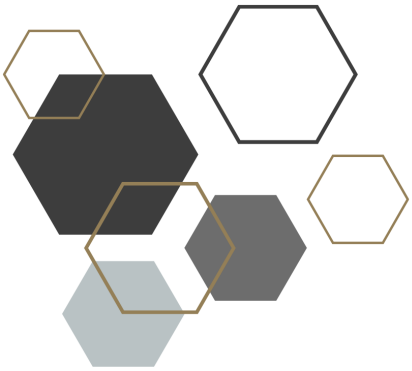


Politecnico di Torino

HOW POST-INDUSTRIAL LANDSCAPES CAN BE REGENERATED TO RECONNECT THE CITY

(REGENERATION OF THE FORMER THYSSENKRUPP FACTORY)

ELHAM MOHAMMADSHAHI



Master's Degree Thesis

How post-industrial landscapes can be regenerated to reconnect the city (Regeneration of the Former ThyssenKrupp Factory)

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Declaration on the Use of Artificial Intelligence Tools

Artificial Intelligence (AI) tools were used during the preparation of this thesis solely as supporting instruments, particularly for language and grammatical revision, improvement of textual clarity, and assistance in the preparation and refinement of some graphical and visual materials. The research, architectural and urban analyses, design concepts, design decisions, drawings, and final outcomes presented in this thesis are the original work of the author. AI-generated outputs were critically reviewed, verified, and, where necessary, modified by the author. The author assumes full responsibility for the accuracy, originality, and final content of this thesis.

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Abstract

Post-industrial sites within European cities often remain disconnected from the urban fabric long after their productive function has ended, persisting as barriers rather than assets despite their strategic location and scale. This thesis addresses this condition through the case of the former ThyssenKrupp factory site in the Lucento/Vallette area of Turin, proposing its regeneration as a multifunctional hub anchored by an intercity bus terminal, a facility the city currently lacks, with intercity coaches presently served informally along Corso Vittorio Emanuele II.

The work combines a theoretical and a design-based approach. The literature review situates the project within debates on post-industrial landscape theory, brownfield remediation and environmental restoration, adaptive reuse of industrial heritage, transit-oriented development, and urban regeneration policy specific to Turin, establishing a framework in which infrastructure, memory, and ecology are treated as complementary rather than competing concerns. Site analysis, combining field observation, archival research, and comparative case studies of post-industrial regeneration and transport terminal precedents, identifies the site's connectivity potential (proximity to the Tangenziale A55, Turin Airport, Allianz Stadium, and the Torino Rebaudengo Fossata train station) alongside existing gaps in pedestrian and vehicular access, particularly across the Dora River and toward Parco della Pellerina.

The design proposal organizes the 157,000 m^2 site into three interrelated zones: a terminal zone combining the bus station with a hotel, cinema, concert hall, and cultural and educational facilities; a central zone of civic and commercial services serving both travelers and residents; and a local zone providing schools, sports facilities, and a public library for the neighboring Lucento-Vallette community. Design development proceeded from mobility planning, a new network of primary and secondary access routes and pedestrian/vehicular bridges resolving the site's connectivity gaps, through to architectural form, retaining the factory's original structural columns and roof trusses as a primary order into which the diverse program was inserted.

By reading infrastructure as a form of public space rather than a purely functional device, the thesis argues that a transport terminal can act as a catalyst for post-industrial regeneration, reconnecting a fragmented urban edge to the wider metropolitan network while restoring everyday civic life to a site long defined by its separation from the city.

Keywords

Keywords

Post-industrial regeneration, Adaptive reuse, Intercity bus terminal, Transit-oriented development, Industrial heritage, Brownfields.

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1 Introduction

1.1 Background and Context

European cities that built their economic and spatial identity around twentieth-century manufacturing are now confronted with the long-term consequences of deindustrialization. Former factories, steelworks, and rail yards, once engines of production and employment, have in many cases become extensive urban voids: disconnected from the surrounding fabric, environmentally compromised, and often carrying complex social memories tied to labor, loss, and economic decline. Turin, one of Italy's principal industrial centers throughout the twentieth century, exemplifies this condition. Its northern industrial belt, once dominated by steel production tied to the automotive, machinery, and construction sectors, has undergone a profound transformation since the 1990s, following the crisis of the Fordist city and, subsequently, the momentum generated by the 2006 Winter Olympic Games. Within this broader trajectory, the former ThyssenKrupp steel plant in the Lucento–Vallette district represents one of the city's most complex and unresolved post-industrial sites. Closed in 2008 after decades of operation, the site occupies a strategic position along the Dora Riparia River corridor, bordered by Pellerina Park, residential neighborhoods, and major transport axes connecting Turin to the wider metropolitan region. Its regeneration is complicated, however, by a dimension that distinguishes it from many comparable European cases: the tragic fire of the night between 5 and 6 December 2007, in which seven workers lost their lives. This event transformed the site from a symbol of industrial productivity into one of collective mourning, embedding questions of memory and social healing into what would otherwise be a primarily technical and spatial problem of land reuse.

At the same time, the site's condition intersects with a distinct and pressing urban challenge: the inadequacy of Turin's intercity and suburban bus infrastructure. Unlike many comparable European cities, Turin lacks a dedicated, purpose-built bus terminal; instead, intercity and suburban coaches operate from a series of informal roadside stops along Corso Vittorio Emanuele II, in the dense heart of the city. This arrangement generates congestion, safety risks, and inefficient regional connections, particularly toward the A55 ring road, Turin Airport, and major destinations such as the Allianz Stadium. The convergence of these two conditions, an abandoned, socially significant industrial site in search of a new identity, and a structurally inefficient piece of urban mobility infrastructure in search of a location, forms the starting point of this thesis.

1.2 Problem Statement

The former ThyssenKrupp site currently exists in a state of prolonged abandonment. Its production halls, steel sheds, and administrative buildings continue to deteriorate structurally, while environmental assessments have identified soil and potential groundwater contamination consistent with decades of heavy industrial activity. Left unaddressed, the site represents not merely a lost urban opportunity but an active environmental liability, contributing to localized heat island effects and posing an ongoing risk to the adjacent Dora Riparia ecological corridor.

This environmental and structural neglect is compounded by a social one: the surrounding Lucento–Vallette neighborhoods lack many of the everyday services and public spaces that support community life, while the site itself remains disconnected from its context, accessible only through a handful of constrained and often barricaded points. Numerous redevelopment proposals have been advanced since 2008, including Variant No. 221 of the Municipal Master Plan and the 2013 Programme for Urban, Social, and Architectural Regeneration (P.R.U.S.A.), yet none has been fully implemented. Most recently, a 2024 municipal deliberation proposing to designate part of the site as public park has become the subject of ongoing litigation between the Comune and the site's current owner; the site remains, nearly two decades after its closure, an unresolved question within the city's planning agenda.

Simultaneously, and largely independently of these planning discussions, Turin's intercity bus system continues to operate without dedicated infrastructure, generating congestion and emissions in one of the city's most central corridors. The research problem addressed by this thesis is therefore twofold and interconnected: how can a contaminated, structurally degraded, and socially significant post-industrial site be regenerated in a way that reconciles environmental remediation, the memorialization of a collective trauma, and renewed public use, and how can this same site's strategic position be leveraged to resolve a genuine, unmet infrastructural need of the city, namely the relocation of its intercity bus terminal.

1.3 Research Aim and Objectives

The aim of this thesis is to develop an integrated regeneration strategy for the former ThyssenKrupp site in Turin that addresses its environmental, historical, and social complexity while responding to a concrete urban mobility need through the design of a multimodal transport hub with complementary public and neighborhood facilities.

This aim is pursued through the following objectives:

1.To reconstruct the historical trajectory of the site, from its medieval origins as Lucento Castle through its industrial expansion and eventual closure , in order to identify the layers of meaning that any regeneration strategy must engage with.

2.To analyze the site's current physical, environmental, and infrastructural conditions, including its accessibility, connectivity to surrounding green and urban systems, and relationship to the Dora Riparia.

3.To examine international precedents of post-industrial regeneration and transport-oriented development in order to extract transferable design strategies applicable to the ThyssenKrupp site.

4.To articulate the specific urban challenges the project responds to, namely inefficient mobility infrastructure, environmental degradation of the site, and the shortage of public space and services in the surrounding neighborhoods.

5.To develop a design proposal that translates these findings into a coherent spatial strategy, organized around a multimodal bus terminal, a substantial green buffer, and mixed-use neighborhood facilities.

1.4 Research Questions

Main Question

The thesis is structured around one central research question and three supporting questions:
Central question:
How can the regeneration of the former ThyssenKrupp site in Turin reconcile environmental remediation, the memorialization of its industrial and social history, and the introduction of a new mobility infrastructure, in a way that benefits both the immediate neighborhood and the wider city?

Supporting questions

Supporting questions:
• What design and planning strategies have other European cities used to regenerate large-scale, socially significant post-industrial sites, and which of these strategies are transferable to the Turin context?
• How can an intercity bus terminal, a typically utilitarian and infrastructure-driven program , be integrated into a site of historical and emotional significance without reducing it to a purely technical intervention?
• What spatial and programmatic strategy can simultaneously address regional mobility needs, environmental restoration, and the everyday

1.5 Methodology

The research underpinning this thesis combines archival and bibliographic investigation with direct site analysis and comparative case study research, structured to move from historical and contextual understanding toward a grounded design proposal.

Archival and historical research was used to reconstruct the site's evolution, drawing on municipal planning documents, corporate and institutional histories, newspaper archives, and existing academic studies of the area, including prior thesis work on the ThyssenKrupp–Bonafous site. This was complemented by bibliographic research into the broader theoretical and disciplinary discourse on post-industrial regeneration, brownfield remediation, and transit-oriented development across European contexts.

Direct, on-site field observation was conducted to assess the site's current physical condition, its points of access and connectivity, and its relationship to adjacent green spaces, residential areas, and transport infrastructure, findings that could not be reliably obtained from documentary sources alone.

A comparative case study analysis was carried out on four European precedents, selected to address the project's two core design challenges: the regeneration of large post-industrial landscapes (Zeche Zollverein, Essen; Gasometer City, Vienna) and the integration of high-capacity transport terminals within dense urban and civic environments (Kamppi Center, Helsinki; King's Cross, London). Each case was analyzed for its historical significance, its architectural and urban strategy, its functional organization, and, critically, the specific implications it holds for the ThyssenKrupp site.

These research strands informed an iterative design development process, in which the emerging spatial strategy for the site was tested and refined through successive sketches, diagrams, and models, allowing the historical, environmental, and infrastructural findings of the research phase to be translated progressively into an architectural and urban proposal.

1.6 Thesis Structure

This thesis is organized into 7 chapters, structured to move from theoretical and contextual grounding toward a specific design proposal.

Second Chapter

Chapter 2, Literature Review, situates the thesis within the broader academic and disciplinary discourse on post-industrial regeneration, brownfield remediation, collective memory in architecture, and transit-oriented urban development, establishing the theoretical framework that informs the analysis and design strategy developed in later chapters.

Third Chapter

Chapter 3, Contextual frameworke, examines the contextual, infrastructural, and environmental conditions of the study area within Turin's Lucento district, before reconstructing the site's historical trajectory from its medieval origins to its industrial decline, culminating in the tragic fire of December 2007 and the subsequent, still-unresolved planning discussions surrounding its future, including an ongoing legal dispute over its proposed designation as public park.

Fourth Chapter

Chapter 4, Case Studies, presents a comparative analysis of four European precedents, Zeche Zollverein, Gasometer City, Kamppi Center, and King's Cross, examined for their strategies of industrial preservation, structural intervention, and infrastructural integration, concluding with a synthesis of design principles applicable to the ThyssenKrupp site.

Fifth Chapter

Chapter 5, Site Analysis and Rationale, articulates the reasoning behind the choice of both topic and site, situates the project within Turin's ongoing municipal planning interest, and sets out the specific urban challenges, mobility, environmental, and social, that the design proposal is intended to address.

Sixth Chapter

Chapter 6, Design Process, translates the preceding research and analysis into a spatial and architectural strategy for the site, organized around a multimodal mobility hub, an ecological buffer zone, and mixed-use facilities serving the surrounding neighborhood.

Seventh Chapter

Chapter 7, Conclusion, reflects on the outcomes of the design proposal in relation to the research questions posed in this introduction, and considers the broader transferability of the strategies developed to other post-industrial sites across Europe.

2 Literature Review

2.1 Introduction

This chapter situates the thesis within five interrelated bodies of academic and disciplinary literature: the theoretical foundations of post-industrial landscape thinking; brownfield remediation and environmental restoration; the adaptive reuse of industrial heritage, including the specific literature on memory and trauma in the built environment; the theory and practice of transit-oriented development; and the substantial body of scholarship on Turin's own post-industrial trajectory. Each section moves from foundational theory toward literature of increasing specificity, closing with a discussion of how the theme bears directly on the former ThyssenKrupp site and the design proposal developed in later chapters.

2.2 Theorizing the Post-Industrial Landscape

2.2.1 Deindustrialization and the Production of Urban Voids

The academic treatment of former industrial land is inseparable from the broader history of deindustrialization that reshaped Western economies from the 1970s onward. As manufacturing relocated, automated, or simply ceased, cities that had organized their spatial and economic structure around production were left with what geographers and planners have variously termed urban voids, vacant land, or derelict sites, areas whose common feature is not physical emptiness but the absence of the productive function that had previously organized their use.[1] An early and influential contribution addressing this condition directly is Niall Kirkwood's edited volume Manufactured Sites: Rethinking the Post-Industrial Landscape, which brought together landscape architects, engineers, and environmental scientists around the argument that environmental contamination and structural obsolescence should be treated as active design parameters rather than problems to be solved prior to design.[2] This position, that the physical and chemical legacy of industrial production must shape design methodology from the outset, rather than being treated as a technical precondition, underpins the analytical approach to the ThyssenKrupp site developed in Chapter 3 of this thesis, where the site's contamination and structural decay are treated as constitutive conditions of the design problem rather than obstacles external to it.

1 Adams, D., De Sousa, C., & Tiesdell, S. (2010). "Brownfield Development: A Comparison of North American and British Approaches." Urban Studies, 47(1), 75–104. https://doi.org/10.1177/0042098009346868

2 Niall Kirkwood, ed., Manufactured Sites: Rethinking the Post-Industrial Landscape (London: Spon Press, 2001).

2.2.2 Terrain Vague and the Aesthetics of Abandonment

A parallel and highly influential strand of theory approaches the post-industrial void not primarily as an environmental or economic problem, but as a distinct spatial and cultural condition. In his 1995 essay "Terrain Vague," the Catalan architect and critic Ignasi de Solà-Morales Rubió described abandoned, obsolete urban spaces as sites defined by "absence of use, of activity, and the sense of freedom, of expectancy" , spaces that are simultaneously void and full of possibility, resistant to the ordering logic that architecture typically imposes. Solà-Morales's essay has become one of the most widely cited texts in the theorization of post-industrial and residual urban space, precisely because it reframes the abandoned industrial site not as a failure of the city but as a legitimate, if ambiguous, condition in its own right , one that subsequent scholarship has continued to revisit and reinterpret in relation to contemporary regeneration practice.[1] This literature is directly relevant to how the former ThyssenKrupp site is read in this thesis: prior to any intervention, the site already carries a specific spatial and atmospheric identity , barricaded driveways, overgrown yards, the abandoned rail underpass , that a purely functionalist regeneration strategy risks erasing rather than engaging with, a tension addressed explicitly in the design approach developed in Chapter 5.

1 Ignasi de Solà-Morales Rubió, "Terrain Vague," in Anyplace, ed. Cynthia Davidson (Cambridge, MA: MIT Press, 1995), 118–123.

2.2.3 Drosscape and the Third Landscape: Two Readings of Residual Land

Two further, complementary theoretical positions extend this discussion in different directions. Alan Berger's Drosscape: Wasting Land in Urban America coined the term "drosscape" to describe residual landscapes generated by the "stealth relocation" of industrial and logistical functions within and around metropolitan regions, arguing that these leftover landscapes are not marginal anomalies but a structural and recurring feature of contemporary urbanization that deserves sustained design attention.[1] Berger's framing is significant for treating such sites as a type , a recurring condition with transferable characteristics , rather than as isolated curiosities, a position that directly supports the comparative case-study method adopted in Chapter 4 of this thesis, where lessons from Zeche Zollverein, Gasometer City, Kamppi Center, and King's Cross are explicitly treated as transferable to the ThyssenKrupp site.

A related but conceptually distinct position is offered by the landscape theorist and gardener Gilles Clément in his Manifeste du Tiers Paysage (Manifesto of the Third Landscape), which reframes abandoned, unmanaged, and residual land , precisely the condition of a site such as the former ThyssenKrupp plant prior to intervention , as a reservoir of ecological and biological diversity in its own right, deserving of protection rather than being treated as land whose only value lies in eventual redevelopment.[2] Where Berger's drosscape reads residual land primarily through its position within metropolitan systems, Clément's third landscape reads it through its latent ecological value even in a state of apparent neglect. Read together, these two positions inform the treatment of the site's green buffer and its role within the wider Dora Riparia ecological corridor discussed in Chapter 5: the strategy of retaining and strengthening spontaneous vegetation on parts of the site, rather than treating every square meter as a blank slate for construction, draws directly on this theoretical lineage.

1 Alan Berger, Drosscape: Wasting Land in Urban America (New York: Princeton Architectural Press, 2006).

2 Gilles Clément, Manifeste du Tiers Paysage (Paris: Sujet/Objet, 2004).

2.3 Brownfield Remediation and Environmental Restoration

2.3.1 Defining and Governing Brownfields

The environmental dimension of post-industrial regeneration is addressed by an extensive body of literature on brownfield redevelopment, a field that has grown substantially since the 1990s in both North America and Europe. This literature commonly defines brownfields as land rendered vacant, underused, or undervalued due to real or perceived environmental contamination associated with prior industrial or commercial use , a definition that positions such sites simultaneously as an environmental liability and, given their frequent proximity to established infrastructure, transport corridors, and urban cores, as a potentially valuable urban resource.[1] A recurring theme in this scholarship is that brownfield regeneration outcomes are shaped as much by institutional and governance factors , the coordination, or lack thereof, between municipal authorities, private landowners, and affected communities, as by the underlying environmental science itself.[2] This observation is strongly consistent with the ThyssenKrupp site's own planning history: as documented in Chapter 3, successive instruments, including Variant No. 221 of the Municipal Master Plan and the 2013 Programme for Urban, Social, and Architectural Regeneration (P.R.U.S.A.), were formally proposed but never fully implemented, a pattern the brownfield governance literature would attribute to exactly this kind of institutional fragmentation rather than to any purely technical obstacle.

1 Christopher A. De Sousa, "Turning Brownfields into Green Space in the City of Toronto," Landscape and Urban Planning 62, no. 4 (2003): 181–198.

2 Klusáček, P., Alexandrescu, F., Osman, R., Malý, J., Kunc, J., Dvořák, P., Frantál, B., Hlaváček, M., Krejčí, T., Martinát, S., Skokanová, H., & Trojan, J. (2018). "Good governance as a strategic choice in brownfield regeneration: Regional dynamics from the Czech Republic." Land Use Policy, 73, 29–39. https://doi.org/10.1016/j.landusepol.2018.01.007

2.3.2 From Remediation to Green Infrastructure

A specific and increasingly prominent strand within the brownfield literature addresses the conversion of contaminated industrial land into urban green space. Christopher De Sousa's research on brownfield-to-greenspace conversion in Toronto is among the most widely cited contributions to this field, documenting how derelict industrial land can be transformed into parks, greenways, and recreational space, and identifying both the environmental benefits of this approach, including soil quality improvement and habitat creation, and the practical barriers that frequently constrain it, including remediation cost, land ownership fragmentation, and the mismatch between the pace of environmental cleanup and the pace of development pressure.[1] Subsequent scholarship building on this work has emphasized that the level of remediation a brownfield site requires depends heavily on its intended reuse: a site destined for spontaneous, low-intervention vegetation and habitat creation typically requires less intensive remediation than one destined for direct public use, such as an urban park or plaza, where human exposure to any residual contamination becomes a primary design constraint. [2]This distinction is directly relevant to the design proposal in Chapter 5, which envisions differentiated levels of intervention across the ThyssenKrupp site, from an intensively used mixed-use and mobility core to a more ecologically oriented buffer zone along the Dora Riparia, where remediation and reuse strategies logically diverge based on this same principle.

1 De Sousa, "Turning Brownfields into Green Space."

2 Akinade, O. O., et al. (2023). "A Critical Review of Developers' Decision Criteria for Brownfield Regeneration: Development of the BRIC Index." Sustainability, 15(9), 7105.

2.3.3 The Former ThyssenKrupp Site: Documented Environmental Conditions

Beyond this general literature, the environmental condition of the ThyssenKrupp site itself has already been the subject of direct technical investigation. A series of environmental site assessments and remediation projects commissioned for the plant between 2002 and 2007, including a baseline environmental investigation of the AST rolling-mill area along Corso Regina Margherita, and subsequent remediation design and groundwater-barrier monitoring campaigns concerning the Sendzimir 62 rolling mill, conducted under Italian remediation regulation (D.M. 471/99), document the presence of soil and groundwater contamination consistent with decades of steel production, including elevated concentrations of total petroleum hydrocarbons identified during 2006–2007 monitoring campaigns.[1] While these are technical and site-specific reports rather than academic literature in the conventional sense, they provide primary evidentiary grounding for the general contamination risks described in the wider brownfield literature discussed above, and confirm that the environmental complexity addressed in Chapter 5 of this thesis reflects a documented condition of the site rather than a general assumption drawn from comparable cases elsewhere.

1 Environmental site investigation and remediation reports for the AST rolling-mill plant, Corso Regina Margherita 400, Turin, prepared by ENSR International / ENSR Italia s.r.l., 2002–2007

2.4 Adaptive Reuse of Industrial Heritage

2.4.1 Industrial Heritage as a Category of Conservation

A distinct but closely related field of literature addresses the conservation and adaptive reuse of industrial heritage, structures and landscapes valued not for their material or spatial qualities alone, but for their historical, technological, and social significance. This field is grounded institutionally in the Nizhny Tagil Charter, adopted by The International Committee for the Conservation of the Industrial Heritage (TICCIH) in 2003, which defines industrial heritage as encompassing the physical remains of industrial culture, production buildings, machinery, storage facilities, and associated infrastructure, that possess historical, technological, social, architectural, or scientific value, and which explicitly calls for the retention of such structures wherever possible rather than their demolition.[1] The charter's emphasis on retaining industrial fabric as a matter of principle, rather than only where individual structures meet conventional aesthetic or architectural criteria, provides an important reference point for evaluating which elements of the ThyssenKrupp complex might be considered candidates for retention within the design proposal developed in Chapter 5.

1 TICCIH (The International Committee for the Conservation of the Industrial Heritage), The Nizhny Tagil Charter for the Industrial Heritage (2003).

2.4.2 Adaptive Reuse as Urban Catalyst

Within the academic literature specifically addressing the redevelopment of post-industrial sites, Luís Loures's research has become one of the most widely cited contributions, examining the often divergent perspectives of the general public and of design professionals regarding the benefits and barriers associated with reusing post-industrial land.[1] Loures's work identifies adaptive reuse as a means of constructing what he terms "tangible bridges" between the economic and cultural identity of the industrial past and that of the present, positioning individually significant structures as catalysts capable of anchoring the wider sustainable redevelopment of their surrounding areas, rather than treating heritage retention and contemporary reuse as competing objectives.[2] The case studies examined in Chapter 4 of this thesis, Zeche Zollverein and Gasometer City in particular , can be read as built demonstrations of precisely this argument: both projects retain the historic industrial envelope as an organizing device for entirely new programmatic content, using the retained fabric to anchor rather than constrain the site's contemporary function.

1 Luís Loures, "Post-Industrial Landscapes as Drivers for Urban Redevelopment: Public versus Expert Perspectives towards the Benefits and Barriers of the Reuse of Post-Industrial Sites in Urban Areas," Habitat International 45, part 2 (2015): 72-81.

2 Loures, "Post-Industrial Landscapes as Drivers.

2.4.3 Memory, Trauma, and the Limits of Adaptive Reuse

A further body of theory, originating largely outside architecture and urban planning, is nonetheless essential to any serious engagement with a site such as the former ThyssenKrupp plant: the study of collective memory and its relationship to physical space. The French historian Pierre Nora's concept of lieux de mémoire, or "sites of memory," describes places, objects, or practices that , through either deliberate commemorative will or the accumulated work of time , become symbolic repositories of a community's shared memory, condensing collective meaning in a way that ordinary historical documentation cannot.[1] Nora's framework, together with the earlier sociological work of Maurice Halbwachs on collective memory as a socially constructed and spatially anchored phenomenon rather than a purely individual one, provides a theoretical basis for treating the former ThyssenKrupp site as something more than a physical or economic asset: it is a site where the collective memory of the 2007 fire and its seven victims is, in Nora's terms, materially "crystallized," and any design intervention necessarily acts upon that memory, whether intentionally or not. [2]

This literature also raises direct methodological caution. Scholars working in this field frequently warn against adaptive reuse projects that retain the physical shell of a historically or emotionally significant site while evacuating it of the specific meaning that made it significant in the first place , producing what is, in effect, an aestheticized industrial backdrop disconnected from the memory it purports to honor.[3] This risk is of direct relevance to the ThyssenKrupp site, where a purely stylistic reuse of retained industrial fabric , without a deliberate strategy for memorialization, community engagement, or commemorative space , would risk exactly the kind of evacuation of meaning this literature warns against, a concern that directly shapes the programmatic and spatial reasoning developed in Chapter 5.

1 Pierre Nora, "Between Memory and History: Les Lieux de Mémoire," Representations 26 (1989): 7–24.

2 Maurice Halbwachs, On Collective Memory, trans. Lewis A. Coser (Chicago: University of Chicago Press, 1992).

3 Samadzadehyazdi, S., Ansari, M., Mahdavinejad, M., & Bemanian, M. R. (2020). "Significance of authenticity: Learning from best practice of adaptive reuse in the industrial heritage of Iran." International Journal of Architectural Heritage, 14(3), 329-344

2.4.4 Memory and Identity at the ThyssenKrupp Site: Prior Studies

This question of memory has, in fact, already been engaged directly in relation to the ThyssenKrupp site itself, providing this thesis with a documented precedent rather than a purely theoretical concern. A prior Politecnico di Torino thesis by Delton and Italiano examined the site explicitly through the lens of territorial memory and identity, proposing a multidisciplinary approach to its urban design precisely because the authors argued that the site's meaning could not be reduced to a purely technical or economic planning exercise.[1] This position is reinforced by Alessandro Portelli's oral history of the ThyssenKrupp and Acciai Speciali Terni workforce, Acciai speciali, which documents the lived experience of steelworkers across the company's Turin and Terni sites and situates the 2007 tragedy within a longer social history of industrial labor, corporate globalization, and workplace risk, drawing on direct testimony from workers and their families.[2] A further account, Novelli and colleagues'Thyssen Krupp: l'inferno della classe operaia, published in the immediate aftermath of the 2007 fire, provides a detailed narrative reconstruction of the plant's final years of operation, the safety conditions preceding the fire, and the corporate and judicial response that followed.[3] Together, these sources confirm that the memorial dimension of the site is not a speculative concern introduced by this thesis but a documented and previously studied feature of the site's identity, one that this thesis extends by linking it explicitly to a concrete infrastructural and mixed-use design proposal, rather than treating memory and design as separate lines of inquiry.

1 Francesca Delton and G. Italiano, "Memoria e identità di un territorio: il sito ThyssenKrupp come occasione per un approccio multidisciplinare alla progettazione urbanistica" (master's thesis, Politecnico di Torino, 2009)

2 Alessandro Portelli, Acciai speciali: Terni, la ThyssenKrupp, la globalizzazione (Rome: Donzelli, 2008).

3 Diego Novelli et al., Thyssen Krupp: l'inferno della classe operaia (Milan: Sperling & Kupfer, 2008).

2.5 Transit-Oriented Development and Mobility Hubs

2.5.1 Origins: Calthorpe and the Transit-Oriented Community

The theoretical foundation for the mobility component of this thesis rests on the concept of Transit-Oriented Development (TOD), first systematically articulated by Peter Calthorpe in The Next American Metropolis: Ecology, Community, and the American Dream (1993). Calthorpe defined a transit-oriented development as a mixed-use community organized within a comfortable walking distance , approximately 2,000 feet , of a transit stop and a core commercial area, explicitly designed to reduce dependence on private car use. [1] A central and often overlooked aspect of Calthorpe's original formulation is his insistence that a successful TOD requires a genuine mix of uses, including a minimum threshold of convenience retail and everyday services, so that transit access and daily neighborhood needs are addressed as a single integrated design problem rather than as separate concerns. [2] This principle , that transit infrastructure should be conceived from the outset as embedded within, rather than adjacent to, everyday urban life , is foundational to the design proposal developed in Chapter 5, in which the proposed bus terminal is explicitly organized alongside retail, health, and cultural facilities intended to serve the surrounding Lucento–Vallette neighborhood.

1 Peter Calthorpe, The Next American Metropolis: Ecology, Community, and the American Dream (New York: Princeton Architectural Press, 1993).

2 Calthorpe, The Next American Metropolis.

2.5.2 Built Environment and Travel Behavior: The 3Ds and Beyond

Calthorpe's normative framework was subsequently developed into an empirically testable model through the work of Robert Cervero, whose research on the relationship between the built environment and travel behavior has become central to the TOD literature. Cervero and Kockelman's influential "3Ds" framework, density, diversity, and design , established that transit ridership and travel behavior around a station are shaped not by any single variable in isolation, but by the interaction of residential and employment density, the diversity of land uses present, and the pedestrian-oriented design qualities of the surrounding built environment.[1] This framework has since been validated and extended across a wide range of international contexts; a large-scale meta-analysis by Cervero and Ewing later confirmed the robustness of these built-environment effects on travel behavior across dozens of empirical studies, while also cautioning that the magnitude of these effects varies considerably by context and cannot simply be assumed to transfer uniformly between cities.[2] For the ThyssenKrupp site, the 3Ds framework provides a direct conceptual checklist against which the proposed multimodal hub can be evaluated: the design response outlined in Chapter 5 explicitly combines density (through the mixed-use programme), diversity (bus terminal, retail, health, cultural, and residential functions), and pedestrian-oriented design (direct, car-free connections between the terminal and surrounding public space), rather than treating the terminal as a purely functional transport facility.

1 Robert Cervero and Kara Kockelman, "Travel Demand and the 3Ds: Density, Diversity, and Design," Transportation Research Part D: Transport and Environment 2, no. 3 (1997): 199–219.

2 Robert Cervero and Reid Ewing, "Travel and the Built Environment: A Meta-Analysis," Journal of the American Planning Association 76, no. 3 (2010): 265–294.

2.5.3 The Node-Place Model and Station Area Typologies

A further methodological contribution to the TOD literature, particularly relevant to the classification and evaluation of station areas, is Luca Bertolini's node-place model. Bertolini's framework characterizes any station area along two axes: its function as a transport "node," measured by the diversity and intensity of transport connections it offers, and its function as a "place," measured by the diversity and intensity of non-transport activity occurring there , retail, housing, employment, and public life. [1] The model identifies several ideal-typical situations for a station area based on the balance, or imbalance, between these two dimensions: a station strong as a node but weak as a place risks becoming a purely functional transfer point disconnected from urban life, while a station weak as a node but strong as a place risks being a vibrant district poorly served by transport. [2] Applied to the ThyssenKrupp site, the node-place model offers a useful diagnostic frame: the site currently registers as weak on both dimensions , poorly connected by public transport, as documented in Chapter 3, and entirely inactive as a place, and the design proposal explicitly aims to strengthen both dimensions simultaneously, rather than treating the introduction of the bus terminal (an increase in "node" value) as sufficient on its own to regenerate the site.

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1 Luca Bertolini, "Spatial Development Patterns and Public Transport: The Application of an Analytical Model in the Netherlands," Planning Practice and Research 14, no. 2 (1999): 199–210.

2 Bertolini, "Spatial Development Patterns."

2.5.4 Beyond Rail: TOD Principles and Bus/Coach Terminals

While the majority of the foundational TOD literature was developed with rail transit in mind, subsequent scholarship has extended these principles to a broader range of transit typologies. Research published under the World Bank's Transforming Cities with Transit initiative, led in part by Cervero, examines the application of transit-and-land-use integration principles across a wide range of international contexts and transit modes, including bus rapid transit and high-capacity bus terminal infrastructure, arguing that the fundamental logic of TOD, integrating transit capacity with adjacent land use rather than treating them as separate planning problems , applies regardless of whether the transit mode in question is rail-based or road-based.[1] This body of work directly supports the central premise of the ThyssenKrupp project: that an intercity bus terminal, despite lacking the fixed-guideway permanence typically associated with classic TOD literature, can and should be designed according to the same integrative principles as a rail-based transit hub, a position substantiated further by the precedent of the Kamppi Center in Helsinki examined in Chapter 4, where a bus terminal is embedded within a dense, mixed-use, multi-level urban structure precisely along these lines.

1 Hiroaki Suzuki, Robert Cervero, and Kanako Iuchi, Transforming Cities with Transit: Transit and Land-Use Integration for Sustainable Urban Development (Washington, DC: World Bank, 2013).

2.6 Urban Regeneration Policy in Turin and Italy

2.6.1 Turin's Post-Fordist Trajectory

The final body of literature addresses Turin's own documented experience of post-industrial urban regeneration, a subject of substantial academic attention given the city's historical role as Italy's prototypical single-industry manufacturing center and its subsequent, much-studied search for a new economic and spatial identity. Alberto Vanolo's research traces this trajectory in detail, examining how Turin's regeneration policy shifted over roughly two decades from physical, area-based interventions targeting the city's most economically disadvantaged neighborhoods toward a broader strategy of urban branding and "creative city" positioning, a shift that gained particular momentum around the 2006 Winter Olympic Games.[1] Vanolo's account is notable for treating this shift not as a straightforward success story but as an ambivalent process, in which the symbolic rebranding of the city as creative and cosmopolitan coexisted uneasily with the continued material reality of abandoned industrial land and persistent social inequality in peripheral districts, a tension of direct relevance to the ThyssenKrupp site, which sits precisely within this category of land left behind by the city's more visible, centrally located regeneration successes.

1 Alberto Vanolo, "The Fordist City and the Creative City: Evolution and Resilience in Turin, Italy," City, Culture and Society 6 (2015): 69–74.

2.6.2 Planning Instruments and Their Limits

Complementary research by Davide Ponzini and Michele Santangelo traces the specific evolution of Turin's formal planning instruments over approximately twenty-five years, documenting how successive municipal master plans, urban projects, and metropolitan-scale visions have shaped, and, in numerous cases, failed to fully implement , the city's post-industrial transformation.[1] Their analysis is particularly valuable for this thesis because it treats implementation failure not as an anomaly but as a recurring structural feature of Turin's planning history, driven by shifting political administrations, fragmented land ownership, and the difficulty of coordinating public planning ambition with private landowner interest.[2] This account directly corroborates the specific planning history of the ThyssenKrupp–Bonafous area documented in Chapter 3, where Variant No. 221, the 2013 P.R.U.S.A. programme, and the 2017 revision of the Municipal Master Plan each represented genuine institutional attempts at regeneration that were, for reasons consistent with Ponzini and Santangelo's broader account, never carried through to implementation.

1 Davide Ponzini and Michele Santangelo, "Spatial Strategies through Land-Use Plans, Urban Projects and Metropolitan Visions: Twenty-Five Years of Planning in Turin," Town Planning Review 89, no. 3 (2018): 259–282.

2 Ponzini and Santangelo, "Spatial Strategies."

2.6.3 Italian Territorial and Urban Theory

Beyond empirical planning history, Italian urban theory more broadly offers conceptual resources directly relevant to this thesis. Bernardo Secchi, one of the most influential Italian urbanists of the late twentieth century, argued in La città del ventesimo secolo that the twentieth-century city must be understood as a layered accumulation of successive, often contradictory planning logics, rather than as the product of any single coherent vision , a reading directly applicable to the ThyssenKrupp–Lucento area, whose successive functions (Savoyard hunting lodge, silk mill, hospital, textile works, steel plant, storage yard) exemplify precisely this kind of layered accumulation.[1] Secchi's earlier writing on the role of the general plan similarly argued that planning instruments succeed not by imposing a single, fixed vision but by establishing a flexible spatial and infrastructural framework capable of absorbing subsequent, unforeseen transformation.[2] A related but distinct position is offered by Alberto Magnaghi's territorialist school of Italian planning theory, articulated in Il progetto locale, which argues that regeneration projects succeed to the degree that they engage seriously with the specific historical, ecological, and social identity of a place , its territorio , rather than applying generic redevelopment models regardless of context.[3] Magnaghi's territorialist emphasis on place-specific identity provides additional theoretical support for the historically grounded, memory-conscious approach to the ThyssenKrupp site developed throughout this thesis, in contrast to a purely generic transit-hub-plus-housing redevelopment model.

1 Bernardo Secchi, La città del ventesimo secolo (Rome: Laterza, 2005).

2 Bernardo Secchi, "Un piano generale," Casabella, no. 548 (1988).

3 Alberto Magnaghi, Il progetto locale (Turin: Bollati Boringhieri, 2000).

2.6.4 The Spina Axis and the ThyssenKrupp-Bonafous Area

Finally, the specific municipal planning record for the ThyssenKrupp–Bonafous area itself constitutes an important, if non-academic, source base for this thesis. Municipal planning documents, including the City of Turin's currently effective Municipal Master Plan (PRGC), the 2013 Urban Center Torino "Piano di rigenerazione urbana area ThyssenKrupp-Ilva," and subsequent City Council resolutions revising the planning framework for the area, provide the primary documentary record against which the historical account in Chapter 3 and the rationale developed in Chapter 5 are built.[1] These documents situate the ThyssenKrupp site within Turin's broader Spina regeneration axis, a series of urban transformation zones developed along former railway and industrial land running through the city, of which the northwestern ThyssenKrupp–Regina Margherita zone examined in this thesis represents one of the least resolved and most fragmented segments, in contrast to the comparatively complete transformation achieved in the Spina 2 segment around the new Porta Susa railway station. This body of material situates the ThyssenKrupp site not as an isolated case, but as a further, and in some respects more complex, chapter within a well-documented and ongoing municipal process of post-industrial transformation.

1 Comune di Torino / Urban Center Torino, "Piano di rigenerazione urbana area ThyssenKrupp-Ilva" (Turin, 2013); Comune di Torino, "PRGC vigente" (Turin, 2010).

2.7 Synthesis

The literature reviewed in this chapter converges on a set of principles that directly structure the analytical and design approach developed in the remainder of this thesis. First, the theoretical literature on post-industrial landscapes, from Kirkwood's manufactured sites to Solà-Morales's terrain vague, Berger's drosscape, and Clément's third landscape, establishes that former industrial land carries both an active environmental complexity and a distinct spatial and ecological identity that design must engage with directly, rather than treating the site as a neutral surface awaiting redevelopment. Second, the brownfield remediation literature, substantiated in this case by primary site-specific environmental data, confirms that contamination is a documented rather than assumed condition of the ThyssenKrupp site, and that the intensity of remediation required should be calibrated to the specific reuse proposed for each part of the site. Third, the adaptive reuse and memory literature, from the TICCIH charter to Nora's and Halbwachs's theories of collective memory, substantiated by prior direct studies of the ThyssenKrupp site itself, establishes that any regeneration strategy for this site carries an unavoidable memorial responsibility that cannot be resolved through retained industrial aesthetics alone. Fourth, the transit-oriented development literature, from Calthorpe's foundational model through Cervero's empirical 3Ds framework, Bertolini's node-place model, and the extension of TOD principles to bus-based transit, provides both the theoretical justification and the specific evaluative tools for treating the proposed multimodal terminal as the organizing core of a genuinely mixed-use district. Finally, the body of scholarship on Turin's own post-industrial trajectory, empirical, theoretical, and documentary, situates the ThyssenKrupp site within both a well-documented pattern of implementation difficulty and a substantiated Italian theoretical tradition emphasizing place-specific, historically grounded design. Together, these five bodies of literature establish the theoretical framework against which the site analysis, historical investigation, case studies, and design proposal developed in the following chapters can be understood.

3 Contextual Framework

3.1 Context Analysis

The study area is situated within the north-western quadrant of the city of Turin, occupying a peripheral position relative to the urban center. It belongs to the Lucento neighborhood which, alongside the Borgo Vittoria, Madonna di Campagna, and Vallette districts, constitutes Administrative District 5 (Circoscrizione 5) of Turin. The site is bordered to the south by Corso Regina Margherita and Pellerina Park; to the north by industrial facilities and warehouses, behind which runs Via Pianezza; to the west by Via Pietro Cossa and social housing complexes dating back to the 1990s; and finally, to the east by the Dora Riparia River, beyond which lie residential and manufacturing buildings. The major transport axes surrounding the site facilitate accessibility both for commuters arriving from outside the city and for the local resident population. This geographical and urban configuration makes the area highly significant at both local and metropolitan scales, serving as a seamless transition zone between the urban and peri-urban fabric, thereby rendering the plot an undeniable asset for the city. Furthermore, the zone occupies a strategically vital position from an environmental perspective, as it directly connects to the ecological corridor of the Dora Riparia.

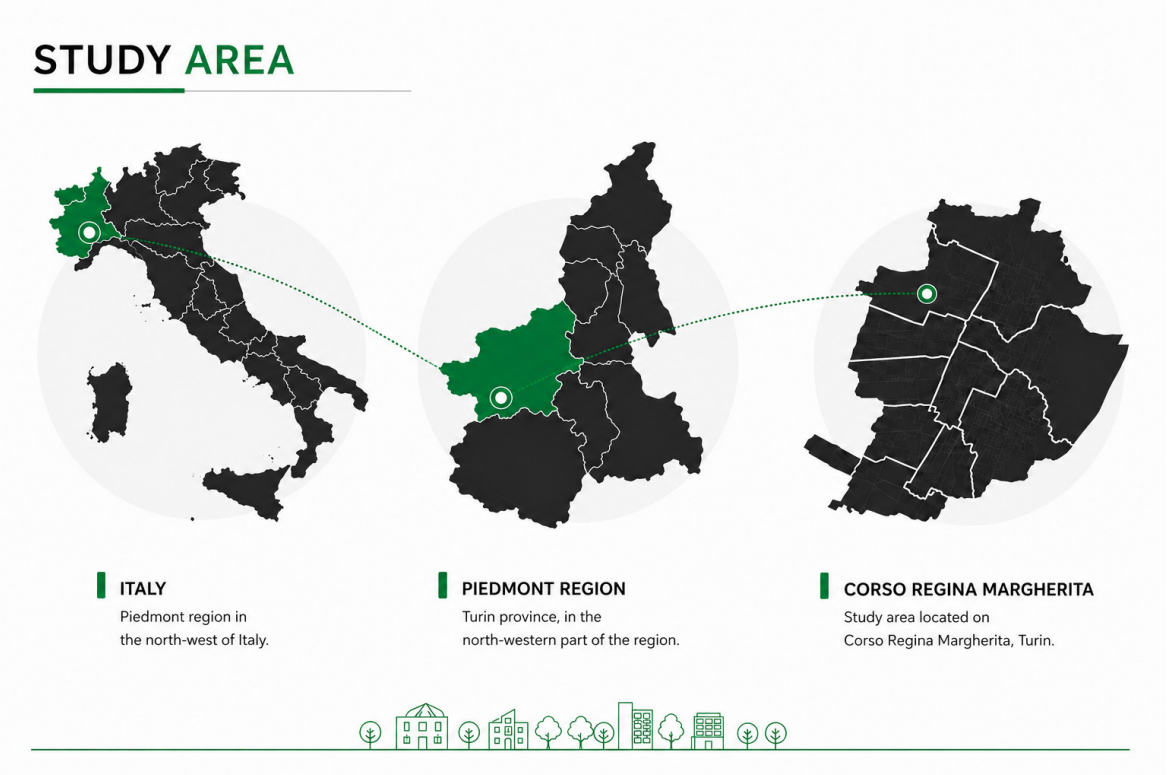


Figure 3.1. Study Area
Source: Author's elaboration based on Google Maps, Turin 2026.

3.1 Context Analysis

3.1.1 Accessibility and Infrastructure Analysis

The plot is serviced by seven public transport lines (Lines 32, 62, 2, 29, VE, 59, and 3) ;(Fig. 3.2)however, these do not fully satisfy the infrastructural demands of the surrounding community. Indeed, numerous parking lots and garages line the streets, and soft mobility is insufficiently incentivized. On-site field research indicates that there are only two pedestrian zones adjacent to the plot and a total absence of municipal vehicle-sharing stations (covering bicycles, scooters, and cars). Nonetheless, due to the proximity of Pellerina Park, a segment of the bicycle path extends near the lot in question. The primary land use within this neighborhood consists of small commercial activities, industrial enterprises, and residential developments. The largest commercial areas and football fields are located along Via Pietro Cossa, specifically within Borgata Frassati. To the north of the plot lies a multi-sport center featuring tennis courts, alongside minor retail activities.



Figure 3.2 Public transportation.
Source: Author's elaboration

3.1.2 Site Connectivity and Environmental Assets

Pellerina Park connects to the plot via only two modalities: a pedestrian bridge that links the residential area to the west of the lot, and a roundabout located at the terminus of the eastern building complex. Two driveways are situated at the rear of the buildings, both of which are currently barricaded. (Fig. 3.3)

Near Via Carlo Pittara, behind the lot, there is a small green space that serves as a buffer zone between the industrial building and the Lucento Castle, although its maintenance is limited. Additional nearby green spaces include the Via Calabria Park and the Beccuti Garden along Corso Molise. (Fig. 3.4)

Presently, the site conditions reveal that the northern portion of the area is occupied by the former Ilva-Bonafus warehouse, which has long been decommissioned and whose appurtenant areas have been transferred to private operators. To the south, the facility is still occupied by the ThyssenKrupp Acciai Speciali Terni plant. Its manufacturing operations were halted on March 3, 2008, following a tragic accident; since then, the production facilities have been abandoned, remaining open exclusively to facilitate minimal maintenance and private security protocols.

3.1.2 Site Connectivity and Environmental Assets



Figure 3.3. Pedestrian bridge connecting Parco della Pellerina with the adjacent residential area.
Source: Google earth 2026



Figure 3.4 Green buffer area between the former ThyssenKrupp industrial site and Lucento Castle.
Source: Zaccagni, A. L. (2019), Rigenerazione urbana e socio-economica dell'area ex ThyssenKrupp-Bonafous (Master's thesis), Politecnico di Torino.

3.2 Historical Investigation

As is frequently observed in the structural evolution of urban environments, centuries of development bring about complex processes of spatial addition, subtraction, and redistribution regarding local assets, resources, and territorial values, yielding outcomes that are not invariably positive or favorable. Through a rigorous examination of bibliographical sources and historical testimonies, it is possible to reconstruct and comprehend the evolutionary trajectory of the site, as well as the specific role it has played within the broader municipal context. In this particular case, however, it is analytical to distinguish between the area's remote and recent past, given that both have uniquely shaped the contemporary perception of the site.

Today, the historical legacy left by the territory's multifaceted military, agricultural, recreational, and institutional care functions stand in stark contrast to the modern remnants of industrial and administrative activities. Most notably, it confronts the collective memory of a tragedy that bears significant weight in current urban decision-making processes. Until 2007, the spatial coexistence of these disparate historical layers was somehow maintained, albeit through questionable planning solutions and an uneven urban dialogue.

In recent years, however, the detachment from the site's industrial past, intensified by the fatal blaze has fueled contentious debates regarding the potential destiny and future reconfiguration of the area. The tragedy of the night between December 5th and 6th, 2007, inevitably reactivates a broader municipal trauma, evoking the nightmare of devastating fires that have physically and psychologically afflicted the city since the 1980s, including the Cinema Statuto, the Vallette prison, and the Cathedral (Duomo). While such urban wounds have often been mended and memorialized as warnings for future generations, they occasionally leave profound physical and emotional scars upon the urban fabric and its citizens. Consequently, local communities sometimes attempt to suppress these memories to avoid confronting the enduring stigma that imbues the landscape with its profound solemnity.

3.2 Historical Investigation

3.2.1 Methodological Aims and Anthropogenic Landscape Transformations

The objective of this research, therefore, is to identify and enhance the site-specific elements capable of fostering the recovery and preservation of collective memory, thereby transforming them into strategic opportunities and resources for the urban regeneration process.

Under the framework of the General Municipal Regulatory Plan (PRGC), subsequently ratified by Variant No. 616 in 1977, which still retains traces of the suppressed river bend and the former designation of a portion of the area as public green space, the primary transport axes, such as Corso Potenza and Corso Regina Margherita, were consolidated. However, the construction of these new facilities not only required sacrificing a designated green area but also entailed profound, irreversible modifications to the local terrain.

The coexistence of a low-lying zone north of Corso Regina Margherita (with elevations varying between 240 m and 245.5 m) and an elevated zone south of Via Pianezza (ranging from 252 m to 257 m) necessitated extensive excavation and earthmoving operations, resulting in the morphological disruption of the landscape. Furthermore, it became necessary to divert both branches (Maddalena and Marchese) of the historic Lucento canal system (bialera) into a single, unified channel running along Via Pianezza.

3.2 Historical Investigation

3.2.1 Methodological Aims and Anthropogenic Landscape Transformations

3.2.1.1 The Historical and Military Evolution of Lucento Castle

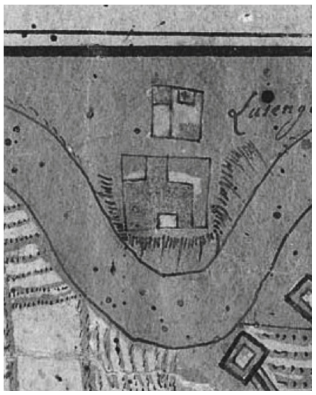


Figure3.5 Castello di Lucento.
Source: S.n., "Castello di Lucento, Carta dell'assedio di Torino", Torino, Archivio Storico della Città di Torino, 1706.

The earliest archival documentation attesting to the construction of Lucento Castle dates its erection between 1300 and 1389. Throughout this period, the castle served as a Savoyard hunting lodge, a primary function it preserved until the seventeenth century.
At the dawn of the eighteenth century, the residential complex acquired an industrial dimension following the construction of a silk spinning mill adjacent to the Dora Riparia River.
Subsequently, during the historic Siege of Turin in 1706, both the neighboring church and Lucento Castle assumed a critical military role. Within the defensive lines of the Franco-Spanish besieging forces, the complex functioned as a vital bridgehead, linking the northern front on the left bank of the Dora Riparia with the south-western front situated on its right back.[1]

1 Lo Russo S., Corrado A., Guerrini M., Florio R., Fagnani S., Spinelli C., "Città in discussione: "Area Thyssen. La memoria di un luogo simbolo, il parco e un nuovo quartiere.", Torino, La Repubblica, 2014.

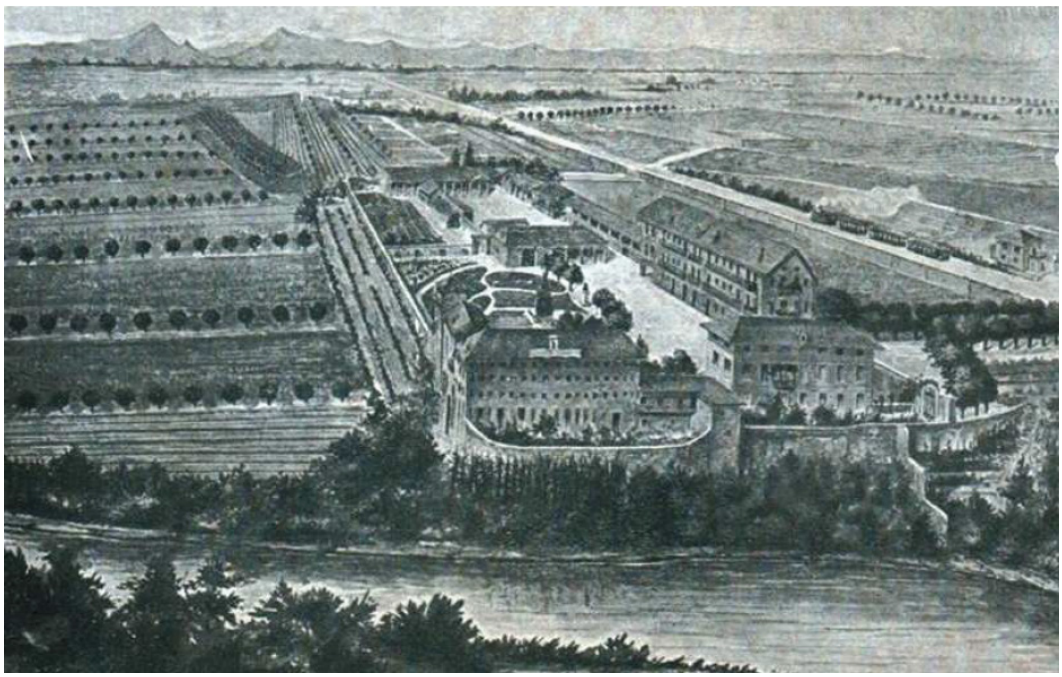


Figure 3.6 Castello di Lucento.
Source: S.n., "Castello di Lucento, Carta dell'assedio di Torino", Torino, Archivio Storico della Città di Torino, 1706.

3.2.2 From Industrial Stronghold to Urban Void

The nineteenth century brought a succession of changes in the site's functional use. In 1834, the complex was acquired by San Giovanni Hospital; however, this institutional use was short-lived, as in 1848 the site was occupied by the cotton dyeing works owned by Felice Bosio. During the 1858 Turin Exhibition, Bosio's enterprise received awards for its pioneering achievements in textile production and the implementation of innovative machinery.
The founding of Società degli Alti Forni, Fonderie ed Acciaierie di Terni dates back to 1884. Shortly thereafter, the company adopted the name Acciai Speciali Terni, before ultimately assuming the corporate name ThyssenKrupp Acciai Speciali Terni in 2004.
The first steel casting at the Turin plant took place in 1907. The enterprise, named Ferriere Piemontesi, had been established the previous year as an offshoot of the ironworks in Buttigliera Alta and Avigliana, which themselves originated from the French company Vandel & Co. (Ferriere-Sous-Jougne). The designated site for the plant covered an area of 40,000 m^2 in the Stazione Dora district.[1]
Despite the profound transformation of the site, a final residual trace of the riverbed prior to its rectification remained visible during those years.
At the end of the 1950s, Turin's metallurgical industry acquired an additional parcel of land: the Bonafous site, owned by a charitable foundation (opera pia).[2] Construction of the new plant began in 1960 with the development, in the southeastern corner of the site, of a department dedicated to the cold processing of stainless-steel strip. The facility was subsequently expanded to include a section for the cold rolling of carbon steel strip, consisting of five single-storey steel-framed sheds. In addition, service buildings, maintenance workshops, storage facilities, and power units were constructed. Particular attention should also be drawn to the acid-neutralization plant and its reinforced concrete basins, located east of the stainless-steel department, which remain a source of environmental concern today. By contrast, the land south of Corso Regina Margherita was used as a storage yard, or scrap yard, in connection with the eastern portion of the industrial area occupied by Berta Spezzarottami. Equally significant was the underpass constructed to provide both road and rail connections between the original industrial complex and the new departments in the Bonafous area. Located between Via Forlì and Via Pianezza, it measured 120 m in length, 12.8 m in width, and 5 m in height.[3]

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1 cfr, Novelli D., Bobbio M., Dirindin V., Giudice E., Laugeri C., "Thyssen Krupp l'inferno della classe operaia", s.l., Sperling & Kupfer editori S.p.a., 2008, prima ed., pg.46.

2 cfr, Novelli D., Bobbio M., Dirindin V., Giudice E., Laugeri C., "Thyssen Krupp l'inferno della classe operaia", s.l., Sperling & Kupfer editori S.p.a., 2008, prima ed., pg.48.

3 S.n., "Teksid - P.P.A. Torino", Torino, Archivio Fiat, s.d.

At this stage, the extensive expansion of the industrial area necessitated the elimination of the meander of the Dora Riparia River. However, no official documentation recording this intervention has been found, leaving the exact date of this morphological transformation uncertain. A few years later, this alteration contributed to the first environmental problems caused by the increased flow velocity of the adjacent stretch of the river.
In 1969, FIAT acquired Lucento Castle and its adjoining buildings, together with a strip of land along Via Pianezza intended for road widening and the construction of a new sports and cultural centre. This acquisition marked the final relocation of the activities of the Bonafous Institute, which had become completely surrounded by industrial facilities and residential development.

In 1977, FIAT decided to establish an autonomous company for its metallurgical operations. Consequently, the former Bonafous area, together with the Castle and its annexed buildings, passed into the ownership of Teksid.
Five years later, in an effort to increase production capacity and strengthen its competitiveness in international markets, Acciai Speciali Terni, following its acquisition by Finsider, established IAI (Industria Acciai Inox). "Four companies were established in Turin during that period: IAI, IAS, LAF, and Secosid [...]. LAF, which specialized in the cold rolling of carbon steel [...], merged into Bonafous."[1] Subsequently, within the framework of a state-led industrial reorganization programme, Acciai Speciali Terni incorporated IAI into Ilva, a multi-divisional state-owned holding company created to consolidate what were intended to become the principal centres of Italian steel production (Turin, Terni, and Taranto). "The public steel group, then the second largest in Europe by production volume, established three companies destined for privatization: ILP (Ilva Laminati Piani), with plants in Taranto, Turin, Novi, and Cornigliano; AST (Acciai Speciali Terni), with facilities in Terni and Turin; and Ilva in liquidation." [2]
In 1992, burdened by substantial debt and the loss of public subsidies prohibited under European Union regulations, Ilva was dismantled and sold off in stages. A significant portion of the group, including operations in Taranto, Genoa, Novi Ligure, part of the Turin plant, and Racconigi, was acquired by steel entrepreneur Emilio Riva in 1995.

1 Novelli D., Bobbio M., Dirindin V., Giudice E., Laugeri C., "Thyssen Krupp l'inferno della classe operaia", s.l., Sperling & Kupfer editori S.p.a., 2008, prima ed., pg. 50.

2 Novelli D., Bobbio M., Dirindin V., Giudice E., Laugeri C., "Thyssen Krupp l'inferno della classe operaia", s.l., Sperling & Kupfer editori S.p.a., 2008, prima ed., pg. 51.

3.2.2 From Industrial Stronghold to Urban Void

In 2002, a major fire broke out in the northwestern section of the factory when accumulated oil ignited in the underground tunnels beneath the main production facility, bringing operations to a halt. In Judgment No. 4123/2008, issued in February 2009, the Italian Court of Cassation officially classified the incident as the result of criminal negligence. Within a few years of this event, LAF was scheduled for closure following severe flood damage caused by the Dora River. Meanwhile, on the opposite side of the wall separating the two plants,once united within the Bonafous complex,Riva reassured the trade unions about the company's future before closing the facility shortly afterwards. As a consequence, only a small portion of what had once been Turin's vast steel-producing complex, AST, remained operational in the city. [1] The Turin plant was acquired,and thus permanently privatized,in 1994 by the German company Krupp Stahl AG (founded in Essen in 1811). Five years later, following its merger with Thyssen Stahl AG (founded in Duisburg in 1891), the company became ThyssenKrupp AG, one of the world's largest industrial conglomerates. In 2001, it acquired full ownership of the company's shareholding and, in 2004, renamed the company ThyssenKrupp Acciai Speciali Terni.

1 cfr, Novelli D., Bobbio M., Dirindin V., Giudice E., Laugeri C., "Thyssen Krupp l'inferno della classe operaia", s.l., Sperling & Kupfer editori S.p.a., 2008, prima ed., pg. 52-53.

3.2.3.1 Industrial Closure, Collective Memory, and Land Ownership

In 2007, a new industrial plan was presented that called for the closure of the Turin plant. Despite the unions' determined opposition, the outcome was unfavorable, as the Turin facility was considered too costly for the German group to maintain. The agreement signed in Rome on 7 June 2007 therefore provided for the closure of the ThyssenKrupp AST plant in Turin within fifteen months.[1]
The Ministry of Productive Activities, the Piemonte Region, local authorities, trade union representatives, and ThyssenKrupp were given time to relocate employees, dismantle the plant, remediate the site, and transfer the property in accordance with the area's urban planning and development strategies.
The closure, originally scheduled for the beginning of 2008, was tragically anticipated by the fire that broke out during the night of 5–6 December 2007, resulting in the deaths of seven workers. The trade unions immediately denounced the inadequate safety conditions at the plant, and the site, already destined for closure in 2008, became the focus of judicial investigations into what is widely regarded as one of the most serious workplace disasters in contemporary Italian history.
The lengthy legal proceedings that followed continue to divide public opinion. On one side are those who advocate preserving both the industrial heritage of the site and the memory of the workers who lost their lives; on the other are those who believe that the entire complex should be removed to allow the area to begin a new chapter.
Currently, Lucento Castle and its annexed buildings are owned by Piemongest, while the former ThyssenKrupp industrial complex remains under the ownership of Acciai Speciali Terni.

1 cfr, Novelli D., Bobbio M., Dirindin V., Giudice E., Laugeri C., "Thyssen Krupp l'inferno della classe operaia", s.l., Sperling & Kupfer editori S.p.a., 2008, prima ed., pg. 83.

Ownership of the site itself has also changed since that account: as of January 2022, Acciai Speciali Terni became part of the Gruppo Arvedi, an Umbrian steel conglomerate. The question of the site's future use has since moved from planning discussion into active litigation. On 18 March 2024, Turin's Consiglio Comunale approved a deliberazione di indirizzo initiating a variante urbanistica for the "Zona urbana di trasformazione Regina Margherita," identifying the designation of a "relevant and majoritarian" portion of the site as parco pubblico urbano as one of its objectives. Acciai Speciali Terni challenged this deliberation before the TAR Piemonte, arguing that the change of destination, sought after years of environmental characterization, remediation, and safety procedures already carried out on the site , could prejudice the area's redevelopment potential and economic value, and contesting the Comune's failure to properly weigh alternative urban destinations such as university facilities, sports infrastructure, museums, or theatres. On 24 July 2026, the TAR Piemonte declared the company's appeal inadmissible, ruling that the March 2024 deliberation constituted a "mero atto d'indirizzo politico", a mere statement of political intent, rather than an immediate modification of the site's urbanistic regime, and therefore could not yet be considered legally prejudicial to AST's position. The court's ruling, notably, did not itself approve the public-park proposal, nor bind the Comune or Consiglio to that specific destination in the eventual variante generale al Piano Regolatore, on which Palazzo Civico has been working for several years. The ruling nonetheless confirms the Comune's continued intent to pursue the site's designation, at least in part, as public green space integrated within the broader "infrastruttura verde" corridor along the Dora.[1]

1 Leonardo Dipaco, "Un parco pubblico nell'area ex Thyssen: il Tar respinge il ricorso della proprietà," La Stampa (Cronaca di Torino), July 27, 2026, 45.

In 2010, an article published in La Repubblica reported that potential investors were interested in redeveloping the area, although previous purchase offers had never been accepted by the owners of the plant.
The Councillor for Heritage (Assessore al Patrimonio), Mario Viano, issued an ultimatum to the German steel multinational:
"This is an area suitable for redevelopment along the lines of the Barriera di Milano model. To implement the project, however, it is necessary for the public administration to acquire the remaining area, namely that owned by ThyssenKrupp." [1]
Soprin S.p.A. and other companies controlled by Finpiemonte, together with Bonafous S.p.A., initiated the first redevelopment studies for the ThyssenKrupp–Bonafous area, covering approximately 30,000 m^2. In 2010, the Urban Center Torino engaged citizens in discussions on the first redevelopment proposals and preliminary urban design concepts.
In 2011, the ThyssenKrupp–Regina Margherita area was incorporated into the studies for Variant No. 221 of the Municipal Master Plan (P.R.G.), which concerned three urban transformation areas:

•Southwest: Sangone;
•Northwest: ThyssenKrupp–Regina Margherita;
•Northeast: Abbadia di Stura.

The objective of the planning initiative was to relocate advanced production activities while promoting environmental regeneration across these districts.

1 Longhin D., "Lo stabilimento Thyssen? Lo compriamo sottocosto. L'assessore Viano: i tedeschi hanno un debito con la città", Torino, maggio 2010, La Repubblica.

3.2.3.3 Municipal Policy Realignments and Master Plan Revisions

In November 2013, the Programme for Urban, Social, and Architectural Regeneration (P.R.U.S.A.) was adopted pursuant to Article 14 of Regional Law 20/2009 and its subsequent amendments. This initiative was introduced twenty years after the approval of the Municipal Master Plan, reflecting the growing awareness that obsolete industrial areas,no longer compatible with the surrounding landscape and urban environment,required a comprehensive redevelopment strategy.

Accordingly, Variant No. 221 proposed enhancing the landscape through a long-term vision of urban transformation that would be coherent with the surrounding context. Regarding the northwestern sector of Turin, the Variant,submitted jointly by ThyssenKrupp Acciai Speciali S.p.A. and Bonafous S.p.A. in August 2012,provided the opportunity to develop an integrated urban design strategy that considered both the redevelopment area and its relationship with the surrounding urban fabric, thereby initiating a transformation process capable of producing forms more compatible with the city's physical and social structure.

More generally,Variant promoted the recovery of spaces abandoned following industrial decline while preserving the productive vocation of the area and adapting it to contemporary social and economic needs.[1] Nevertheless, the approval process for Variant No. 221 was never completed.

The City of Turin subsequently proposed the recognition of an urban, social, and architectural regeneration programme pursuant to Article 14 of Regional Law 20/2009, aimed at improving the architectural, environmental, energy, and social quality of the area, thereby supporting the transformation of the built environment into forms compatible with the surrounding urban and social fabric.[2]

With Resolution No. 46 of 22 May 2017, the City Council initiated a comprehensive review of the Municipal Master Plan (P.R.G.), recognizing it as a strategic instrument for achieving the city's urban regeneration objectives. Consequently, the City Council proposed revoking the previous resolution concerning the study area, referring to City Council Resolution No. 122 of 9 December 2013 (mecc. No. 2013-05479/009), which had approved the perimeter and planning guidelines for the Programme for Urban, Social, and Architectural Regeneration (P.R.U.S.A.) relating to the northwestern quadrant of Turin.

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1 S.n., "Programma di Rigenerazione Urbana, sociale e architettonica (ai sensi dell'art. 14 della legge 20/2009 e S.M.I.9 Area Thyssen-Bonafous-Castello di Lucento, Città di Torino, novembre 2013. (Documento)

2 cfr., S.n., "Area Thyssen. La memoria di un luogo simbolo, il parco e un nuovo quartiere.", s.l., maggio 2018, La Repubblica.

3.2.3.3 Municipal Policy Realignments and Master Plan Revisions

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This area, bounded by Corso Regina Margherita, Via Pietro Cossa, Via Pianezza, and the Dora Riparia River, covers approximately 350,300 m^2 and includes the former ThyssenKrupp industrial complex, Lucento Castle, and the surrounding residential developments built during the 1990s. The planning guidelines envisaged residential development integrated with the adjacent neighbourhoods, the concentration of tertiary and commercial activities along Corso Regina Margherita, and the restoration of the extensive green corridor extending from Lucento Castle to Corso Regina Margherita and the banks of the Dora Riparia River.[1]

The revocation of the previous planning framework was intended to facilitate future planning instruments, including urban planning variants, building permits, and planning exemptions required for subsequent redevelopment projects.

The areas included within this planning framework all share the need for environmental, economic, and social regeneration. The total gross floor area (SLP) envisaged amounts to approximately 153,300 m^2. Through Resolution No. 46 of 22 May 2017 (mecc. 2017-01354/009), the City Council therefore approved new planning guidelines as part of the comprehensive review of the Municipal Master Plan, reaffirming urban regeneration as one of the principal strategic objectives of the new municipal administration.

1 Montanari G., Golzio S., "Deliberazione del consiglio comunale proposta dalla G.C. 18 luglio 2017 con oggetto "programmi di rigenerazione urbana, sociale esercizi tettonica-P.R.U.S.A.-art.14 della L.R. n.20/2009, art.17bis della LUR e programmi integrati di riqualificazione urbanistica, edilizia e ambientale. Pr. In. - L.R. n.18/1996. Revoca", Torino, 2017.

3.2.4 Progress

In the 1990s, following the crisis of the Fordist city and the decline of the industrial sector, which resulted in the creation of extensive urban voids, Turin launched a series of initiatives as part of a broader strategy of urban recovery and regeneration. The principal drivers of these initiatives were the adoption of a new Master Plan (Piano Regolatore Generale, PRG) in 1995 and, subsequently, the 2006 Winter Olympic Games. These two milestones definitively marked the end of Turin's industrial era and the beginning of the search for a new urban identity. Since then, successive municipal administrations have promoted numerous initiatives aimed at shaping the city's future.

In 2008, Soprin S.p.A. and other companies controlled by Finpiemonte, together with Bonafous S.p.A., initiated the first redevelopment studies for the Thyssen–Ilva area. During the same period, Urban Center Torino collaborated with the City of Turin to develop preliminary urban design concepts and morphological scenarios. For the first time, the ThyssenKrupp–Bonafous area was conceived as a strategic environmental corridor linking Parco Dora (Spina 3) with Parco della Pellerina.

On 10 February 2009, Turin joined the Covenant of Mayors, the principal European initiative bringing together local and regional authorities committed to improving energy efficiency and increasing the use of renewable energy sources within their territories. Promoted by the European Commission, the initiative sought to encourage a shift in the approach of municipal administrations in accordance with the objectives of the Kyoto Protocol. Its goal was to exceed the European target of reducing CO_2 emissions by 20% by 2020 compared with 1990 levels.

Turin consequently adopted the objective of becoming a city capable of combining environmental sustainability with technological innovation, clean mobility, and an improved quality of life through a low-carbon development model. This strategy was to be pursued through investment in innovation while maintaining both the quality and the quantity of services provided to citizens and businesses.

To support this new development model, the City of Turin established the Turin Smart City Foundation for Sustainable Development in October 2011. The Foundation, a non-profit organization, was created to develop, promote, and disseminate projects, studies, and research aimed at fostering environmental awareness and energy sustainability among citizens, public institutions, and economic stakeholders. In particular, it seeks to promote the efficient management of local energy and environmental resources through improved energy efficiency, the wider adoption of renewable energy sources, and participation in European Union funding programmes.[1]

1 cfr, S.n., "Covenanto of Major for climate Change ", s.l., 2009, <https:// www.covenantofmayors.eu/about/ covenant-community/signatories/keyactions. html?scity_id=1842>. (WebSite, Last Version: 21 July 2023)

3.2.4 Progress

As Piergiorgio Vitillo observed in 2010:
"In recent decades, we have witnessed the progressive decline of the public dimension of city governance, while at the same time culpably neglecting territorial rebalancing policies, based primarily on the development of the mobility and public transport system. One of the foreseeable and deplorable effects of this decline has been the explosion of very low-quality settlement, residential, and productive sprawl (inefficient sprawl), which characterizes almost all of the regions of Central-Northern Italy, with unsustainable infrastructural, environmental, and ecological costs." [1]
Vitillo drew attention to the impact of uncontrolled urban expansion on territories whose environmental systems still play a dominant role. This perspective is consistent with the principles expressed in Draft Law (DdL) No. 86, which defines soil as a "common good and a non-renewable resource that performs essential functions and provides ecosystem services, including the prevention and mitigation of hydrogeological instability, climate change mitigation and adaptation, and the reduction of soil erosion, loss of organic matter, and biodiversity loss." [2]
As of August 2026, the former ThyssenKrupp site remains, in the words of a recent La Stampa investigation into Turin's abandoned industrial estate, "la ferita più profonda" (the deepest wound) of the city's industrial past. The article confirms that the site's long-anticipated environmental remediation, repeatedly solicited by the Comune , has still not begun, and that the area remains formally involved in a transformation project envisaging residential units, student housing, and a public park, a process the article describes as proceeding "a rilento" (slowly). This is consistent with the broader pattern documented across Turin's post-industrial estate: the same reportage surveys several other long-stalled ex-fabbriche across the city, despite the city's new PRG explicitly identifying "riuso adattivo" (adaptive reuse) of disused industrial buildings as one of its priority strategies for transformation.[3]

1 Vitillo P., "Aree dismesse e rinascita delle città. Un nuovo modello di sviluppo cerca di integrare urbanistica ed ecologia. Il recupero delle aree industriali dismesse è un aspetto decisivo per il futuro delle città italiane. In questo assumono un ruolo chiave i programmi urbani complessi.", Milano, Ecoscienza, 2010, Numero 3.

2 De Petris, Errani, Grasso e Laforgia, "Disegno di Legge n. 86", Roma, marzo 2018.

3 Andrea Joly, "Il 'riuso adattivo': la leva nel Prg per la rinascita delle ex fabbriche," La Stampa (Cronaca di Torino), August 18, 2026, 33.

3.2.4 Progress

PERIOD	EVENT	HISTORICAL PHASE
1300–1389	Construction of Lucento Castle, originally serving as a Savoy hunting lodge.	Medieval
Early 1700s	Silk spinning mill established beside the Dora Riparia, introducing industrial activity.	Proto-industrial
1706	During the Siege of Turin, Lucento Castle became an important military outpost.	Military
1834	Acquisition by San Giovanni Hospital.	Institutional
1848	Felice Bosio established a cotton dyeing factory.	Industrialization
1858	Bosio's textile production was awarded at the Turin Exhibition.	Industrial Growth
1884	Foundation of Società degli Alti Forni, Fonderie ed Acciaierie di Terni.	Italian Steel Industry
1906	Establishment of Ferriere Piemontesi in Turin.	Steel Industry
1907	First steel casting at the Turin plant.	Steel Production
Late 1950s	Acquisition of the Bonafous area for industrial expansion.	Expansion
1960	Construction of the stainless-steel cold processing plant and related industrial facilities.	Industrial Expansion
1960s	Elimination of the Dora Riparia meander; construction of the road/rail underpass connecting both factory areas.	Landscape Transformation
1969	FIAT purchased Lucento Castle and surrounding land.	Ownership Change
1977	FIAT created Teksid; Bonafous area transferred to the new company.	Industrial Reorganization
1982	Creation of Industria Acciai Inox (IAI); restructuring of steel production.	Industrial Reorganization
1992	Dissolution of Ilva due to financial crisis.	Industrial Decline
1994	Turin plant acquired by Krupp Stahl AG (privatization).	Privatization
1995	Part of the former Ilva acquired by Emilio Riva.	Privatization
1999	Merger of Krupp and Thyssen forming ThyssenKrupp AG.	Corporate Change
2001	ThyssenKrupp became sole owner of the Turin plant.	Corporate Consolidation
2002	Major fire halted production; later recognized as resulting from criminal negligence.	Industrial Accident
2004	Company renamed ThyssenKrupp Acciai Speciali Terni.	Corporate Identity
7 June 2007	Agreement was signed to permanently close the Turin plant.	Closure
5–6 Dec 2007	Fatal ThyssenKrupp fire killed seven workers.	Historic Tragedy
2008	First redevelopment studies promoted by Soprin, Finpiemonte and Bonafous.	Regeneration Begins
2009	Turin joined the Covenant of Mayors; regeneration and sustainability policies strengthened.	Sustainability
2010	Urban Center Torino presented first redevelopment concepts; area envisioned as ecological corridor connecting Parco Dora and Parco della Pellerina.	Urban Regeneration
2011	Area included in Variant No. 221 of the Municipal Master Plan.	Urban Planning
2011	Turin Smart City Foundation established.	Sustainability
2013	Adoption of the P.R.U.S.A. regeneration programme.	Urban Regeneration
2017	Municipal Master Plan revised; previous planning framework revoked and new regeneration guidelines approved.	Current Planning
January 2022	Acciai Speciali Terni acquired by Gruppo Arvedi.	Ownership Change
18 March 2024	The Municipality of Turin approves a policy resolution for the "Regina Margherita" urban planning amendment, proposing to designate part of the site as an urban public park.	Urban Regeneration
24 July 2026	TAR Piemonte declares AST's appeal against the deliberation inadmissible, upholding the Comune's course without yet binding it to a final destination.	Urban Regeneration

TIMELINE

Medieval and Agricultural Period · Early Industrial Development · Heavy Industrial Expansion · Industrial Decline and Privatization · ThyssenKrupp Disaster · Urban Regeneration and Planning

Table 3.1 Historical timeline of the transformation of the former ThyssenKrupp–Bonafous site, illustrating its evolution from the medieval period to the contemporary urban regeneration initiatives. Source: Author's elaboration based on archival document, municipal planning reports, and bibliographic sources.

3.3 Historical Synthesis

The historical evolution of the former ThyssenKrupp area illustrates the continuous transformation of the site in response to changing economic, social, and political conditions. Over the centuries, the area has successively fulfilled military, agricultural, institutional, industrial, and residential functions, each leaving tangible traces within the urban landscape. The rise and decline of heavy industry profoundly shaped both the physical structure of the site and the identity of the surrounding neighborhood, while the 2007 ThyssenKrupp fire transformed the area into a place of collective memory, extending its significance beyond its industrial heritage. Since the closure of the plant, numerous planning initiatives have sought to redefine the site's role within the city, promoting environmental restoration, improved urban connectivity, and new forms of mixed-use development. Although many of these proposals have remained unimplemented, they demonstrate a shared recognition of the strategic importance of the area for the northwestern sector of Turin. Consequently, understanding the historical processes that have shaped the site provides the essential foundation for the analyses and regeneration proposal developed in the following chapters, where both the site's industrial legacy and its contemporary urban challenges are considered as opportunities for future transformation.

3.3 Historical Synthesis



Diagram 3.1 Historical Timeline
Source: Author's elaboration

4 Case Study

4.1 Precedents for Post-Industrial Regeneration and Transit-Oriented Design

The redevelopment of the former ThyssenKrupp fabrica in the Lucento–Vallette district of Turin poses a dual design challenge: how to reactivate a large, disused industrial site as a meaningful piece of the city, and how to accommodate a program as infrastructurally demanding as an intercity bus terminal without severing that site from its surrounding urban fabric. Neither problem is unique to Turin. Across Europe, cities confronting the decline of heavy industry and the obsolescence of mid-century transport infrastructure have developed a substantial body of built precedent from which strategic lessons can be drawn.

This chapter examines four case studies, organized into two thematic groups that correspond to the two core challenges of the ThyssenKrupp project. The first group, Zeche Zollverein in Essen and Gasometer City in Vienna,addresses the regeneration of post-industrial landscapes at the scale of the district, focusing on how retained industrial fabric can be reprogrammed to support dense, mixed-use urban life while preserving its historical legibility. The second group, the Kamppi Center in Helsinki and King's Cross in London,addresses the specific problem of integrating high-capacity transport infrastructure, namely bus and rail terminals, within commercial, residential, and civic environments without allowing the technical demands of transit to dominate or degrade the public realm around it.

Each case study is structured in four parts: an overview of the site's historical and spatial significance; an analysis of the architectural and urban strategy that guided its regeneration; a description of its current functional and programmatic organization; and, finally, a set of implications distilled specifically for the ThyssenKrupp site. This last section is the analytical core of the chapter: rather than treating these precedents as isolated examples of good design, the chapter reads them as a source of transferable strategies,concerning circulation, structural intervention, vertical stratification, and the relationship between infrastructure and public space,that can inform the design proposal developed in the following chapters. Taking together, the four cases demonstrate that the twin ambitions of the ThyssenKrupp project, heritage-conscious regeneration and infrastructural integration, are not only compatible but have already been tested, at scale, in comparable European contexts.

4.2 Case Studies in Post-Industrial Regeneration

4.2.1 Zeche Zollverein, Essen (Germany): Preservation Through Adaptive Reuse

4.2.1.1 Overview and Spatial Significance

The Zeche Zollverein Coal Mine Industrial Complex, located in the Ruhr region of North Rhine-Westphalia, Germany, serves as a primary international benchmark for the regeneration of large-scale, post-industrial landscapes. Operating as a coal mine from 1851 and a coking plant until its final closure in 1993, the site underwent a paradigmatic transition from the industrial heartland of German steel production to a multifunctional cultural and educational precinct. In 2001, UNESCO inscribed the complex as a World Heritage site, cementing its status as a monument to industrial labor and a cornerstone of regional identity.[1]

1 www.goethe.de/prj/ger/en/wow/umw/26161465.html

4.2 Case Studies in Post-Industrial Regeneration

4.2.1 Zeche Zollverein, Essen (Germany): Preservation Through Adaptive Reuse

4.2.1.2 Regeneration Strategy: The "Minimal Intervention" Approach

The site's successful revitalization was driven by a masterplan (2002) led by Rem Koolhaas/OMA, which prioritized "preservation through conversion." Unlike traditional clearance strategies, this approach sought to retain the industrial skeleton,including the iconic conveyor structures, shaft towers, and blast furnaces,while inserting new programmatic functions. A critical design intervention was the transformation of the former coal-washing plant into the Ruhr Museum (2010) by Foster + Partners. The architects introduced a dramatic external escalator to facilitate access, intentionally mirroring the historical path of coal. By ensuring that new structural insertions (typically in glass and steel) remained visually distinct from the original brick and steel fabric, the masterplan maintained the legibility of the site's historical layers, allowing contemporary use to coexist with historical artifact.[1]

1 www.route-industriekultur.ruhr/en/ankerpunkte/unesco-welterbe-zollverein/

4.2.1 Zeche Zollverein, Essen (Germany): Preservation Through Adaptive Reuse

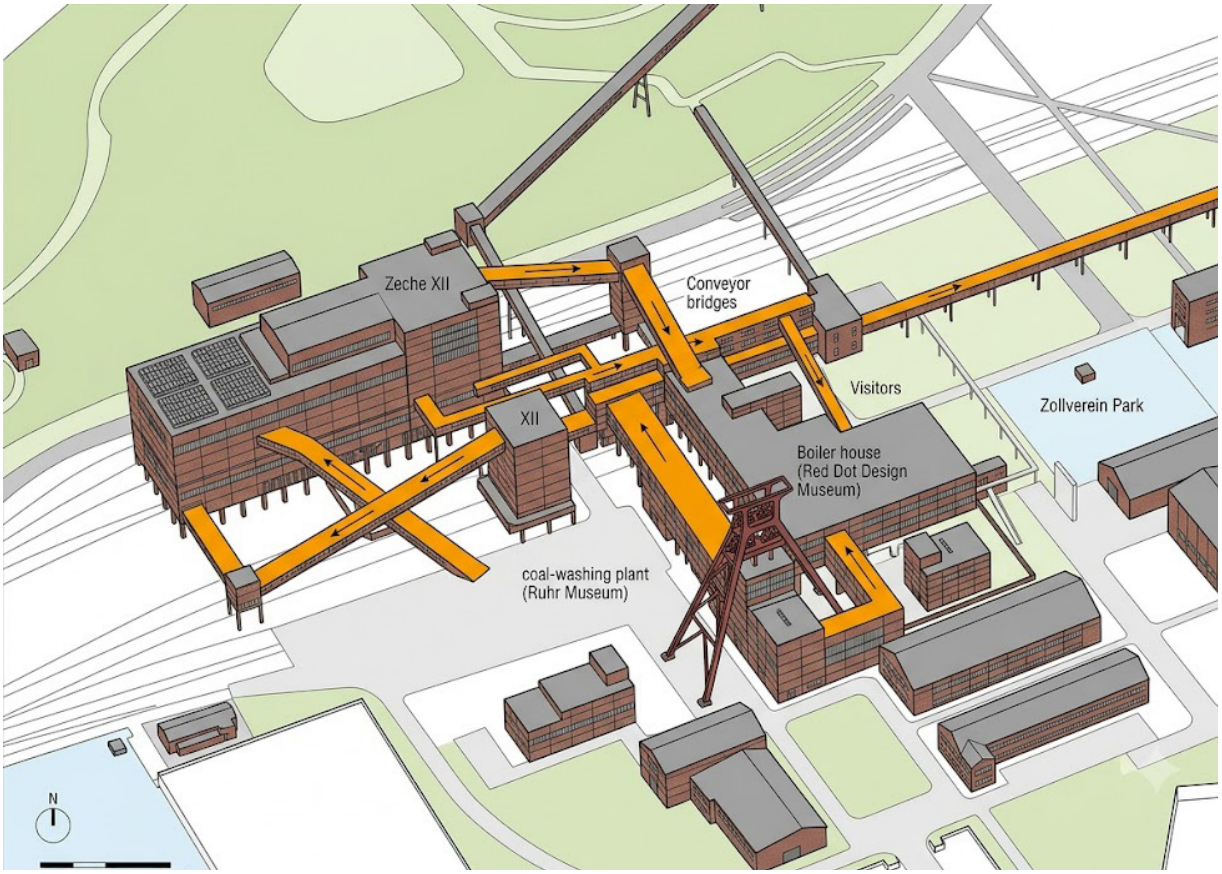


Figure 4.1Axonometric site plan of the Zeche Zollverein complex highlighting the primary industrial circulation spines, conveyor bridges, and repurposed programmatic nodes.
Source: Author's elaboration based on Conceptual diagram adapted from the OMA/Rem Koolhaas 2002 masterplan layout

4.2.1 Zeche Zollverein, Essen (Germany): Preservation Through Adaptive Reuse

4.2.1.3 Functional Integration and Current Programming

Today, Zollverein functions as a polycentric cultural hub across its 100-hectare footprint. The integration of the Ruhr Museum, the Red Dot Design Museum (housed in the former boiler house), and the Folkwang University of the Arts demonstrate the feasibility of concentrating disparate public programs within massive, re-purposed industrial volumes. With over 1.5 million annual visitors, the site exemplifies how industrial heritage can anchor tourism, research, and community engagement.[1]

1 www.zollverein.de/zollverein-unesco-world-heritage-site/history/

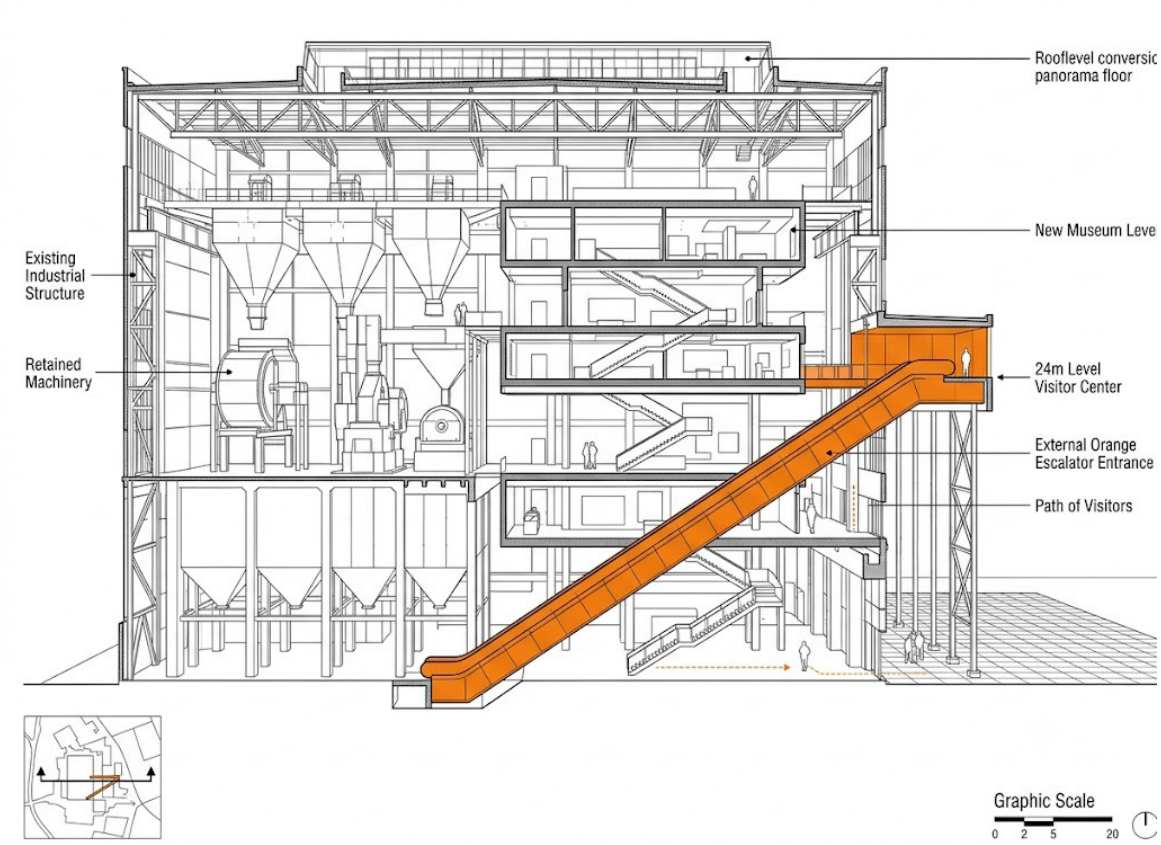


Figure 4.2 Architectural cross-section of the repurposed Coal-Washing Plant (Kohlenwäsche), demonstrating the insertion of the Ruhr Museum levels within the preserved industrial infrastructure and the external visitor escalator sequence. Source: Author's elaboration based on the Foster + Partners and OMA architectural conversion strategies.

The Zollverein model offers three strategic takeaways for the regeneration of the ThyssenKrupp ex fabrica site:

1.District-Scale Cohesion: The case demonstrates that large industrial precincts need not be subdivided into isolated plots. Instead, disparate uses,from academic to exhibition spaces,can coexist within a unified urban design framework.

2.Infrastructure as Circulation: By re-purposing existing conveyor bridges as the primary pedestrian spine, Zollverein provides a precedent for the project. This strategy transforms remnants of industrial logistics into the backbone of public movement, reducing the need for new, intrusive circulation paths.

3.Heritage and Public Function: The successful balance between UNESCO-level conservation and functional, high-traffic public space suggests that even if only specific ThyssenKrupp structures are preserved, they can serve as catalysts for the broader site's economic and social vitality.

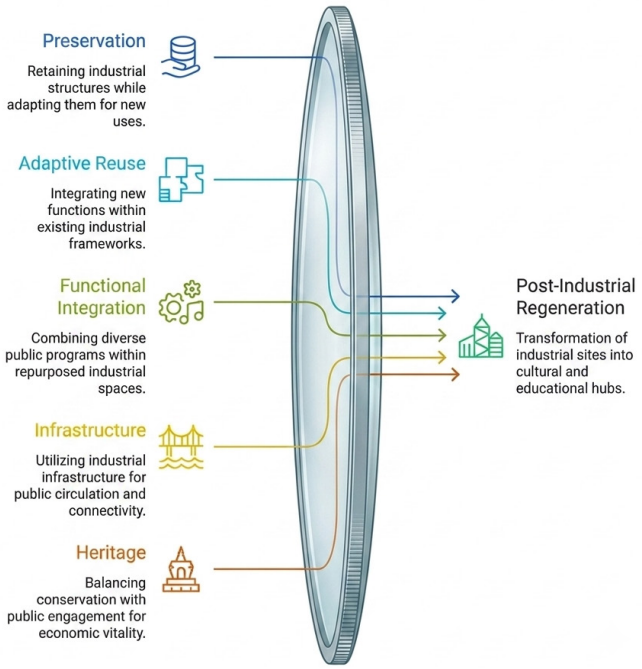


Diagram 4.1. Conceptual diagram of the key strategies leading to post-industrial regeneration.
Source: Author's elaboration

4.2.2 Gasometer City, Vienna (Austria): Vertical Stratification and Mixed-Use Densification

4.2.2.1 Overview and Spatial Significance

Gasometer City, located in the Simmering district of Vienna, Austria, represents a seminal precedent for the internal adaptive reuse of heavy industrial containers into a high-density, vertical urban community. Constructed between 1896 and 1899, the facility originally comprised four massive, cylindrical brick gasholder structures designed to store the city's coal gas. Following their decommissioning in 1984 due to shifts in energy technology, the historic facades were protected as architectural monuments, leaving four expansive, hollow brick shells. In 1995, the City of Vienna initiated a comprehensive urban regeneration project to transform the vacant industrial enclave into a vibrant, mixed-use extension of the urban fabric.[1]

1 Studio MATRX. "Gasometer City: How Four Architects Built a Town Inside Four Gas Tanks." www.studiomatrx.org/guides/gasometer-city

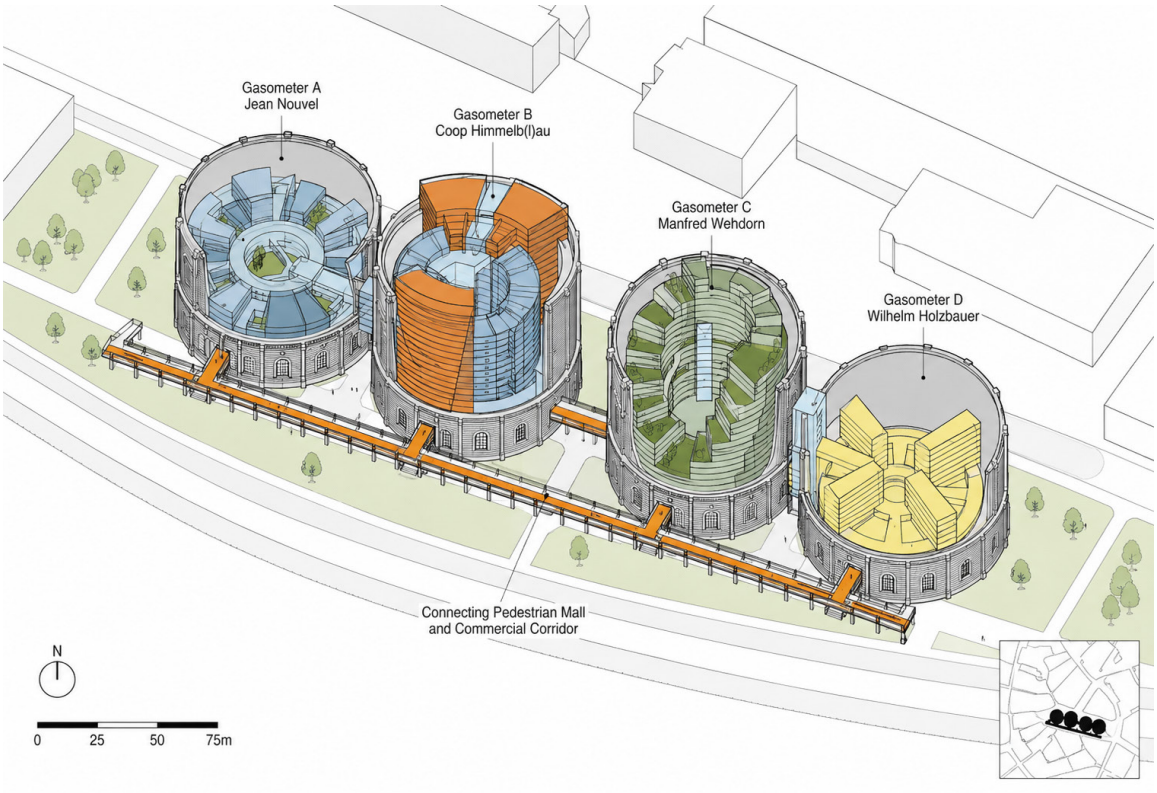


Figure 4.3 Axonometric diagram visualizing the physical connection of the four repurposed Gasometer volumes via a continuous lower-level pedestrian corridor and the diverse internal architectural structures (colors) inserted into the historic masonry shells.
Source: Author's elaboration based on the City of Vienna Gasometer City project documentation[1]

1 Ateliers Jean Nouvel. "Gasometer A - Project Documentation." www.jeannouvel.com/en/projects/gazometre/

4.2.2.2 Regeneration Strategy: Architectural Pluralism and Structural Insertion

The defining design strategy of Gasometer City was the preservation of the historic masonry shells, within which entirely new, structurally independent buildings were inserted. To promote architectural diversity and avoid stylistic monotony across the large-scale complex, the interior redevelopment of each of the four 70-meter-high cylinders was assigned to a different prominent architect:

•Gasometer A (Jean Nouvel): Utilized a scheme focused on light and transparency, creating a series of segmented indoor courtyards and employing large glass segments to reflect the historic brickwork.[1]

•Gasometer B (Coop Himmelb(l)au): Introduced a dramatic, 22-story "shield" building attached to the exterior of the historic brick cylinder, alongside a new free-standing apartment structure inside the drum.[2]

•Gasometer C (Manfred Wehdorn): Approached the interior with a focus on terraced greenery and tiered residential structures that step back to maximize natural light penetration.

•Gasometer D (Wilhelm Holzbauer): Structured the interior layout around three radiating residential wings organized around a central pedestrian courtyard, emphasizing clear internal sightlines.[3]

The four structures were linked physically and programmatically through an indoor pedestrian mall corridor at the lower levels, establishing a unified, weather-protected public spine across the entire complex.

1 www.jeannouvel.com/en/projects/gazometre/

2 coop-himmelblau.at/projects/apartment-building-gasometer-b/

3 www.wbv-gpa.at/projekt/guglgasse-8/

4.2.2 Gasometer City, Vienna (Austria): Vertical Stratification and Mixed-Use Densification

4.2.2.3 Functional Integration and Vertical Zoning

Gasometer City operates as a self-sustaining "city within a city," accommodating a complex mix of programs through precise vertical stratification. The programming is zoned by elevation to balance public accessibility with residential privacy:

•Ground and Lower Levels (Public/Commercial Zone): Houses a vast shopping mall, restaurants, offices, and an entertainment complex including a cinema and a 4,200-capacity event hall.

•Mid-Levels (Intermediate/Community Zone): Dedicated to commercial office spaces, student housing, and community facilities.

•Upper Levels (Private/Residential Zone): Accommodates approximately 800 apartments, situated at the top of the cylinders to capture natural daylight through the historic window apertures and newly inserted glass roofs.

By combining public mass transit access (via the U3 U-Bahn station) directly into the basement levels with a high-density residential and commercial mix above, the project engineered a continuous, 24-hour cycle of activity.[1]

1 Studio MATRX. "Gasometer City: How Four Architects Built a Town Inside Four Gas Tanks." www.studiomatrx.org/guides/gasometer-city

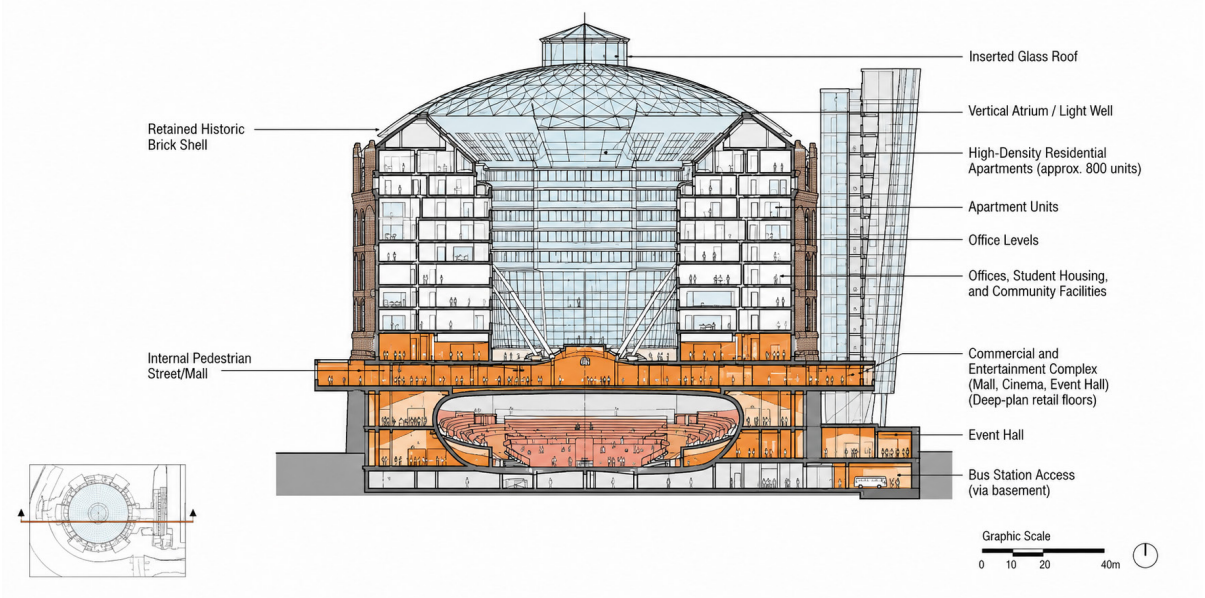


Figure 4.4 Vertical cross-section detailing the stratification of functions within the repurposed Gasometer structure, showing the internal independent vertical community inserted into the historic masonry perimeter.
Source: Author's elaboration based on the City of Vienna and Coop Himmelb(l)au structural strategies.

4.2.2 Gasometer City, Vienna (Austria): Vertical Stratification and Mixed-Use Densification

4.2.2.4 Implications for the ThyssenKrupp Site

The spatial and programmatic strategies implemented in Vienna provide three critical insights for the redevelopment of the ThyssenKrupp ex fabrica site:

1.Vertical Programmatic Stratification: Gasometer City demonstrates how deep-plan, high-volume industrial envelopes can be organized vertically. For the ThyssenKrupp site, this method provides a model for stacking public infrastructure,such as the bus terminal functions,at the ground level, while isolating private programs like a hotel or residential spaces in the quieter levels above.

2.Architectural Diversity Within a Shared Framework: The use of multiple design voices within a uniform historic perimeter shows how a large site can achieve visual and functional variation without fracturing its overarching industrial identity. This can guide how the design treats different sections.

3.The Subsidized Enclosure as a Public Realm: The creation of an internal, climate-controlled pedestrian street linking the individual volumes highlights a method for maintaining public connectivity through massive structural blocks, ensuring the development remains integrated into the surrounding city transit networks.

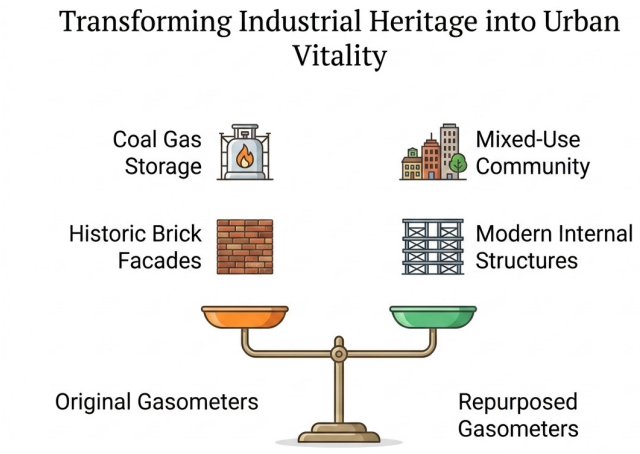


Diagram 4.2. Conceptual diagram illustrating the transformation of the Gasometers from industrial infrastructure to a mixed-use urban complex.
Source: Author's elaboration

4.3 Bus and Transport Terminals with Extra Facilities

4.3.1 Kamppi Center, Helsinki (Finland): Multi-Level Transit Infrastructure and Urban Integration

4.3.1.1 Overview and Spatial Significance

The Kamppi Center (Kampin keskus), situated in the dense downtown core of Helsinki, Finland, represents a premier global benchmark for a high-capacity, multi-level public transport terminal seamlessly embedded within a commercial, residential, and social infrastructure matrix. Opened in stages between 2005 and 2006, the project was the largest singular construction development in Finland's history. The redevelopment transformed a fractured, open-air bus yard into an ultra-dense, 37,000 square-meter subterranean and sub-surface transit node. It handles over 200,000 transit passengers daily, effectively demonstrating how essential municipal transport functions can serve as the economic and architectural anchor for a multi-layered urban center.[1]

1 "Kamppi Center, Helsinki: Visitor Guide & Urban Development." audiala.com/en/finland/helsinki/kamppi-center

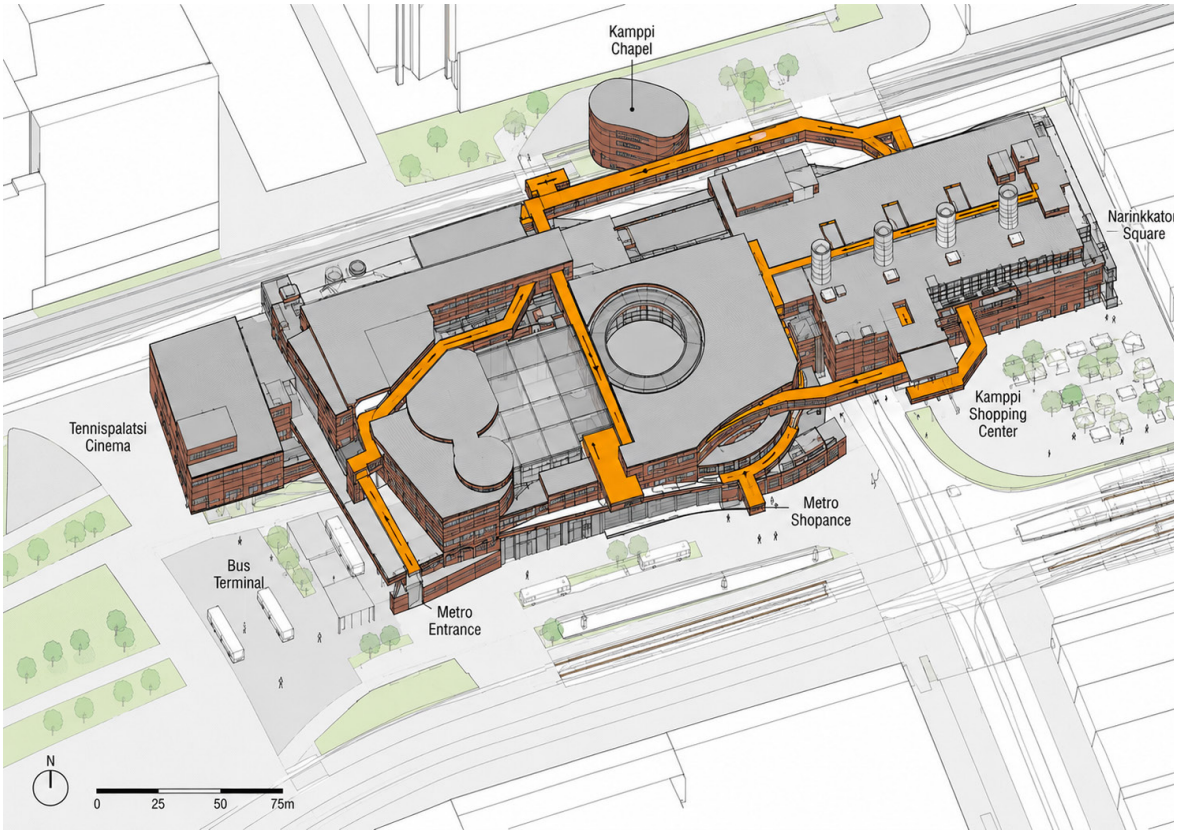


Figure 4.5 Three-dimensional axonometric diagram mapping passenger flow from the public plazas through the central shopping atriums to the enclosed subterranean bus platforms.
Source: Author's elaboration based on the EP-Logistics transit simulation models.

4.3.1.2 Architectural Vision and Engineering Strategy

Designed by a consortium of architects, with Juhani Pallasmaa acting as the chief designer, the complex is notable for its Structuralist and Constructivist architectural language, operating conceptually as a highly synchronized urban machine. Because the site sat directly in the historic center, horizontal expansion was impossible; the architectural solution relied entirely on advanced excavation and highly complex vertical underground stacking.[1]
To optimize high-volume pedestrian and vehicular flows, advanced computer simulations were utilized during the planning phases. This ensured that the heavy exhaust emissions, vibrations, and noise generated by thousands of daily bus movements were completely contained within subterranean concrete volumes, isolating them entirely from the public plazas, residential zones, and retail spaces above ground.

1 EP-Logistics. "Simulation and Transit Planning of Kamppi Center." ep.fi/en/portfolio/simulation-of-kamppi/

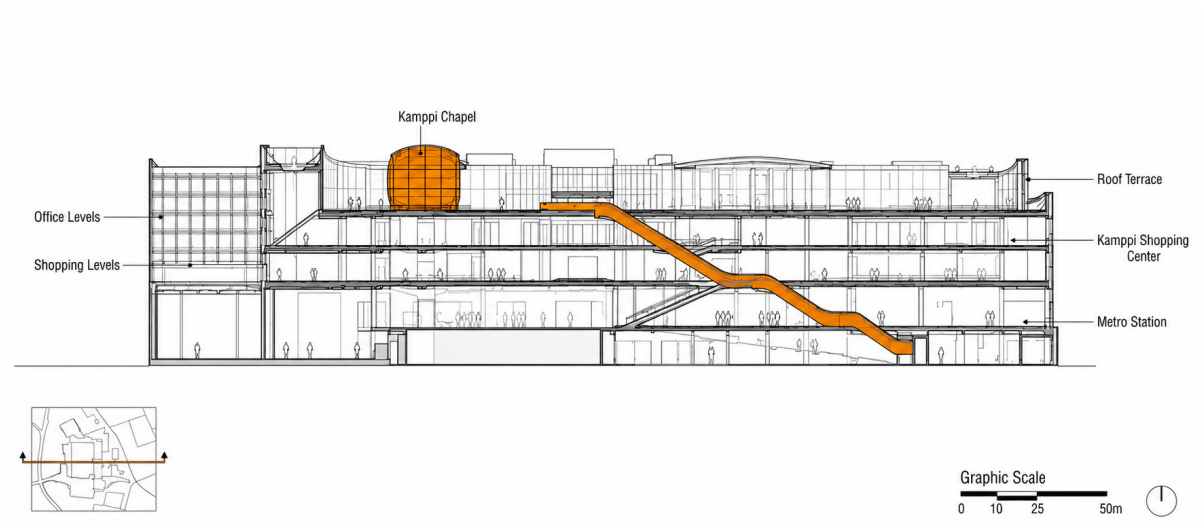


Figure 4.6 Analytical vertical cross-section of the Kamppi Center, illustrating the subterranean integration of the metro line, intercity coach terminal, and local bus deck beneath the above-ground commercial and residential layers.
Source: Author's elaboration based on the Juhani Pallasmaa & Associates architectural design files.

Kamppi Center achieves its intense functional variety through a rigorous, seven-story vertical stratification scheme that organizes public mass transit at the lower levels and private urban life at the upper levels:

•Level 2 (30 Meters Sub-surface): Houses the pre-existing Kamppi Metro Station, acting as the high-capacity rail foundation of the hub.
•Level 1 / Level C (6 Meters Sub-surface): Accommodates the long-distance/ intercity coach terminal. This underground hall features 32 platforms separated from the climate-controlled passenger waiting lounge by glass automated doors that open only when a coach is docked, keeping fumes out of consumer zones.
•Level E (Ground Level): Functions as the local/city bus terminal, managing up to 900 daily bus departures across 17 platforms. This level directly interfaces with the primary public entry plazas (Narinkkatori Square).
•Levels 1 to 5 (Above-Ground Commercial Core): Contains a six-floor shopping center, supermarkets, dining precincts, and public services, organized around wide multi-story internal atriums that flood lower transit levels with natural daylight.
•Upper Crown (Private Zone): Integrates independent, high-class office spaces facing the streets and 99 residential apartments surrounding quiet rooftop gardens, insulated from the bustling transit hubs beneath.[1]

1 Helin & Co Architects / ArchDaily. "Aedes Architecture Forum: Helsinki Urban Projects and the Kamppi Center." www.archdaily.com/1034053/aedes-architecture-forum-in-berlin-presents-exhibition-on-helin-and-cos-helsinki-urban-projects

4.3.1.4 Implications for the ThyssenKrupp Site

The vertical mechanics of the Kamppi Center provide three fundamental strategic lessons for designing the bus terminal section of the ThyssenKrupp site in Turin:

1.Subterranean Transit and the Recovered Ground Plane: Kamppi proves that placing bus terminals and maneuvering yards partially underground or inside enclosed decks liberates valuable ground-level and rooftop real estate. For the ThyssenKrupp site, this strategy allows the heavy footprint of a bus terminal to exist without severing pedestrian continuity or ruining the aesthetics of the adjacent hotel and cultural spaces.

2.Environmental Separation via Gate-to-Platform Mechanics: The use of sealed, indoor passenger terminals with automated glass boarding gates offers a template for how to handle passenger staging safely. It guarantees that commuters moving between the bus terminal, commercial spaces, and hotel are completely insulated from vehicular exhaust and noise.

3.The Transport Hub as an Urban Catalyst: Rather than treating a bus station as an isolated, utilitarian infrastructure piece, Kamppi demonstrates how integrating transit directly with daily commercial and community life generates a constant stream of foot traffic. This continuous flow can naturally sustain the business ecosystem of the proposed hotel and repurposed cultural pavilions.

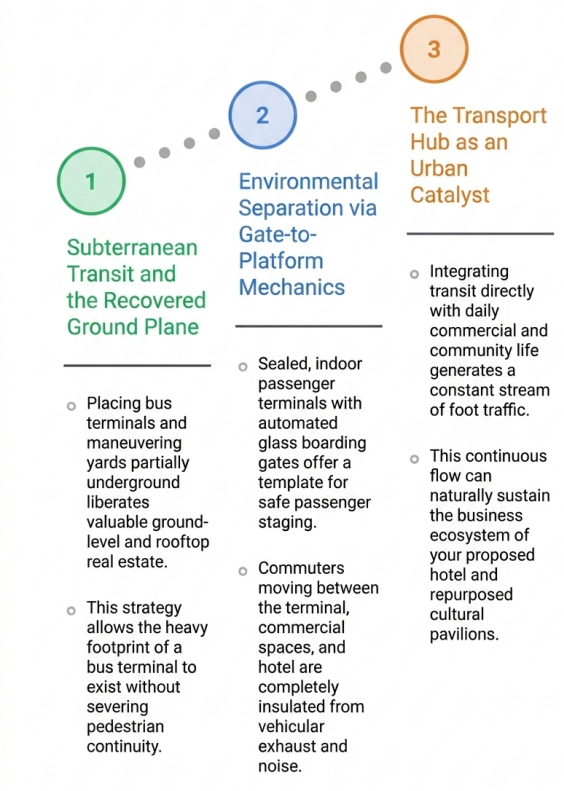


Diagram 4.3. Strategic design principles and urban development implications for the ThyssenKrupp site development from Kamppi Center.
Source: Author's elaboration.

4.3 Bus and Transport Terminals with Extra Facilities

4.3.2 King's Cross, London (UK): Infrastructure-Led Regeneration and Public Realm Connectivity

4.3.2.1 Overview and Spatial Significance

The redevelopment of King's Cross in central London, UK, stands as one of the most significant European precedents for infrastructure-led urban regeneration and Transit-Oriented Development (TOD). Encompassing a 27-hectare site that was once a heavily polluted, disused rail yard and industrial goods depot, the project transformed the precinct into a high-density, carbon-neutral neighborhood. The regeneration program successfully integrated three major transport layers,six London Underground lines, two domestic railway termini (King's Cross and St Pancras), and an international high-speed rail terminal (Eurostar),to serve as the structural anchor for a vast network of commercial, residential, and educational facilities.[1]

1 Allies and Morrison. "King's Cross Masterplan Portfolio." www.alliesandmorrison.com/projects/kings-cross

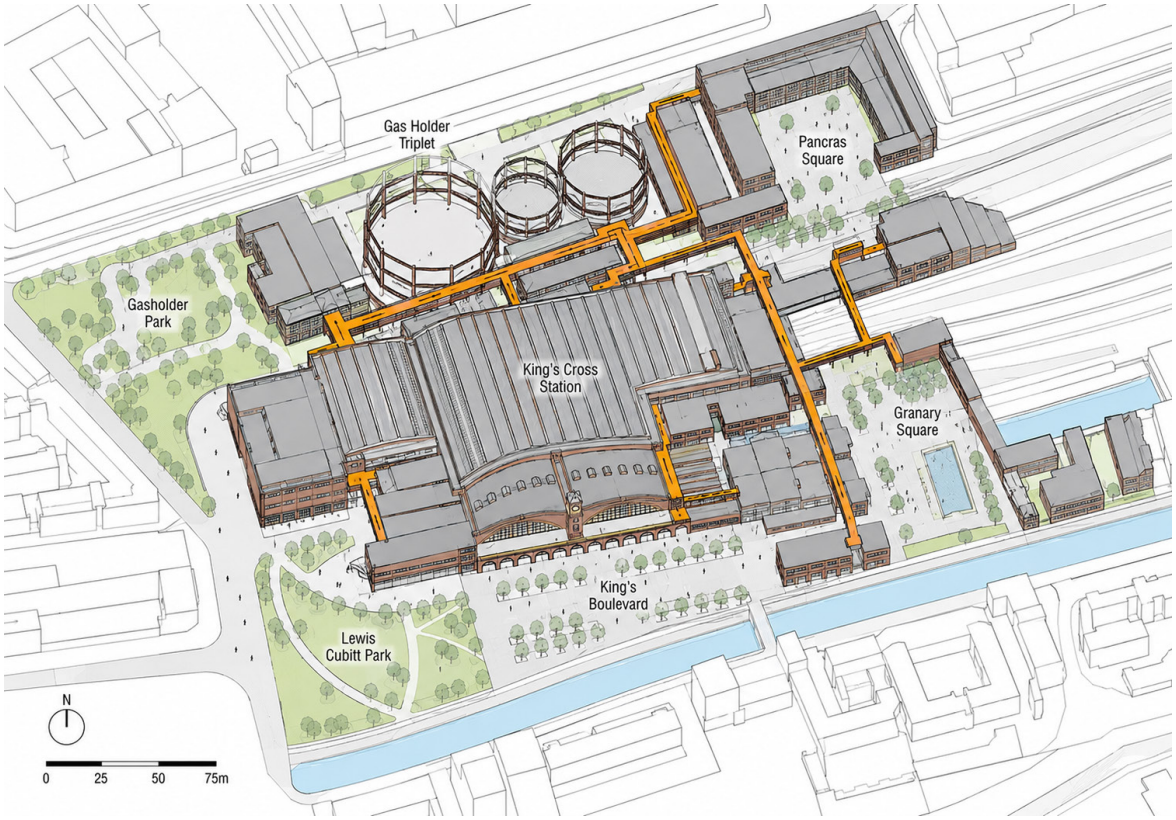


Figure 4.7 Urban masterplan layout of the King's Cross precinct, mapping the public realm network, repurposed industrial heritage structures, and the horizontal connections across the Regent's Canal.
Source: Author's elaboration based on the Allies and Morrison urban repair framework.[1]

1 New London Architecture (NLA). "King's Cross Masterplan: Zero Carbon London Infrastructure." nla.london/projects/kings-cross-masterplan

4.3.2.2 Architectural Vision and Engineering Strategy

The masterplan, developed by Allies and Morrison alongside Porphyrios Associates and Townshend Landscape Architects, focused on a process of "urban repair" and radical spatial permeability. The layout established an intricate grid of streets, lanes, and 10.5 hectares of new public open spaces that stitched the historically isolated industrial void back into London's broader urban fabric.

Architecturally, the project achieved a sophisticated dialogue between structural preservation and iconic new construction. A focal point of this strategy was the £550 million transformation of the mainline station by John McAslan + Partners, engineered by Arup. To expand circulation capacity without altering the Grade I-listed Victorian brick sheds, designers introduced the Western Concourse,a 1,700-tonne, 20-meter-high geodesic steel and glass diagrid dome. This shell structure funnels down into a single central column, remaining completely structurally independent of the historic brick masonry, thereby ensuring the original architectural heritage remains legibly detached from the modern intervention.[1]

1 Arup Group. "London King's Cross Station: Exemplary Transport Hub." www.arup.com/projects/london-kings-cross-station/

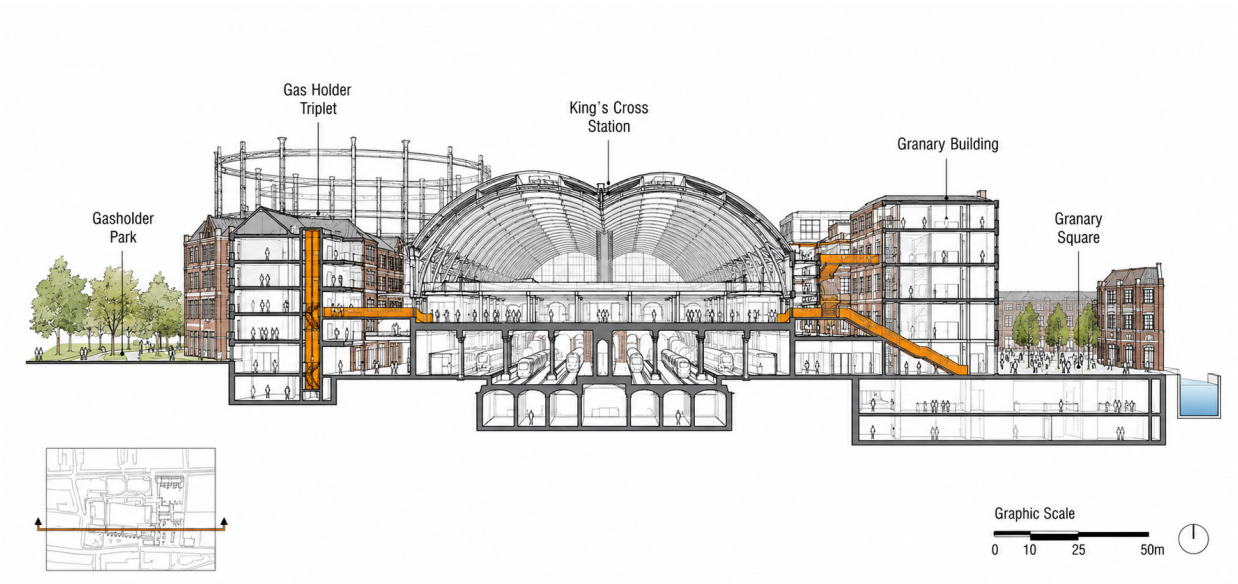


Figure 4.8 Detailed cross-section of the King's Cross Western Concourse, illustrating the geodesic steel diagrid roof funneling into a central tree column, structurally isolated from the Grade I-listed Victorian brick facade.
Source: Author's elaboration based on the John McAslan + Partners and Arup engineering documentation.

King's Cross achieves continuous urban vitality by distributing complementary public, educational, and transit facilities across its masterplan:

•The Transit Hub Core: The underground station ticket halls and pedestrian subways were expanded to manage over 47 million annual passengers, creating step-free links directly between the subterranean platforms and the surface concourses.

•The Educational Anchor: Granary Square, a primary public open space lining the Regent's Canal, is anchored by the adaptive reuse of the mid-19th-century Granary and Transit Sheds, converted into the campus for Central Saint Martins University.

•Commercial and Retail Stratification: The district incorporates major global corporate headquarters (e.g., Google) adjacent to repurposed heritage features like Coal Drops Yard, which was converted into a prominent outdoor retail and leisure destination.

•Residential Distribution: Nearly 2,000 housing units (with a mandate for 42% affordable housing) were introduced, including the conversion of the historic iron Gasholder triplets into residential apartments.[1]

1 John McAslan + Partners. "King's Cross Station Redevelopment Architecture." www.mcaslan.co.uk/projects/kings-cross-station.

4.3.2.4 Implications for the ThyssenKrupp Site

The infrastructure and urban repair strategies demonstrated at King's Cross offer three fundamental takeaways for the Turin ex fabrica proposal:

1.Structural Independence in Adaptive Reuse: The engineering of the Western Concourse diagrid provides a direct model for your proposal. New public structures (like the bus terminal lounges) can sit adjacent to or inside retained ThyssenKrupp industrial shells using independent foundation points and lightweight tree columns, protecting historic masonry from modern structural loads.

2.Public Realm as a Connective Tissue: King's Cross proves that transit portals must open directly into high-quality public squares. Designing the threshold of bus terminal to merge into an open public plaza creates a logical pedestrian transition zone that leads visitors naturally toward hotel and cultural programs.

3.The Institutional Anchor: Just as Central Saint Martins brought immediate daytime activity and youth culture to an empty industrial site, integrating a distinct social or educational program alongside bus terminal will ensure the ThyssenKrupp precinct transitions into a self-sustaining civic center rather than a sterile transport-only station.

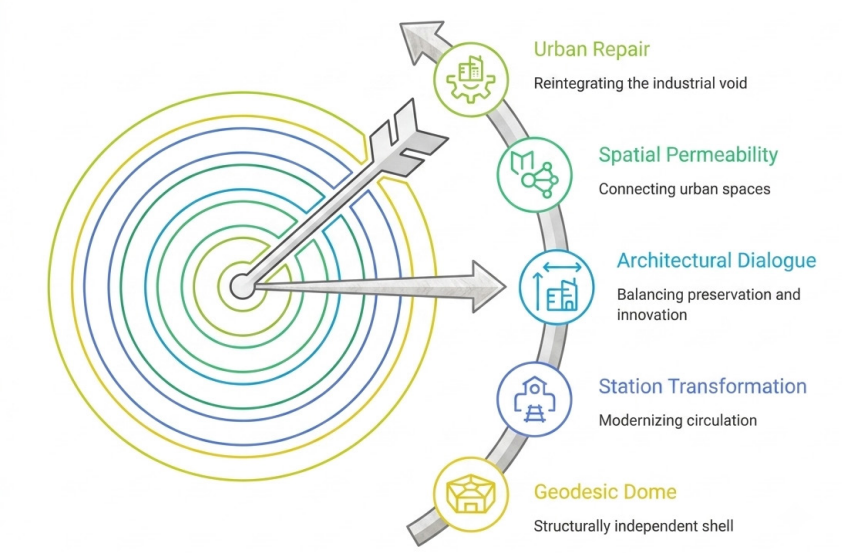


Diagram 4.4. Key pillars and design strategies driving the King's Cross Station redevelopment.
Source: Author's elaboration.

4.4 Synthesis of Case Study Findings

The four precedents examined in this chapter, though situated in different national contexts and responding to different programmatic briefs, converge on a set of recurring design principles directly applicable to the regeneration of the ThyssenKrupp site in Turin.

The first principle concerns the preservation of industrial fabric as a structuring device rather than an obstacle to be cleared. Both Zeche Zollverein and Gasometer City demonstrate that retaining the shell, skeleton, or envelope of an industrial structure need not constrain new use; on the contrary, the historic fabric can organize circulation, define spatial identity, and lend coherence to a set of otherwise disparate new programs. This suggests that specific ThyssenKrupp structures,rather than being treated as constraints on the design,might instead be positioned as anchors around which the bus terminal, hotel, and neighborhood facilities are organized.

The second principle is the structural and visual independence of new interventions from historic fabric. The Foster + Partners insertion at Zollverein, the four distinct architectural insertions at Gasometer City, and the geodesic diagrid at King's Cross all rely on new structures that are self-supporting and legible as contemporary additions, avoiding the ambiguity of a false historicism. This principle offers a direct architectural strategy for how new volumes on the ThyssenKrupp site, including terminal buildings and the proposed hotel, might relate physically and materially to any retained industrial elements.

The third principle, drawn primarily from Kamppi Center and King's Cross, is the vertical and spatial separation of heavy infrastructural functions from public and residential life, achieved not through segregation but through carefully engineered points of connection. Subterranean or enclosed bus platforms sealed boarding gates, and generous above-ground public space allow a transit function to operate at full capacity while the levels above remain calm, daylit, and civic in character. This has direct bearing on the organization of the proposed three-zone division of the ThyssenKrupp site, particularly the relationship between the bus terminal, the green buffer, and the neighborhood facilities.

Finally, all four cases affirm that infrastructure and heritage, far from being competing agendas, can jointly catalyze urban revitalization. Whether through the reuse of a coal-washing plant as a museum, gasholders as housing, or a rail terminus as the anchor for an entire district, each precedent shows that a single large-scale intervention can generate sustained public life well beyond its immediate footprint.

These findings collectively establish a design framework for the following chapters: one in which the retained industrial character of the ThyssenKrupp site, the infrastructural requirements of an intercity bus terminal, and the social needs of the Lucento–Vallette neighborhood are treated not as competing constraints but as complementary elements of a single, integrated regeneration strategy.

5 Site Analysis and Rationale

5.1 Introduction

This chapter presents the rationale underlying the selection of both the research topic and the project site, establishing the conceptual and contextual foundation for the design proposal developed in the following chapters. The choice of post-industrial regeneration as a thematic focus stems from its relevance as a shared challenge across European cities that underwent rapid industrialization in the twentieth century and now face the task of reintegrating abandoned or underutilized industrial land into their contemporary urban fabric. Turin, as one of Italy's principal industrial centers, offers a particularly significant context for this inquiry, given the scale and pace of its post-industrial transformation over the past three decades.

Within this framework, the former ThyssenKrupp steel plant was identified as the project site due to its layered historical significance, the environmental and social complexity it presents, and its strategic position within the city's urban and infrastructural network. The site is not only a physical testimony to Turin's industrial heritage, but also carries a profound social memory linked to the tragic fire of 2007, making its regeneration a matter that extends beyond spatial design into questions of collective memory, environmental justice, and community healing. At the same time, its proximity to major transport infrastructure, including the A55 ring road, under ground railways(Torino rebaudengo Fossata),Turin Airport, and the Allianz Stadium , presents a unique opportunity to address pressing urban mobility challenges, particularly the inefficiencies and environmental impact of the city's current intercity bus terminal.

5.2 Rationale for Topic Selection

Post-industrial regeneration has become one of the defining challenges of contemporary European urbanism. Following the wave of deindustrialization that swept across the continent from the 1970s onward, cities that had built their economic and spatial identity around manufacturing found themselves confronting vast tracts of abandoned or underused industrial land. These sites, once engines of production and employment, were left as physical voids within the urban fabric, disconnected from surrounding neighborhoods, environmentally compromised, and often carrying complex social memories tied to labor, loss, and economic decline. Addressing these voids is not merely a technical or spatial problem; it is a question of how cities reconcile their industrial past with their contemporary and future identity.

The relevance of this theme extends far beyond any single city or country. Former industrial regions across Europe , from the Ruhr Valley in Germany to the steel towns of northern England, and from the shipyards of the Basque Country to the manufacturing belts of northern Italy , share a common set of challenges: soil and groundwater contamination from decades of industrial activity, structurally obsolete buildings unsuited to contemporary uses, and the social fragmentation that often follows the loss of the economic activity around which entire neighborhoods were built. The strategies developed to address these challenges in one context frequently offer transferable insights for others, which is part of what makes post-industrial regeneration a productive and continuously evolving field of architectural and urban research.

Beyond its environmental and infrastructural dimensions, post-industrial regeneration raises important questions about memory and identity. Industrial sites are rarely neutral; they carry the imprint of the communities that worked within them, and their transformation inevitably involves decisions about what to preserve, what to erase, and how to represent a site's history to future generations. This is particularly significant in cases where a site's industrial past includes not only economic and social change but also traumatic events, as is the case with the site examined in this thesis. Regeneration projects that engage seriously with this dimension move beyond simple adaptive reuse and begin to function as instruments of collective memory and, potentially, of community healing.

At the same time, post-industrial sites frequently occupy strategic positions within the urban structures, often located along historical transport corridors, rivers, or rail lines that were originally chosen to serve industrial logistics. This same infrastructural positioning, which once served factories and freight, can today be reinterpreted to serve contemporary urban needs: public transport interchanges, green corridors, or mixed-use districts that reconnect previously isolated parts of the city. Regeneration, in this sense, is not only about remediating a damaged site, but about recovering an urban potential that industrial use had obscured.

Choosing post-industrial regeneration as the topic of this thesis is therefore an attempt to engage with a challenge that is simultaneously local and universal. It allows the project to be grounded in the specific historical, environmental, and social conditions of a single site in Turin, while contributing to a broader architectural and urban discourse on how European cities can transform their industrial legacies into resilient, inclusive, and meaningful urban spaces. The following sections narrow this general framework to the specific site chosen for this thesis, outlining the criteria that made it a particularly compelling case for this investigation.

5.3 Site Selection Criteria and Justification

5.3.1 Historical and Industrial Significance

The former ThyssenKrupp plant occupies a distinctive place within the narrative of Turin's industrial development. Established as part of the city's northern industrial belt, the site was, for several decades, an active site of steel production, contributing directly to the sectors , automotive, machinery, and construction, that defined Turin's identity as one of Italy's principal manufacturing centers throughout the twentieth century. Its operations were closely tied to the broader economic transformation of the city, from the postwar industrial boom through the restructuring pressures of the later twentieth century, making the site a physical record of these successive phases of growth, adaptation, and eventual decline.

Beyond its economic function, the site embodies the social history of the communities that depended on it. Generations of workers were employed within its production halls, and the rhythms of factory labor shaped the surrounding neighborhoods, their housing patterns, and their social infrastructure. The site therefore cannot be understood purely in architectural or industrial terms; it is inseparable from the labor history and social identity of the districts that grew around it, and any project of regeneration must engage with this dimension as seriously as it engages with the physical fabric of the buildings themselves.

This historical weight is compounded by the tragic fire of December 2007, in which seven workers lost their lives. The event marked a rupture in the site's history, transforming it from a symbol of industrial productivity into one of industrial tragedy, and it triggered national debate on workplace safety standards in Italy.[1] As a result, the site carries a layered and, at times, contradictory historical identity: it is simultaneously a monument to industrial achievement and a site of mourning. This complexity makes it an especially rich subject for a thesis concerned not only with spatial regeneration but with how architecture can mediate difficult histories, offering a testbed for exploring how design can hold space for industrial memory, social impact, and urban transformation simultaneously.

1 Incidente della ThyssenKrupp di Torino," Wikipedia, last modified 2026, https://it.wikipedia.org/wiki/Incidente_della_ThyssenKrupp_di_Torino; on the trial and its outcome, see also "L'incidente della Thyssenkrupp di Torino e le lunghe battaglie legali," Geopop, https://www.geopop.it/lincidente-della-thyssenkrupp-di-torino-e-le-lunghe-battaglie-legali/.

5.3 Site Selection Criteria and Justification

5.3.2 Environmental and Social Complexity

From an environmental standpoint, the site presents the kind of substantial technical challenges that are characteristic of former heavy-industry land. Decades of steel production have left the soil and potentially the groundwater contaminated with hydrocarbons and heavy metals, while the existing structures show significant degradation resulting from prolonged abandonment. These conditions demand that any design proposal engage directly with questions of environmental remediation, structural assessment, and phased decontamination, challenges that are rarely present, at least not at this scale, in greenfield or already-serviced urban sites.

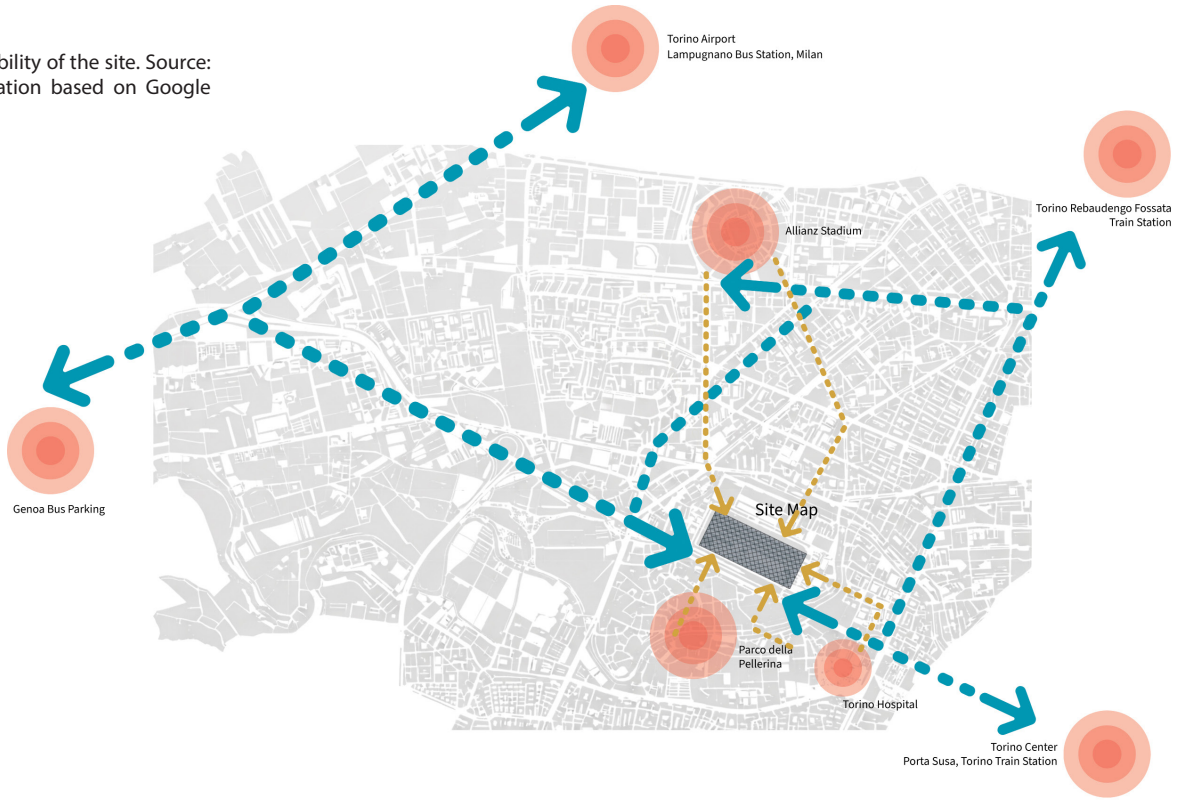
This environmental complexity is inseparable from the site's social complexity. The 2007 fire introduced a further layer of difficulty that extends beyond questions of soil quality or structural safety: the site is marked by collective trauma, and its regeneration necessarily raises questions of memorialization, community healing, and social acceptance. A design response cannot treat the site as a neutral surface for redevelopment; it must consider how new uses and new spatial narratives can coexist respectfully with the memory of the event, and how the surrounding community can be engaged as an active participant in, rather than a passive recipient of, the site's transformation.

Taken together, these environmental and social dimensions position the site as what might be described as a "real-world" testbed for integrated design thinking. Rather than allowing environmental remediation, cultural memory, and adaptive reuse to be treated as separate concerns addressed in isolation, the site demands that they be approached as interconnected aspects of a single design problem. This is precisely the kind of complexity that a thesis project is well positioned to explore, since it allows for a depth of investigation and a degree of design experimentation that would be difficult to achieve within the more constrained timelines of professional practice.

5.3.3 Strategic Urban Location and Potential Impact

The site's location constitutes one of the strongest arguments for its selection. Positioned along the Dora riverfront corridor, it benefits from proximity to significant transport infrastructure, including major rail lines and road arteries, as well as potential future mobility connections. This positioning is not incidental: like many industrial sites of its era, it was originally located to take advantage of logistical corridors, and this same infrastructural logic can today be reinterpreted to serve very different, contemporary urban functions. Of particular importance is the site's proximity to the Tangenziale Nord di Torino (A55), which connects Turin directly to Milan, Aosta, Genoa, and onward to France and Switzerland, as well as its relative closeness to Turin Airport and the Allianz Stadium. This combination of highway access, air travel connectivity, and proximity to a major sporting venue is uncommon among Turin's post-industrial sites, and it opens the possibility of a project that operates simultaneously at the neighborhood scale and at the scale of regional and international mobility, a duality that is explored in greater depth in section 5.6.

The site's inclusion within the broader Spina 3 redevelopment axis further reinforces its strategic relevance. Spina 3 represents one of Turin's principal urban regeneration corridors, aimed at reconnecting formerly fragmented industrial areas with the rest of the city through a combination of infrastructure, green space, and mixed-use development. Situating this project within that axis allows the thesis to engage not only with the specific conditions of a single site, but with the broader urban strategy of which it forms a part, positioning the design proposal as a contribution to an ongoing, city-wide process of urban reconnection rather than an isolated intervention.



Map 5.1 Accessibility of the site. Source: Author's elaboration based on Google Maps 2026

5.3.4 Ongoing Municipal and Institutional Interest

The relevance of this site is reinforced by its inclusion within Turin's municipal strategic planning for brownfield remediation and post-industrial regeneration. Rather than being an overlooked or purely theoretical case, the site sits within an active governance framework, in which questions of environmental clean-up, land reuse, and urban redevelopment are already under institutional consideration. This gives the thesis a degree of grounding in real policy processes that a purely speculative site would not offer.

This institutional engagement has intensified further with the drafting of Turin's new Piano Regulator Generale (PRG) , a comprehensive revision of the city's master plan that has been anticipated for over thirty years and is set to replace the long-standing Gregotti-Cagnardi plan of 1995. At the first technical presentation of the draft plan to the Ordine degli Architetti di Torino, the city's Assessore all'Urbanistica, Paolo Mazzoleni, outlined a planning philosophy centered on a strong "regia pubblica" (strong public direction) over private development, including tools such as perequazione (the redistribution of building rights across areas) and an expanded definition of public "servizi" to include ecosystemic and environmental standards, not only schools and hospitals as under the 1995 plan. This shift is significant for the ThyssenKrupp site specifically, since any future urban variant proposed for its regeneration, including a mixed-use, transit-oriented redevelopment such as the one proposed in this thesis , will be evaluated against this new, still-forming regulatory framework rather than the outdated 1995 plan.

Regional legislation is moving in a parallel direction. In October 2025, debate opened in the Piedmont Regional Council over the "Cresci Piemonte" bill, a regional urbanistica reform aimed at reducing procedural timelines for urban transformation projects through 2030, pending a broader revision of the region's 1977 urban planning law (L.R. 56/1977). The bill's initial draft prioritized funding and simplified procedures for smaller municipalities, explicitly excluding Turin from its measures. The Partito Democratico, together with Mayor Stefano Lo Russo, pushed for this exclusion to be reversed, arguing that extending the simplifications to the capoluogo was necessary to avoid obstructing the ongoing revision of Turin's own master plan; this request was not accepted in the bill's first reading, and discussion was postponed to a broader legislative table after the reform of L.R. 56/1977 is addressed.[1] While the outcome of this debate remains unresolved, it illustrates that the regulatory environment governing brownfield and urban transformation projects in Turin , including any future variant required for the ThyssenKrupp site , is itself in active flux, with real consequences for how quickly a project of this scale could move from proposal to implementation.

1 Consiglio Regionale del Piemonte, "Approvato il Cresci Piemonte," press release, February 24, 2026, https://www.cr.piemonte.it/cms/articoli/comunicati-stampa/approvato-il-cresci-piemonte; see also "Ok al Cresci Piemonte, la preghiera di Lo Russo accolta: Piano regolatore in corsia veloce," Torino Cronaca, February 25, 2026.

5.3.4 Ongoing Municipal and Institutional Interest

Engaging with this institutional dimension allows the project to move beyond a purely formal or programmatic design exercise and to position itself within an existing discourse of environmental policy and urban governance. It requires an awareness of the regulatory and procedural frameworks that govern brownfield remediation in Italy, as well as the mechanisms through which municipal authorities coordinate stakeholder interests, from public institutions to private developers to affected communities, in the redevelopment of contaminated industrial land.

This grounding in an active planning context also gives the thesis a degree of practical relevance beyond the academic exercise itself. Because the site is already the subject of municipal attention, the design strategies developed here have the potential, at least in principle, to inform future implementation phases or stakeholder discussions, rather than remaining a purely hypothetical proposal. This does not mean the thesis aims to produce a literal implementation plan, but rather that its design reasoning is developed with an awareness of the real institutional and regulatory conditions that would shape any actual transformation of the site.

5.3 Site Selection Criteria and Justification

5.3.5 Broader Relevance to Urban Regeneration

Beyond its specific local conditions, the selection of this site allows the thesis to engage with challenges that extend well beyond Turin. Contaminated steel-production brownfields with strong industrial identities and, in some cases, associated social trauma exist across many European regions that underwent similar industrialization and deindustrialization processes over the twentieth century. In this sense, the site functions as a representative case: a specific, concrete condition through which more general questions of post-industrial transformation can be explored.

These general questions include how to balance environmental clean-up with heritage conservation, how to reconcile economic viability with community well-being, and how to integrate ecological considerations into what some of the most ecologically damaging land uses in the urban landscape were historically. Few urban design problems require the simultaneous negotiation of so many, often competing, priorities, which is precisely what makes this typology of site so valuable as a subject of architectural research.

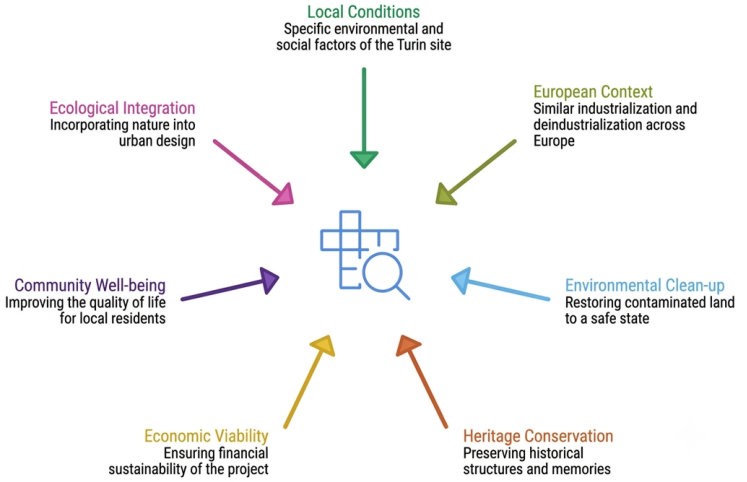
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This pattern is not unique to the ThyssenKrupp site. A 2026 survey of Turin's post-industrial estate identified at least four other comparable ex-fabbriche across the city , the former Officine Grandi Motori, Tecumseh, Superga, and Manifattura Tabacchi sites , each marked by years or decades of abandonment and by redevelopment plans that have stalled or progressed only partially. Some have found more concrete paths forward than others: the former Superga shoe factory has been assigned to a cultural-center proposal (Paratissima) after years of failed auctions, while the former Manifattura Tabacchi is currently proceeding to demolition under a Demanio-issued tender. This comparative picture reinforces the argument made above: the ThyssenKrupp site is not an isolated or arbitrarily chosen case, but one instance of a citywide condition affecting Turin's post-industrial land at scale.[1]

1 Andrea Joly, "Il 'riuso adattivo': la leva nel Prg per la rinascita delle ex fabbriche," La Stampa (Cronaca di Torino), August 18, 2026,



Dagram 5.1 Key factors contributing to the research value of the site.
Source: Author's elaboration.

5.4 Historical Background of the Site

The origins of the former ThyssenKrupp site can be traced back to the mid-twentieth century, when it was developed as part of Turin's broader industrial expansion into heavy manufacturing and steel production. Established during the 1950s and 1960s, the plant formed a strategic node within the city's northern industrial belt, a location chosen deliberately for its proximity to major railway lines and road infrastructure, as well as to what would later become the Tangenziale Nord di Torino. This infrastructural positioning allowed the efficient distribution of steel products both within Italy and to international markets, situating the plant within a much wider network of national and continental industrial exchange.

Throughout the 1970s to the 1990s, the factory operated under a succession of ownership structures within the ThyssenKrupp conglomerate, specializing in the production of steel components for the automotive, machinery, and construction sectors, three industries closely tied to Turin's broader economic identity during this period. Beyond its direct economic output, the plant played a significant role in the socio-economic development of the surrounding neighborhoods, providing stable employment for a substantial local workforce and, in doing so, shaping the social fabric of the districts that grew around it.

This period of relative stability came under increasing pressure toward the end of the twentieth century and into the early twenty-first, as heavy industry in Italy faced the combined effects of global outsourcing and broader economic restructuring. Production volumes at the plant declined progressively, mirroring a pattern common to many manufacturing centers across Europe during this period, in which industries once considered fundamental to national economic strength found themselves increasingly unable to compete within a globalized production landscape.

The site's history reached its most critical juncture in December 2007, when a catastrophic fire broke out within the plant, resulting in the deaths of seven workers. The event provoked widespread public outrage across Italy, triggered significant legal proceedings, and became a focal point for national debate on industrial safety standards and corporate accountability. Beyond its immediate human toll, the fire fundamentally altered the meaning of the site: what had previously been understood primarily as an industrial facility became, from that point forward, a site of collective mourning and a symbol of the human costs that can accompany industrial production when safety is inadequately prioritized.

In the aftermath of the tragedy, operations at the plant were progressively wound down, culminating in its complete closure in 2008. In the years since, the site has remained abandoned, its large production halls, steel sheds, and administrative buildings left to gradual structural decay. Environmental assessments conducted on the site have indicated the presence of soil and potential groundwater contamination, a legacy of decades of steel manufacturing processes that were, at the time, subject to considerably less stringent environmental regulation than exists today.

5.5 Urban Challenges Addressed by the Project

5.5.1 Inefficient and Congested Mobility Infrastructure

Current Situation

Turin's principal suburban and intercity bus terminal is currently located near Corso Vittorio Emanuele II, close to the city center. Unlike many comparable European cities, Turin lacks a dedicated, purpose-built intercity bus station equipped with integrated passenger facilities; instead, buses operate from what is essentially a series of roadside stops along a busy urban corridor. This arrangement places a significant volume of intercity and suburban bus traffic directly within one of the city's most central and congested areas, with no dedicated infrastructure for passenger waiting, ticketing, luggage handling, or connections to other transport modes.



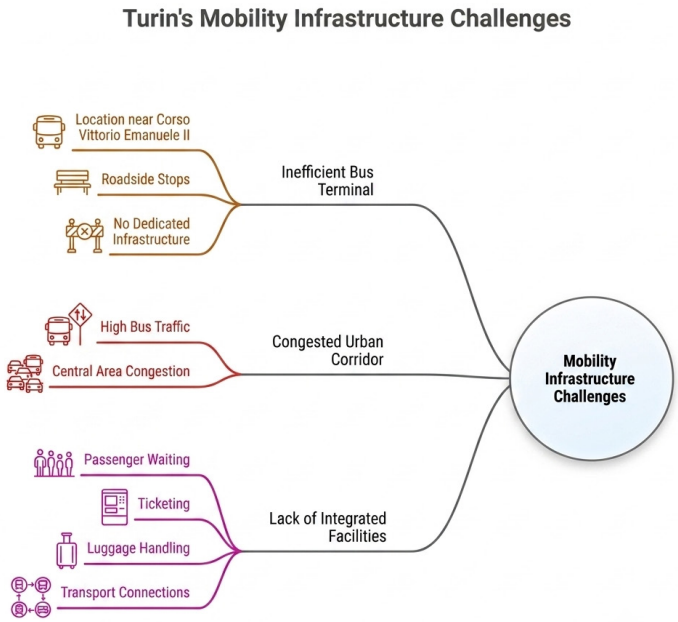
Figure 5.1 Current Bus station of Turin. Source: Author's elaboration.

Impact

This situation generates a series of interrelated problems. Traffic congestion along Corso Vittorio Emanuele II is worsened by the concentration of large vehicles maneuvering in and out of roadside stops, creating safety risks for commuters, pedestrians, and cyclists sharing the same road space. Furthermore, because the terminal is positioned in the city center rather than closer to Turin's regional infrastructure, connections toward the A55 ring road, the airport, and points beyond are inherently inefficient: buses arriving from or departing to other cities must first traverse dense urban traffic before reaching the regional road network, adding time, fuel consumption, and emissions to journeys that could otherwise bypass the city centre entirely.

5.5 Urban Challenges Addressed by the Project

5.5.1 Inefficient and Congested Mobility Infrastructure



Dagram 5.2 Structural overview of Turin's mobility infrastructure challenges, categorizing key bottlenecks across bus terminal efficiency, corridor congestion, and facility integration.
Source: Author's elaboration.

Design Response

The project responds to this challenge by relocating this function to the former ThyssenKrupp site, transforming part of it into a multimodal mobility hub. This new terminal would integrate suburban and intercity bus services with bicycle-sharing infrastructure, future tram connections, and direct access to the A55 ring road, positioning the site as a genuine regional gateway rather than an isolated bus stop. This relocation directly enhances Turin's connectivity to major national and international destinations, including Milan, Aosta, Genoa, France, and Switzerland , while simultaneously relieving the city center of a significant volume of heavy-vehicle traffic. The broader implications of this relocation, particularly with respect to the site's proximity to Turin Airport and the Allianz Stadium, are examined in greater detail in section 5.6.

5.5.2 Underutilized and Contaminated Industrial Land

Current Situation

Since its closure in 2008, the former ThyssenKrupp site has remained abandoned, its soil and structural fabric bearing the legacy of decades of heavy industrial use. Environmental assessments have identified contamination from hydrocarbons and heavy metals, while the disused production halls and administrative buildings continue to deteriorate structurally in the absence of any maintenance or productive use. This direction finds institutional backing in the Comune's own 2024 proposal to designate part of the site as public park, a course of action upheld by the TAR Piemonte in July 2026, confirming that public authorities themselves are already moving toward this same conclusion, independent of this thesis.

Impact

This condition of prolonged abandonment carries consequences that extend beyond the boundaries of the site itself. The contamination poses ongoing risks of soil and water pollution, with potential effects on the adjacent Dora River corridor. The site's extensive paved and built surfaces, combined with its almost complete absence of vegetation, contribute to localized urban heat island effects, exacerbating the broader environmental degradation of the surrounding area. Left unaddressed, the site represents not only a lost urban opportunity but an active, ongoing environmental liability.

Design Response

The project addresses this challenge through a strategy of environmental remediation paired with adaptive reuse, transforming the site from a source of environmental degradation into a safe, ecologically resilient component of the urban landscape. This involves the phased decontamination of soil and, where necessary, groundwater, alongside the reintroduction of substantial green infrastructure capable of mitigating heat island effects and restoring ecological function to this stretch of the Dora corridor. Rather than treating remediation as a preliminary, purely technical step separate from the design proposal, the project integrates environmental recovery directly into the spatial and programmatic strategy for the site's reuse.



Figure 5.2 current situation
Source: Author's elaboration.

5.5.3 Lack of Public Space and Social Services

Current Situation

The neighborhoods surrounding the former ThyssenKrupp site currently lack many of the basic social services and amenities that support daily urban life, including shops, markets, pharmacies, and community facilities. This shortage is compounded by a limited provision of public green space and inclusive gathering areas, leaving residents with few accessible spaces for informal social interaction or community activity.

Impact

The absence of these services and spaces contributes to a diminished quality of life for residents, weakens social cohesion within the neighborhood, and reinforces a sense of isolation in areas that already carry the physical and social legacy of industrial decline. Without accessible everyday amenities and shared public spaces, these neighborhoods risk remaining peripheral not only in physical terms, relative to the rest of the city, but in social and economic terms as well.

Design Response

Design Response. The project responds by integrating a mixed-use building into part of the site, incorporating shops, health services, cultural facilities, and public parks alongside the mobility and remediation strategies described above. This programmatic integration is intended to create an active, inclusive urban environment that directly addresses the daily needs of local residents, repositioning the site not merely as a piece of regional transport infrastructure, but as a genuine extension of the surrounding neighborhood's social and civic life.

5.6 Personal Motivation and Strategic Positioning of the Site

Beyond the historical, environmental, and institutional criteria discussed above, the selection of this site is also grounded in a specific and concrete functional opportunity that emerged from analyzing Turin's current mobility patterns and its evolving healthcare infrastructure. Of particular relevance is the Municipality of Turin's plan to build a new major hospital, Ospedale Torino Nord, intended to replace the ageing Maria Vittoria and Amedeo di Savoia facilities , on a currently disused site at the corner of Corso Lecce and Corso Regina Margherita, previously used as the city's Luna Park. [1]As of 2026, the project has moved well beyond the initial planning stage: the conferenza dei servizi coordinating the Regione Piemonte, the ASL Città di Torino, and the Comune di Torino has concluded with a fully favorable outcome, and the Consiglio Superiore dei Lavori Pubblici has issued a positive opinion on the design, with the facility targeted to become operational by 2031. [2] This advanced status reinforces the urgency of the mobility rationale developed below: a major hospital moving toward construction on this timeline will generate substantial, near-term transport demand in the immediate vicinity of the ThyssenKrupp site. This site lies in relative proximity to the former ThyssenKrupp plant, reinforcing the strategic importance of the broader Lucento/Vallette/Pellerina area as a zone of significant forthcoming public investment.

Notably, the ex-ThyssenKrupp site itself was among the locations formally evaluated by the Region and the Municipality as a potential home for this same hospital, before ultimately being excluded on account of its private ownership, its environmental incompatibility stemming from decades of industrial use, and the hydrogeological risk associated with the area. While this exclusion ruled the site out as a hospital location, it is significant for this thesis in two ways: first, it confirms that public institutions already regard the site as a priority area for major urban transformation, reinforcing the argument made in section 5.3.4 regarding ongoing municipal interest; and second, it underscores precisely the environmental remediation challenge that this thesis proposes to address, since the very obstacles that excluded the site from hospital development , contamination and hydrogeological risk, are the conditions this project's design response is intended to resolve.

The presence of this new hospital nearby also strengthens the site's mobility rationale. A major hospital of this scale generates substantial, recurring transport demands from patients, staff, and visitors, much of which will rely on public transport and require efficient connections to the wider region. Positioning a multimodal mobility hub on the former ThyssenKrupp site would therefore serve not only stadium-bound and airport-bound travelers, as discussed below, but also this emerging healthcare hub, further consolidating the area's role as a key node within Turin's northern urban structure.

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1 Regione Piemonte, "Torino verso il futuro: il nuovo ospedale a Torino Nord per rispondere alle sfide della salute," Piemonteinforma, accessed August 23, 2026, https://www.regione.piemonte.it/web/pinforma/notizie/torino-verso-futuro-nuovo-ospedale-nord-per-rispondere-alle-sfide-della-salute.

2 https://www.regione.piemonte.it/web/pinforma/notizie/torino-verso-futuro-nuovo-ospedale-nord-per-rispondere-alle-sfide-della-salute

Continuing from this basis, the site's proximity to the A55 ring road (Tangenziale Nord di Torino), Turin Airport, and the Allianz Stadium, home to Juventus FC and one of the city's principal destinations for large-scale, recurring visitor flows, further reinforce this locational advantage. This combination of proximities is significant because it allows the site to function simultaneously at two distinct scales: as a neighborhood-level piece of urban regeneration, and as a regional gateway serving travelers whose destination lies entirely outside the historic city center.

At present, this second function is served inefficiently. Turin's suburban and intercity bus terminal, located near Corso Vittorio Emanuele II, sits at the heart of the city center, meaning that any traveler arriving from outside Turin whose sole destination is the Allianz Stadium, for a match, a concert, or another event, must first travel into the city center by bus, then find alternative transport (taxi, tram, or another bus) back out toward the stadium, and subsequently repeat this same detour in reverse on their return journey. For a visitor with no other reason to enter the city center, this represents a structurally inefficient routing: two unnecessary trips into and out of the dense part of the city, purely as a by-product of the terminal's location.

Relocating the intercity bus terminal to the former ThyssenKrupp site directly resolves this inefficiency. Because the site sits close to the A55, the stadium, the airport, and now the future hospital, arriving buses could deliver passengers to a terminal from which each of these destinations is reachable by a short taxi ride, shuttle, or future tram connection, without any need to pass through the city center at all. The same logic applies in reverse for departing passengers. This is not merely a convenience for individual travelers; it represents a structural simplification of several of the city's recurring, high-volume mobility flows, replacing a two-stage, center-crossing journey with a single, direct connection.

The urban and environmental implications of this simplification are considerable, particularly with respect to traffic and air quality along Corso Vittorio Emanuele II. Research on real-world bus operation has shown that congested, low-speed driving conditions substantially worsen vehicle emissions compared to free-flowing traffic: one study comparing free-flow and severely congested urban routes found that average route speed fell by roughly 50 percent while the number of stops per kilometer increased by a factor of 1.5, with CO2 and NOx emissions rising by approximately 50 percent and 85 percent respectively.[1]

1 Fredy Rosero, Natalia Fonseca, Zamir Mera, and José-María López, "Assessing On-Road Emissions from Urban Buses in Different Traffic Congestion Scenarios by Integrating Real-World Driving, Traffic, and Emissions Data," Science of the Total Environment 863 (2023), https://www.sciencedirect.com/science/article/abs/pii/S0048969722081050. and was also responsible for close European Environment Agency, "Emissions of Air Pollutants from Transport in Europe," last updated October 21, 2025, https://www.eea.europa.eu/en/analysis/indicators/emissions-of-air-pollutants-from.

5.6 Personal Motivation and Strategic Positioning of the Site

Given that Corso Vittorio Emanuele II already experiences the congestion typical of a dense central corridor, and that this congestion is further worsened by the maneuvering of large vehicles in and out of an informal, roadside bus terminal, it is reasonable to expect that buses operating along this corridor are emitting substantially more pollution than they would under free-flowing conditions. At the broader European scale, this pattern is consistent with EU-wide data showing that transport was the largest source of nitrogen oxide emissions in the EU-27 in 2022, accounting for over half of the total, and was also responsible for close to a third of PM10 and PM2.5 emissions, figures that underline why relieving dense urban corridors of unnecessary bus traffic is a recognized and meaningful strategy for improving urban air quality, rather than a marginal or symbolic gesture.

Relocating the terminal away from Corso Vittorio Emanuele II and toward the former ThyssenKrupp site therefore offers a multiple benefit: it removes a significant volume of heavy-vehicle traffic, and its associated congestion-driven emissions, from one of the city's most central and densely used corridors; it provides stadium-bound, airport-bound, and hospital-bound travelers with a more direct, efficient connection that no longer requires an unnecessary detour through the city center; and it consolidates the site's role within a wider northern arc of the city that is already the focus of significant public investment. In this sense, the site's strategic location is not simply a locational advantage in the abstract; it is the foundation for a concrete design proposal capable of measurably improving both regional mobility efficiency and local urban air quality, an argument that, together with the historical, environmental, and institutional reasoning developed earlier in this chapter, provides the full rationale for the site and project explored in the remainder of this thesis.

5.7 SWOT Analysis

The next step of the analysis is the SWOT framework, a decision-support tool that responds to the need to rationalize planning processes. The technique was originally developed to support strategic choices in contexts marked by uncertainty and strong competition.[1] Starting in the 1980s it began to be applied to public-sector decision-making, as a way of comparing alternative development scenarios; today its use has extended to territorial diagnosis and to the evaluation of regional programmes.[2]

The four letters of the acronym identify the categories to be considered: Strengths and Weaknesses, understood as internal factors, and Opportunities and Threats, understood as external factors. More specifically, the SWOT method distinguishes between endogenous and exogenous variables. The former, corresponding to Strengths and Weaknesses, include all the variables that are part of the system itself and on which it is possible to act in order to pursue given objectives. The latter, corresponding to Opportunities and Threats, include variables external to the system that can nonetheless condition it, positively or negatively. The purpose of this tool is to assess how internal and external factors affect a decision-making process, and how a competitive strategy can be built from that assessment. The analysis leads to the identification of development opportunities for a given area or field of intervention, opportunities that emerge from enhancing strengths and containing weaknesses in light of the broader framework of opportunities and risks generated by the external context. In this sense, the SWOT analysis provides an overall picture of the site that makes all information on a specific theme systematic and immediately usable, allowing alternative development scenarios to be compared.

In this thesis the SWOT analysis is applied to the ex-ThyssenKrupp area, read through the lens of the project's specific objective: transforming the site into Turin's new intercity bus terminal combined with a mixed-use building serving the Lucento and Vallette neighborhoods. The analysis is organized on two levels, the scale of the plot (lotto) and the scale of the neighborhood, since the factors affecting the site itself and those affecting its surrounding urban context call for different strategic responses.

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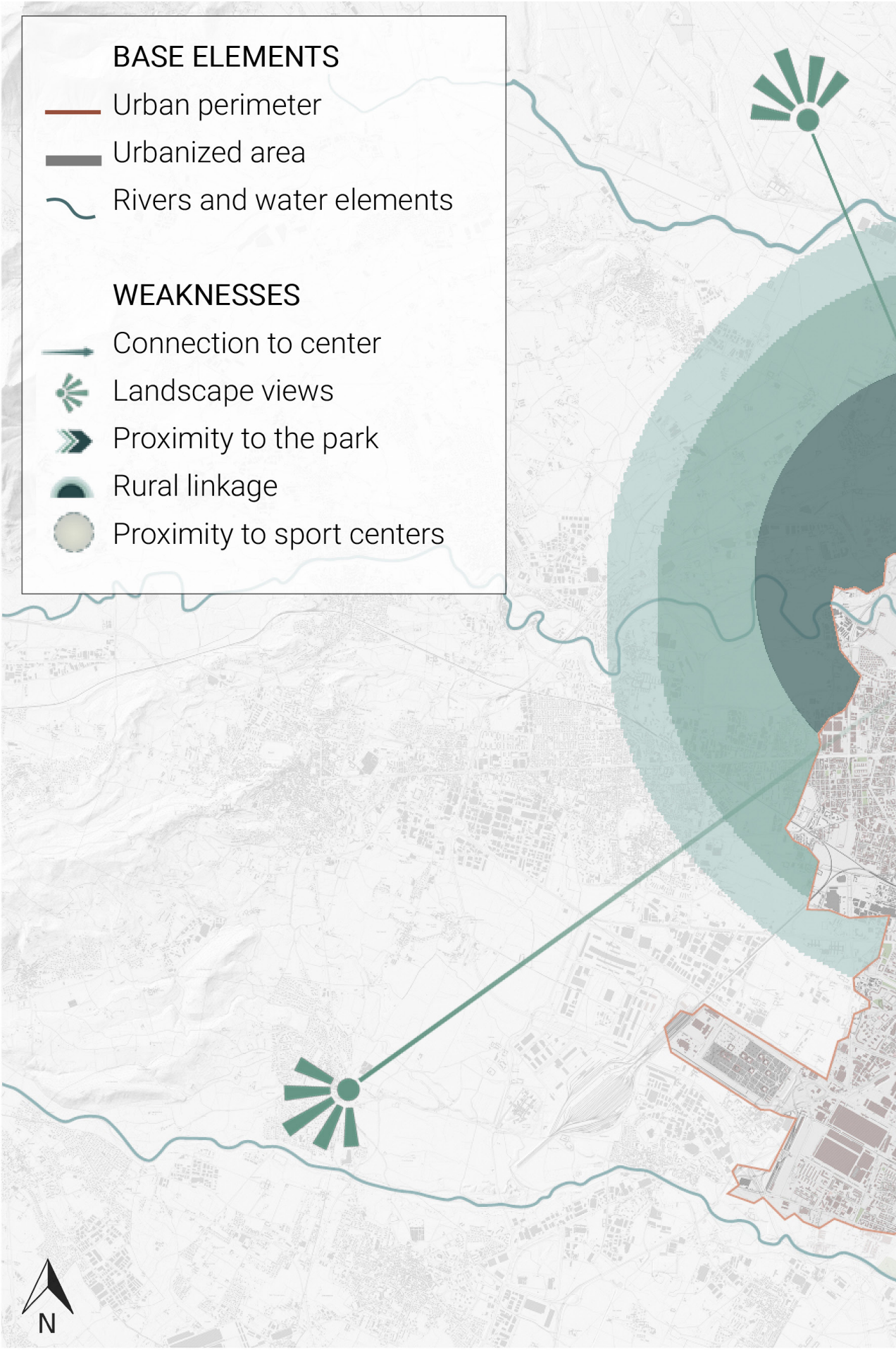
1 Ferry Puyt, Finn Birger Lie, and Celeste P. M. Wilderom, "The Origins of SWOT Analysis," Long Range Planning 56, no. 3 (2023), https://www.sciencedirect.com/science/article/pii/S0024630123000110.

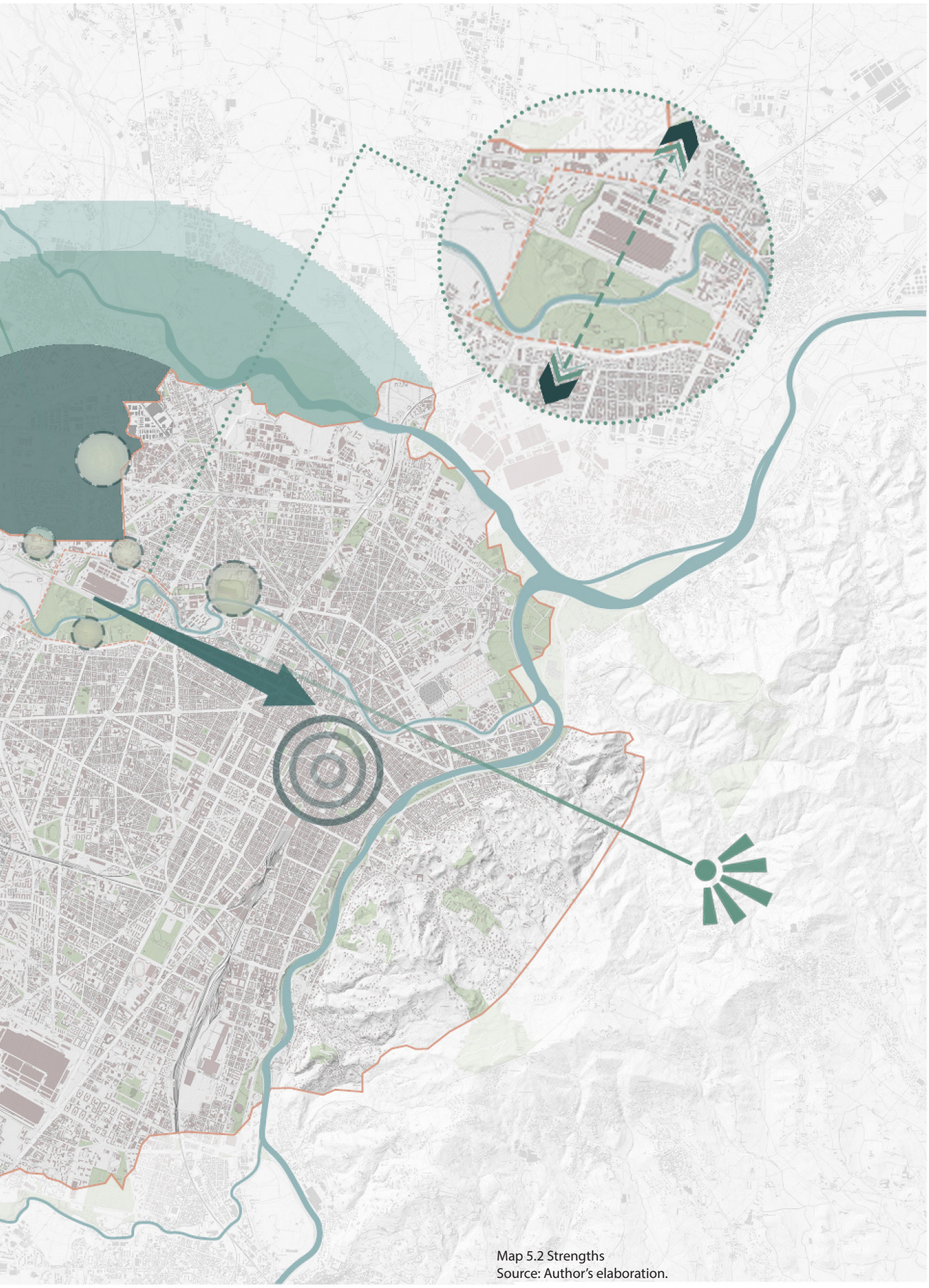
2 Elena Comino and Valentina Ferretti, "Indicators-Based Spatial SWOT Analysis: Supporting the Strategic Planning and Management of Complex Territorial Systems," Ecological Indicators 60 (2016): 1104–1117, https://www.sciencedirect.com/science/article/abs/pii/S1470160X15004872.

5.7 SWOT Analysis

5.7.1 Strengths

At the scale of the plot, the site benefits from a favorable position with respect to both natural and infrastructural systems. Its eastern boundary lies close to the western bank of the Dora Riparia River, whose corridor runs directly along the site and connects it to the naturalistic areas of Parco della Pellerina and Parco Calabria. This proximity to a large green system is reinforced by the visual buffer created between the disused industrial buildings and the neighboring houses, a condition produced by the terrain's morphology and by the river's former floodplain. In terms of accessibility, the plot is served by fast connections toward both the urban center and the periphery along Corso Regina Margherita and Via Pianezza, and lies close to Turin's western ring road (Tangenziale): a combination that constitutes a direct asset for a terminal function, which depends structurally on strong vehicular connectivity. The area is furthermore classified as a transformation zone with a low existing building density, leaving ample room for a large-scale mixed-use intervention, and it lies in proximity to the Castello di Lucento, a site of historical and cultural significance that functions as a symbolic landmark for the neighbourhood and could support the public identity of the new complex. At the neighborhood scale, the strengths lie primarily in the density of existing networks and services that a new terminal and mixed-use building could integrate with rather than replace. Urban and extra-urban public transport lines already run along the main roads, and cycling paths connect the area to Parco della Pellerina, even if, as will be discussed below, this network is not without interruptions. The neighborhood also hosts sports facilities, churches and school services, which reinforce the case for including neighborhood-oriented functions within the mixed-use programme. Its proximity to recently transformed and developed urban areas such as Spina 3 and Spina 4 situates the project within an ongoing trajectory of urban renewal, while the presence of the Castello di Lucento as a historical and cultural hub, the connection,although currently interrupted,through the Tunnel delle Ferriere, and the proximity to the district-heating network represent further latent resources, the last of which is particularly relevant to the building's future energy strategy.(Map 5.2)


BASE ELEMENTS
Urban perimeter
Urbanized area
Rivers and water elements
WEAKNESSES
Connection to center
Landscape views
Proximity to the park
Rural linkage
Proximity to sport centers
N



Map 5.2 Strengths
Source: Author's elaboration.

5.7.2 Weaknesses

At the scale of the plot, the principal constraints stem from morphology, pollution and fragmentation. The plot presents an irregular morphology with significant level changes, the result of past excavation works and of the retreat of the Basse di Dora plateau; this is compounded by its proximity to the Dora Riparia, which has produced an increased flood risk following the suppression of one of the river's meanders. Corso Regina Margherita acts as a physical barrier along the road, and the plot itself has few and scattered access points, a significant limitation for a terminal that requires multiple, clearly legible points of entry and exit. Low soil permeability and the lack of adequate pedestrian and cycling infrastructure,often interrupt and disconnected,further constrain the site, which is also marked by an almost complete absence of night-time activity and by green areas that, although present, are abandoned or poorly equipped. More critically, the site suffers from very high levels of water, air and soil pollution, caused by the former factory and by the storage of industrial sludge, combined with a critical level of noise pollution; historically, the plot has functioned as a place of transit rather than of stationary activity. These material weaknesses are joined by a persistent social one: a strong lingering memory associated with the 2007 accident, together with a multiplicity of property ownership overlapping on the plot, both of which complicate any process of transformation of what remains, overall, a very large urban void.(Map 5.3)

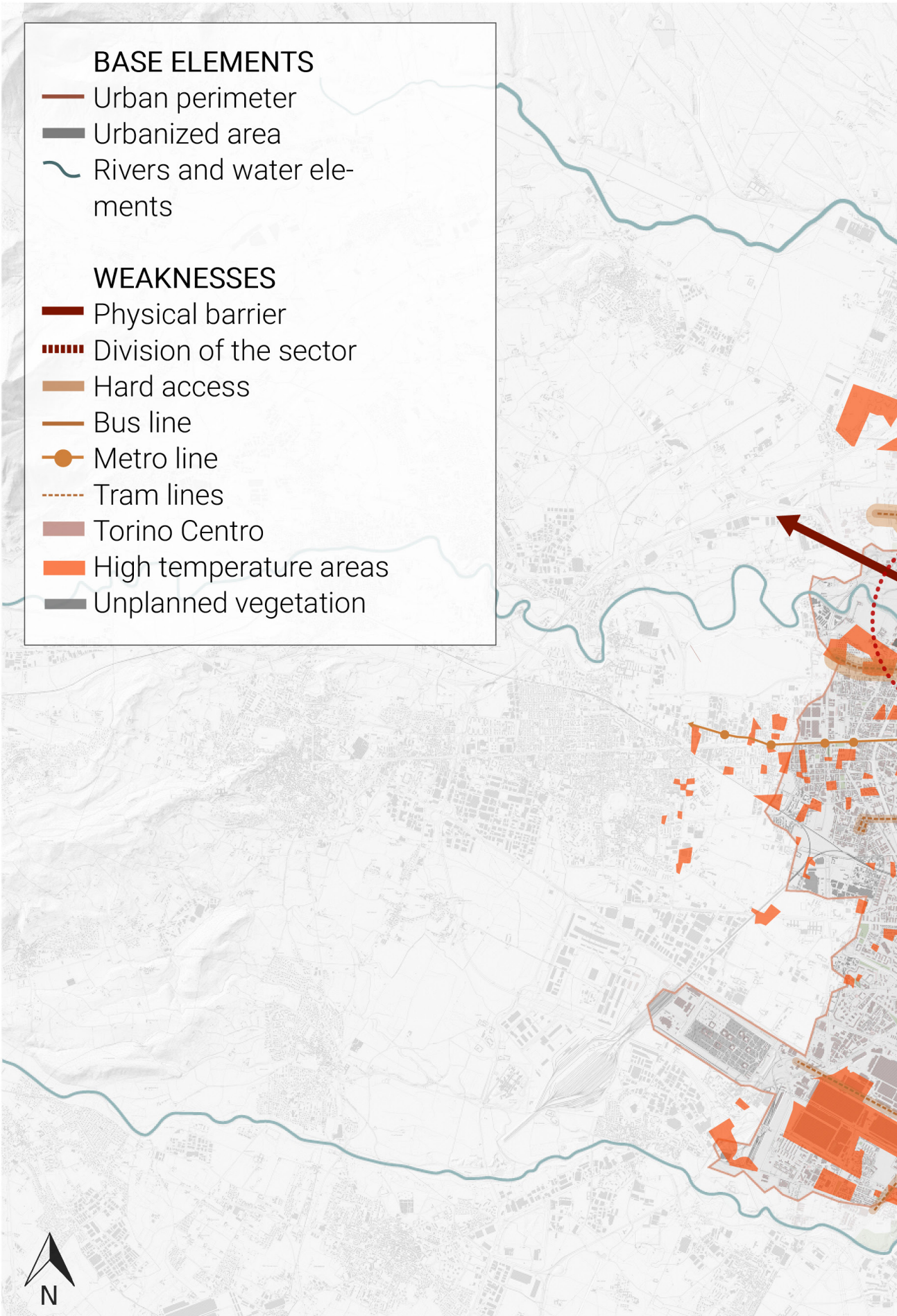
At the neighborhood scale, the weaknesses are largely social and hydrogeological in nature. According to the documentation provided by the P.A.I. (Piano di Assetto Idrogeologico), the macro-area falls within flood zones B and C, and the same morphological and anthropic level changes produced by the excavation works at Basse di Dora recur here.[1] The neighborhood is further characterized by a very high concentration of social housing built in the last decades of the twentieth century in a compact urban form, a condition associated with a perceived sense of social discomfort linked to low social mixité, a high concentration of elderly residents, and correspondingly low real-estate values. Cycling connections, while present, remain partly interrupted, limiting the neighborhood's overall permeability.

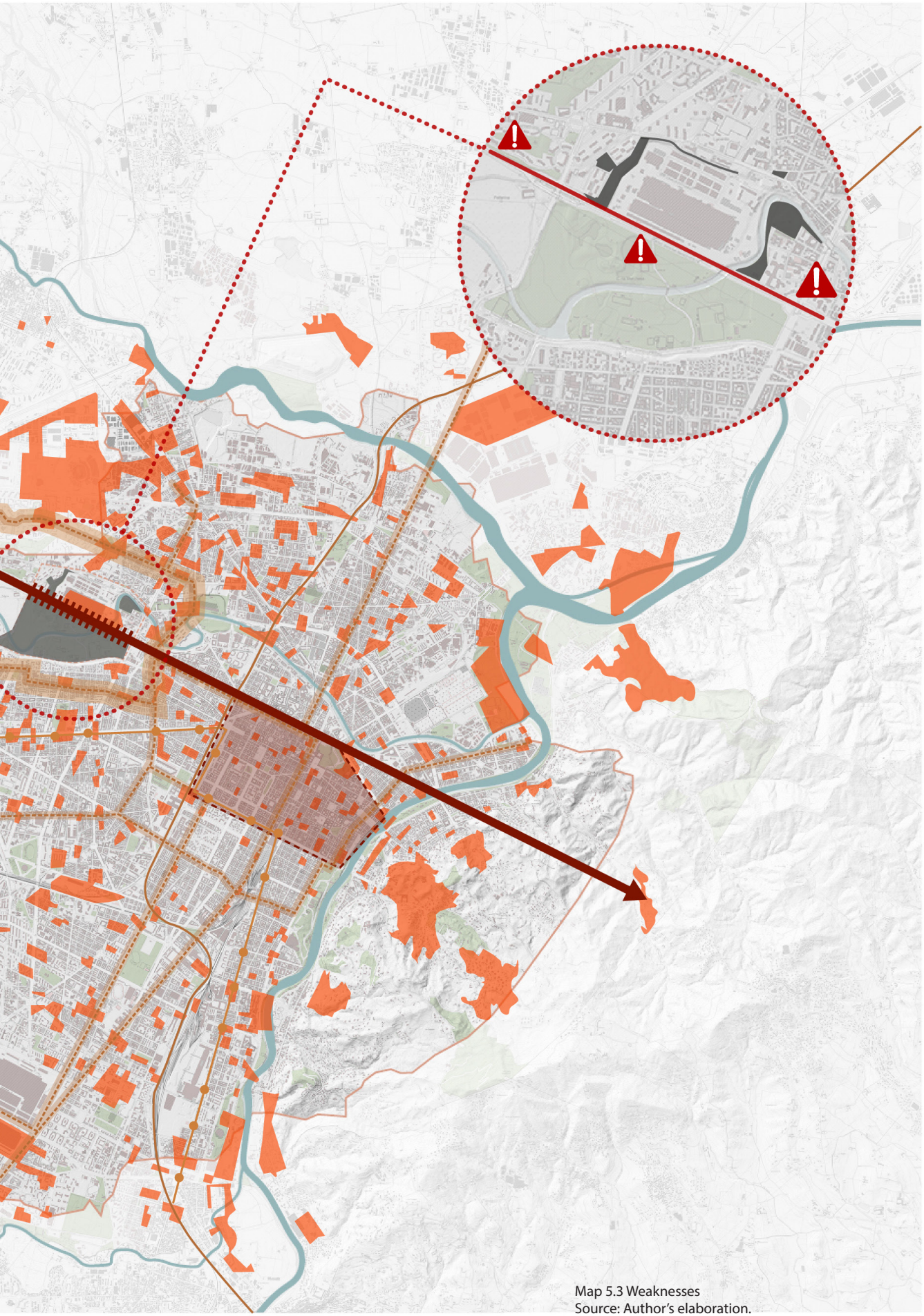
1 Regione Piemonte, "Piano per l'assetto idrogeologico (PAI)," https://www.regione.piemonte.it/web/temi/protezione-civile-difesa-suolo-opere-pubbliche/difesa-suolo/strumenti-per-difesa-suolo/piano-per-lassetto-idrogeologico-pai. triggered national debate on workplace safety standards in Italy

5.7.3 Opportunities

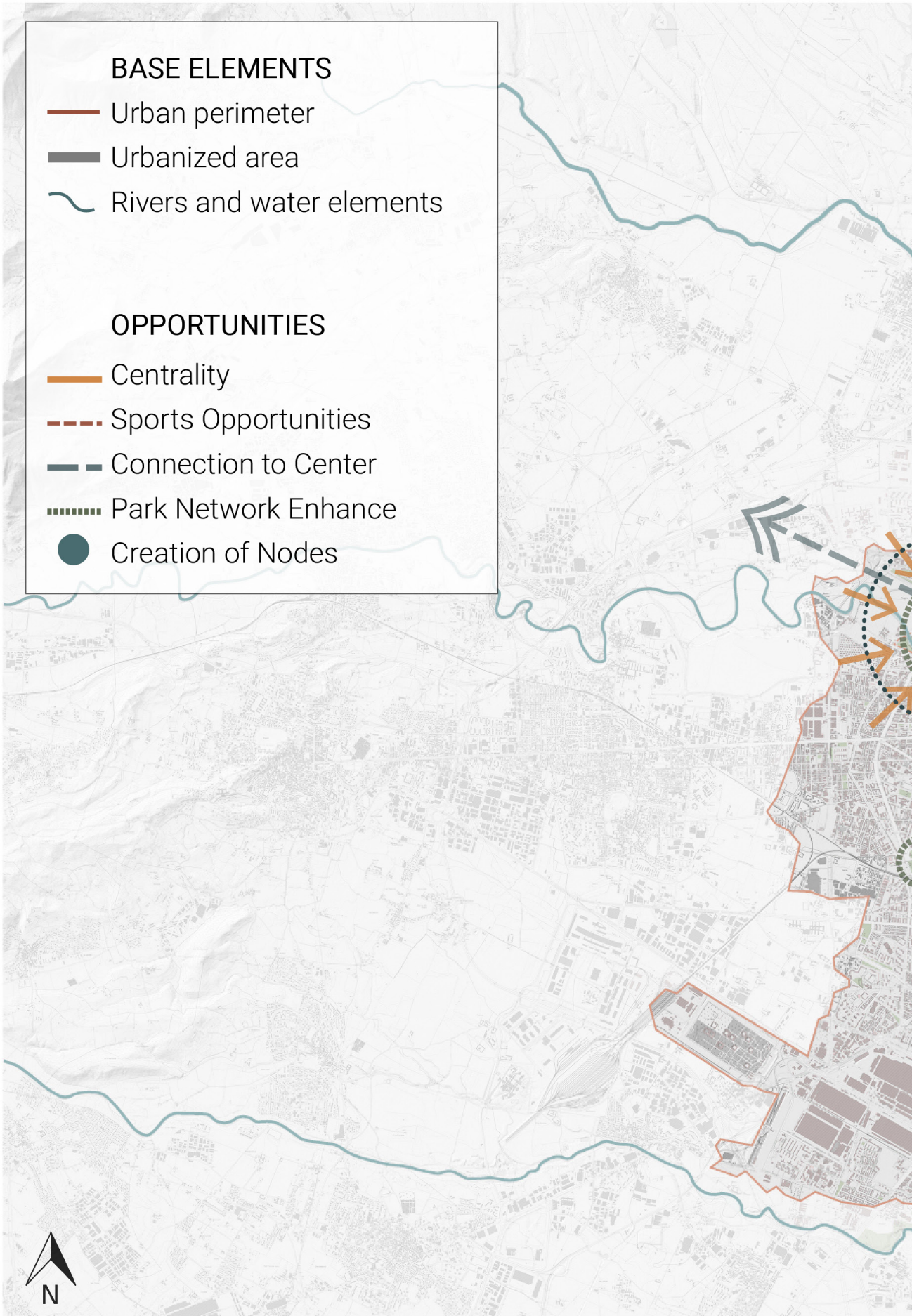
At the scale of the plot, the project can be read as an opportunity to establish a new gateway into Turin through a "western gate," a role reinforced precisely by the terminal function. This is paired with the possibility of requalifying and remediating the water-air-soil system and of mitigating flood risk through a thinning of anthropic pressure on the site. The plot's proximity to a major road artery and its pre-existing cycling infrastructure offer a favorable base for terminal accessibility, while its closeness to the Castello di Lucento and to major residential developments allows the new complex to be anchored both symbolically and functionally within its surroundings. The green corridor of the Dora Riparia, linkable to Parco Calabria and Parco della Pellerina, extends this anchoring into the landscape system. Finally, the terminal function itself creates the opportunity to introduce evening and night-time activity on the site, expanding its catchment area of users well beyond standard daytime hours.(Map 5.4)

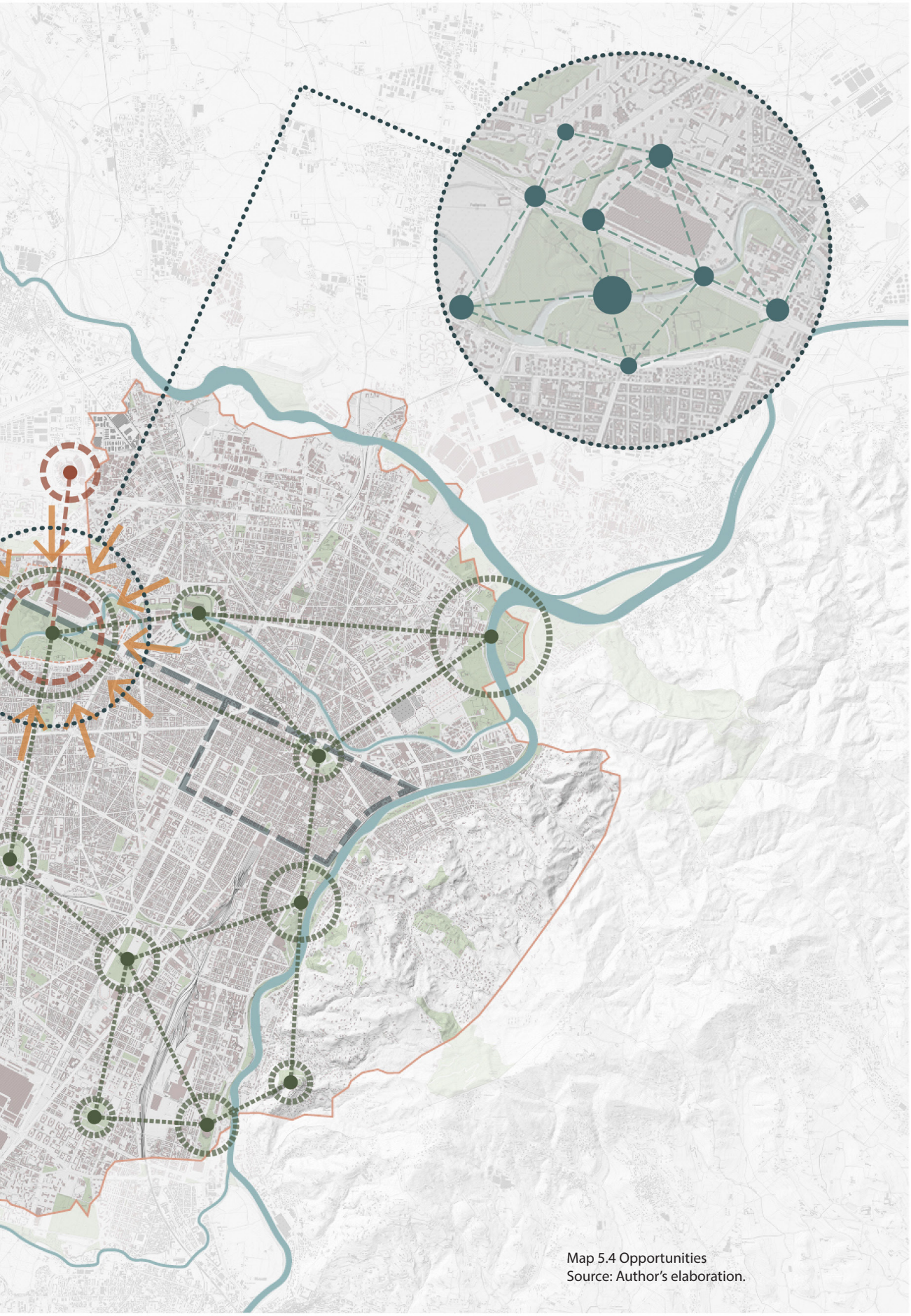
At the neighborhood scale, the opportunities concern above all the possibility of reweaving the urban fabric. The proximity to a high number of green areas and the memory of the building as part of a rural heritage offer a basis for a project that engages with both landscape and collective memory, while the strong potential for human activity generated by the connection with the surrounding residential areas supports the viability of new mixed-use functions. The elimination of functional zoning implied by the project,introducing a plurality of uses where a monofunctional industrial site once stood,can act as a means of re-stitching the urban fabric, an effect that can be reinforced by incentivizing slow and shared mobility to facilitate access to and connection with the city center. The current real-estate market offers favorable conditions for selling property in the area, and the neighborhood's proximity to recently transformed areas such as Spina 3 and Spina 4, as well as to the Castello di Lucento, situates the project within a wider process of urban renewal. Finally, the associations founded on the memory of the 2007 accident represent an opportunity to engage the community in a process of collective memory and reconciliation with the site, rather than in its erasure.


BASE ELEMENTS
Urban perimeter
Urbanized area
Rivers and water elements
WEAKNESSES
Physical barrier
Division of the sector
Hard access
Bus line
Metro line
Tram lines
Torino Centro
High temperature areas
Unplanned vegetation
N



Map 5.3 Weaknesses
Source: Author's elaboration.


BASE ELEMENTS
Urban perimeter
Urbanized area
Rivers and water elements
OPPORTUNITIES
Centrality
Sports Opportunities
Connection to Center
Park Network Enhance
Creation of Nodes
N



Map 5.4 Opportunities
Source: Author's elaboration.

5.7.4 Threats

At the scale of the plot, the principal threats derive from the persistence of degradation and from the site's fragmented ownership. Widespread degradation in the area, partly caused by the deterioration of the former factory buildings, is accompanied by an exponential growth of spontaneous vegetation and by the social abandonment of the site, which in common perception has led to its labelling as a dangerous place,a label that is difficult to fully shed given its continuing association with a "site of a fire." Increased soil impermeability threatens to raise flood risk further, while an unmanaged increase in the anthropic share of the area risks deepening the site's estrangement from the rest of the city. Heavy traffic flows already contribute to increased environmental and noise pollution, and the sectorialization of existing activities carries the risk of encouraging isolated functional clusters in the surrounding area rather than genuine integration. The plurality of property ownerships overlapping on the plot remains, finally, a significant obstacle to any coordinated transformation process.(Map 5.5)

At the neighbourhood scale, the threats are closely tied to the demographic and social trajectory of the area. The plot's enclosure, a consequence of the site's morphology, is compounded by a very high average age within the neighbourhood and by the near-total abandonment of productive and recreational activities, conditions that together risk deepening social and urban degradation. A steady increase in environmental, noise and light pollution, together with a continuing rise in the anthropic share of the area, further threatens the neighbourhood's liveability. A subtler risk lies in the attempt to erase the memory of the 2007 accident from collective consciousness rather than working through it, which could foreclose the very process of reconciliation identified above as an opportunity. Finally, the flood risk confirmed by the P.A.I. documentation, which places the macro-area within flood zones B and C, remains a structural threat that any design proposal will need to address.

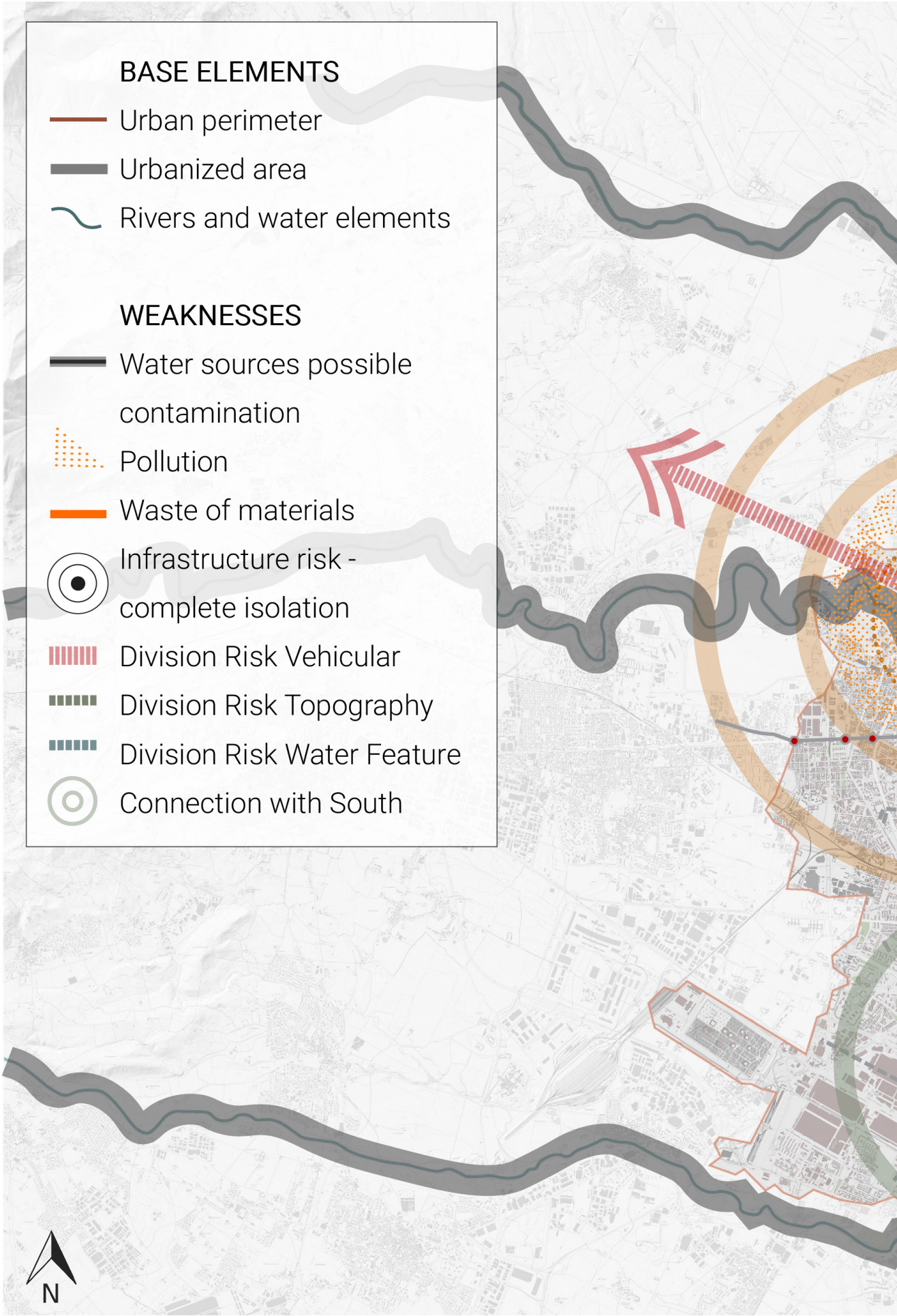
5.8 Conclusion

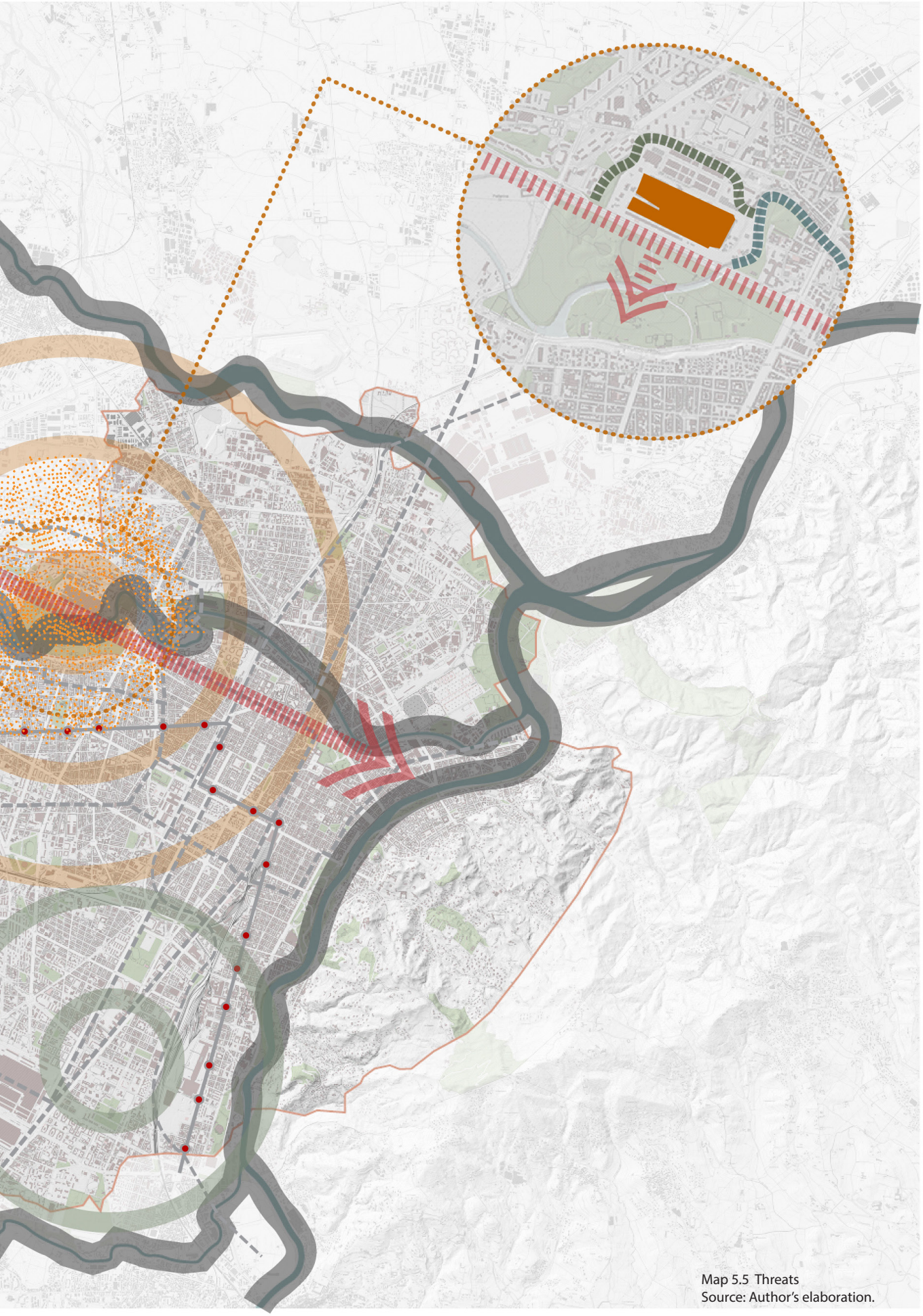
This chapter has established the rationale underlying both the thesis topic and the selection of the former ThyssenKrupp site as its object of study. Post-industrial regeneration was identified as a subject of broad relevance to contemporary European urbanism, offering a productive lens through which to examine how cities reconcile their industrial past with the demands of their contemporary and future identity. Within this framework, the former ThyssenKrupp site emerged as a particularly compelling case, combining rich historical and industrial significance, substantial environmental and social complexity, a strategic position within Turin's urban and infrastructural network, ongoing municipal and institutional interest, and a broader relevance that extends well beyond the specific conditions of this single site.

The chapter also traced the site's historical trajectory, from its establishment in the mid-twentieth century as part of Turin's industrial expansion, through its decades of operation under the ThyssenKrupp conglomerate, to the tragic fire of December 2007 and its subsequent closure and abandonment. This history underlies the three principal urban challenges the project seeks to address: the inefficiency and congestion of Turin's current mobility infrastructure, the environmental degradation and structural decay of the site itself, and the shortage of public space and social services in the surrounding neighborhoods.

Finally, the chapter presented the specific locational reasoning that most directly motivates the design proposal: the site's proximity to the A55 ring road, Turin Airport, the Allianz Stadium, and the forthcoming Ospedale Torino Nord, and the opportunity this presents to relocate Turin's intercity bus terminal away from Corso Vittorio Emanuele II. This relocation was shown to offer measurable benefits in terms of regional mobility efficiency and the reduction of traffic-related emissions within the city center, while simultaneously consolidating the site's role within a broader area of the city already marked for significant public investment.

Together, these arguments establish the former ThyssenKrupp site not as an arbitrary or convenient choice, but as a site whose regeneration is both historically meaningful and urgently needed, one capable of addressing environmental, social, and infrastructural challenges simultaneously, while contributing to Turin's broader post-industrial transformation. Chapter 6 turns to the case studies that inform the design methodology developed in response to this rationale.


BASE ELEMENTS
Urban perimeter
Urbanized area
Rivers and water elements
WEAKNESSES
Water sources possible contamination
Pollution
Waste of materials
Infrastructure risk - complete isolation
Division Risk Vehicular
Division Risk Topography
Division Risk Water Feature
Connection with South
N



Map 5.5 Threats
Source: Author's elaboration.

6 Design Process

6.1 Introduction

This chapter presents the design process developed for the transformation of the former ThyssenKrupp industrial site in the Lucento/Vallette district of Turin. While the previous chapters established the theoretical framework, the site's historical and urban context, and the rationale for selecting this location and program, this chapter traces the evolution of the design proposal itself, from its earliest conceptual diagram to its final, fully articulated masterplan.

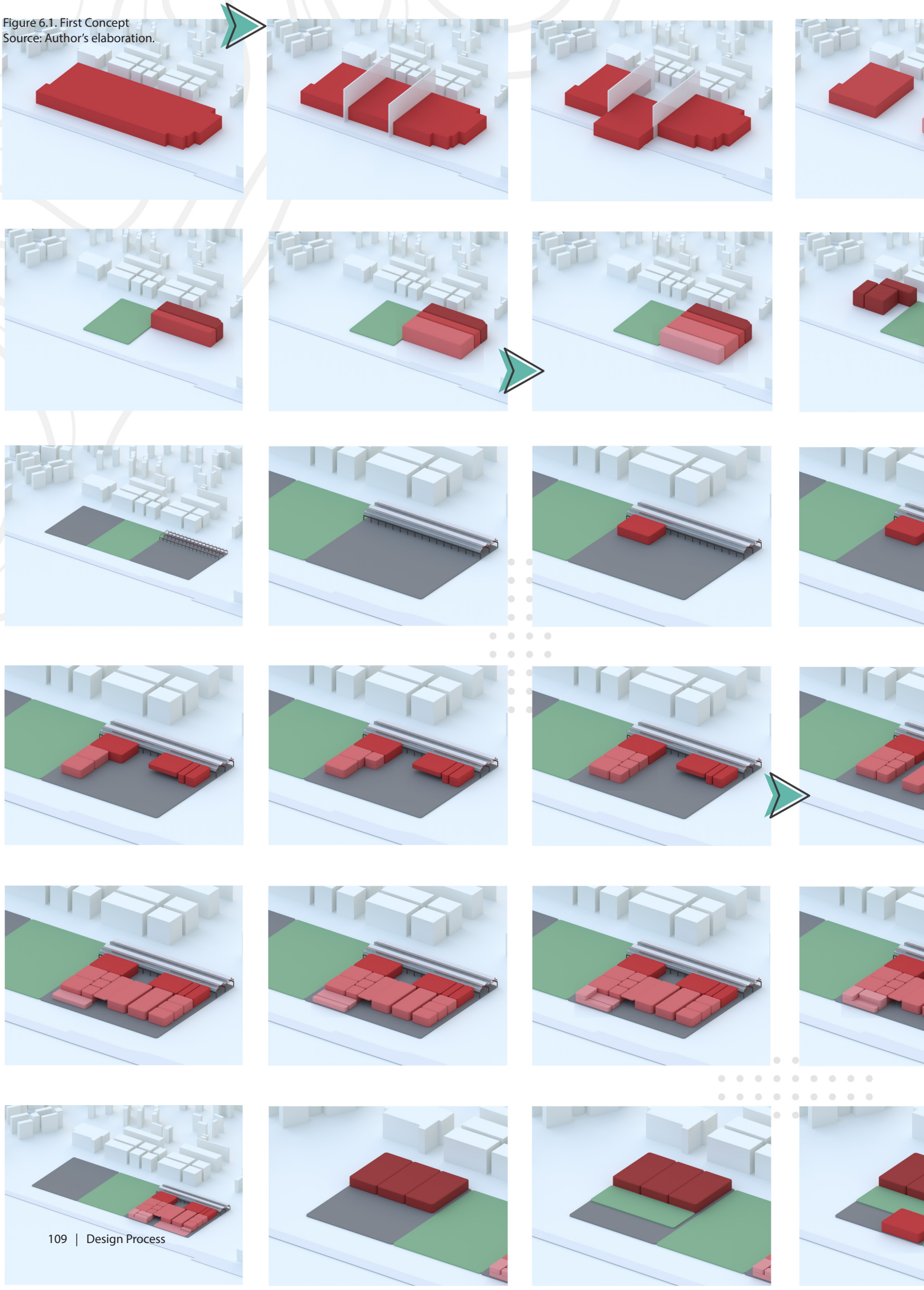
Chapter 5 identified a series of urban challenges affecting the site and its surroundings: the prolonged disuse and physical deterioration of the former industrial complex; the absence of a proper intercity bus terminal in Turin, with buses currently operating informally along Corso Vittorio Emanuele II without adequate passenger facilities; and significant gaps in the site's connectivity to its surrounding context, including insufficient pedestrian and cyclist access across the Dora River and toward Parco della Pellerina. The design process documented in this chapter was developed specifically to respond to these conditions, reactivating a large, well-located but underused urban area; providing Turin with the intercity terminal infrastructure it currently lacks; and repairing the site's connections to the metropolitan road network, the surrounding neighborhood, and adjacent green and institutional landmarks.

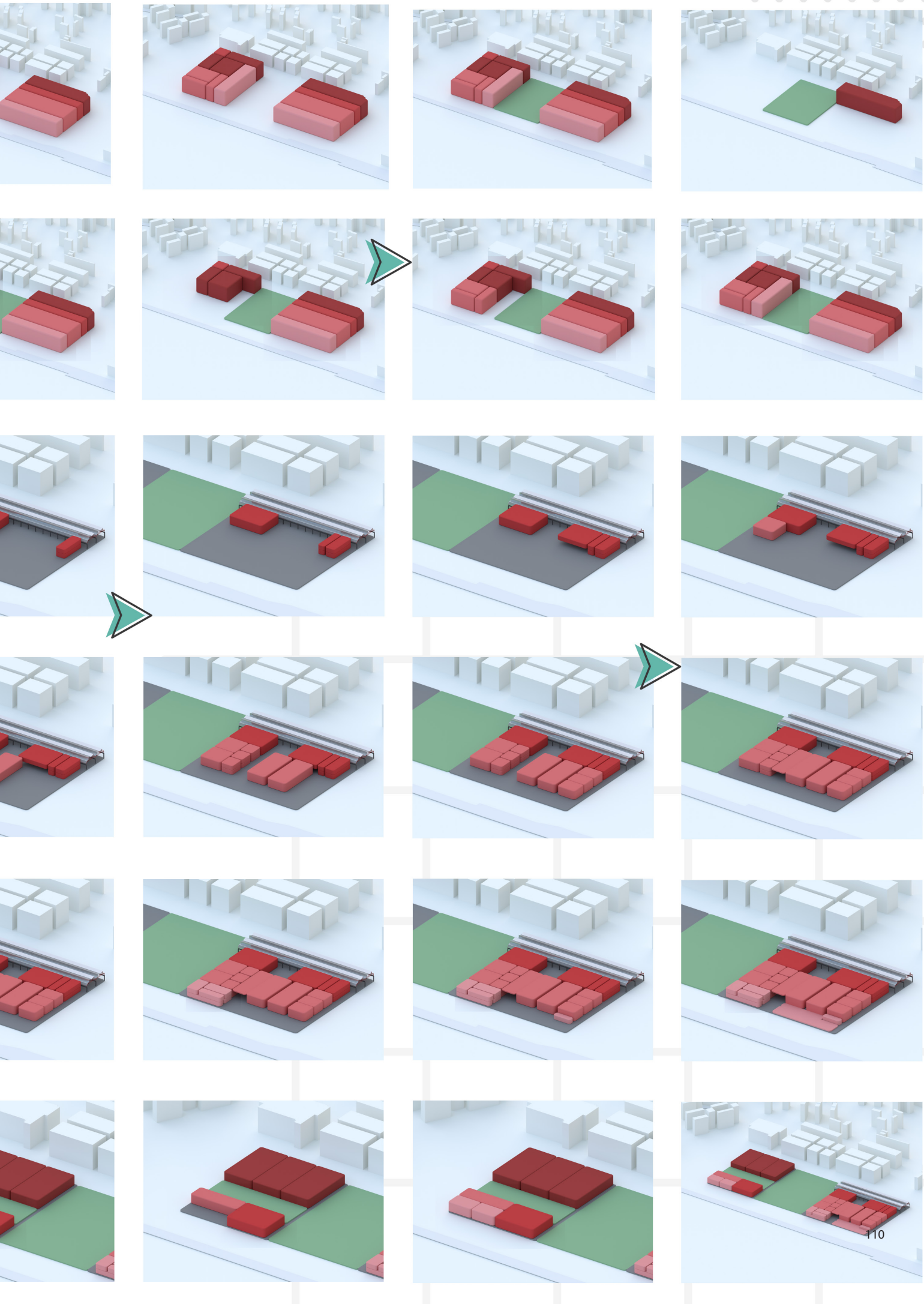
The design process was not linear. It began with a straightforward tripartite division of the site into terminal, buffer, and neighborhood-facing zones and was substantially revised as the project's priorities were clarified, first by grounding the proposal in an infrastructural and mobility logic and later by broadening its program in ways that dissolved the initial rigid zoning into a more integrated urban fabric. The sections that follow document the reasoning behind each of these shifts so that the final masterplan presented at the end of the chapter can be understood as the outcome of a sequence of deliberate design decisions rather than a single fixed idea.

6.2 First Concept: Dividing the Site into Three Zones

The design process began with a preliminary division of the 157,000 m^2 former ThyssenKrupp site into three broad zones, each corresponding to a distinct group of functions and users. This initial subdivision was intended as a working framework, a way to organize the scale and complexity of the site before developing any detailed architectural response. The boundaries, areas, and functions described in this section reflect this first stage of the design and were substantially revised in the sections that follow. The Terminal Zone, located on the eastern portion of the site (approximately 64,000 m^2), was conceived as the primary functional core of the project. It was intended to accommodate the intercity bus platforms, taxi station, waiting areas, and a set of complementary public functions, including a hotel, cinema, and theatre, supporting both the terminal's passengers and the surrounding area. Its position was chosen for proximity to the site's main points of external connection, including the Tangenziale A55 motorway and the routes linking the site to the underground railway network and Turin's city center. The Green Area, occupying the central portion of the site (approximately 48,000 m^2), was conceived as a buffer between the Terminal Zone and the residential district to the west. Its role at this stage was primarily environmental and spatial: to soften the transition between the more intensive terminal functions and the existing neighborhood, while providing open green space that the surrounding area currently lacks. The Local Zone, located on the western portion of the site (approximately 45,000 m^2) and directly adjacent to the existing Lucento/Vallette residential fabric, was intended to house facilities serving the neighborhood's everyday needs, including a kindergarten, primary and secondary school, gymnasium, registry office (anagrafe), post office, and local market functions. This tripartite division was represented in an early concept diagram and served as the starting point for the design process.(Fig. 6.1) As the following sections describe, this initial framework was subsequently reconsidered, first through a mobility-driven masterplan, and later through a broadening of program that dissolved the strict boundaries between the three zones.

Figure 6.1. First Concept
Source: Author's elaboration.





6.3 Reordering the Method: Mobility Mapping and Masterplan

To translate the site's regional and urban connections into an operative accessibility structure, a schematic 3D accessibility diagram (Fig. 6.2) was produced. Rather than beginning from the internal zoning of the site, this diagram maps the site outward: it identifies the key vehicular, pedestrian, and cyclist routes connecting the site to the surrounding city and numbers each route segment against the real street network, with Corso Regina Margherita as the principal spine linking the site to both the Tangenziale A55 and the city center, Via Andrea Sansovino and Corso Lucio Quinzio Cinccinato as the connections toward Alliance Stadium, Corso Appio Claudio, Corso Lecce, and Corso Tuscana as the west, south, and east access corridors, and a set of local streets (Via Amedeo di Francesco, Via Pellegrino Tibaldi, and Via Pianezza) serving the adjacent residential areas to the north. Three new internal vehicular roads were also proposed, connecting the terminal, administrative, and educational districts to the sideroad of Corso Regina Margherita, while dedicated pedestrian and bicycle pathways were layered across the site to ensure it functions independently of car access for local and short-distance movement. This diagram established the accessibility logic, origins, destinations, and hierarchy of routes that the subsequent masterplan and internal circulation design would be built upon.

Accessibility

Site → 6 Vehicular Bridge (from the controviale of Corso Regina Margherita) → 1 Corso Regina Margarita → Tangenzale A55

Site → 1 Corso Regina Margarita → 2 Via Andrea Sansovino → Alliance Stadium

Site → 3 Corso Lucio Quinzio Cincinato → Alliance Stadium

Site → 1 Corso Regina Margarita → Corso Venezia → Torino Rebaudengo Fossata

Site → 1 Corso Regina Margarita → City Center

Site → 1 Corso Regina Margarita → 11 Corso Appio Claudio → Access to the Western part of the City

Site → 1 Corso Regina Margarita → 10 Corso Lecce → Access to the Southern part of the City

Site → 4 Via Amedeo di Francesco → 12 Via Pianezza → Residential Area

Site → 5 Via Pallegrino Tibaldi → 12 Via Pianezza → Residential Area

Site → 1 Corso Regina Margarita → 2 Via Andrea Sansovino → 13 Corso Tuscana → Access to the Eastern part of the City

Site → 7 Vehicular Road (from the Terminal to controviale di Corso Regina Margarita)

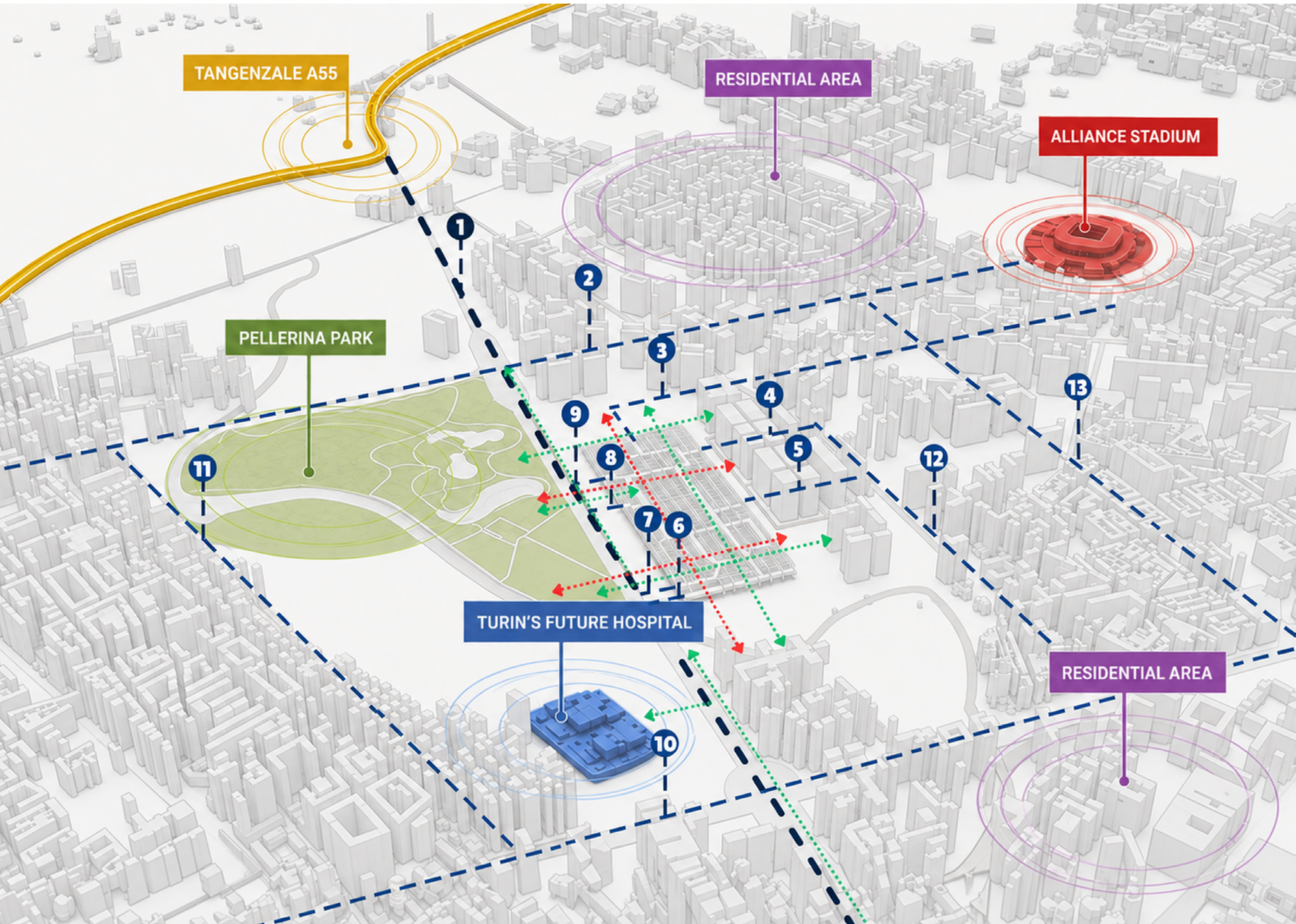
Site → 8 Vehicular Road (from the Administrative District to controviale di Corso Regina Margarita)

Site → 9 Vehicular Road (from the Educational District to controviale di Corso Regina Margarita)

Pedestrian Pathways

Bicycle Pathways

Figure 6.2 : Mobility Mapping
Source: Author's elaboration.



6.3 Reordering the Method: Mobility Mapping and Masterplan

6.3.1 Metropolitan and Urban Points of Reference

The mobility study began by identifying the destinations, at metropolitan and urban scale, that the site needed to relate to (Fig. 6.3). Seven reference points were mapped around the site: Turin Airport and the Tangenziale A55, reached via the Raccordo Autostradale Torino–Caselle and Corso Regina Margherita; Torino Rebaudengo Fossata, the nearest railway station to the site, whose proximity strengthens the site's connection to Turin's wider public transport network and improves regional accessibility; the Allianz Stadium, treated as a metropolitan destination whose proximity offered an opportunity to extend pedestrian and cycling connections beyond event days; the Castello di Lucento, whose historical presence adjacent to the site suggested reinforcing pedestrian and cycling links, as well as local road access, between the regenerated site and the surrounding heritage and residential fabric behind it; Parco della Pellerina, identified in the earlier site analysis as insufficiently connected to the surrounding fabric; the Dora river, running along the site's edge; and Turin's future hospital, planned nearby.

For each of these, the mobility study did not simply mark a destination but proposed a specific connective response, for example, two dedicated pedestrian and bicycle bridges linking different areas of Parco della Pellerina to different programmatic zones of the site, or a barrier-free pedestrian and bicycle bridge connecting the site directly to the future hospital, reducing the need for hospital staff, patients, and visitors to rely on private vehicles.

Building on these reference points, the accessibility structure of the site was organized into five access types:

1.Type 1 – Regional Access, connecting the site to the Tangenziale A55 and, through it, to the wider motorway network (A4, A5, A21, A32) and destinations such as Milan, Aosta, Ivrea, and the surrounding municipalities.

2.Type 2 – Urban Access, split into primary east–west and primary north–south corridors, carrying the main urban-scale traffic to and from the site.

3.Type 3 – Urban Access, a secondary tier of urban-scale connections.

4.Type 4 – Local Access, serving the immediate neighborhood.

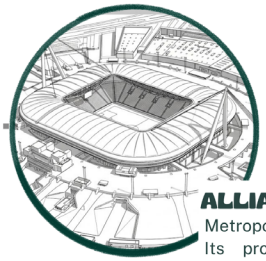
5.Type 5 – Proposed Primary Site Axes, the new internal axes introduced by the project itself to structure movement within the site. (Fig. 6.3)

This hierarchy was then translated into a concrete list of routes using existing streets: a vehicular bridge from the sideroad of Corso Regina Margherita connects the site to the Tangenziale A55; Corso Regina Margherita itself connects the site to the city center and, via Via Andrea Sansovino, to the Allianz Stadium; Corso Appio Claudio and Corso Lecce give access to the western and southern parts of the city, respectively; and three local streets, Via Amedeo di Francesco, Via Pellegrino Tibaldi, and Via Pianezza, were identified for improvement to provide direct access from the northern part of the city into the site. Three further internal vehicular roads were defined to connect the terminal, the administrative district, and the educational district within the site to the sideroad of Corso Regina Margherita, allowing traffic to exit the site and reach Corso Regina Margherita in both directions, alongside dedicated pedestrian and bicycle pathways layered across the same network.



TURIN AIRPORT

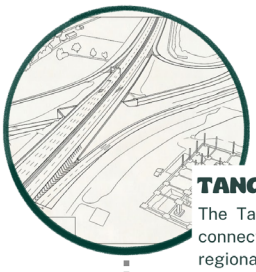
ThThe site's location between Turin Airport and the city centre ensures excellent regional accessibility. Via the Raccordo Autostradale Torino–Caselle, Tangenziale A55, and Corso Regina Margherita, the site is directly connected to both the airport and the city centre, reinforcing its role within Turin's metropolitan mobility network.



ALLIANCE STADIUM

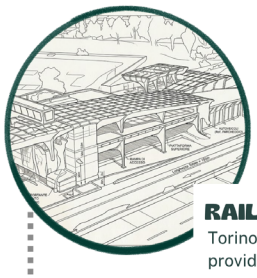
Metropolitan Destination

Its proximity creates an opportunity to strengthen pedestrian and cycling connections while integrating the site into an existing metropolitan movement network beyond event days.



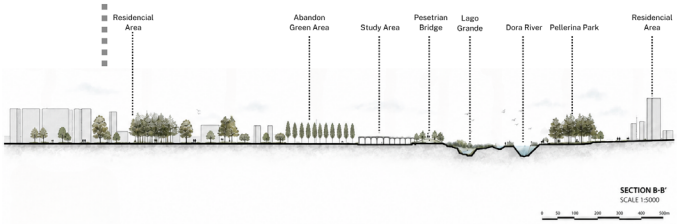
TANGENZALE A55

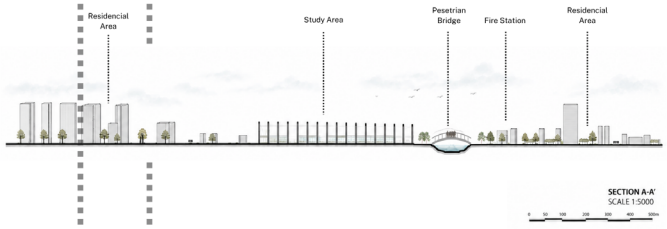
The Tangenziale A55 is the primary metropolitan ring road connecting Turin with the surrounding municipalities and regional motorway network, including destinations such as Milan, Aosta, Ivrea, Caselle Airport, Venaria Reale, Rivoli, Collegno, Orbassano, Moncalieri, Settimo Torinese, Chivasso, and Piacenza through its connections with the A4, A5, A21, A32, and A55 corridors.

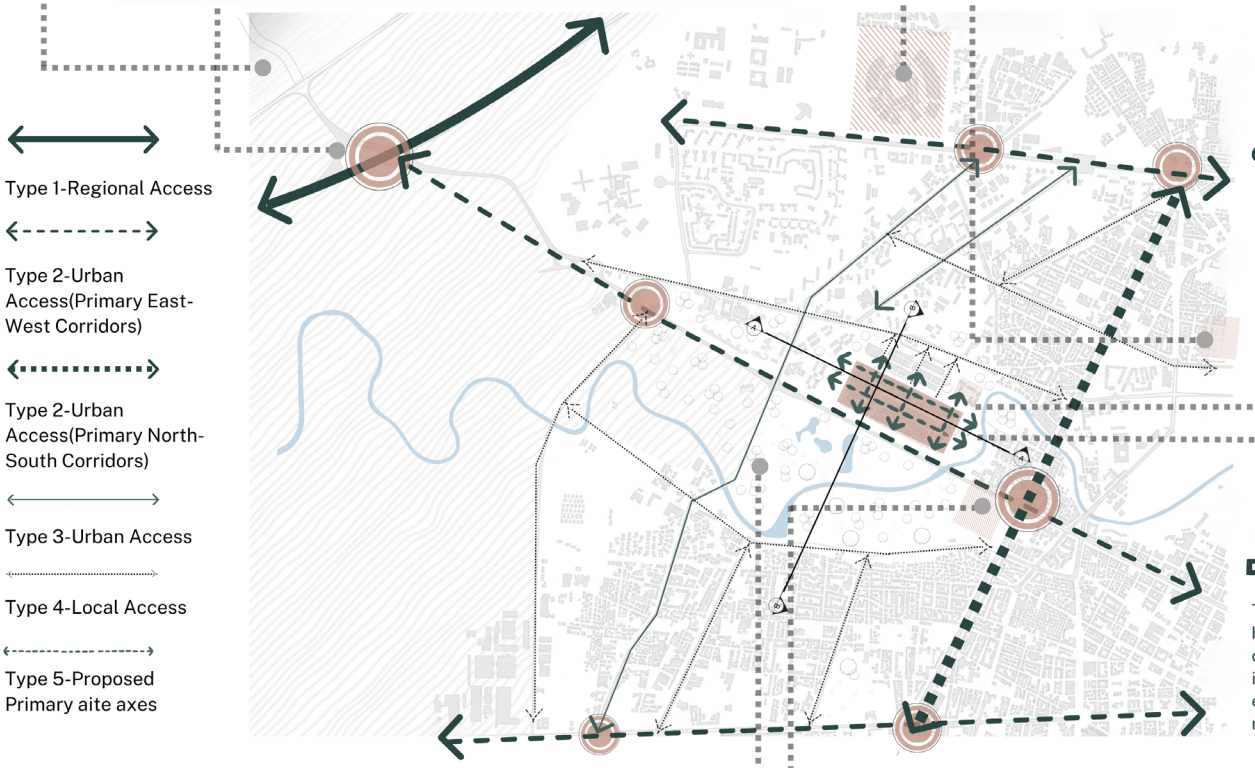


RAILWAY ACCESSIBILITY

Torino Rebaudengo Fossata provides the nearest railway access to the site. This proximity strengthens the site's connection to Turin's wider public transport network and improves regional accessibility.







CASTELLO DI LUCENTO

Improved pedestrian and cycling connections can reinforce the relationship between the regenerated site and the surrounding historical heritage.

DORA RIVER

Two dedicated pedestrian and bicycle pathways are proposed to connect the site with the riverside, improving accessibility and extending the active mobility network.



PARCO DELLA PELLERINA

The project establishes two dedicated pedestrian and bicycle bridges at different locations, creating multiple access points between the park and the redevelopment site. These connections link different areas of the park with different programmatic zones of the site, improving permeability, distributing pedestrian and cycling flows, and extending the park's recreational and ecological network into the former industrial landscape.



FUTURE HOSPITAL

The proposed pedestrian and bicycle bridge establishes a direct, safe and barrier-free connection between the hospital and the regeneration site. This new link enables hospital users, employees and visitors to easily access the site's public spaces, services and green areas, while strengthening active mobility and reducing dependence on private vehicles.

Figure 6.3 : Mobility Mapping
Source: Author's elaboration.

6.3.2 Cross-Sections

Three masterplan sections were developed to address the accessibility problems identified in the earlier site analysis, in particular the poor or absent connections between the site, Parco della Pellerina, and the areas on the opposite side of the Dora River.

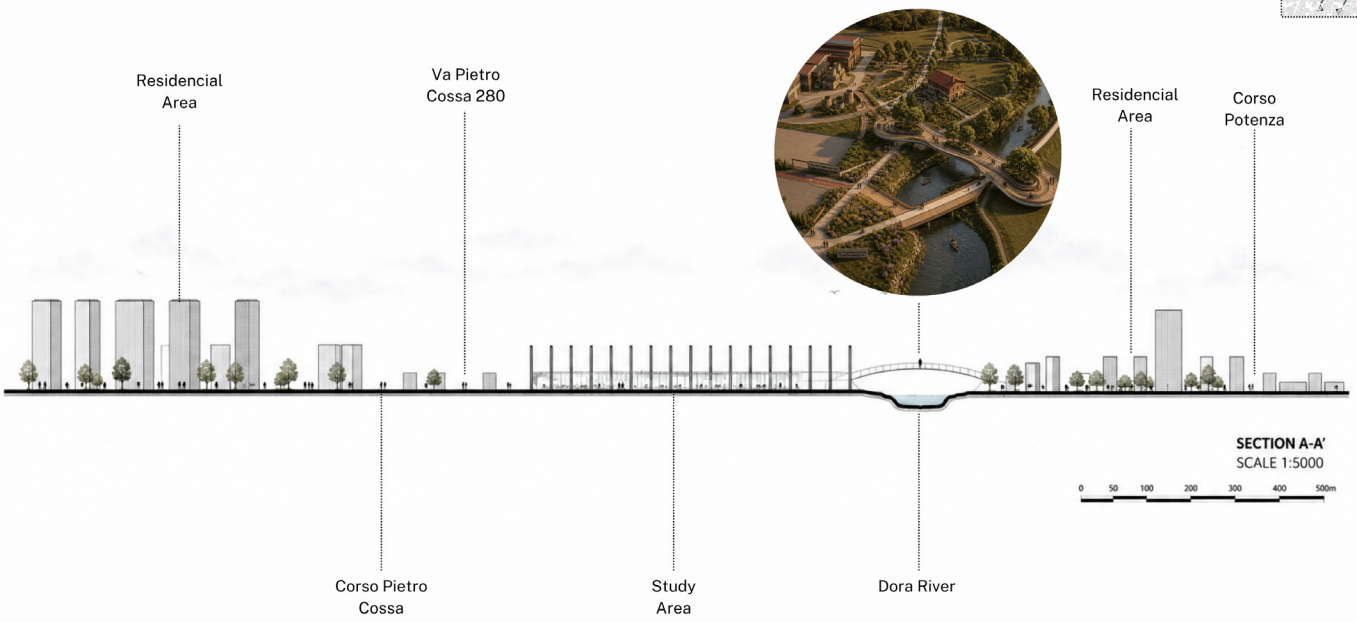
Section A-A' runs from the residential area on Corso Pietro Cossa, through the site, across the Dora River, to the residential area on Corso Potenza. It resolves the connection between the site and the eastern part of the city by introducing a pedestrian and bicycle bridge over the Dora, which despite running along the site's edge is currently inaccessible from it, allowing movement to continue across the river rather than stopping at its edge.

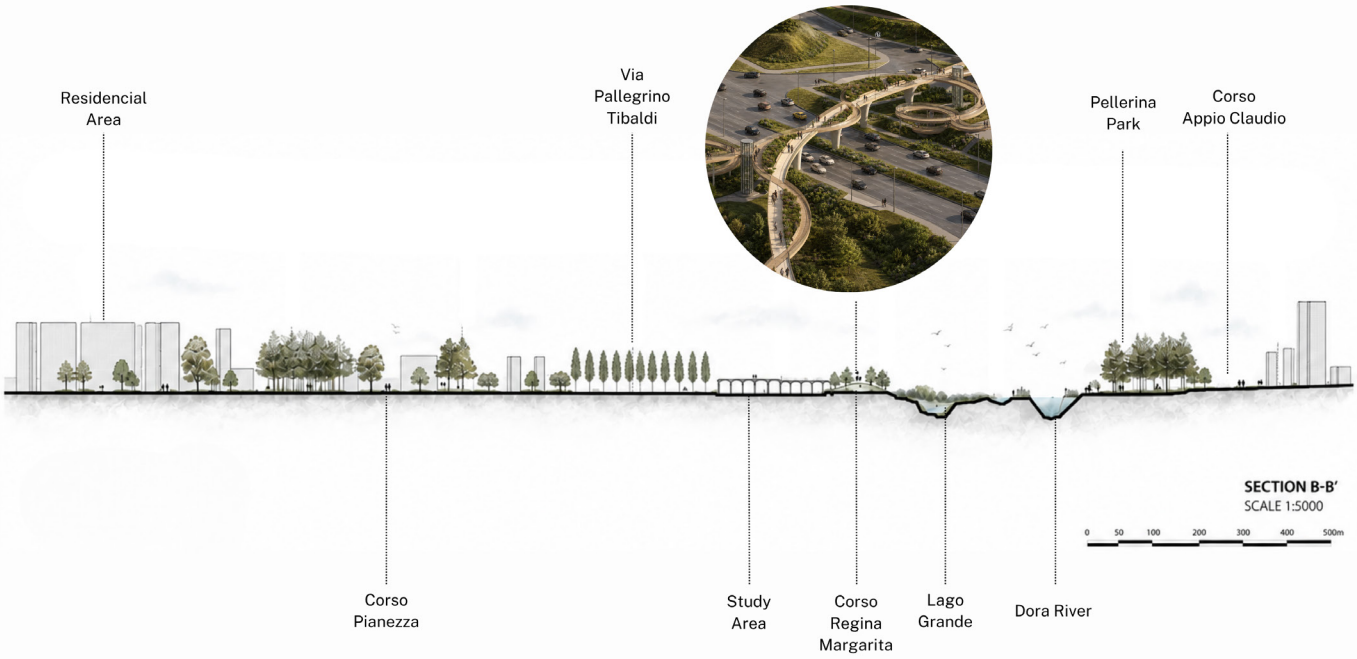
Section B-B' runs from the residential area on Corso Pianezza, through Via Pellegrino Tibaldi and the site, across the Dora and Parco della Pellerina, to Corso Appio Claudio. It introduces two elements: a vehicular bridge carrying traffic from the Tangenziale A55 and Corso Regina Margherita into the site, shown as an elevated road passing over the existing street network, and pedestrian and bicycle bridges connecting the site directly into Parco della Pellerina, turning what the earlier analysis had identified as a disconnected, underused park into an accessible extension of the site's public space.

Section C-C runs from Parco della Pellerina and the Dora River, through Corso Regina Margherita, the site, and the former industrial zone, to Corso Toscana and the residential area beyond. It focuses in detail on the vehicular bridge introduced in Section B-B', shown here as an elevated interchange carrying traffic from Corso Regina Margherita directly into the site, alongside a smaller pedestrian bridge crossing the Dora near Parco della Pellerina. Together with the aqueduct-like pedestrian crossing further along the section, it establishes the site's main vehicular entry point while keeping pedestrian movement along the river separate from car traffic.

Together, the reference-point mapping, the five-tier access hierarchy, and the three cross-sections gave the project a circulation logic that could support the zoning and functional decisions described in the following sections, reversing the order of the original first hypothesis, where zones had been proposed before circulation was resolved.







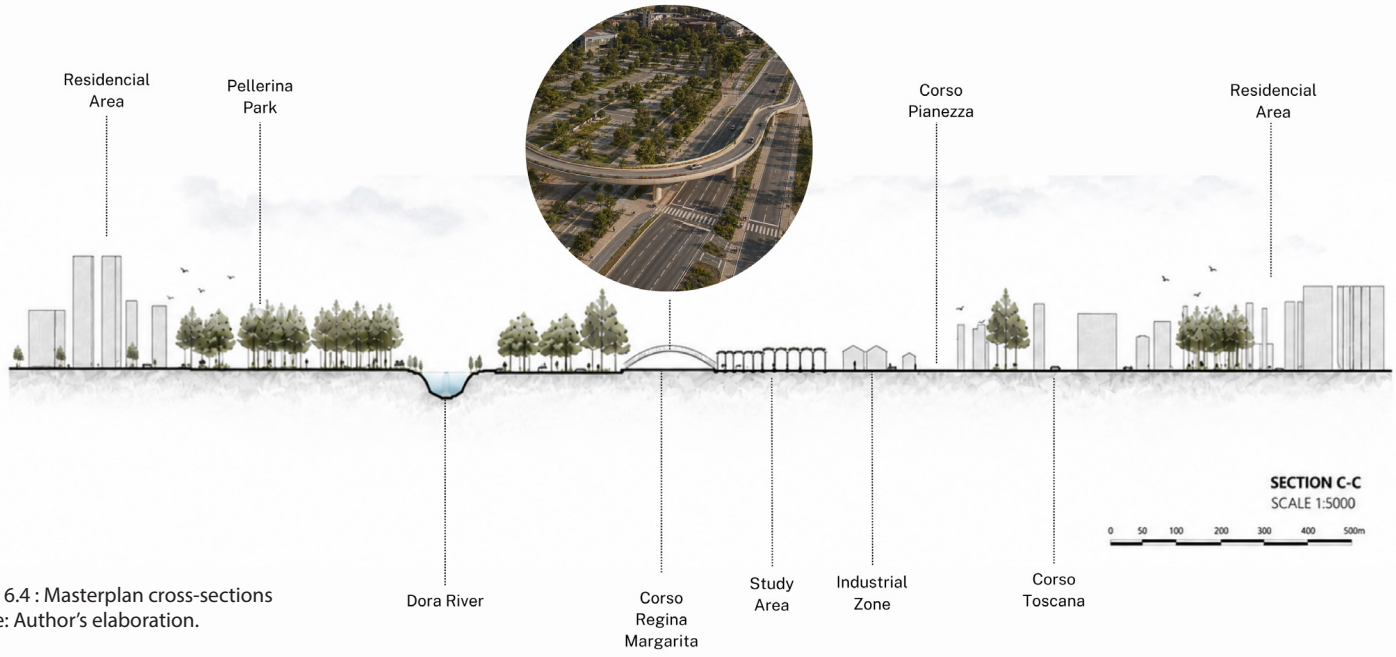


Figure 6.4 : Masterplan cross-sections
Source: Author's elaboration.

6.3.3 Internal Circulation

With the site's external connections established, the same circulation-first logic was applied to its interior. The first step was to define a set of main axes running through the site, aligned with the primary north–south and east–west directions established by the surrounding street grid (Fig. 6.5). These axes structure the site at the largest scale, giving it a clear internal orientation before any building volumes were placed.

Around these main axes, a ring-based circulation system was then developed. Rather than routing traffic straight through the site, car roads were looped around the larger building clusters and public squares, functioning similarly to roundabouts distributed across the site (Fig. 6.6). This ring logic keeps vehicle movement continuous and distributed rather than concentrated on a single route, reducing the risk of traffic congestion and limiting the exposure of pedestrian areas to concentrated vehicle emissions.

Pedestrian movement was layered directly onto this road network, with sidewalks running alongside every car road. Beyond these, the spacing between building volumes was deliberately kept open to provide additional pedestrian routes through the site, so that movement on foot is not confined to the edges of the road network but can also be cut directly between buildings.

Finally, a dedicated bicycle network was introduced across the site (Fig. 6.7), physically separated from car traffic to ensure safety for children and other vulnerable users. The bicycle pathways are two-way, approximately 4 meters wide, and run both along the main axes and through the site's interior, connecting the different functional zones to one another and to the external pedestrian and cycling network described in the previous sections.

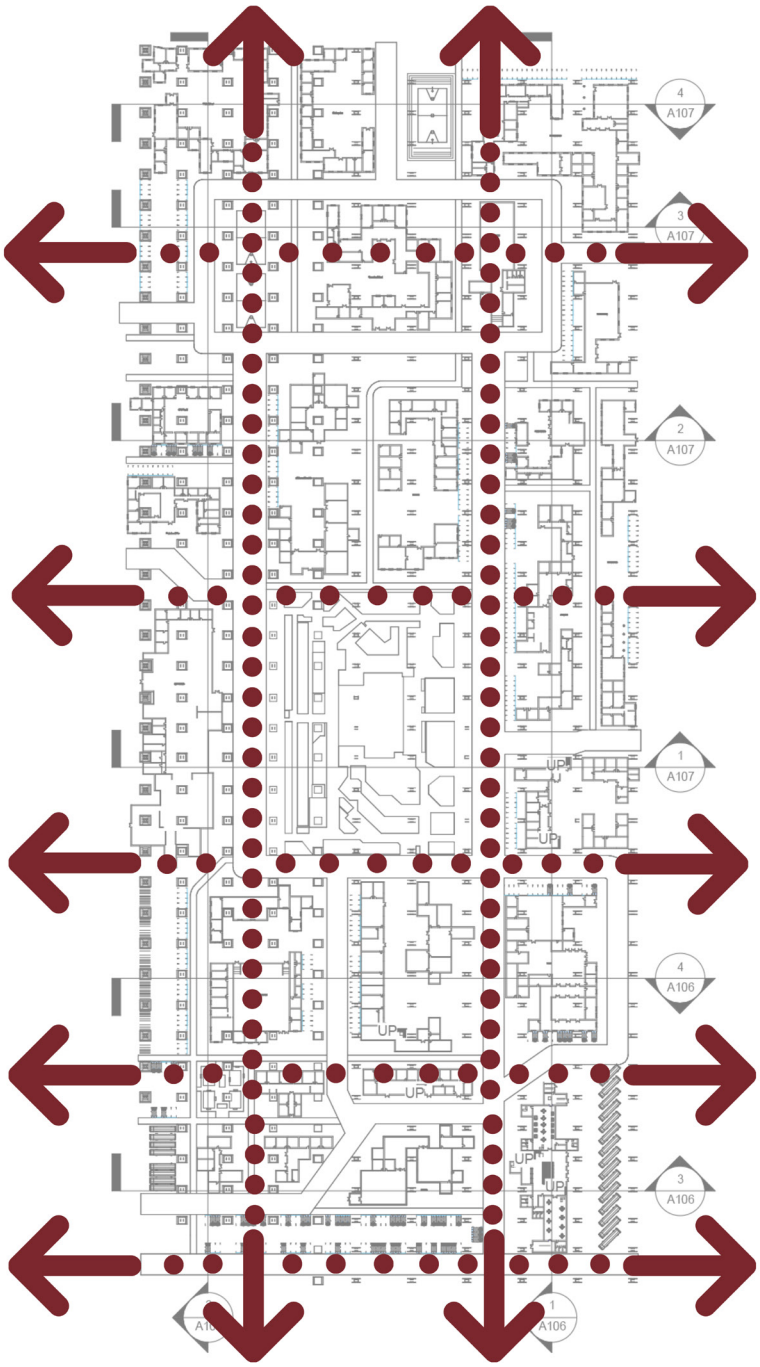


Figure 6.5 : Main Access. Scale: 1:3000
Source: Author's elaboration.

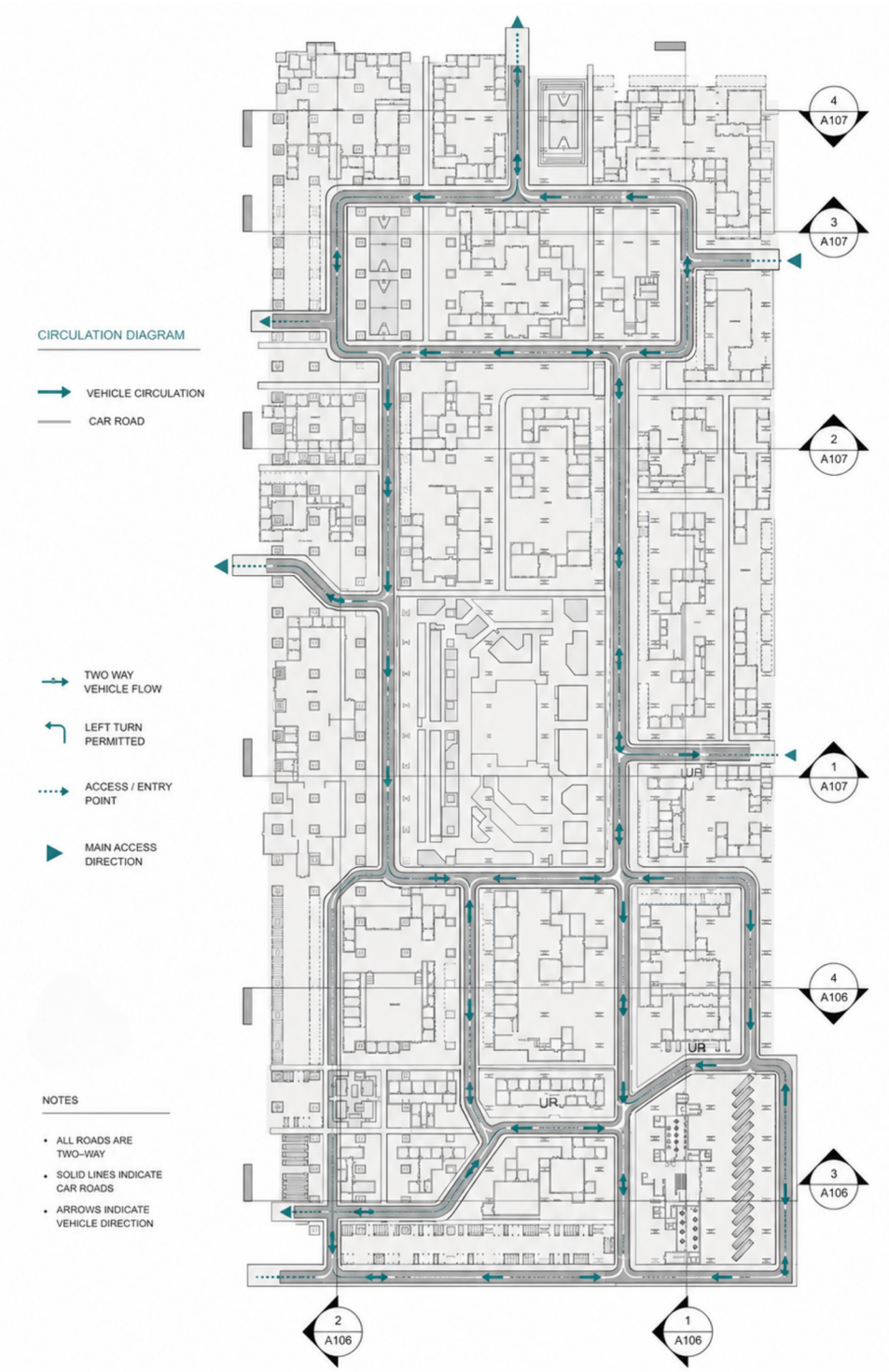


Figure 6.6 : Circulation Diagram.
Scale: 1:3000
Source: Author's elaboration.



Figure 6.7 : Circulation Diagram.
Scale: 1:3000
Source: Author's elaboration.

6.4 Revising the Design's Content

Working from the mobility map and masterplan, the project's content was substantially revised from the first hypothesis shown in Fig. 6.1. Two changes distinguish this stage from the initial concept.

Expansion and reorganization of functions into three zones. The number and variety of functions increased significantly beyond the original three-zone sketch, and the site's program was reorganized into three distinct zones: the Terminal Zone, the Civic Zone, and the Educational Zone.

Terminal Zone

The Terminal Zone was developed around the intercity bus terminal itself, together with a transit hotel, a museum dedicated to the site's ThyssenKrupp industrial history, a cinema complex, a concert hall, a commercial center and an entertainment center. It also accommodates the mobility functions the terminal depends on: a GTT bus station for city bus routes, a taxi station, and public parking, in addition to the terminal's own back-of-house functions (management offices, staff facilities, maintenance, and plant rooms).

Civic Zone

The Civic Zone, occupying the central part of the site, was developed to include an Iper mercato, a Poste Italiane branch, medical offices, and a large public green area, together with a set of civic and administrative services for the surrounding district: an Anagrafe (registry office), a police station, Comune offices, civil protection and social services offices.

Educational Zone

The Educational Zone was developed to include a kindergarten, primary school, middle school and secondary school, together with sport courts, a public library and a swimming pool.

This expansion reflects the intention, established in the earlier chapters, for the project to function not simply as a transport facility but as a piece of urban infrastructure that gives the Lucento–Vallette neighborhood the civic and social facilities it currently lacks.

Integration of green space into the built fabric. The separated green buffer of the first hypothesis was abandoned. Rather than keeping green space and building volumes as two distinct, side-by-side zones, green space was redistributed throughout the site and mixed directly with the built volumes. This shift moves the green area from being a separating device between two unrelated programs to being a connective and distributive element running through a more continuous, mixed-use fabric, consistent with the transit-oriented development literature discussed in Chapter 2, where mobility infrastructure is treated as an integrated part of the urban fabric it serves rather than an isolated enclave.

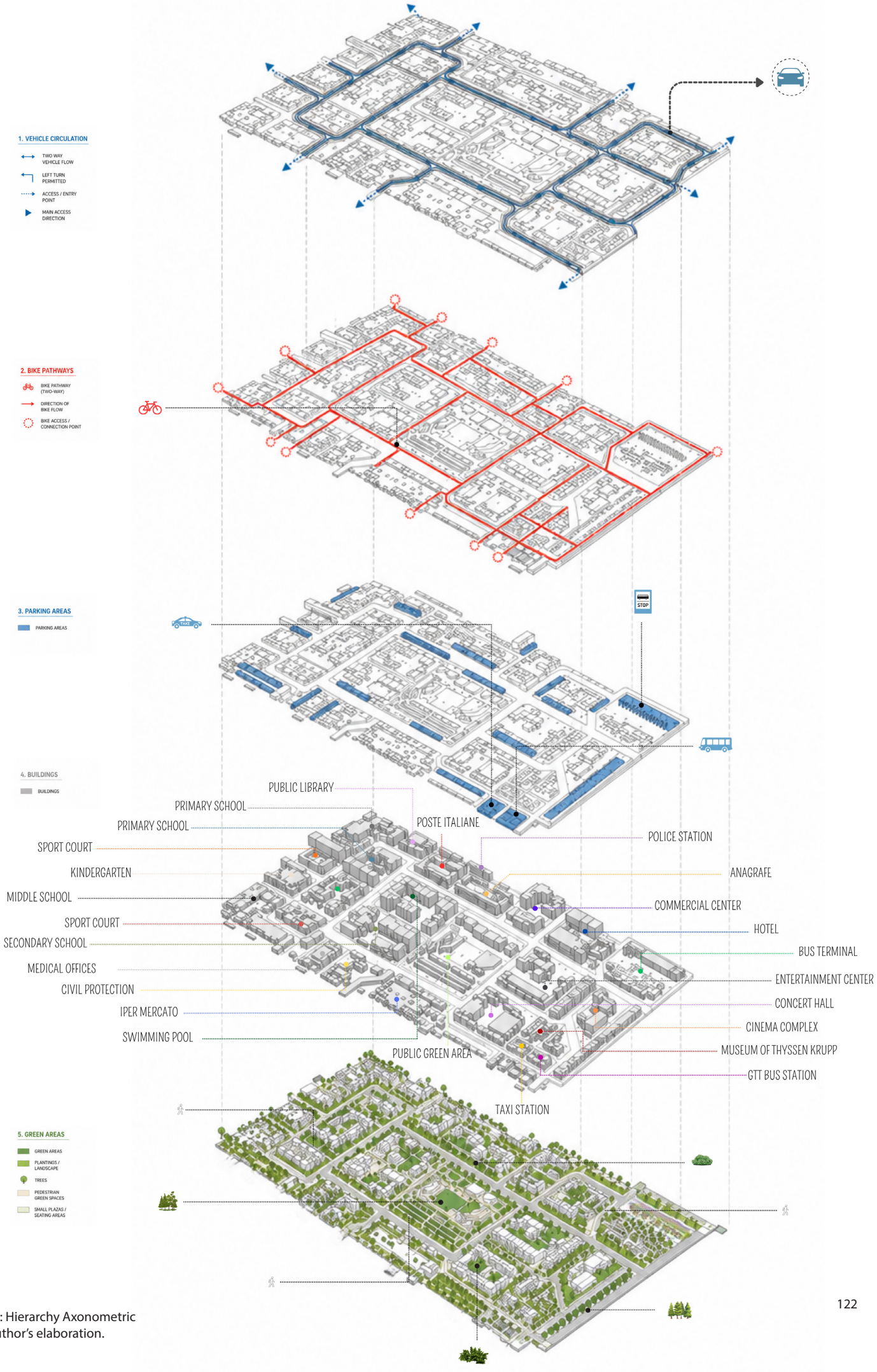


Figure 6.8 : Hierarchy Axonometric
Source: Author's elaboration.

6.5 Structural Grid and Modular System

Because the existing factory structure was not demolished, the design of the buildings was constrained and, in practice, guided by the existing column grid. The spacing between the existing columns was measured across the site; since this spacing was not uniform, an average dimension was taken as the basis for a modular system of 5 × 5 m boxes. These boxes were fitted into the bays defined by the existing columns, and for each function in the program, the number of boxes and the number of stores required were determined according to the area and spatial needs of that function (Fig. 6.9, showing the resulting modular massing beneath the terminal's canopy structure).

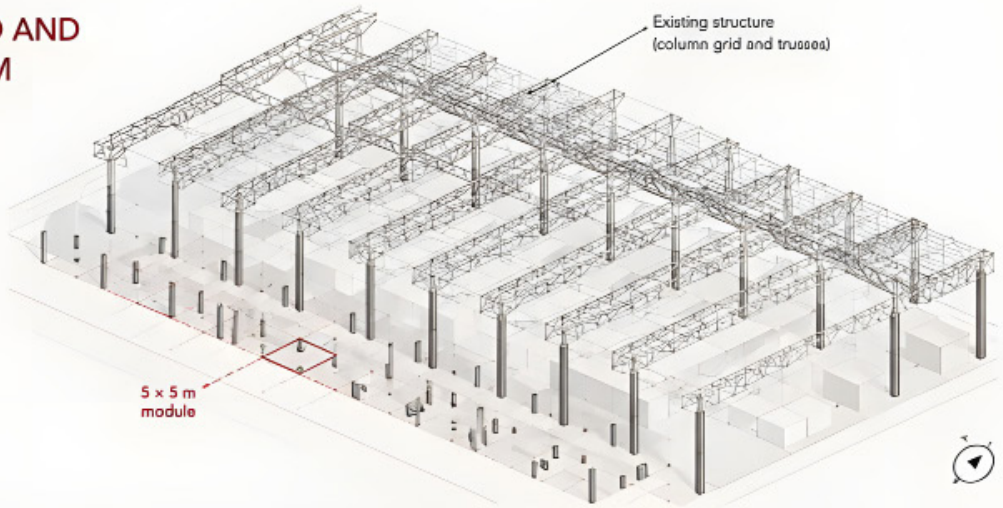
Within this logic, the original steel structure of the factory was treated as a datum rather than a set of walls: the existing columns and the long-span roof trusses were retained and re-expressed as the primary structure, while the 5 × 5 m boxes were inserted beneath and around them as the secondary, occupiable layer. This produces a legible distinction, visible throughout the sections and elevations developed for the terminal (Section 6.6), between the tall, regularly spaced original columns and trusses on the outside and the lower, denser volume of stacked boxes they shelter(Fig. 6.9)

Once this modular base was established, the design proceeded function by function: for each programmed use, the corresponding cluster of boxes within its structural bay was tested against the specific spatial requirements of that function, and boxes were added or removed accordingly to refine the footprint. The modules were then extruded in height, stacking additional layers of boxes where a function required more floor area or a taller volume, and it was through this process of aggregation and vertical expansion that the individual buildings of the site began to take their final form.

6.5 STRUCTURAL GRID AND MODULAR SYSTEM

The existing factory structure was not demolished, so the design was constrained by the existing column grid. The spacing between the columns was measured across the site and, since it was not uniform, an average dimension of 5 × 5 m was adopted as a modular system.

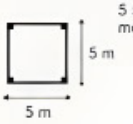
These 5 × 5 m boxes were fitted into the bays defined by the existing columns, and for each function in the programme, the number of boxes and storeys required were determined according to the area and spatial needs of that function.



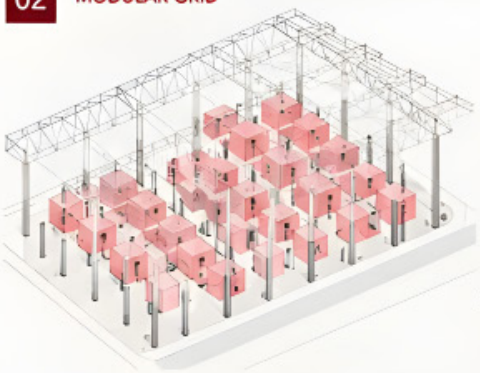
01 EXISTING COLUMN GRID



The existing columns were measured across the site. Since the spacing was not uniform, an average dimension of 5 × 5 m was taken as the basis for the modular system.

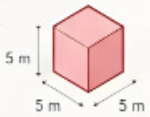


02 MODULAR GRID

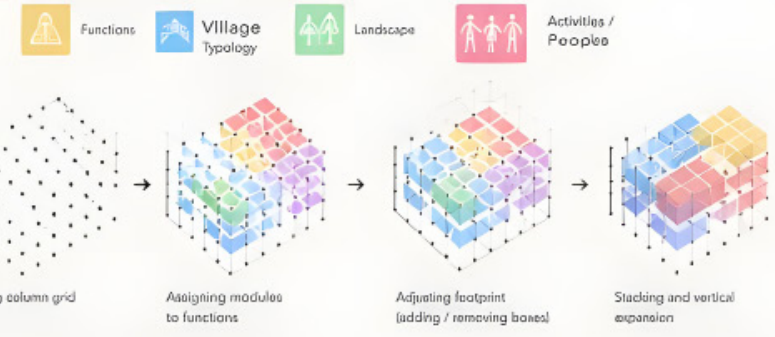


The 5 × 5 m boxes were fitted into the bays defined by the existing columns.

The number of boxes and storeys for each function was determined based on the specific spatial needs and area requirements.



03 FUNCTIONS AND MODULAR LAYOUT



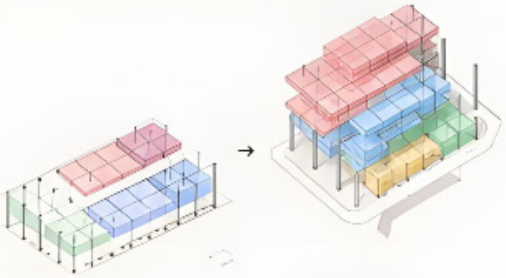
Existing column grid

Assigning modules to functions

Adjusting footprint (adding / removing boxes)

Stacking and vertical expansion

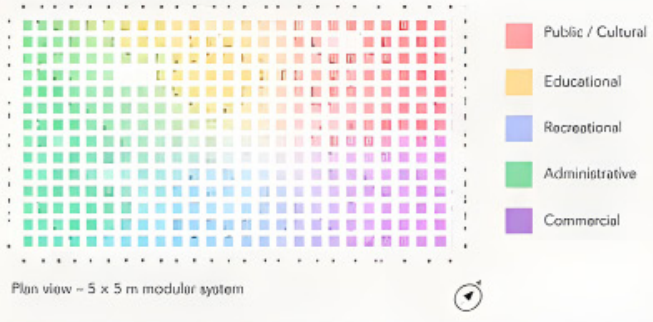
04 EXTRUSION AND VERTICAL DEVELOPMENT



Single level modules

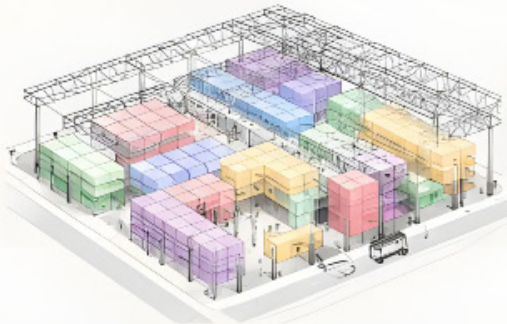
By aggregating and stacking the 5 × 5 m modules, the individual buildings of the site began to take their final form.

05 MODULAR CONCEPT IN PLAN



Plan view – 5 × 5 m modular system

06 RESULTING MASSING



By aggregating and stacking the 5 × 5 m modules, the individual buildings of the site began to take their final form.

07 SECTION THROUGH THE TERMINAL



The original steel structure is the primary structure, while the 5 × 5 m boxes form the secondary, occupiable layer.

Public / Cultural Educational Recreational Administrative Commercial

0 10 20 30 50 m

Figure 6.9 : Design Process
Source: Author's elaboration.



Figure 6.10 : Bus Terminal 3D View
Source: Author's elaboration.



6.6 Design Development: Terminal Zone

6.6.1 Design Development: Terminal

Design development did not proceed uniformly across the site. The intercity bus terminal was designed first, in full detail, before work extended to the site's other functions, a sequencing decision that reflects the terminal's role as the origin of the whole project: the site's relevance rests on its capacity to host the terminal function currently located on Corso Vittorio Emanuele II, so the terminal building was treated as the part the rest of the project had to be built around and calibrated against.

This priority is also reflected in the terminal's scale within the masterplan. The building occupies approximately 1,900 m^2 of footprint and is developed across three floors, each with a floor-to-floor height of 5 meters, giving the structure an overall height of 15 meters. This vertical proportion was deliberate: a taller-than-typical floor height allows the ground level to accommodate the clearances required by bus manoeuvring and by the retained industrial roof trusses, while the upper levels can house more intimate, human-scaled cultural and educational functions without the section feeling compressed beneath the structure above.

Treating the terminal as an object to be designed in isolation, however, would have contradicted the project's broader premise, established in Chapter 5, that the site's regeneration depends on reconnecting it to the surrounding urban fabric rather than treating it as an enclosed infrastructural enclave. For this reason, the design of the terminal was never limited to the building envelope alone; it was conceived together with the public space around it. Waiting, in particular, was not treated as an activity confined to an interior hall. Passengers arriving early, meeting others, or simply preferring to remain outdoors are accommodated in a landscaped forecourt directly in front of the platforms, designed as a pedestrian-priority space with clear sightlines, level (barrier-free) surfaces, and separation from vehicular circulation, so that waiting outside is not merely tolerated but actively supported as a safe and comfortable alternative to the interior.

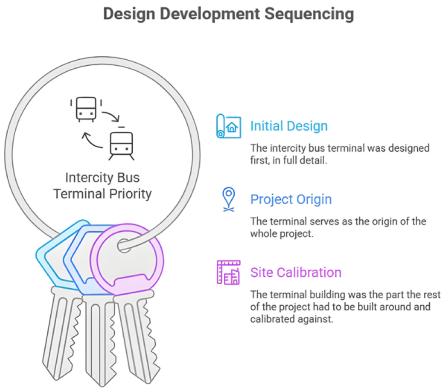


Figure 6.11 Design development sequencing
Source: Author's elaboration.

This exterior space is not residual leftover ground but a designed extension of the terminal's public programme. Green areas are introduced along the pedestrian approach and between the forecourt and the adjacent ring road, providing shade, softening the transition from the hard-paved platform apron, and contributing to the broader mitigation of urban heat and vehicle emissions discussed in Chapter 5. Seating, planting, and paving patterns are used to define informal waiting zones without enclosing them, while bollards, level changes, and planting strips buffer pedestrians from bus and taxi manoeuvring lanes. In this sense, the terminal's design development operated simultaneously at two scales: the architectural scale of the building's plan, section, and structural grid, and the urban scale of the immediate public realm that mediates between the terminal and the rest of the site. It is this combined treatment of building and surrounding open space that allowed the terminal to function, from the earliest stage of the design process, as the calibrating reference for the zones developed afterward. The organization of that architectural scale, beginning at ground level with the platforms and arrival sequences ,is described in the sections that follow.

6.6 Design Development: The Intercity Bus Terminal

6.6.1 Design Development: Terminal

6.6.1.1 Ground Floor: Platforms and Arrival

At ground level, the terminal is organized around a fan of angled bus platforms, bays set at a consistent diagonal angle to the main building line rather than perpendicular to it (Fig. 6.13). This arrangement allows buses to enter and exit their bays without requiring a full turning manoeuvre in a confined yard, reducing manoeuvring conflicts between vehicles and shortening the distance passengers need to walk between the platform and the terminal building. Along the building edge facing the platforms, the ground floor houses the passenger-facing functions that need to sit closest to arrival and departure: the waiting hall, ticketing and information points, toilets, small retail and food service, and the vertical circulation cores (stairs and escalators, marked "UP" on the plan) that bring passengers up to the level above.



Figure 6.12 : Bus Terminal Axonometric
Source: Author's elaboration.



Figure 6.13: Ground Floor plan
SC: 1:500
Source: Author's elaboration.

6.6.1 Design Development: Terminal

6.6.1.2 Upper Level: Passenger and Public Facilities

The level above the platforms is dedicated entirely to passenger waiting and support facilities, rather than to the broader cultural and educational programme housed elsewhere on the site. The floor is enclosed by curtain walls on all sides, a choice made specifically to preserve visual continuity between the interior and the platforms below: seated passengers can see their bus arrive and the surrounding site without needing to move toward a window or monitor a departure board. Toilets are provided centrally on this level, and the floor opens onto balconies that extend the waiting area outward, giving passengers a further option to wait in the open air while remaining within sight of the platforms.

Rather than treating the waiting floor as a single undifferentiated hall, it is subdivided into distinct zones calibrated to different ways of waiting. One area is furnished with bedchairs, intended for passengers facing a long layover or an overnight wait. A second area provides tables and chairs suited to passengers who want to work on a laptop or otherwise use the wait productively. A third area offers conventional seating for passengers who simply want to sit and wait without other requirements. This zoning allows the single floor to accommodate a range of waiting durations and passenger needs without requiring separate rooms or additional floor area.

Figure 6.14 : Bus Terminal South Elevation
SC: 1:300
Source: Author's elaboration.



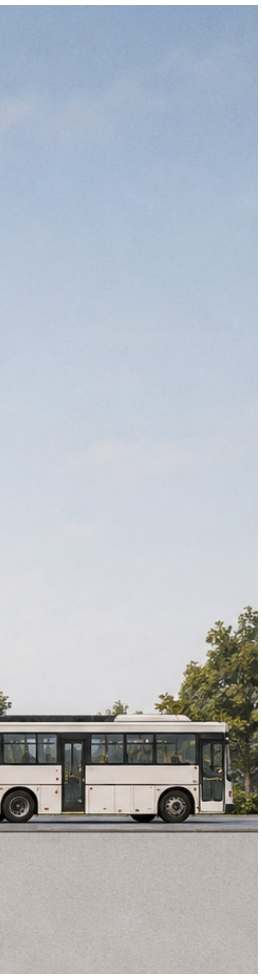


Figure 6.15: First floor plan
SC: 1:500
Source: Author's elaboration.



Figure 6.16 : Bus Terminal 3D View
Source: Author's elaboration.



6.6.1 Design Development: Terminal

6.6.1.3 Third Floor: Bus Company Offices

The top floor of the terminal is occupied by administrative offices, allocated to the intercity bus companies that operate out of the terminal. This follows the logic of a modern, well-serviced transport hub more familiar from airport terminals than from conventional bus stations: just as an airport houses back-office space for individual airlines, a terminal handling multiple intercity carriers benefits from dedicated space for each operator's staff, ticketing management, scheduling, and customer service functions, rather than requiring these to be handled informally from ground-floor counters alone. Consolidating this administrative function on a separate floor keeps it out of the passenger flow at ground and waiting levels, while still placing it within the same building as the platforms it serves, allowing rapid coordination between office staff and platform operations when needed (delays, gate changes, dispatch).

Unlike the level below, where curtain walls maintain full visual continuity with the platforms, the office floor uses a more conventional enclosure, appropriate to its administrative rather than passenger-facing function. The floor plan is organized to accommodate multiple independent operators as discrete office units along the circulation spine, allowing each bus company to be allotted its own suite of space while sharing common services (circulation cores, sanitary facilities) with the rest of the building.

Figure 6.17 : Bus Terminal South Elevation
SC: 1:300
Source: Author's elaboration.





Figure 6.18: Second floor plan
SC: 1:500
Source: Author's elaboration.

Figure 6.19 : North Elevation
SC: 1:250
Source: Author's elaboration.



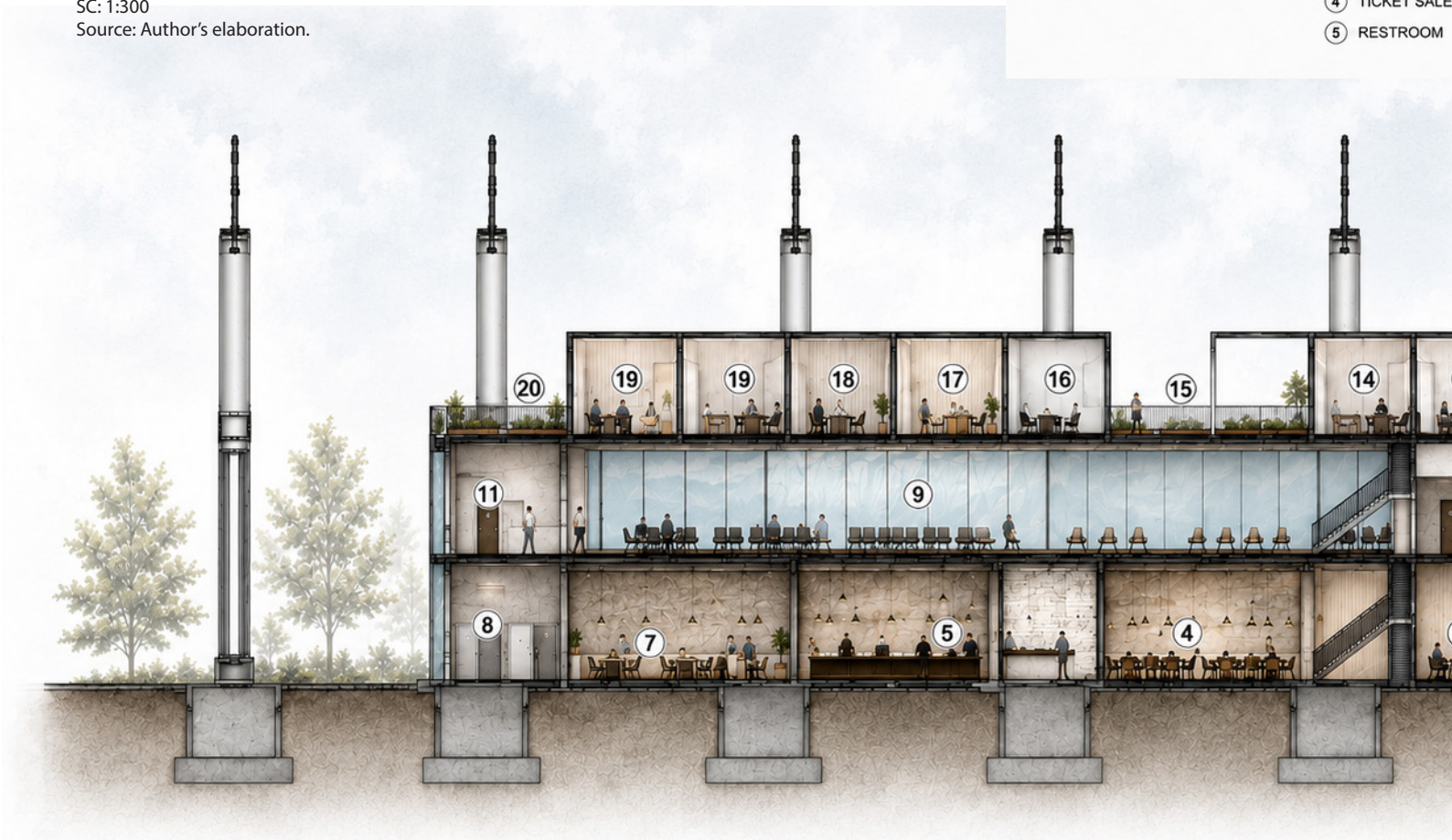


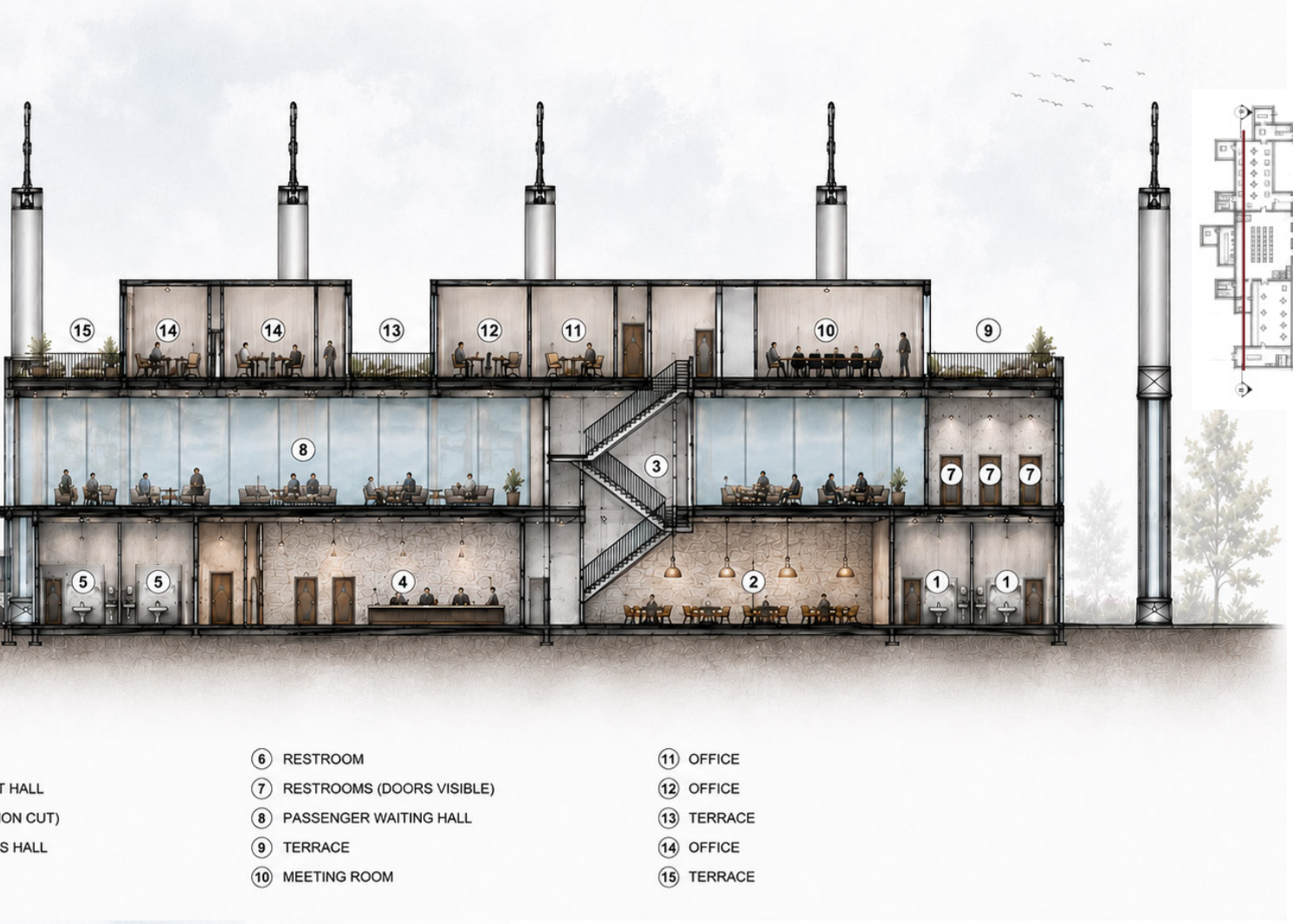
6.6 Design Development: The Intercity Bus Terminal

6.6.1 Design Development: Terminal



Figure 6.20 : Bus terminal Section A-A
SC: 1:300
Source: Author's elaboration.

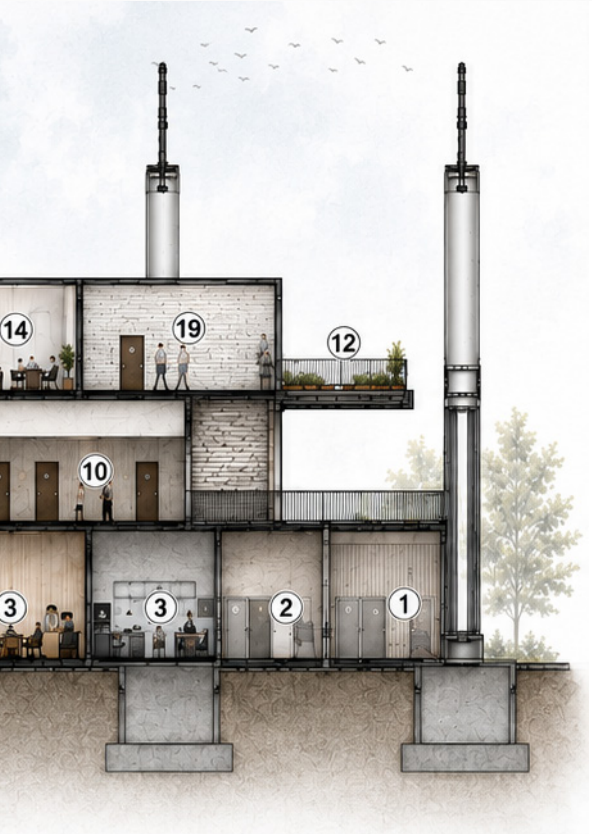




T HALL
ION CUT)
S HALL

6 RESTROOM
7 RESTROOMS (DOORS VISIBLE)
8 PASSENGER WAITING HALL
9 TERRACE
10 MEETING ROOM

11 OFFICE
12 OFFICE
13 TERRACE
14 OFFICE
15 TERRACE



16 OFFICE
17 OFFICE
18 OFFICE
19 OFFICE
20 TERRACE

Figure 6.21 : Bus Terminal Section B-B
SC: 1:1300
Source: Author's elaboration.

6.6.2 Design Development: The Hotel

After the terminal, work moved to the other functions identified as necessary within the terminal zone, beginning with the hotel (Fig. 6.22). The decision to include a hotel was not automatic; the site's rationale for it rests on three distinct arguments, each tied to a condition established earlier in the thesis.

The first is tied to the Allianz Stadium, one of the metropolitan reference points identified in the mobility analysis (Section 6.3.1). Visitors travelling to Turin specifically for a match do not always leave the city the same night: a missed bus, a late-running fixture, or simply the last departure having already gone can strand a visitor with no way home until the following day. A hotel on the terminal site gives these visitors a place to stay without needing to enter the city center, keeping this demand close to the transport infrastructure it depends on.

The second argument concerns passengers with health conditions that make night travel impractical, who may need to break a long journey and continue only after sunrise; a hotel attached to the terminal allows the journey to be paused rather than forcing an unsafe or uncomfortable overnight trip.

The third argument returns to the site's proximity to Turin Airport, another of the mobility study's reference points: the hotel would be among the nearest hotel facilities to the airport, while also addressing the absence of any new or modern hotel accommodation in the neighborhoods surrounding the site.

Architecturally, the hotel was designed as the tallest building on the site, at five storeys, a deliberate departure from the datum height of most of the terminal zone's other functions, marking it as a landmark within the masterplan and giving its upper floors clear views toward the airport approach and the stadium. With a total floor area of approximately 6,000 m^2, its plan follows a cross/H-shaped footprint made up of the same 5 × 5 m modular logic used across the site (Section 6.5), with the arms of the cross producing a series of set-back roof terraces at different levels rather than a single uniform roofline, visible in the render as planted terraces and courtyards cut into the massing at the second and fourth floors. The facade is clad in a textured stone finishing with a regular window rhythm that follows the underlying structural module, and ground-floor parking is provided directly along the street edge, keeping guest arrival separate from the terminal's own bus platforms.



Figure 6.22 : Hotel Ground Floor PlanSC: 1:1700
Source: Author's elaboration.

Figure 6.23 : Hotel 3D view
Source: Author's elaboration.



6.6.3 Design Development: Cinema Complex

Continuing the design development within the Terminal Zone, work then turned to the cinema complex, one of the entertainment and leisure functions identified as part of the terminal's extended program (Section 6.3.1, Section 6.4). The cinema complex occupies a single storey, with a total footprint of 875 m^2.
The complex is organized around two movie theaters (screening halls) as its primary spaces, supported by the full range of ancillary functions required for a facility of this kind to operate independently within the terminal zone:

- Entrance lobby/foyer–the main public threshold, connecting the complex to the surrounding terminal circulation
- Box office/ticketing counter
- Concession stand (snack and beverage counter)
- Waiting/gathering area, where visitors wait before doors open
- Two movie theaters (screening halls), sized to different seating capacities
- Projection rooms, one per hall, housing projection and sound equipment
- Corridors and pre-function circulation space leading to each hall entrance
- Public restrooms (W.C.), separated for staff and visitors where required
- Administrative offices, for complex management and staff
- Staff room/break room
- Storage rooms for concessions stock, cleaning equipment, and seating maintenance
- Mechanical/plant room, housing HVAC and other building systems serving the complex
- Emergency exits and fire escape corridors, required for the two large-occupancy halls

Volumetrically, the complex is organized around two distinct height zones reflecting the difference in function: the infrastructural and administrative spaces (lobby, offices, W.C., storage, plant rooms, circulation) are set at a standard height of 5 m, consistent with the datum height used elsewhere in the terminal zone, while the two screening halls rise to 9 m to accommodate the raked seating, screen height, and acoustic/projection requirements of a cinema hall.

Figure 6.24 : Hotel Ground Floor
SC: 1:700
PlanSource: Author's elaboration.

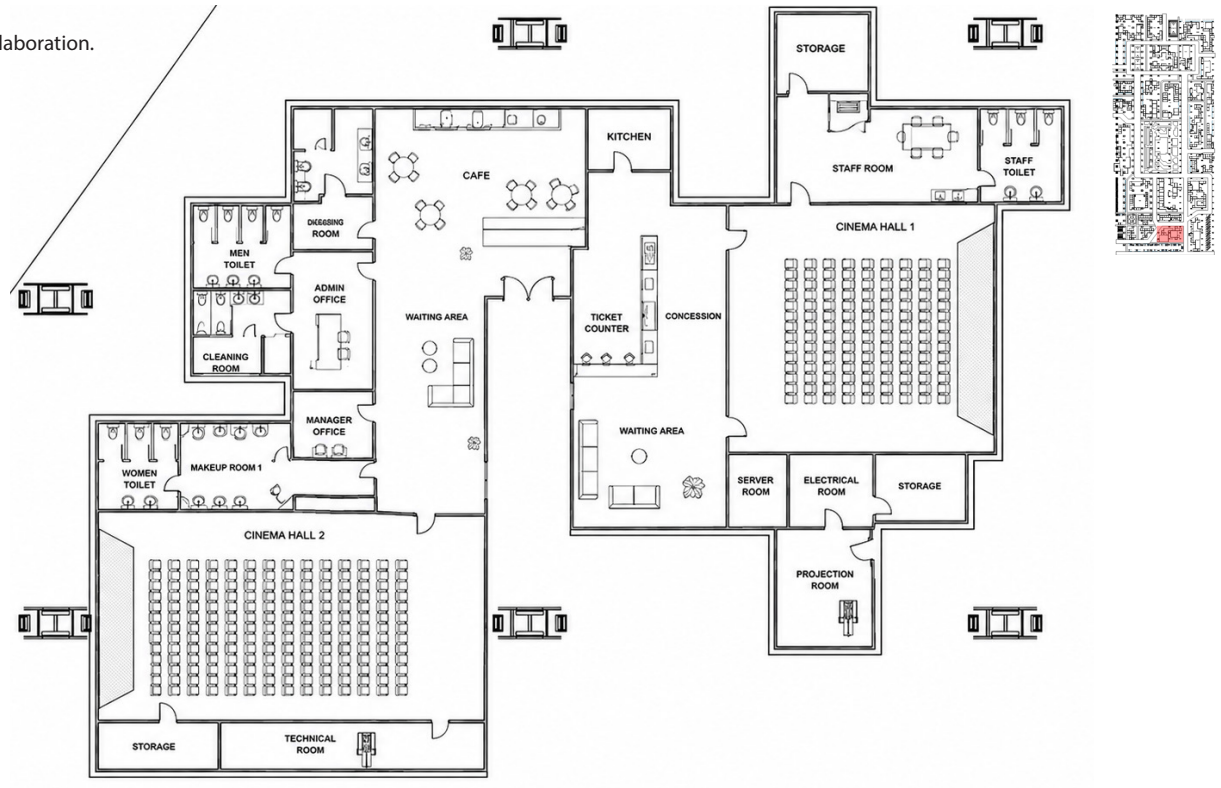


Figure 6.25 : Cinema Complex 3D view
Source: Author's elaboration.



6.6.4 Design Development: Concert Hall

Figure 6.26 :Concert Hall Ground Floor
SC: 1:700
Source: Author's elaboration.

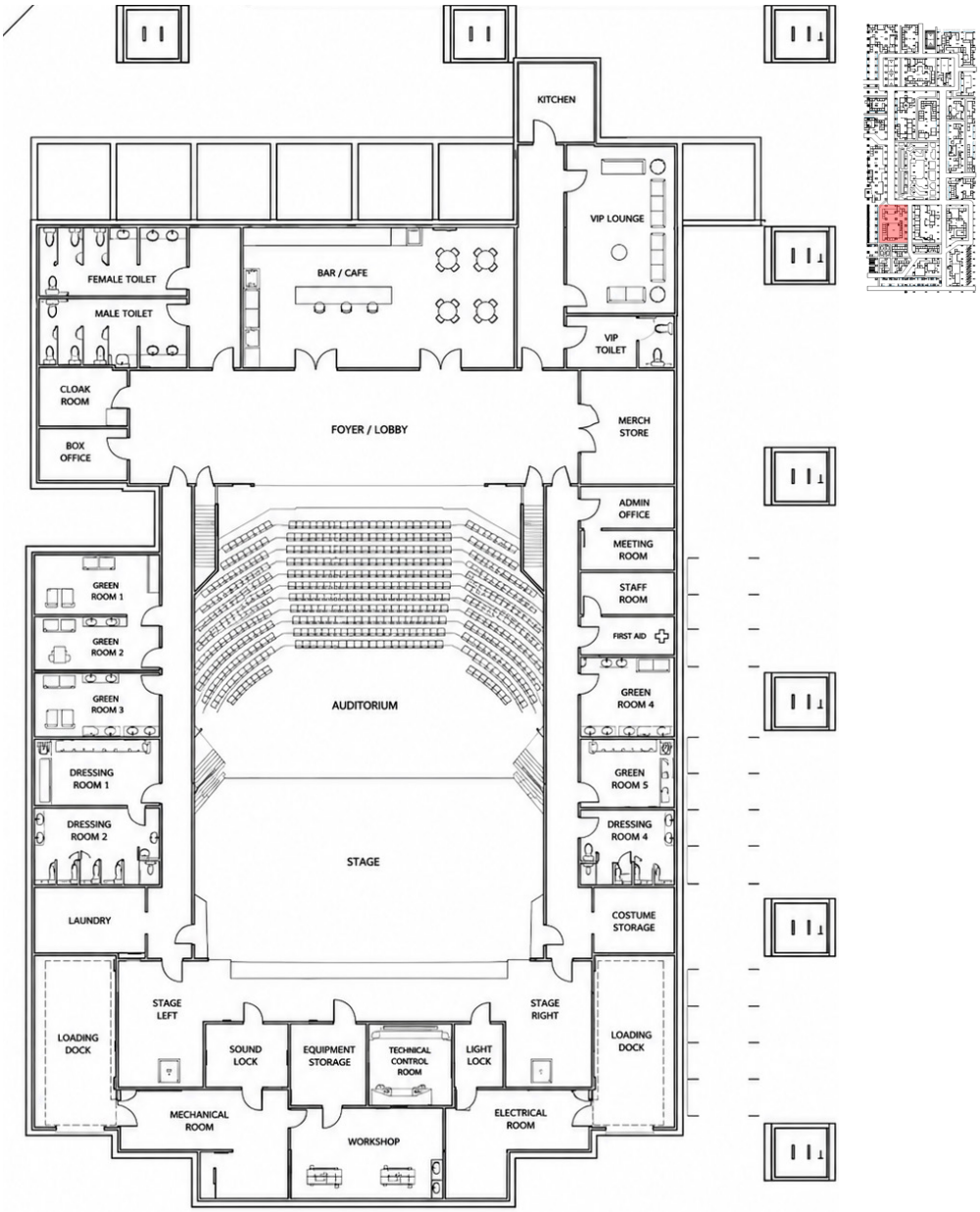


Figure 6.27 : Concert hall 3D view
Source: Author's elaboration.



The concert hall occupies a total footprint of 1,700 m^2, organized as a single large performance salon supported by the ancillary spaces required for a complex of this kind. In addition to the main salon, the complex includes a box office/ticketing area, a foyer/waiting area for patrons before performances, a cloakroom, public toilets, a backstage area with performer dressing rooms and a green room, a technical control room for lighting and sound, storage space for instruments and equipment, and administrative/staff facilities for the venue's management. As with the cinema complex, this mix of functions follows the same modular logic established earlier in the chapter, with each supporting room sized according to its specific spatial needs.

All supporting rooms are set at a height of 5 m, consistent with the modular system used elsewhere on the site. The main salon, however, rises to a height of 10 m, reflecting the acoustic and volumetric requirements of a performance space of this scale — allowing for a greater ceiling void above the audience and stage, which supports natural reverberation and accommodates any rigging, acoustic paneling, or lighting infrastructure suspended above.



6.6.5 Design Development: Entertainment Hub

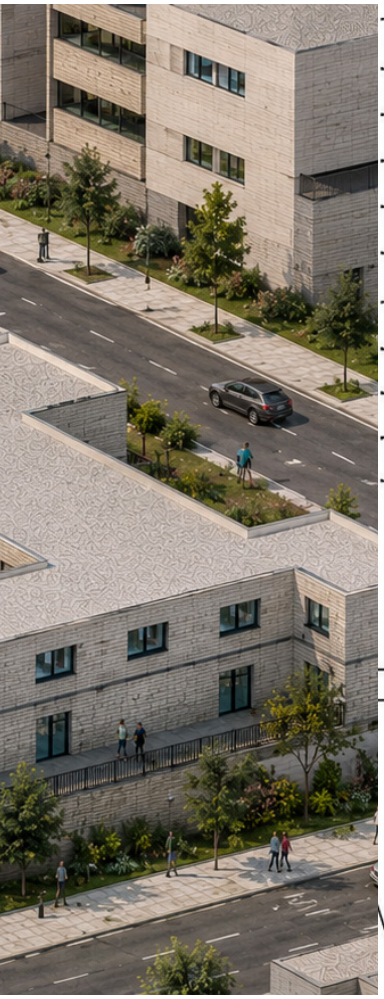
The concert hall occupies a total footprint of 1,700 m^2, organized as a single large performance salon supported by the ancillary spaces required for a complex of this kind. In addition to the main salon, the complex includes a box office/ticketing area, a foyer/waiting area for patrons before performances, a cloakroom, public toilets, a backstage area with performer dressing rooms and a green room, a technical control room for lighting and sound, storage space for instruments and equipment, and administrative/staff facilities for the venue's management. As with the cinema complex, this mix of functions follows the same modular logic established earlier in the chapter, with each supporting room sized according to its specific spatial needs.

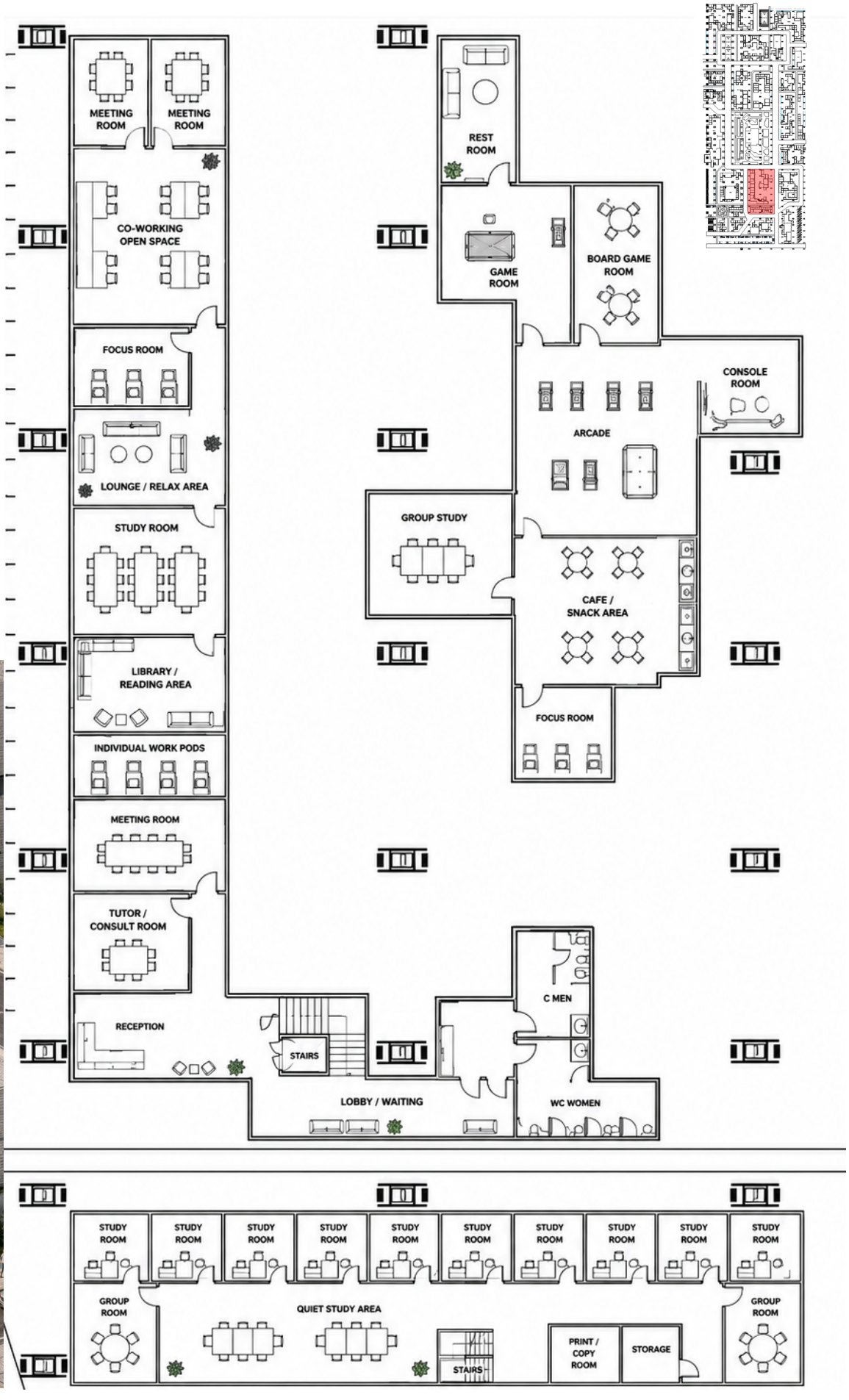
All supporting rooms are set at a height of 5 m, consistent with the modular system used elsewhere on the site. The main salon, however, rises to a height of 10 m, reflecting the acoustic and volumetric requirements of a performance space of this scale—allowing for a greater ceiling void above the audience and stage, which supports natural reverberation and accommodates any rigging, acoustic paneling, or lighting infrastructure suspended above.

Figure 6.28 : Entertainment Hub
3D view
Source: Author's elaboration.



Figure 6.29 Entertainment Hub Ground Floor Plan
SC: 1:700
Source: Author's elaboration.





6.6.6 Design Development: GTT Bus Station

Figure 6.31 : Gtt Bus Station 3D view
Source: Author's elaboration.



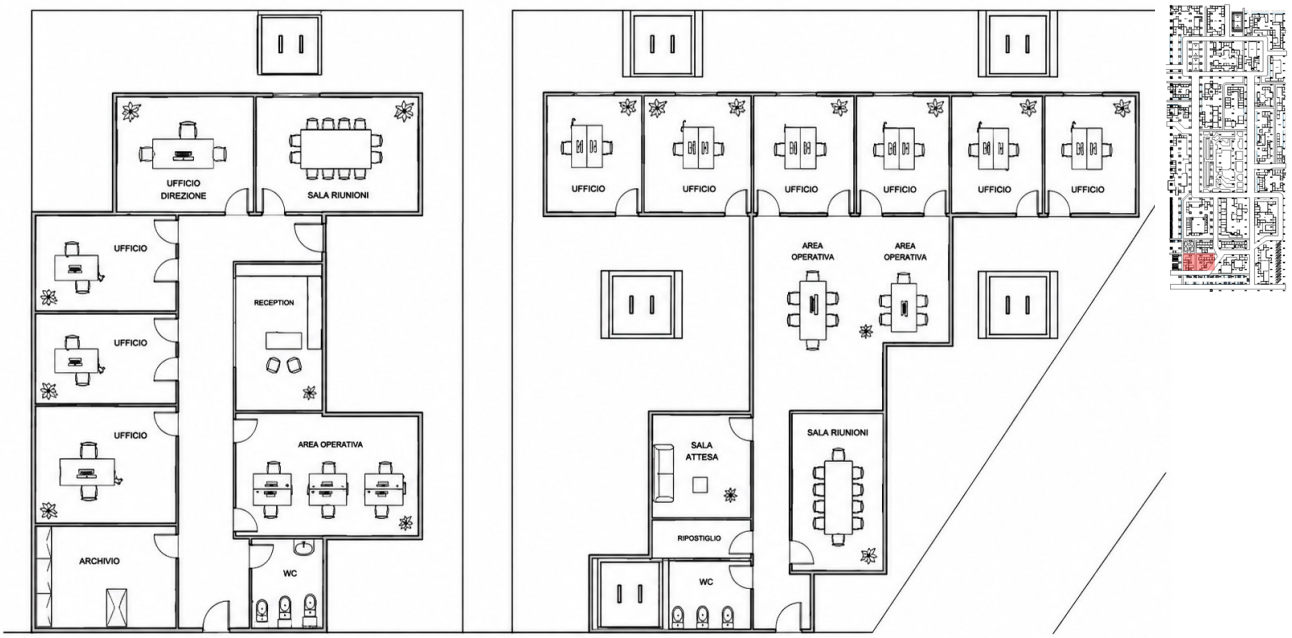
While the terminal building addresses intercity and regional bus connections, the site's role as a mobility hub required a distinct facility for local public transport. The GTT (Gruppo Torinese Trasporti) bus station was introduced within the Terminal Zone to provide direct connections between the site and the city center, ensuring that passengers arriving from outside Turin, as well as visitors to the Terminal Zone's other facilities, could continue their journey without relying solely on private vehicles or taxis.

The station occupies a footprint of 925 m^2, organized across two floors of 3 m each. The ground floor is dedicated to the bus parking and station area, accommodating the maneuvering, boarding, and dwelling space required for the departing and arriving lines, while the upper floor houses administrative and operational offices supporting the station's management. This vertical separation follows the same logic applied throughout the site: functions requiring direct vehicular access and public circulation are kept at ground level, while supporting and administrative functions are placed above, reducing conflict between pedestrian, passenger, and vehicular movement.

Four bus lines were planned for the station, each corresponding to one of the cardinal directions of the city, north, south, east, and west, allowing passengers arriving at the site to reach any part of Turin without needing to first travel into the city center. This configuration reinforces the site's broader ambition, established in the mobility master plan (Section 6.3), of positioning the ex-ThyssenKrupp site as a genuine point of arrival and redistribution for the metropolitan area, rather than a peripheral facility requiring a secondary transfer downtown.

Structurally and volumetrically, the GTT station follows the same 5x5 m modular grid system used across the site, allowing it to read as part of a coherent architectural family with the terminal, hotel, and surrounding buildings, while remaining a functionally independent component within the Terminal Zone.

Figure 6.30 : GTT Bus Station Ground Floor Plan
SC: 1:700
Source: Author's elaboration.



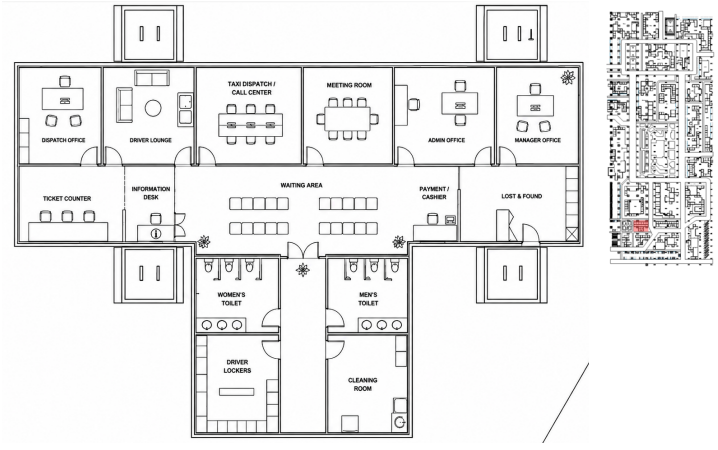


6.6.7 Design Development: Taxi Station

Figure 6.33 : Taxi Station 3D view
Source: Author's elaboration.



Figure 6.32 : Taxi Station Ground Floor Plan
SC: 1:700
Source: Author's elaboration.



Adjacent to the GTT bus station, a dedicated taxi station was introduced to complete the range of transport options available within the Terminal Zone. While the GTT station serves passengers travelling into the wider city, the taxi station addresses shorter, more flexible trips, accommodating passengers with heavy luggage, reduced mobility, late-night arrivals outside regular bus service hours, or destinations not directly served by the four GTT lines.

The building occupies a compact footprint of 400 m^2, contained within a single floor of 3 m in height. Given its limited scale and function, the taxi station houses a small office component for dispatch, coordination, and driver facilities, alongside the taxi waiting and pick-up area itself, rather than requiring the two-level organization used in the larger transport facilities on the site.

Positioned close to the terminal building and the GTT station, the taxi station reinforces the intended clustering of transport-related functions at the arrival edge of the Terminal Zone, allowing passengers to move easily between intercity buses, local buses, and taxis within a short walking distance. As with the other buildings in this zone, it follows the site's 5x5 m modular grid, maintaining architectural continuity despite its smaller size.



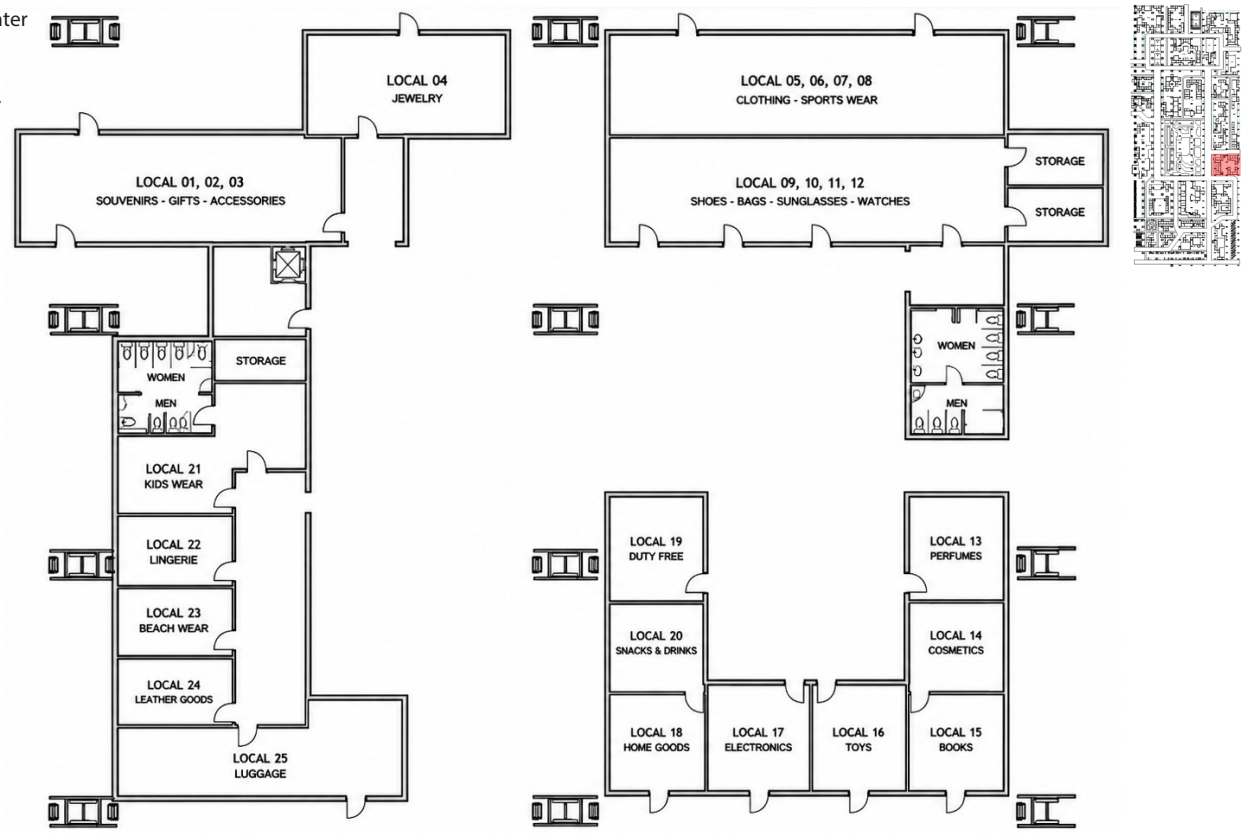
6.7 Design Development: Civic Zone

6.7.1 Design Development: Commercial Center

Figure 6.34 :Commercial Center 3D view
Source: Author's elaboration.



Figure 6.35 : Commercial Center Ground Floor Plan
SC: 1:700
Source: Author's elaboration.





The first function introduced within the Civic Zone is the commercial center, positioned at the boundary shared with the Terminal Zone, directly adjacent to the hotel. This location was chosen deliberately, for two complementary reasons. First, the commercial center is intended to serve visitors unfamiliar with Turin, whether first-time visitors to the city or to the country altogether, who are likely to need everyday goods, services, or souvenirs shortly after arrival. Placing it beside the hotel means it is encountered at the point where these visitors are most likely to pause, rest, and orient themselves before continuing further into the site or the city. Second, its position on the border between the Terminal Zone and the Civic Zone allows it to function as a shared threshold resource: rather than serving only arriving passengers or only local residents, it is accessible to both groups simultaneously, along with the broader population of city users passing through the site. In this way, the commercial center reinforces the transitional role of this edge condition, mediating between the metropolitan-scale function of the terminal and the everyday civic functions that follow, while avoiding duplication of retail provision that would otherwise be isolated within a single zone.

The building occupies a footprint of 1,875 m^2 on a single floor, with an internal height of 6 m, generous enough to accommodate a double-height retail interior or a mezzanine level if desired for future flexibility. A dedicated private parking area is provided alongside the building, separate from the terminal's bus platforms and the hotel's own parking, ensuring that shoppers and visitors using the commercial center, including those arriving by car from outside the terminal system, have direct, independent access without competing with terminal or hotel traffic.

6.7.2 Design Development: Police Station

Figure 6.36 : Police Station Ground Floor Plan
SC: 1:700
Source: Author's elaboration.

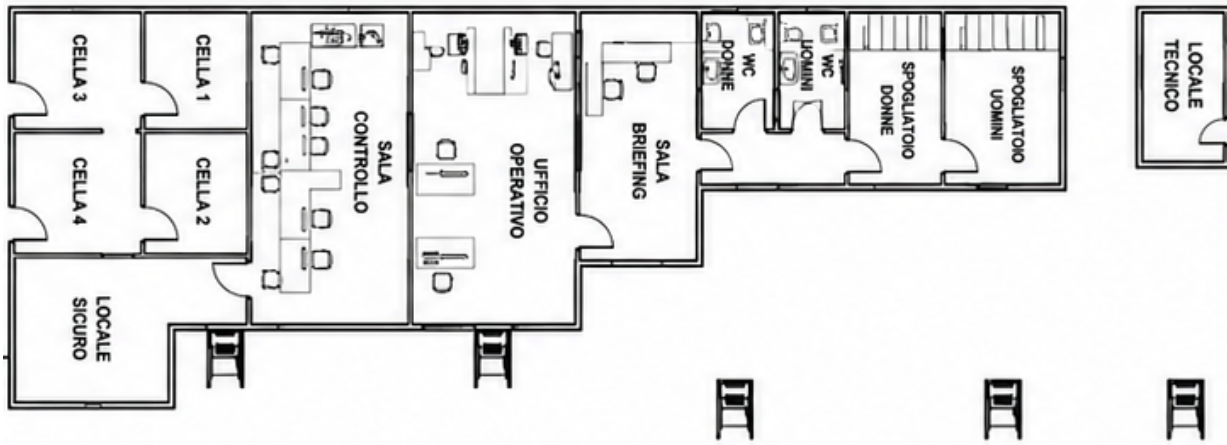
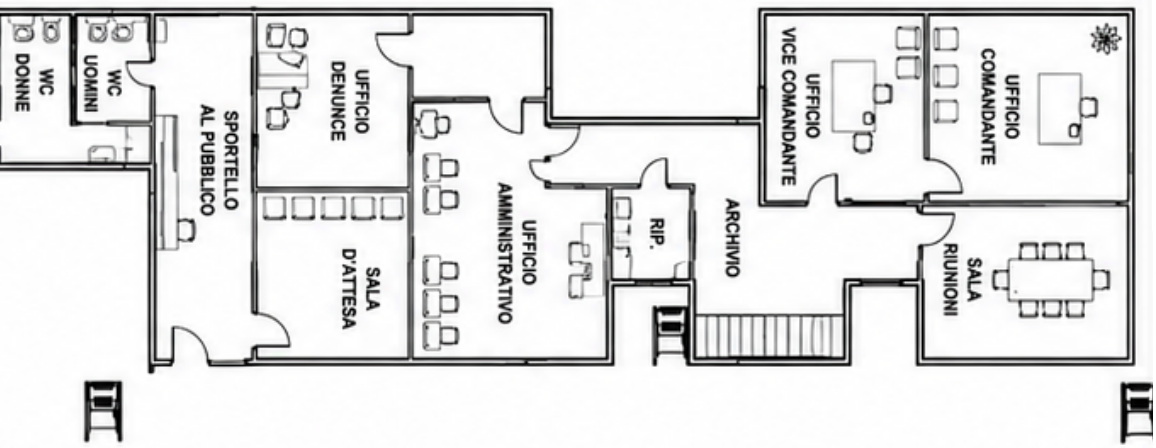




Figure 6.37 :Police Station 3D view
Source: Author's elaboration.

The police station occupies a footprint of 1,725 m^2 across two floors. The ground floor, with a height of 5 m, houses the publicly accessible functions of the station, while the second floor, at 3 m, is reserved for private offices for staff. Two separate private parking areas serve the building, one dedicated to police vehicles, kept apart from public access, and the second for visitors and users of the station, keeping operational and civic traffic clearly separated.





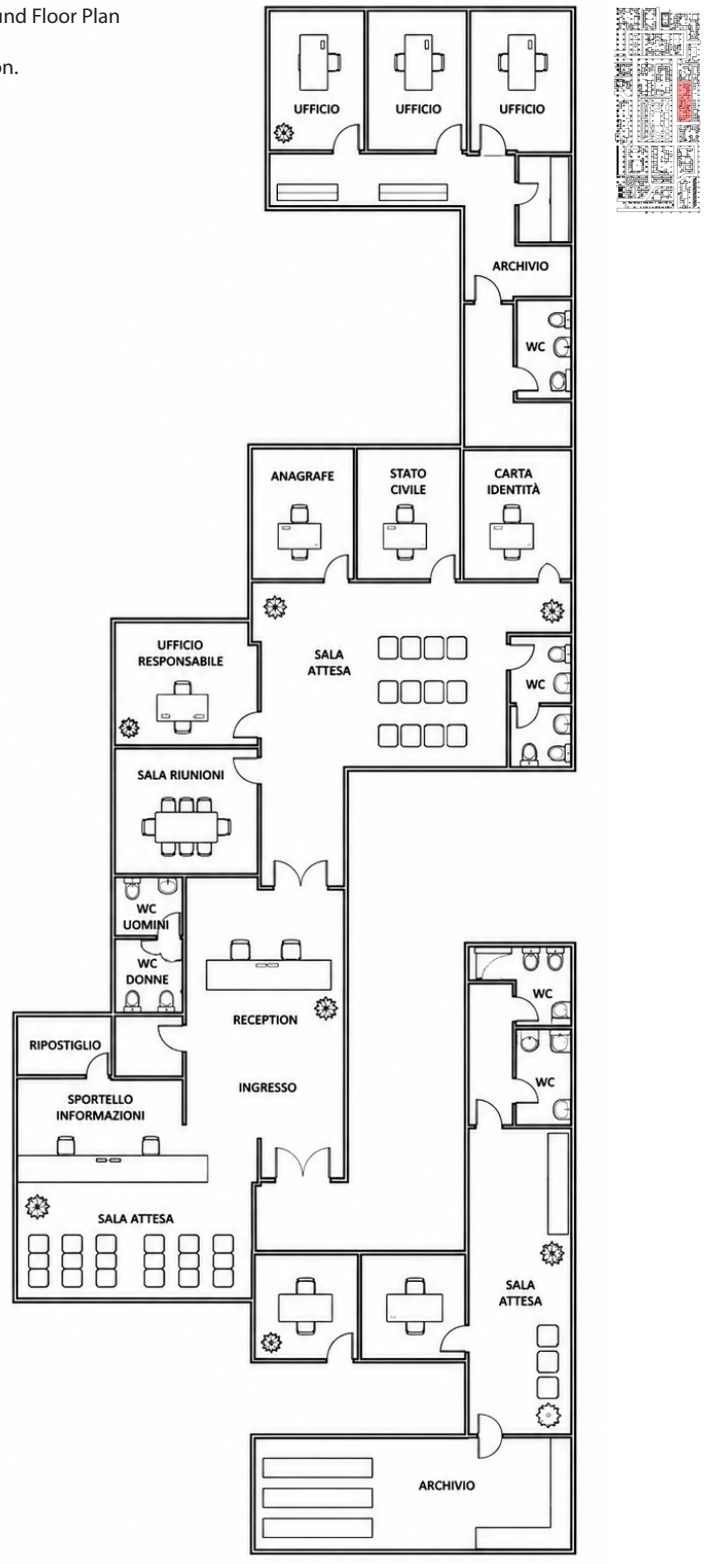
6.7.3 Design Development: Anagrafe (Civil Registry Office)

The anagrafe is included among the Civic Zone functions as one of the most essential administrative services within the Italian municipal system, responsible for civil registration, residency records, and the issuance of identity documents and certificates that citizens require for a wide range of everyday and legal purposes. Given the frequency and necessity of these interactions, the inclusion of a dedicated anagrafe office within the site was considered indispensable: it ensures that residents of the surrounding Lucento/Vallette neighborhood, as well as users of the broader site, have direct access to a core civic service without needing to travel to the city center, thereby reinforcing the site's role as a functioning extension of municipal administration rather than solely a transit-oriented development.
The building occupies a footprint of 1,100 m^2 on a single floor, with an internal height of 5 m, and is served by a dedicated private parking area to accommodate visitors attending to administrative procedures.

Figure 6.38 :Anagrafe 3D view
Source: Author's elaboration.



Figure 6.39 : Anagrafe Ground Floor Plan
SC: 1:700
Source: Author's elaboration.



6.7.4 Design Development: Poste Italiane (Italian Post Office)

A branch of Poste Italiane is likewise included within the Civic Zone, in recognition of the essential and wide-ranging role the postal service plays in Italian civic life, extending well beyond mail and parcel handling to include banking services, bill payments, and various administrative transactions that residents rely on regularly. Its presence on site ensures that this frequently used service is readily accessible to both the local population and the broader user base of the site, further consolidating the Civic Zone's role as a functioning administrative and service hub alongside the anagrafe and police station.

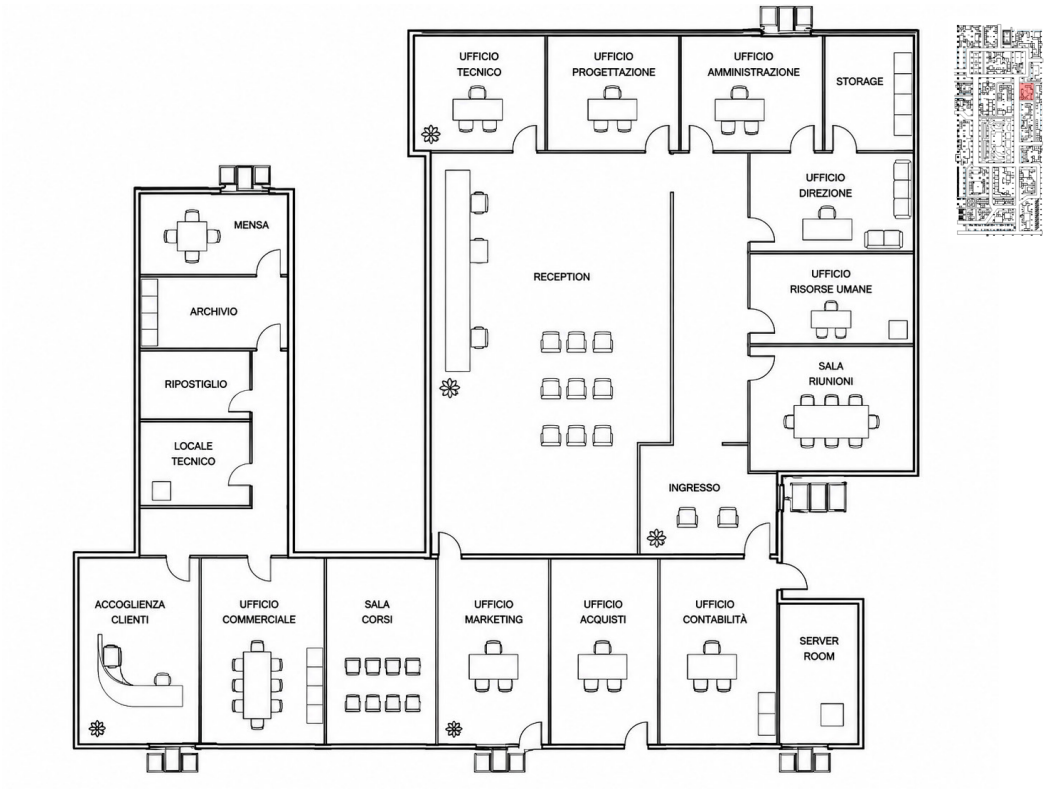
The building occupies a footprint of 625 m^2 on a single floor, with an internal height of 5 m, and includes a dedicated private parking area for visitors.

Figure 6.40 :Poste Italiane 3D view
Source: Author's elaboration.





Figure 6.41 : Poste Italiane Ground Floor Plan
SC: 1:700
Source: Author's elaboration.



6.7.5 Design Development: Comune (Municipal Office)

Figure 6.42 : Comune Ground Floor Plan
SC: 1:700
Source: Author's elaboration.

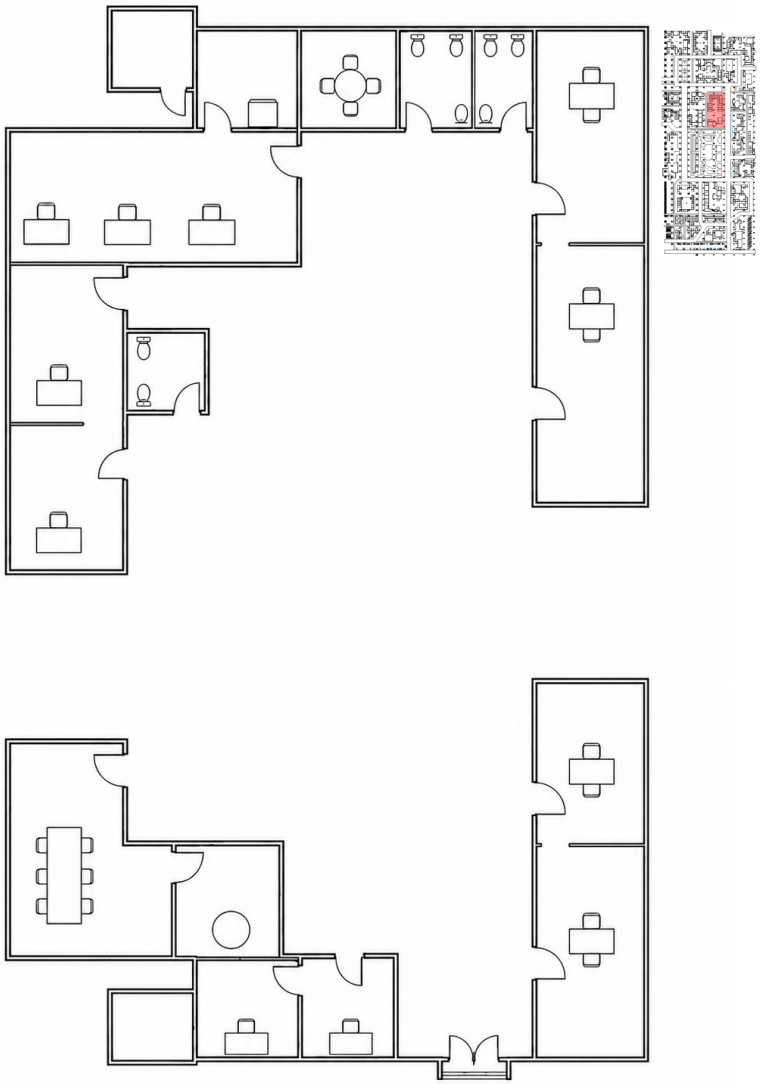


Figure 6.43 :Comune 3D view
Source: Author's elaboration.



The comune building represents the administrative heart of the Civic Zone, housing the local municipal offices responsible for governance functions at the city or district level, including permitting, urban planning liaison, public records beyond the anagrafe's scope, council and administrative meeting spaces, and general citizen services. Its inclusion on site reflects the broader ambition of the Civic Zone: not merely to provide isolated services, but to bring a genuine cross-section of municipal governance closer to both residents of the surrounding Lucento/Vallette neighborhood and the wider population moving through the site, reducing the need to travel into central Turin for routine administrative and civic engagement.

The building is organized across two floors, each with a height of 5 m, together comprising a total footprint of 1,875 m^2. Positioned within the Civic Zone alongside the anagrafe, Poste Italiane, and the police station, the comune anchors this part of the site as a genuine municipal presence, reinforcing the project's broader aim of reconnecting the post-industrial site to the everyday civic life of the surrounding city, rather than functioning purely as an infrastructural or transit-oriented enclave.



6.7.6 Design Development: Social Services Offices

Social services offices (servizi sociali) are municipal facilities that support residents facing situations of vulnerability or need, including family and child welfare support, assistance for the elderly and people with disabilities, housing and economic hardship counseling, immigrant and integration services, and coordination with healthcare and community organizations. Unlike the anagrafe or the comune, which handle routine administrative procedures, social services offices provide direct, often ongoing support to individuals and families navigating difficult circumstances, making them a fundamentally different but equally essential category of civic infrastructure.
Including a social services office within the site is justified on several grounds. First, the Civic Zone is intended to function as a genuine extension of municipal life for the surrounding Lucento/Vallette neighborhood, an area that, as established in the site's urban background, has historically been affected by industrial decline and its associated social and economic pressures. A social services office directly addresses this context, offering support to residents who may be navigating the consequences of deindustrialization, unemployment, or housing instability. Second, co-locating social services alongside the anagrafe, comune, and police station allows the Civic Zone to function as an integrated administrative cluster, where residents can access multiple forms of civic and welfare support within a single, walkable area rather than being dispersed across the city. Finally, situating this service within a regenerated post-industrial site reinforces the thesis's broader argument: that post-industrial regeneration should not only restore physical and economic vitality to a site but also actively support the social fabric of the community historically tied to it.
The building occupies a footprint of 2,100 m^2 across two floors: the ground floor, at 5 m in height, accommodates public-facing reception and consultation spaces, while the second floor, at 3 m, houses private offices and administrative staff areas.

Figure 6.44 : Social Services Offices Ground Floor Plan
SC: 1:700
Source: Author's elaboration.

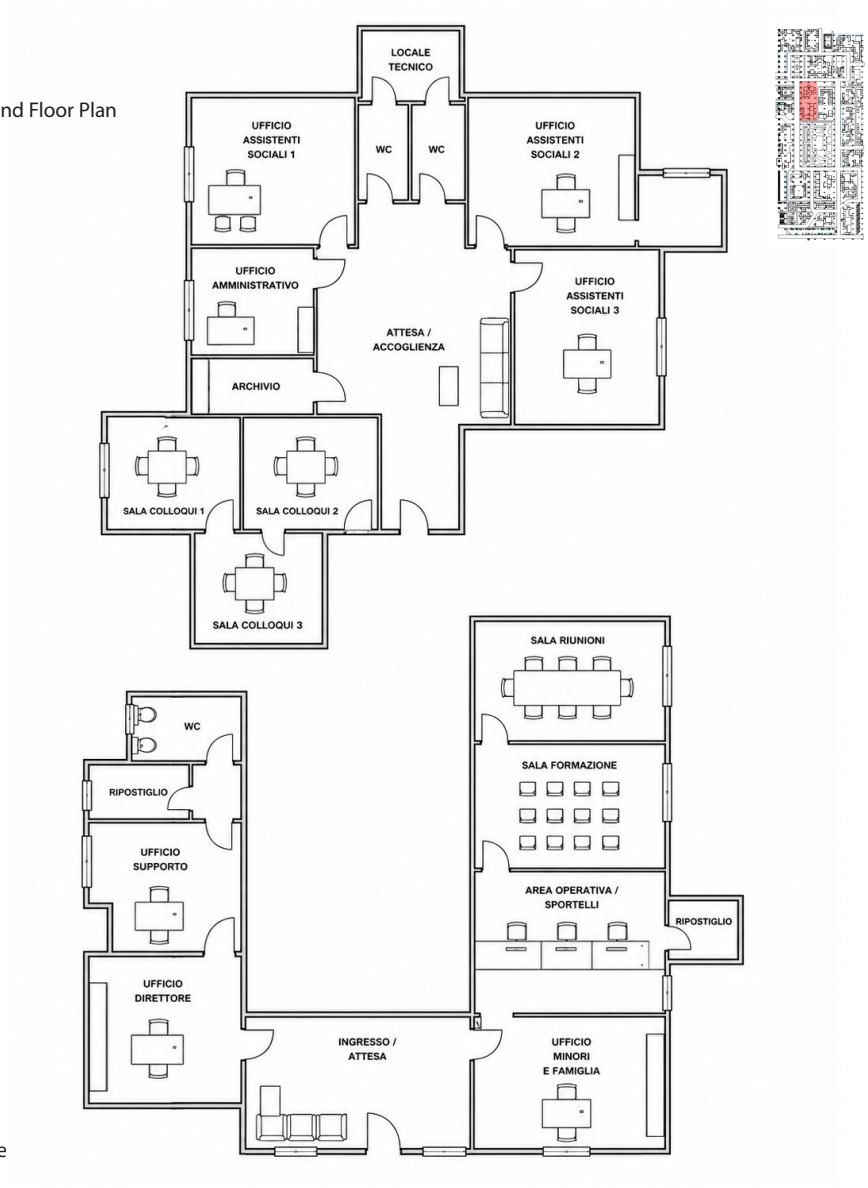


Figure 6.45 : Social Services Office
Source: Author's elaboration.



6.7.7 Design Development: Medical Offices

The inclusion of medical offices within the Civic Zone responds to three complementary lines of reasoning. First, at the scale of the overall masterplan, it was considered necessary for each zone of the site to have access to a baseline medical presence, ensuring that no part of the site, whether transit-oriented, civic, or educational, is left without immediate healthcare provision. Second, the medical offices were deliberately positioned at the border of the Educational Zone, which accommodates the kindergarten, primary, middle, and secondary schools as well as the sport courts. This adjacency is particularly valuable in the case of unforeseen events, injuries during physical activity, sudden illness among students, or other emergencies common to environments with a high concentration of children and adolescents, where proximity to medical care can meaningfully reduce response time. Third, the decision is reinforced by the site's broader mobility context: given its proximity to Turin's planned future hospital, many physicians working at that facility are also likely to maintain private practices elsewhere in the city. Locating medical offices on site offers these practitioners the opportunity to consolidate their professional activity near their primary place of work, reducing unnecessary cross-city travel and, by extension, the associated time, cost, and environmental impact, an outcome consistent with the thesis's broader emphasis on sustainable, well-connected urban regeneration.
The building occupies a footprint of 1,000 m^2 on a single floor.

Figure 6.46 : Medical Offices Ground Floor Plan
SC: 1:700
Source: Author's elaboration.



Figure 6.47 : Medical Offices 3D view
Source: Author's elaboration.



6.7.8 Design Development: Civil Protection (Protezione Civile)

The inclusion of a civil protection office within the Civic Zone provides the site with a dedicated presence for emergency preparedness, risk management, and coordinated response to natural disasters, environmental hazards, or other large-scale emergencies. In the Italian context, the Protezione Civile plays a central role in coordinating between local authorities, volunteer organizations, and citizens during such events, and its proximity to the anagrafe, comune, police station, and social services offices allows it to operate as part of an integrated civic and administrative cluster, facilitating rapid coordination with other municipal functions in the event of an emergency, rather than depending on resources located elsewhere in the city.
The building occupies a footprint of 675 m^2 on a single floor.

Figure 6.48 : Civil Protection Ground Floor Plan
SC: 1:700
Source: Author's elaboration.

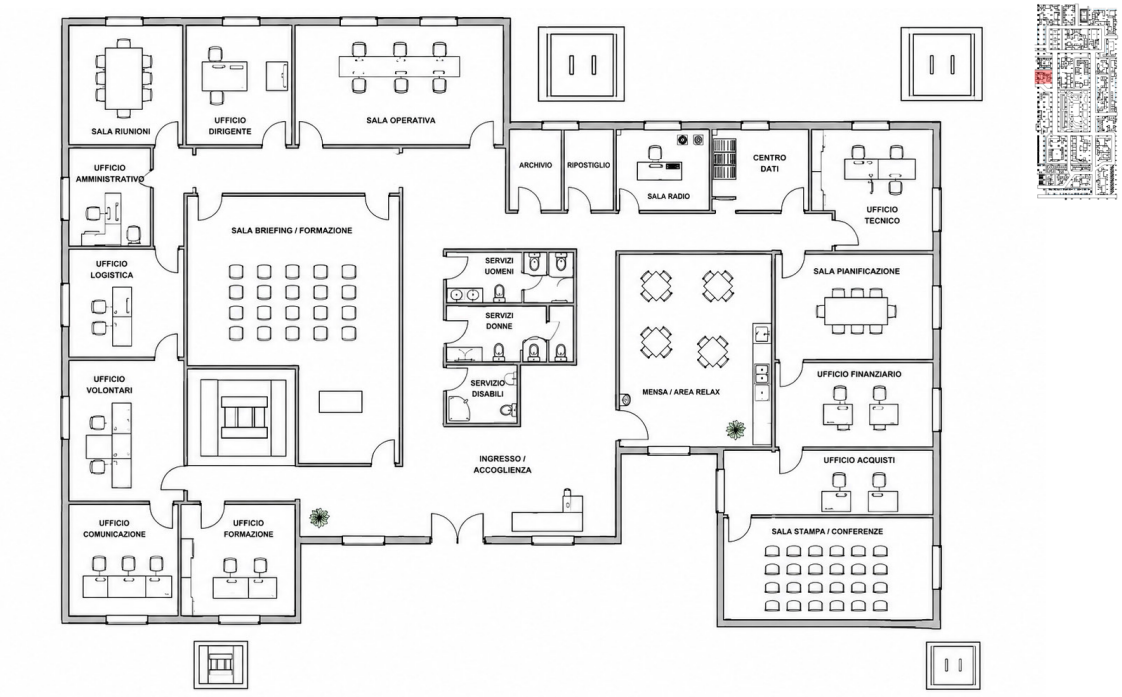


Figure 6.49 : Civil Protection 3D view
Source: Author's elaboration.



6.7.9 Design Development: Ipermercato (Hypermarket)

The ipermercato serves as the primary grocery and everyday-goods retail facility within the Civic Zone, and its role within the site extends well beyond that of a conventional supermarket. As a large-format store offering a broad range of food, household, and daily necessity items under one roof, it functions as a critical point of convenience for the diverse population the site is designed to serve, from residents of the surrounding Lucento/Vallette neighborhood doing their routine weekly shopping to intercity passengers picking up provisions before a journey to hotel guests and terminal staff in need of quick, everyday supplies.

Operating on a 24-hour, 7-days-a-week basis significantly amplifies this role. Unlike smaller shops or markets bound to standard opening hours, a continuously operating ipermercato ensures that grocery access is never dictated by the clock: a resident returning late from work, a passenger arriving on an overnight bus, night-shift staff at the terminal or hospital, or a family facing an unexpected late-night need can all rely on the same facility at any hour. This continuity of access is particularly valuable given the site's function as a 24-hour mobility hub, where bus arrivals, departures, and passenger activity are not confined to daytime hours, and reinforces the broader ambition of the Civic Zone to provide genuinely dependable, always-available civic and commercial infrastructure rather than services that assume a conventional 9-to-5 rhythm of urban life.

The building occupies a footprint of 3,200 m^2 on a single floor, with an internal height of 6 m, and is served by a dedicated private parking area to accommodate the higher volume of vehicle-based grocery trips typical of hypermarket shopping.

Figure 6.50 :Ipermercato 3D view
Source: Author's elaboration.



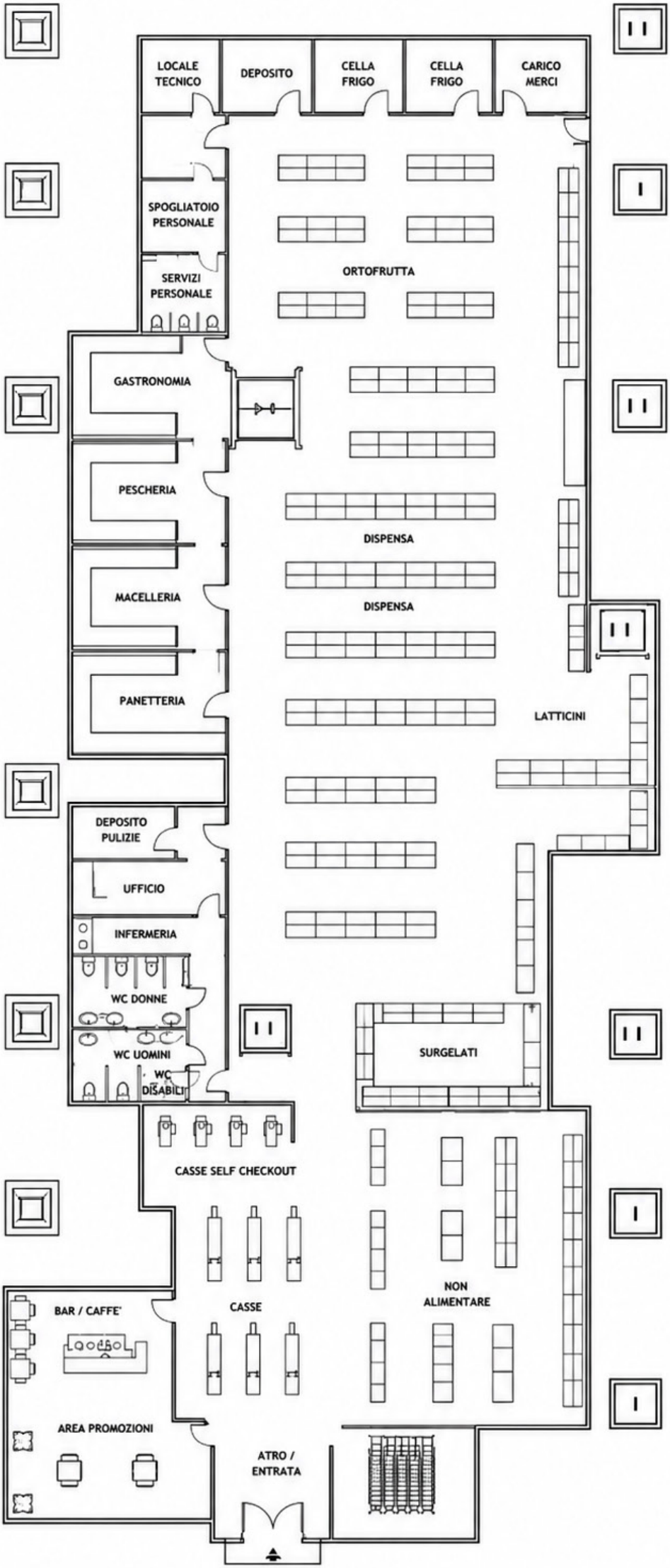


Figure 6.51 : Ipermercato Ground Floor Plan
SC: 1:1000
Source: Author's elaboration.

6.8 Design Development: Educational Zone

6.8.1 Design Development: Kindergarten

The Educational Zone gathers the site's teaching, sport, and cultural facilities for the Lucento/Vallette neighbourhood, and its first and smallest function is the kindergarten. With a total footprint of 650 m^2, the kindergarten is designed entirely on a single floor, a decision that follows directly from the nature of its users rather than from site or structural constraints.

Kindergarten-age children are among the most vulnerable users of any public building, and vertical circulation is one of the clearest sources of risk in spaces designed for them. Stairs require constant supervision, are difficult to evacuate quickly in an emergency, and are simply unsuited to children who are still developing basic motor coordination. For this reason, a single-storey layout is treated internationally as a de facto standard for early-childhood facilities, and the design adopts this principle without compromise: the entire kindergarten program, classrooms, nap rooms, dining area, staff offices, and support spaces, is distributed across one continuous ground-floor plan.

The kindergarten occupies a compact cluster that keeps all functions at one accessible level. This arrangement also allows every classroom to relate directly to ground level, simplifying both daily circulation (drop-off, pick-up, movement between classrooms and outdoor areas) and emergency evacuation, since no child or caregiver needs to navigate stairs to reach a safe exit.

The kindergarten's placement within the Educational Zone reflects a similar logic: proximity to the medical offices located at the zone's border ensures a rapid response in case of health emergencies, addressing the particular vulnerability of very young children, while its position within the broader zone keeps it close to but separated from the older-student facilities (primary, middle, and secondary schools), avoiding unnecessary crossing of circulation paths between very different age groups.

Figure 6.52 : Kindergarten Ground Floor Plan
SC: 1:700
Source: Author's elaboration.

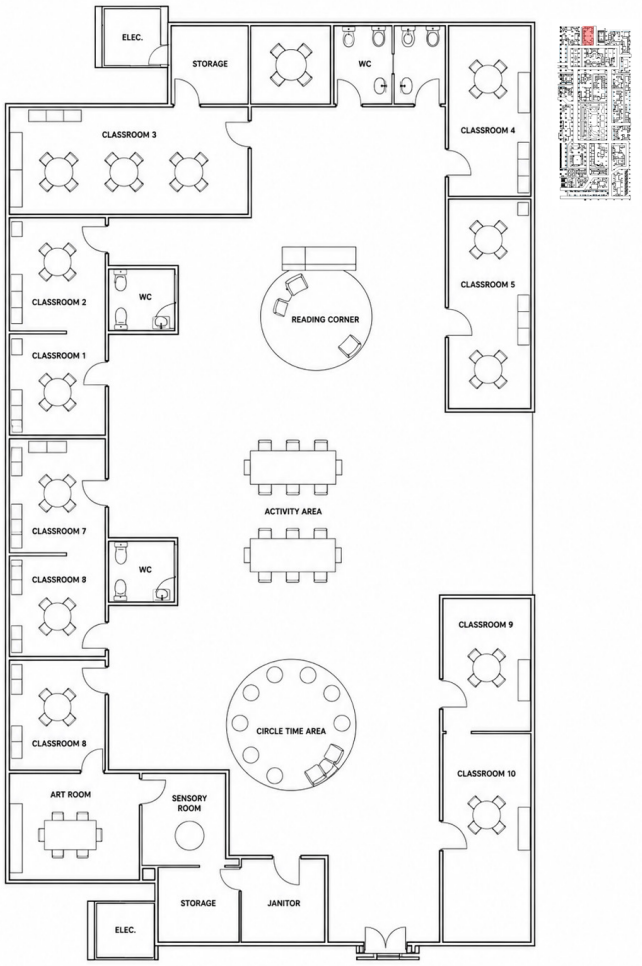


Figure 6.53 :Kindergarten 3D view
Source: Author's elaboration.



6.8.2 Design Development: Primary School

The primary school follows the kindergarten within the Educational Zone, serving a slightly older age group and accordingly adopting a more vertically developed layout. With a total footprint of 4,750 m^2, the building is organized across three floors, reflecting both its larger program and the greater independence of primary-age children compared to kindergarten users, for whom vertical circulation no longer poses the same degree of risk.
The building is served by a dedicated parking area, accommodating drop-off and pick-up traffic as well as staff and visitor parking without interfering with the pedestrian flows of the Educational Zone. A sport court is placed directly adjacent to the school, giving pupils immediate outdoor access for physical education and recreation without requiring movement across the wider site.



Figure 6.54 :Primary School 3D view
Source: Author's elaboration.





Figure 6.55 : Primary School Floor Plan
SC: 1:!000
Source: Author's elaboration.

6.8.3 Design Development: Middle School

Following primary school, middle school continues the Educational Zone's progression of facilities for increasingly older students. It occupies a footprint of 4,225 m^2, similarly organized across three floors, consistent with the vertical layout adopted for the primary school and reflecting the comparable independence of this age group.
The building is served by a private parking area, ensuring dedicated access for staff and visitors separate from the general circulation of the Educational Zone.



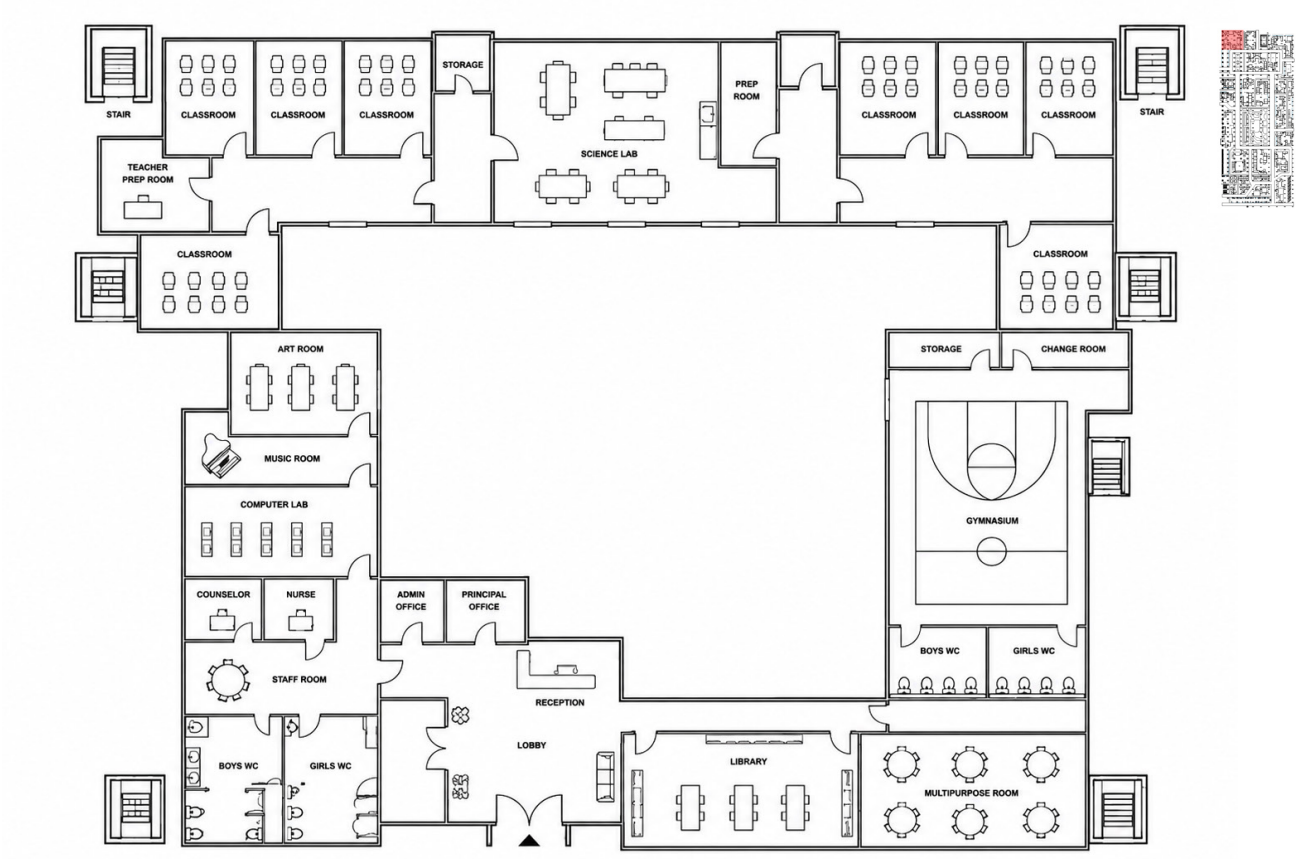


Figure 6.56 : Middle School Floor Plan
SC: 1:!000
Source: Author's elaboration.



Figure 6.57 : Middle School 3D View
Source: Author's elaboration.

6.8.4 Design Development: Secondary School

Completing the sequence of educational levels within the zone, the secondary school occupies a footprint of 4,000 m^2, again distributed across three floors in keeping with the vertical organization established by the primary and middle schools. This consistency across the three school types reinforces a unified architectural language for the Educational Zone, while each building's footprint reflects its specific programmatic requirements.

Figure 6.58 : Secondary School 3D View
Source: Author's elaboration.



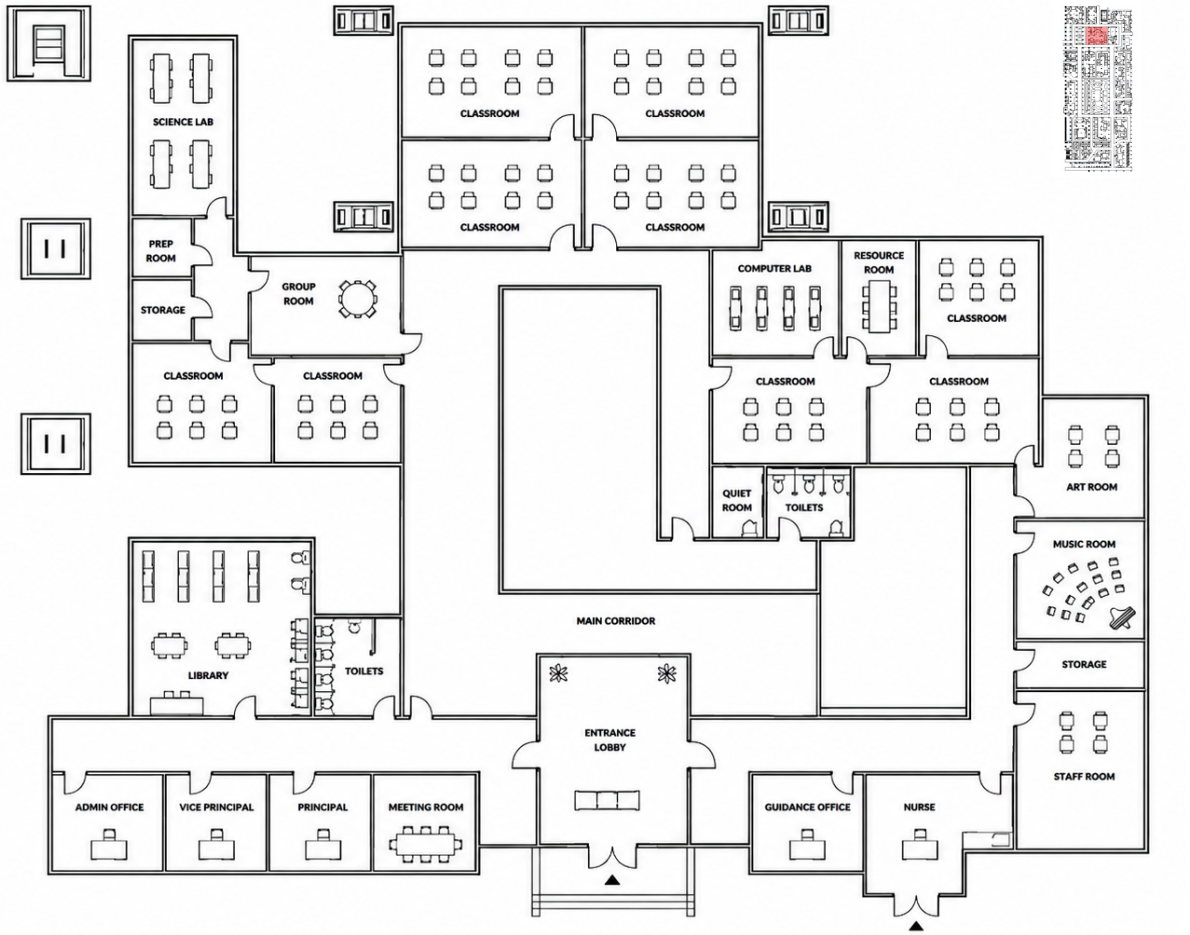




Figure 6.59 : Secondary School Floor Plan
SC: 1:!000
Source: Author's elaboration.

6.8.5 Design Development: Public Library

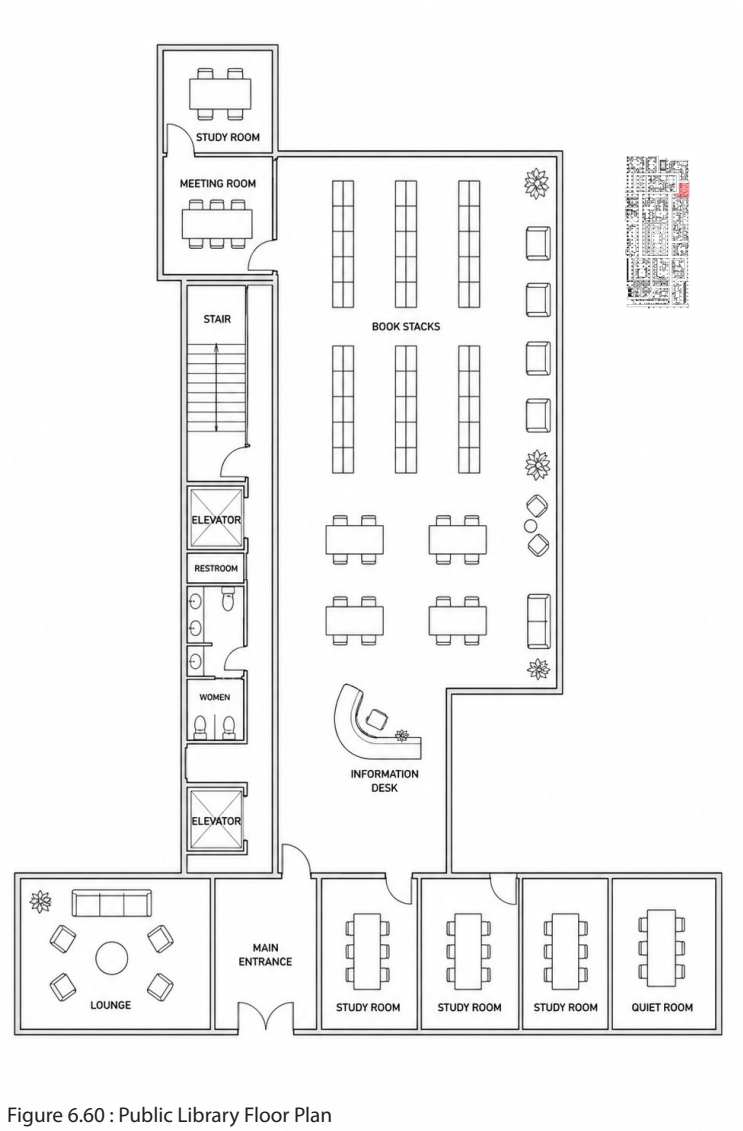


Figure 6.60 : Public Library Floor Plan
SC: 1:700
Source: Author's elaboration.

Figure 6.61 : Public Library 3D View
Source: Author's elaboration.



The public library occupies a footprint of 1,450 m^2, organized across two floors of 5 m height each. The ground floor houses the main collection, circulation desk, and general reading areas, while the second floor is dedicated to a study room, enclosed by curtain walls that flood the space with natural light and offer views over the surrounding Educational Zone, an environment intended to support prolonged, focused study.

The library's placement within the Educational Zone, directly serving the kindergarten, primary, middle, and secondary schools, responds to a clear pedagogical need: a shared library extends learning beyond the classroom, giving students of all ages a common resource for research, independent study, and reading that no single school on its own would be able to provide at the same scale. Positioning it centrally within the zone allows it to function as a genuine extension of each school's own educational program, rather than as an isolated cultural facility.

Beyond its role within the Educational Zone, the library also addresses a broader deficiency in the Lucento/Vallette neighborhood, which currently lacks a public library of its own. For residents, this facility therefore represents more than an amenity attached to the schools: it is a civic resource that fills a genuine gap in the neighborhood's cultural infrastructure, offering local residents, not only students, a space for reading, research, and community use that did not previously exist in the area.

6.8.6 Design Development: Swimming Pool

The swimming pool occupies a footprint of 900 m^2 on a single floor, with two distinct internal heights corresponding to its functional zones. The changing rooms, entrance, waiting area, and other support spaces are set at 5 m height, consistent with the standard supporting-space height used elsewhere in the site's buildings, while the pool hall itself rises to 9 m, providing the volume necessary to accommodate the pool tank, diving activity if applicable, and the sense of openness typically required in a natatorium.

Figure 6.62 : Swimming Pool 3D View
Source: Author's elaboration.



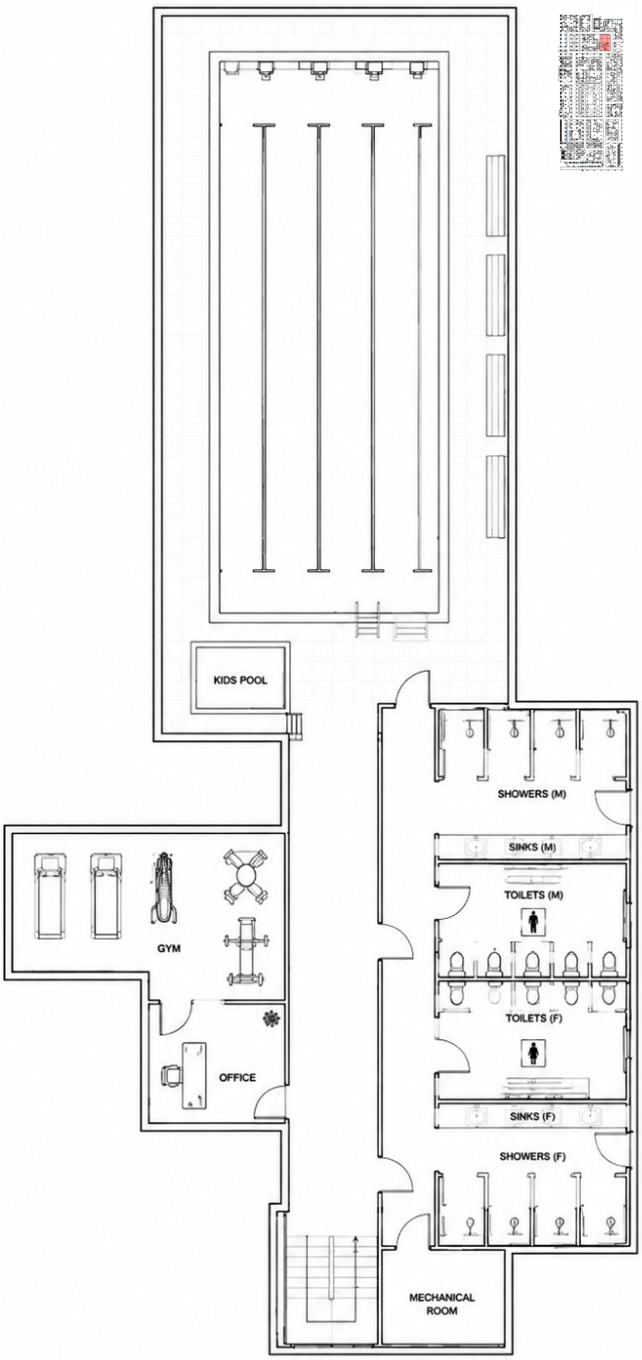


Figure 6.63 : Public Library Floor Plan
SC: 1:700
Source: Author's elaboration.

6.8.7 Design Development: Sport Courts

Closing the Educational Zone's programme, the sport courts are outdoor facilities dedicated to physical activity and recreation for students and neighbourhood residents alike. Positioned within reach of the primary, middle, and secondary schools, they support physical education classes during school hours while remaining accessible to the wider community outside of them, extending the zone's function beyond formal schooling into everyday neighbourhood life.

Together with the sport court already placed next to the primary school and the swimming pool, these courts complete a small but coherent network of sport and recreation spaces within the Educational Zone, ensuring that physical activity is treated as an integral part of the site's educational offer rather than an afterthought.

Figure 6.64 : Sport Courts 3D View
Source: Author's elaboration.



6.9 Masterplan Synthesis

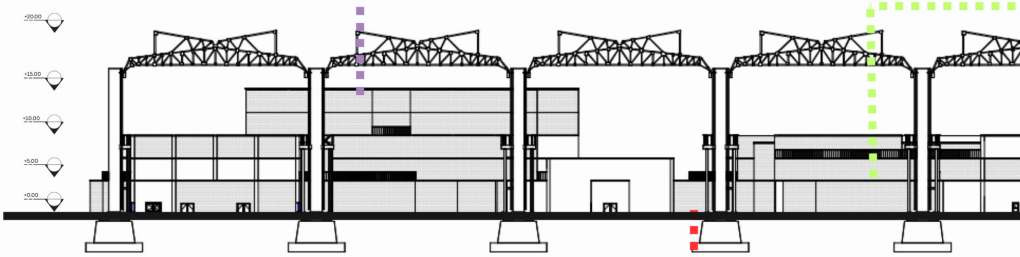
The masterplan that results from this design process is a site organized around three zones, the Terminal Zone, the Civic Zone, and the Educational Zone, that read as distinct parts while operating as a single, coherent piece of urban regeneration. Each zone has its own character and dominant use: the Terminal Zone gives Turin the intercity transport infrastructure it currently lacks, together with the hotel, cultural, and entertainment facilities that give arriving and departing passengers reason to engage with the site rather than simply pass through it; the Civic Zone, at the center of the site, supplies the administrative, civic, and everyday-retail functions the surrounding neighborhood was found to be missing; and the Educational Zone, closest to the existing residential fabric of Lucento and Vallette, extends the neighborhood's educational, sporting, and cultural offer.

What holds these three zones together, beyond their shared boundary, is a common architectural and infrastructural logic. Every building on the site, regardless of function or zone, is assembled from the same 5×5 m modular unit, fitted to the surviving structure of the former factory, so that the terminal, the hotel, the civic buildings, and the schools all belong to a single architectural family even as their scale, height, and expression differ according to what each function requires. Beneath this, a single circulation network, resolved before any building volume was placed, ties the three zones into one continuous, walkable sequence rather than leaving them as disconnected precincts.

In this respect, the final masterplan is not simply a larger or more detailed version of the first three-zone sketch with which this chapter began. It is the outcome of a design process that was repeatedly revised, in its sequencing, its content, and its degree of integration, while preserving the same basic ambition: to turn a disused, disconnected, and underused industrial site into a piece of urban infrastructure that serves Turin at the metropolitan scale while restoring genuine civic and social life to the neighborhood around it. Chapter 7 returns to this outcome directly, assessing how well the masterplan presented here answers the research questions and urban challenges set out at the beginning of the thesis.

PRIMARY SCHOOL





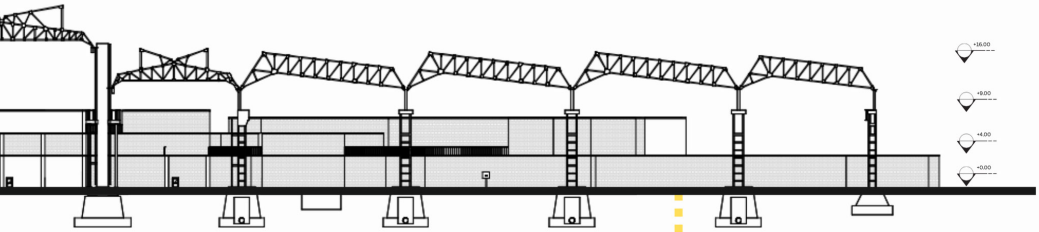
SPORT COURT



Figure 6.65 : Site North Elevation
SC:1:1000
Source: Author's elaboration.



KINDERGARTEN





MIDDLE SCHOOL



GTT BUS STATION

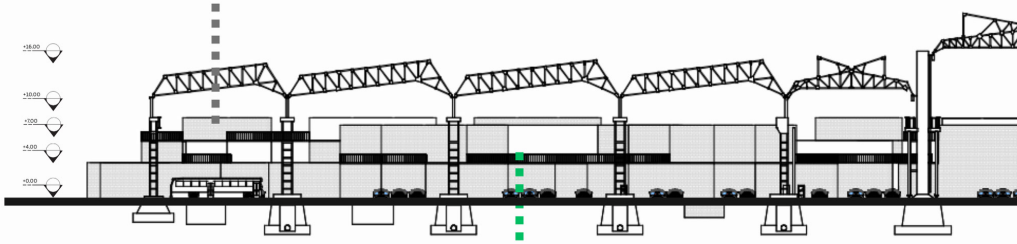
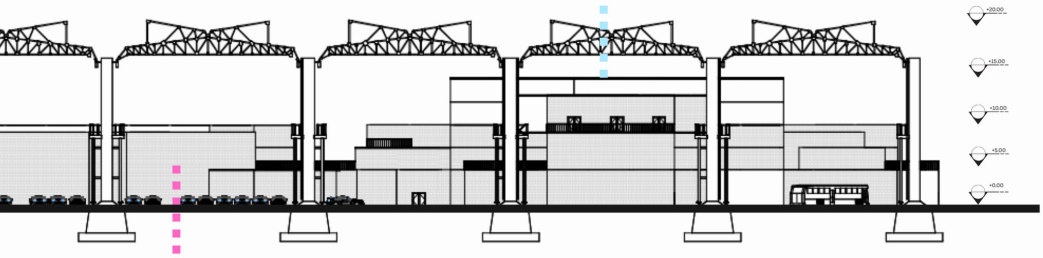




Figure 6.66 : Site South Elevation
SC:1:1000
Source: Author's elaboration.



BUS TERMINAL



CONSERT HALL



CINEMA COMPLEX



SECONDARY SCHOOL

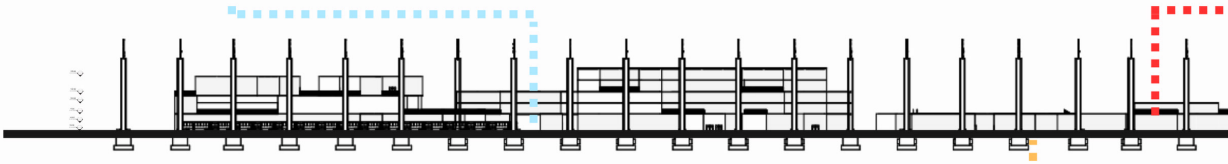
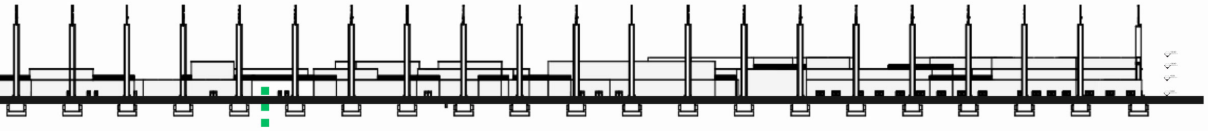




Figure 6.67 : Site West Elevation
SC:1:2000
Source: Author's elaboration.



CIVIL PROTECTION



MEDICAL OFFICES



IPER MERCATO



PUBLIC LIBRARY

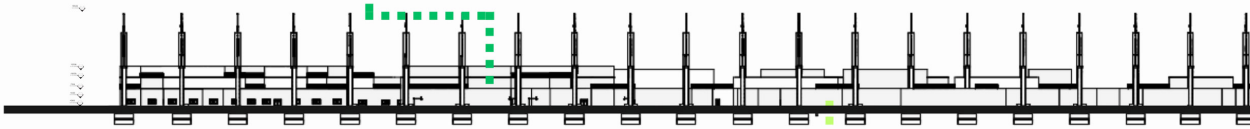
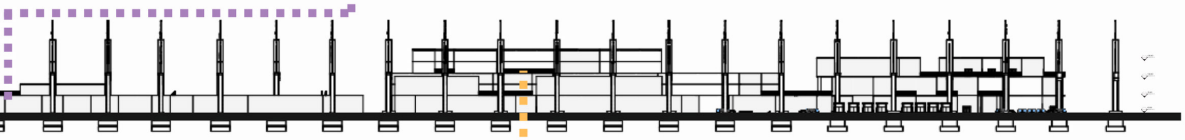




Figure 6.68 : Site East Elevation
SC:1:2000
Source: Author's elaboration.



COMUNE



POSTE ITALIANE



HOTEL

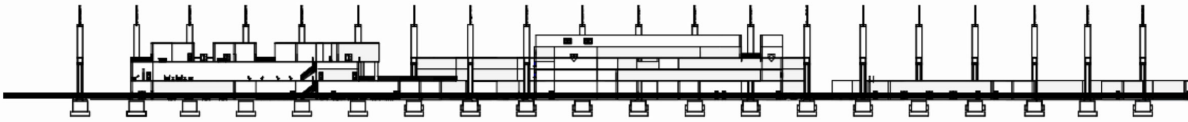


Figure 6.69 : Section A-A
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Source: Author's elaboration.

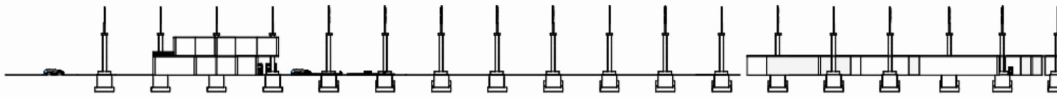


Figure 6.70 : Section B-B
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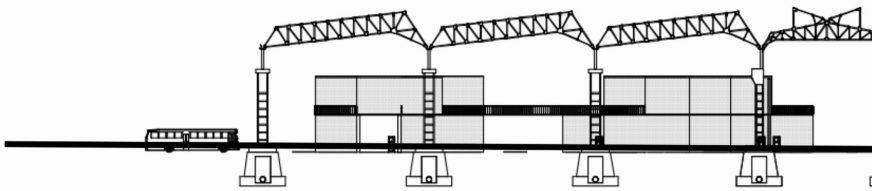


Figure 6.71 : Section C-C
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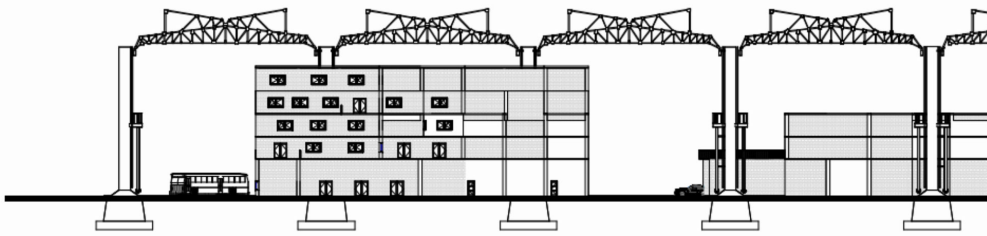
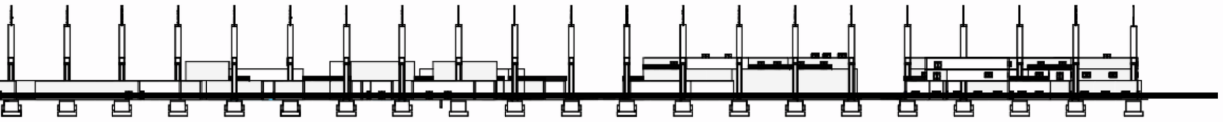
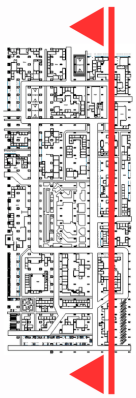
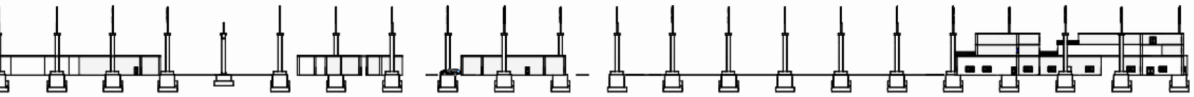
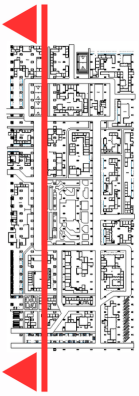


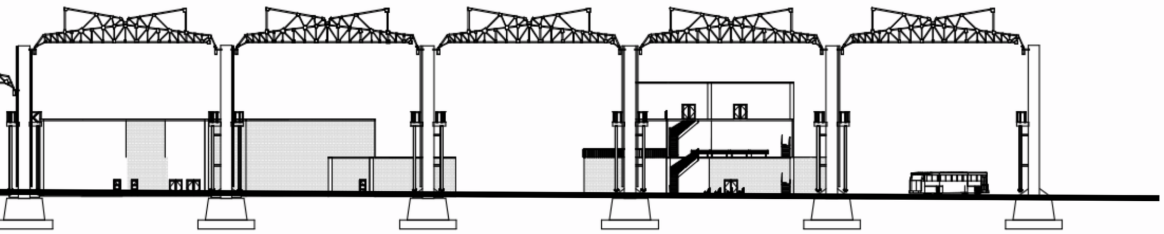
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SC:1:1000
Source: Author's elaboration.

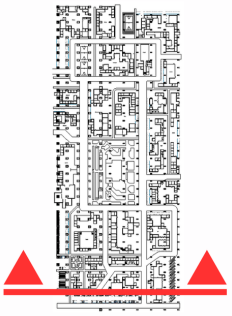


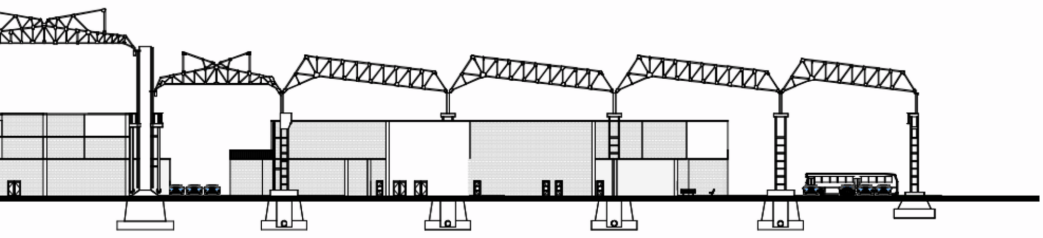


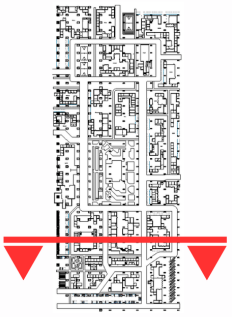












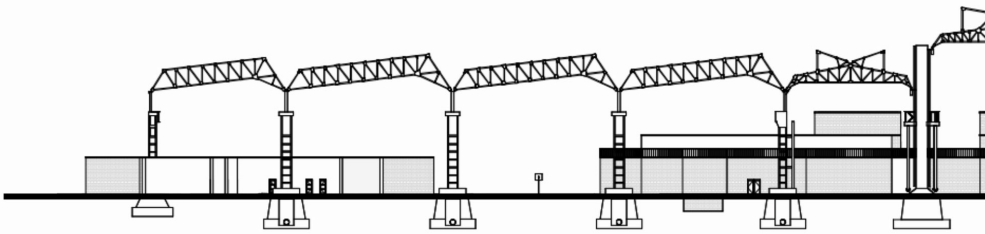


Figure 6.73 : Section E-E
SC:1:1000
Source: Author's elaboration.

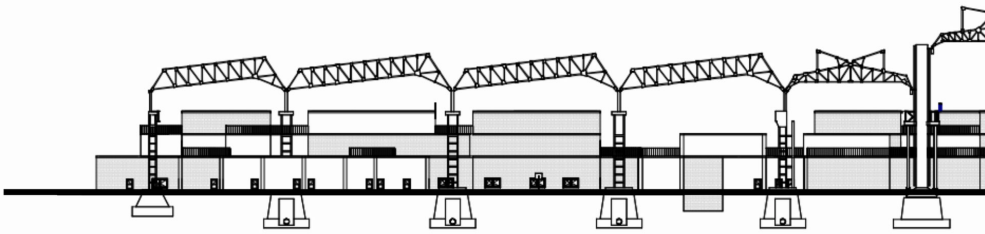


Figure 6.74 : Section F-F
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Source: Author's elaboration.

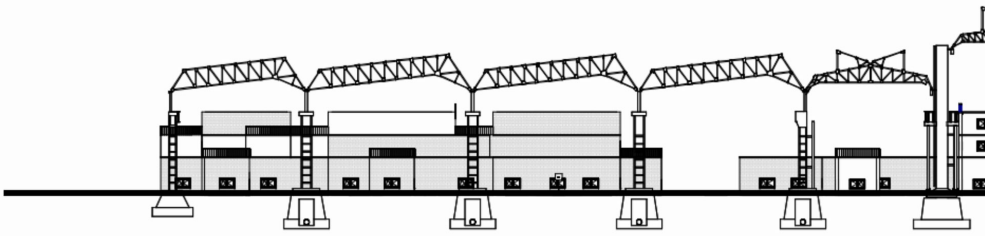


Figure 6.75 : Section G-G
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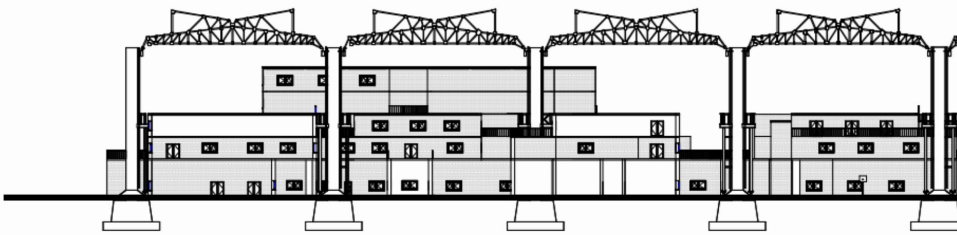
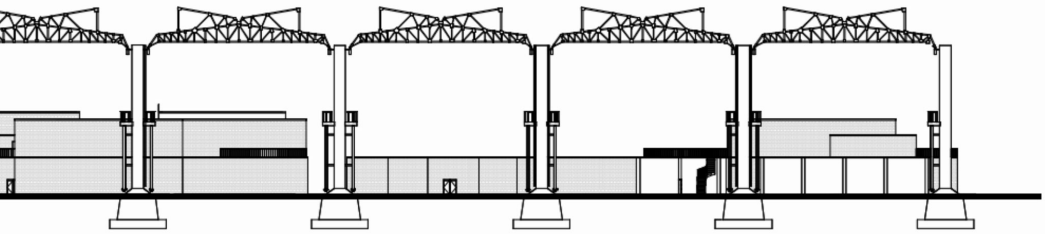
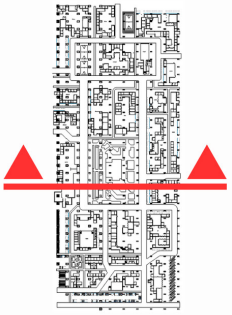
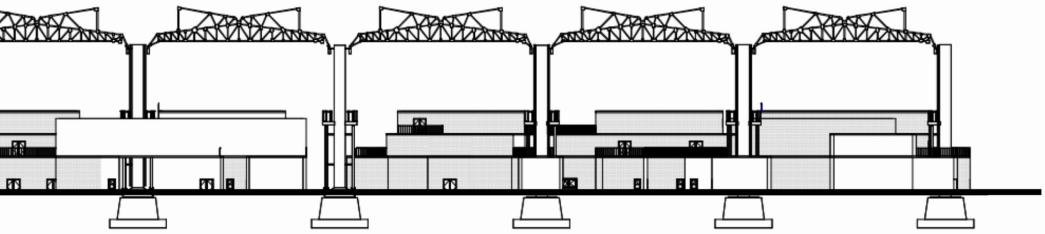
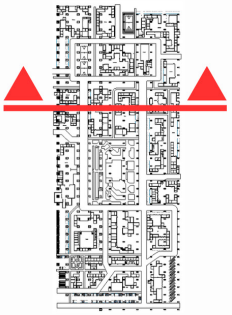


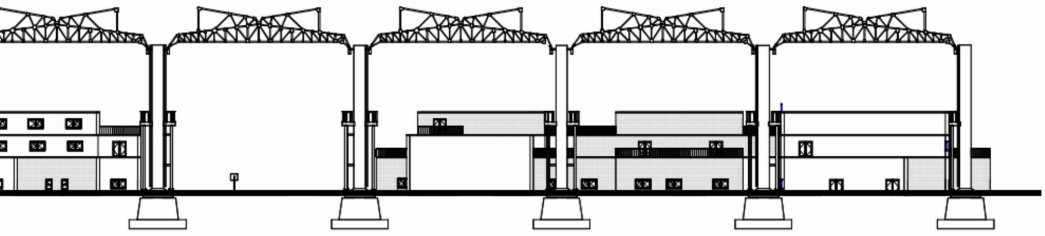
Figure 6.76 : Section H-H
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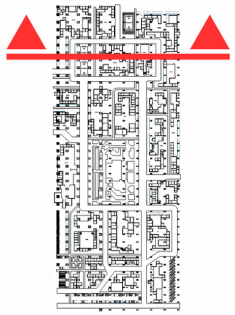


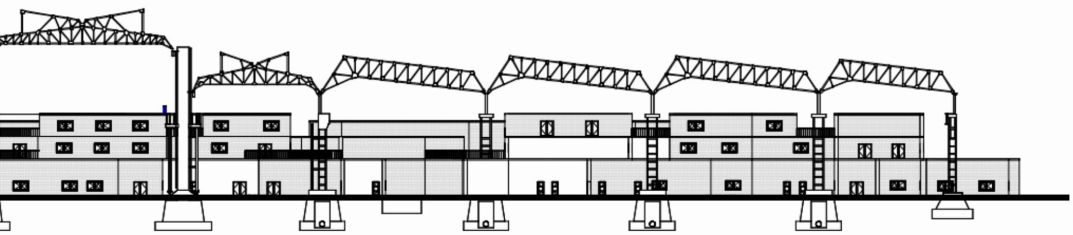


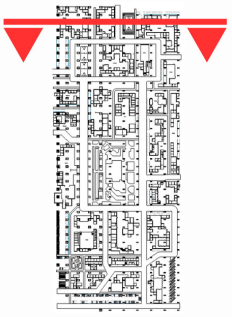












7 Conclusions

7.1 Restating the Research Problem

This thesis sets out to investigate how a large, disused post-industrial site within a dense urban fabric can be regenerated in a way that simultaneously repairs its physical and infrastructural disconnection from the city and reactivates its social and functional relevance to the surrounding community. The ex-ThyssenKrupp factory site in the Lucento/Vallette area of Turin was selected as the case through which to test this question, both because of the scale and centrality of the site itself and because of a more specific, city-level deficiency it could plausibly help resolve: Turin's lack of a proper intercity bus terminal, a function currently improvised along Corso Vittorio Emanuele II without the infrastructure, services, or urban integration that such a facility requires. The site's condition is therefore not treated in this thesis as a purely local problem of vacancy but as a symptom of a wider, unresolved relationship between the city's industrial past and its infrastructural present.

The research pursued two intertwined objectives, formulated as the thesis's guiding questions. The first, theoretical and analytical, asked how post-industrial landscapes have been reconceived elsewhere as sites of ecological, cultural, and infrastructural value, rather than simply as vacant land awaiting redevelopment, and which of the strategies developed in those precedents could be transferred to a large intra-urban site such as the ex-ThyssenKrupp factory. The second, propositional, asked whether an intercity mobility function could act as the organizing catalyst for the regeneration of a mixed-use post-industrial site, integrating civic, cultural, and residential-serving programmes at a scale adequate to the site's disused condition. Together, these two questions frame regeneration not as an architectural exercise applied to a site after its future has already been decided, but as an inquiry in which the site's own latent infrastructural and social potential is read first and given form only afterwards.

The remainder of this chapter draws these threads together. Sections 7.2 to 7.4 synthesize, in turn, the theoretical framework built in Chapter 2, the site analysis and rationale developed in Chapters 3 to 5, and the design response documented in Chapter 6. Section 7.5 returns explicitly to the two questions posed above and answers each in light of that synthesis. Section 7.6 reflects candidly the limitations of the work, Section 7.7 considers its broader implications beyond the specific case of Turin, and Section 7.8 closes the thesis.

7.2 Synthesis of the Theoretical and Precedent Framework

The literature review (Chapter 2) established the conceptual vocabulary underpinning the project, organized around five themes that were developed independently in that chapter but that operated jointly, rather than separately, in shaping the design. Reading the site through Solà-Morales's notion of terrain vague and Clément's tiers paysage made it possible to treat the apparent emptiness of the abandoned factory grounds not as a problem to be erased, but as a condition of latent possibility: a site whose very indeterminacy created room for a genuinely new urban role rather than a nostalgic restoration of its industrial past. At the same time, the brownfield remediation literature and the environmental site data reviewed in that chapter made clear that this latent potential is not unconditional: any regeneration proposal for a site of this kind has to reckon seriously with soil and groundwater contamination legacies before it can be treated as a blank canvas, a caveat that is revisited as a limitation in section 7.6.

The adaptive reuse and industrial heritage literature, anchored in the TICCIH Nizhny Tagil Charter and in the broader discussion of collective memory in Nora and Halbwachs, supplied the argument for retaining rather than demolishing the factory's structural remains, a position that directly shaped the design decision, elaborated in section 6.5, to preserve the original columns and roof trusses of the terminal building as the primary structural and symbolic order of the new construction. Transit-oriented development literature, principally Calthorpe, Cervero, and Bertolini's node-place model, supplied the second major theoretical pillar, justifying the choice to organize the site around a mobility function and to treat proximity to the Tangenziale A55 and to Turin's wider transport network as a genuine urban asset rather than an incidental convenience. Finally, the Turin-specific regeneration scholarship of Vanolo and of Ponzini and Santangelo situated the project within the city's broader, still-unfinished trajectory of converting its industrial periphery into productive urban space, of which the ex-ThyssenKrupp site is one of the more prominent remaining cases.

The case studies chapter (Chapter 4) reinforced these theoretical positions with built precedent, showing both that post-industrial mixed-use regeneration and transport-terminal-plus-facilities projects are achievable at a comparable scale and offering concrete formal and programmatic strategies, from the handling of retained industrial structure to the integration of civic and cultural functions alongside a primary transport use, that were adapted, rather than copied, into the ThyssenKrupp proposal.

Read together, these five bodies of literature did not function as separate justifications appended to different parts of the design; they operated as a single argument in three steps. Terrain vague and tiers paysage established that the site's emptiness was an asset to be worked with rather than a deficiency to be corrected. The heritage and TOD literatures then supplied, respectively, the structural and the programmatic logic through which that asset could be given form: keep what the factory left behind and organize the new construction around movement and connection rather than around a single dominant function. The Turin-specific scholarship, finally, situated this logic within a real and ongoing local trajectory, rather than treating the ex-ThyssenKrupp site as an isolated design problem. It is this three-step argument, built from the literature and confirmed against precedent, that structures the design synthesis in section 7.4.

7.3 Synthesis of the Site Analysis

Chapter 3 established that the site's central liability is also its central asset: its scale and its position between major infrastructure, the Tangenziale A55, the Dora river, and Corso Regina Margherita, give it real metropolitan relevance, but that same position currently isolates it from the neighborhoods, parks, and civic destinations around it. Section 3.1.2 documented this directly, showing that the only pedestrian connection toward Parco della Pellerina is a single bridge, insufficient to support the level of movement a regenerated, publicly relevant site would generate. Chapter 5 returned to this same finding from a different angle, using a SWOT analysis to confirm that poor connectivity, alongside contamination legacies and regulatory uncertainty over the site's future use, constituted the project's principal weaknesses and threats, while its size, location, and infrastructural proximity constituted its principal strengths and opportunities.Taken together, the site analysis (Chapter 3) and the rationale chapter (Chapter 5) did not simply describe a problem; they defined the design brief. Any credible proposal for the site had to, first, resolve the connectivity deficit identified around Parco della Pellerina and the Dora river; second, exploit rather than ignore the site's proximity to the A55 and to the wider metropolitan network, including the airport, Allianz Stadium, and Torino Rebaudengo Fossata railway station; and third, offer a program substantial and varied enough to justify the scale of intervention the site's disused condition demands. These three requirements are not independent design goals; they are nested. Without resolving connectivity, the site's infrastructural proximity remains theoretical rather than usable, and without a program of adequate scale and variety, improved connectivity would simply route more traffic past rather than into a regenerated site. The site analysis therefore established not only what the design needed to do but also the order in which it needed to do it, a sequence that the design process in Chapter 6 followed directly, beginning with mobility before turning to architecture.

7.4 Synthesis of the Design Response

Chapter 6 documented the design process through which these findings were translated into a built proposal. The project evolved from an early, schematic division of the 157,000 m^2 site into three zones, a terminal zone, a green buffer, and a local zone serving Lucento and Vallette, into a more integrated masterplan in which green space is woven through the built fabric rather than isolated as a separate band. This shift itself reflects a lesson drawn from the theoretical framework: that ecological and social value are produced more effectively when landscape is embedded in daily use rather than set aside from it. The masterplan retains the logic of the original three-zone concept, metropolitan, buffer, and local, while distributing it across what became the Terminal Zone, the Civic Zone, and the Educational Zone described below.

The mobility masterplan (section 6.3) directly answered the connectivity deficit identified in Chapters 3 and 5. New pedestrian, bicycle, and vehicular bridges across the Dora river and into Parco della Pellerina, together with a barrier-free connection towards Turin's future hospital and a restructured hierarchy of regional, urban, and local access routes, reconnect the site to the seven metropolitan reference points identified as most relevant: the airport, the Tangenziale A55, Allianz Stadium, Castello di Lucento, Parco della Pellerina, the Dora river, and Torino Rebaudengo Fossata station. This mobility structure was deliberately resolved before the architecture, on the logic, confirmed through the advisor's guidance during the process, that a project whose premise is regional accessibility has to demonstrate that accessibility at the scale of the city before it can be credible at the scale of the building.

At the building scale, the terminal itself embodies the thesis's central design argument. Its diagonal platform geometry reduces walking distances and simplifies bus maneuvering; its retained columns and trusses, re-expressed as a distinct structural order above a new glazed public level and rooftop terrace, make the industrial heritage of the site legible rather than erased; and its layered public programme, a waiting hall, retail, and vertical circulation at platform level, cultural, educational, and food-and-beverage functions above, extends the building's role well beyond that of a conventional transit shed. Both the terminal and every other building on the site are organized on the same 5×5 m modular structural grid, derived by averaging the spacing of the retained factory columns, so that a single dimensional logic runs from the terminal roof to the classrooms of the Educational Zone.

7.4 Synthesis of the Design Response

Around the terminal, the Terminal Zone clusters the hotel, cinema complex, concert hall, commercial center, entertainment center, ThyssenKrupp museum, GTT city bus station, and taxi station. These functions respond directly to needs identified earlier in the thesis: the hotel serves Allianz Stadium visitors who miss a last departure, passengers with health conditions unable to travel overnight, and a district currently underserved by modern hospitality, while its position near Turin Airport reinforces the site's role as a metropolitan node rather than a purely local one. The commercial center, sited deliberately on the border between the Terminal and Civic Zones, next to the hotel, is intended to serve first-time visitors to the city as much as residents and daily passengers, so that no single function on the site is legible to only one user group.

The Civic Zone, at the center of the site, houses the functions that give the project its everyday civic relevance to Lucento and Vallette: the anagrafe, comune, police station, civil protection, social services offices, Poste Italiane, medical offices, and ipermercato, together with a large green area. The Educational Zone completes the local-scale program with a kindergarten, primary, middle, and secondary schools, sport courts, a public library, and a swimming pool, sequenced so that the single-storey kindergarten sits apart from the taller, multi-storey schools for reasons of child safety, and so that the medical offices sit at the border of this zone to provide a baseline emergency presence for the schools while also drawing on the site's proximity to Turin's future hospital. Table 7.1 summarizes the footprint, floor area, and number of floors specified in Chapter 6 for each function across the three zones.

Table 7.1: Programme summary by zone (as designed in Chapter 6)

Function	Zone	Footprint / floor area	Floors
Intercity bus terminal (platforms, waiting hall, retail, upper-level cultural/educational spine)	Terminal Zone	Not separately quantified; designed in full detail (section 6.7–6.8)	2 (platform level + terrace level)
Hotel	Terminal Zone	≈6,000 m^2 total floor area (footprint not separately reported)	5
Cinema complex (2 salons)	Terminal Zone	875 m^2	1
Concert hall	Terminal Zone	1,700 m^2	1
Commercial centre	Terminal / Civic border	1,875 m^2	1
GTT city-bus station	Terminal Zone	925 m^2	2
Taxi station	Terminal Zone	400 m^2	1
ThyssenKrupp museum; entertainment Hub	Terminal Zone	3800 m^2	3

7.4 Synthesis of the Design Response

Table 7.1: Programme summary by zone (as designed in Chapter 6)

Function	Zone	Footprint / floor area	Floors
Ipermercato	Civic Zone	3,200 m²	1
Poste Italiane	Civic Zone	625 m²	1
Medical offices	Civic / Educational border	1,000 m²	1
Anagrafe	Civic Zone	1,100 m²	1
Police station	Civic Zone	1,725 m²	2
Comune (municipal offices)	Civic Zone	1,875 m²	2
Civil protection	Civic Zone	675 m²	1
Social services offices	Civic Zone	2,100 m²	2

Table 7.1: Programme summary by zone (as designed in Chapter 6)

Function	Zone	Footprint / floor area	Floors
Kindergarten	Educational Zone	650 m²	1
Primary school	Educational Zone	4,750 m²	3
Middle school	Educational Zone	4,225 m²	3
Secondary school	Educational Zone	4,000 m²	3
Public library	Educational Zone	1,425 m²	2
Swimming pool	Educational Zone	900 m²	1
Sport courts	Educational Zone	≈2,000 m²	-

7.4 Synthesis of the Design Response

Summed across the nineteen functions for which a unit footprint was specified in Chapter 6, the design amounts to a combined footprint of approximately 50,850 m^2. This figure excludes the terminal building itself, the hotel, whose 6,000 m^2 was reported as total floor area rather than footprint, the ThyssenKrupp museum, the entertainment center, and the sport courts, none of which were separately quantified in the design chapter. Even on this partial basis, the figure illustrates the scale of program the site's condition was judged, in Chapter 5, to demand: a regeneration proposal built almost entirely of small- and medium-scale civic and cultural buildings, punctuated by two markedly larger interventions, the comune at 18,675 m^2 and the terminal complex itself, both organized on the same 5×5 m structural module that unifies the whole.

Table 7.2 restates this synthesis in a different form, tracing each major issue identified in the analytical chapters through to the specific design response that addresses it in Chapter 6, and is intended to make explicit a chain of reasoning that runs through the thesis as a whole rather than residing in any single chapter.

Table 7.2: From identified problem to design response

Issue identified in the analytical chapters	Where identified	Design response	Where resolved
Site isolated from surrounding neighbourhoods, the Dora river and Parco della Pellerina; only one pedestrian bridge exists	Section 3.1.2; Chapter 5 (SWOT)	New pedestrian, cycling and vehicular bridges across the Dora and into Parco della Pellerina; barrier-free connection toward the future hospital	Section 6.3
Turin has no purpose-built intercity bus terminal; the function is improvised along Corso Vittorio Emanuele II	Chapter 1; Chapter 5	Dedicated terminal with diagonal platform geometry, waiting hall, retail and vertical along Corso Vittorio Emanuele II	Sections 6.7–6.8
Retained industrial heritage and collective memory are at risk of erasure in redevelopment	Chapter 2 (TICCIH; Nora; Halbwachs)	Original factory columns and roof trusses preserved and re-expressed as the terminal's primary structural order	Sections 6.5, 6.7
The site's apparent emptiness is a latent asset, not a blank canvas, and ecological value works best when embedded rather than set aside	Chapter 2 (Solà-Morales; Clément)	Three-zone concept revised so green space is woven through the built fabric rather than isolated as a separate buffer	Sections 6.4, 6.12

Table 7.2: From identified problem to design response

Issue identified in the analytical chapters	Where identified	Design response	Where resolved
Contamination legacies and regulatory uncertainty over the site's designation	Chapter 5 (SWOT: weaknesses/ threats)	Acknowledged as a precondition for redevelopment; not resolved at design-study level	Section 7.6
Turin has no purpose-built intercity bus terminal; the function is improvised along Corso Vittorio Emanuele II	Chapter 1; Chapter 5	Dedicated terminal with diagonal platform geometry, waiting hall, retail and vertical along Corso Vittorio Emanuele II	Sections 6.7–6.8
Lucento and Vallette lack adequate everyday civic, educational and social infrastructure	Chapter 1; Chapter 5	Civic Zone (registry, post office, medical and social services, municipal offices, ipermercato) and Educational Zone (kindergarten to secondary school, library, pool, sport courts)	Sections 6.9–6.11
Site relevance depends on regional infrastructural proximity (A55, airport, rail) that was previously untapped	Chapter 3; Chapter 5	Mobility masterplan organized around seven metropolitan reference points and a five-tier access hierarchy	Section 6.3

7.5 Answering the Research Questions

Section 7.1 restated the two questions that guided this research: an analytical question, asking how post-industrial landscapes have been reconceived elsewhere as sites of value rather than as vacant land and which of those strategies transfer to a large intra-urban site; and a propositional question, asking whether an intercity mobility function can act as the organizing catalyst for the regeneration of a mixed-use post-industrial site. This section answers each in turn before returning to the overarching problem they were designed to address.On the analytical question, the case studies and literature reviewed in Chapters 2 and 4 show that post-industrial sites are most convincingly reconceived when regeneration treats the site's existing physical and infrastructural condition as a resource rather than an obstacle. The most transferable strategies identified were, specifically, the retention and re-expression of structural remains as both an economic and a symbolic move, rather than a purely preservationist one; the organization of mixed-use programs around a primary transport or movement function, following the node-place logic of the TOD literature; and the treatment of residual open space as space to be worked into the building fabric rather than cleared and re-landscaped as an amenity separate from it. All three strategies proved directly transferable to the ex-ThyssenKrupp site and are visible, respectively, in the retained terminal structure, in the mobility-first design sequence of section 6.3, and in the revision of the original three-zone concept described in section 6.4.On the propositional question, the design developed in Chapter 6 demonstrates that an intercity mobility function can indeed act as the organizing catalyst for a much broader regeneration program, provided the connective infrastructure around it is resolved with the same rigour as the buildings themselves. The terminal is neither an isolated transport shed nor a pretext for unrelated development elsewhere on the site: its diagonal platform geometry, structural retention, and layered public program make it the architectural argument for the whole proposal, while the Civic and Educational Zones extend that argument outward into the everyday life of Lucento and Vallette. The project's roughly 50,850 m^2 of quantified civic, cultural, and educational program, summarized in Table 7.1, indicates that this catalytic role was pursued at a scale genuinely comparable to the site's own, rather than as a token civic gesture attached to a primarily commercial or infrastructural scheme.Returning, finally, to the overarching problem restated in section 7.1: a large post-industrial site can be reconnected to its city both physically and functionally when regeneration is approached simultaneously at two scales. At the infrastructural scale, mobility and connectivity deficits must be treated as design problems in their own right rather than as afterthoughts to architecture, which is why the mobility masterplan in this thesis was resolved before a single building was drawn. At an architectural scale, retained industrial structure and a genuinely mixed program allow a single site to serve regional, city-wide, and neighborhood-level needs at once, rather than forcing a choice between them. The ThyssenKrupp proposal demonstrates that an intercity transport function, rather than displacing other uses, can act as the catalyst that justifies and funds the broader regeneration of a site's civic, cultural, and residential surroundings, provided that the project's connective infrastructure is resolved with the same rigour as its buildings and provided that the resulting program, as Table 7.1 shows, is substantial enough to be more than symbolic.

7.6 Limitations and Reflections

The proposal developed in this thesis remains, inevitably, a design study rather than an implementation-ready plan, and several limitations should be acknowledged openly rather than treated as afterthoughts. Soil and groundwater remediation, treated in the literature review as a necessary precondition for redevelopment, was not modelled in technical detail within the design chapters, and any real project on this site would require dedicated environmental engineering input, including updated site investigation, before construction could proceed. The regulatory status of the site, including ongoing questions about its formal designation and the pace of related regional legislation, was evolving even during the writing of this thesis, and a real-world proposal would need to be tested against whatever framework is ultimately in force rather than the one assumed here.A second set of limitations concerns feasibility and verification. No structural engineering calculations were carried out to confirm that the retained columns and trusses can safely carry the loads implied by the new upper-level programme; the 5×5 m modular grid was derived from an averaged column spacing rather than a surveyed structural condition assessment. Similarly, no cost estimate, phasing strategy, or economic feasibility analysis accompanies the design, so the proposal cannot yet be judged against the practical constraints that would ultimately determine whether, and in what order, its three zones could be built. No transport modelling was undertaken to test whether the proposed bridges and access hierarchy would in practice absorb the passenger and traffic volumes a full-scale intercity terminal generates; the mobility masterplan is a design response to a documented connectivity deficit, not a simulated one.Finally, the design was developed by a single author working within the time frame of a master's thesis, using methods – on-site observation, archival and bibliographic research, and comparative case study analysis – that are appropriate to that scale of inquiry but that inevitably narrow the range of expertise brought to bear on the proposal. A project of this scale would, in practice, demand a multidisciplinary team spanning structural and environmental engineering, transport planning, landscape design, and economic feasibility analysis, and it would also benefit from direct consultation with the residents of Lucento and Vallette, whose everyday needs this thesis has attempted to anticipate through research and precedent rather than through direct participation. Each of these limitations points less to a weakness in the argument developed here than to the next stage of work the argument would require before it could move from thesis proposal to buildable project.

7.7 Contribution and Broader Implications

Beyond its specific proposal for the ex-ThyssenKrupp site, this thesis contributes to a broader argument about how European cities might treat their remaining large post-industrial parcels: not as isolated redevelopment opportunities to be resolved site by site, but as potential infrastructural assets whose regeneration can address genuine, city-scale deficiencies, in Turin's case, the absence of a proper intercity terminal, while still returning direct, everyday value to the neighborhoods that have lived alongside their vacancy. This reframes the familiar adaptive-reuse question of what to do with an empty factory as a different, and arguably more productive, question: what city-scale problem, currently unresolved, could this site's scale and position help to solve, and what would it take for the resulting project to also serve its immediate neighbors.

In this sense, the project offers a transferable method as much as a site-specific design, one that follows three steps: first, read the site's latent infrastructural relevance, rather than its physical emptiness, as its primary asset; second, resolve connectivity at the urban scale before architecture is introduced, so that infrastructural claims made for the site are demonstrated rather than assumed; and third, let the architecture that follows give form to a program built from both regional and local need, so that no single user group, regional passenger or local resident, is treated as a secondary beneficiary of the design. This sequence, developed here for a single site in Turin, is not specific to bus terminals or to Italian regional policy, and could reasonably be tested against other large, infrastructurally adjacent post-industrial sites elsewhere in Europe facing a comparable combination of physical disuse and unmet city-level need.

7.8 Closing Statement

Figure 7.1 :Site 3D View
Source: Author's elaboration.



The ex-ThyssenKrupp site has stood, for years, as a visible interruption in the urban fabric of Lucento and Vallette, a reminder of an industrial past the city has largely moved beyond, but not yet a resource for the future it is still shaping. This thesis has argued, and attempted to demonstrate through design, that such sites need not remain interruptions. Reconnected by new bridges and reorganized streets, structured around a terminal that gives Turin the intercity facility it currently lacks, and completed by the schools, civic offices, and public spaces its neighbors need day to day, the site proposed here becomes instead a hinge, a place where the regional and the local, the industrial past and an inhabited future, are held together rather than left apart.

Redeveloping the former Thyssen brownfield while providing the city of Turin with an international bus terminal thus contributes both a concrete solution to a genuine urban deficiency and a transferable method for how other European cities might approach their own large post-industrial sites. This project was conceived to address two important issues of the city's new urban masterplan, currently underway. Furthermore, the choice to incorporate several public functions within the site allows for the creation of a modern 'mixed urban functions' district. It is conceived to bring public services to a peripheral area while maintaining the existing services in the city centre, improving accessibility to urban public services for high-density urban districts, and thus contributing to the urban regeneration process of the whole area and its closest residential districts.

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