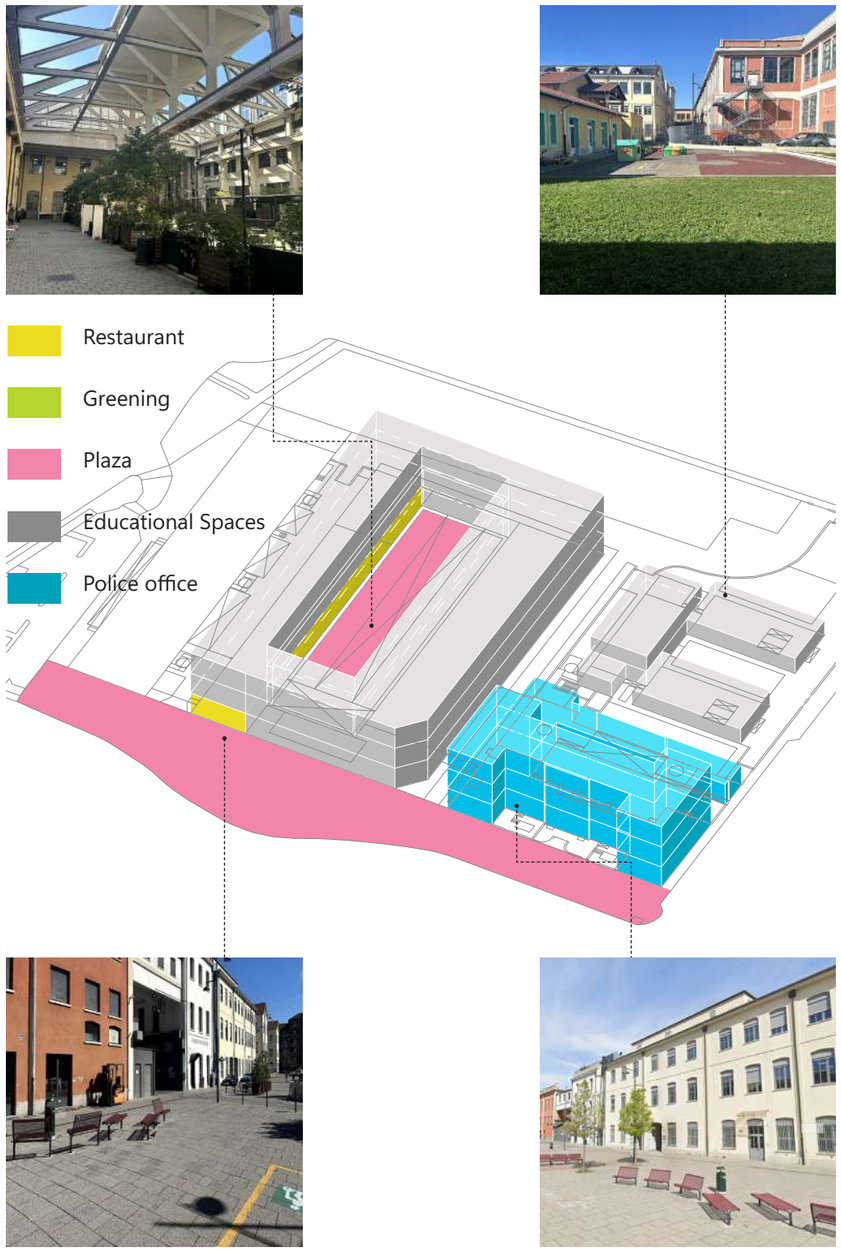


Fig 22-25: Current situation of the Impact Study Center. (2025). Photograph by the author.

2.2 Global case studies

2.2.1 De Hallen Amsterdam

De Hallen Amsterdam, located in the western district of the city, was originally constructed in 1901 as the primary depot and maintenance workshop for Amsterdam's public tram system. The complex was designed with a functionalist approach, featuring brick masonry and large industrial windows, embodying the typical industrial architectural style of the early twentieth century. It served not only as a maintenance facility but also as a central hub for tram operations, providing essential infrastructure to support the modernization of urban transportation. During the first half of the twentieth century, as the tram network expanded and the city continued to grow, De Hallen handled a significant volume of tram maintenance and storage, becoming a crucial support facility for Amsterdam's public transit system. The scale and functionality of the complex gradually increased to meet the rising demands of urban transportation. In the 1970s and 1980s, due to changes in urban transportation technologies and the introduction of new types of vehicles, the tram system underwent restructuring, resulting in the relocation of some lines and maintenance facilities. In 1996, the Amsterdam tram company moved its depot and workshop operations out of De Hallen, marking the end of the building's original transportation function and leading to its subsequent vacancy.

In 2010, a major redevelopment of De Hallen was initiated by architect André van Stigt and the Tram Remise Ontwikkelings Maatschappij (TROM). Completed and reopened in 2015, the project transformed the former tram depot into a multifunctional complex integrating cultural, commercial, artistic, and community uses, marking it as an urban landmark in Amsterdam-West. The design strategy prioritized the preservation of industrial heritage while introducing modern interventions. Original features, such as the tram tracks, were retained as historical references, while abundant natural lighting and open spatial planning created a dialogue between industrial character and contemporary design. The program includes the Foodhallen, a cinema, library, hotel, and offices, addressing diverse urban needs and contributing to local vitality.

De Hallen is a notable example of industrial heritage adaptation in urban renewal. The project shows that historical preservation can work alongside innovative programming. At the same time, it highlights the

Fig 26: Tram depot around 1920.(1920). Accessed July 13, 2025. <https://www.parool.nl/nieuws/hallen-eerste-project-van-kleine-financiers~bc2bd3fa/>

Fig 27-28: Tram depot around 1932 .Stadsarchief Amsterdam. Accessed November 13, 2025. <https://dehallen-amsterdam.nl/en/then-and-now/>.

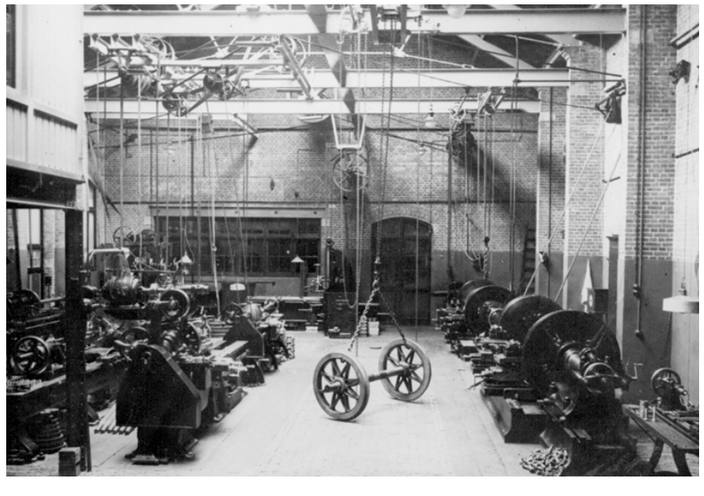


Fig 29-31: Reuse of the De Hallen Amsterdam. Dick van de Berge. Accessed November 13, 2025. < https://www.iamsterdam.com/en/whats-on/calendar/attractions-and-sights/sights/de-hallen-amsterdam>.

importance of socially inclusive planning. Such planning is necessary to ensure a balanced urban transformation.

2.2.2 Matadero Madrid

Matadero Madrid, originally known as the Madrid Municipal Slaughterhouse and Livestock Market, was conceived in 1911 to address the increasing demands for food hygiene and meat supply driven by Madrid's rapid urban expansion. It was designed by municipal architect Luis Bellido González, the complex was constructed in a functional yet ornamental Neo-Mudéjar style, characterized by exposed red brickwork and embellished facades. The design used advanced industrial construction techniques of its time. These included long-span roofs, iron trusses, and refrigeration systems. The facility reflected a modern and rational approach to industrial architecture. Completed in 1925, it covered more than 165,000 square meters. It consisted of nearly 50 buildings, forming the largest and most sophisticated urban slaughterhouse complex in Spain. From 1925 to 1996, Matadero played a key role in Madrid's food infrastructure. During the Franco regime, it became part of the national public health and food safety system. All livestock entering the capital had to be quarantined, slaughtered, and processed on site. By the 1970s, the facility began to decline. Technological obsolescence, urban encroachment, and decentralization of industrial functions all contributed. As the meat supply chain modernized and facilities moved to the city's periphery, Matadero's traditional role became redundant. The slaughterhouse ultimately ceased operations and formally closed in 1996. This marked the end of its industrial function and opened the way for its later transformation into a cultural landmark. The comprehensive renovation strategy of Matadero Madrid emphasized the preservation and restoration of its distinctive Neo-Mudéjar industrial architecture—retaining original red brick facades, iron trusses, and expansive interior volumes—while adaptively reusing the former slaughterhouse spaces to create flexible cultural venues such as galleries, theatres, and community centres; this approach not only revitalized the site's historical and industrial innovative spatial configurations and modern infrastructure, fostering a dynamic environment that integrates contemporary art, education, and public engagement within a sustainable and multifunctional urban cultural hub.

The transformation of Matadero Madrid is a successful example of preserving industrial heritage while supporting urban regeneration.

Fig 32-33: The square of Matadero Madrid . (2023). Photograph by Daniel Schäfer. Accessed November 13, 2025. <https://living.corriere.it/indirizzi/design-tour/gallery/madrid-spirito-libero/?pag=2>.

Fig 34: Matadero Contemporary Art Center. (2025). Accessed November 13, 2025. <https://www.esmadrid.com/it/informazioni-turistiche/matadero-madrid#>.

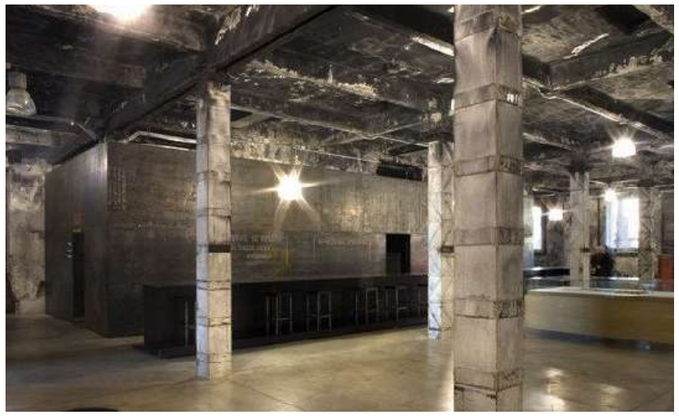
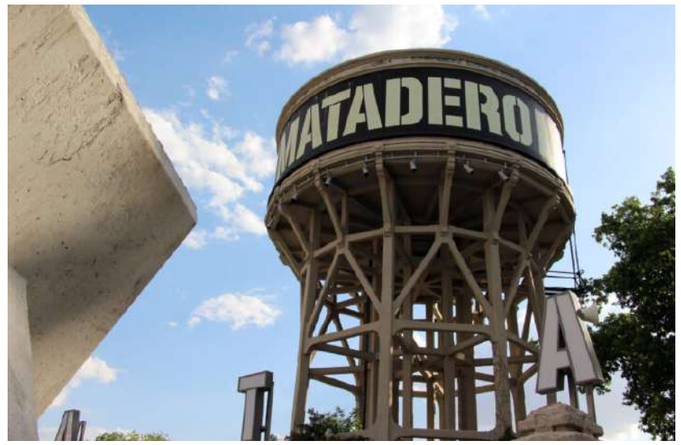


Fig 35-37: Matadero Contemporary Art Center. (2025). Accessed November 13, 2025. <https://www.esmadrid.com/it/informazioni-turistiche/matadero-madrid#>.

Fig 38: Warehouse No. 16. (2021). Accessed November 13, 2025. <https://povedacoleccion.com/blog/matadero-madrid-una-joya-de-la-arquitectura-madrilena/>.

Fig 39: Water tank. (2021). Accessed November 13, 2025. <https://povedacoleccion.com/blog/matadero-madrid-una-joya-de-la-arquitectura-madrilena/>.



The project respects the site's historical fabric. It also introduces innovative cultural functions and sustainable design. This approach has revitalized a formerly obsolete industrial complex. Today, it serves as a dynamic centre for art, community, and education. The adaptive reuse strengthens the city's cultural vitality and urban identity. It shows how careful renovation can connect history and modernity, and also, it has become a meaningful public space for the community.

These three successful cases highlight renovation strategies and summarize effective approaches for adapting existing industrial buildings. The following five points, connected to formal factory renovations, facilitate deeper study and support architectural design.

2.3 Summarize

The reuse of industrial heritage has become an essential topic in contemporary urban regeneration, addressing the transformation of obsolete production sites into spaces that respond to modern social and cultural needs. Adaptive reuse serves as a core strategy to balance heritage preservation and architectural renovation, allowing historical buildings to retain their identity while accommodating new functions.

In theoretical and practical terms, this process involves five main dimensions: Preservation of historical identity, Create space for social activity, Multi-functional renovation, Insertion of a landmark building and Sustainable regeneration.

Several cases illustrate key strategies for adaptive reuse. The Lingotto Plant in Turin, redesigned by Renzo Piano, transformed a former Fiat factory into a multifunctional complex while retaining its reinforced concrete frame and rooftop test track. It shows how industrial architecture can be repurposed without losing its historical identity. The De Hallen complex in Amsterdam converted a tram depot into a cultural hub with cinemas, studios, and a public market, preserving its steel and brick structure while activating it for community use. The Matadero Madrid shows a flexible, incremental approach, where minimal interventions allow the former slaughterhouse to evolve organically into a cultural centre. These examples emphasize preserving heritage, reorganizing interior spaces, and integrating new functions, providing valuable precedents for the adaptive reuse of the Formal National Wallpaper Factory.

Building on these precedents, the proposed transformation of the Formal National Wallpaper Factory adopts a similar framework. It focuses on the preservation of historical traces, the activation of interior spaces through fitness, wellness, and community programs, and the restoration of facades and structures using compatible materials and techniques. Through these strategies, the project aims to reinterpret the former industrial complex as a living heritage, bridging memory and modernity while promoting sustainable urban revitalization.

3.1 Territorial framework

	Torino Lingotto Plant (Italy)	De Hallen Amsterdam (Netherlands)	Matadero Madrid (Spain)
Date of renovation	1994	2010	2006
Original Function	FIAT car manufacturing plant (with rooftop test track)	Tram depot and maintenance hall, central hub for tram operations	Municipal slaughterhouse and meatpacking complex
Multi-functional Renovation	Commercial center Hotel Congress space Art museum Offices Garden Cinema	Foodhallen Cinema Library Makerspace Hotel Offices	Cultural hub Art exhibitions Theaters Design labs Co-working Public events
Main Reuse Strategies	Retention of iconic test track; use functional diversification; public-private collaboration; preservation of historical volumes	Preservation of industrial structure; mixed-use programming; community-driven revitalization; fine-grained spatial adaptation	Adaptive reuse; preservation of historical volumes; integration with riverfront public space
Spatial Value	Maintained rooftop test track and ramps, green garden, original structure and space; integrated new volumes while respecting industrial form	Preserved large vaulted industrial spaces; combined old and new materials; open, flexible layouts	Preserved large vaulted industrial spaces; combined old and new materials; open, flexible layouts
Cultural Value	Strong preservation of automotive legacy; iconic features became urban symbols	Emphasized local industrial heritage and architectural identity; preserved facades and spatial character	Memory; introduced contemporary cultural symbols and programming
Aim	Anchored Southern Turin's urban regeneration; multifunctional hub supporting city community	Engaged local residents and entrepreneurs; improved neighborhood connectivity and mixed-use vitality	Open-access public spaces; riverfront integration; diverse cultural events promoting inclusiveness

The Former National Wallpaper Factory

EXPLORING THE CULTURAL AND SPATIAL VALUE OF INDUSTRIAL HERITAGE
- ADAPTIVE REUSE OF THE FORMER NATIONAL WALLPAPER FACTORY

3.The Former National Wallpaper Factory

The project is located at Corso Vigevano 33, within the Aurora neighbourhood. The area is characterized by a dense urban fabric [4] , it has a mix of residential buildings, commercial uses, and warehouses. This shows how the neighbourhood changed from a working-class area to a place of urban regeneration. Corso Vigevano 33 is strategically positioned near major transportation nodes and stands as a significant example of the layered urban identity of the Aurora area.

The area surrounding Corso Vigevano 33 in Turin's Aurora district exemplifies the complex challenges faced by many former industrial neighbourhoods undergoing urban regeneration. Historically an industrial hub characterized by factories and working-class housing, Aurora has experienced significant economic and social transformations as industrial activities declined. The shift towards redevelopment and adaptive reuse of industrial heritage sites has brought new life to the area, attracting diverse populations, including immigrants and creative industries.

This transition has also shown deep social problems and urban risks. Problems like drug trafficking, theft, robbery, and assaults are still common. This raises concerns about public safety. Many residents still live in insecure conditions. At the same time, public spaces are often in poor condition. The challenge of keeping industrial heritage while solving social problems shows the need for regeneration strategies.

4* Bragaglia, F. (2024). The University and the Neighbourhood—Opportunities and Limits in Promoting Social Innovation: The Case of AuroraLAB in Turin (Italy). (p. 6).

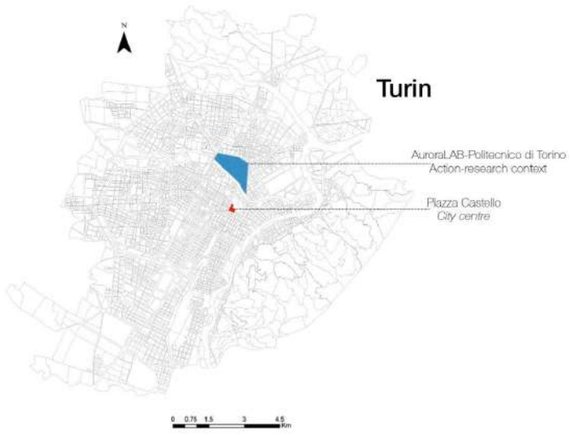


Fig 40: Bragaglia, F. (2024). The University and the Neighbourhood—Opportunities and Limits in Promoting Social Innovation: The Case of AuroraLAB in Turin (Italy). (p. 6).

Fig 41: The Satellite image of the project. Accessed November 13, 2025. <https://www.google.com/maps/>.


0
400
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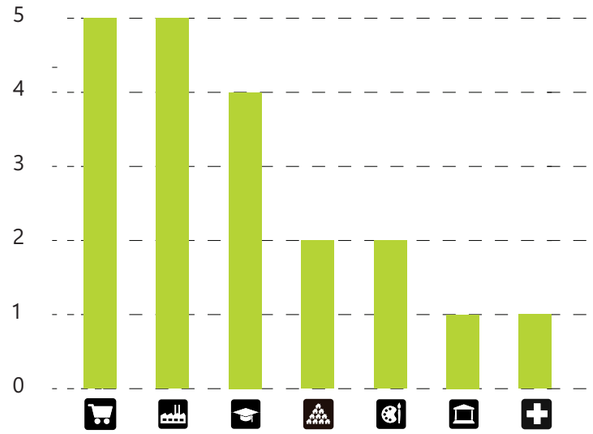
Main Road
Site
Building
Church
Park
Parking Lot
Public area
Education District
River
Hosipital
Chimney
Open platform
Library
Mosque
Shopping area
Cemetery
Cinema
Museum
Police office
Church
Skatepark

5-minute walking circle

A circle with a 400-meter radius, about a 5-minute walk, was drawn around the project site. Nearby public facilities were investigated. These included supermarkets, schools, offices, and galleries. Also, it helps to understand the site's current condition and surrounding environment. The study shows what functional spaces residents need every day. As for result, it supports design development.



- Road
- Site
- Facilities
- Building
- Small building
- Industial Commercial Warehouse
- Sports facilities
- Green area
- Formal Factory
- Market
- School
- Office
- Gallary
- Complex
- Hospital

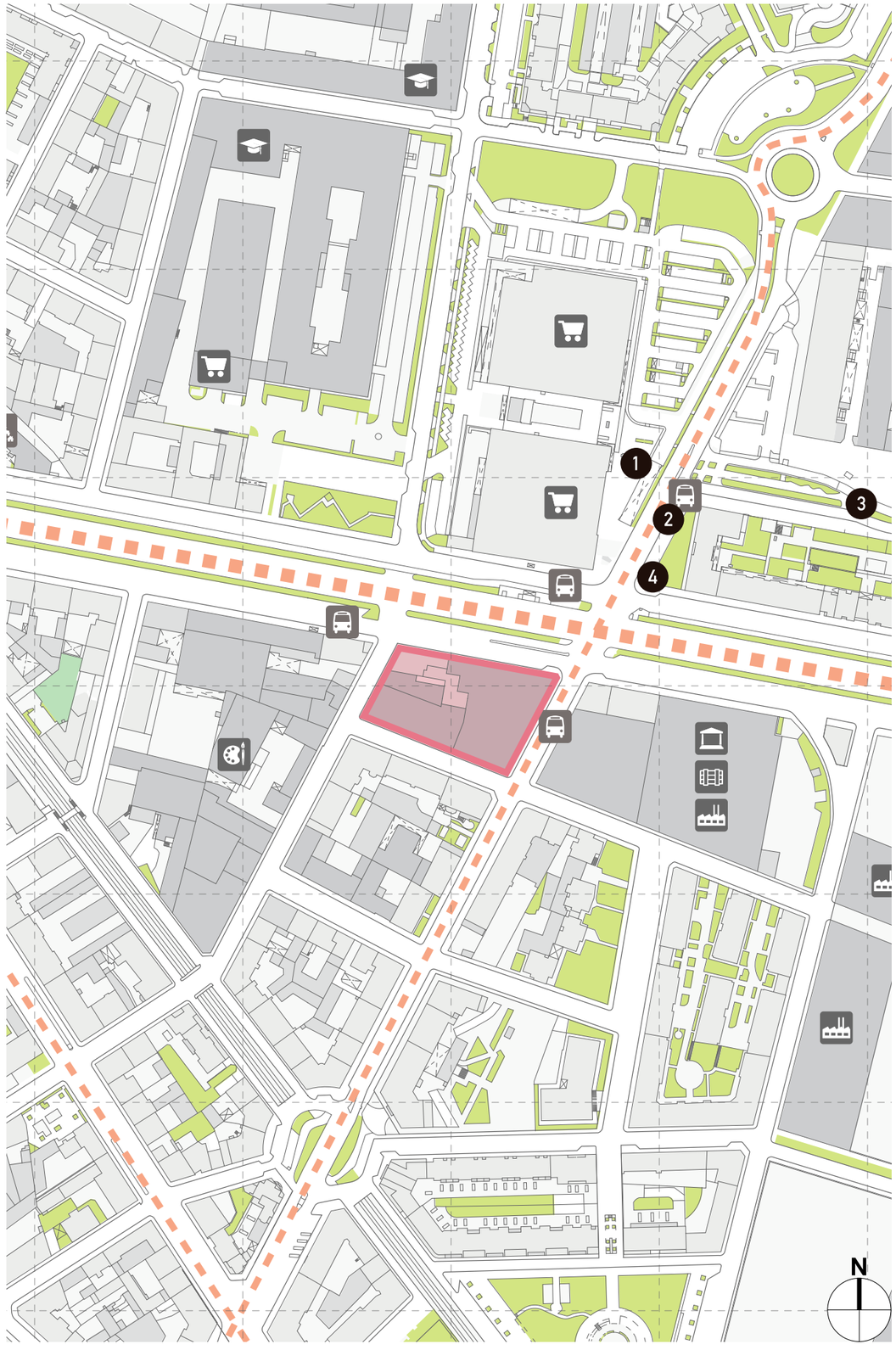


Fig 42: View of the supermarket located across the road. (2025). Photograph by the author.

Fig 43: Pedestrian crossing at an intersection within a residential area. (2025). Photograph by the author.

Fig 44: Residential area's parking lot and public square. (2025). Photograph by the author.

Fig 45: Intersection at the edge of the site. (2025). Photograph by the author.

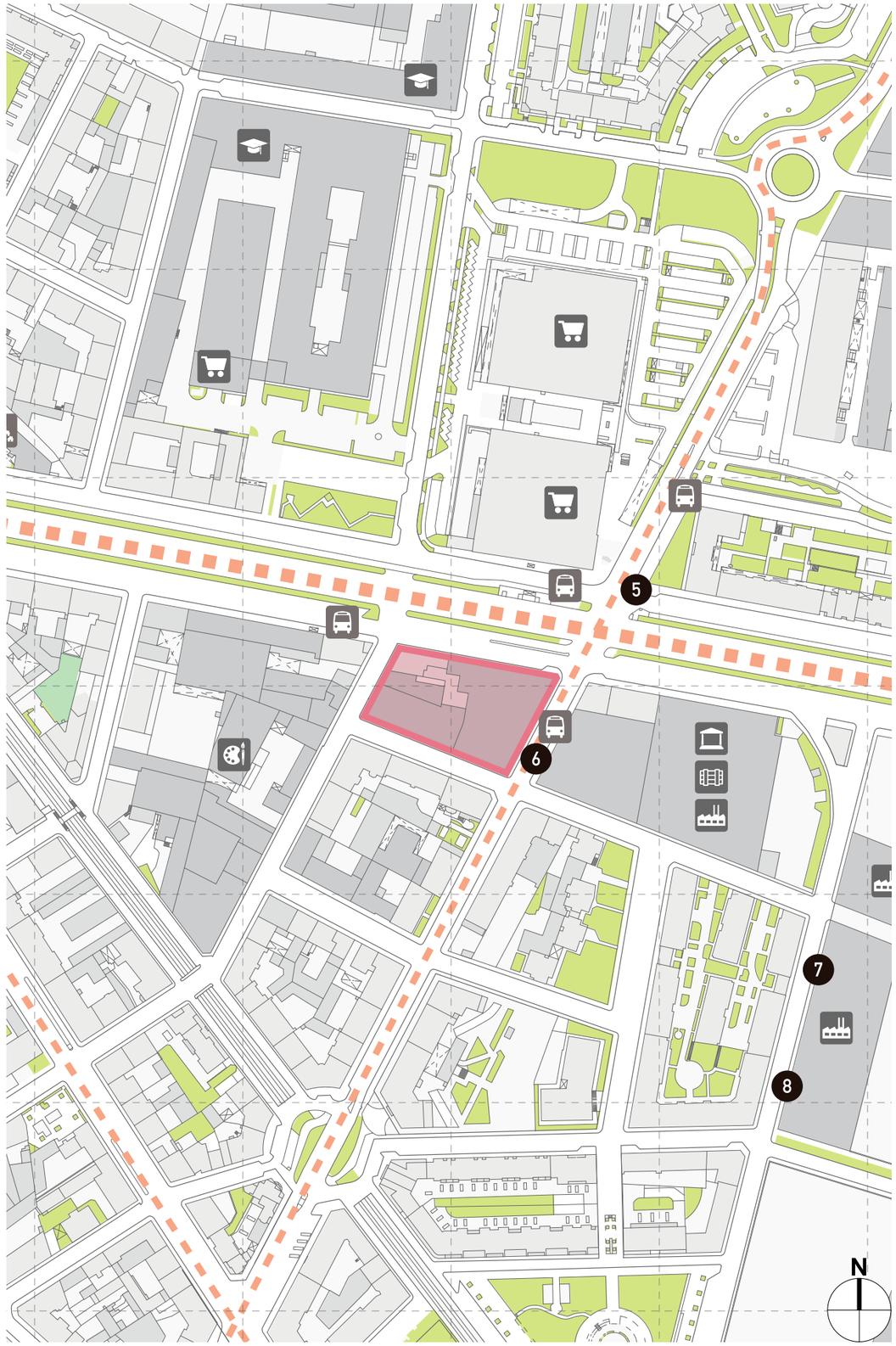


Fig 46: Renovated factory converted into an office building. (2025). Photograph by the author.

Fig 47: The roof skylight is a visible feature of the factory's renovation. (2025). Photograph by the author.

Fig 48: Abandoned factory with high enclosing walls and inner open space. (2025). Photograph by the author.

Fig 49: View of the road beside the factory. (2025). Photograph by the author.

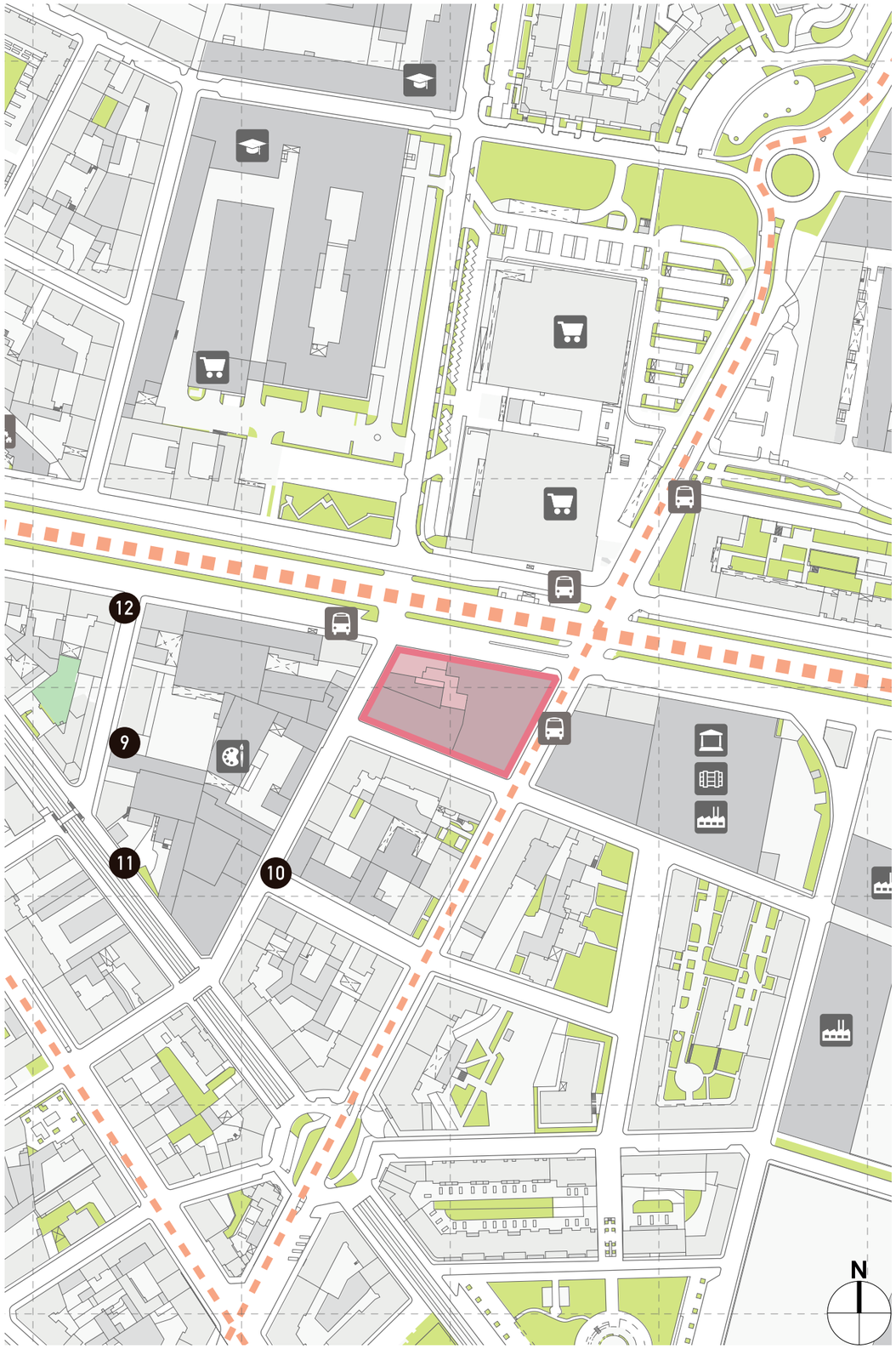


Fig 50: Surrounding residential neighborhood. (2025). Photograph by the author.

Fig 51: Sloping roads run along both sides of the building. (2025). Photograph by the author.

Fig 52: Abandoned old railway. (2025). Photograph by the author.

Fig 53: Two blocks at the intersection. (2025). Photograph by the author.

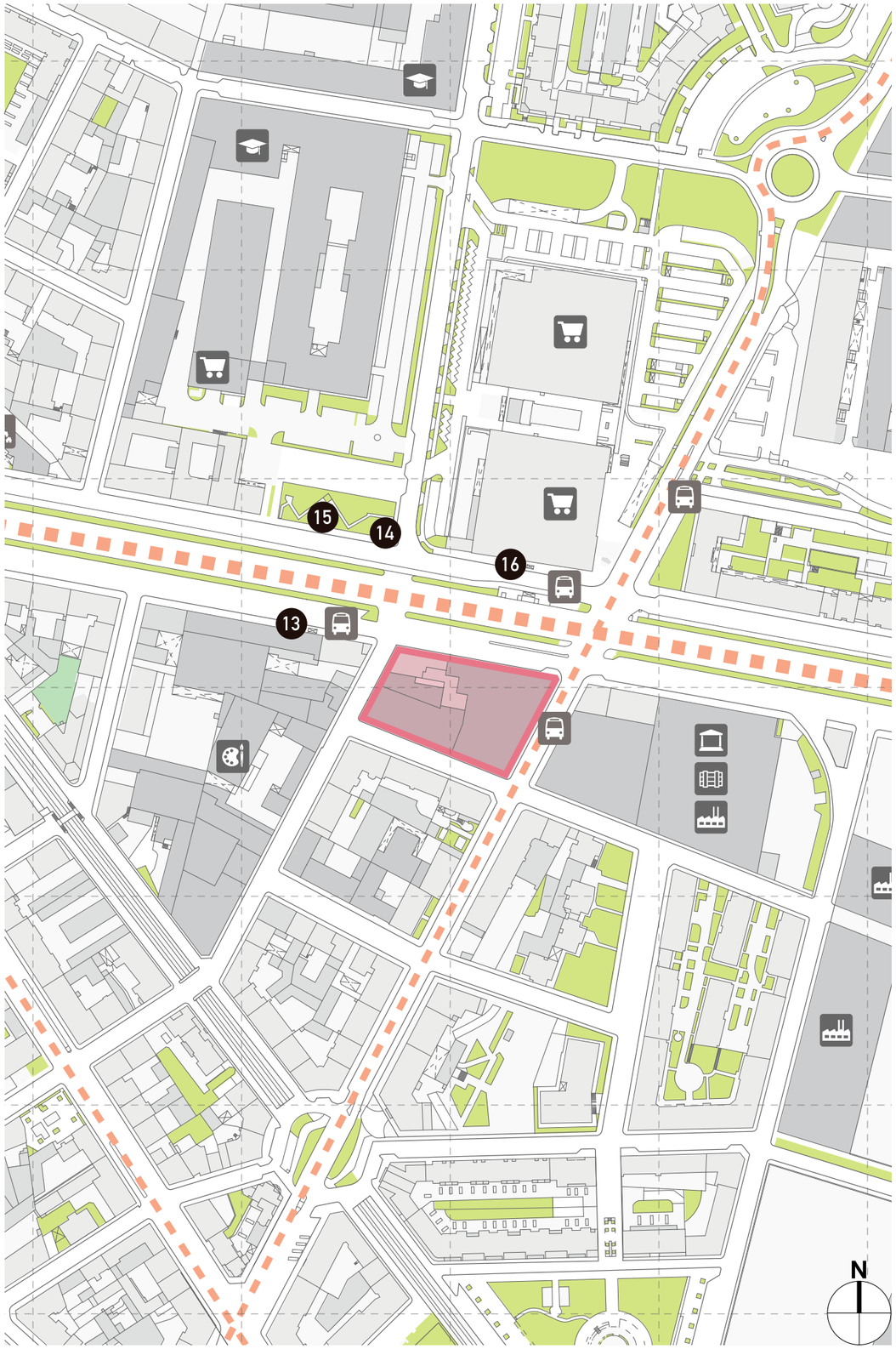


Fig 54: View of the bus stop adjacent to the project. (2025). Photograph by the author.

13

Fig 55: Bus 46 passing on the opposite side of the street. (2025). Photograph by the author.

14

Fig 56: View of the wide road running in front of the project. (2025). Photograph by the author.

15

Fig 57: Bus stop on the opposite side of the road, with buses 46 and 49 passing. (2025). Photograph by the author.

16

3.2 Historical framework

Barone Ambrogio, established in 1852 to manufacture wallpaper, became renowned across Italy for its high-quality tapestries featuring arabesques and floral motifs. At the beginning of the twentieth century, a new factory was established. In 1907, the company was renamed the National Wallpaper Factory, with the building designed by Pietro Fenoglio, Turin's foremost Art Nouveau architect. The company continued its operations until September 1, 1975, the day when the 116 employees returned from their summer holidays to find the gates of the factory locked and their dismissal letters awaiting them. Shocked and outraged, the workforce immediately occupied the factory. Even though they stayed for several months and supported each other, they were ultimately unable to restart production or secure a future for the factory. Today, the central area of the building serves as a boxing gym, attracting many people to exercise. The interior remains largely unchanged from the abandoned factory, with the windows, pillars, and structural elements.

Fig 58: The National Formal Wallpaper Factory. Accessed November 13, 2025. <https://www.museotorino.it/view/s/0f3698cc86554ac7a0a7db3c32831ab3>

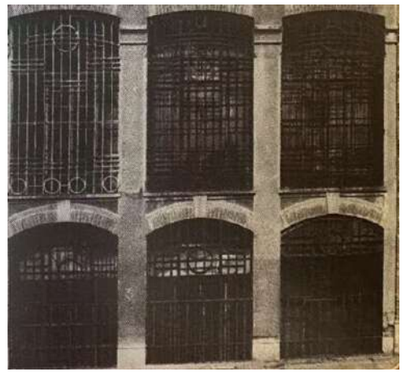


Fig 59: Formerly Barone e Figli detail of a modular group of windows. (1906). Accessed November 13, 2025. <https://www.museotorino.it/>.

CRONACA CITTADINA

Incertezza per il futuro, incredulità, ansia

Tra i lavoratori licenziati che presidiano la "Barone,,

I colpiti dal provvedimento sono 116 - Dicono: « E' stato un fulmine a ciel sereno; molti di noi, in ferie, non lo sanno ancora » - Un incontro in Comune per la Hebel

Alla Barone: «La proprietà non ha preso nemmeno contatto con i sindacati»

Fig 62: La Stampa. (August 28, 1975). Among the fired workers who man the "Barone" (p. 5). Accessed November 13, 2025. <http://www.archiviolastampa.it/>.

Fig 63: Wallpaper factory. (2010). Photograph by Dughera Aureliano. Accessed November 13, 2025. <https://www.torinoinsolita.it>.

Barone Ambrogio & Son company founded, producing high-quality wallpapers.

1852

1907

Construction of the factory complex at Corso Vigevano 33, designed by Pietro Fenoglio.

First enlargement of the building (expansion of production facilities).

1930

1966

Further enlargements and vertical extensions (Some additions were added in the building).

Factory operations ceased and production stopped.

1975

1982

Official change of use (conversion of the property for new functions).

Refurbishment and restoration works to adapt the building for its new uses.

1984

Nowaday

Considered an important example of early 20th-century industrial architecture in Turin and a significant work by Pietro Fenoglio.

Fig 60-61: Formerly Barone e Figli view of the facade. (1906). Accessed November 13, 2025. <https://www.museotorino.it/>.

Fig 64: Exterior view of the building. (2025). Photograph by the author.

Fig 65: Interior view of the boxing training club's locker room. (2025). Photograph by the author.

Fig 66: Basement church, where activities are held every Sunday. (2025). Photograph by the author.

Architecture analysis

EXPLORING THE CULTURAL AND SPATIAL VALUE OF INDUSTRIAL HERITAGE
- ADAPTIVE REUSE OF THE FORMER NATIONAL WALLPAPER FACTORY

4. Architecture analysis

4.1 The building situation

These technical drawings and other original documents come from the Historical Archives of the City of Turin, and some of the photographs were taken in 2025, all off those materials clearly provide information about the site and its history. It is possible to understand the site and the construction process through these drawings, while also helping redraw the situation of the Former National Wallpaper Factory and supporting the preservation of the facade through decay analysis. By studying the archival drawings, historical details can be connected with current renovation, making the redesign accurate and practical. The planning drawings from 1906 to 1908, as well as the current ground floor plan in 2025, it can be seen clearly that the factory has expanded both horizontally and vertically since its construction. Today, many new additions have also been added on the rooftop and in the courtyards as activity rooms serving nearby residents. These additions have made the spatial unclear and disorganized, create an urgent need for renovation and preservation.

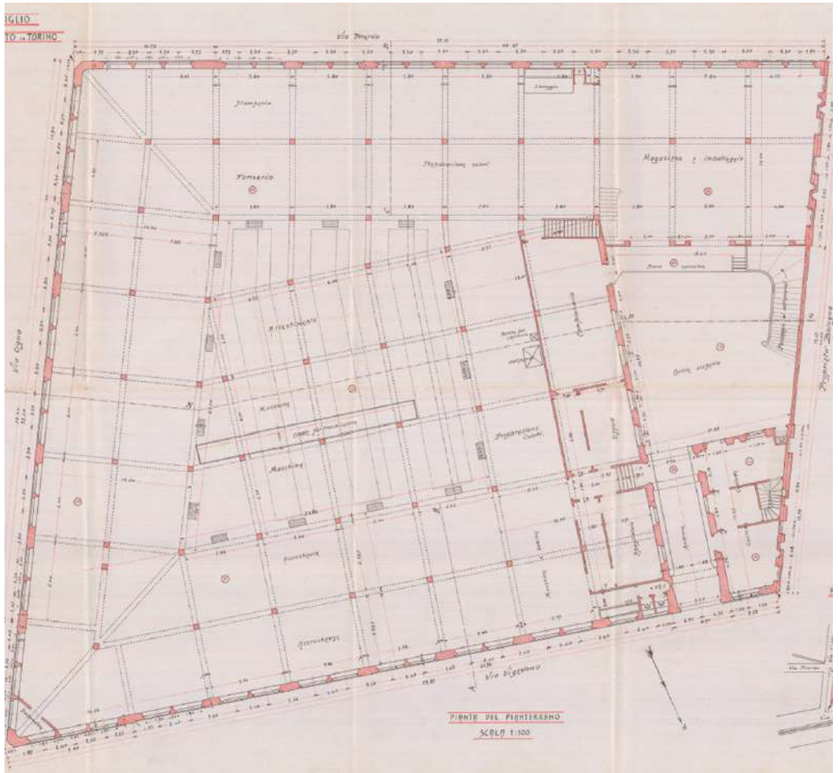


Fig 67: Ground floor plan, AMB. Barone, son, project factory in turin, ASCT, Progetti Edilizi, 1906/277.

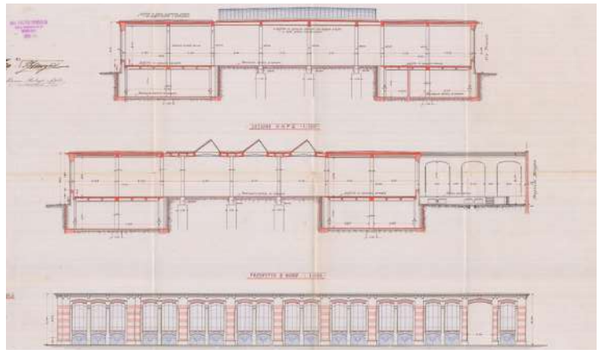


Fig 68: Section and elevation, AMB. Barone, son, project factory in turin, ASCT, Progetti Edilizi, 1906/277.

Fig 59: Elevation, AMB. Barone, son, project factory in turin, ASCT, Progetti Edilizi, 1907/185.

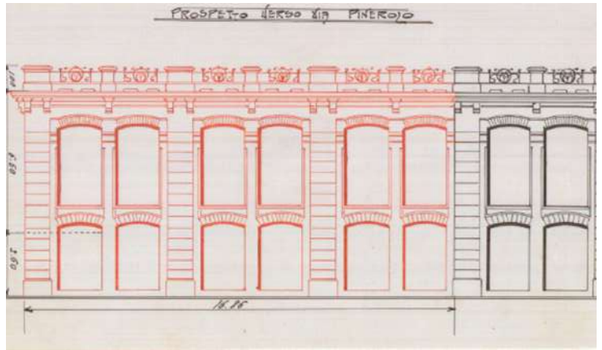


Fig 70: Elevation, AMB. Barone, son, project factory in turin, ASCT, Progetti Edilizi, 1908/231.

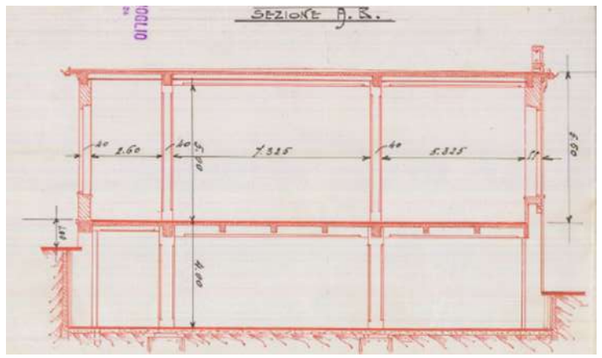
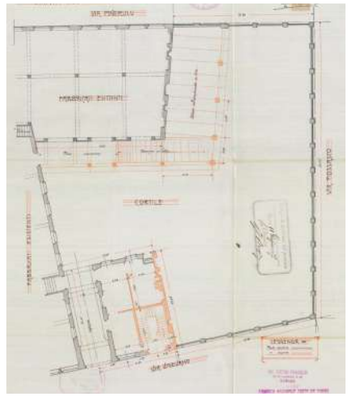


Fig 71: Section, AMB. Barone, son, project factory in turin, ASCT, Progetti Edilizi, 1908/231.



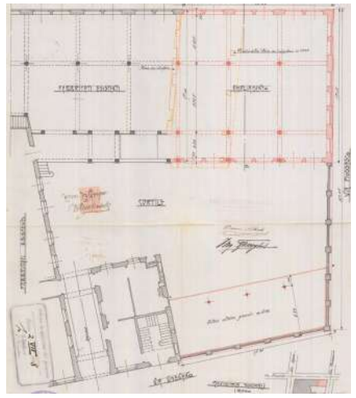


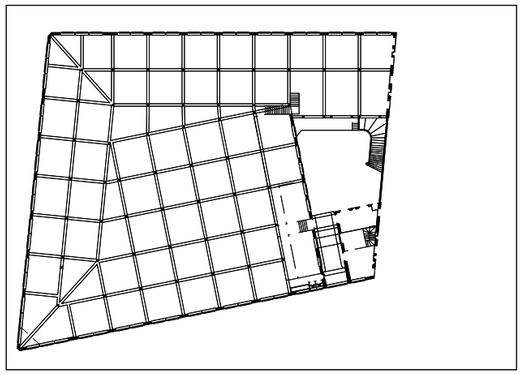
Fig 72: Ground floor plan, AMB. Barone, son, project factory in turin, ASCT, Progetti Edilizi, 1907/185.

Fig 73: Ground floor plan, AMB. Barone, son, project factory in turin, ASCT, Progetti Edilizi, 1908/231.

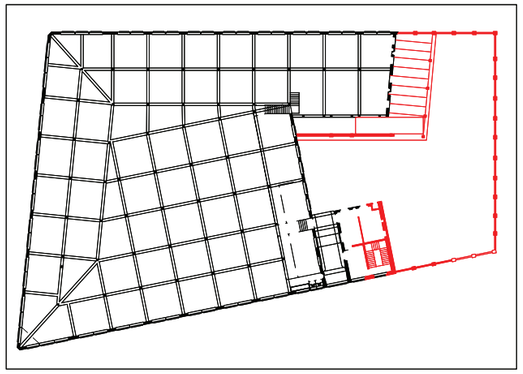
In 1906, the building was originally a two-floor factory with its entrance on the right side and a courtyard. The staircase provided access to the upper floor. The internal circulation was clear and well-organized, people entered through the courtyard, where circulation was efficiently distributed, allowing the building's spaces to be used effectively. By the following year, 1907, the factory was completed. The company planned to expand the factory. Based on the original layout, the building was extended horizontally to enclose a larger courtyard. The main staircase that had been located in the entrance courtyard was demolished and relocated to the right side of the entrance. This change freed up the central courtyard space, making the overall interior more spacious without disrupting the circulation flow and creating more room for work and activities. In 1908, the building continued to expand. To make better use of space and improve workflows, the southern part of the building was extended toward the courtyard up to the boundary wall, while the eastern side near the northern entrance was also enclosed to facilitate activities. These strategies did not compress the central open area, and both indoor and outdoor spaces were utilized to their fullest extent.

During the current site investigation - 2025, it was found that many small new structures had been added over time. Without the 1906 drawings, it would be difficult to imagine the building's original appearance. The most prominent change is the addition of a two - floor activity room on the roof, providing a communal space for nearby residents. The staircase leading to the rooftop remains in the courtyard area, now a straight-run steel structure stair. However, it is surrounded by many small additions, which have filled the central courtyard. Some parts are now used as apartments, while a large portion of the southern area remains vacant. Overall, the internal spatial layout has become complicated, and circulation is disordered.

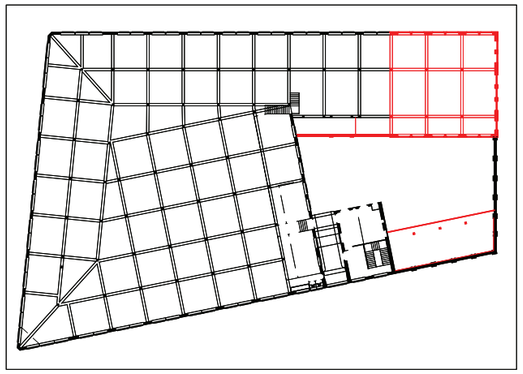
1906



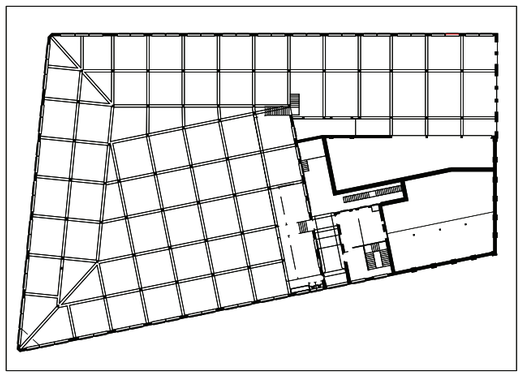
1907



1908



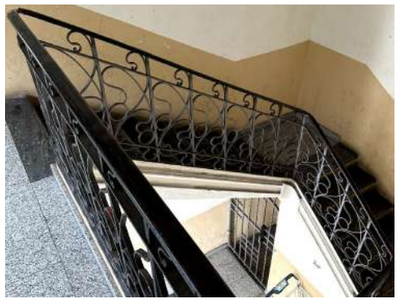
2025



The factory facades remain consistent with the original structures, showing minimal alterations. However, some facades have suffered damage, and many additions are built on the foundation of existing buildings. A new rooftop level has been added for leisure purposes, this severely impacts the building's durability. Furthermore, the interior layout is disorganized, making the building inconvenient to use. On-site investigation revealed that a significant portion of the building is underutilized, thus requiring functional improvements and repairs.

Fig 74-79: Current Situation of the Project. (2025). Photograph by the author.

Fig 80-87: Current Situation of the Project. (2025). Photograph by the author.



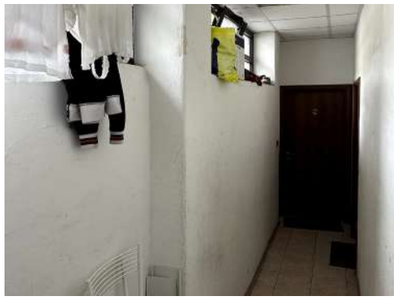


Fig 88-93: Current Situation of the Project. (2025). Photograph by the author.

4.2 Materials and construction techniques

The former factory, a historically significant industrial site, employs a reinforced concrete system developed by Francois Hennebique in the late 19th century. The structure achieves both strength and efficiency through steel reinforcement in its tensile zones. Its rigid frame of concrete beams and columns ensures stability. In general, this system was a milestone in the history of industrial architecture at the time. The well-preserved condition of the building today shows the innovation of early reinforced concrete.

Fig 94: System of reinforced concrete, by Hennebique, European Architecture in the Twentieth Century Architecture. Accessed November 13, 2025. <https://www.jpconcrete.co.uk/francois-hennebique-a-pioneer-of-reinforced-concrete/>.

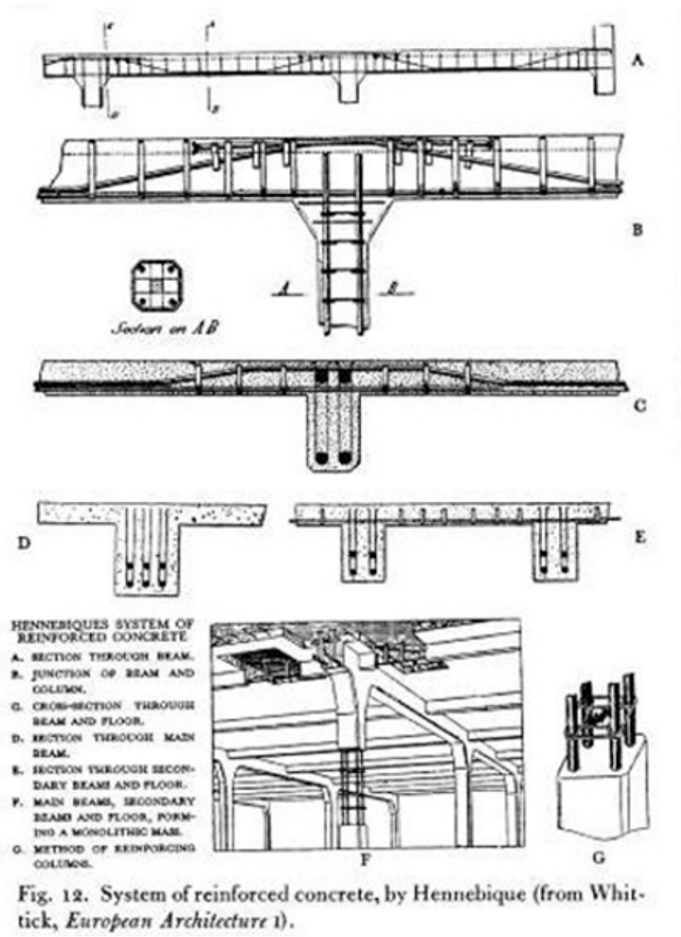
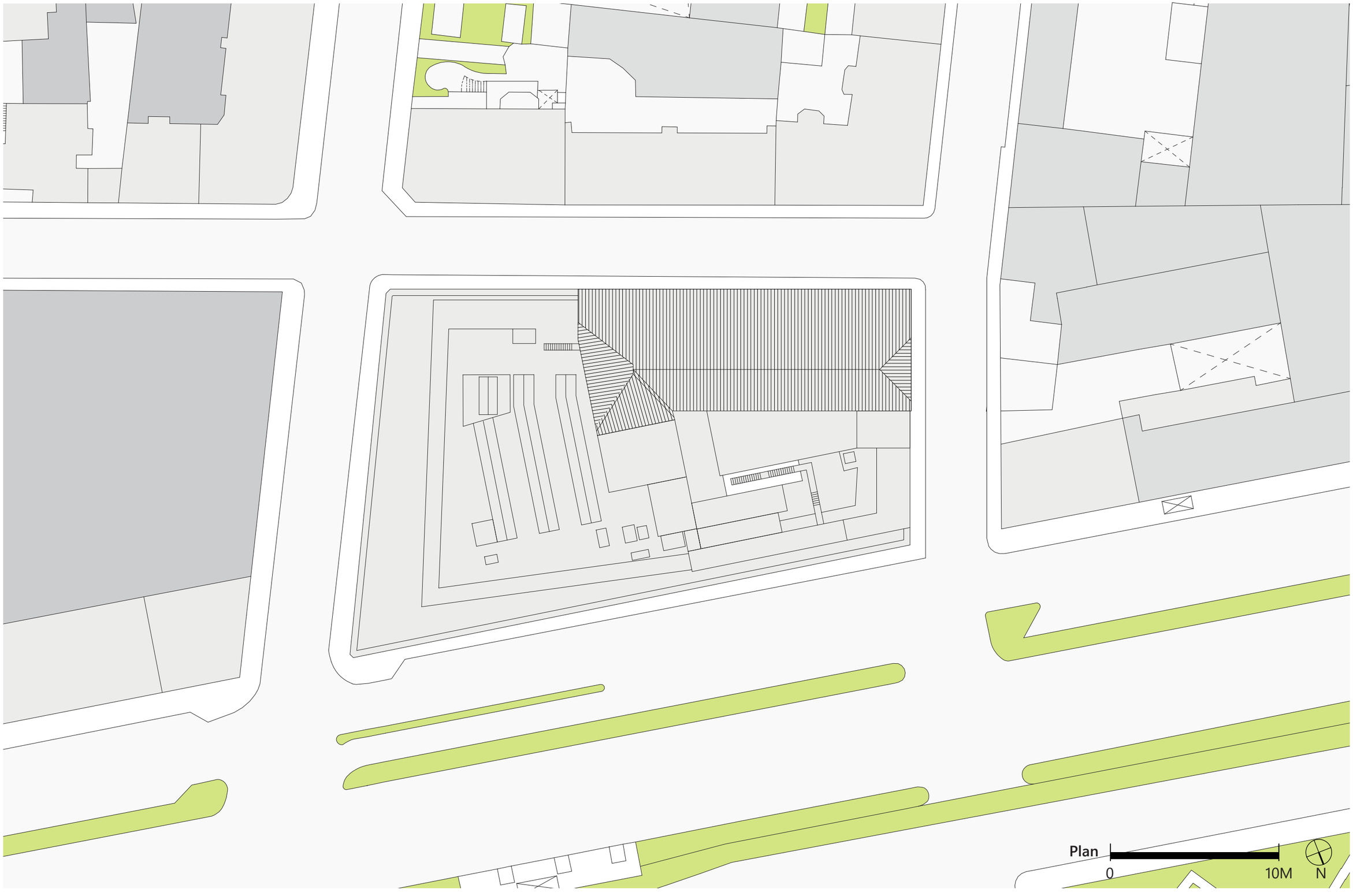


Fig. 12. System of reinforced concrete, by Hennebique (from Whittick, *European Architecture* 1).

The facades facing Via Cigna and Via Vigevano have paired windows on two levels. The windows follow the slope of the streets. Wrought iron details are above the entrance. Red relief bands show the central two-storey section. Liberty-style elements appear in the wrought-iron gates. They also appear in the entrance door on Corso Vigevano. Also, it's clear to see the building is made of concrete and brick.

Fig 95: Detail of the facade's materials. (2025). Photograph by the author.

4.3 Drawings




B
C
A
C
A
B
Ground floor
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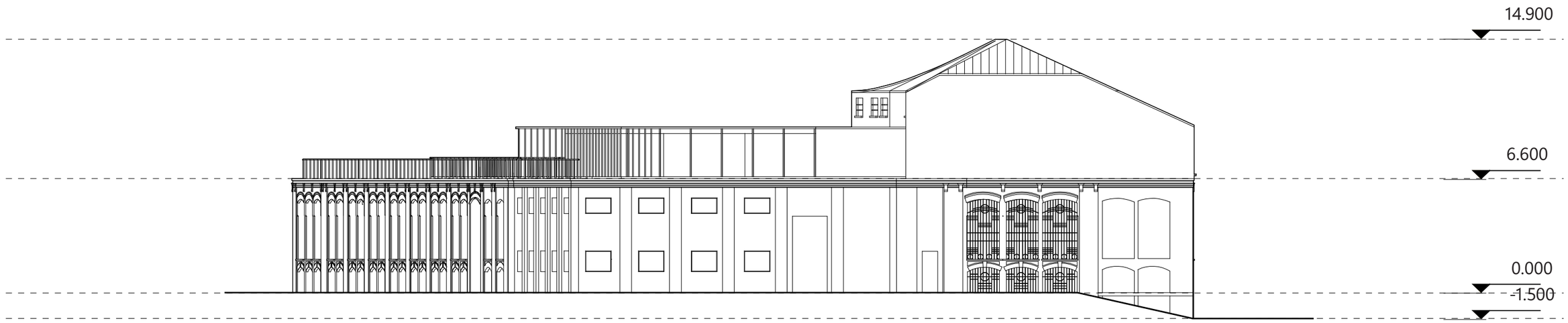
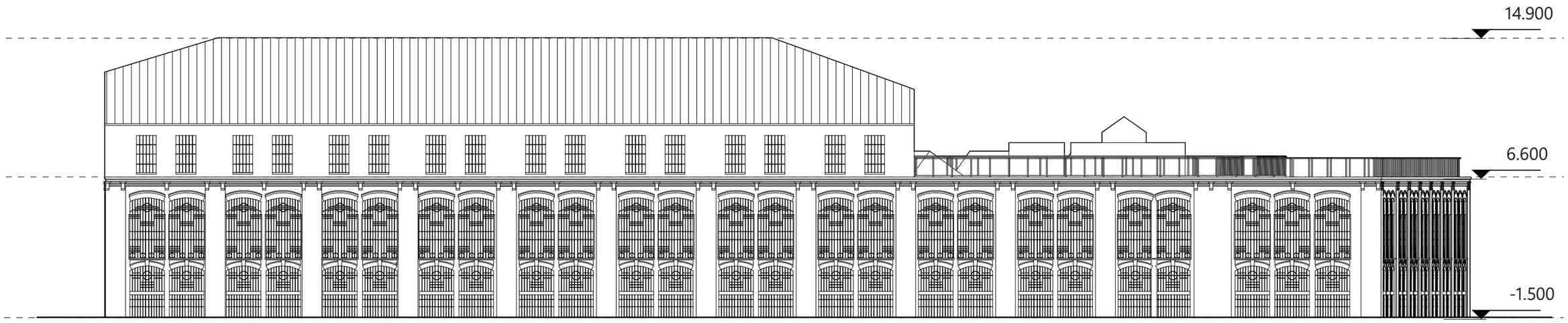
10M
N



West elevation



North elevation

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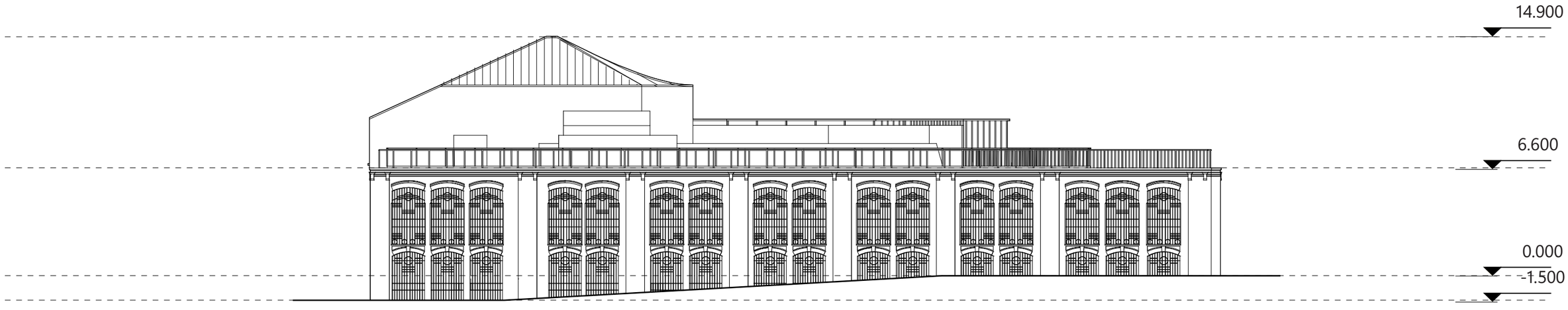
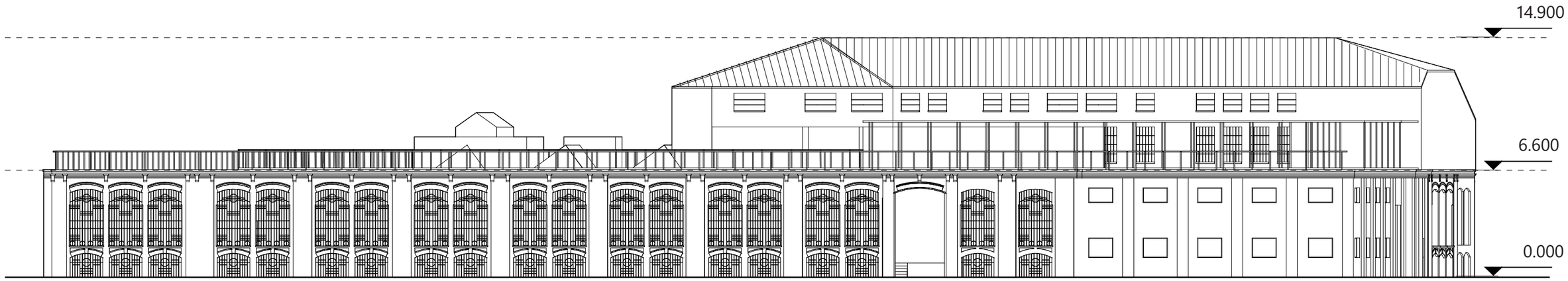
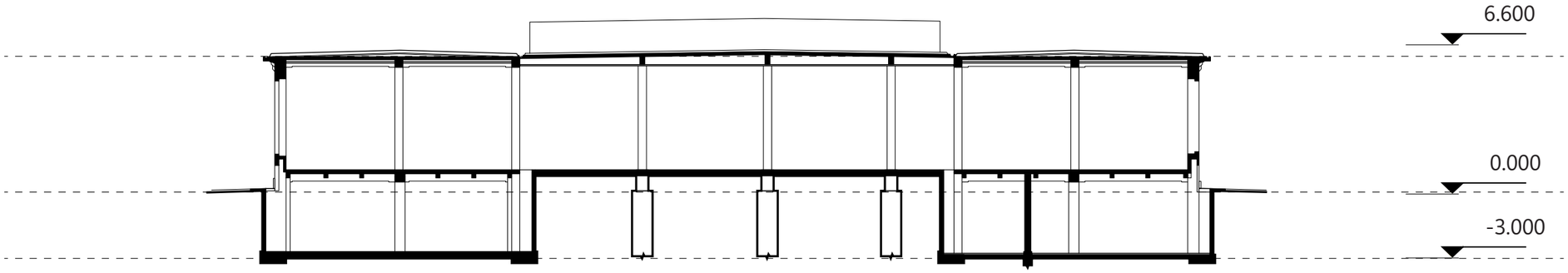


East elevation

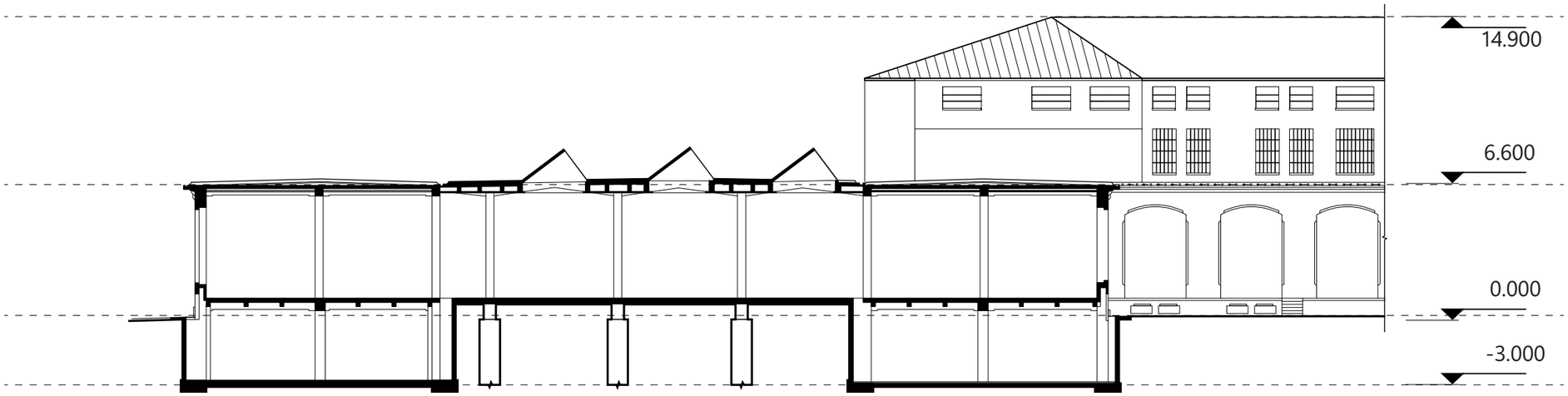


South elevation

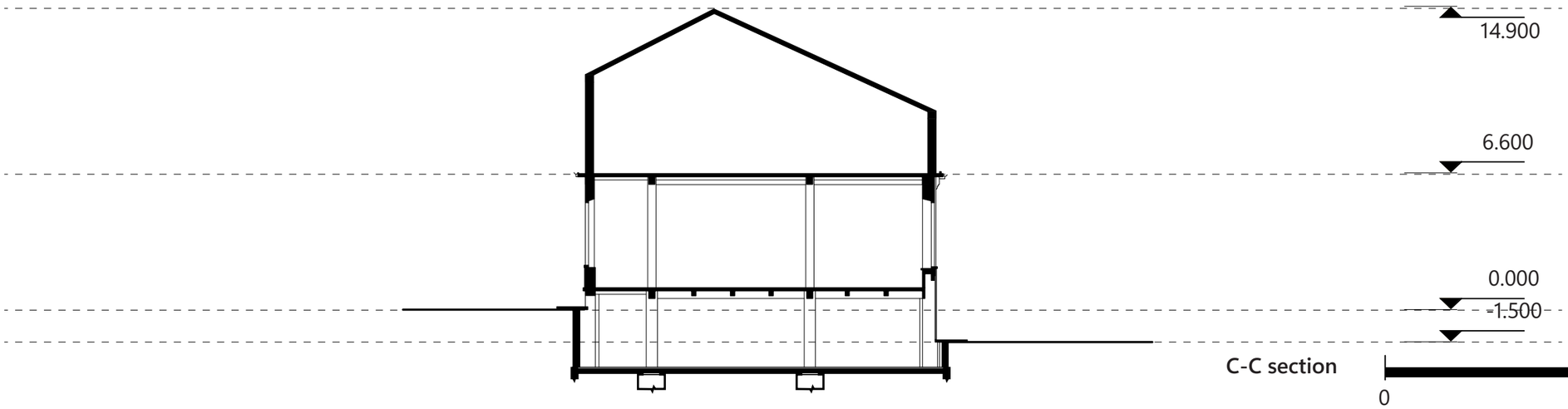
0 10M



A-A section

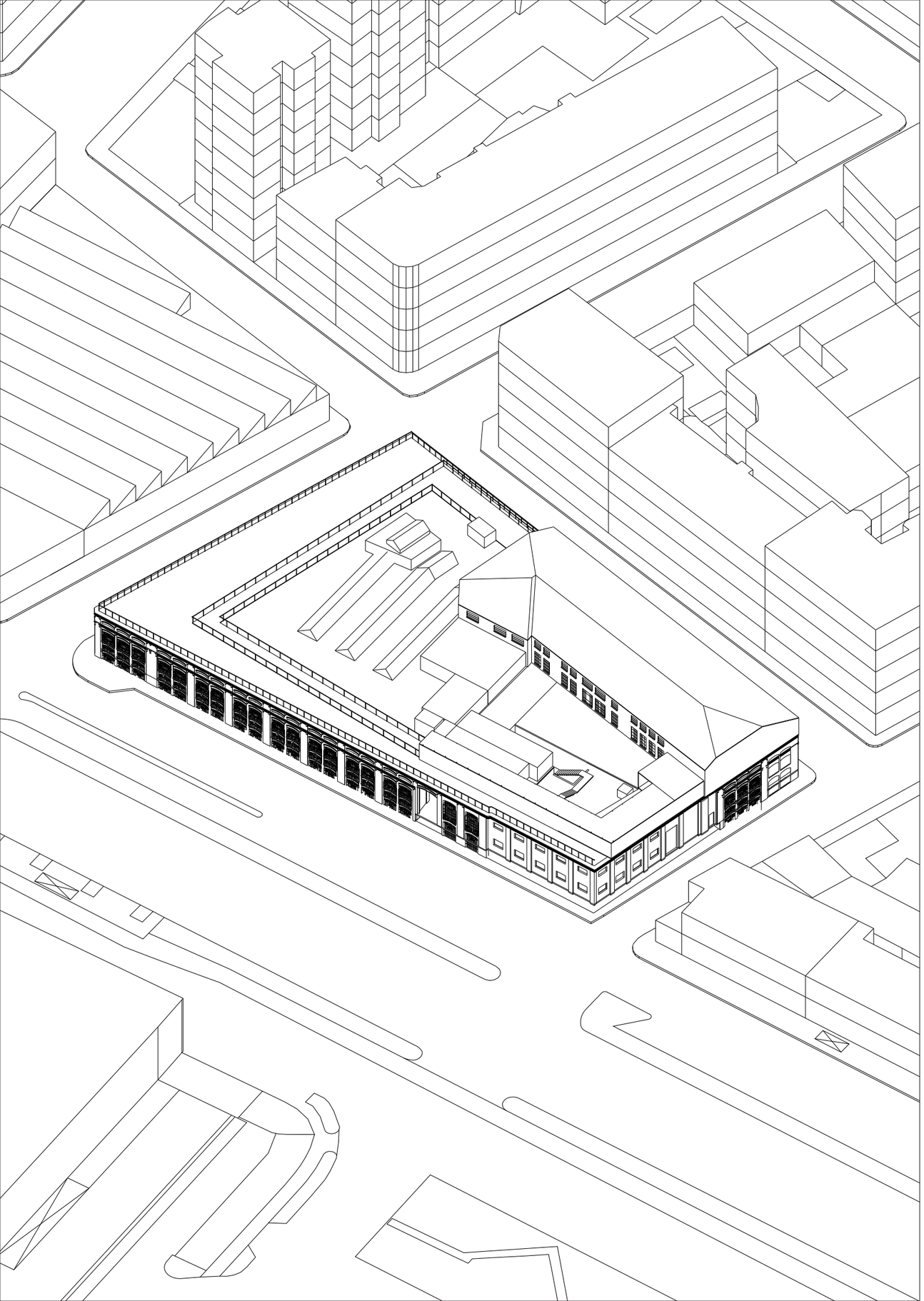


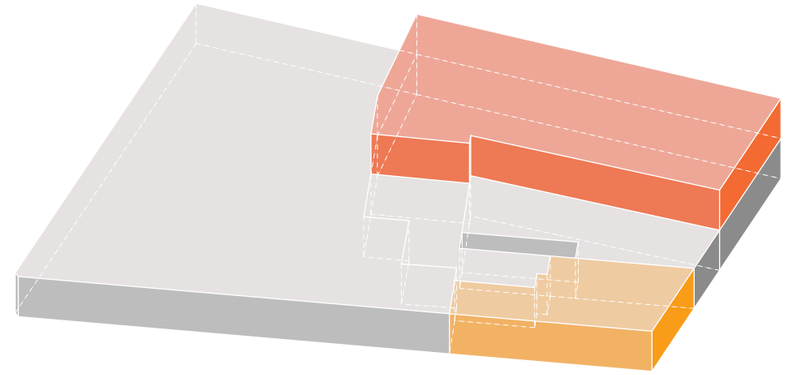
B-B section



C-C section

0 10M

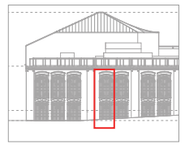




Boxing club & Unknown

Activity area

Apartment



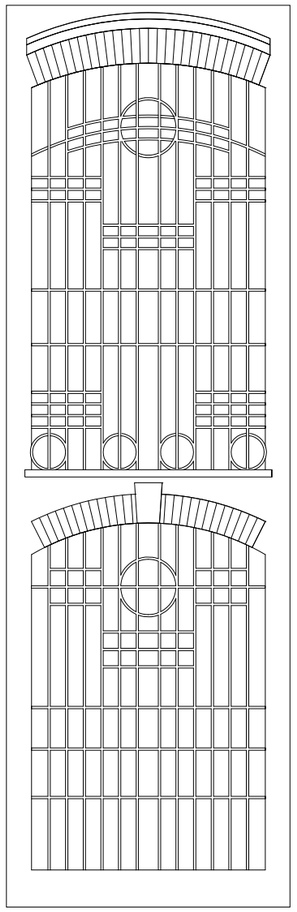


Fig 96: Detail of the window. (2025). Photograph by the author.

Defect analysis and intervention proposal

EXPLORING THE CULTURAL AND SPATIAL VALUE OF INDUSTRIAL HERITAGE
- ADAPTIVE REUSE OF THE FORMER NATIONAL WALLPAPER FACTORY

5.Defect analysis and intervention proposal

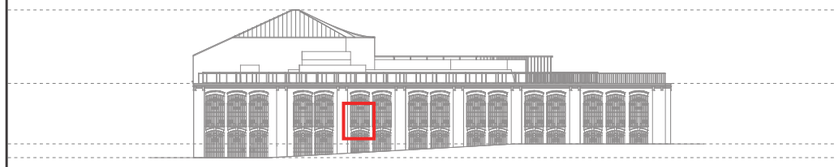
5.1 Introduction

The "knowledge" phase of the old factory restoration project looks at the factory in detail. It studies its history, architectural layout, construction methods, building materials, and internal spatial organization. The main goal of this phase is to find out the physical, chemical, mechanical, and biological processes that make the building decay. This helps to identify internal factors, such as material properties, design or construction problems, or long periods of vacancy, and external factors, such as graffiti, human intervention, and biological growth. By checking the type, cause, and progress of material damage, the future condition of the building can be predicted. This gives a basis for making focused and effective restoration plans.

First, the original facade of the factory was recorded by using photos and measurements. Then a table was made to help assess the damage. The observed problems were divided into natural changes, related to aging and material properties, and harmful changes, caused by external stress or past poor repairs. The restoration also looks at other factors, including site conditions, material conflicts, and previous repair mistakes, to see how they affect decay. After collecting this information, restoration work can be done for each damaged area. In general, all work is based on careful study, is minimally invasive, and keeps the original structure and history of the building.

5.2 Analysis of the degradation and intervention proposal

Portion - East Elevation



Degradation Photo

Material: Steel

Observed Degradation:

• Metal deterioration happens when metal reacts with substances like oxygen or sulfates and starts to rust or break down.

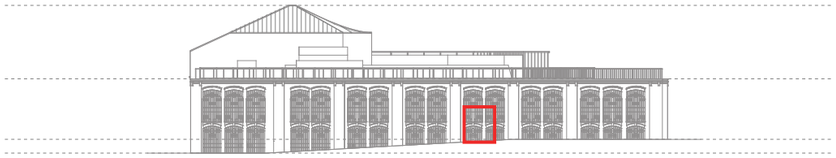
Possible cause:

• Metal that has no protection can easily rust from oxygen and moisture. This happens more when it is not maintained.

Proposed Intervention:

•Acrylic resin coatings can make a material resist stains, water, cracks, blisters, and weather. Any rust must be cleaned first. After that, a protective varnish should be applied.

Portion - East Elevation



Degradation Photo

Material: Bricks

Observed Degradation:

• Missing parts happen when bricks are partly or completely damaged.

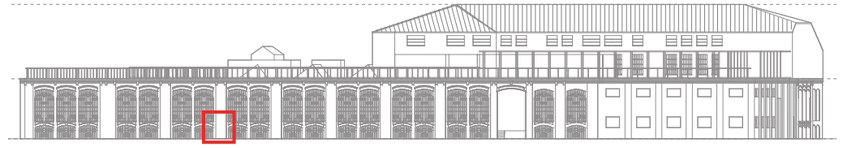
Possible cause:

• The missing bricks are likely caused by impact, problems in the structure, or human actions.

Proposed Intervention:

• First, use a brush to clean the damaged parts of the bricks. The small damaged areas can then be repaired with plaster.

Portion - North Elevation



Degradation Photo

Material: Plaster

Observed Degradation:

• The act of deliberately damaging the building facade through graffiti.

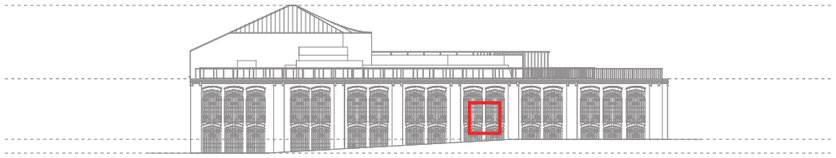
Possible cause:

• Human intervention

Proposed Intervention:

• First, clean the surface with chemical agents. Then, apply anti-graffiti paint or coating.

Portion - East Elevation



Degradation Photo

Material: Plaster

Observed Degradation:

• Blistering on the wall caused the plaster to peel off.

Possible cause:

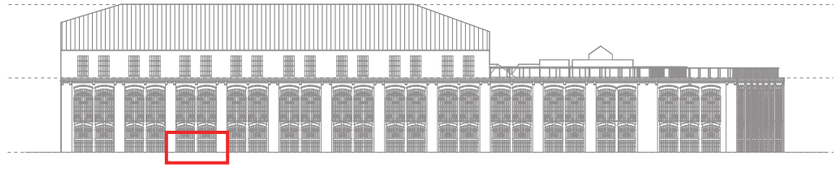
• Separated, air-filled, raised hemispherical elevations on the face of stone resulting from the detachment of an outer stone layer. This detachment is not related to the stone structure. [5]

Proposed Intervention:

• First, clean the surface with a brush or low-pressure water. Then, gently remove the raised or loose parts. Fill the empty areas with repair material similar to the original stone, such as stone glue or mortar. Apply a breathable protective coating if needed to stop water from entering.

5* ICOMOS-ISCS. (2000). Illustrated glossary on stone deterioration patterns: Glossaire illustré sur les formes d'altération de la pierre, UNI 11182:2006, UNI 11130:2004 and the methodology illustrated by M. Dalla Costa. (p.14).

Portion - South Elevation



Degradation Photo

Material: Plaster

Observed Degradation:

• Vegetation grows on the surface. Sometimes there are full plants with roots, stems, and leaves. Sometimes only single leaves appear.

Possible cause:

• Moisture rises from the ground. The building has little maintenance and has been empty for a long time. South-facing walls get more sunlight. The structure also affects the local environment.

Proposed Intervention:

• First, apply a biocide and remove the plants. Then, rinse the surface with deionized water to wash away any leftover treatment.

Material legend

	Structure		Material		Type		Surface treatment	
Brick	BA	Arch	BC	Burnt clay bricks	BA	Arch	BR	Regular
	BD	Vertical structure			BM	Masonry		
Plaster	PE	Eaves			PF	Fine	PR	Regular
	PV	Vertical structure			PG	Granulated	PV	Varnished
Mortar	MW	Wall	MB	Bastard mortar	MB	Binding	MS	Smooth
Steel	SW	Window frame	SS	Steel	SO	Ornament	SR	Regular

1	2	
3	4	5

1. Structure
2. Material
3. Type
4. Surface Treament
5. Photo


1


2


3


4


5


6


7


8


9


10


11


12


13


14


15


16


17

Decay legend

- Crack
- Blistering
- Disintergation
- Peeling
- Crust
- Discolouration
- Plants
- Subflorescence
- Human intervention
- Missing part
- Graffitti
- Decay of steel

Intervention legend

Cleaning

- Removal of peeling paint
- Mild soap washing
- Removal of detached plaster
- Removal of vegetation
- Sand with sand paper
- Light brushing of the mortar joints
- Water cleaning by brush
- Abrasive wet blasting at controlled dosage
- Application of biocidal by spraying
- Brushing using nylon brush

Protection

- Application of acrylic resin
- Fill the hole
- Apply finishing layer
- Protection against rain and humidity using caulk
- Application of anti graffiti painting orcoating
- Application of water repellent products
- Apply rust-inhibiting primer

Reintegration

- Reintegration of bricks
- Replace missing elements
- Reintegration of the plaster
- Reintegration of mortar

General Interventions (INT)

INT 1 Restoration of Brick
Remove broken bricks in the facade, the bricks are using as a decoration and replace by the new one.

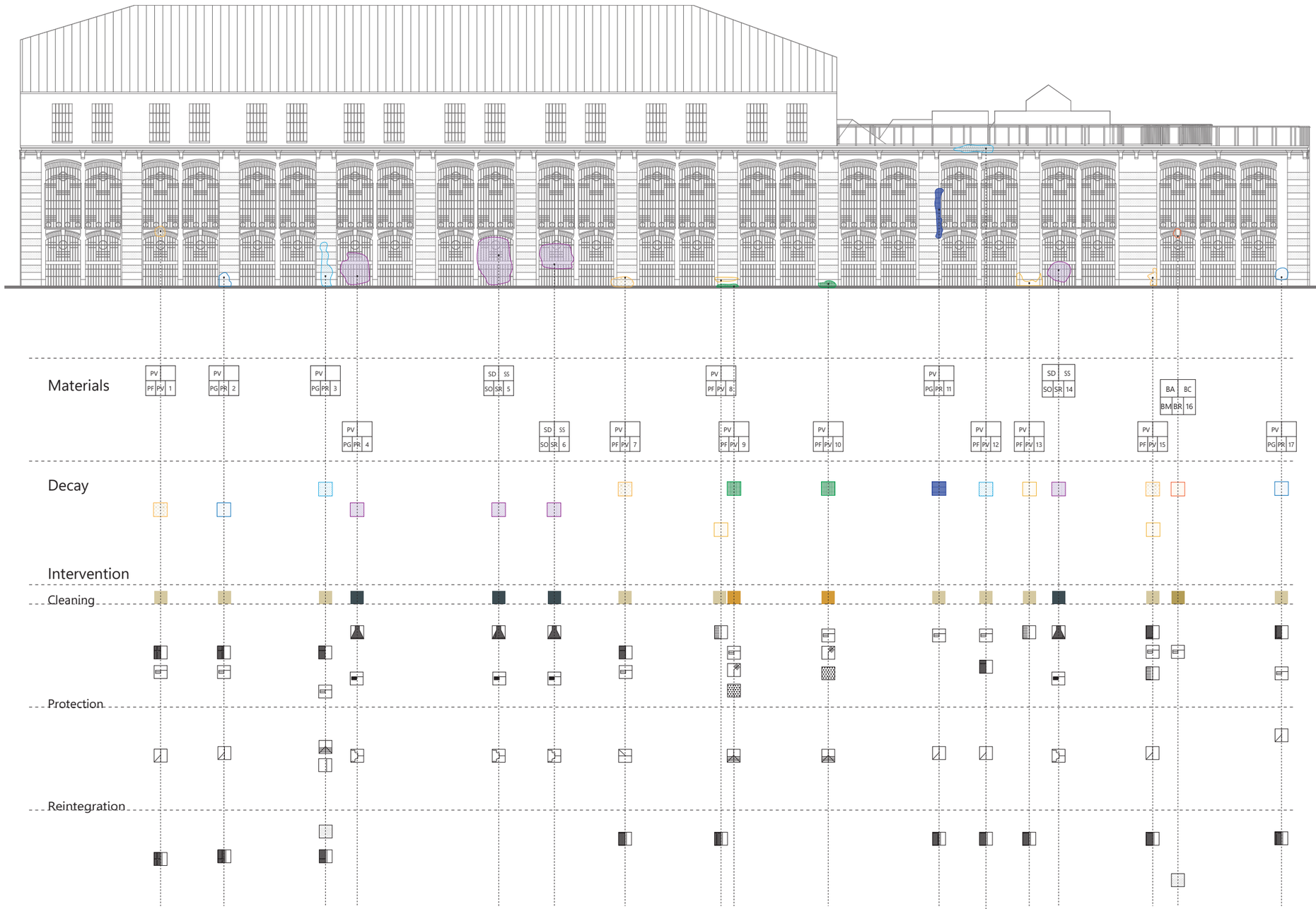
INT2 Restoration of Plaster
Repairs plaster on exterior walls, especially where damp or incompatible materials are present, using macro-porous plaster to allow moisture evaporation.

INT3 Restoration of Missing part
Repair exterior walls, particularly areas with holes that need to be filled with bricks and plaster.

INT4 Remove of plants
Cleans surfaces affected by plants.

INT5 Removal of human intervention and graffitti
Removes the glue adherd on the wall

INT6 Restoration of Steel
Removes biological growths, like moss or mold, from stone or plaster surfaces to prevent further erosion and damage.



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1		2
3	4	5

1. Structure
2. Material
3. Type
4. Surface Treament
5. Photo

Decay legend

- Crack
- Blistering
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- Human intervention
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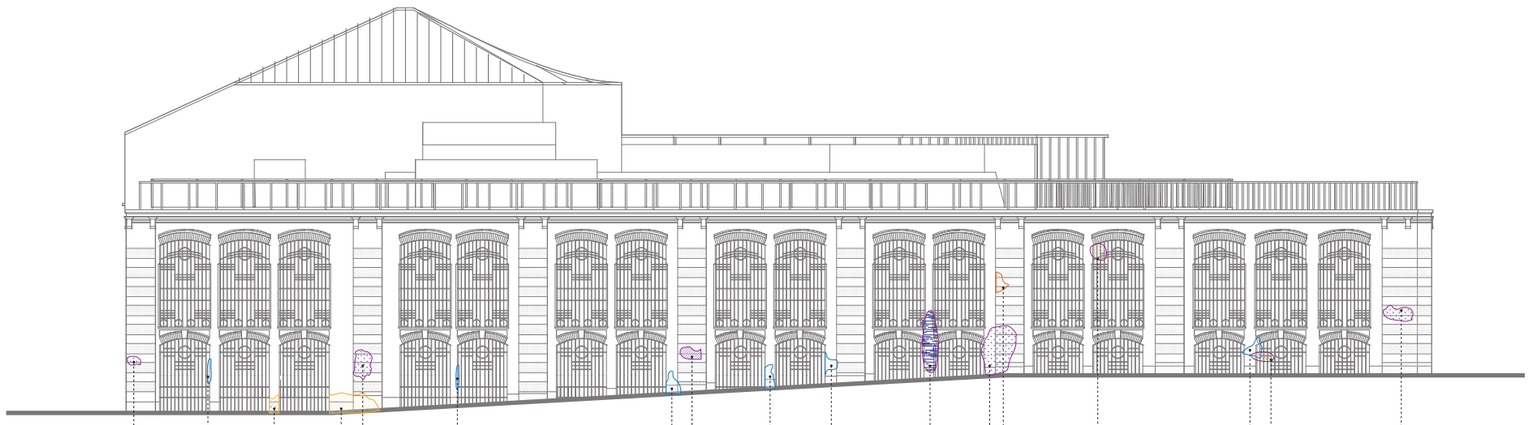
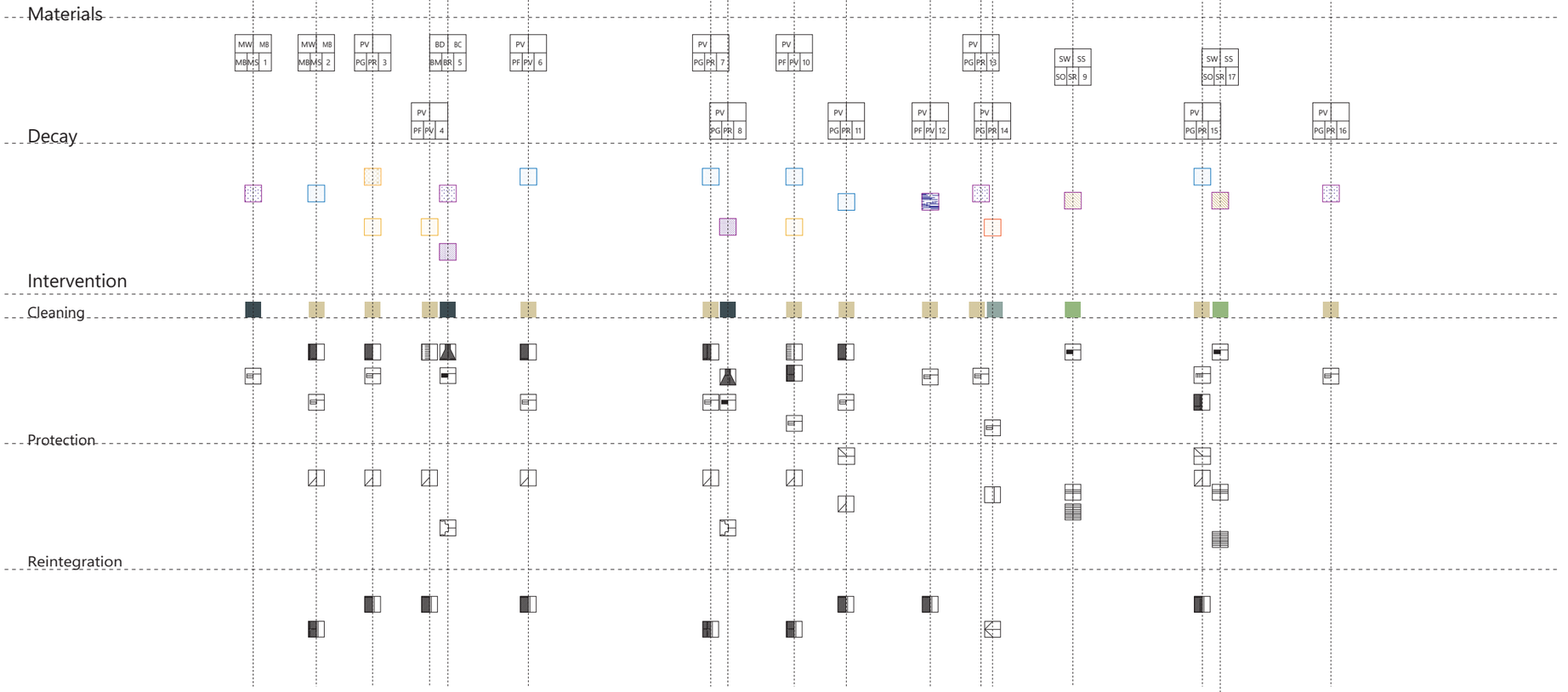




Conservation and reuse project

EXPLORING THE CULTURAL AND SPATIAL VALUE OF INDUSTRIAL HERITAGE
- ADAPTIVE REUSE OF THE FORMER NATIONAL WALLPAPER FACTORY

6.Conservation and reuse project

6.1 Conceptual approach to re-use

The adaptive reuse of the former sports facility aims to transform the existing structure into a mixed centre that integrates activity, educating, working, living and social interaction. The project seeks to preserve the building's industrial heritage while reinterpreting it through new programs that respond to contemporary urban and community needs. The following diagrams show the existing function in the buildings, clearly compare and go deeper to design the proposal what the former national wallpaper factory needed.

This diagram shows the proposal, summarizes and outputs the relative design. All of the functions to place are relevant and connected with the plaza, so the plaza plays an important role in the location and possibility to gather people in, to make full use of the abandoned factory, explore the space, and activate the surrounding vibrancy.

	Educational Space	Plaza	Restaurant Bar	Apartment	Activity area	Greening
The former national wallpaper factory	✓			✓	✓	
Lingotto plant	✓	✓	✓	✓	✓	✓
Square of the Crafts	✓	✓	✓		✓	✓
Impact Study Center	✓	✓	✓		✓	✓

EDUCATIONAL DISTRICT

Educational district in buildings are usually profit-oriented and for everyday learning are related with personal hobbies, where attract students in.

PLAZA

The plaza links all the functional spaces. It is an outdoor area for people to rest and do activities. Also, it hosts exhibitions and events.

RESTAURANT BAR

Restaurants and bars attract people who come for activities or classes. They also serve local residents every day.

Greening

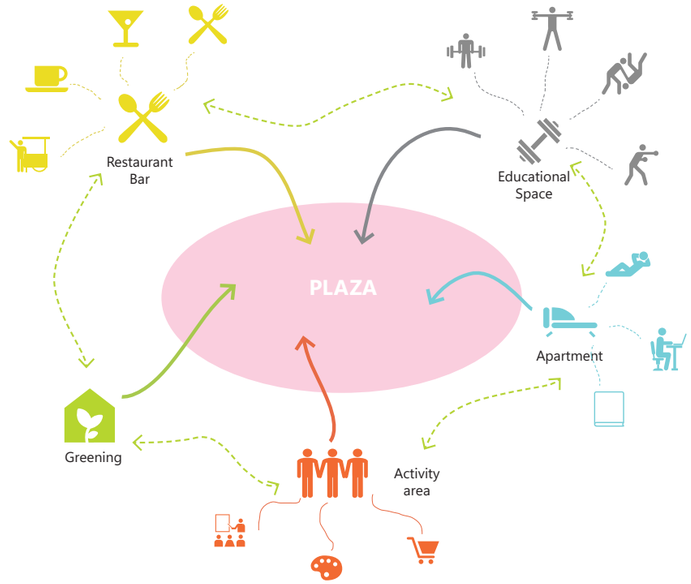
Green spaces give people places to relax and make the area better. Plants help clean the air and improve the environment.

ACTIVITY AREA

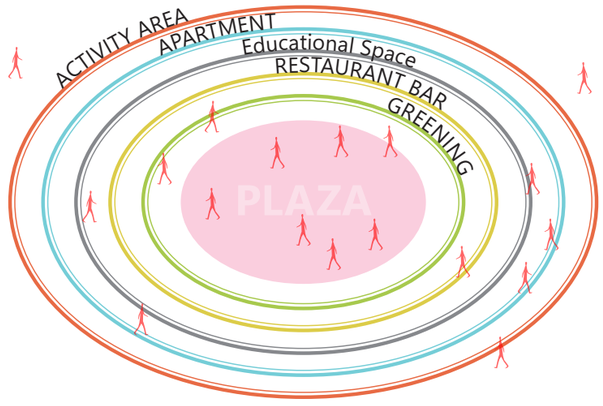
The complex sometimes hosts events to attract people. These are art exhibitions, Sunday markets, second-hand markets, and conferences.

RESTAURANT BAR

Restaurants and bars attract people attending activity or studying in the classroom, while also serving the surrounding residents on a daily basis.



This chart shows the new functions that will be added to the building, all connected to and serving the main space—the plaza. These functions include an activity area, apartment, educational spaces, restaurant and roof greening.



The spatial reorganization follows the principle of functional layering, where activities are arranged according to their spatial and environmental requirements.

1. Educational Spaces:

The central area is primarily designed for training and physical activities, including boxing, weightlifting, and Ju-jitsu. Due to limited natural light, this zone relies on artificial lighting and specialized ventilation systems to ensure a safe and comfortable environment for exercise.

2. Restaurant and Hub:

Cafe, restaurant, bar and vendor are located near main circulation nodes to encourage social interaction. This space will also hold some activities, parties for surrounding people to join in. It is much more important to activate the building with these vibrant spaces.

3. Apartment:

The residential units are mainly provided for immigrants and newcomers to the city, offering them a safe and supportive living environment. The apartments are arranged along the building's outer edges to ensure good daylight and ventilation. The activity room in the ground floor encourage cultural exchange and daily interaction among residents, helping them integrate into the local community.

4. Activity:

Community activities such as Sunday rehearsal, language workshops, and cultural exchange programs are specially designed for immigrant groups. The flexible spaces can also host public events, encouraging interaction between immigrants and local citizens.

5. Greening

The design integrates greenery throughout the site, including along pathways, around the plaza, and on building rooftops. Green roofs improve environmental quality, support biodiversity, and create pleasant, inviting spaces for social interaction and relaxation.

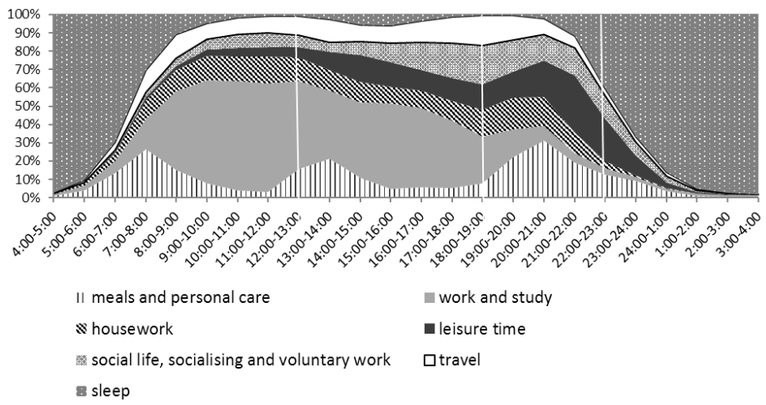
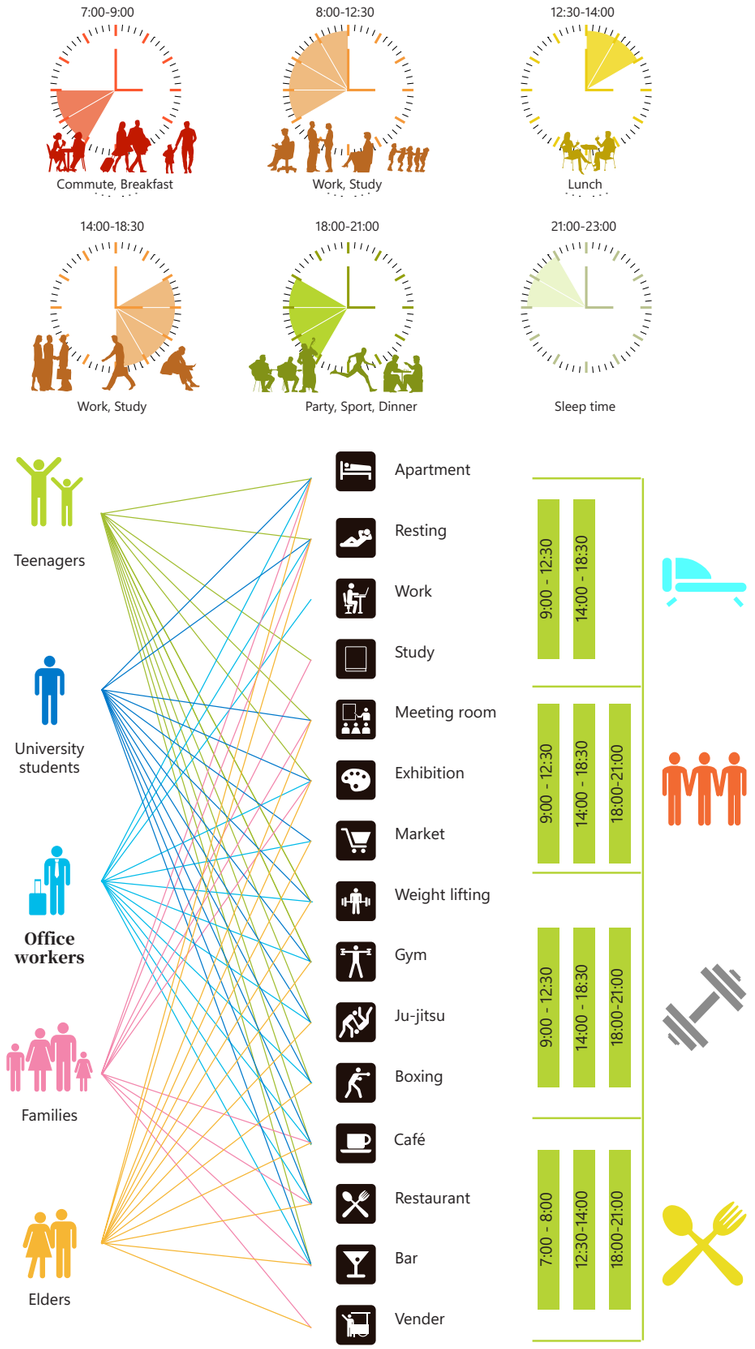
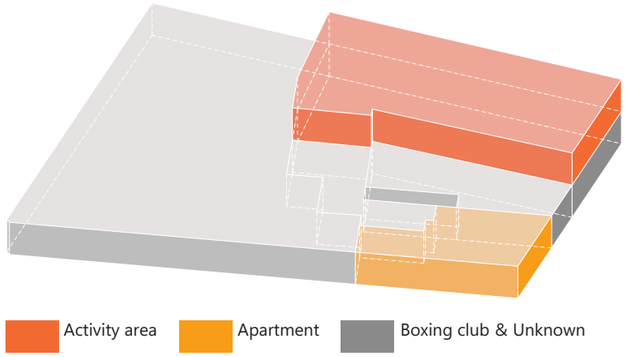


Fig 97: Boffi, M., Colleoni, M., & Del Greco, M. (2015). Night-time hours and activities of the Italians. Articulo - Journal of Urban Research, 11. Frequencies of activity participation (excluding sleeping), by time of night (Percentages, Average weekday Monday-Friday).

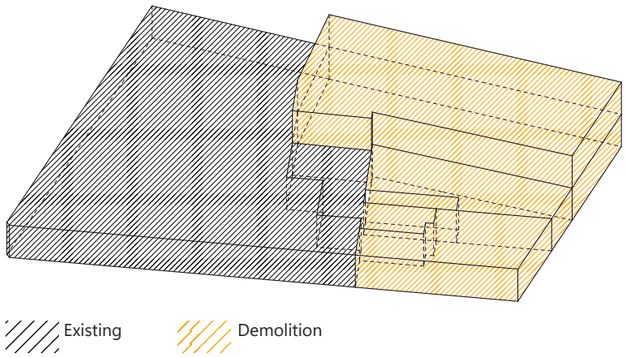
The following two diagrams focus on people's daily activities. They show how space can be used efficiently for different ages at different times. Combined with the embedded functionality, it's clear to demonstrate rational space utilization.



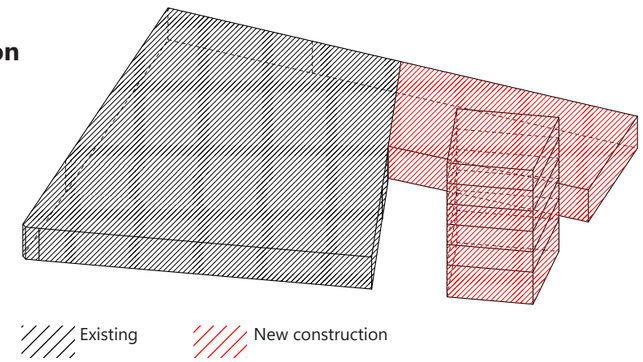
Existing condition



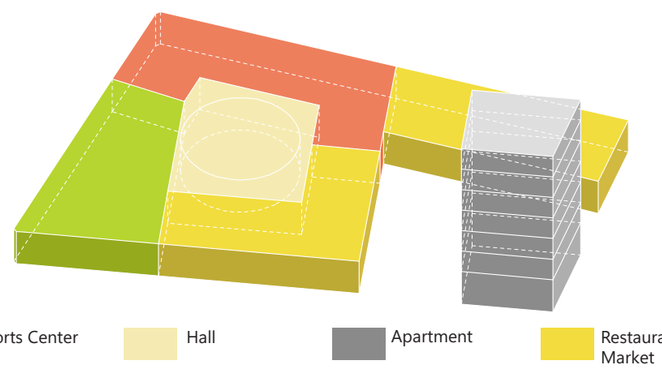
Demolition



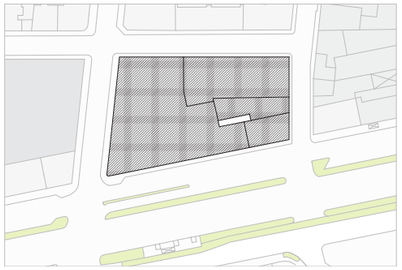
New construction



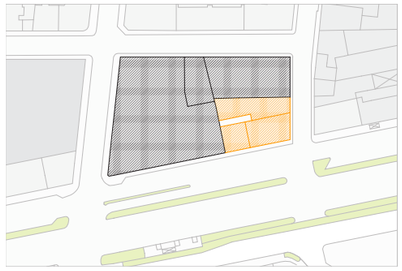
New function



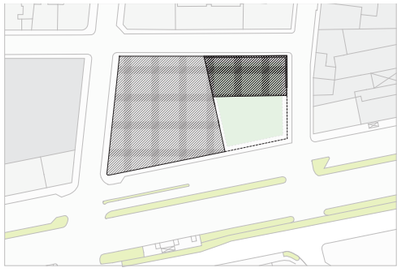
Conceptual Diagram



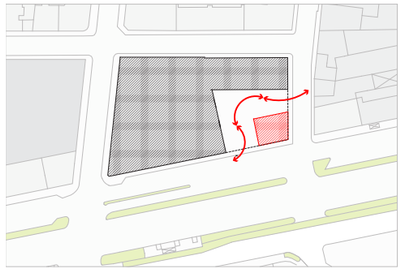
Step 1: Existing building



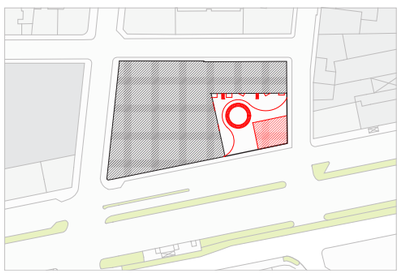
Step 2: Demolition. Some additions make the building circle complicated, so most of them must be removed.



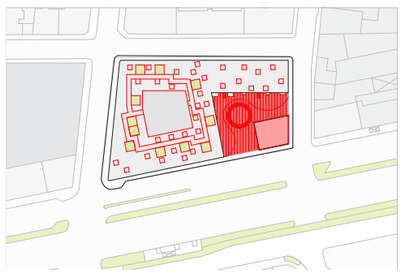
Step 3: Create a plaza. The demolition opened up space and formed the plaza.



Step 4: Place a landmark tower. It encloses the plaza and makes a boundary. The boundary also creates a path that guides people into the site.

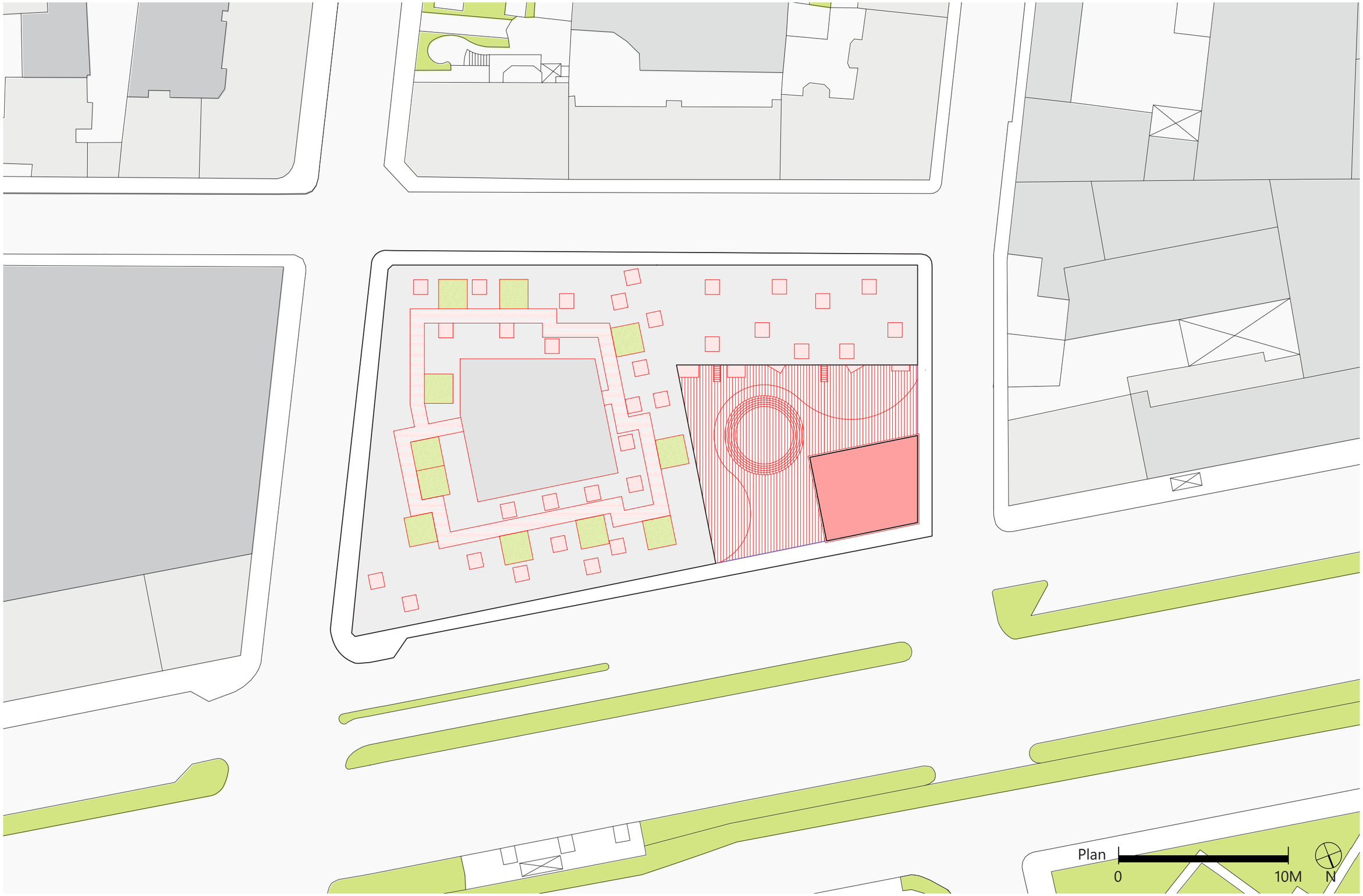


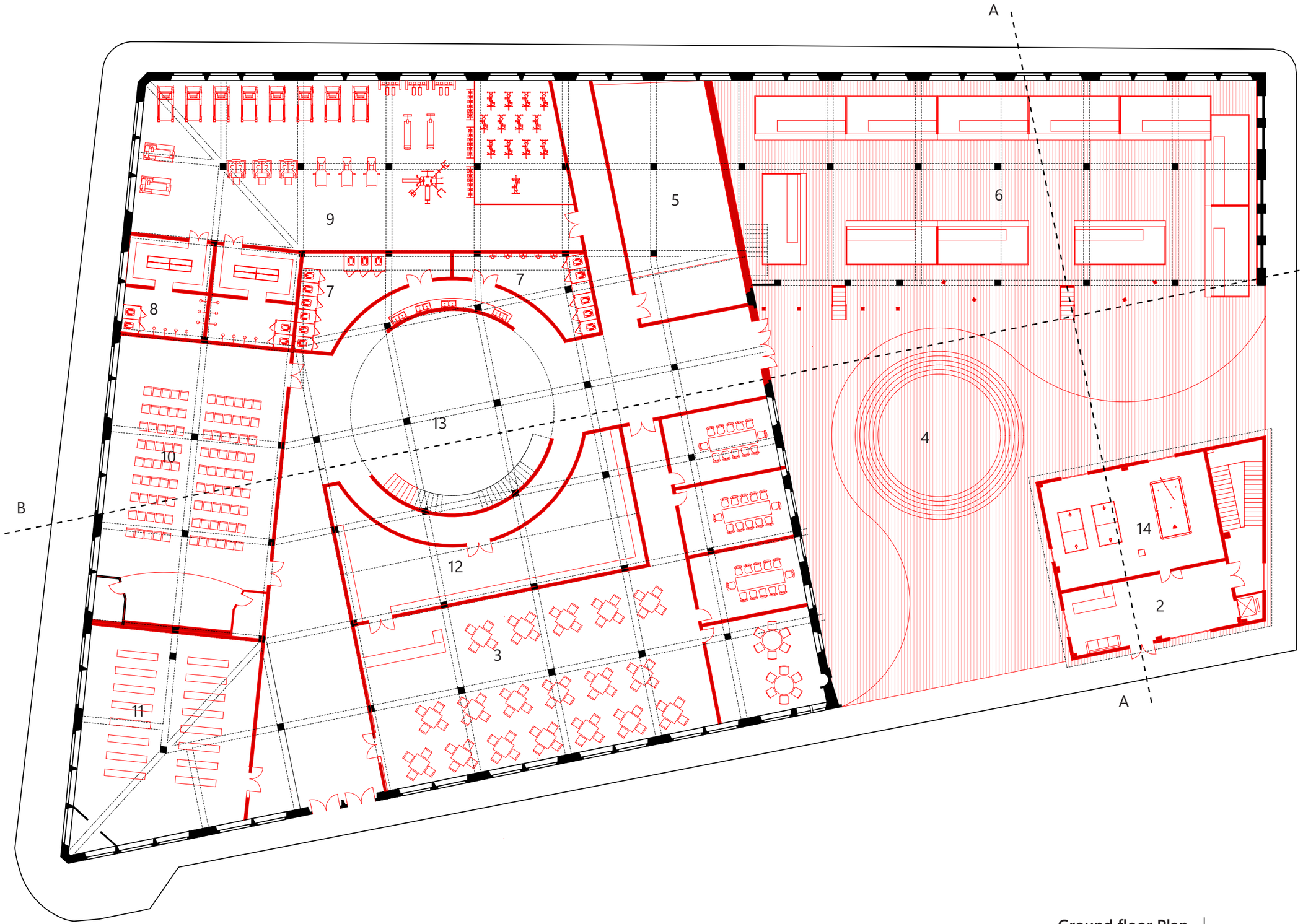
Step 5: Market and plaza design. The plaza is used as the building entrance. It is also an active space for public activities.



Step 6: Skylights and rooftop greenery design. Skylights let sunlight enter the interior. Rooftop greenery improves the surrounding environment.

6.2 Reuse proposal

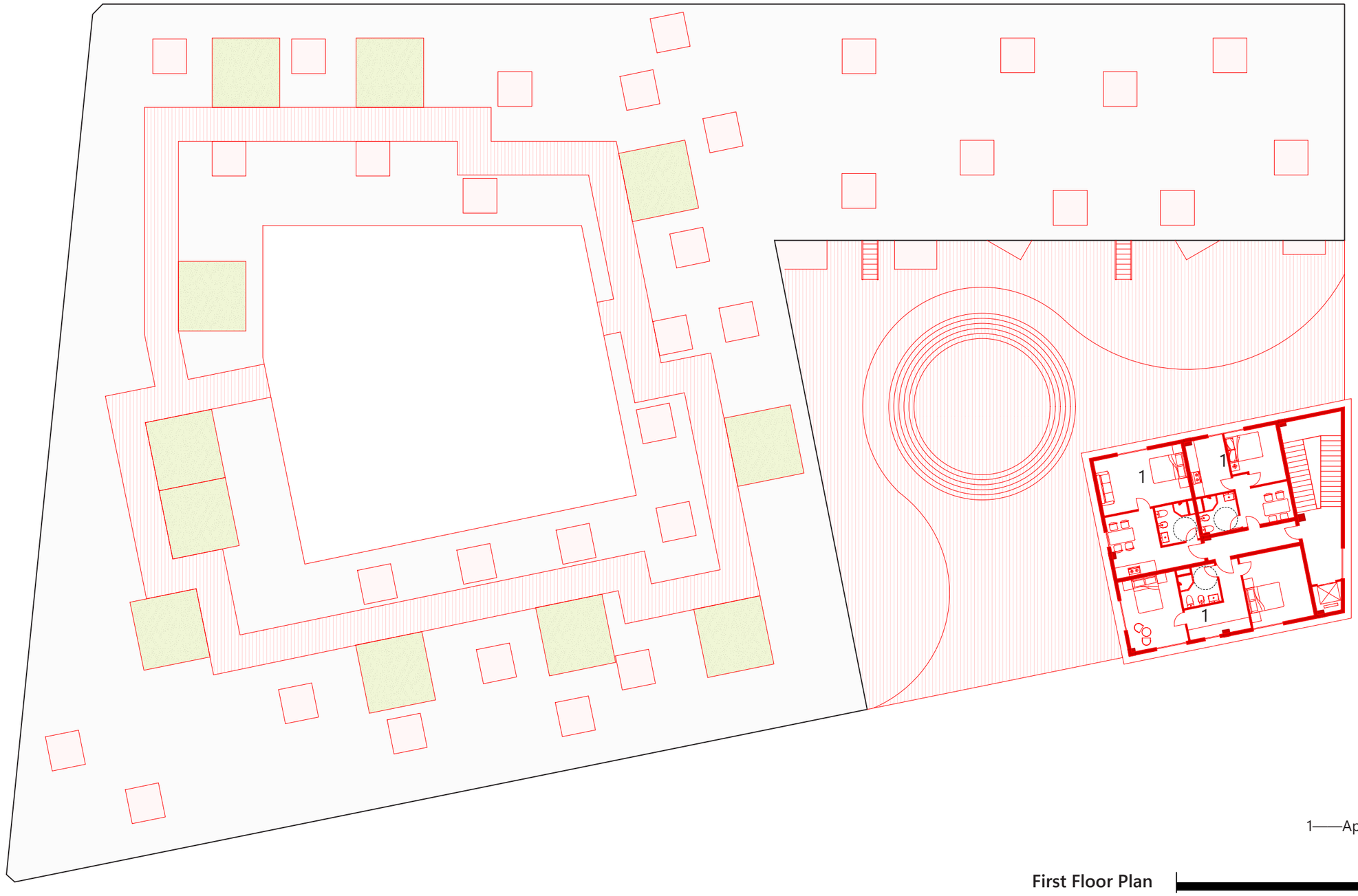




1——Apartment
2——Reception
3——Restaurant
4——Plaza
5——Boxing club
6——Market
7——Toilet
8——Changing room
9——Gym
10——Meeting room
11——Minimarket
12——Kitchen
13——Hall
14——Activity room

Ground floor Plan

0 10M N

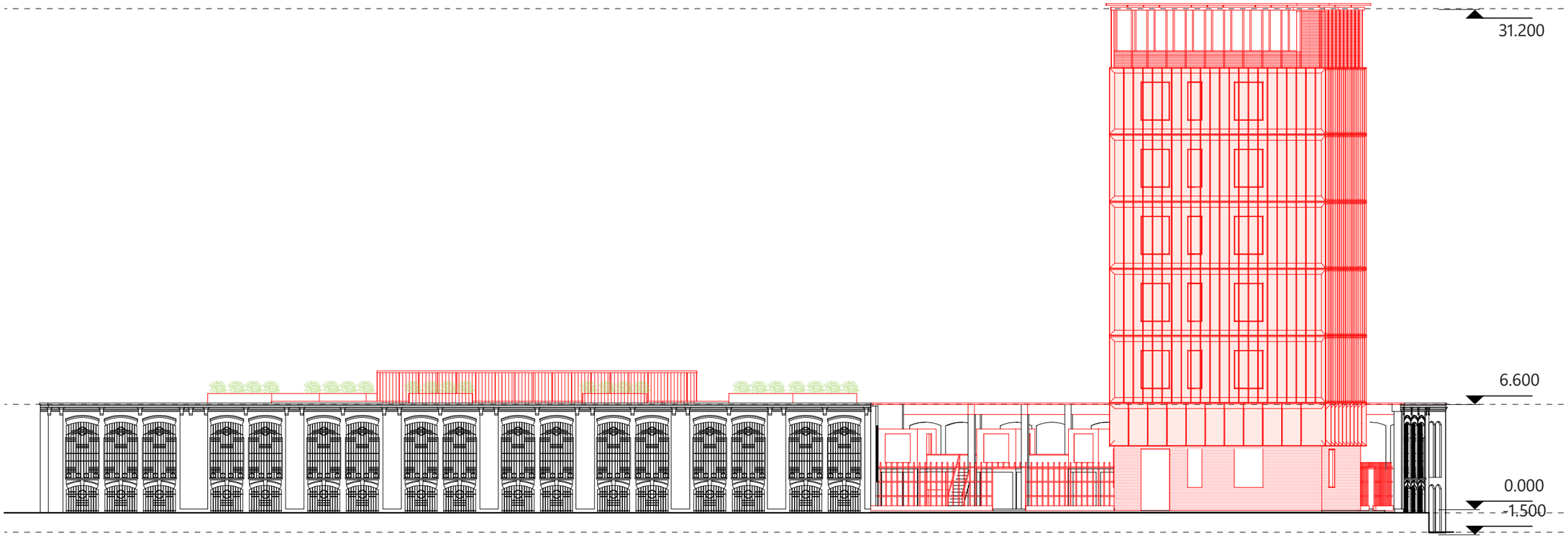


1——Apartment

First Floor Plan

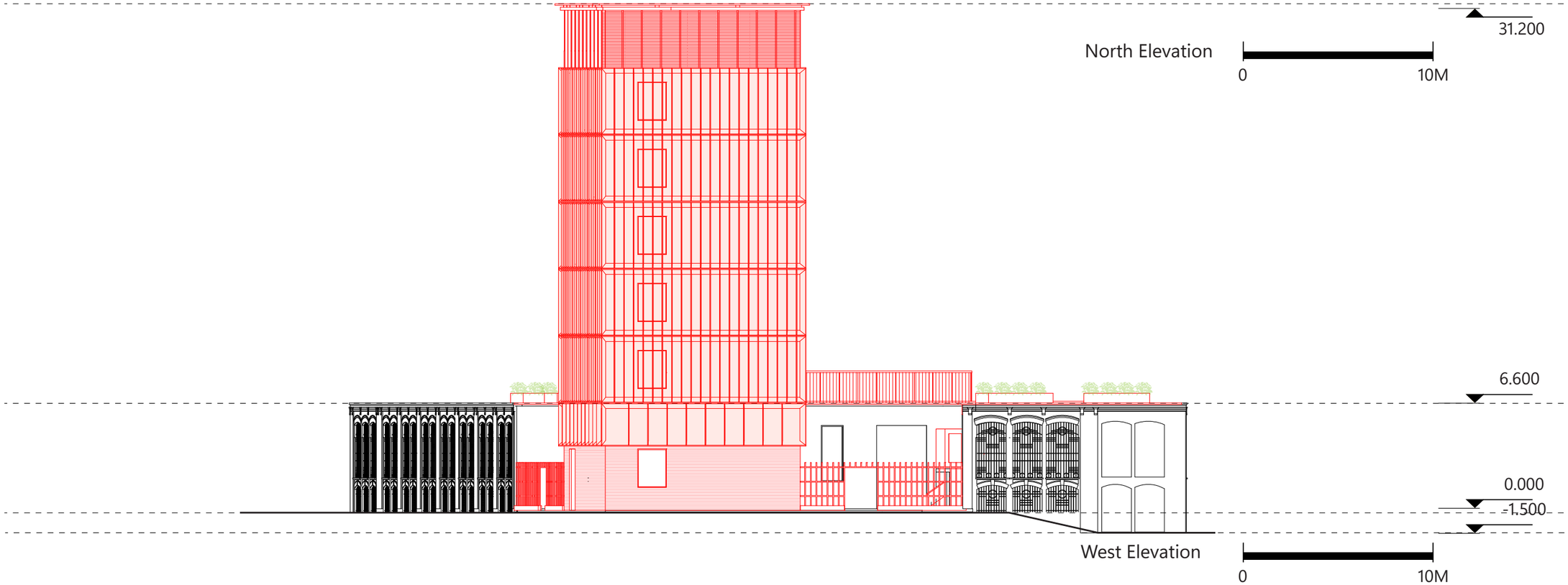
0 10M N


31.200
6.600
0.000
-1.500
East Elevation
0
10M
31.200
6.600
0.000
-1.500
South Elevation
0
10M



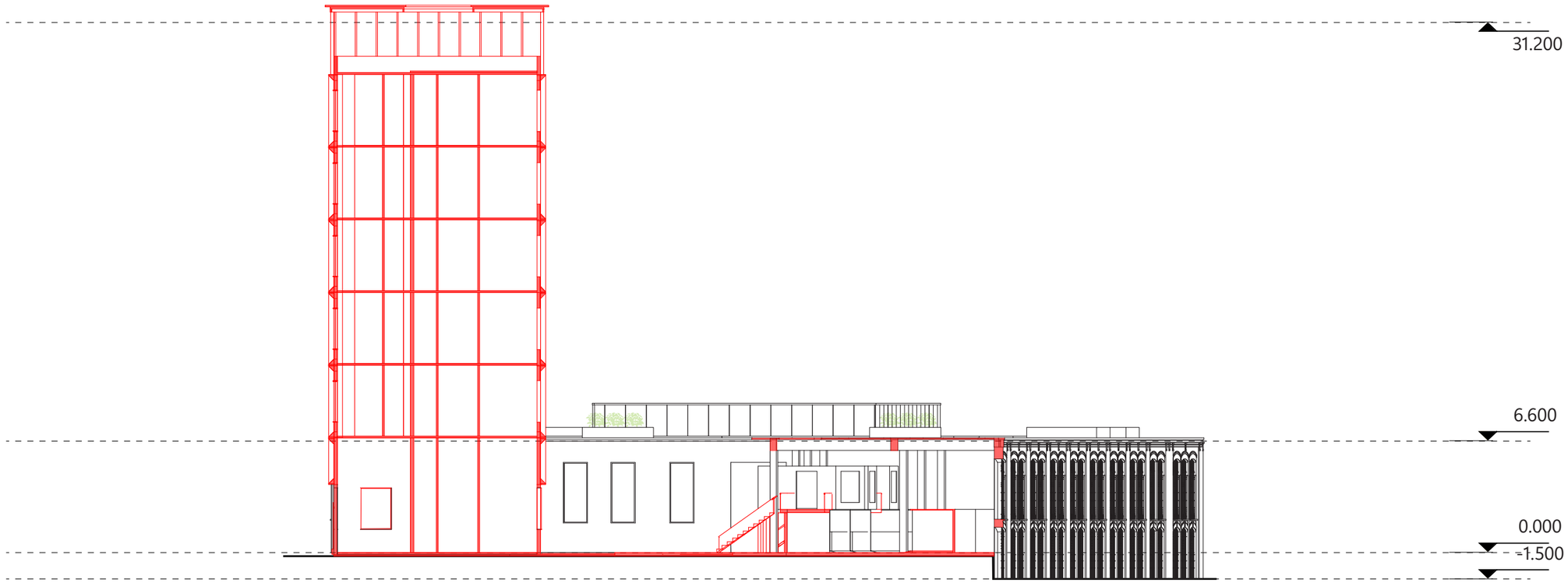
North Elevation

0 10M



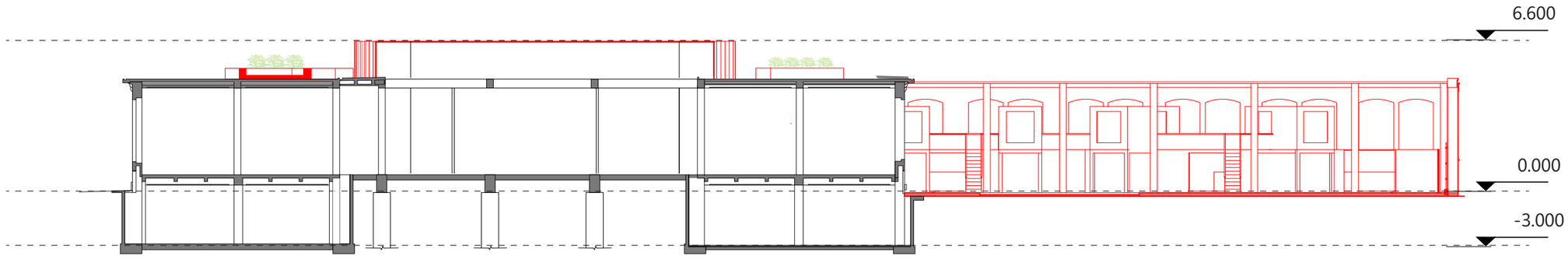
West Elevation

0 10M



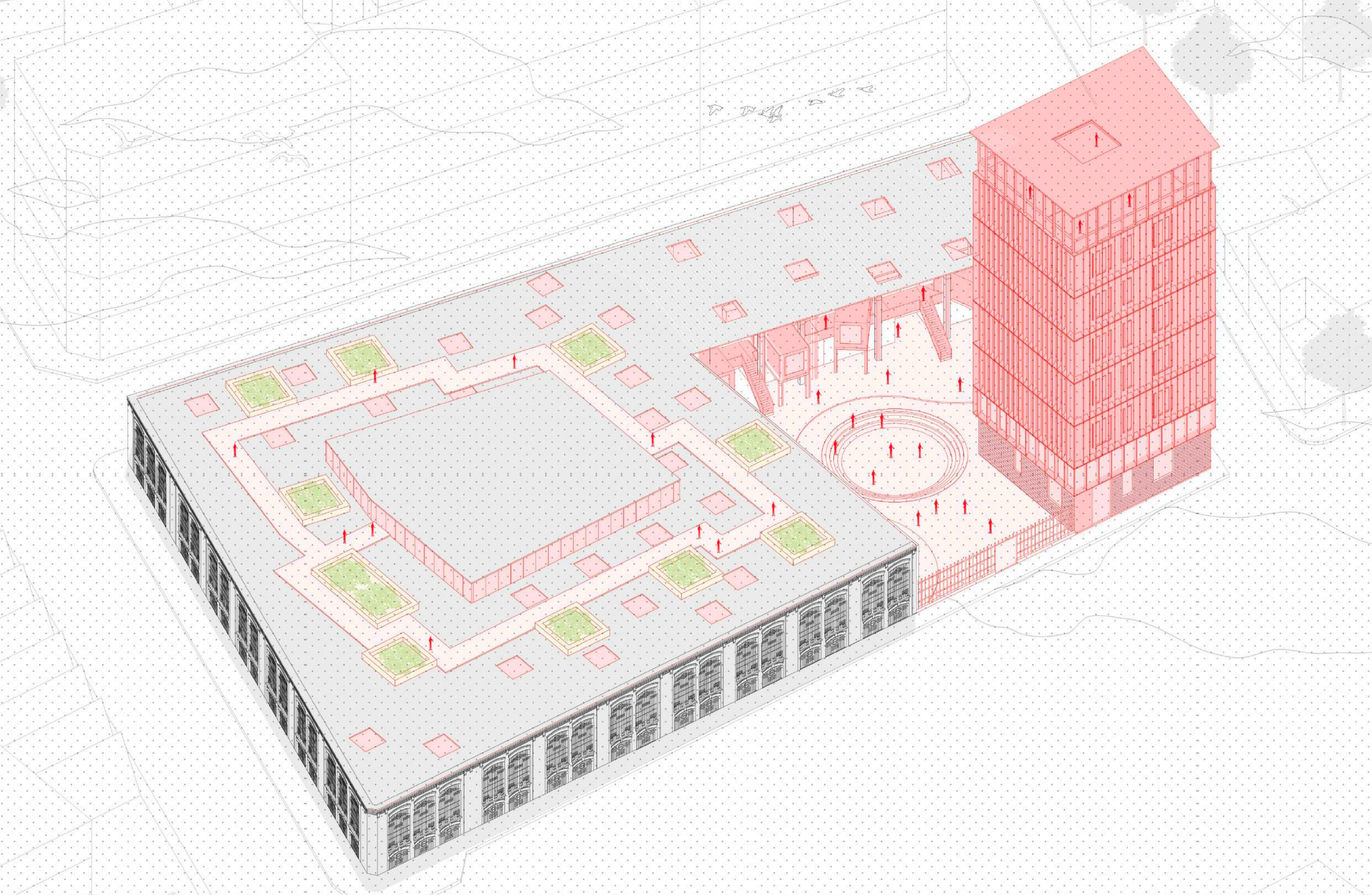
A-A Section

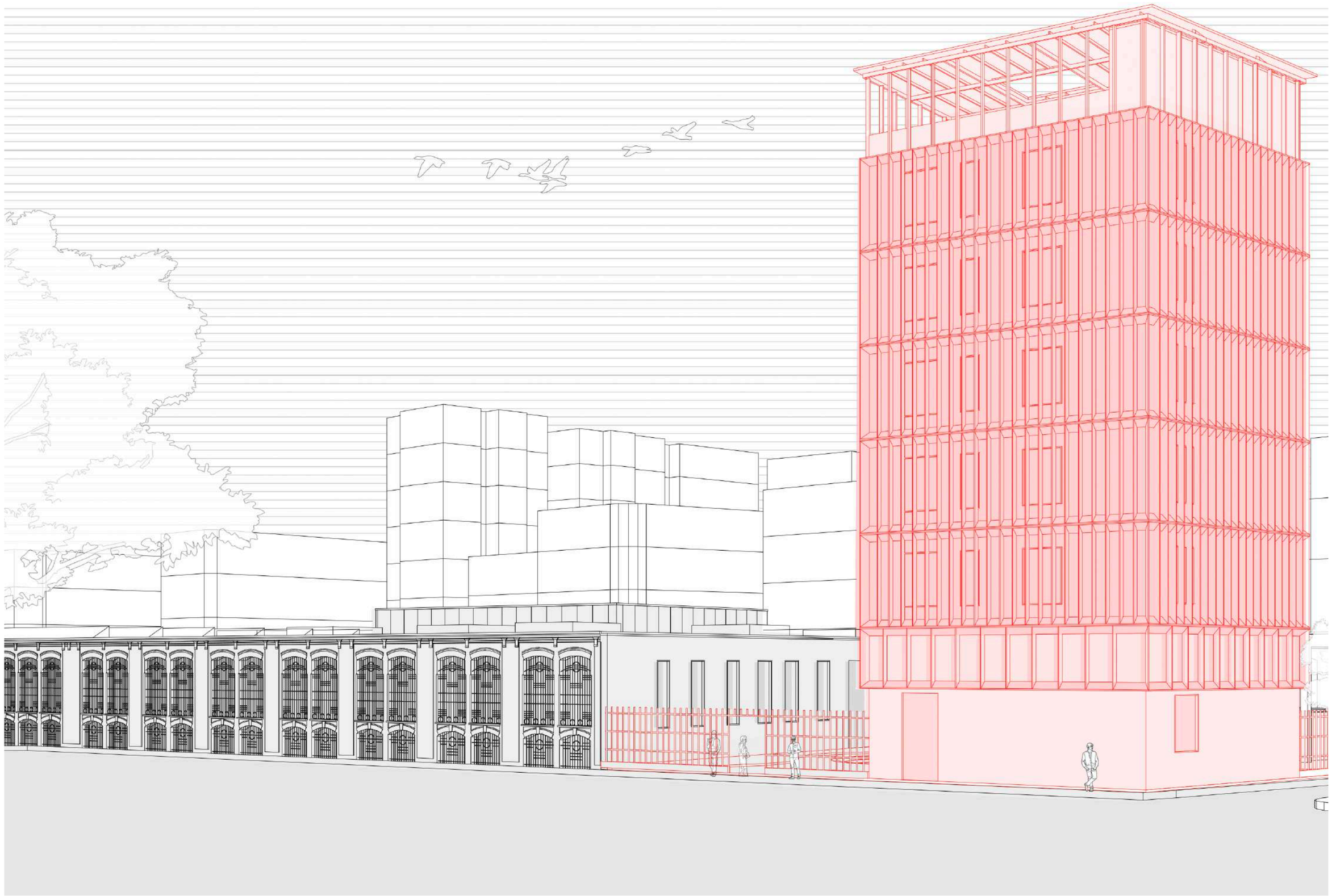
0 10M

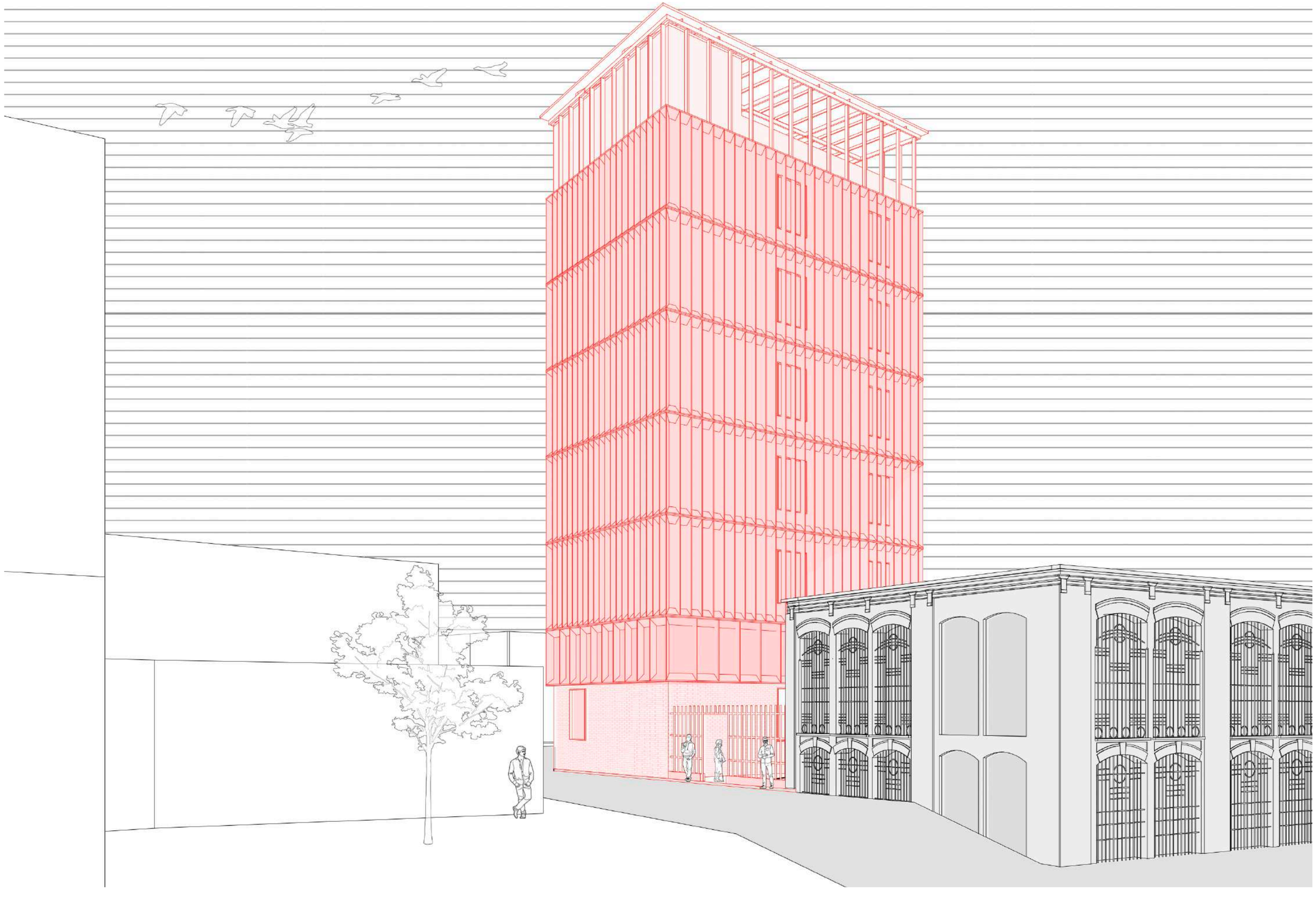


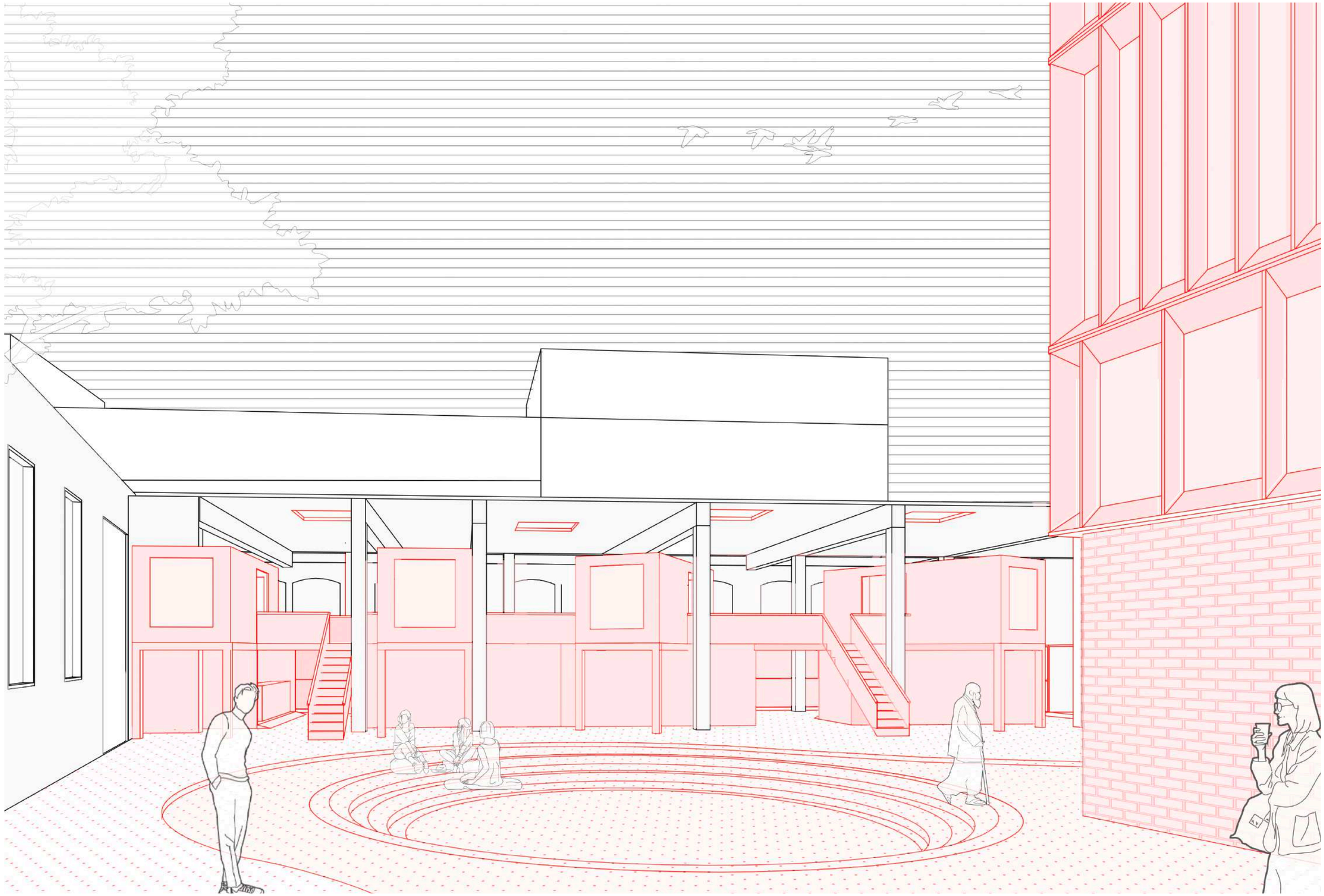
B-B Section

0 10M









Conclusion

This renovation project is located at Corso Vigevano 33. It was the Former National Wallpaper Factory. This renovation project shows the reuse of old factory buildings and how industrial heritage can help urban revitalization. The site has a long history. In the early 20th century, it was known for producing high-quality wallpaper. Like many other factories, it went through expansion, closure, bankruptcy, abandonment, and reuse. This history shows how Turin changed from an industrial city to a post-industrial city, like Lingotto Plant, De Hallen Amsterdam, and Matadero Madrid. It has many layers of history, including labor, technology, economy, society, and culture.

The factory has a strong concrete frame, a stable roof, and multiple additions, which allows it to still stand today. This shows that the existing building structure is solid, but it also reflects the chaos caused by years of expansion projects. To solve the problems of underused space and chaotic circulation, the renovation strategy involved preserving and restoring the facade, redesigning the internal circulation, and transforming vacant areas into educational spaces, a restaurant, apartments, plaza and a market. To attract more people and create a landmark, a tower was placed in a corner of the site. These changes revitalized the old buildings, turning them into lively cultural spaces and making the site open. In general, the goal is to reactivate the buildings' spatial and cultural value, creating an urban space that integrates social, cultural, and leisure activities.

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- Section, AMB. Barone, son, project factory in turin, ASCT, Progetti Edilizi, 1908/231.
- Elevation, AMB. Barone, son, project factory in turin, ASCT, Progetti Edilizi, 1908/231.
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I would also like to thank my friends, who have become my second family here in Italy. Their companionship, warmth, offered not only encouragement but also moments of balance and joy, making this journey far more meaningful.

Finally, I must express my deepest appreciation to my parents, who are the true pillars of my work and of my entire journey throughout this thesis. Their sacrifices, values, and unconditional love have shaped who I am and have given me the courage to pursue my goals. To them, I owe every step forward. You have helped me grow, persevere, and become more myself, and for that, I am profoundly grateful.

Li Zixiong

Zixong Li
S324450

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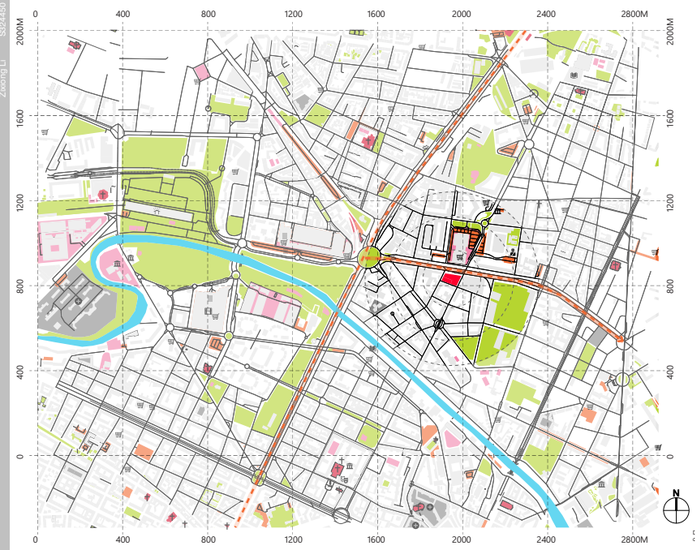
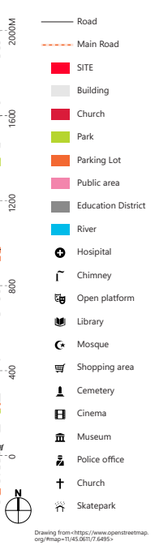
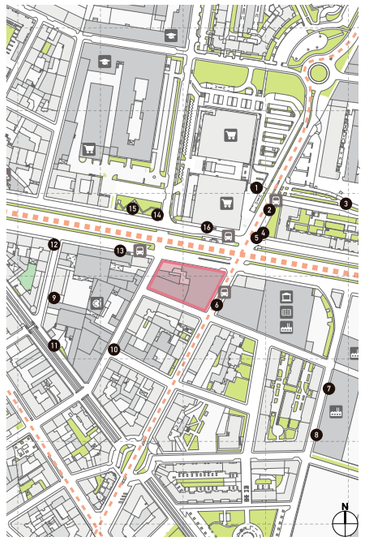
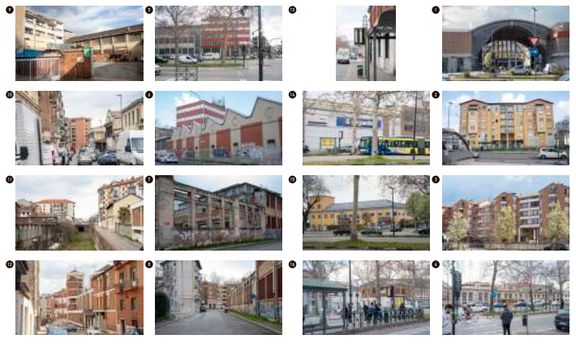








Barone Ambrogio & Son company founded, producing high-quality wallpapers.

First enlargement of the building (expansion of production facilities).

Factory operations ceased and production stopped.

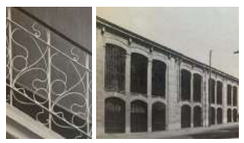
Refurbishment and restoration works to adapt the building for its new uses.

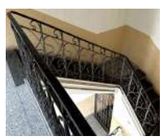
1852 — **1907** Construction of the factory complex at Corso Vigevano 33, designed by Pietro Fenoglio.

1930 — **1966** Further enlargements and vertical extensions (additional floors added to some sections).

1975 — **1982** Official change of use (conversion of the property for new functions).

1984 — **Nowaday** Considered an important example of early 20th-century industrial architecture in Turin and a significant work by Pietro Fenoglio.





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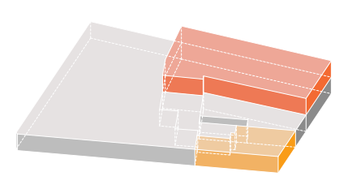
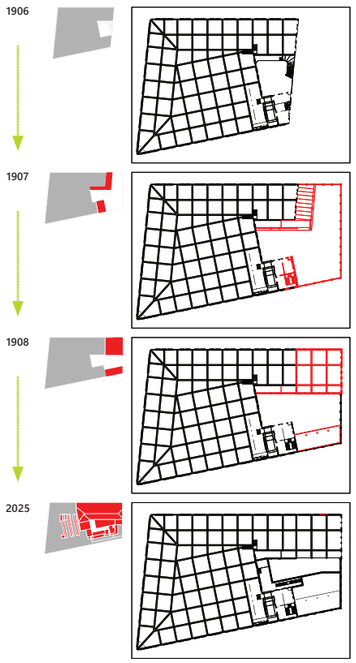
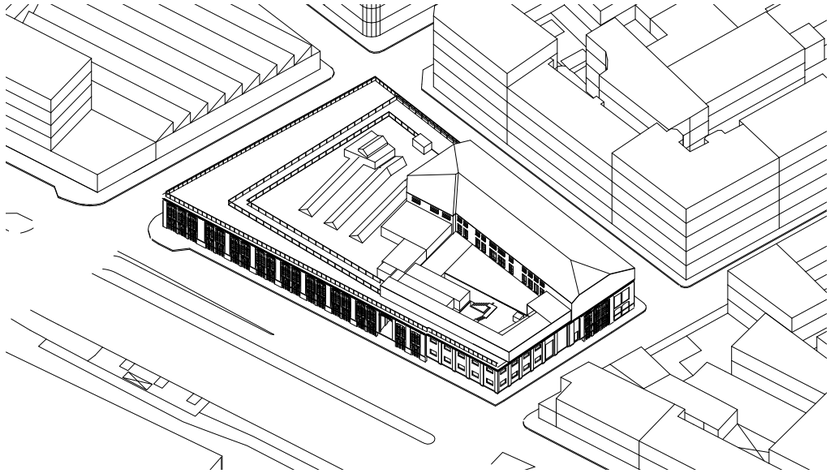
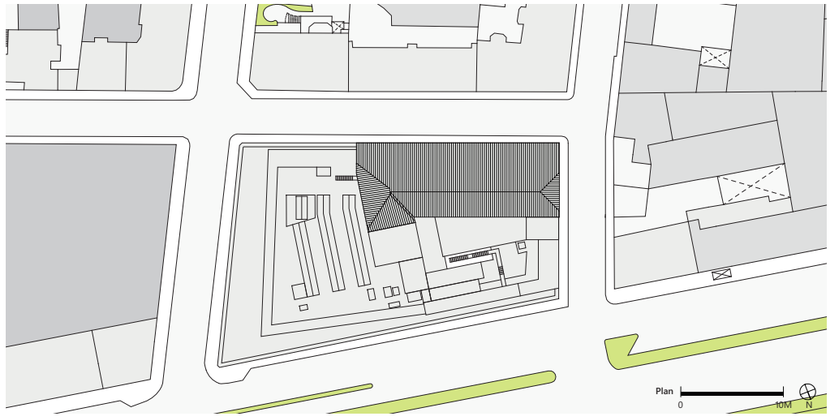
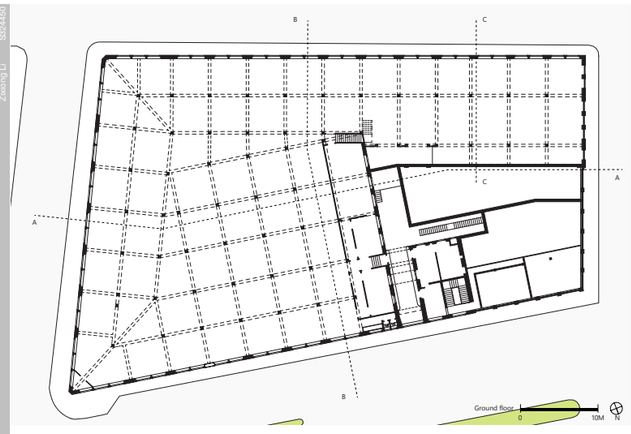


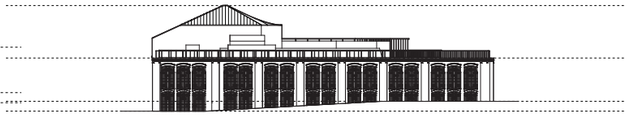
Boxing club & Unknown — Activity area — Apartment

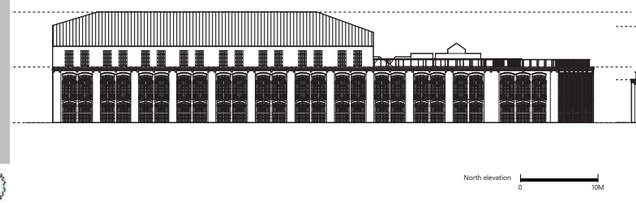












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Material legend

	Structure		Material		Type		Surface treatment	
Brick	BA BD	Arch Vertical structure	BC	Burnt clay bricks	BA BM	Arch Masonry	BR	Regular
Plaster	PE PV	Eaves Vertical structure			PF PG	Fine Granulated	PR PV	Regular Varnished
Mortar	MW	Wall	MB	Bastard mortar	MB	Binding	MS	Smooth
Steel	SW	Window frame	SS	Steel	SO	Ornament	SR	Regular

1. Structure
2. Material
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5. Photo

Decay legend

- Crack
- Blistering
- Disintergation
- Peeling
- Crust
- Discolouration
- Plants
- Subflorescence
- Human intervention
- Missing part
- Graffiti
- Decay of steel

Intervention legend

Cleaning

- Removal of peeling paint
- Mild soap washing
- Removal of detached plaster
- Removal of vegetation
- Sand with sand paper
- Light brushing of the mortar joints
- Water cleaning by brush
- Abrasive wet blasting at controlled dosage
- Application of biocidal by spraying
- Brushing using nylon brush

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- Application of acrylic resin
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General Interventions (INT)

INT 1 Restoration of Brick
Remove broken bricks in the facade, the bricks are using as a decoration and replace by the new one.

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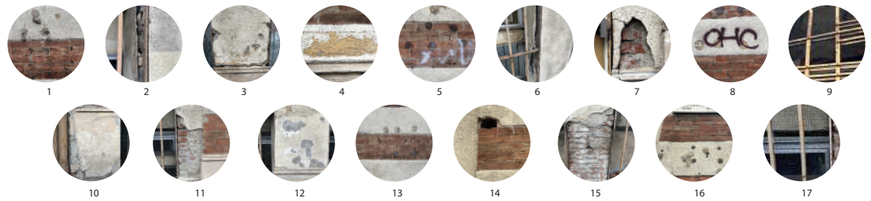

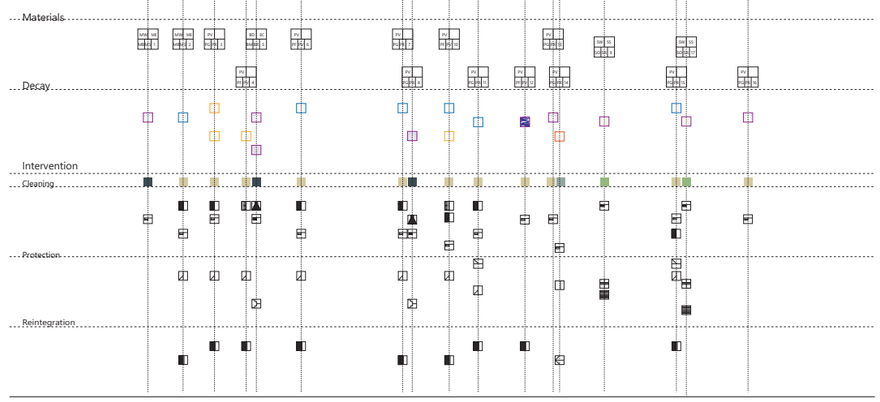

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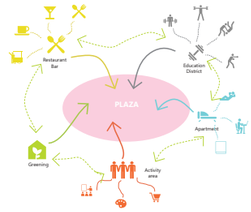
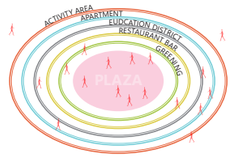
	Educational Spaces	Plaza	Restaurant Bar	Apartment	Activity area	Greening
The former national wallpaper factory	✓			✓	✓	
Lingotto plant	✓	✓	✓	✓	✓	✓
Piazza dei Mestieri	✓	✓	✓		✓	✓
Impacto Centro Studi	✓	✓	✓		✓	✓





EDUCATIONAL DISTRICT — Educational district in buildings are usually profit-oriented and for everyday learning are related with personal hobbies, where attract students in.

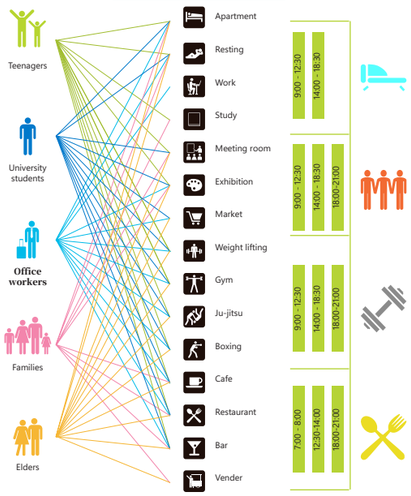
PLAZA — The plaza links all the functional spaces. It is an outdoor area for people to rest and do activities. Also, it hosts exhibitions and events.

RESTAURANT BAR — Restaurants and bars attract people who come for activities or classes. They also serve local residents every day.

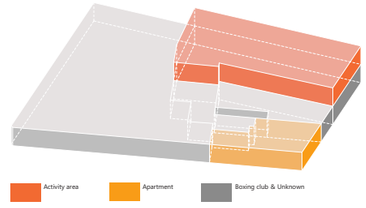
Greening — Green spaces give people places to relax and make the area better. Plants help clean the air and improve the environment.

ACTIVITY AREA — The complex sometimes hosts events to attract people. These are art exhibitions, Sunday markets, second-hand markets, and conferences.

RESTAURANT BAR — Restaurants and bars attract people attending activity or studying in the classroom, while also serving the surrounding residents on a daily basis.



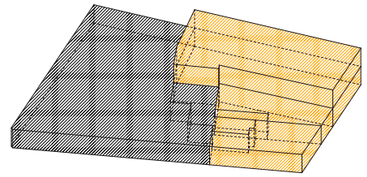
Existing condition



Activity area · Apartment · Boxing club & Unknown

Step 1: Existing building

Demolition

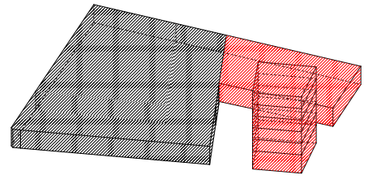


Existing · Demolition

Step 2: Demolition. Some additions make the building circle complicated, so most of them must be removed.

Step 3: Create a plaza. The demolition opened up space and formed the plaza.

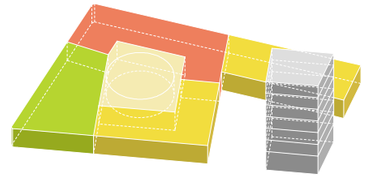
New construction



Existing · New construction

Step 4: Place a landmark tower. It encloses the plaza and makes a boundary. The boundary also creates a path that guides people into the site.

New function



Sports Center · Hall · Apartment · Restaurant Market

Step 5: Market and plaza design. The plaza is used as the building entrance. It is also an active space for public activities.

Step 6: Skylights and rooftop greenery design. Skylights let sunlight enter the interior. Rooftop greenery improves the surrounding environment.

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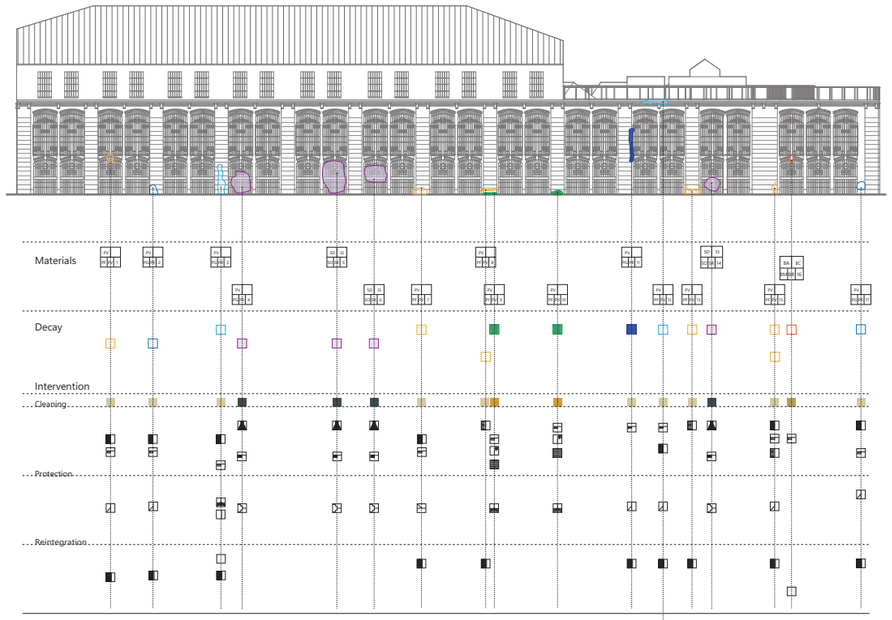

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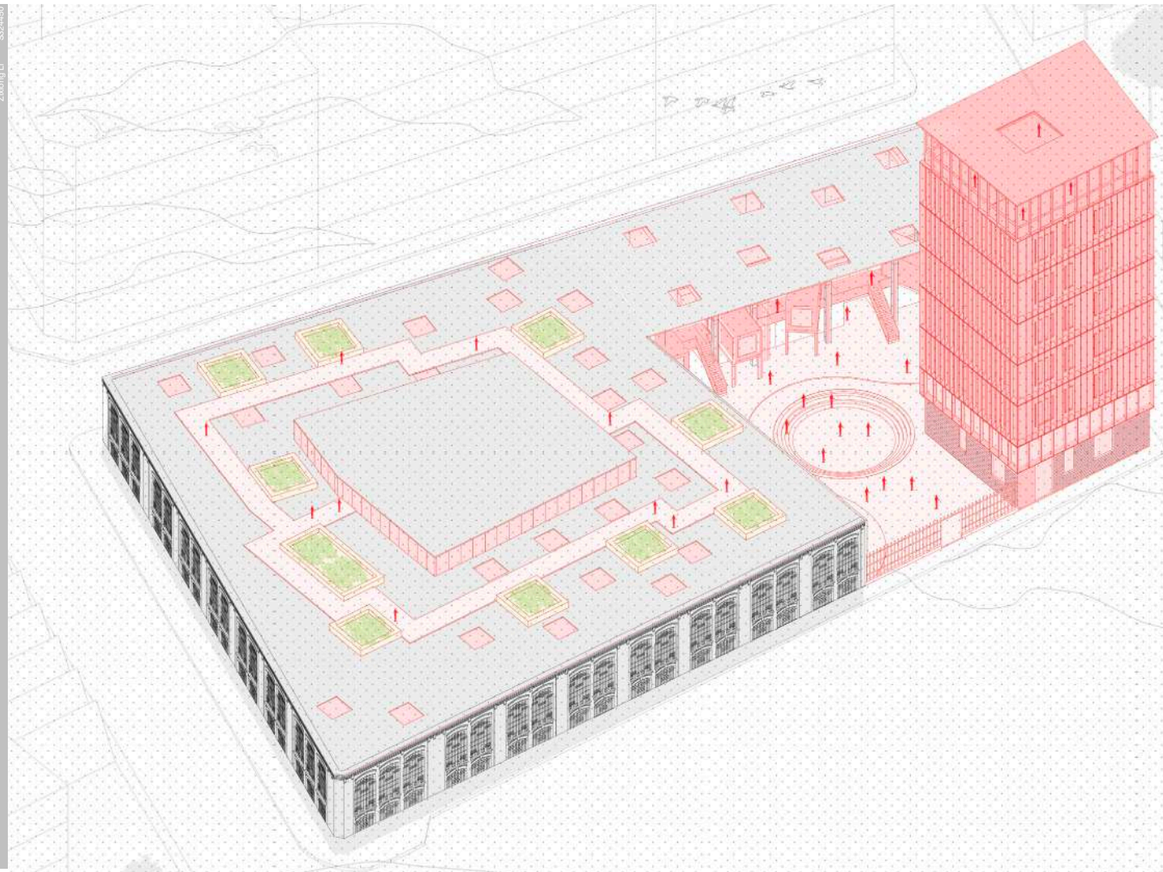

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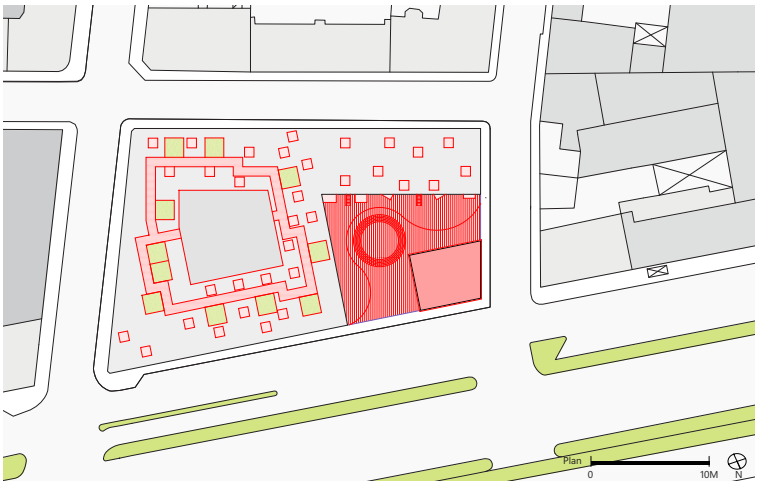

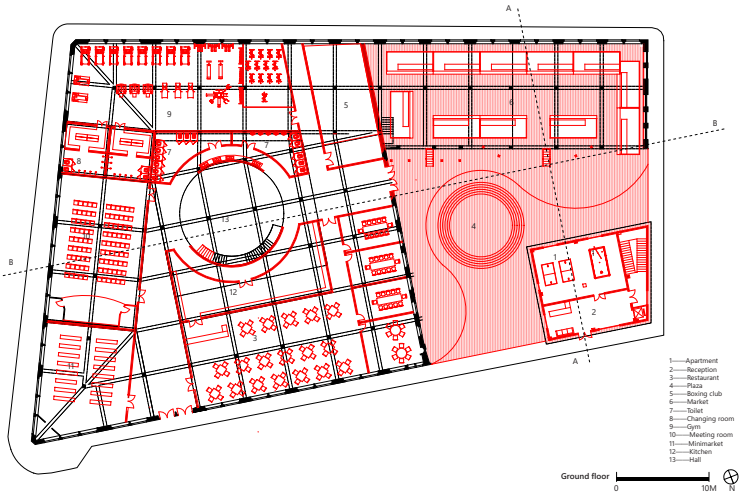

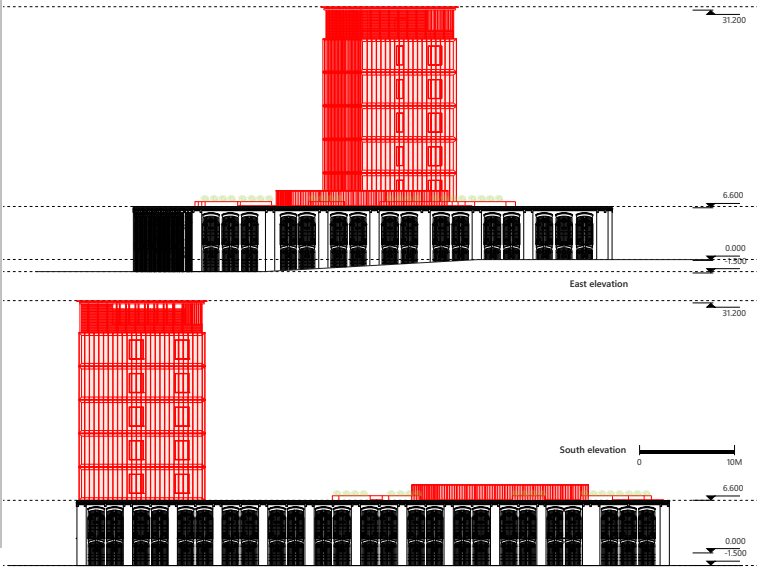

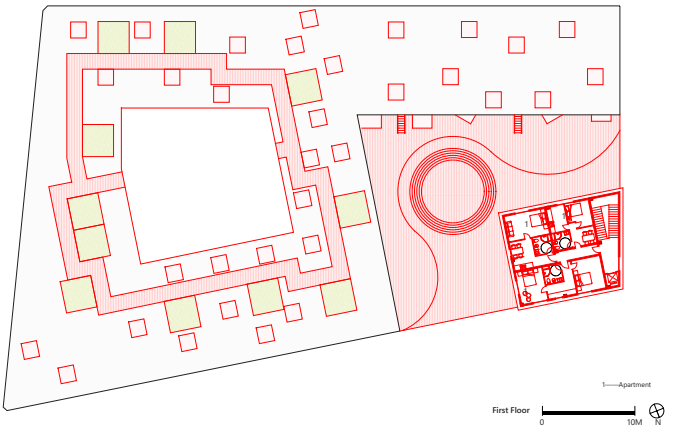

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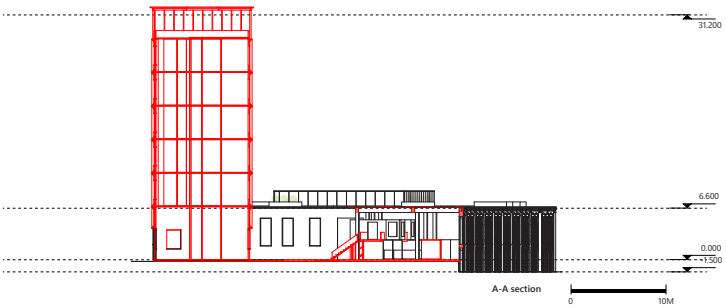
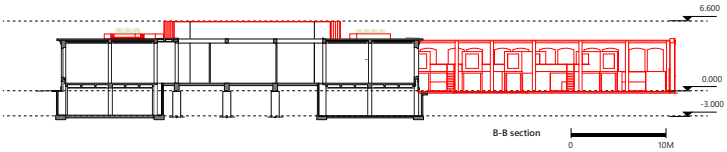
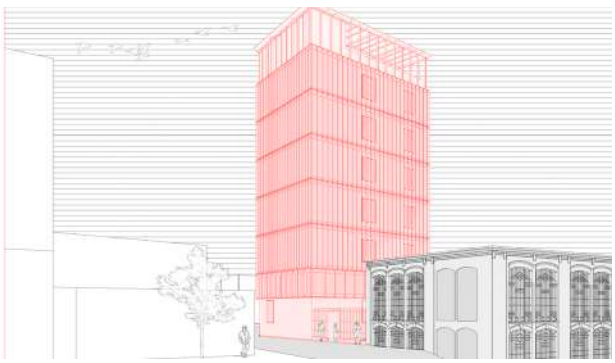
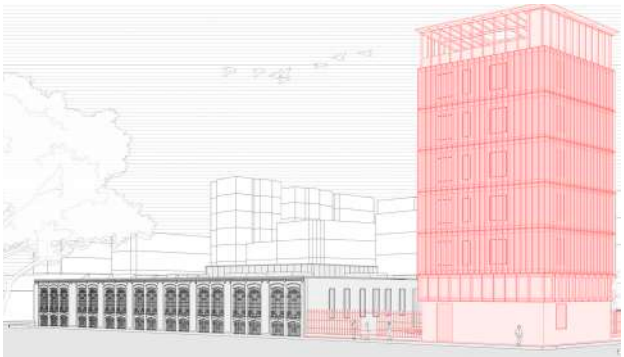
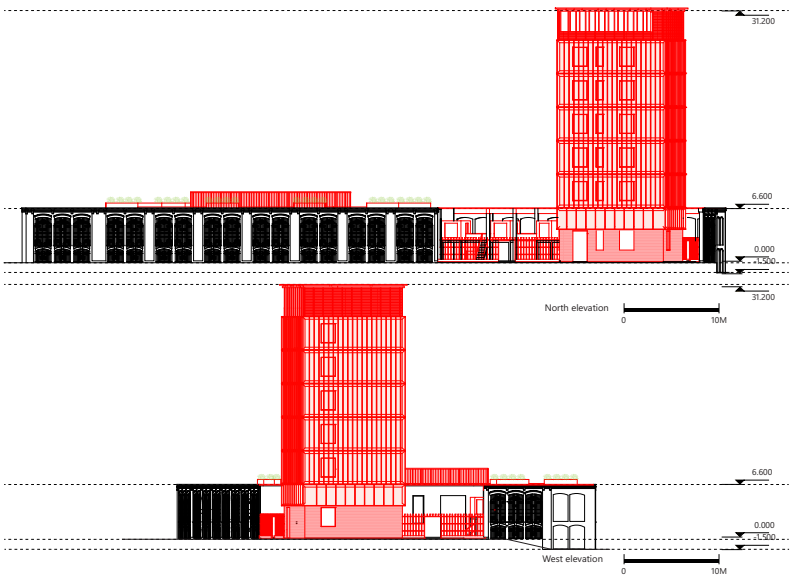
Zixiong Li

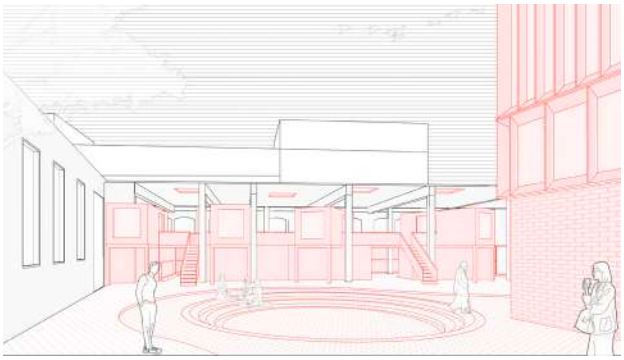












Politecnico di Torino - MSc degree program in Architecture Construction City
Thesis AY 2024-25
Prof. Manuela Mattone, Davide Rolfo