Industrial Heritage

Connecting urban life and nature

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INDUSTRIAL HERITAGE
CONNECTING URBAN LIFE AND NATURE

Adaptive Reuse of the Former Railway Workshops on the Waterfront of Campana, Buenos Aires, Argentina

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"Nothing is born or perishes, but already existing things combine and then separate again"

"Fragments", Anaxagoras, 5th century BC.

"For nothing is created, neither in the operations of art, nor in those of nature, and it may be posited in principle that in every operation there is an equal quantity of matter before and after the operation; that the quality and quantity of the principles is the same, and that there are only changes, modifications"

Traité élémentaire de chimie, Lavoisier, Antoine Laurent, 1789

Abstract

Existing dismissed large infrastructure should be viewed as an opportunity for transformative change in urban development and sustainable initiatives. This includes addressing evolving needs driven by contemporary trends, such as the growing demand for accessible green spaces in urban environments, the shift towards adaptive work environments, and the necessity for resilient infrastructure to mitigate the impacts of climate change.

Emerging concurrently with the nation's establishment, Argentina's railway system played a crucial role in connecting vast territories. Reaching its peak in 1945 with a sprawling network of 45,000 kilometers, today, only 5,000 kilometers cater to passenger transport, while 18,000 kilometers are allocated for cargo.

Similar to other railway stations and workshops in Argentina, those in Campana, Buenos Aires province, largely lie unused, with the exception of a newer train station and cargo rail services. Originally designed to enhance connectivity, these services unintentionally act as a barrier, dividing urban life from the natural surroundings along the river.

The train occupies a signi cant place in Argentina's collective memory, symbolizing a period of prosperity and growth. However, its subsequent decline has left many towns without the vital elements that once de ned them.

This project aims to revive this collective memory, transforming it into a tangible reality by repurposing workshops to bridge the gap between urban life and nature, becoming once again a connector.

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I. **Introduction**

The thesis aims to explore the potential for converting former railway infrastructures, drawing inspiration from successful examples such as Utrecht and The Highline in New York City. Speci cally, the focus is on the abandoned railway infrastructures in Campana, Buenos Aires, Argentina, situated between the built city and the river.

To carry out the analysis, case studies were analyzed at the same time that the site was visited several times, and an assessment of the current situation of the intervened plot and its surrounding built environment was done. The main goals are to reuse the workshops and give them a purpose that complements the city; create a safer connection between city-workshops-riverfront with the construction of a bridge; incorporate the city and the waterfront landscapes at the same time; and nally connect people and nature not only visually with the built environment but also with the addition of vegetation and programs that are related to it.

The former railway workshops in Campana present a unique opportunity for urban revitalization and integration. The goal is to transform the neglected plot into a vibrant space that reconnects the city, repurposes the existing structures, and enhances the relationship between people and nature.

The project proposal to overcome said problem and connect the main avenue, and main axis of the city, directly to the river, is a bridge that does both crossing and intertwining with the plot. The design proposal embraces the logic of minimum intervention by selecting a light structure with a width of 12 meters, different heights and covered and uncovered zones, that does not create big shadows, and is a panoramic viewpoint that incorporates the landscape of the river and island even before crossing the railways.

In conclusion, the project seeks to not only repurpose abandoned spaces but also to foster a harmonious connection between the urban environment, historical structures, and the natural surroundings. The proposed bridge serves as a symbolic and functional link, addressing existing barriers and enhancing the overall urban experience

in Campana.

The thesis is divided into three main parts. *Part I* introduces the thesis and explores the context of industrial and port cities, including their heritage and the in uence of nature in urban settings. In *Part II*, the focus shifts to the proposal, covering both the masterplan and adaptive reuse of existing buildings. This section outlines the strategic plan for the project, detailing how the urban space will be organized and the abandoned structures repurposed. *Part III* concentrates on analyzing the feasibility of the proposed project and potential outcomes. It critically assesses the practicality and viability of the interventions. The thesis concludes with nal thoughts, summarizing key ndings and providing re ections on the entire work.

Introduction to Adaptive Reuse

The term *'adaptation'* refers to any intervention designed to reuse, adjust, or upgrade a building to meet new conditions and requirements, extending beyond routine maintenance (Douglas, 2006). This practice has gained unprecedented signi cance in contemporary urban planning, driven by increased density, conservation considerations, and the imperative of sustainable development. The following sections explore the multifaceted aspects of adaptive reuse, shedding light on its role in shaping urban landscapes and addressing the challenges of our time.

"Adaptive reuse is the process of reusing an existing site, building, or infrastructure that has lost the function it was designed for, by adapting it to new requirements and uses with minimal yet transformative means". (Robiglio, 2017)

Why Adaptive Reuse?

While there was a time when new building shapes were needed to respond to a vastly different lifestyle, the present era allows for a departure from the need for speci c architecture tailored to particular uses. The imagination now enables the reinterpretation and repurposing of existing structures in novel ways. This involves uncovering old rules, combining them with new elements, and pursuing new goals. Such adaptive reuse can lead to the development of artifacts that align with natural and technological processes, symbolizing ecology in both natural and technical systems.

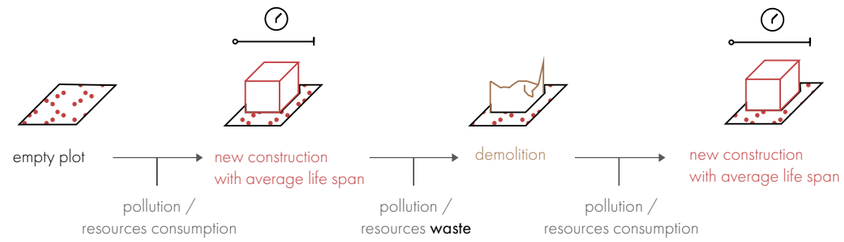


Figure 1: Pollution generated when demolishing versus when reusing. Own elaboration.

i In many cities globally, for example, in Buenos Aires, according to the Ministry of Urban Development in 2011 there were up to 32.400 vacant buildings. Consequently, the necessity to start from scratch has diminished. Instead of searching for vacant plots, the focus can shift to nding new purposes for existing structures. As Jane Jacobs emphasizes in her work *The Death and Life of Great American Cities* (1961), *"new ideas must use old buildings."*

The environmental impact of new construction, including the production of steel, cement, bricks, and other materials, contributes signi cantly to carbon emissions. According to IEA (2022), the construction industry is responsible for 40% of global CO2 emissions. While completely avoiding pollution during construction may be challenging, the concept of adaptive reuse aims to circumvent the demolition and creation of new structures. By adapting existing buildings to host new functions, a smaller percentage of pollution is generated, the lifespan of vacant buildings is extended, and the adverse environmental effects of demolishing and rebuilding are mitigated. This approach aligns with the broader goals of sustainable urban development. (Fig.1)

Factors In uencing Adaptive Reuse

Several crucial factors in uence the adaptive reuse process, encompassing:

Range of Intervention (Fig. 2): The extent of alterations and modi cations.

Scale of Intervention and Degree of Change (Fig. 3): The size and depth of modi cations.

Time and Level of Cost (Fig. 4): The temporal and nancial aspects of the adaptive process.

Adaptability of a Building (Fig. 5): The inherent capacity of the structure to undergo changes.

Building Adaptation: Key Aspects

Building adaptation involves three pivotal aspects: changes in function, size, and performance. Understanding a building's composition is fundamental in deciding necessary modi cations. The concept of shearing layers (Fig. 6), introduced by Brand (1994) and expanded by Leupen (2006), provides a systematic approach to analyzing buildings, considering their interdependence or independence.

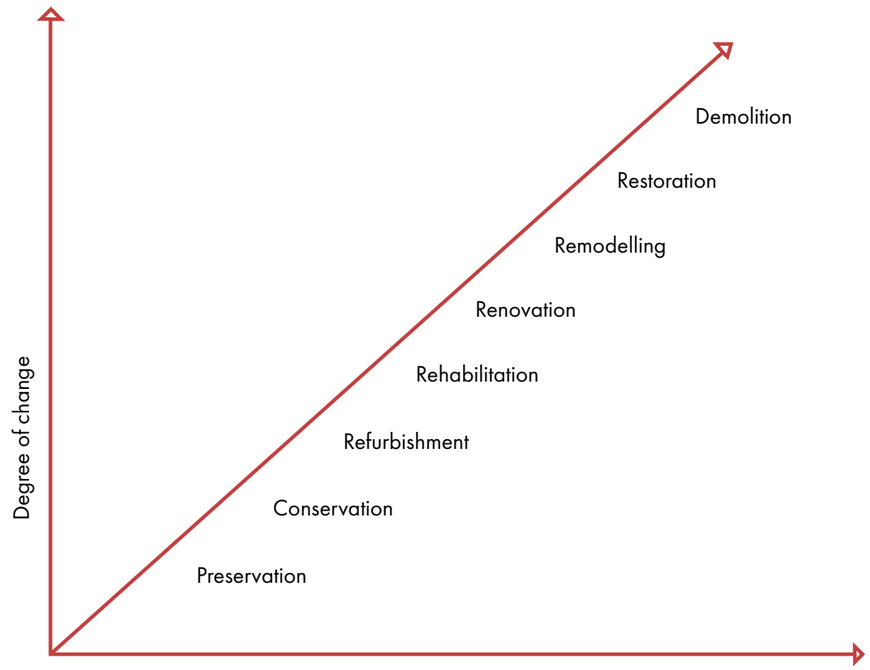


Figure 2: Range of interventions. Source: Own elaboration based on 'Building Adaptation' graph, Douglas, J., p.3, 2006.

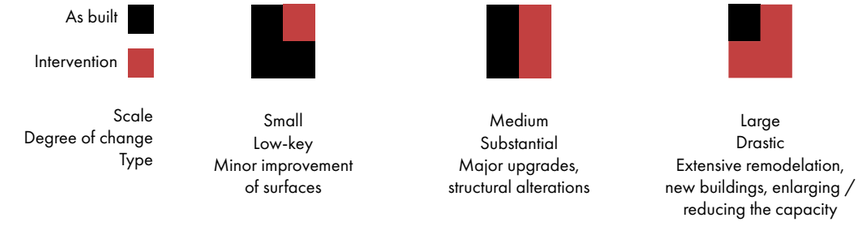


Figure 3: Scale of intervention and degree of change. Source: Own elaboration based on 'Building Adaptation', Douglas, J., 2006.

Dividing a building into layers is imperative due to the differing lifespans (Fig. 7) of its components, as emphasized by Brand (1996). F. Duffy's analysis in 1989, cited by Brand, categorizes layers based on permanence and spatial location within the structure. Brand advocates for spatial and constructional separation to enable independent changes and prevent structural issues. Leupen (2006) re nes the layering concept, categorizing layers as loadbearing structure, skin, scenery, servant elements, and access (Fig. 8). Leupen's model underscores layers as potential frameworks allowing change while displaying spatial interdependence.

However, both models fall short in capturing internal differences within layers. Large buildings often feature diverse stairs, circulation areas, and facades with variations in orientation and function, alongside differences in permanence among structural elements like the core, walls, or columns.

Group Hosts in Adaptive Reuse

Group hosts within adaptive reuse can be integral components of a single complex or scattered elements in an urban environment. In the case of a single complex, the focus often centers on preserving a historic event, community, or moment. The strategy for these hosts is to present enhanced versions of their original selves as exhibits (Wong, 2017).

Inside the group host, various types explained by Wong (Fig. 9) come to the fore. The "shell host" involves the insertion of new elements into the interior of a building without altering its exterior. A variant, the "interior segment host," sees interventions within a portion of a building, a strategy commonly observed in of ce and retail design. The "semi-ruin host" entails incomplete buildings where both interior insertions and additions are made to restore or extend the structure. The "fragmented host" deals with incomplete or uninhabitable structures, prompting inventive adaptive reuse, such as repurposing obsolete structures like crane ways and concrete skeletons. Lastly, the "relic host" sees a structure serving as a memory catalyst for new construction, in uencing the design and spatial experience of the new buildings.

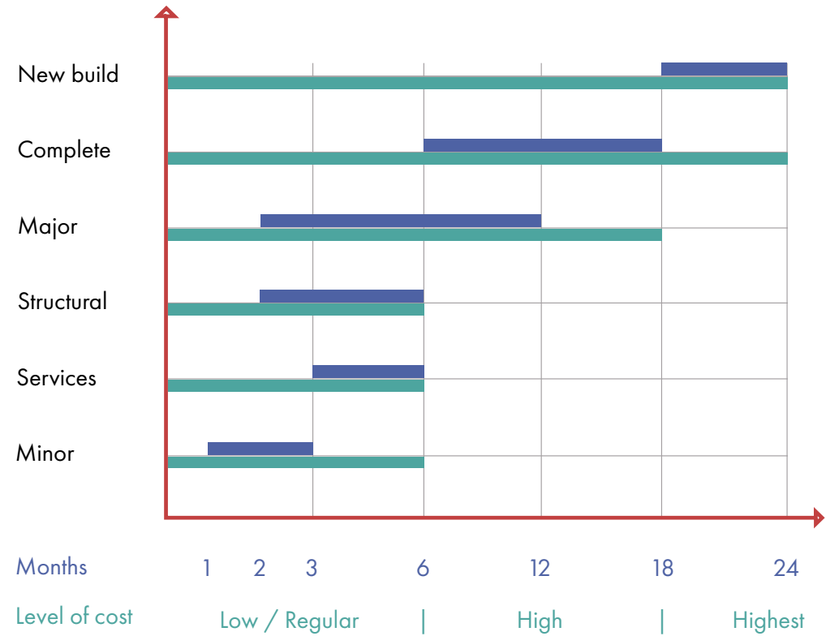


Figure 4: Typical levels of commercial refurbishment, based on Martin and Gold, 1999. Source: own elaboration based on 'Building Adaptation', Douglas, J., p.5, 2006.

Approaches in Adaptive Reuse

The historical moment in which the notion of 'adaptive re-use' established itself as a creative discipline in its own right was the 1970s. However, various approaches coexisted, offering unique insights and identifying salient issues. Four main strategies currently in play include the typological, technical, programmatic, and strategic approaches (Plevoets, Bie, & Van Cleempoel, 2013, pp. 14–19).

Typological Approach (Fig. 10): Sherban Cantacuzino's pioneering work in the 1970s categorized adaptive reuse based on the original purpose of the host space, providing new possible functions for different typologies (Cantacuzino, 1975).

Technical Approach (Fig. 11): High eld's guidebook (1987) focuses on adapting buildings from a technical standpoint, addressing issues like re resistance and thermal performance. Giebeler (2009), Rabun (2009), and others expand on technical aspects, emphasizing sustainability in the adaptation process.

Programmatic Approach (Fig. 12): This strategy selects a speci c function or program as a starting point, adapting the host building to accommodate it. While currently emphasizing contemporary architecture, this approach needs to broaden its view to older structures, given the increasing adaptation of historic buildings for various commercial functions.

Strategic Approach (Fig. 13): A more poetic understanding of adaptive reuse, emphasizing the meaning of the past and the architect's role in reshaping it. Brooker and Stone (2008) introduce affective strategies, focusing on the 'affective' aspect of each adaptation to accept, transform, or suppress the meaning of the building.

Conclusion

Adaptive reuse is a dynamic response to urban challenges, emphasizing intervention range, scale, time, and adaptability. It shapes sustainable urban environments, integrating heritage into contemporary life as a cultural and economic asset. As cities evolve, adaptive reuse becomes a crucial tool for urban development, balancing preservation, innovation, and sustainability.

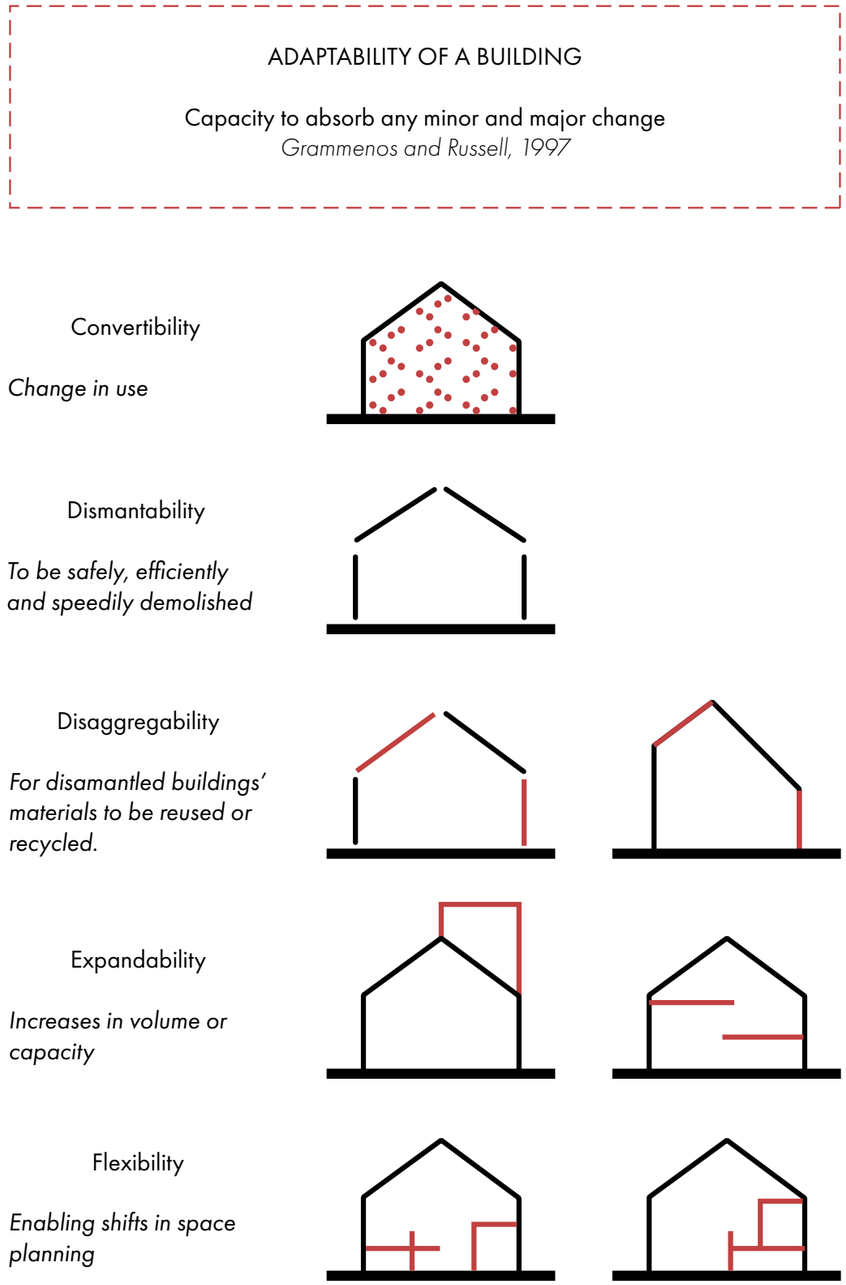
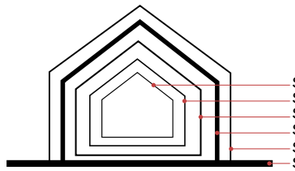
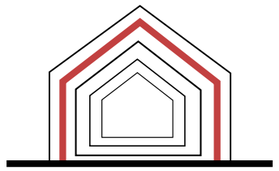


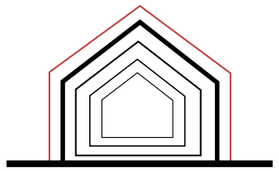
Figure 5: Adaptability of a building criteria. Source: own elaboration based on 'Building Adaptation', Douglas, J., p.6 ,2006.



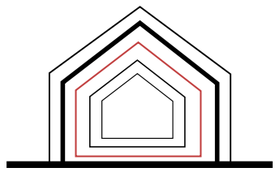
Site
Geographical setting.
Eternal.



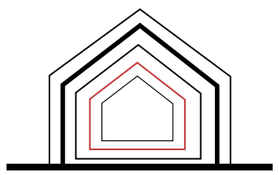
Structure
Foundations & load bearing elements.
From 30 to 300 years.



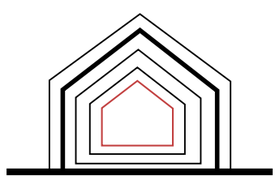
Skin
Exterior surfaces.
About 20 years.



Services
The working guts of a building, the facilities.
From 7 to 15 years.



Space plan
The interior layout, where walls, ceilings floors and doors go.



Stuff
Furniture, photos, kitchen appliances, everything that twitch around daily to monthly.

Figure 6: Shearing layers of change. Source: own elaboration based on Brand's 1994 'Shearing Layers Of Change', p.38, scheme.

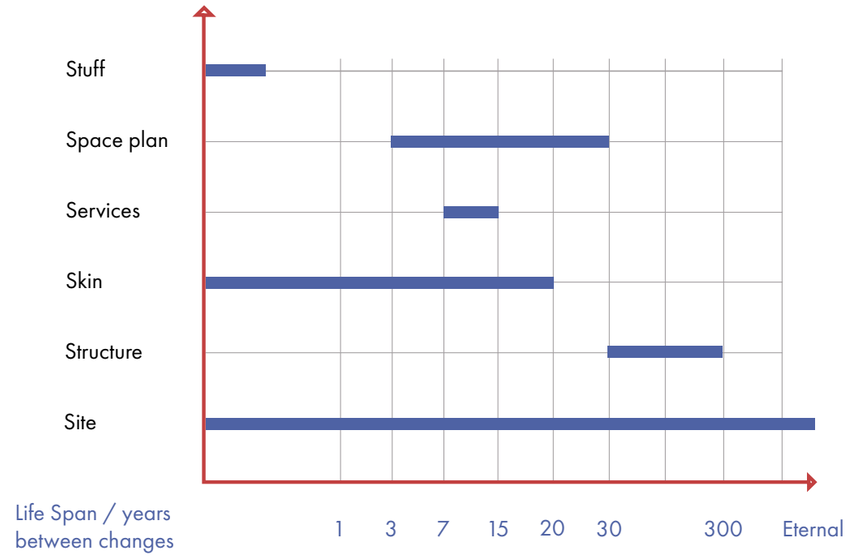


Figure 7: Life Span and years between changes of each shearing layer. Source: own elaboration based on 'The Changin City', Duffy, F., 1989, p 61.

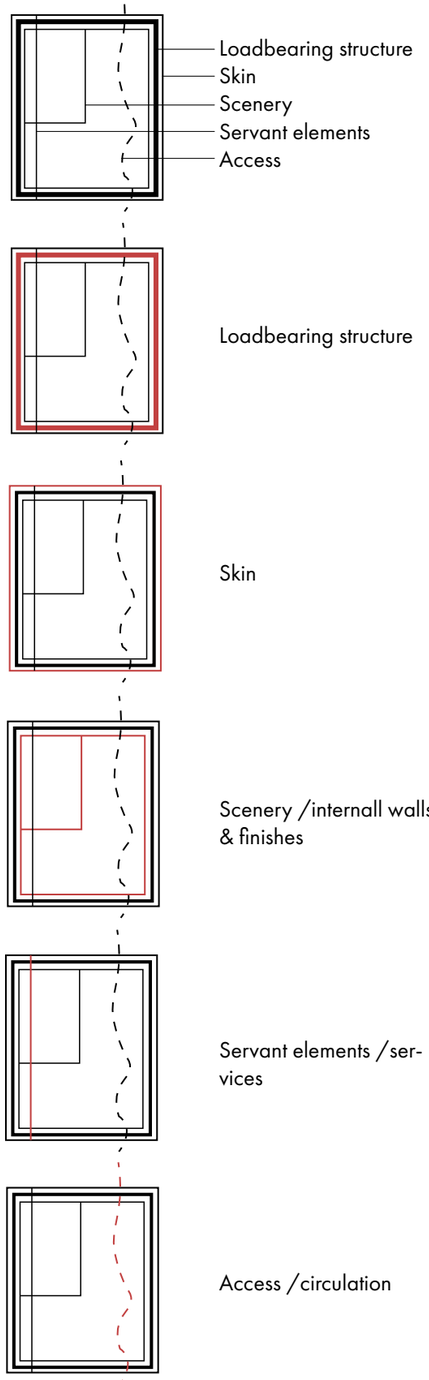


Figure 8: Shearing layers of change. Source: own elaboration based on Brand's 1994 'Shearing Layers Of Change', p.38, scheme.

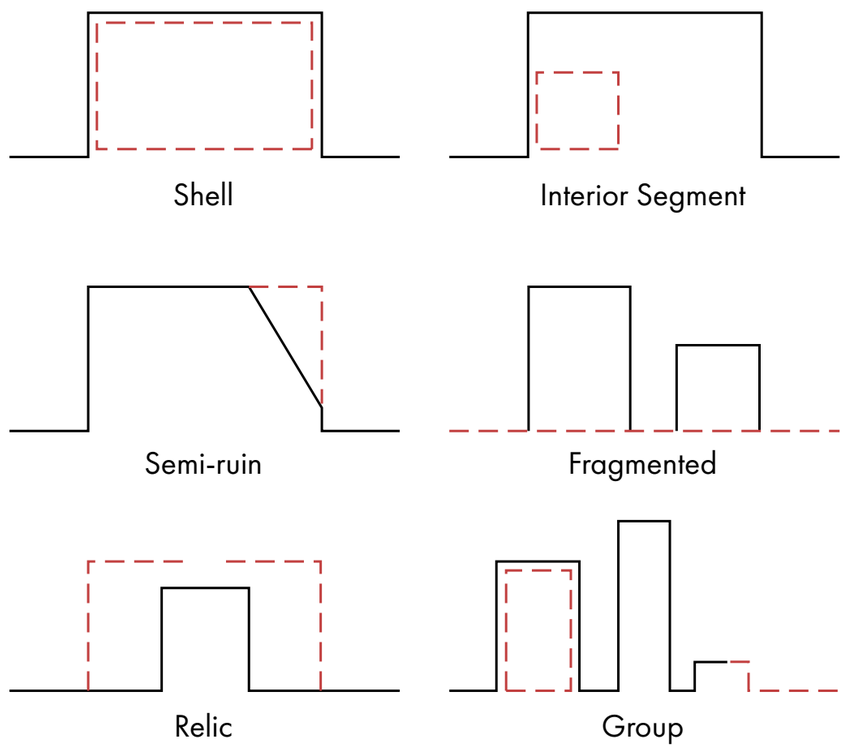


Figure 9: Types of host buildings. Source: own elaboration based on Liliane Wong's "Adaptive Reuse, extending the lives of buildings".

1. Typology
2. Possible program

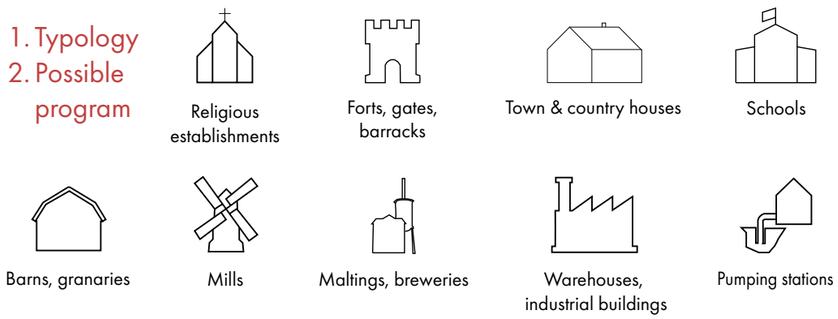


Figure 10: Typological approach. Source: Own elaboration based on Van Cleempoel, K., and Plevoets, B., "Adaptive reuse as an emerging discipline: an historic survey", 2013.

1. Host
2. Technological improvements

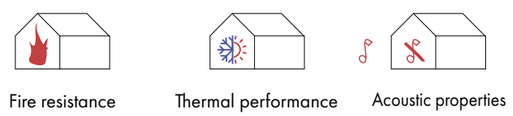


Figure 11: Technological approach. Source: Own elaboration based on Van Cleempoel, K., and Plevoets, B., "Adaptive reuse as an emerging discipline: an historic survey", 2013.

1. Specific program (P)
2. Find a Host

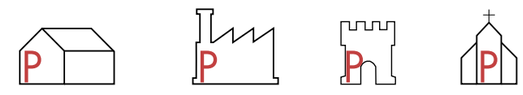


Figure 12: Programmatic approach. Source: Own elaboration based on Van Cleempoel, K., and Plevoets, B., "Adaptive reuse as an emerging discipline: an historic survey", 2013.

1. Host
2. Evoke sence of place and meaning

Figure 13: Strategic approach. Source: Own elaboration based on Van Cleempoel, K., and Plevoets, B., "Adaptive reuse as an emerging discipline: an historic survey", 2013.

Methodology

To evaluate the existing structure, the initial step involves delineating its current shearing layers: site, structure, skin, space plan, and services. The consideration of the 'souls' layer is excluded from this speci c analysis due to its intangibility. Although acknowledged in the project's approach, it constitutes a qualitative aspect resistant to reduction into a schematic representation. Similarly, the 'stuff' layer is omitted from the analysis, given its dynamic, daily alterations, and the project's fundamental reliance on the built environment rather than transient aspects.

Following this, the subsequent phase entails the examination of the structure, evaluating its completeness, partiality, foundational components, or merely its footprint. An investigation into the structural material and construction type assumes signi cance in this context. Stratigraphical layers, elucidating the building's historical transformations, are deliberately disregarded. The emphasis is on the present state of the structure, as currently constructed, and its future trajectory.

When scrutinizing an already adapted building, the actions taken and their extent become subjects of assessment. Are these actions constructive, involving additions? Or deconstructive, indicating the removal of certain elements? Perhaps a combination of both? The scale of adaptation and the degree of change are further considerations, categorized as small, medium, or large.

Subsequent to the building assessment, an exploration of its latent potentials is undertaken. Here, the conventional dictum of "form follows function" undergoes a reversal. Instead, the existing form of the building dictates the programs it can accommodate — a paradigm where "function follows form." The function adapts to the structural shell, discerning its potentialities and augmenting them. The analysis of these potentials is then intricately linked to the conceptual frameworks introduced by the designer.

For a lucid comprehension of the interventions, a designated color code — black-yellow-red — is employed, consistent with *"Yellowred: On Reused Architecture"* (Boesch, M., et al. 2019). This visual coding system contributes to a standardized and clear representation of the various interventions, aligning with established conventions in the eld (Fig. 14).

To illustrate the building assessment discussed earlier, the graphics (Fig. 15), drawn from *"The Potential of Form. Assessing the Transformative Potential of Existing Buildings in Post-Functional Europe."*(Guidetti, 2022), employ a form-form approach. These graphics particularly highlight the project's in uence on the shearing layers of change, following the interpretative framework inspired by Brand's layer concept.

In relation to the project, while assessing the host type, self-created graphics in uenced by Wong's research (Fig. 9) will be employed for each building. Additionally, a graphical representation of decay will be utilized, referring to the 2015 *European Illustrated Glossary of Conservation Terms for Wall Paintings and Architectural Surfaces (Fig. 16).*

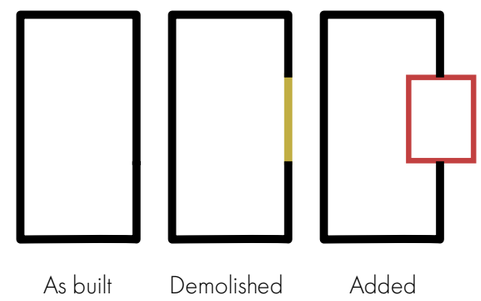


Figure 14: BYR code. Source: Own ellaboration based on "Yellowred: On Reused Architecture", Boesch, M., L. Lupini, and J.F. Machado (2019)

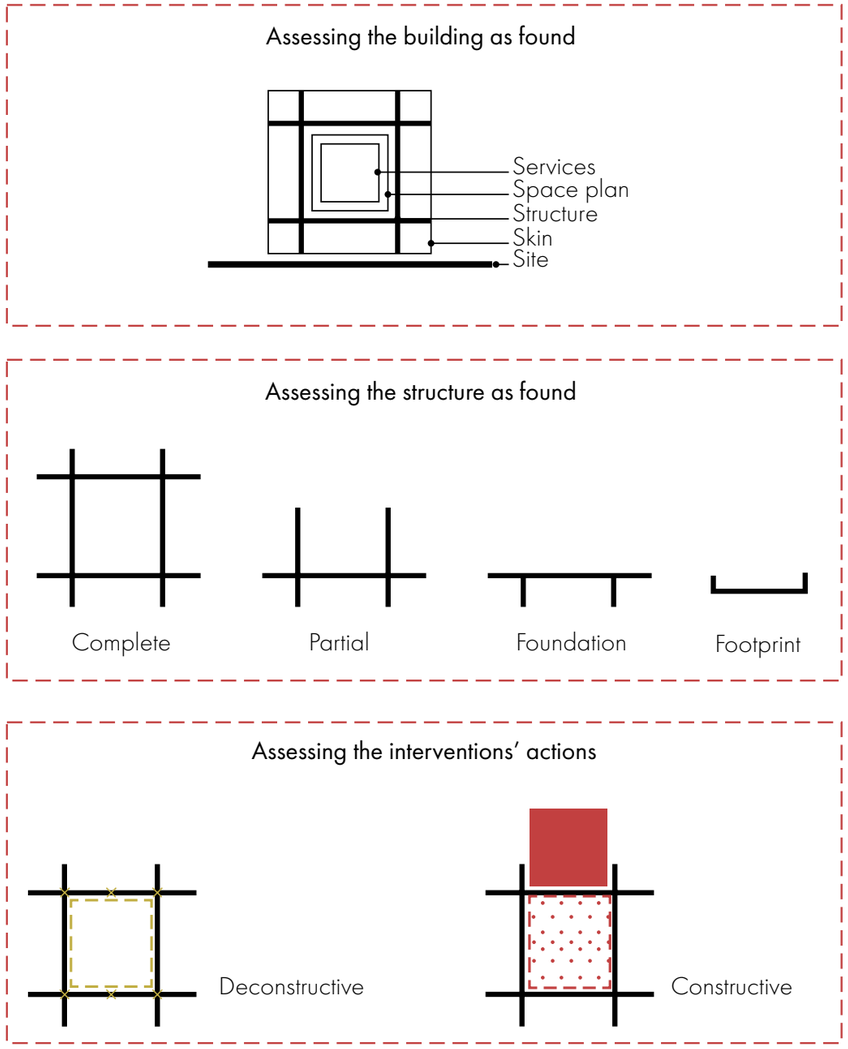


Figure 15: Assessment of the building as found, its structure and the interventions. Source: Own elaboration based on Guidetti, E., "The Potential of Form. Assessing the Transformative Potential of Existing Buildings in Post-Functional Europe." PhD Thesis, Politecnico di Torino, 2022.

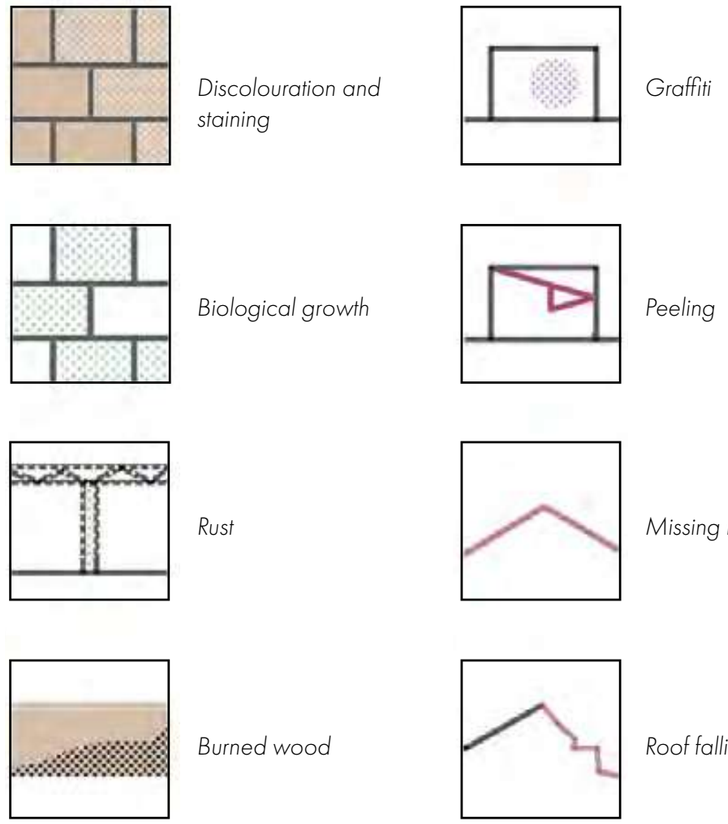


Figure 16: Decay assessment of the building as found. Source: Own elaboration based EwaGloss - European Illustrated Glossary of Conservation Terms for Wall Paintings and Architectural Surfaces, 2015

Nature and the city (Hough, 2004).

The bene ts of urban farms

Community-driven decision-making, fueled by a lack of government-led entertainment initiatives, leads to transformative urban conditions. Experiences in Great Britain highlight that addressing physical decay and social needs is most effective when rooted in the local community

In the early 1970s, the concept of urban farms emerged, repurposing abandoned land for the community's bene t. The rst of its kind, the Kentish Town urban farm, founded in 1972, became a model, with around sixty such farms in the UK by 1990. Originally abandoned by British railways, the farm, economically self-supporting, contributes to community resources, offering employment and training opportunities. The emphasis is on active participation, with plots serving various purposes and regular inspections for hygiene.

Urban farms serve as a foundation for revitalizing struggling urban areas, repurposing abandoned land, and becoming self-sustaining through community efforts, minimizing public expenses and lowering maintenance costs.

It minimizes vandalism, provides diverse social, educational, and physical experiences, showcasing the underutilized potential of vacant urban land.

The implications for urban design necessitate a new approach integrating urban ideals with nature, promoting productivity, diversity, and sustainability.

A comprehensive urban land policy is essential, encouraging both commercial and community gardens, self-sustaining urban spaces, and economic bene ts for communities.

Urban farms offer an alternative connection to nature and a means to address food accessibility issues, particularly in developing countries. The concept of productivity in urban design holds broader implications, shaping a new culture and providing an alternative language for future urban landscapes.

Brown eld regeneration (Rey et al., 2022)

The regeneration of urban brown elds, aligned with the compact and polycentric city model, represents a crucial strategy for mitigating the adverse impacts of urban sprawl on the environment, society, and economy. Brown eld regeneration yields environmental bene ts through soil remediation approaches such as "greening" and "soft re-use," positively in uencing ecosystems, groundwater, and soil quality. Additionally, the decontamination of brown elds reduces health hazards and premature deaths associated with contaminated sites.

Socio-culturally, abandoned sites contribute to low property values and increased foreclosures, negatively impacting residents' quality of life. However, brown eld regeneration projects hold the potential to revitalize communities, enhance property values, and contribute to the preservation of cultural heritage. Redeveloped brown eld sites, often transformed into cultural spaces, avoid "museumi cation" and provide creative spaces with added social value.

Economically, despite high decontamination costs, strategic brown eld redevelopment presents a mutually bene cial scenario for the local economy, the environment, and the community. Such projects positively in uence the economy, generate local tax income, increase employment levels, and contribute to community revitalization.

Brown eld regeneration projects contribute to the restructuring of the metropolitan area, either erasing negative perceptions or enhancing sites through iconic architectural projects. This urban remodelling serves the community by valorizing abandoned cultural heritage and creating positive impacts on neighboring property values.

The inclusion of a cultural component in regenerated brown eld sites enhances local economic and social life, improves user services, regularizes situations, and secures spaces. The diversi cation of objectives, including social, functional, and economic aspects, enriches the qualitative potential of urban brown elds. In numerous European countries, policies focused on controlling urban sprawl and strategically regenerating brown elds have shifted the perception of brown elds from a burden to an opportunity.

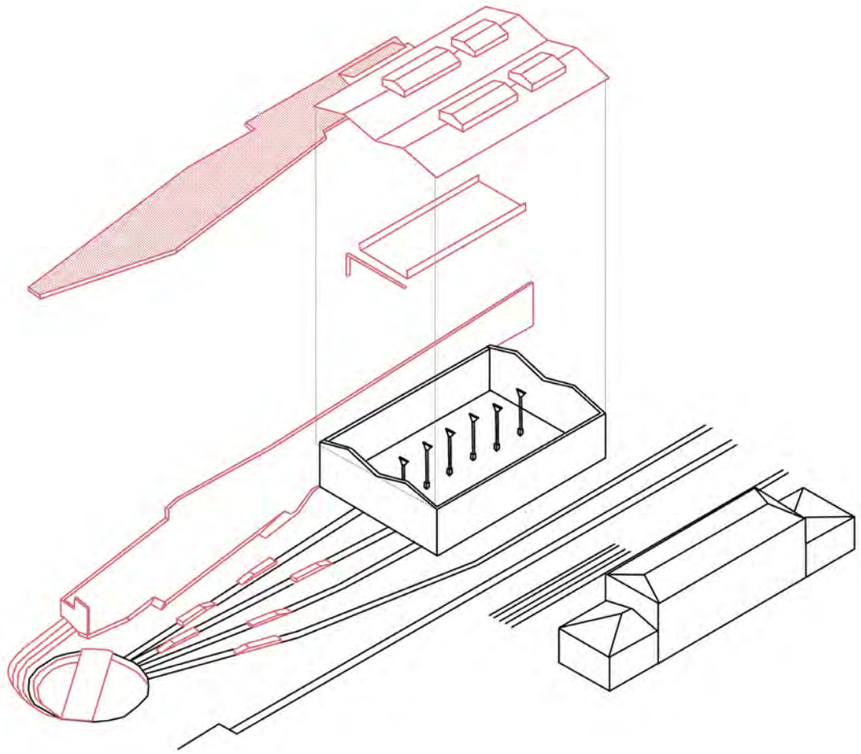


Figure 17: Axonometric Vias Center, León, Spain. In black: built - as found. In red: Added. Own elaboration.

In some cases not just a building but a whole zone or substantial structure is abandoned, and dismissed, generating an urban barrier -uncomfortable zones for the citizens.

In the case of Campana, not only the plot containing the vacant railway workshops is generating a barrier between city and waterfront, but also the fact that it is surrounded by two different railways on the north and south make it inaccessible -therefore, even simply giving a program to the buildings is not enough, because the whole plot is not approachable in a safe way, mainly for kids and the elderly.

The following analyzed cases work with dismissed zones, for which sometimes it was needed to include new elements, and in other cases simply reusing and generating new situations was enough to make these places fruitful for the city. Since the topic of the present thesis is that industrial heritage is a place for nature and city to meet, the present cases work on this as well, including nature as part of the design in different ways.

Parco Dora (2004-2012), in Turin, Italy, was originally an industrial wasteland surrounded by important traf c arteries, the Dora River and mainly residential quarters, and containing large industrial remains which identify and differentiate the ve separate areas: Lotto Ingest, Lotto Mortara, Lotto Vitali, Lotto Michelin and Lotto Valdocco. The mentioned areas and surrounding quarters are connected by added bridges, ramps, and stairs.

About designing on dismissed zones with a certain heritage, the studio declares: *"Our new conceptions must design landscape along with both accepted and disturbing elements, both harmonious and interrupting ones. The result is a metamorphosis of landscape without destroying existing features, an archetypal dialogue between the tame and the wild. The image of nature can be made of the "untouched" and the "built". Accepting a fragmented world means doing without the complete overall picture and leaving room for the coincidence nature in the web of the layout".*[1]

1 'The idea of making time visible', Topos 33

The second case is **La Friche**, in Marseille, France. It used to be a tobacco factory, but later on closed and became a "friche", meaning wasteland. It is a workspace for 70 resident organization and a cross-disciplinary venue, occupying 45,000 square-meter public space which houses ve performance spaces, a community garden, a playground and athletic space, a restaurant, bookstore, daycare, some 2,400 square meters of exhibition space, an 8,000 square-meter rooftop, and a training center. The diversity of the offered programs that are included in well-designed spaces make La Friche a place with no barriers or boundaries, promoting social inclusion, no matter the age, social situation or gender of the user. Neither visual barriers are found: the architects started with a solid existing structure and hollowed it to let in light and make a uid circulation, generating spaces where the user does not know when he is in or outside, being therefore more inviting, bringing always the outside in and vice versa -wind makes its own way inside the building. So important the intervention on this dismissed area is for the citizens, that La Friche ends up adopting the name of the neighborhood next to it, la Belle de Mai. Thanks to attending different needs and programs, the once-dismissed area turns into an important cultural meeting point for all citizens. *"La Friche is a political experience, a place of thought and action renewing the relationship of art to territory and society"*[1]

The case of **The Highline** in New York City, U.S.A., is one of the main examples for railways reuse, neighborhood connections and city and nature coexisting. The Highline used to work as a railway placed on a large bridge to avoid accidents when being on the street level. Nevertheless, it was only used for about fty years, the platform stayed and was dismissed, and later planned for demolition. Thanks to the initiative of diverse professionals, the then current state of the structure was shared, as well as the potential it held to be a public space full of nature and a slow rhythm in comparison to the chaos of the cosmopolitan city, among the 2.3km it constitutes.

The success of the adaptive reuse project of the mentioned cases highlights the fact that humans seek mainly for nature and spaces to socialize. These spaces should clearly answer to the needs claimed by the

1 Wasteland Manifesto, 2020

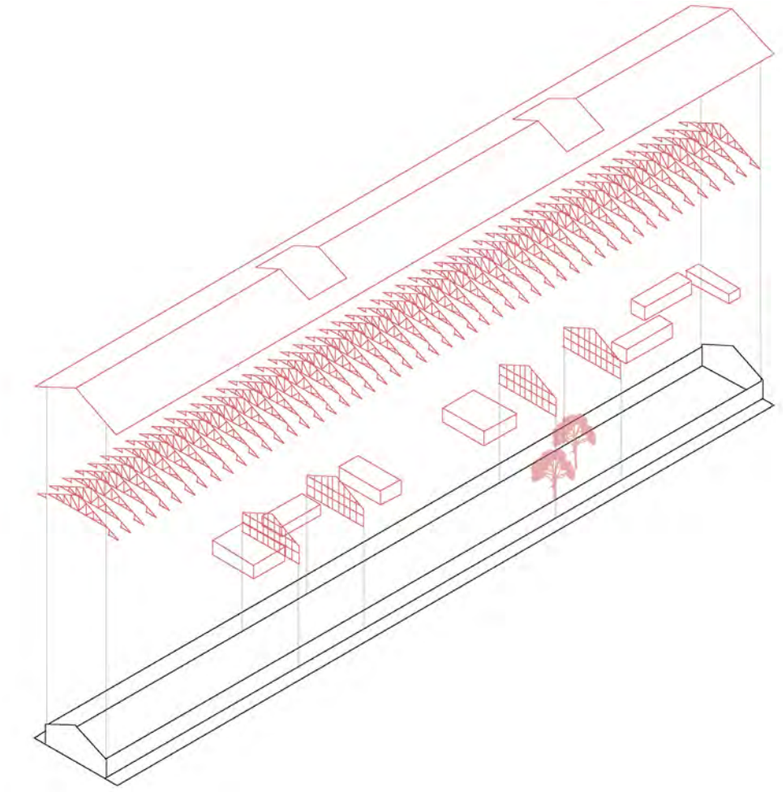


Figure 18: Axonometric Station Park, Buenos Aires, Argentina. In black: built - as found. In red: Added. Own elaboration.

program, but the fact that the proposed new function follows the existing form is what makes these proposals successful -the form will always be perfect when the potential of the existing structure is seen clearly and enhanced by a correct program. Another successful decision was to include nature, which can be considered as a must for any project whenever possible: the lack of absorbing land, shadows for hot weather, reduction of noise are situations that need to be addressed and acted upon slowly but surely, and reusing is a perfect situation for starters, since it will not disrupt as much as a new construction or a full demolition would.

In the analysis of smaller interventions concerning square meters, the building serves as a *Shell Host*. In each instance, the necessity arose to replace or repair the roof structure or skin; however, every intervention meticulously honors the existing structure, giving rise to a program and design that harmoniously coexists with the building. In certain cases, exempli ed by the **former workshops in Utrecht** and **OGR**, even the walls are intentionally revealed, allowing the underlying structure to be exposed.

Conversely, in the instance of the **Vias Cultural Center** (Fig. 17), an additional volume is incorporated, but in a manner that avoids overshadowing the industrial heritage of the site.

The **Station Park**'s (Fig. 18) design involved the partial demolition of sections of the building to create patios along its extensive length, thereby facilitating a clearer delineation of activities.

Concerning the **Ex-mill Marconetti** and **La Redonda** *(Fig. 19)*, these structures are integral components of a *Group Host* dispersed throughout Santa Fe. They form part of a cultural corridor that aimes to enhace the value of various buildings and areas within the city.

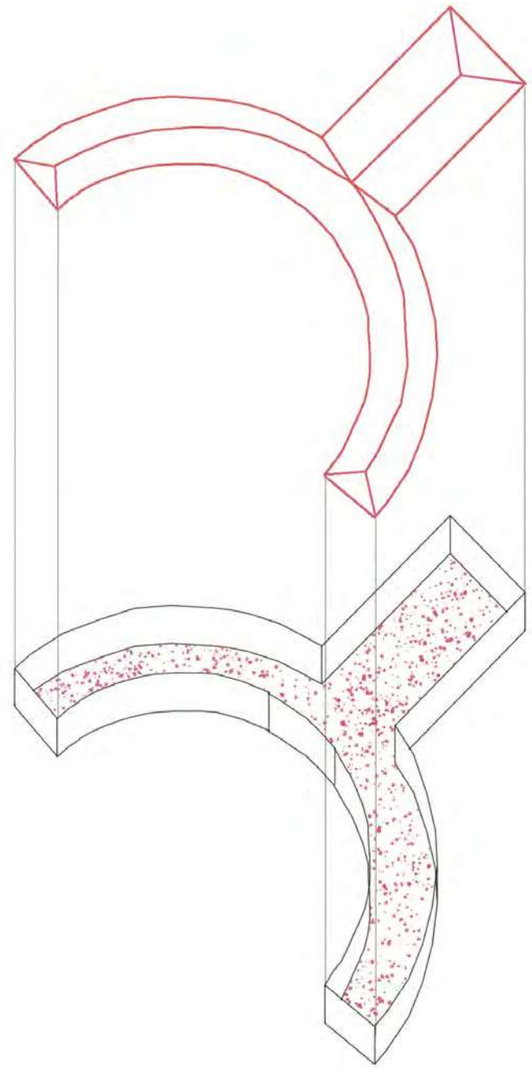
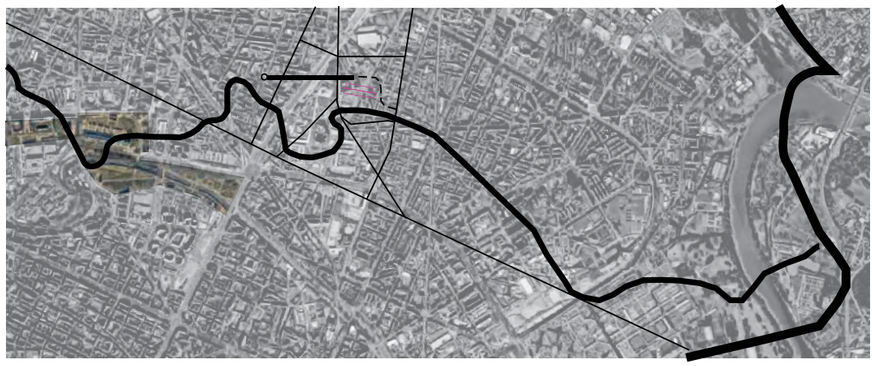


Figure 19: Axonometric La Reonda, Santa Fé, Argentina. In black: built - as found. In red: Added. Own elaboration.

Parco Dora, Latz + Partner
Original function: Fiat and Michelin factories' plants| Date of construction: End of the 19th century
New function: Park| Date of adaptation: 2004 - 2012
Location: Turin, Italy | Area: 370000 m²

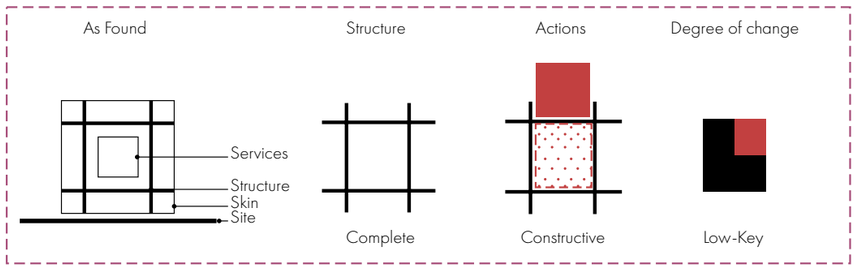


Parco Dora, Turin, Mattia Boero, 2011.
Source: www.latzundpartner.de

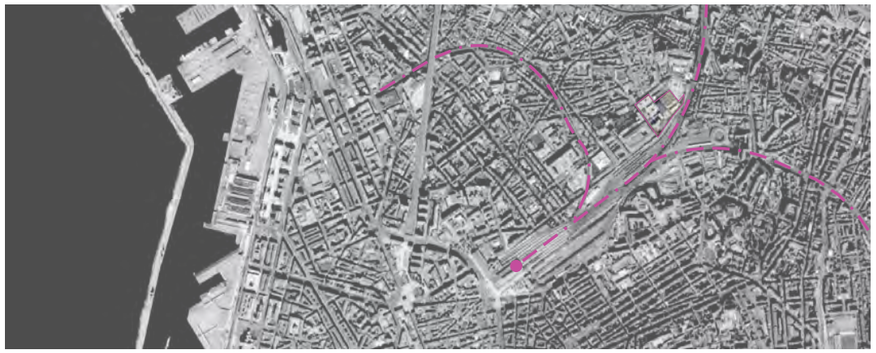
Parco Dora, Turin, Heidemarie Niemann, 2011.
Source: www.latzundpartner.de

Parco Dora. Torino, Italy, Alessandro Guida.
Source: www.divisare.com

Parco Dora. Torino, Italy, Alessandro Guida.
Source: www.divisare.com



La Friche
Original function: Tobacco factory| Date of construction: 1868
New function: Multiple use public space| Date of adaptation: 1992 - 2014
Location: Marseille, France | Area: 45000 m²

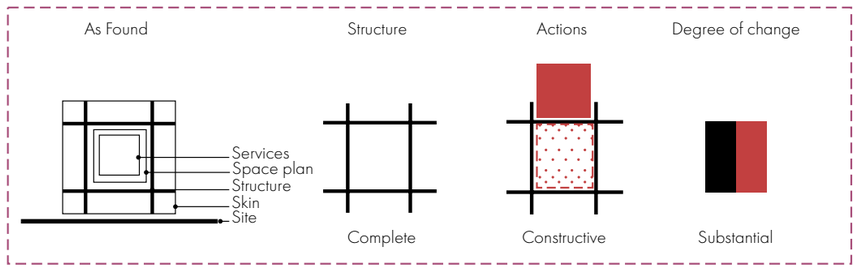


Playground & the railway. Caroline Dutrey.
Source: www.lafriche.org

Le Jardin des Rails. Sebastine Normand.
Source: www.lafriche.org

La Toit-Terrasse. Caroline Dutrey.
Source: www.lafriche.org

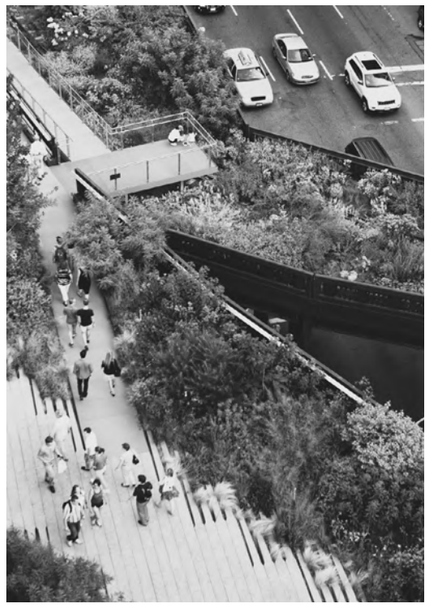
Farmers shop. Caroline Dutrey.
Source: www.lafriche.org



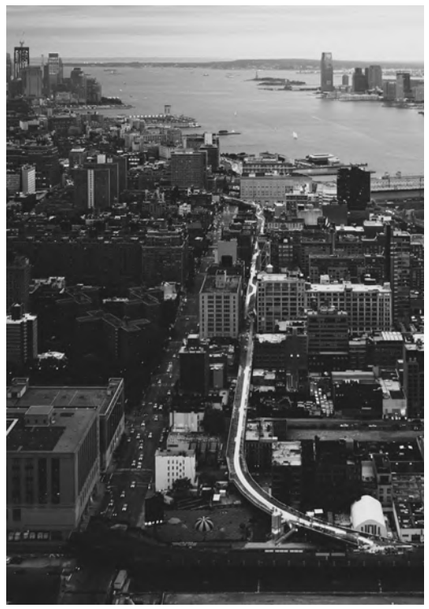
The Highline

Original function: Elevated railway | Date of construction: 1868
New function: Linear park| Date of adaptation: 1924
Location: New York, United States | Extension: 2.33km

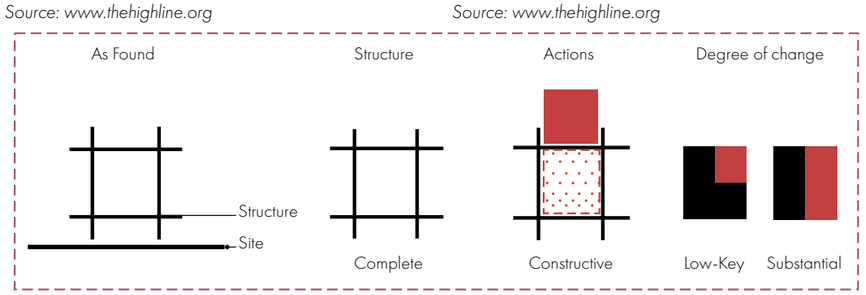
Hudson river — The Highline — East river



Iwan Baan, 2011.
Source: www.thehighline.org



Iwan Baan, 2011.
Source: www.thehighline.org



La Redonda

Original function: Railway workshop | Date of construction: 1905
New function: Cultural centre| Date of adaptation: 2010
Location: Santa Fé, Argentina | Area: 7000 m²

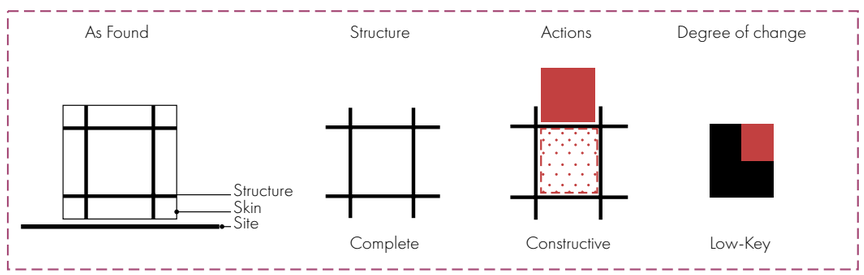
ex railway, now linear park — current railway — La Redonda — River Setubal

Archive BAQ.
Source: www.arquitecturapanamericana.com

Archive BAQ.
Source: www.arquitecturapanamericana.com

Archive BAQ.
Source: www.arquitecturapanamericana.com

Archive Santa Fé Mi Barrio
Source: www.santafemibarrio.com.ar



OGR

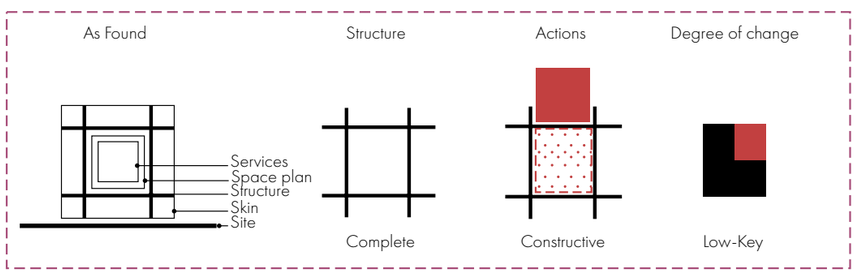
Original function: Fiat and Michelin factories' plants| Date of construction:
New function: Park| Date of adaptation: 2004 - 2012
Location: Turin, Italy | Area: 370000 m²

Source: www.ogrtorino.it

Michele D'Ottavio
Source: www.e-flux.com

Claudia Giraud.
Source: www.artribune.com

Source: www.capellidesign.com



Ex Mill Marconetti

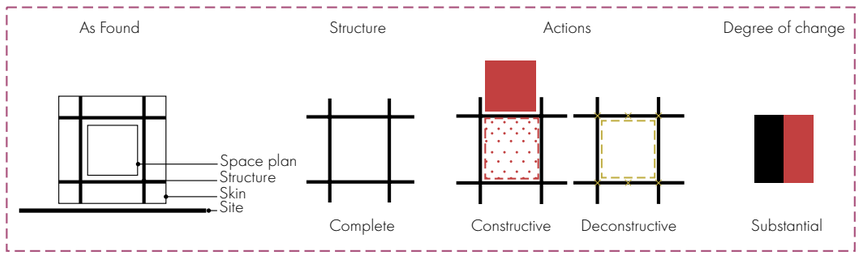
Original function: Mill | Date of construction: 1920
New function: Educational centre| Date of adaptation: 2014 - 2017
Location: Santa Fé, Argentina | Area: 4500 m²

Federico Cairoli, 2018
Source: www.federicocairoli.com

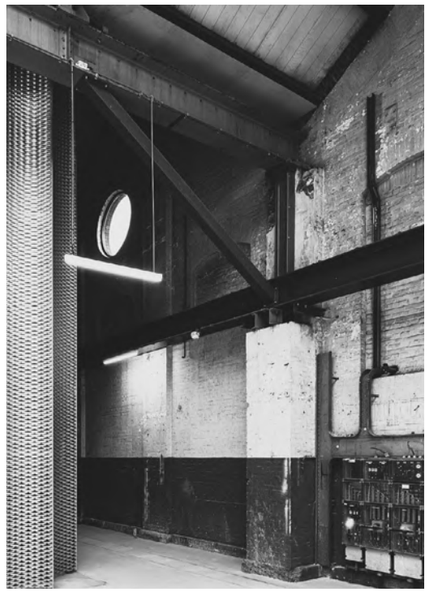
Federico Cairoli, 2018
Source: www.federicocairoli.com

Federico Cairoli, 2018
Source: www.federicocairoli.com

Federico Cairoli, 2018
Source: www.federicocairoli.com



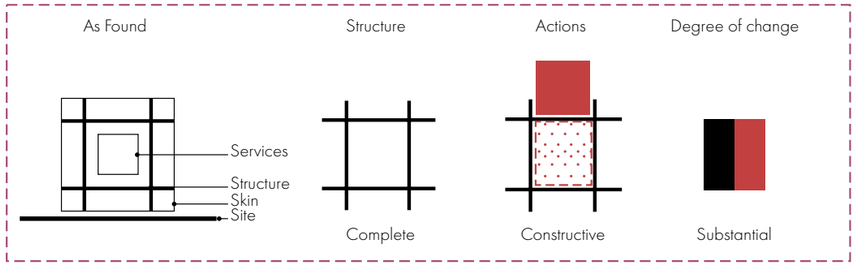
Bovenbouwwerkplaats, Ex Railway's Workshops, Studioninedots
Original function: Railway workshop| Date of construction: 1905
New function: Urban activator, cultural facilities, workspaces, parking| Date of adaptation: 2022
Location: Utrecht, Netherlands | Area: 7900 m²



Sebastian van Damme
Source: www.studioninedots.nl

Sebastian van Damme
Source: www.studioninedots.nl

Sebastian van Damme
Source: www.studioninedots.nl



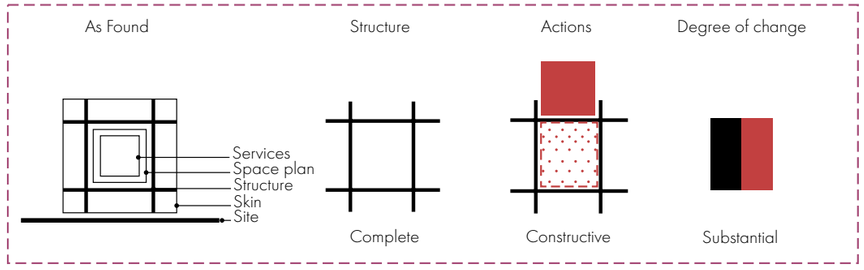
Vias Cultural Center, Estudio SIC
Original function: Railways' workshop | Date of construction:
New function: Public square and cultural art center | Date of adaptation: 2010
Location: León, Spain | Area: Approx. 1500 m²

Esaú Acosta
Source: www.estudiosic.es

Esaú Acosta
Source: www.estudiosic.es

Esaú Acosta
Source: www.estudiosic.es

Esaú Acosta
Source: www.estudiosic.es



Station Park

Original function: Railways' facility | Date of construction:
New function: Public park and cultural & sports center | Date of adaptation: 2019
Location: Balvanera, Argentina | Area: 8366 m²

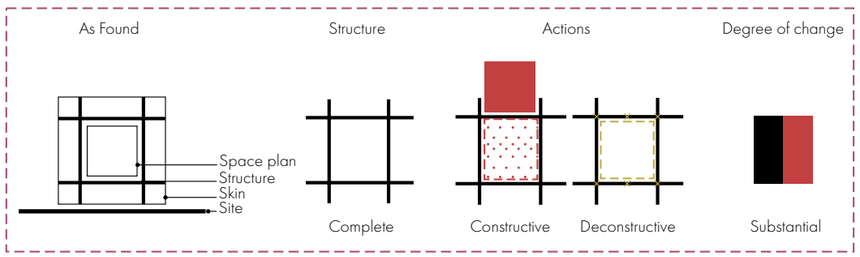
Station Park — Railway

Javier Agustín Rojas
Source: www.archdaily.com

Javier Agustín Rojas
Source: www.archdaily.com

Javier Agustín Rojas
Source: www.archdaily.com

Javier Agustín Rojas
Source: www.archdaily.com



Reuse of Railways' Sheds, Estudio Bares-Bares-Bares-Schnack

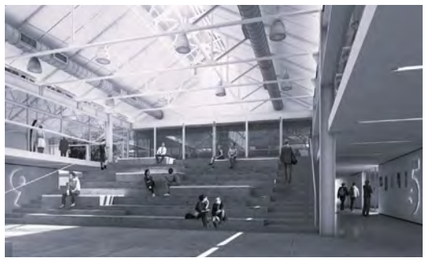
Original function: Railways' sheds | 1st Prize National Competition
New function: Educational center | Date of project: 2018
Location: Rosario, Argentina | Area: 5000 m²

Station Park — Railway — Paraná River

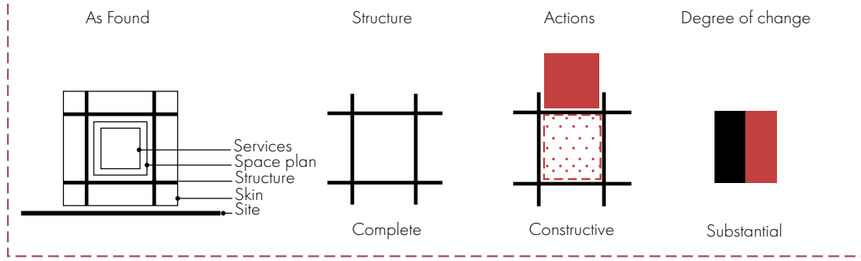
Javier Agustín Rojas
Source: www.archdaily.com

Javier Agustín Rojas
Source: www.archdaily.com

Javier Agustín Rojas
Source: www.archdaily.com



Javier Agustín Rojas
Source: www.archdaily.com



III. **Campana**

Campana as a Company Town

The national context in which the city is founded is under the primary agro-export model. According to Rapoport (2007) and Ferrer (2004), this means that the measures applied in the Republic of Argentina from the mid-19th century to the crisis of 1929 are described as an economy in which the main interest is the agricultural production and its export to external markets. Such policy generated a great external dependency, commercially and nancially, subordinated to the English investments on both railways and cold storage plants/freezers (Rapoport, 2010). From this point of view, Argentina had a rapid international insertion, with a speci c type of progress and social development. The achievements of the country made it the main market of the region during the 19th century, and the stage of commercialization forces between the U.S.A., Great Britain and Germany (Minguez, 2008). At the same time, Argentina had a more important commercial relationship with Europe and the USA than with other Latin American countries. Logically, the international relationships that Argentina has have always been affected by the historical context and the different countries' interests. So the city of Campana is not only founded under the mentioned economical model, but also in a moment of a strong relationship with Great Britain.

Campana is located surrounded by the city of Zárate in the North, Belén de Escobar in the South, and Exaltación de la Cruz in the West. On the East side, the Paraná River ows. About eighty kilometres away from Campana, the city of Buenos Aires is located. Thanks to the excellent access to the city from both the waterfront and the land, an important industrial hub is created.

There are three keys to the city of Campana developing as a Company Town:

a. Great natural depth of the Paraná River when it reaches the zone of Campana. For the English, it is a privilege, because it naturally claims the city as a commercial point extremely strategic.

b. The installation of the railways added a migratory local movement as well, boosting the process of urbanization both

both from the inside and outside of the country;

c. The combination of the two mentioned points with the land and aquatic access to the city complements with a social and commercial growth fundamental for the development of Campana.

In the year 1860, the Costa brothers bought the only piece of land in the zone. The rst actions that they choose to carry out are starting to dedicate themselves to the breeding of sheep -for wool- and improve that of cattle, which they would import from Europe the best of these animals. Such an important decision is this, that already by 1866 there is a grease shop created on the coast of the river and planting and harvesting of alfalfa begins as well.

The port of Campana was important also because it was, at the time, the main connection to the city of Buenos Aires, generating that the whole city depends on its important political and commercial role, therefore in uencing the population of Campana, increasing it.

The success and drive of the city comes from the ideas of the Costa family, whose project consisted on the construction of a series of industries on this region of the river, aiming to strengthen the agro-export model.

One of the main causes explaining the so-ahead industrial development of Campana is the production of products destined to be exported, having as a main character the freezer The River Plate Fresh Meat Co. Ltd starting from 1883, w hose owner was George Drabble, the president of the London Bank, a wealthy rancher linked to the textiles and railways activities.

As explained, the founding project of Campana led by the Costa family has never had the intention of creating a conventional or traditional urban plan, but to exploit the port's bene ts in order to develop an important industrial zone with a clear business imprint. The concept of Company Town implies that from the beginning of the urbanization process to the distribution of each construction, everything responds to an industrial need. This is what happened to Campana, and therefore the reason why the city had such a rapid and homogeneous urban development around the need that the growing industries led by the agro-export economic model had.

Track laying on the pier west of the station. Year 1878. Source: fototecacampana.org

Freezer "Frigorífico Anglo, S.A", plan view showing the plot it occupies. Year 1912. Source: fototecacampana.org

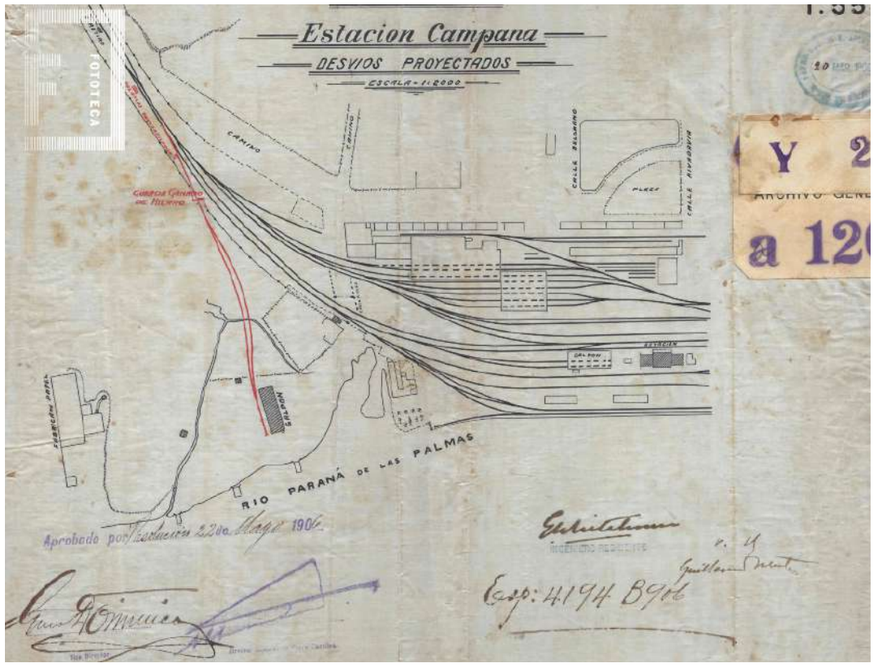
Not only can it be seen how the city is a Company Town from its origins, but also from the crisis it has had over the years. Post-mortem of the Costa brothers (1897 and 1902), one of the few industries still thriving there was the English freezer, which started to show abandonment signs from the colony. Entering the 20th century, the domestic economy of the city seemed to have settled around the mentioned industry, not only because of the number of workers it hosted but also because of the activities around it. Everything relied on the freezer and the railways (Paredes, 2015). The trade of meat started to be lower as a direct consequence of the sales drop given the civil and First World War.

Until 1924, the freezer gave a job to thousands of people living in Campana, until in the mentioned year a re started in the industry and lasted three days. This was one of the reasons why two years later the company closed.

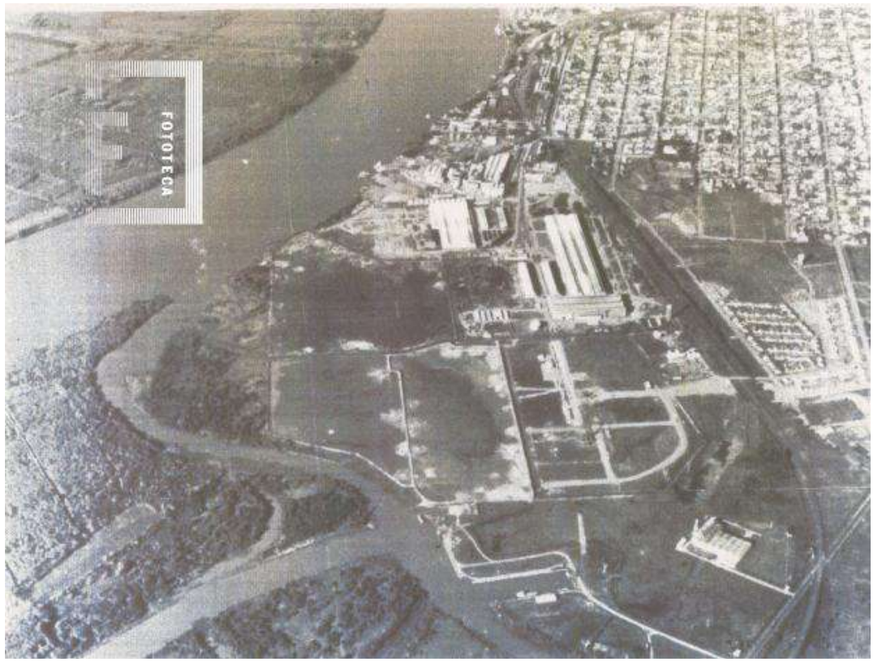
The economic model had a very strong dependency on the exterior countries, but also on the local industries, speci cally the freezer, which employed many people from in and outside the city. So, when meat sales dropped, the impact on the industry was harsh. When it closed, it was even worse: people were unemployed, resulting in less retail shopping, consumption, and investment, ruining the domestic economy of the city and leading businesses to go bankrupt. Citizens started to leave Campana. The amount of citizens dropped from 18.000 to 10.000.

Later, the city comes back from the crisis, and positions itself once again as an important industrial pole, heavily related to external commerce, as it once was. Nowadays, aside from the railways and sea and river connections, the port -or the city itself- is easily connected to the national highways n°9 and 12, which connects to the important Zarate-Brazo Largo bridge, as well as to the provincial highway n°6, all of it making an unbeatable connection between the province of Buenos Aires and the Mesopotamia.

Nowadays Campana has 147 industries of all types. Between them, the biggest ones located on t are Axion Energy, the rst plant of oil re nery in Argentina; Tenaris, established in the city since the 1950s and CABOT, radicated in Campana since 1962.



Partial plan view of the railways, workshops, public square. Year 1906. Source: fototecacampana.org



Axion Energy refinery, ex ESSO, ex West Indian Oil Company. Year 1958. Source: fototecacampana.org

The waterfront nowadays. Source: Municipality of Campana

The port nowadays. Source: Municipality of Campana

Campana as a Port City

"The port is an area of transition, a strategic area where the city becomes landscape. The port infrastructure turns into an access device, a place where it is possible to perceive the territory-landscape, the shore line and the urban front, a line with different dimensions but, at the same time, an incredible depth.

In the past, port areas have represented an amazing public space for the city. However, in the course of time, they lost their urban character, gradually becoming high specialized independent machines and taking out every activity and every function not essentially related to their internal function. Today the port area has become a sectorial infrastructure divided from the city, that creates marginalization and urban blight, not only in its proximity, but also next to the infrastructures that connect and, at the same time, divide the city from its waterfront."

The city of Campana has a small public waterfront because, as mentioned before, the main reason of this city's development was to exploit the bene t of such a wide, acceesible and deep river that acts as a connection between the merchandise arriving from other countries, and going directly to Buenos Aires, and viceversa. Therefore, the rest of the waterfront is mainly private, in control of industries like the Axion Oilr Re nery and the Tenaris' steel tubes production. The landscape of Campana has always been an industrial one, and it is nowadays part of the image of the city.

The elements found in the waterfront are the same ones illustrated on Russo and Formato's paper "City/Sea Searching for a New Connection. Regeneration Proposal for Naples Waterfront Like an Harbourscape: Comparing Three Case Studies", and shown in Fig. 9.

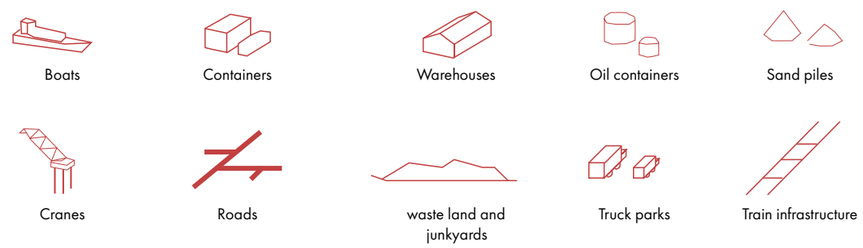
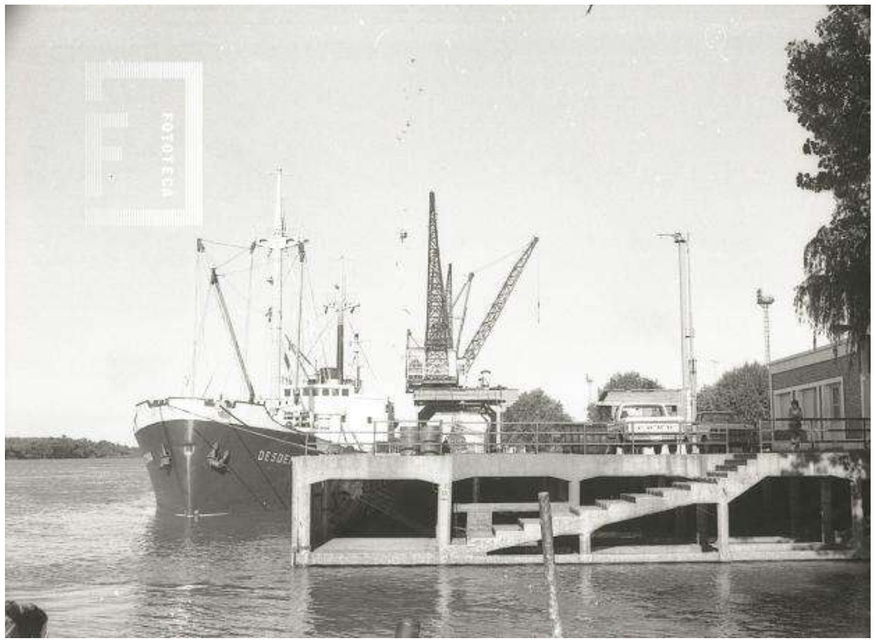
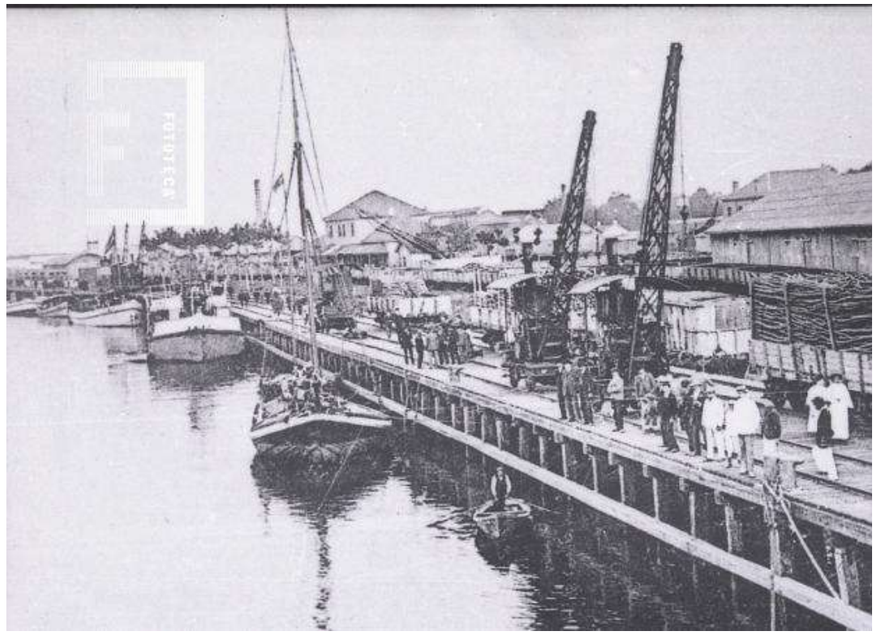


Fig. 9: Elements on Campana's industrial riverfront. Source: Own elaboration based on "City/Sea Searching for a New Connection. Regeneration Proposal for Naples Waterfront Like an Harbourscape: Comparing Three Case Studies", Russo, M., Formato, E., 2014.



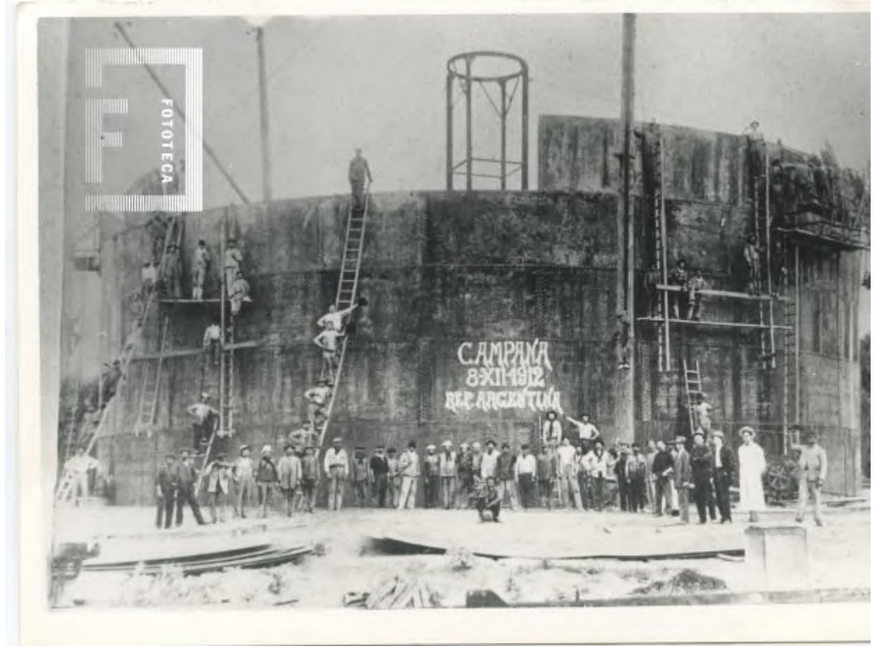
The port in 1982. Source: fototecacampana.org



Aerial view of the oil refinery in the 1960s. Source: fototecacampana.org

Port and boats from the oil refinery. Year 1940. Source: fototecacampana.org

Aerial view of the oil refinery in the 1960s. Source: fototecacampana.org



Port and boats from the oil refinery. Year 1940. Source: fototecacampana.org

The riverfront as an activities' catalyst

Thanks to the successful recovery of the waterfront by creating a public park, a big step was taken into solving the problem presented in this thesis -the disconnection between the city and the river-, since now the users can get a well-designed space that interacts with the main characteristic of Campana. The park has probably become the most interesting and chosen meeting point for the citizens, and it does attract as well tourist from near locations, as it happened at the time when Zárate re-designed their own waterfront. There is a clear need of people to be close to the water, the nature, and feel safe, comfortable and relaxed.

On a normal day the park gets runners and groups of people of all ages, some of them doing sport, others just meeting, and others with their kids to use the games. Many times this park is used for social events organized by the municipality, since it has the space to host hundredths of people and many scenarios. Still, a urban barrier is between this clearly accepted and well used space by the citizens, that is claimed and enjoyed constantly, and the city.

Celebration of kid's day on 2022. Source: Municipality of Campana.

Source: Municipality of Campana

Kids' day celebration. Source: Municipality of Campana

Inauguration of the waterfront. Source: Municipality of Campana

Activities on a normal weekend. Year 2021. Source: municipality of Campana.

Source: Municipality of Campana

The project site

Created to serve the now disused train station, the railway workshops strategically stood on the port, transporting people and goods.

Some of the original buildings were demolished, one repurposed as a museum. Since the '90s, the remaining structures have decayed due to neglect. Nowadays, it is occupied by Euroamérica's trucks, sov the buildings state is rapidly getting worse.

The studied plot, located in the north of Campana, between the river and the city, is nearly as wide as the waterfront, requiring users to circumvent it for access.

Av. Ing. Agustin Rocca, the main street visually connected to the workshops, has mixed uses; it starts at Plaza Eduardo Costa and ends in the current train station.

The challenge arises when users aim to reach the waterfront from Rocca Av. to the station, taking about ten minutes for the west access and ve minutes for the east access. The sidewalks are limited, and the trajectory is uncomfortable, emphasizing the need for a more direct connection between the center, square, train station, and riverfront.

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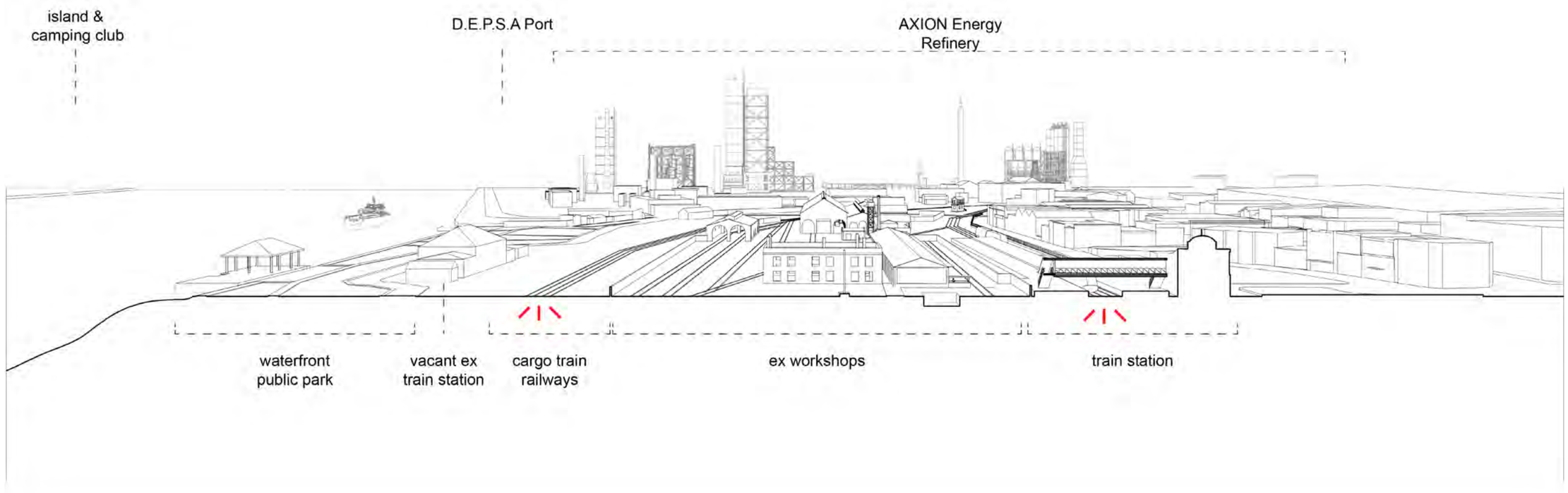
N

SOIL / GREEN
STUDIED PLOT + BUILDINGS
BUILT ENVIRONMENT
RIVER


island &
camping club
D.E.P.S.A Port
AXION Energy
Refinery
waterfront
public park
vacant ex
train station
cargo train
railways
ex workshops
train station

Aerial photo from the riverfront towards the ex-workshops, the 'new' train station and Av. Rocca. Photo courtesy of Andrés H. Tournour.

View from the square in front of the train station. Own photo.

From the square to the workshop's plot. Own photo.

Walking towards the train station from the west access to the plot. Own photo.

Sidewalk among the railways.. Own photo.

West access. Own photo.

East access. Own photo.

Top-View photo showing the encounter between public square, train station and ex-workshops. Photo courtesy of Andrés H. Tournour.

Aerial view from the workshops towards the former train station, the waterfront, Paraná River and the island. Photo courtesy of Andrés H. Tournour.

From the train station. Own photo, 2023.

Between the divisory wall and the railway. Own photo, 2023.

Nature claiming the plot back. View from between B°4 and train station. Own photo, 2023.

View from the train station's bridge. Own photo, 2023.

View from the train station's bridge. Own photo, 2023.

Division between the plot and the train station. Own photo, 2023.

View from the outside: B°1, and the Euroamérica trucks and workers. Own photo, 2023.

Inside the plot, between B°2 and the train station. Own photo, 2023.

Nature claiming the plot back. Own photo, 2023.

Nature claiming the plot back. Own photo, 2023.

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Studioninedots, https://studioninedots.nl
The Highline
The Highline, www.thehighline.org
Vias Cultural Center, Station Park and Reuse of railway sheds:
Archdaily, www.archdaily.cl

PartII

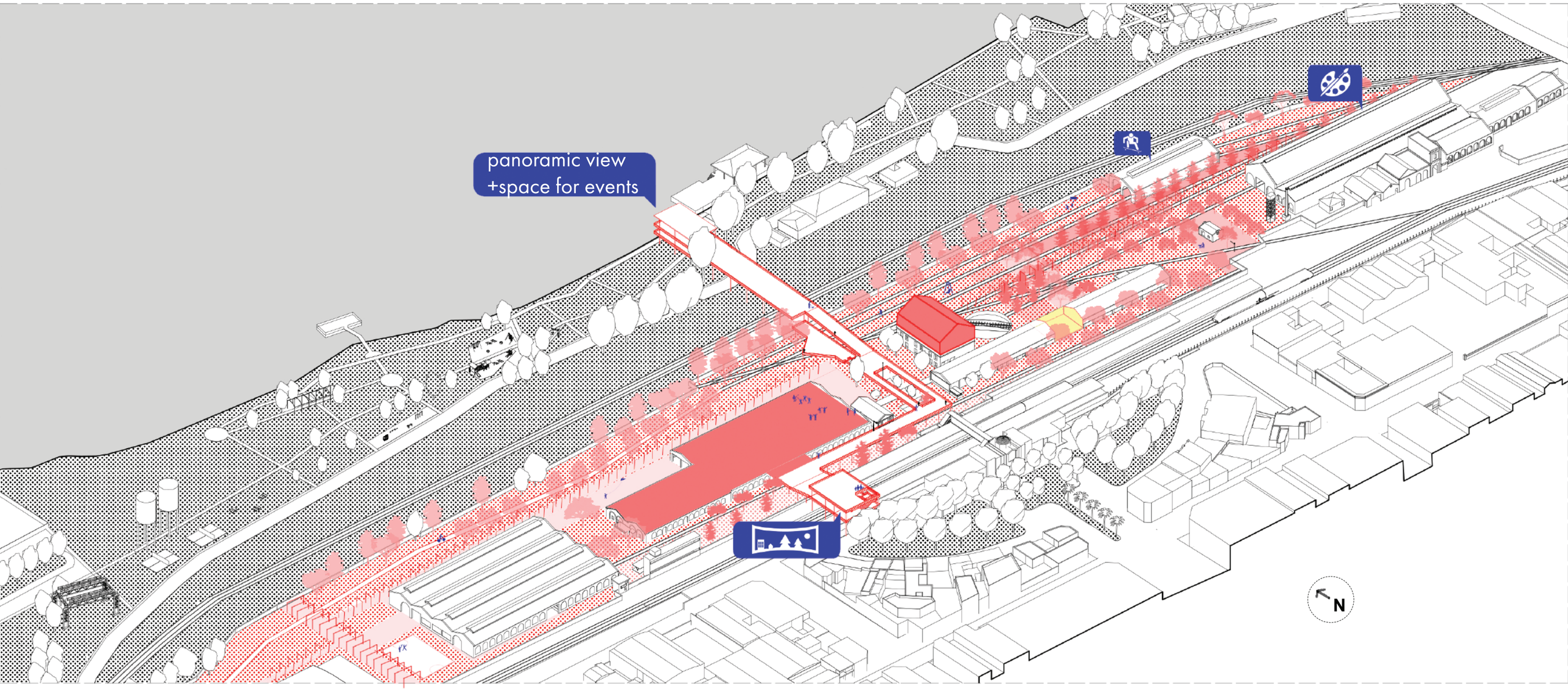
IV.MasterplanV.AdaptiveReuse

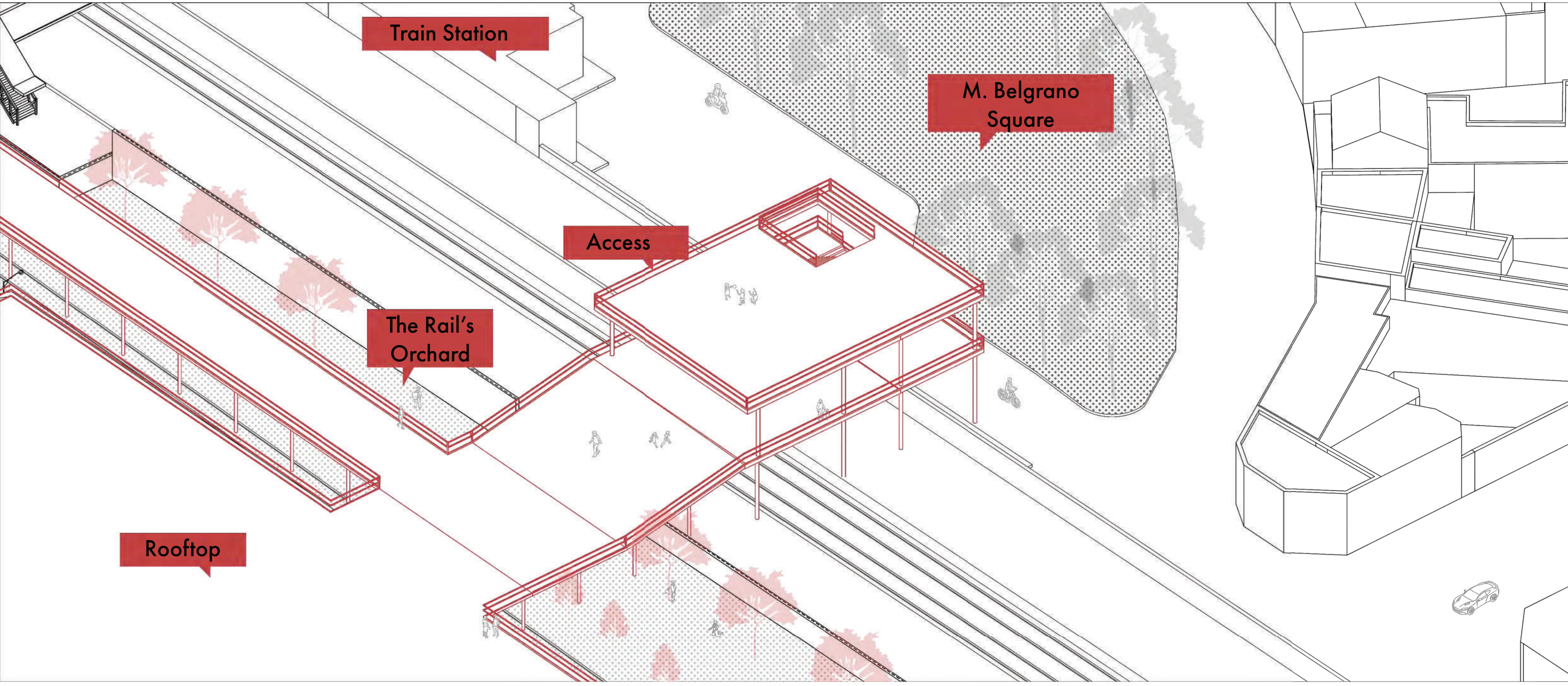
IV. **Masterplan**
The Urban Scale

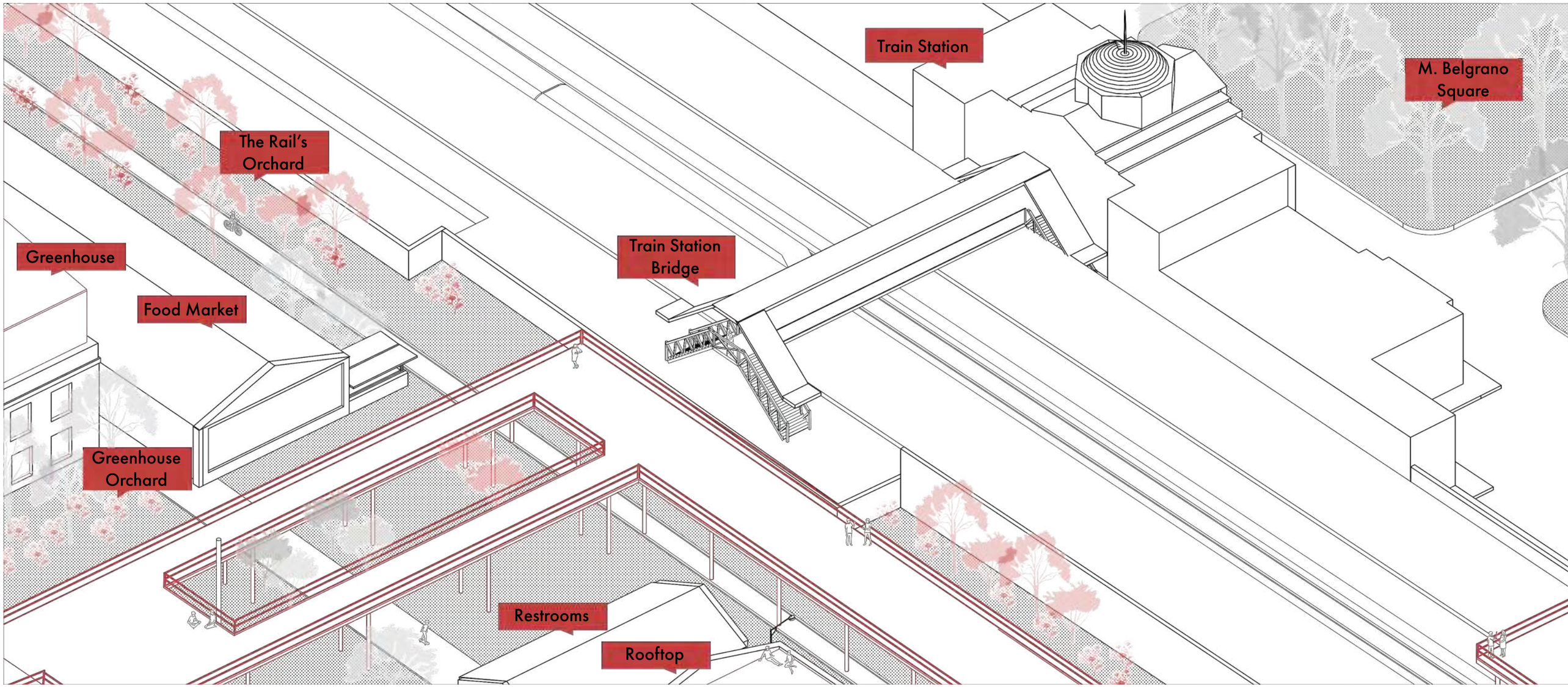
The main project to solve the connection river-city is the creation of a bridge that crosses directly from the public square (the sidewalks of the train station front façade) and ends in the waterfront, taking the user to the closes point to the water. In the middle, it has a connection to the inside of the ex-workshops plot. The bridge gives a chance of safe crossing, and fast when the cargo train is passing by and takes about 30 minutes to cross the whole plot longitudinally.

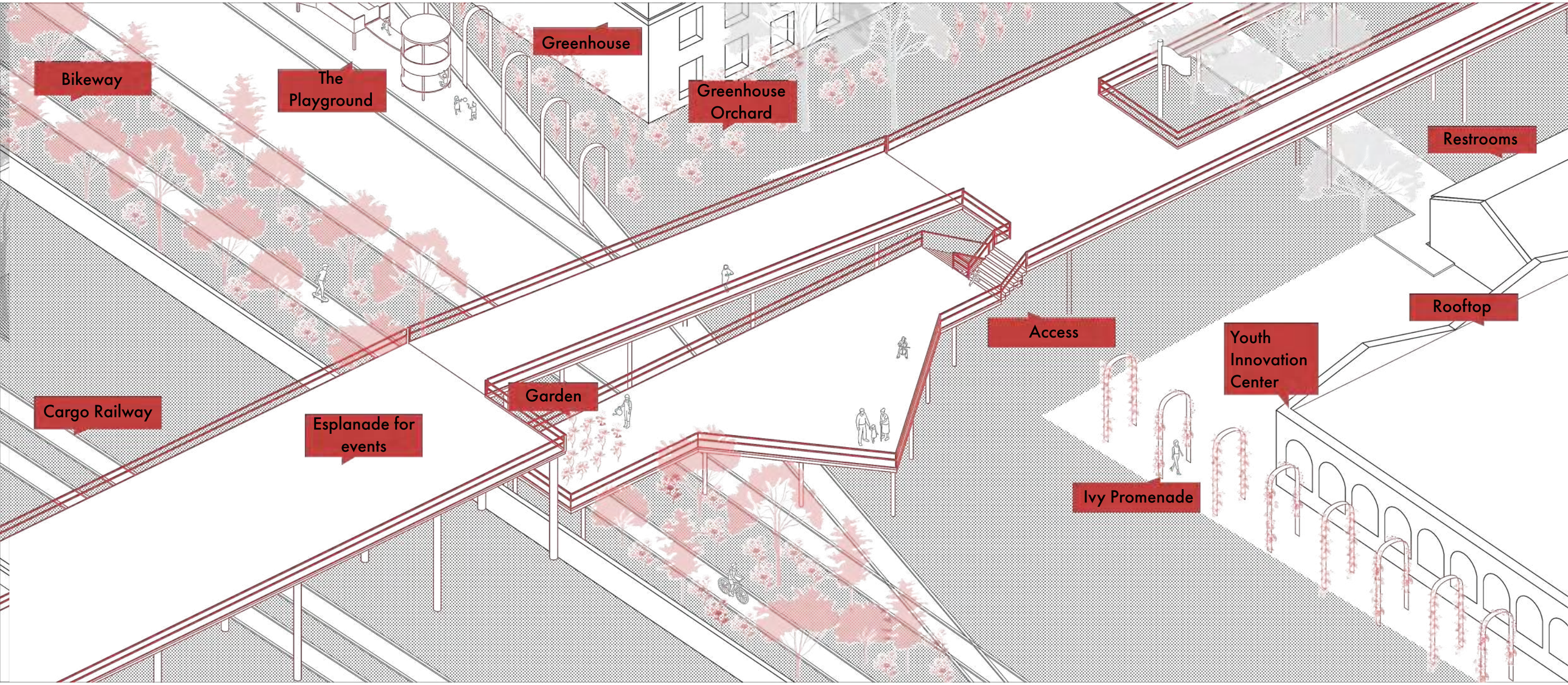
The bridge has a width of about twelve meters, and different covered and uncovered parts, with enough space for public events. It respects the existing trees by moving between them, whether these are inside or outside the plot, and does not interfere with the rest of the existing structures.

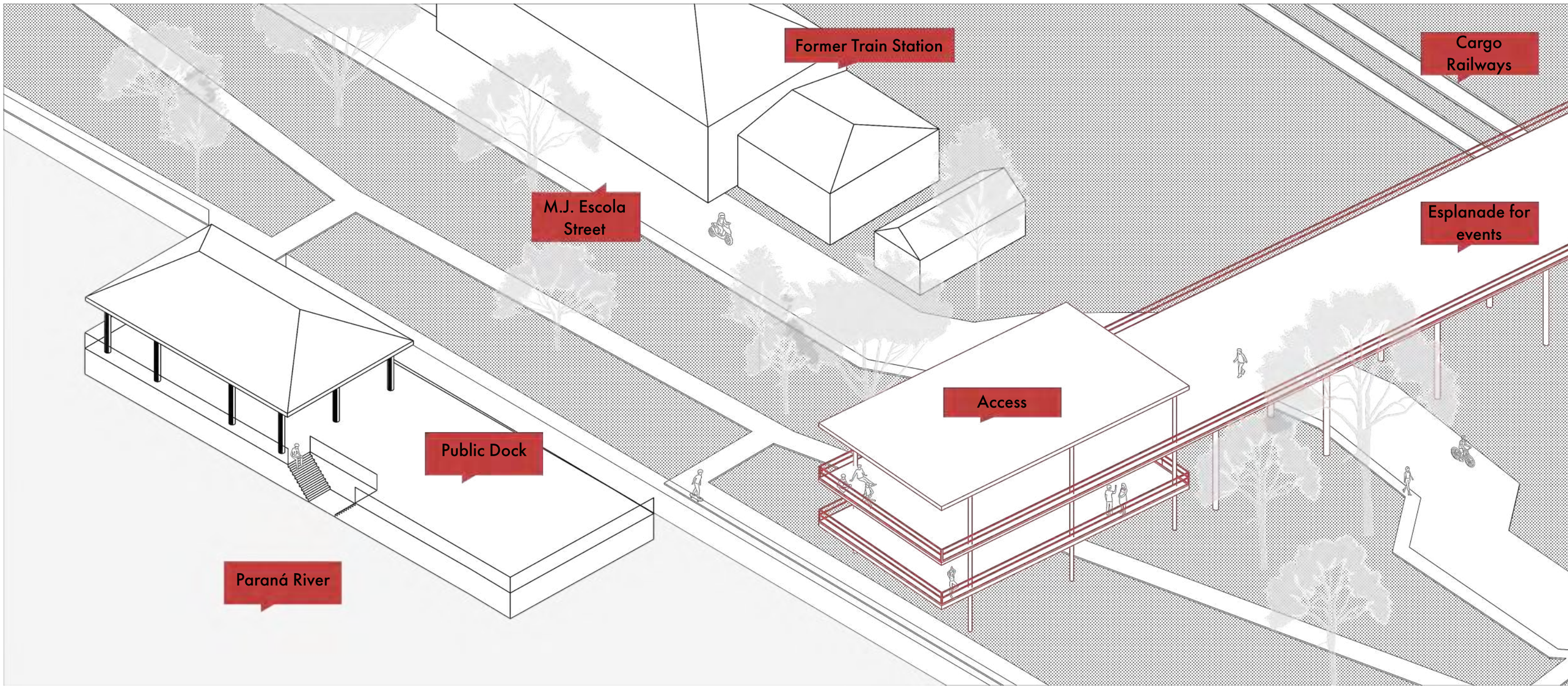
For the ground oor, it is proposed that the plot incorporates a bikeway following the direction of one of the railways, and the rest of the railways become paths for pedestrians. Also, a mix of pavements provides space for different activities, such as skating, playing, or sitting around. A large part of the plot is simply soil, in which orchards and linear parks are designed, while the absorbant ground lets water sink in faster on rainy seasons. The main goal is to interconnect differnet activities that lead the users to span across the area without the need to cross any new barrier.

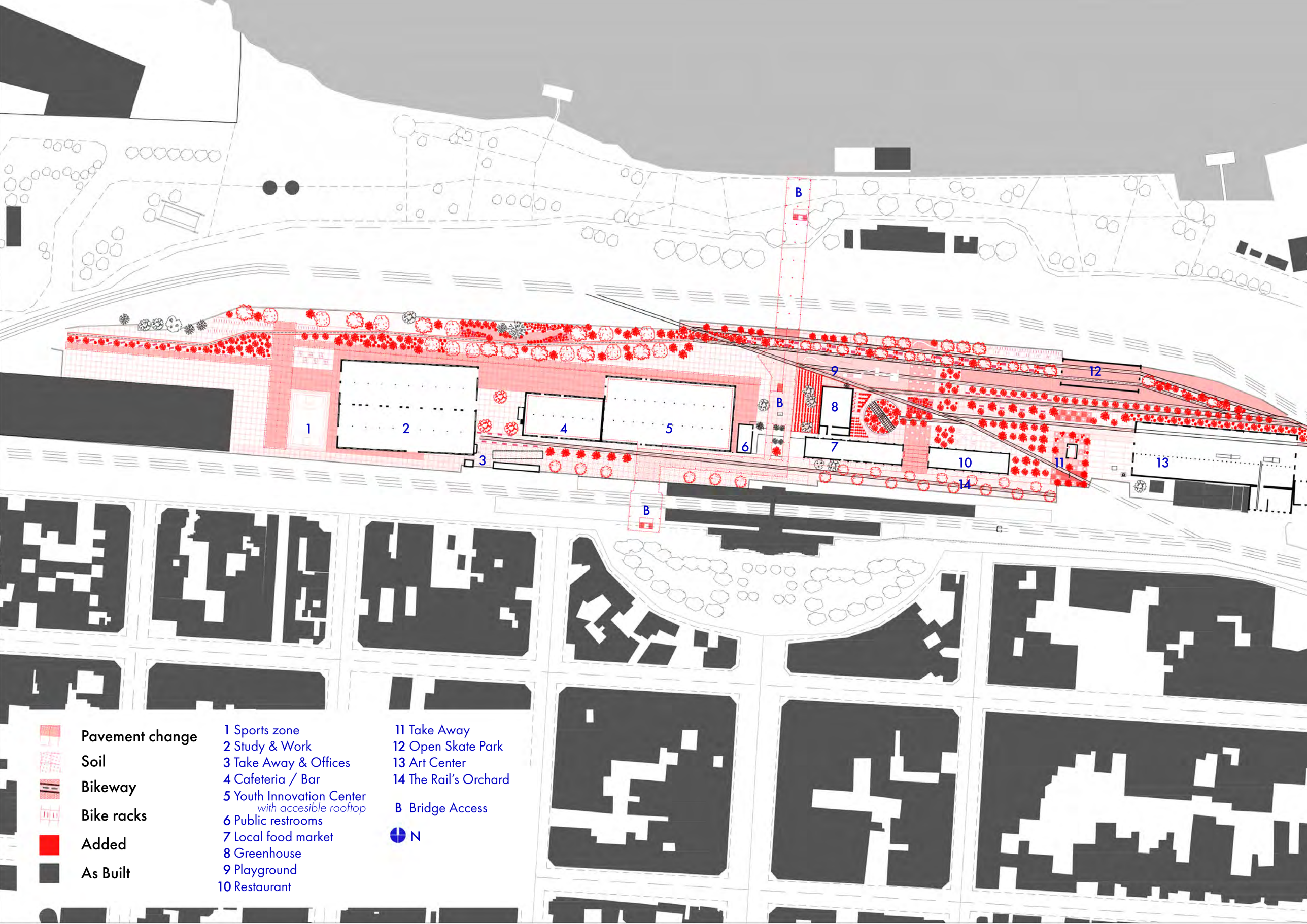

panoramic view
+space for events
N


Train Station
M. Belgrano Square
Access
The Rail's Orchard
Rooftop


Train Station
M. Belgrano Square
The Rail's Orchard
Train Station Bridge
Greenhouse
Food Market
Greenhouse Orchard
Restrooms
Rooftop


Bikeway
The Playground
Greenhouse
Greenhouse Orchard
Restrooms
Rooftop
Access
Youth Innovation Center
Cargo Railway
Esplanade for events
Garden
Ivy Promenade


Former Train Station
Cargo Railways
M.J. Escola Street
Esplanade for events
Access
Public Dock
Paraná River


B
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11
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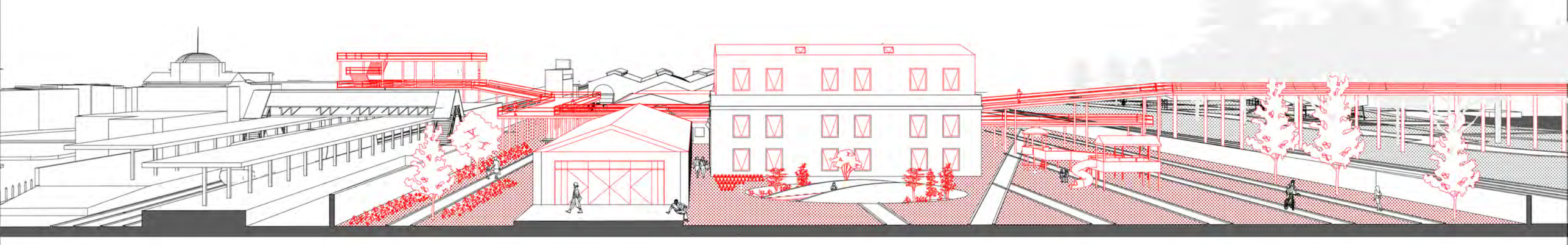
14
B
B
Pavement change
Soil
Bikeway
Bike racks
Added
As Built
1 Sports zone
2 Study & Work
3 Take Away & Offices
4 Cafeteria / Bar
5 Youth Innovation Center
with accesible rooftop
6 Public restrooms
7 Local food market
8 Greenhouse
9 Playground
10 Restaurant
11 Take Away
12 Open Skate Park
13 Art Center
14 The Rail's Orchard
B Bridge Access
N



Train station

Plaza de los rieles
Linear promenade with orchard

Local food market

Orchard, greenhouse

Playground

Bikeway

V. **Adaptivereuse**
The Building Scale

To gure out which programs any building can host, it is rst needed to know its potential. A site visit was done and a record of each building considering its approximate measures, shearing layers and decay and images was created. After said process, a function was given to each -as shown in the masterplan chapter, but the designing process was carried out in detail only for building n°1 and n°3, becoming a study & work area and a greenhouse respectively. For building n°2 and n°4, a morphological change is proposed.


1
2
3
4
5
6
7
N

Building 1

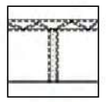
Original function: Woodwork workshop

Approximate height: 7.5 m

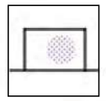
Approximate area: 3100 m2

Approximate volume: 23.250 m3

Decay

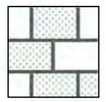


Rusty steel elements



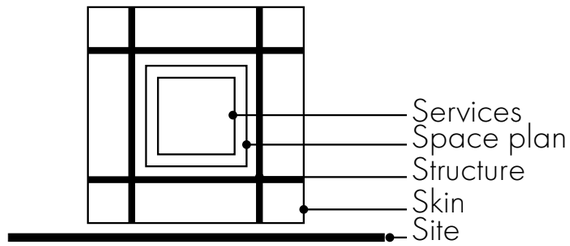
Graf ti

Roof tiles falling apart

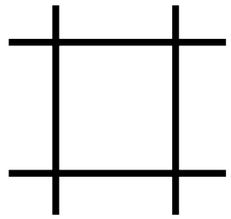


Biological growth

Building 1 - As Found

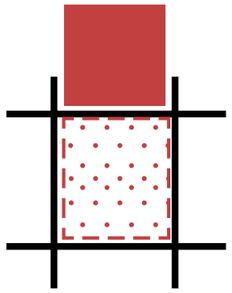


Shearing layers

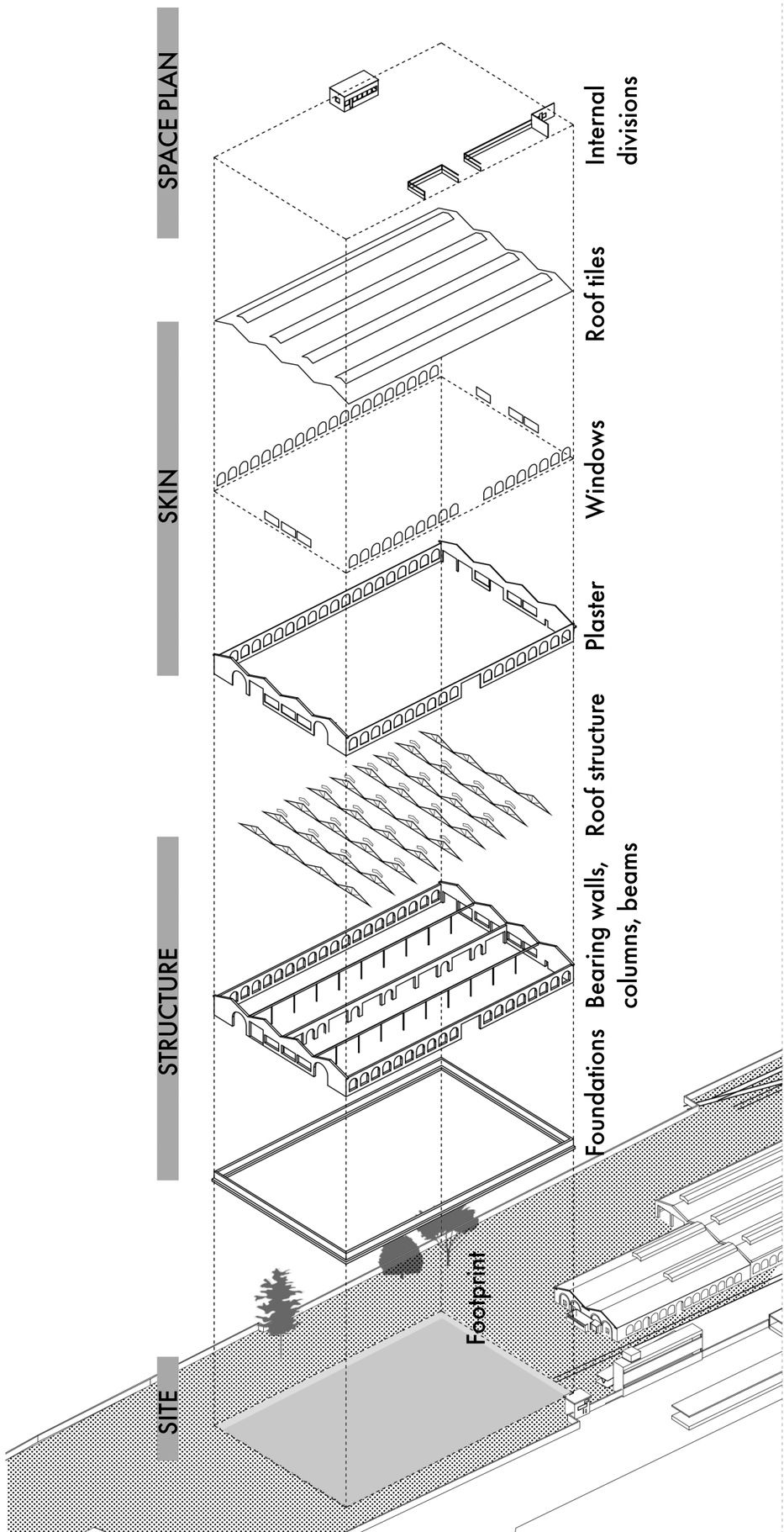


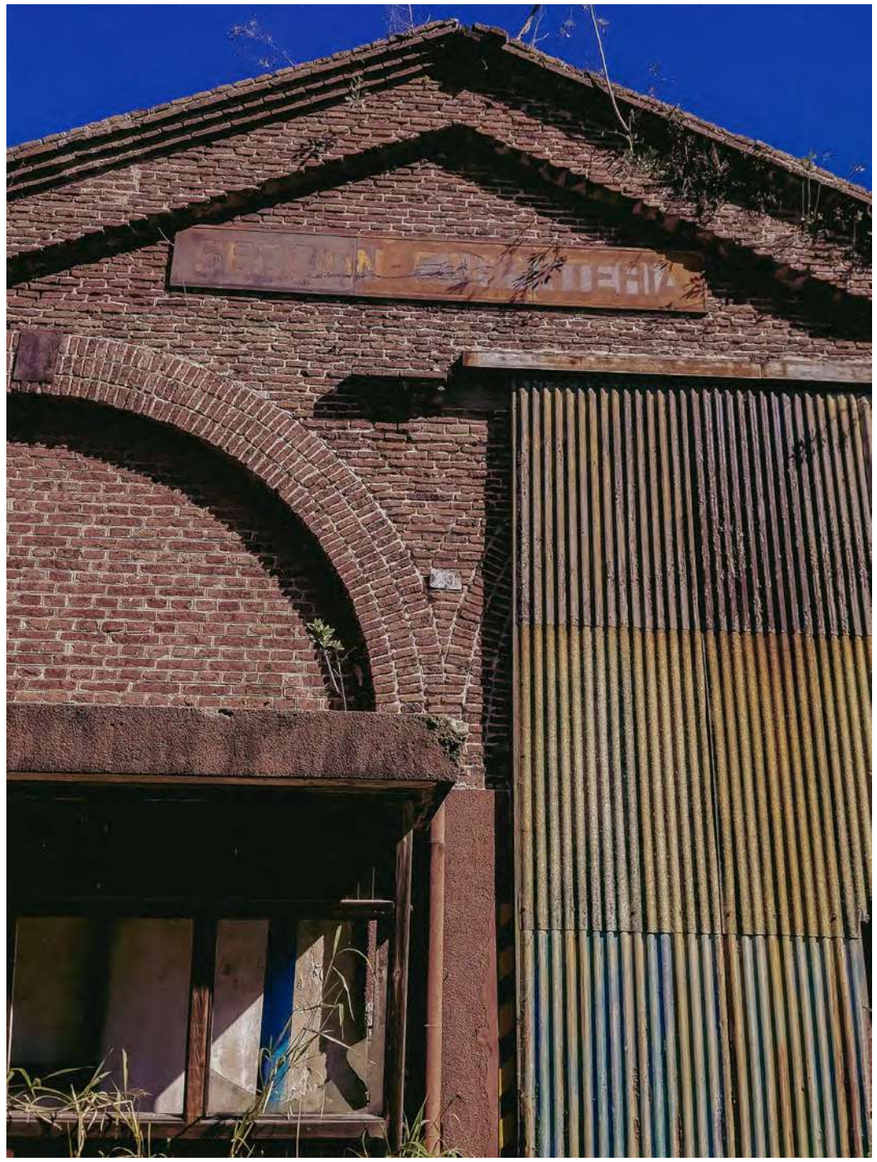
Complete structure

Shell host

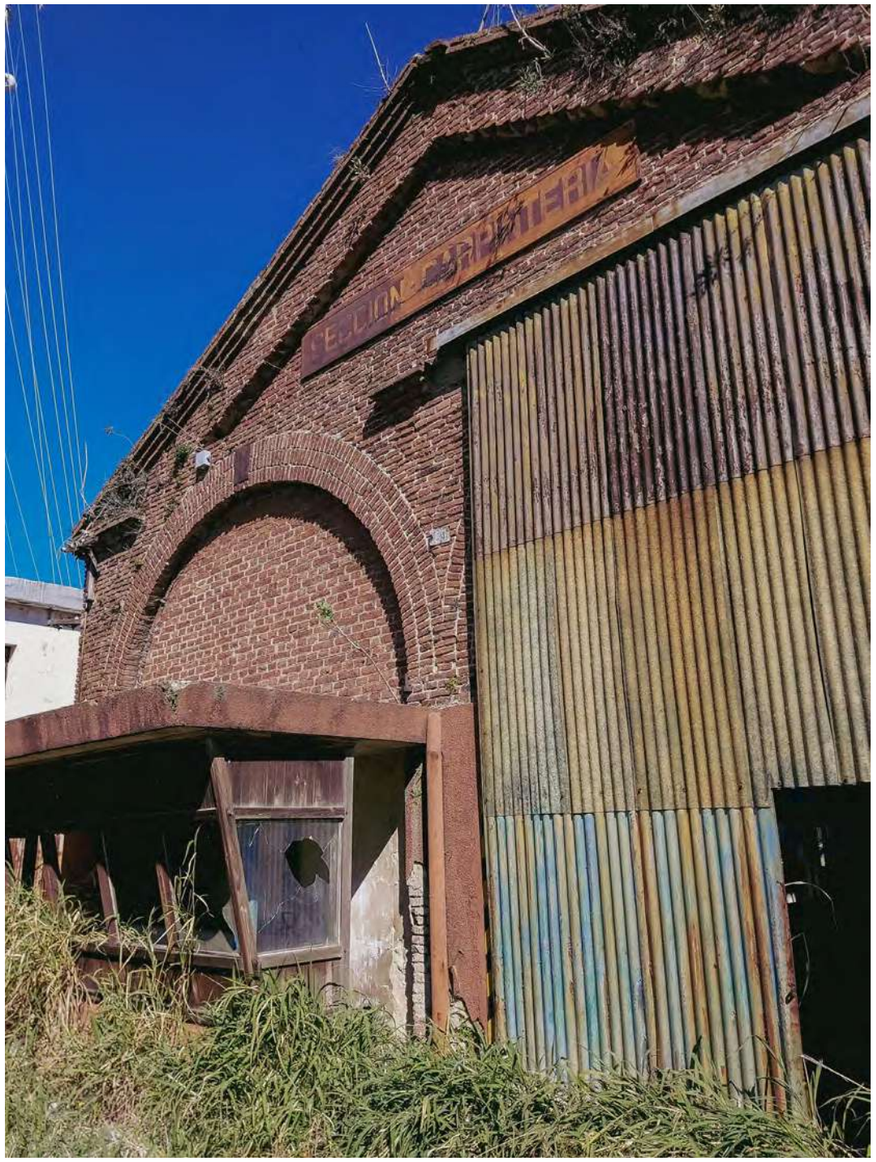


Constructive actions proposed



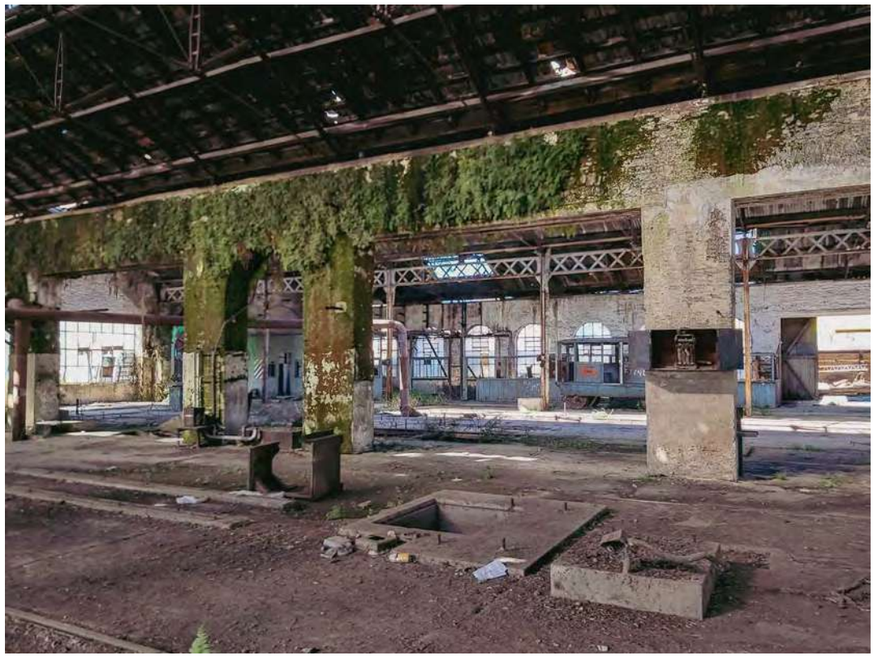


Front facade with the sign that reads "Sección Carpintería", Carpentry section.
Source: Own photo, 2023.



Front facade with the sign that reads "Sección Carpintería", Carpentry section.
Source: Own photo, 2023.

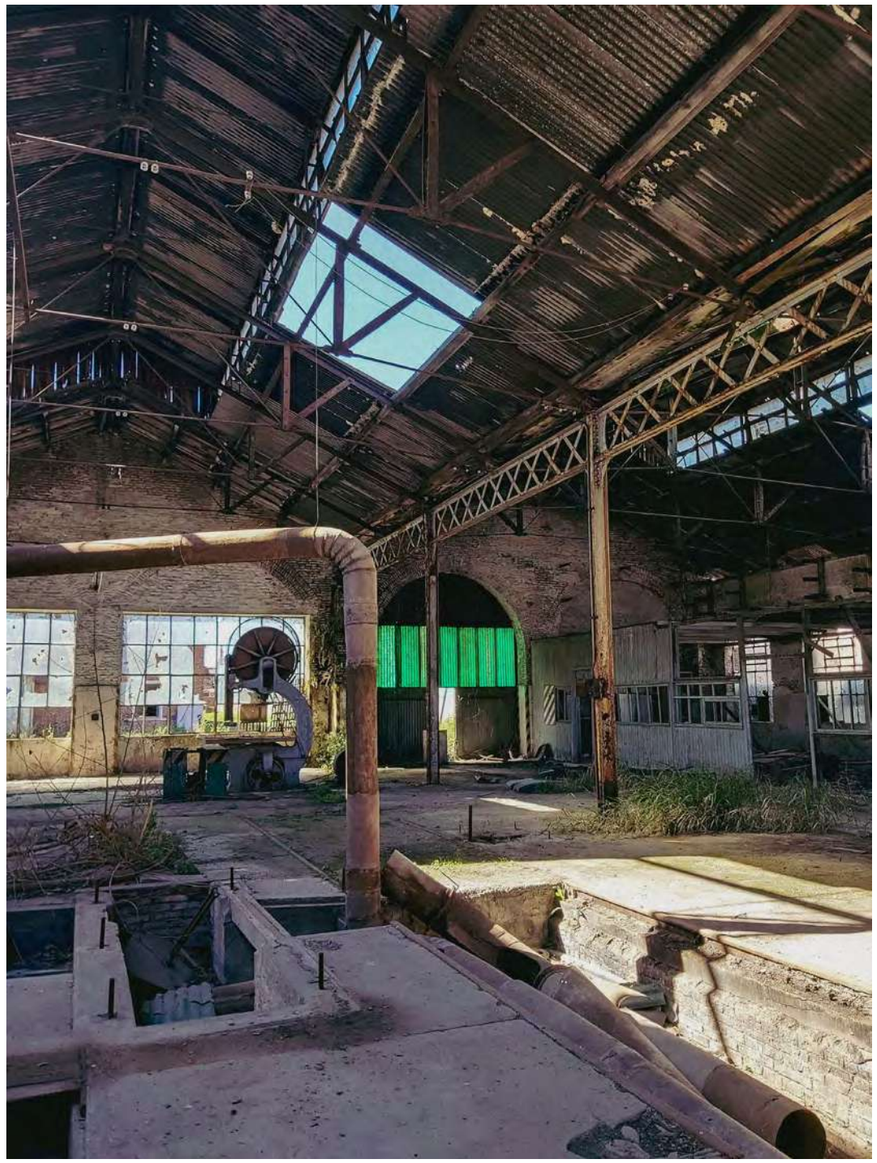
The building lets in natural light. Source: Own photo, 2023.



Biological growth on the walls. Source: Own photo, 2023.

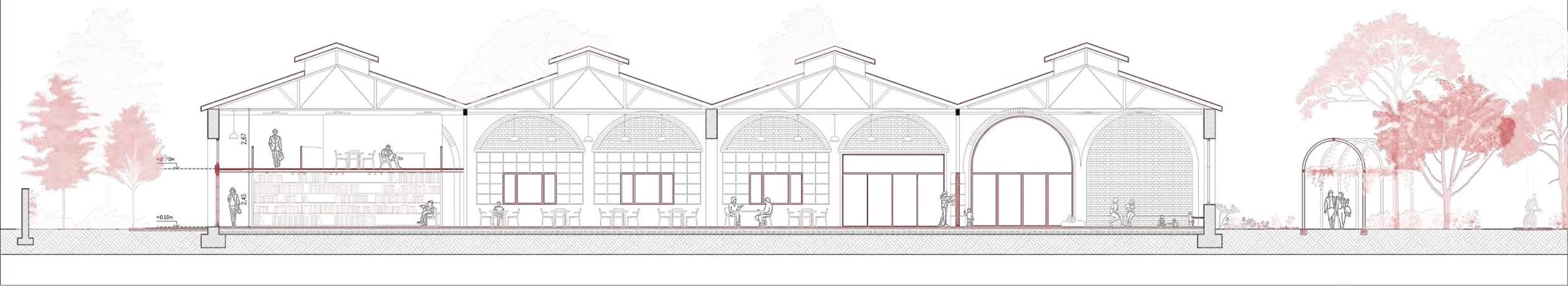
Space plan and Stuff present on the building. Source: Own photo, 2023.

Services related to the original function. Source: Own photo, 2023.

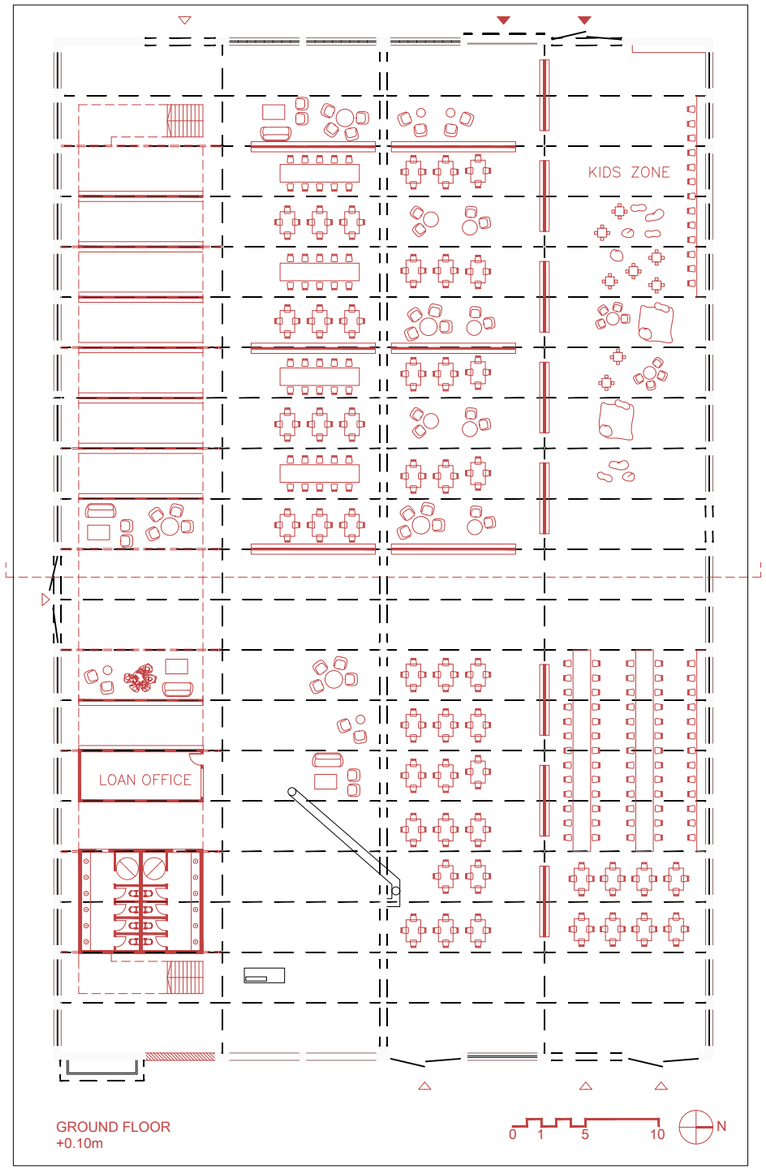


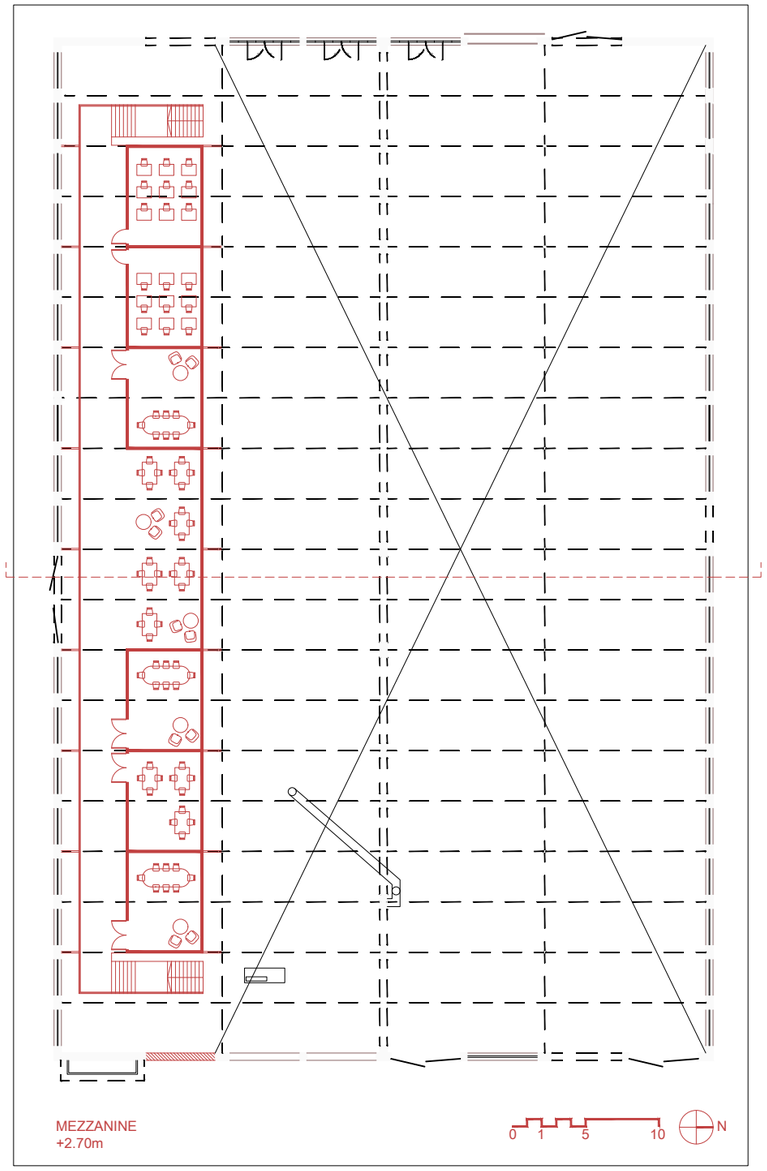
Rust on structural steel elements. Source: Own photo, 2023.

Skin decaying. Source: Own photo, 2023.

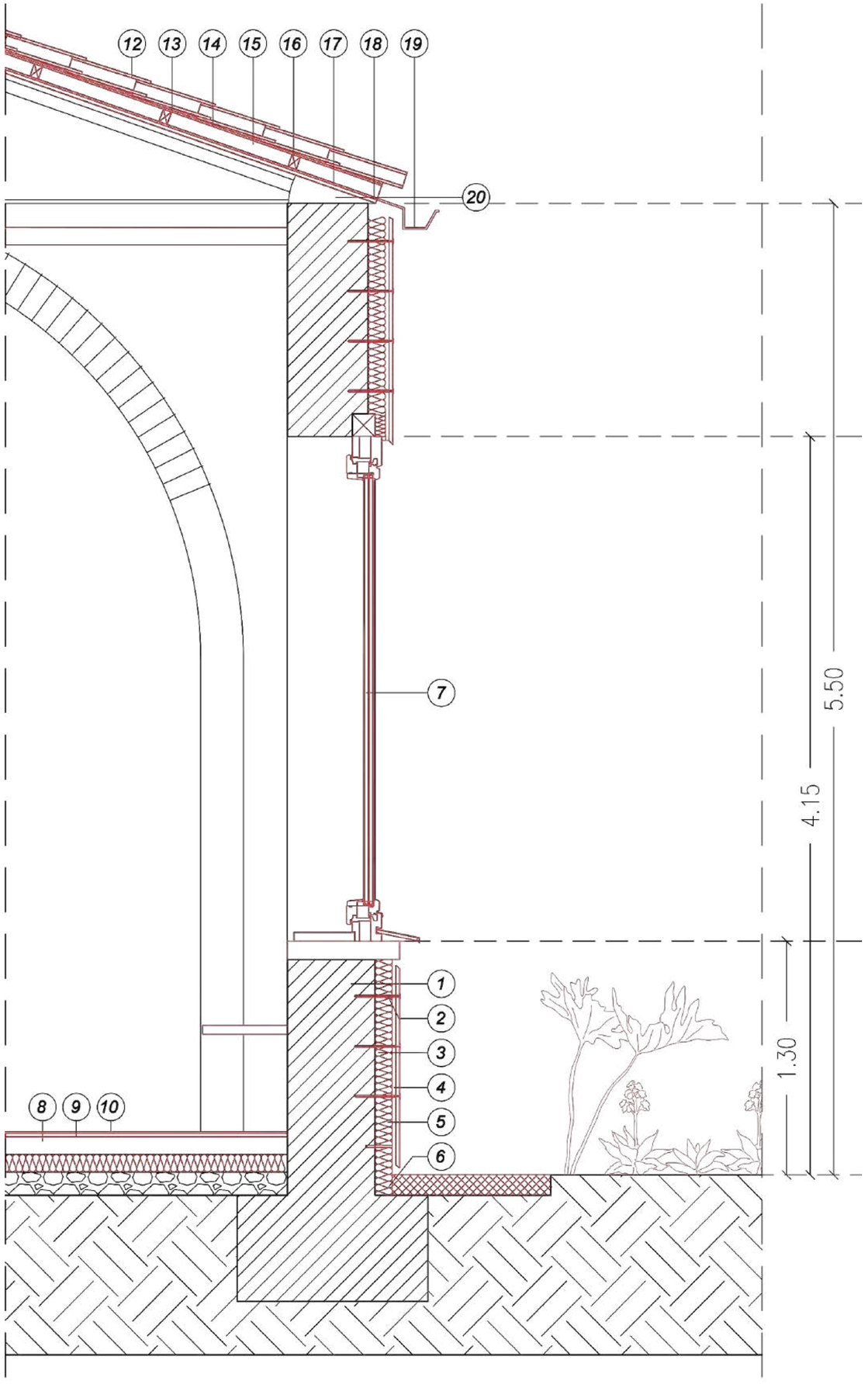


Proposal for building 1: Study & Work space. Transversal section.





Proposal for building 1: Study & Work space. Ground oor and Mezzanine



Ventilated facade system

1. Existing masonry wall
2. Attachment points
3. Thermal and acoustic insulation *Ecovent VN 032* (Lambda=0,032)
4. Ventilated air chamber
5. Finishing panelling
6. *XPS Isover* (Lambda=0,032)

Windows replacement

7. One-leaf tilt-turn opening window, system *OS275, SECCO.*

Flooring additions

8. Polyethylene sheet division t=0.2cm
9. Compacted gravel t=8cm - anticapilarity
10. Polished concrete

Roof system

12. Roof tiles
13. Water Barrier: *Typar*
14. Structural *OSB*
15. Acoustic & Thermal insulation e=7.5cm
16. Purlin 2"x3"
17. Vapor Barrier: *Rothoblaas* Vapor NET 110
18. Ceiling
19. Metal drip edge
20. Steel truss

Building 2

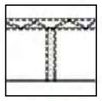
Original function: Mechanics, sawmill

Approximate height: 6 m

Approximate area: 3100 m2

Approximate volume: 18600 m3

Decay

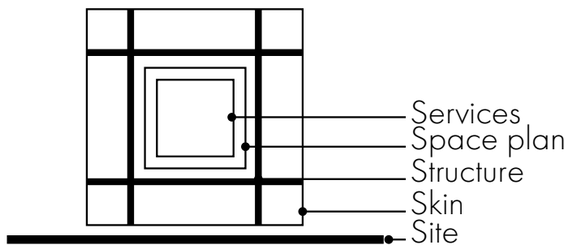


Rustv steel elements

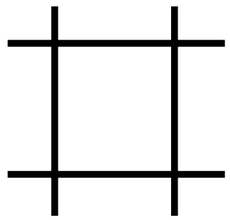
Biological growth

Roof falling apart

Building 2 - As Found

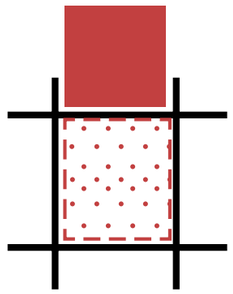


Shearing layers

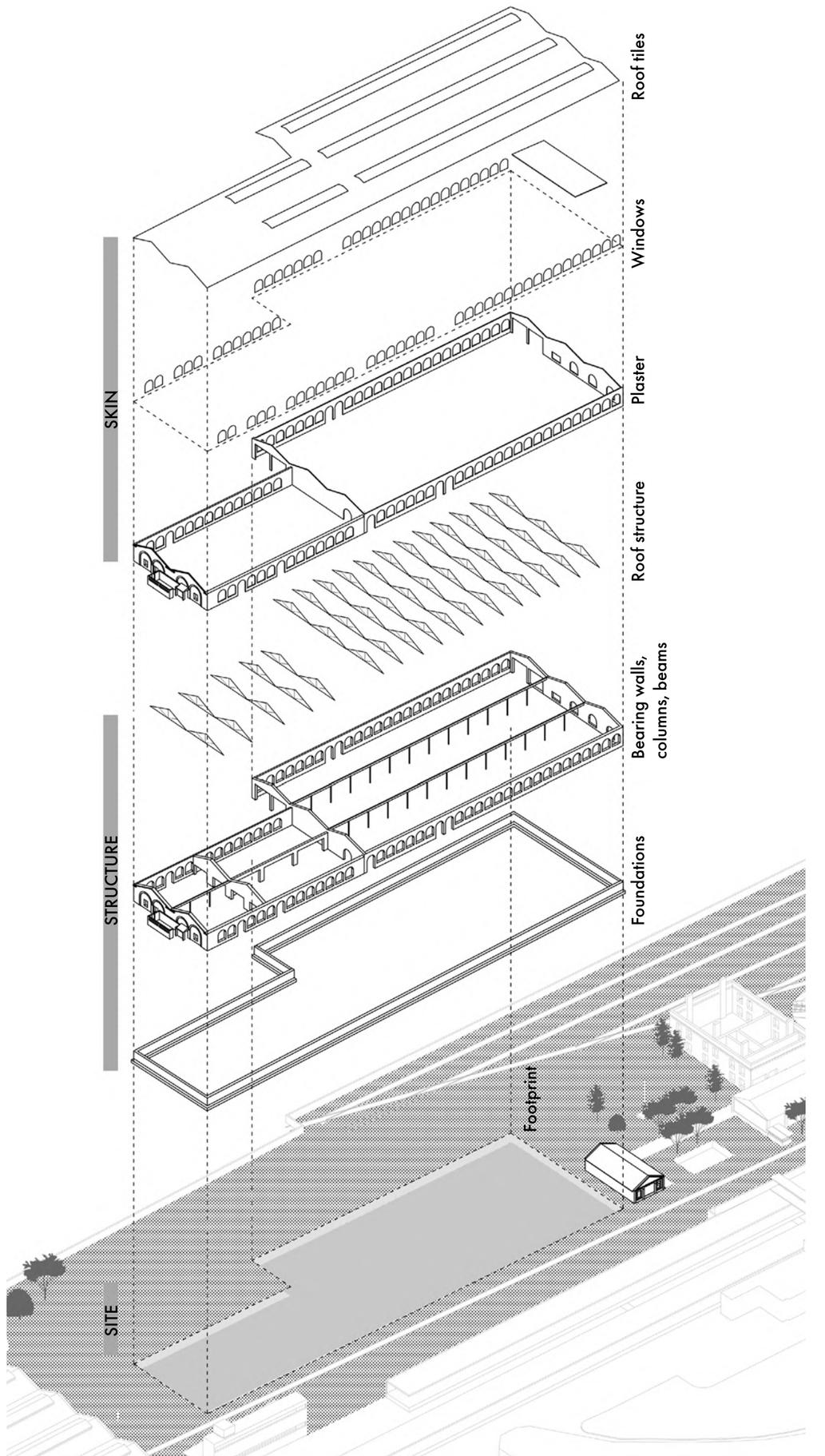


Complete structure

Shell Host

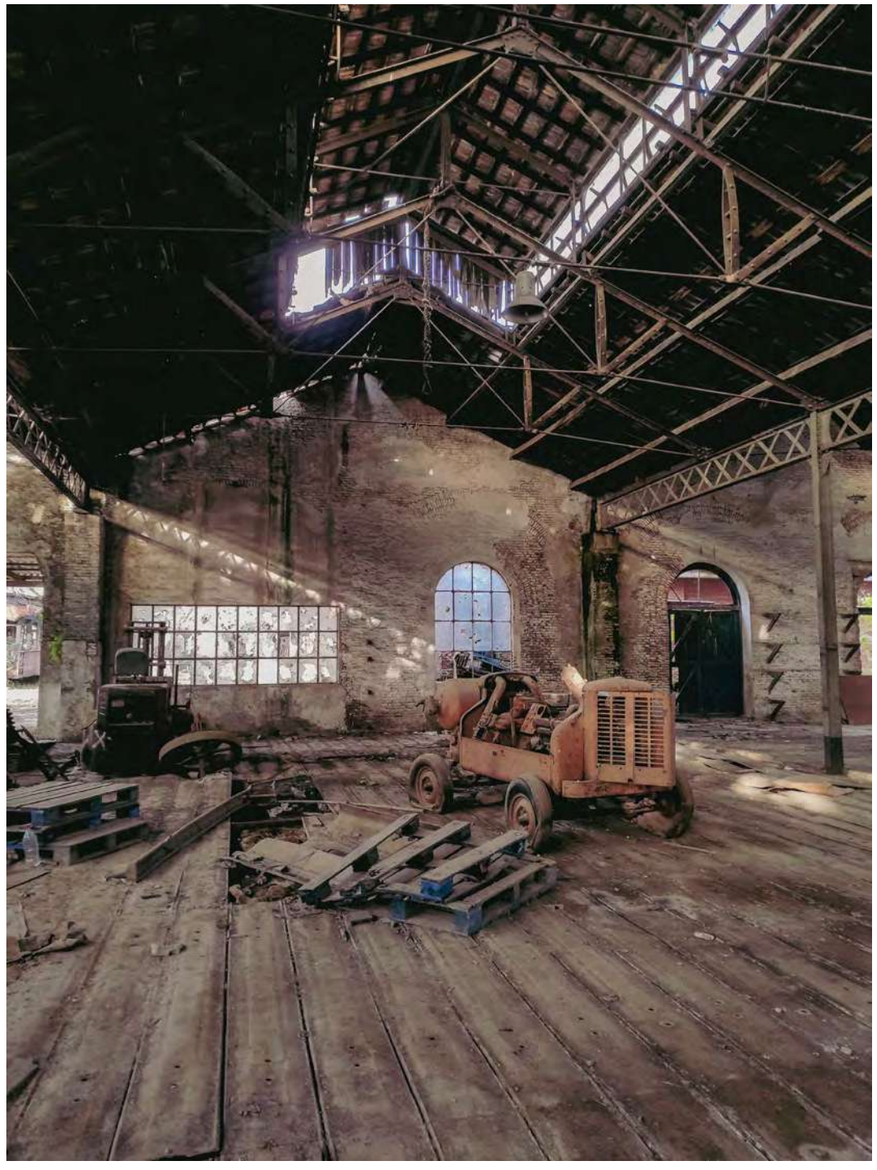


Constructive actions proposed



View from the bridge on the train station. Source: Own photo, 2023.

Accumulation of stuff. Source: Own photo, 2023.



Luminous space, even on a cloudy winter afternoon. Source: Own photo, 2023.

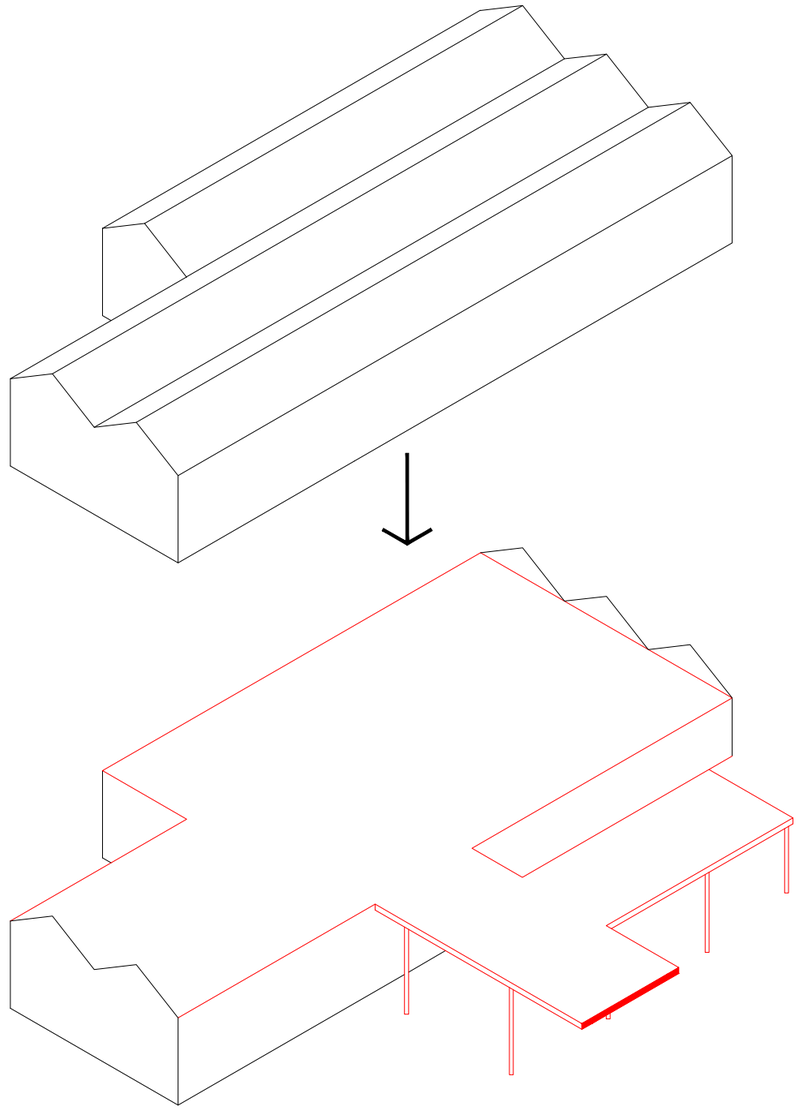
R.oof falling apart Source: Own photo, 2023.

Stuff laying around. Source: Own photo, 2023.

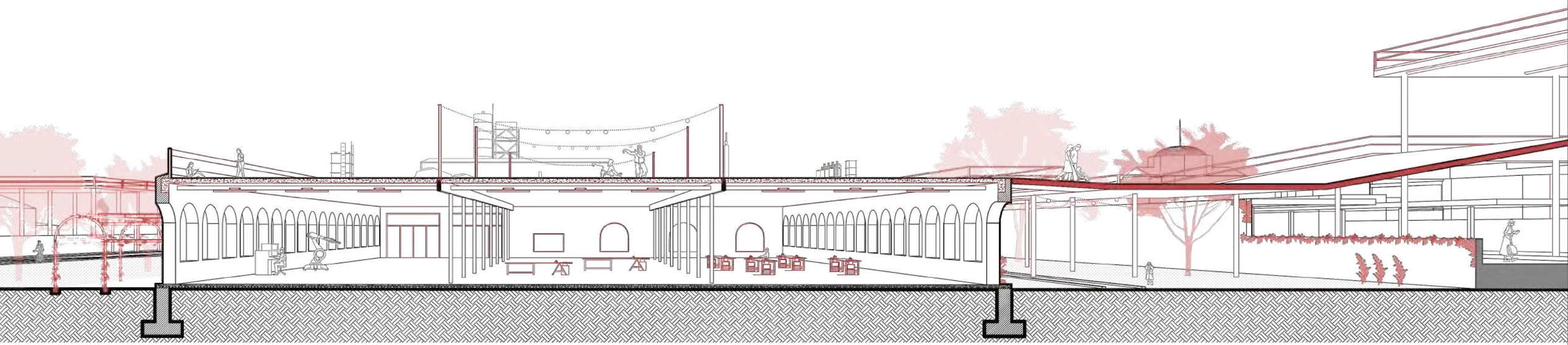
Skin decaying. Source: Own photo, 2023.

Source: Own photo, 2023.

Source: Own photo, 2023.



Morphological proposal for Building 2: Replace decaying roof with walkable terrace and connect to the bridge. Schematic axonometry.



Building 3

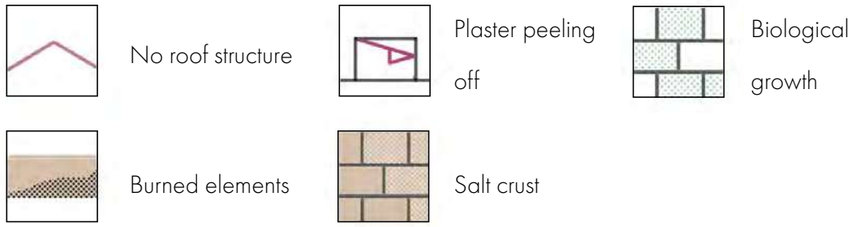
Original function: Of ce

Approximate height: 7.5 m

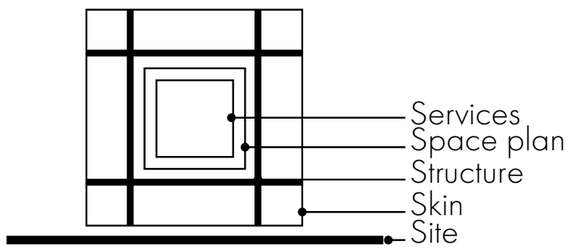
Approximate area: 395 m2

Approximate volume: 2965 m3

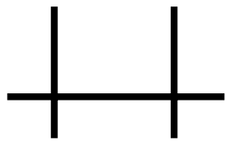
Decay



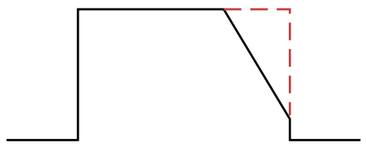
Building 3 - As Found



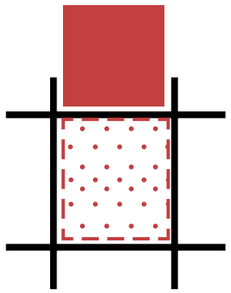
Shearing layers



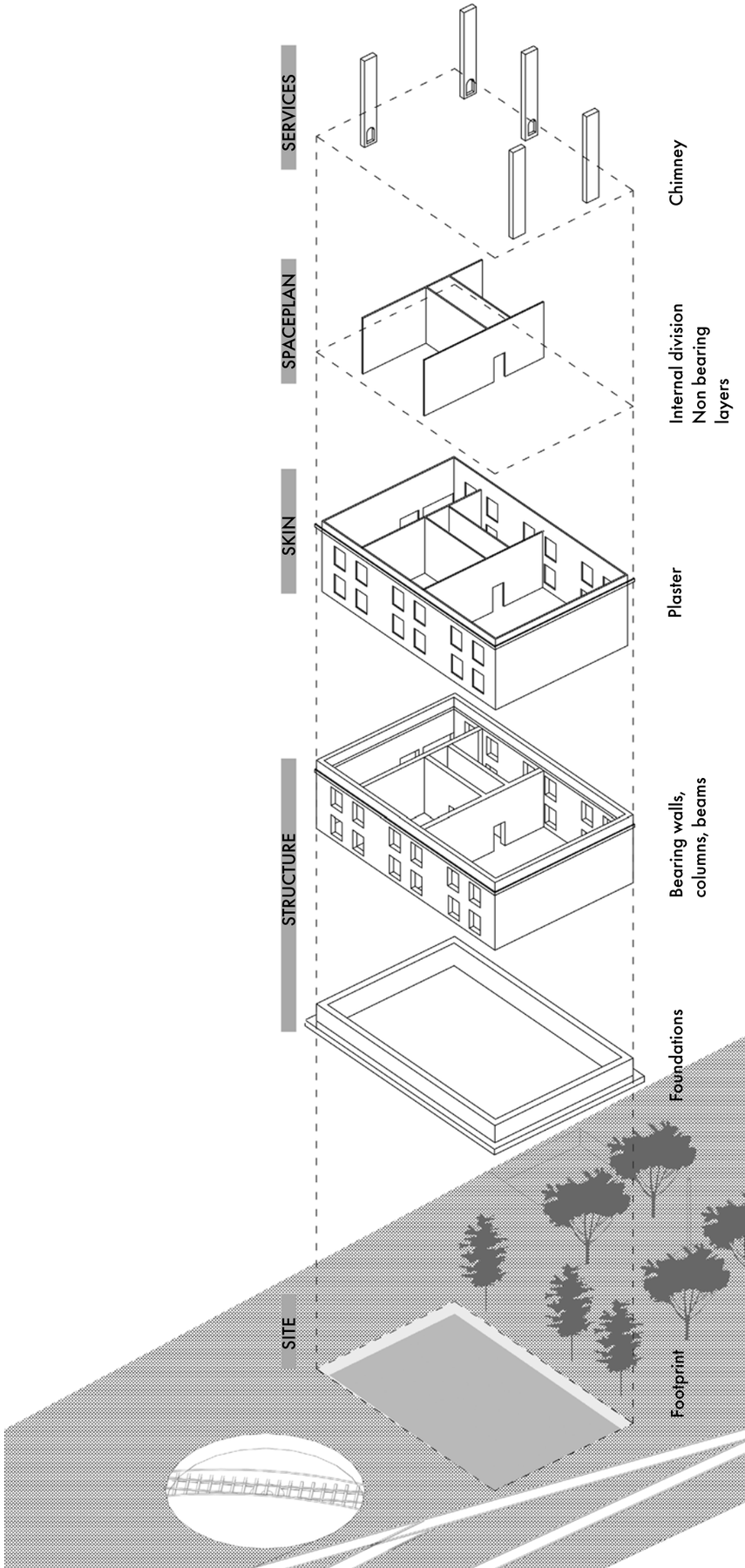
Partial structure



Semi-Ruin Host



Constructivre actions proposed



External photo. Source: Own photo, 2023.

Relation between Building 3 and Building 4. Source: Own photo, 2023.

Fencing elements. Source: Own photo, 2023.

Building 4 on the left, Building 3 on the right. Source: Own photo, 2023.

Biological growth, peeling off, burned elements Source: Own photo, 2023.

Biological growth, peeling off, burned elements Source: Own photo, 2023.

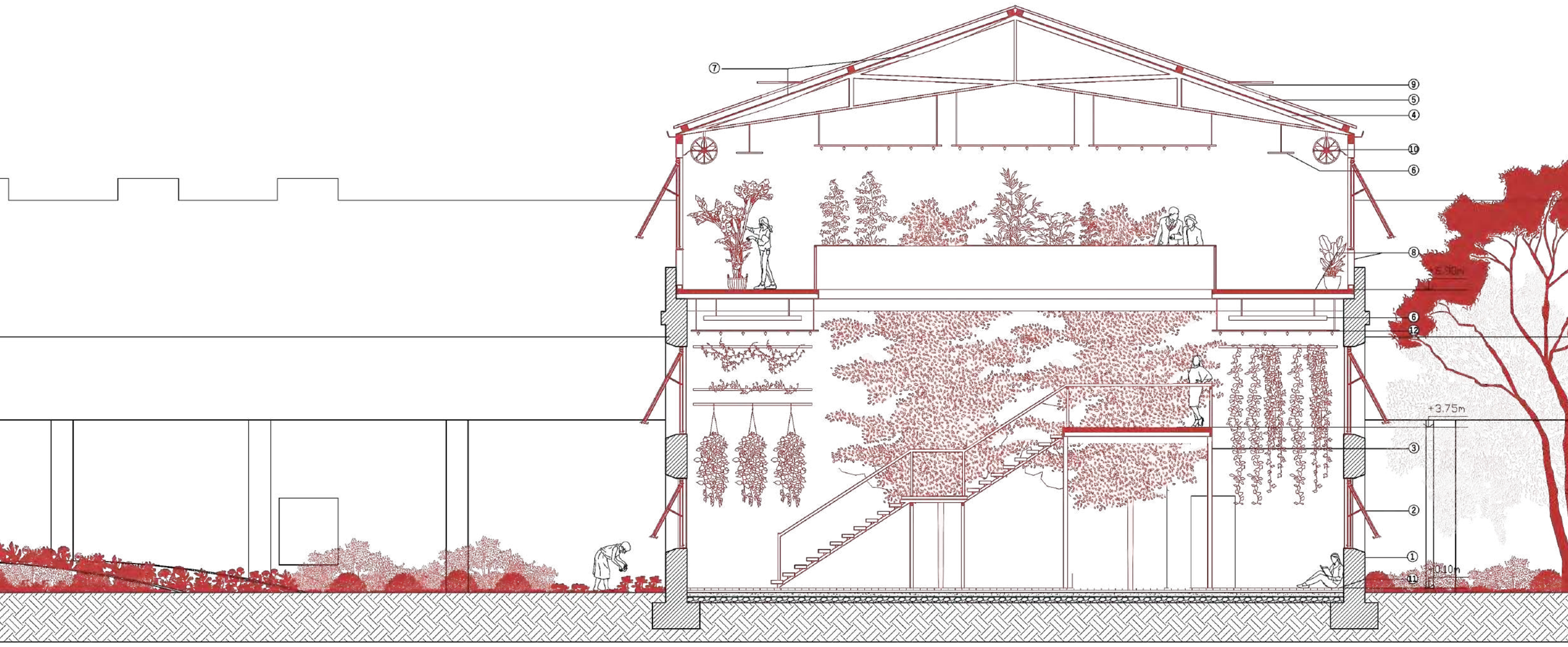
Main entrance. Biological growth, peeling off, burned elements Source: Own photo, 2023.

Structure
1. Brick Masonry
3. Independent steel structure
4. Scissor steel truss

8. Added structure on built bearing masonry walls
Ventilation
2. Swing window with automatic openers
9. Roof vent

10. Circulating fan
Light and temperature conditions
5. Polycarbonate 3 wall - 8mm- approx. 76% light
6. High intensity LED lights

7. Cloth shades facing northeast
11. Ceramic tile oor
Watering
12. Misting system



Proposal for building 3: Greenhouse. Transversal section.

Building 4

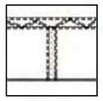
Original function: Deposit and workers' services

Approximate height: 6.00 m

Approximate area: 1160 m2

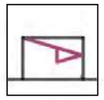
Approximate volume: 6960 m3

Decay



Rusty steel elements

Burned walls

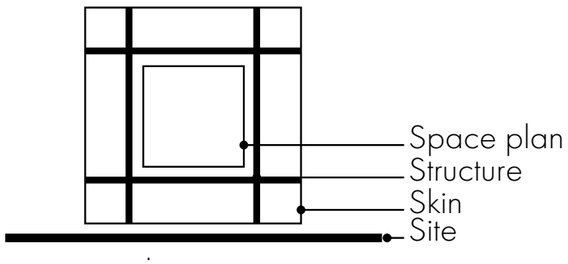


Plaster peeling off

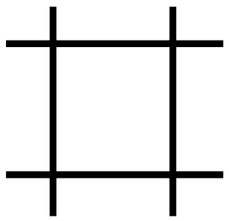
Roof tiles falling apart

Biological growth

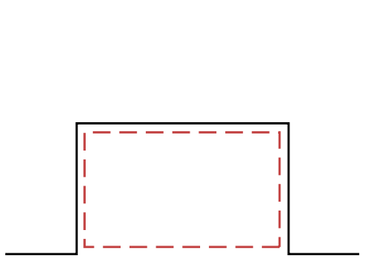
Building 4 - As Found



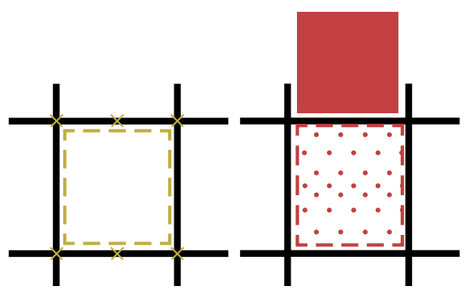
Shearing layers



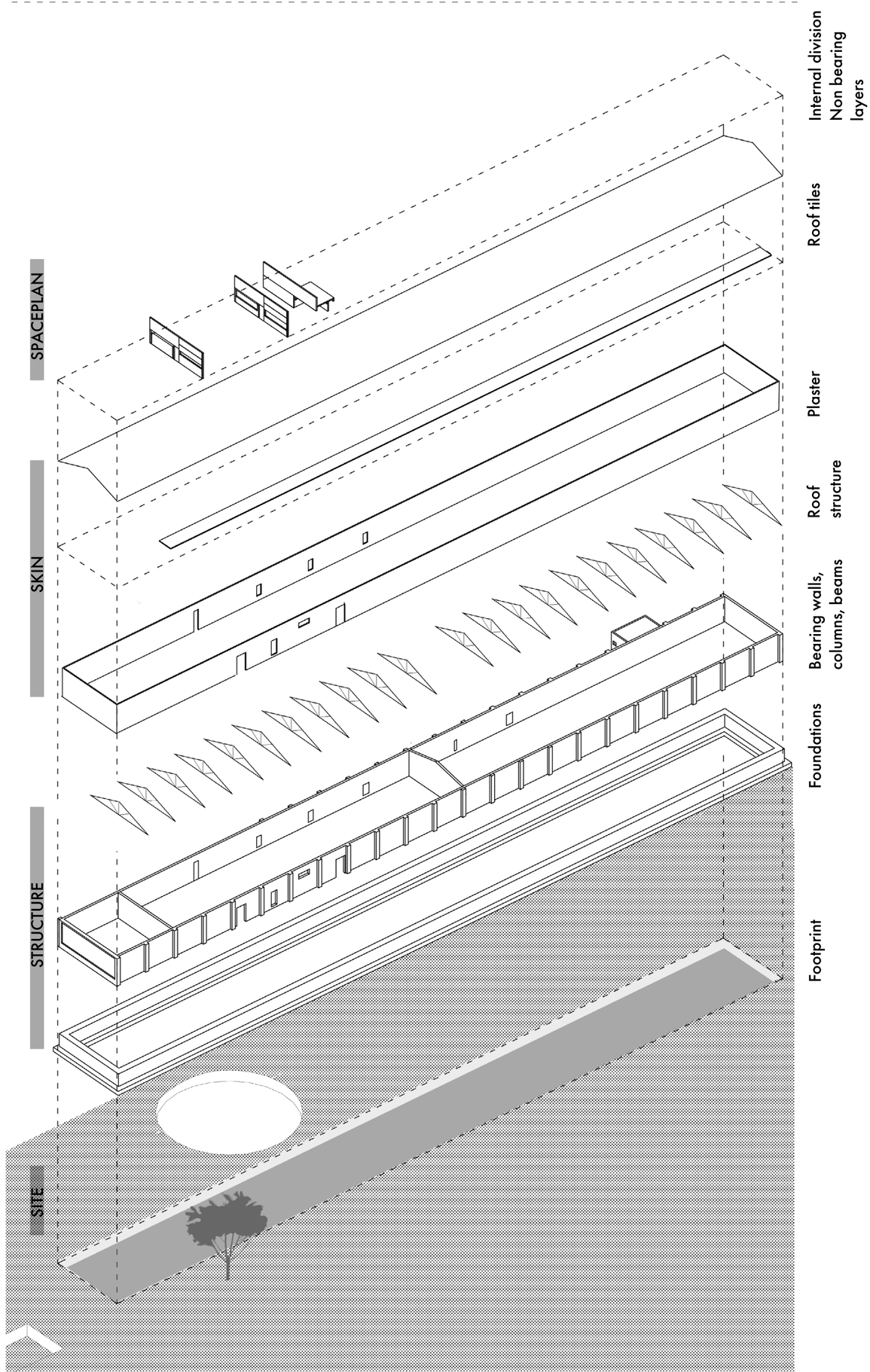
Complete structure



Shell Host

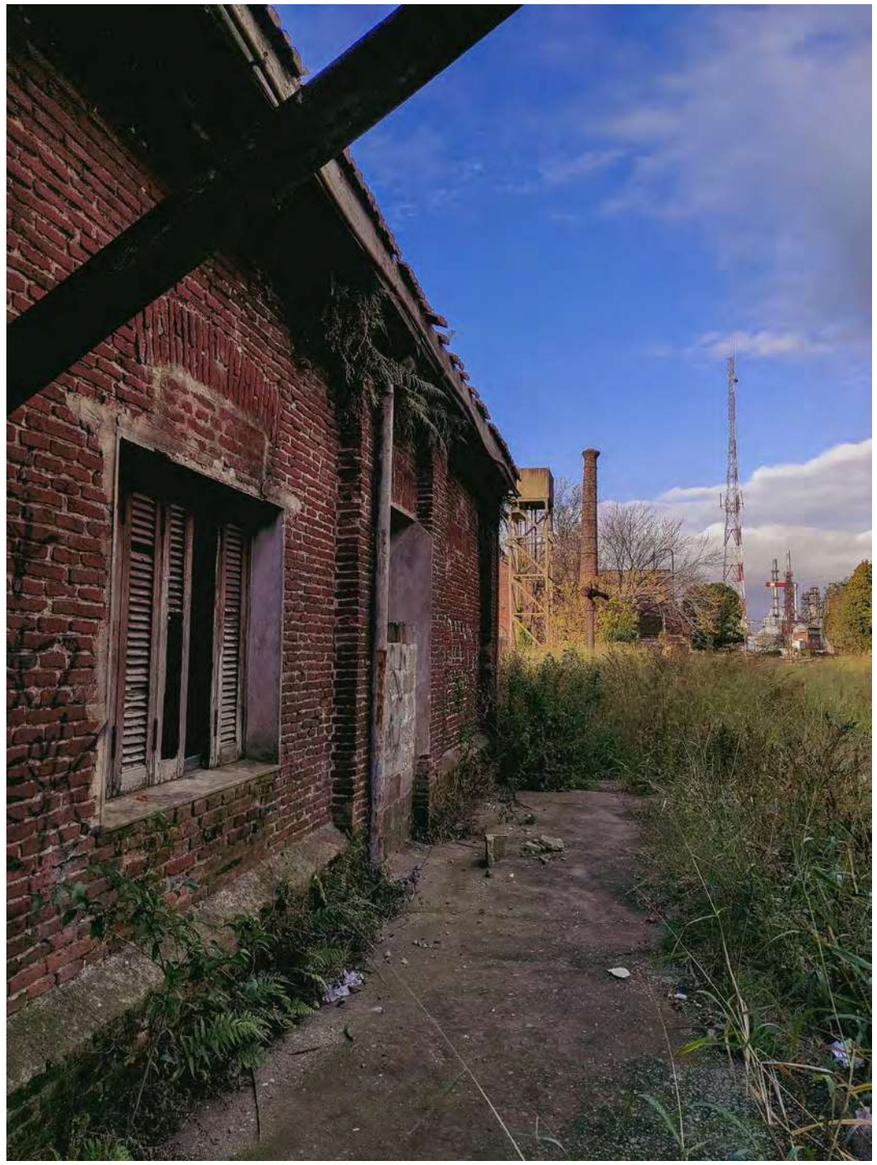


Constructive & Deconstructive actions proposed

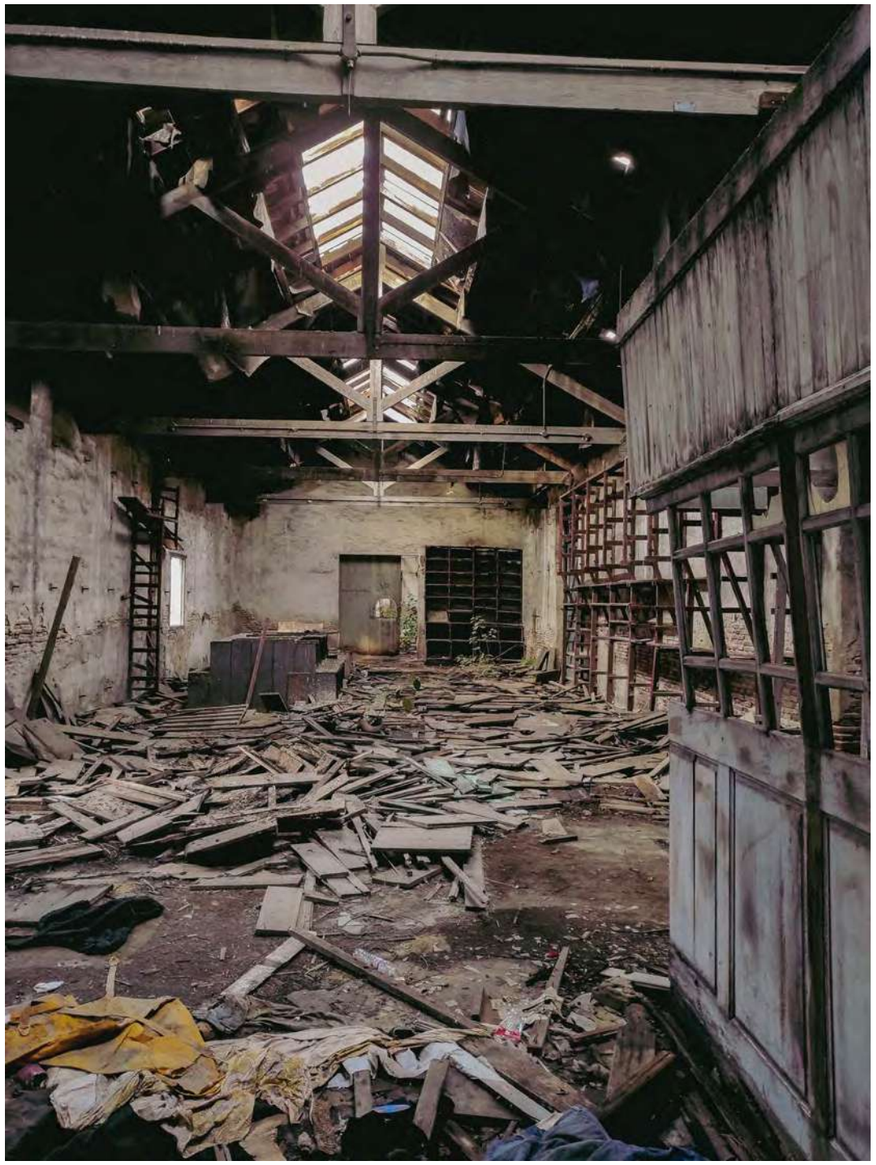


Between Building 4 and the train station. Source: Own photo, 2023.

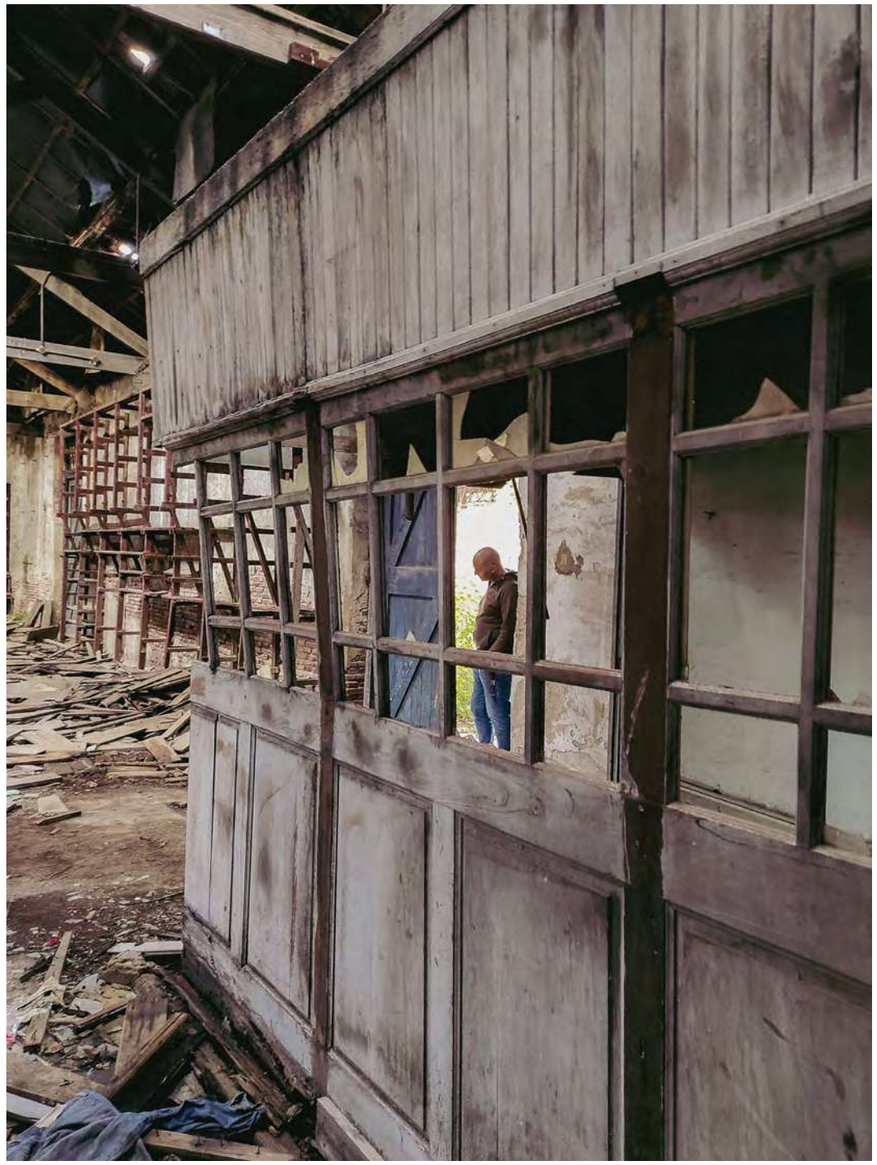
Skin peeling off, cracking, rust, and stuff laying around. Source: Own photo, 2023.



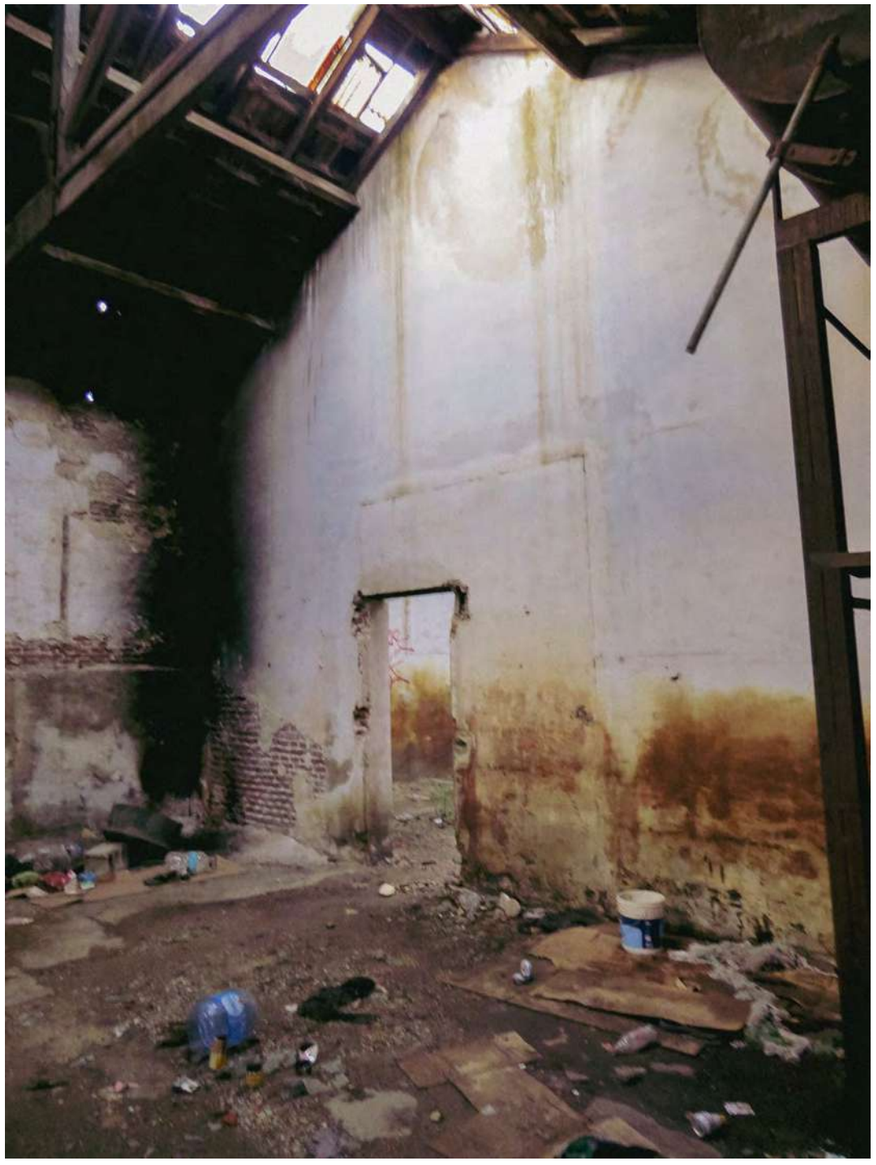
View from the south wall of Building 4 towards Building 7. Source: Own photo, 2023.



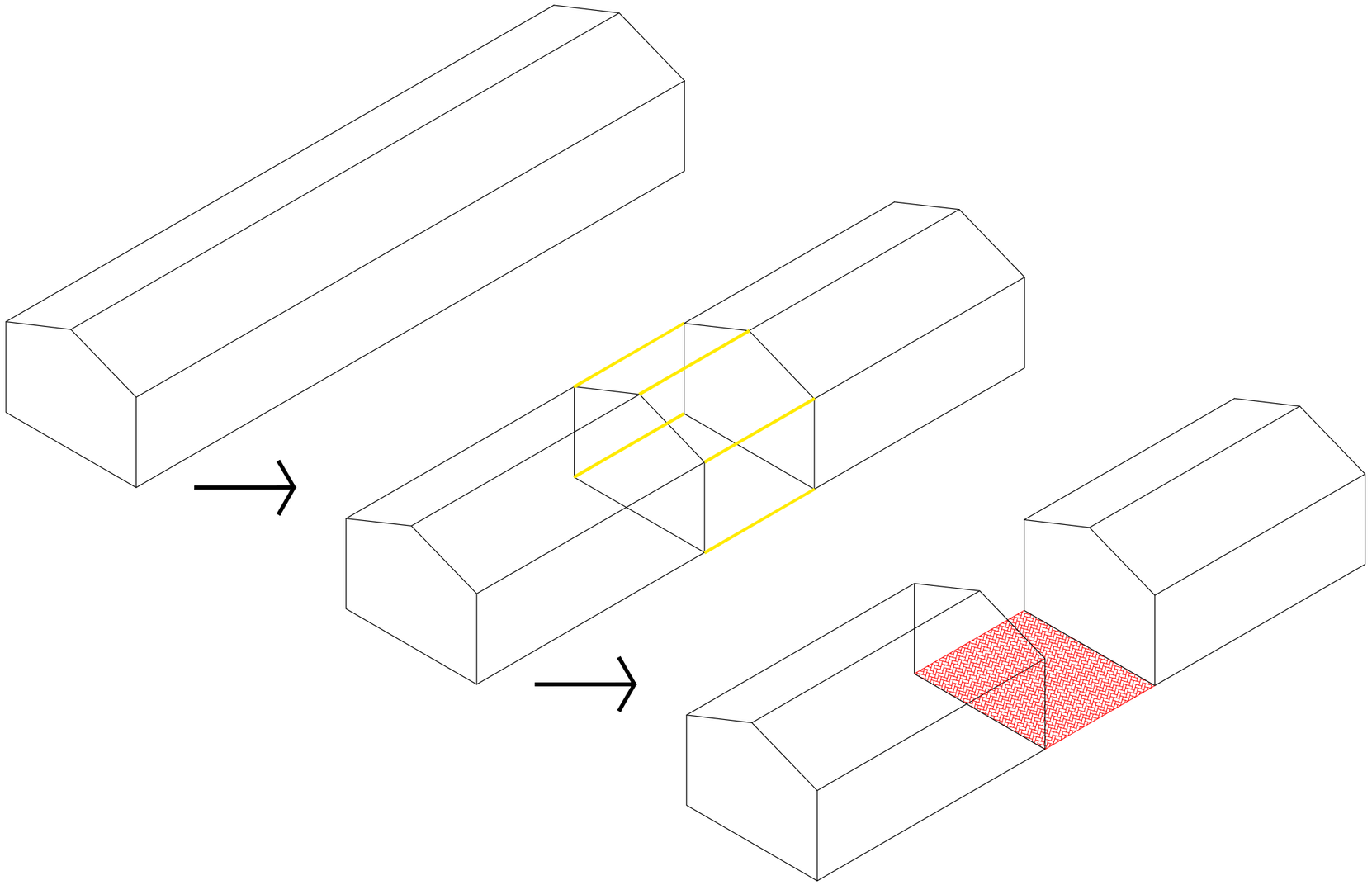
Internal conditions. Source: Own photo, 2023.



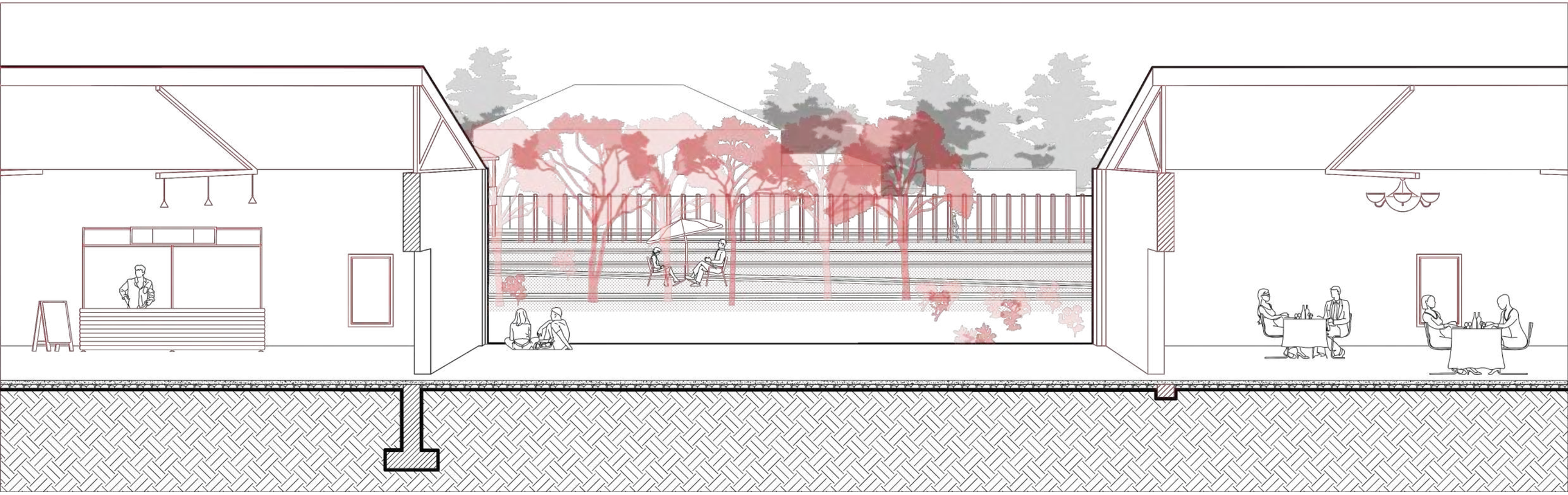
Space plan. Source: Own photo, 2023.



Internal conditions. The building is being used by people. Source: Own photo, 2023.



Morphological proposal for Building 4: Turning a section of the 100 m long building into a patio that enhaces the connection. Schematic axonometry.



Building 5

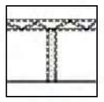
Original function: Unknown

Approximate height: 4.00 m

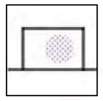
Approximate area: 40 m2

Approximate volume: 160 m3

Decay



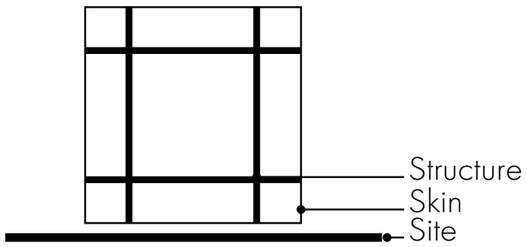
Burned wood elements



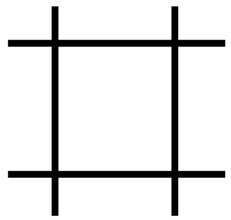
Graf ti

Discolouration from rainfall and staining from metallic materials

Building 5 - As Found

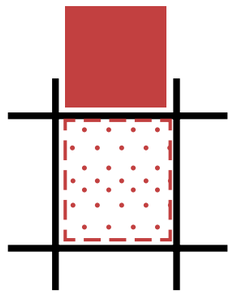


Layers

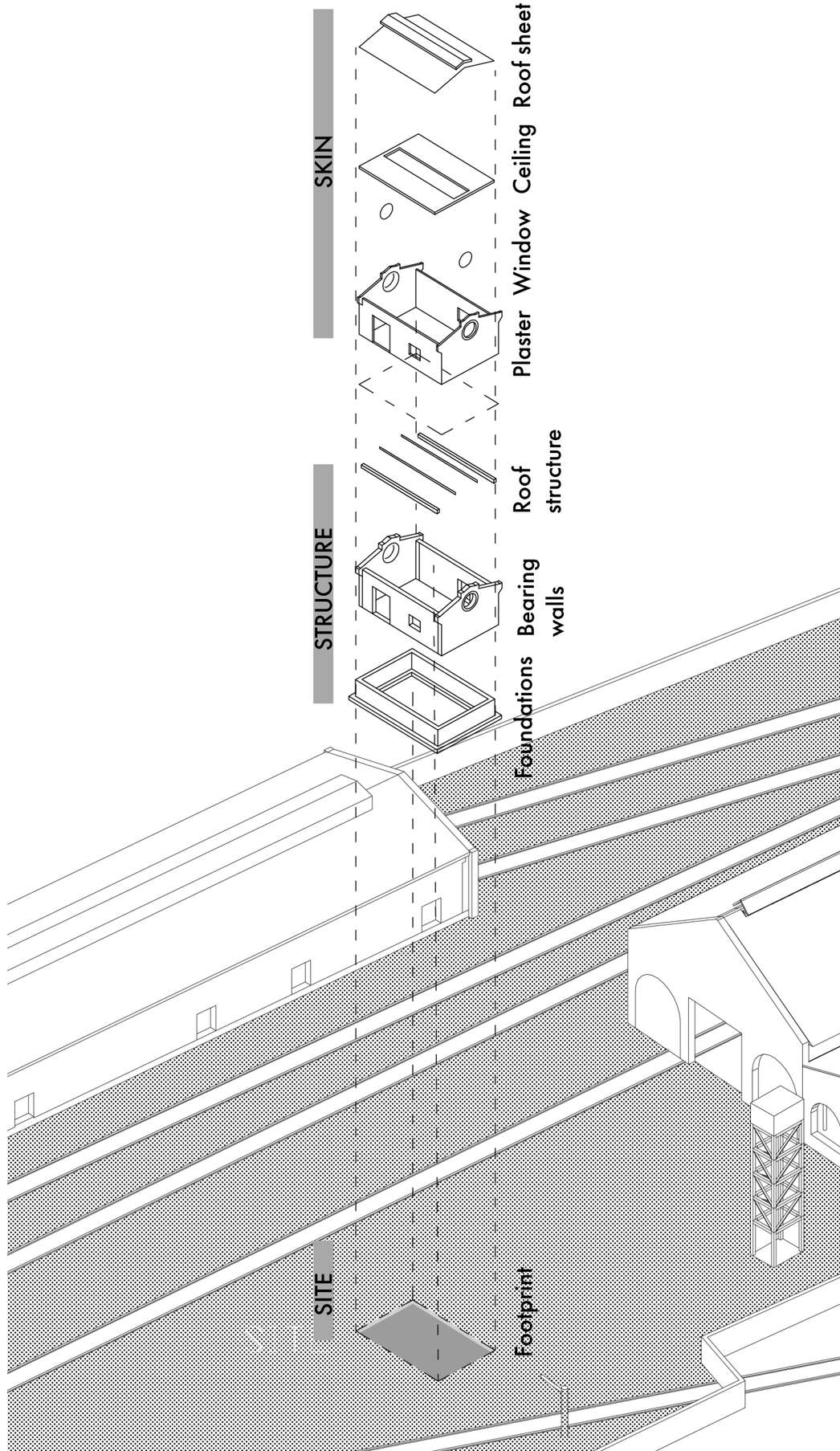


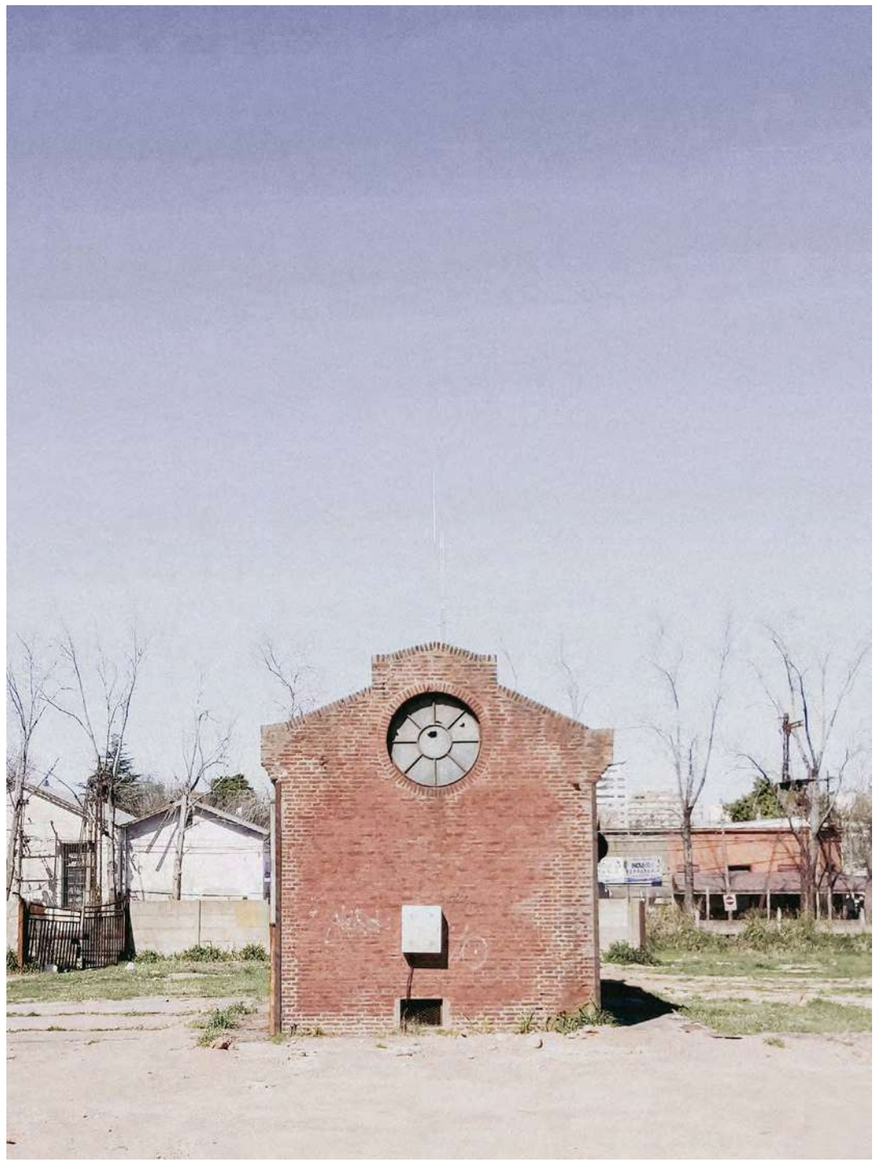
Structure

Shell Host



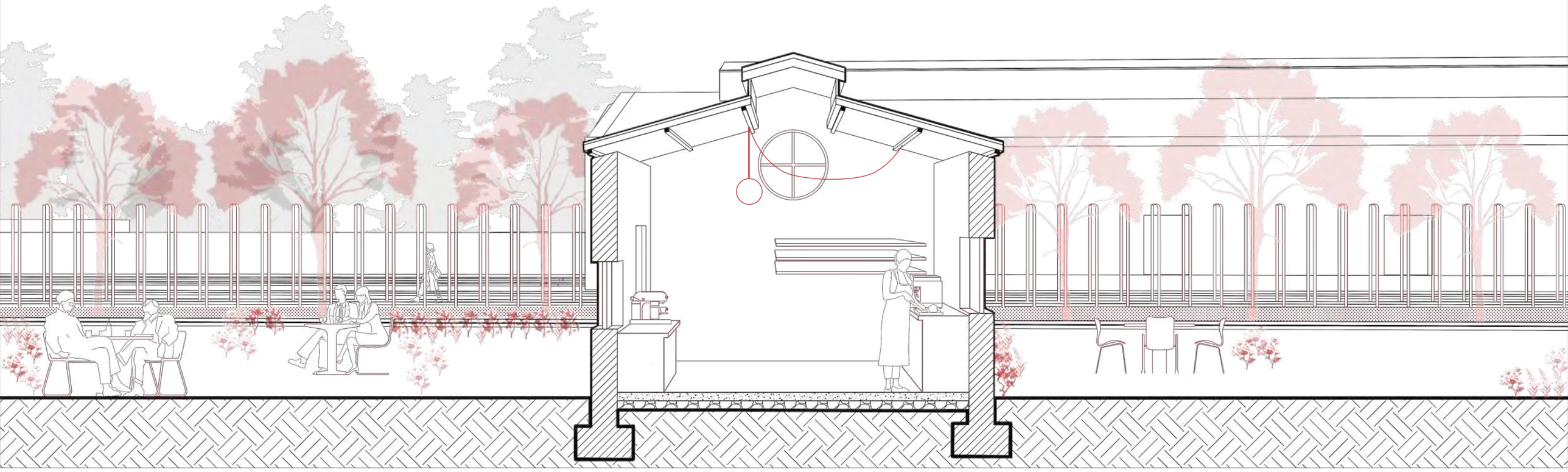
Constructivre actions proposed





Front View. Source: Own photo, 2023.

Decolouration, rust. Source: Own photo, 2023.



Building 6

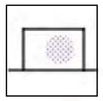
Original function: Unknown

Approximate height: 7.00 m

Approximate area: 560 m2

Approximate volume: 3920 m3

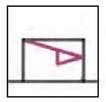
Decay



Graf ti

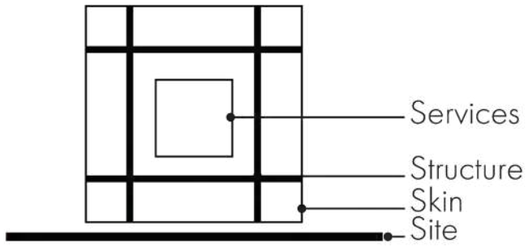
Discolouration from rainfall and staining from metallic materials

Biological growth

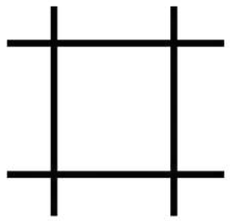


Plaster peeling off

Building 6 - As Found

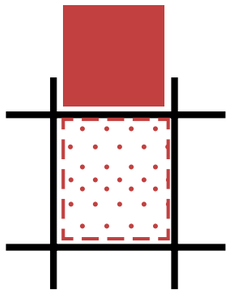


Shearing layers

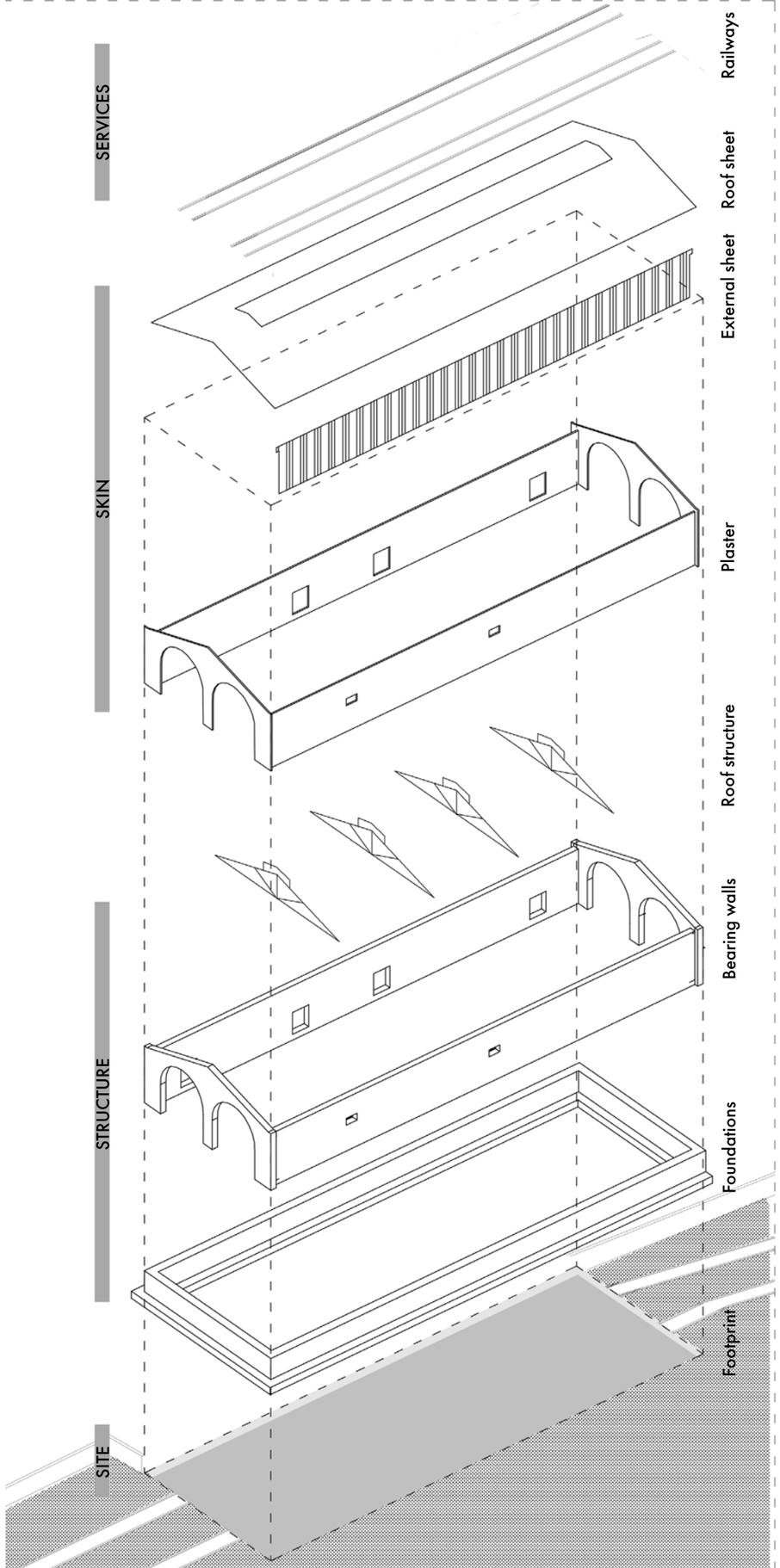


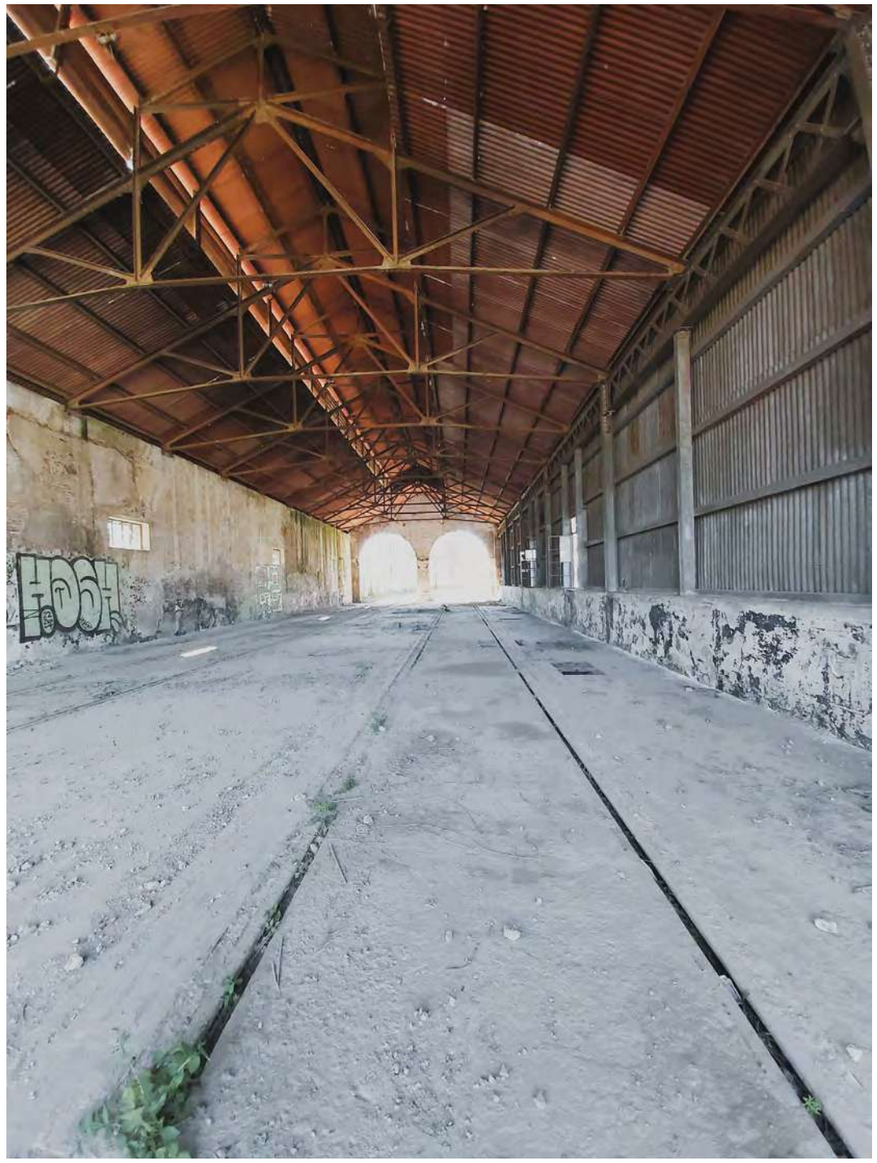
Complete structure

Shell Host



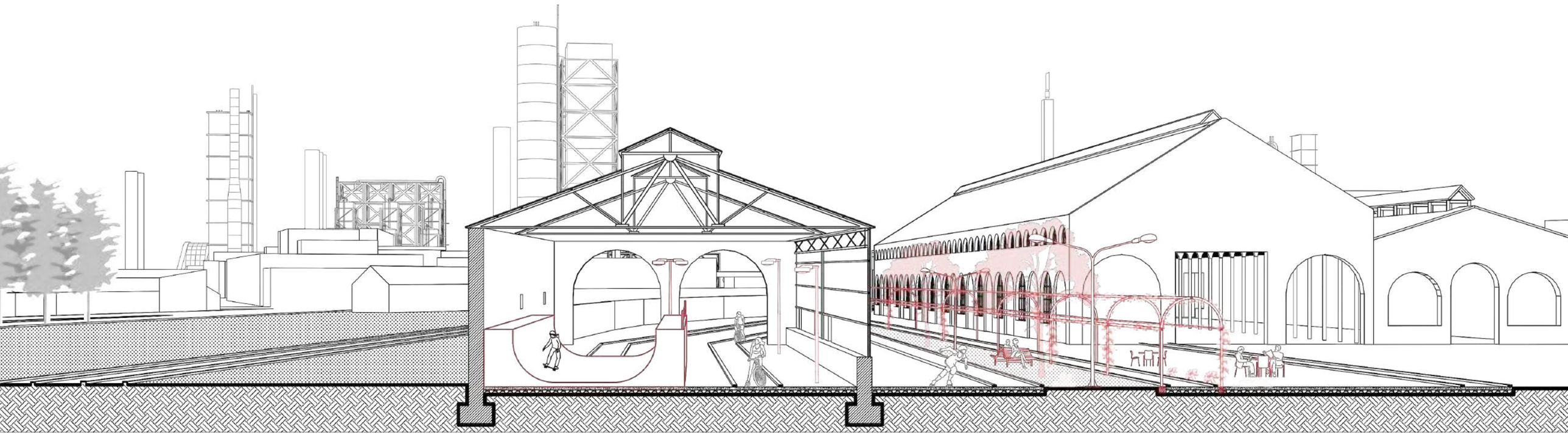
Constructivre actions proposed





Internal conditions. Source: Own photo, 2023.

Side view. Source: Own photo, 2023.



Building 7

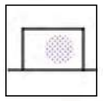
Original function: Changes and crossovers shed

Approximate height: 7.00 m to 12 m

Approximate area: 2540 m2

Approximate volume: 24700 m3

Decay

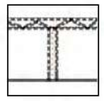


Graf ti

Discolouration

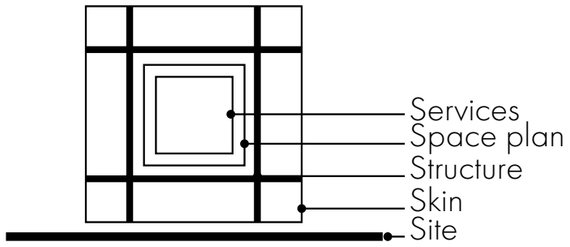
Roof tiles falling

Biological growth

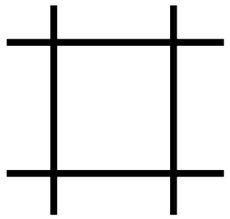


Rusty metal elements

Building 7 - As Found

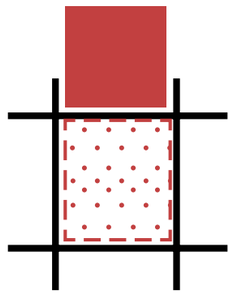


Shearing layers

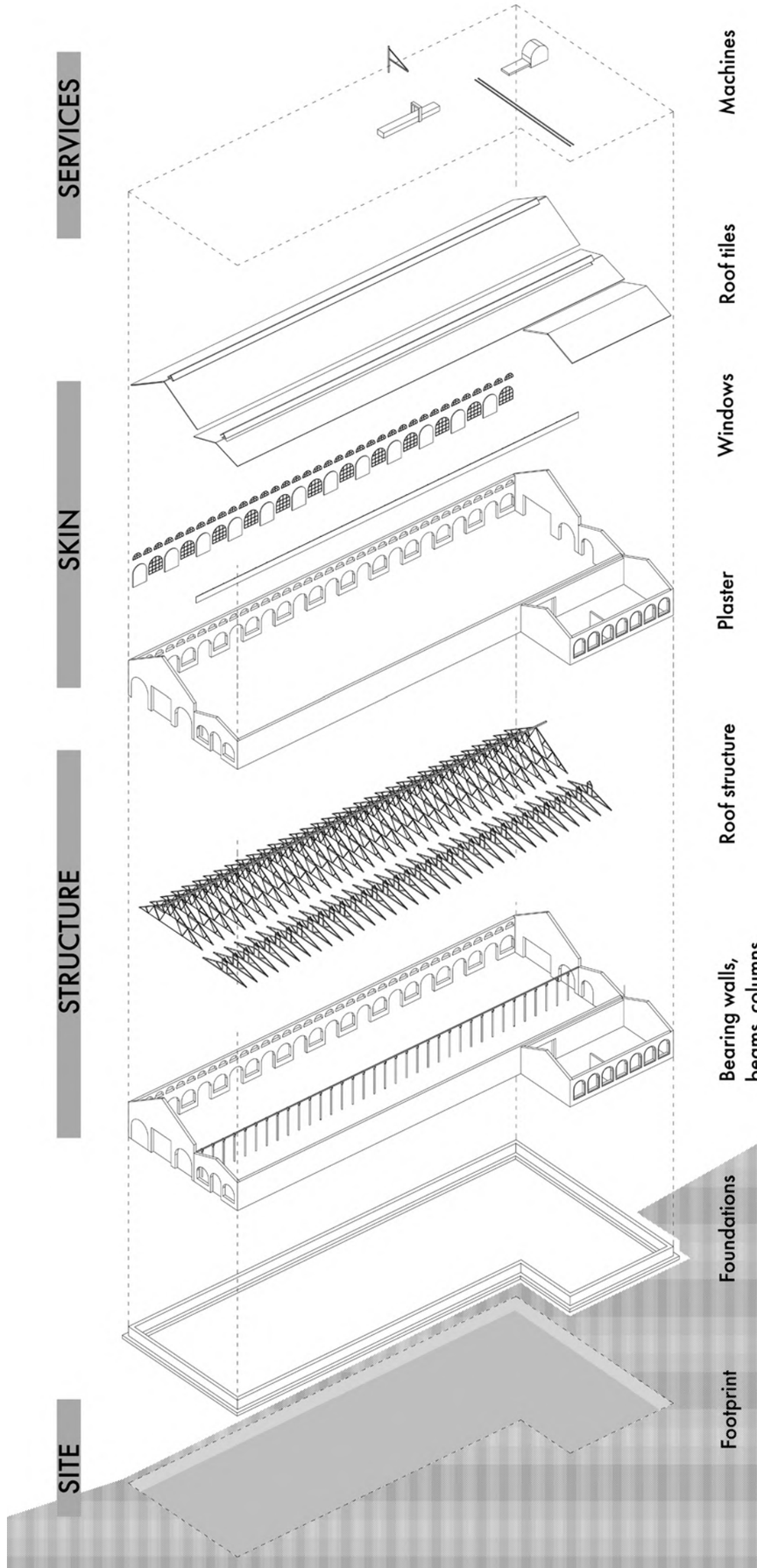


Complete Structure

Shell Host



Constructivre actions proposed



View from the train station's platform. Source: Own photo, 2023.

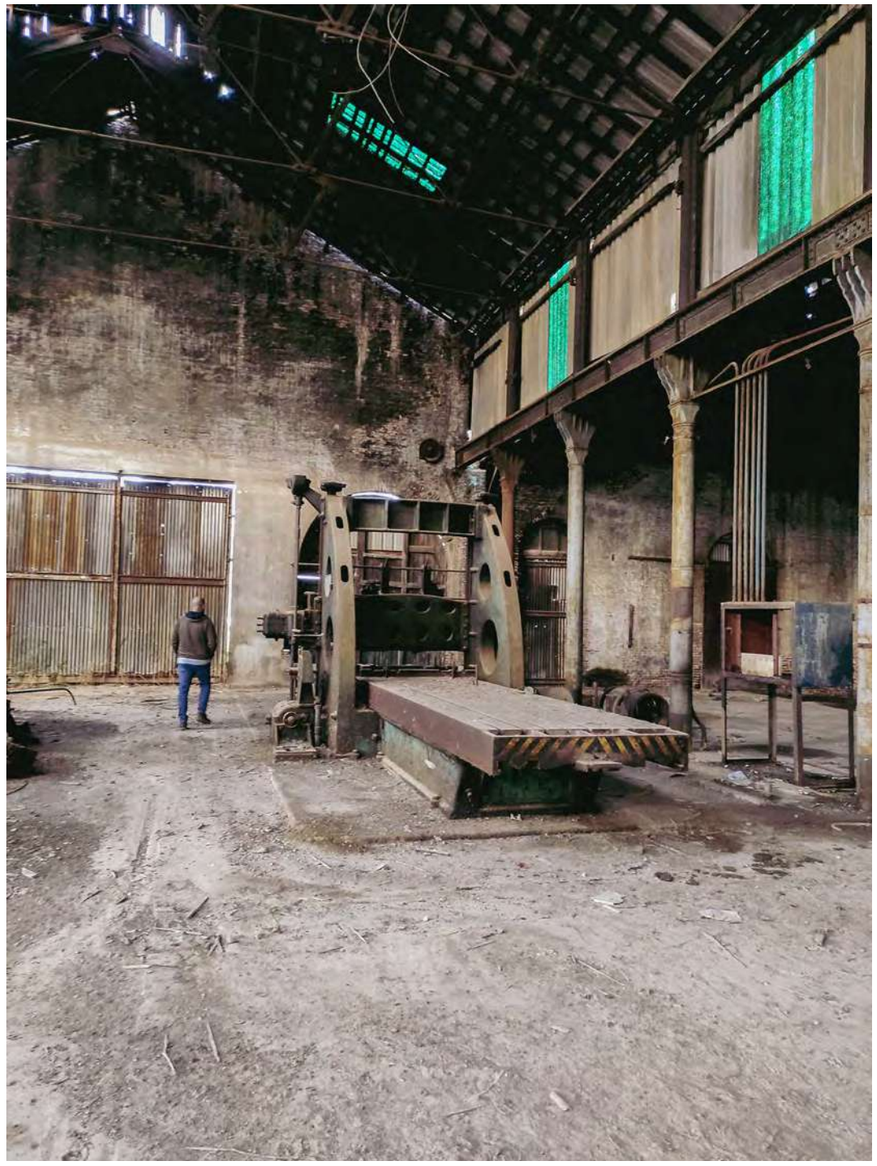
Facade with sign that reads "Sección Cambios y Cruzamientos". Source: Own photo, 2023.

Internal view from the entrance. Source: Own photo, 2023.

Internal view to the right from the entrance. Source: Own photo, 2023.

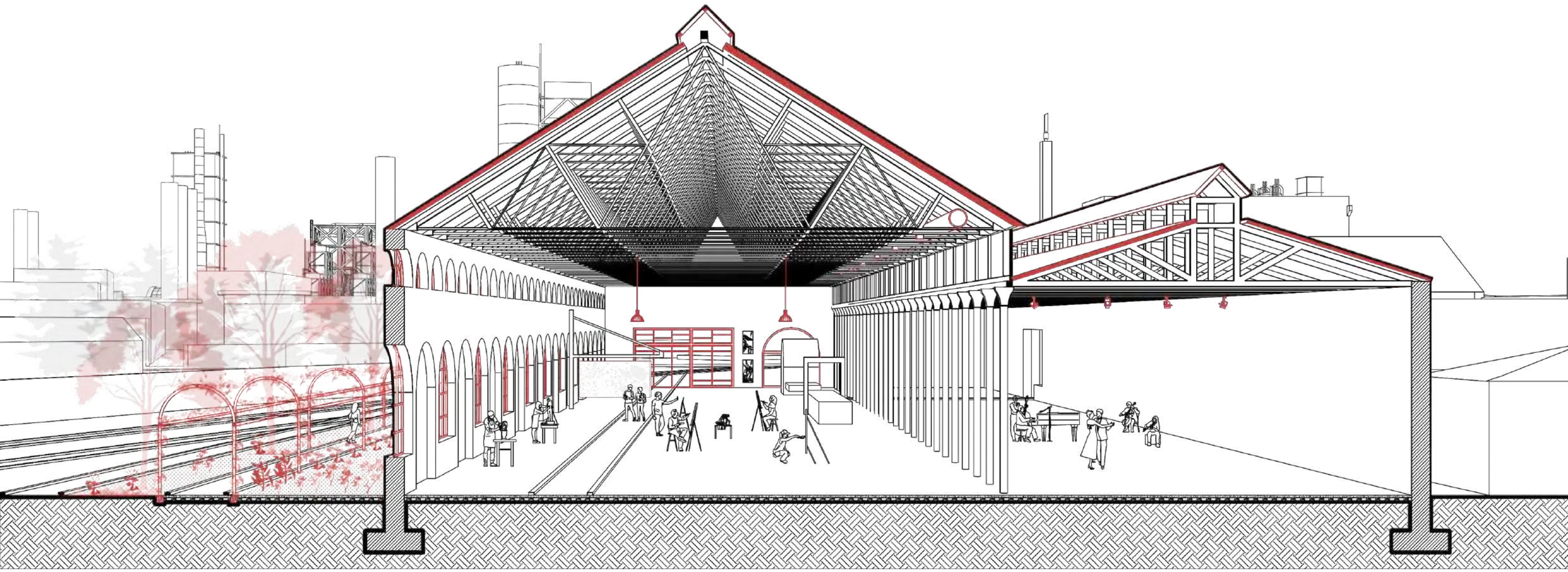
Footprints. Source: Own photo, 2023.

Internal connection to a second smaller body. Source: Own photo, 2023.



Services, wall degradation. Source: Own photo, 2023.

A mattress placed on the machine. Source: Own photo, 2023.



PartIII

VI.FeasibilityVII.FinalthoughtsVIII.BibliographicalReferences

VI. **Feasibility**

Action Plan

The action plan proposed is divided in two groups: the short term one, which can be implemented in the lapse of one year, and the long term, which would be done only after the rst group is settled.

The main priorities are to make the site safe, so cleaning and removing everything that is not needed, and making it accessible for everyone. Then tempoprary uses will lead people to get involved with the space and claim it back.

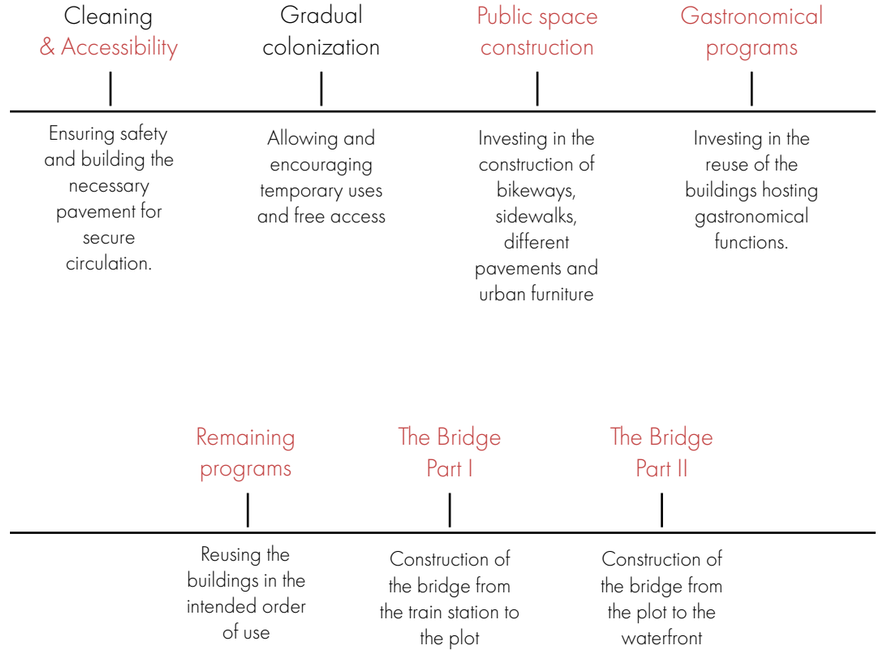
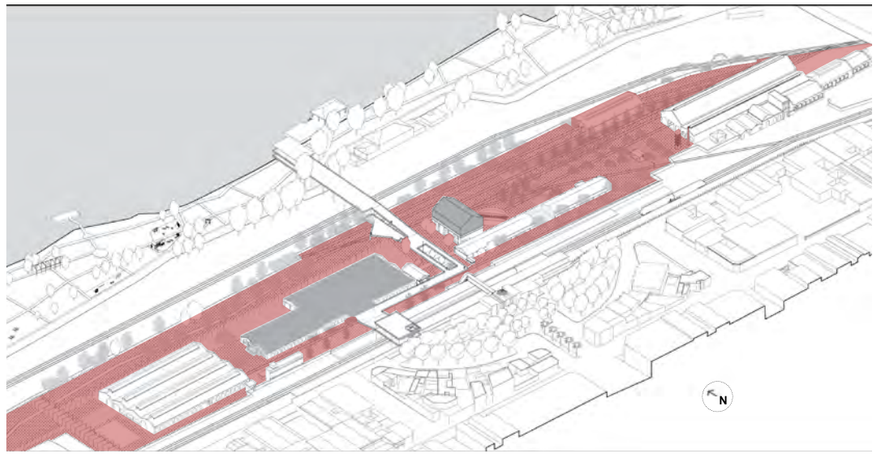
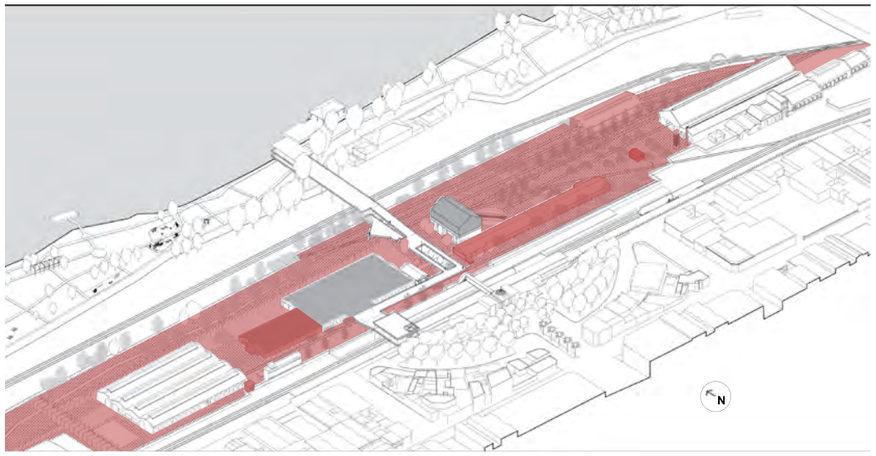


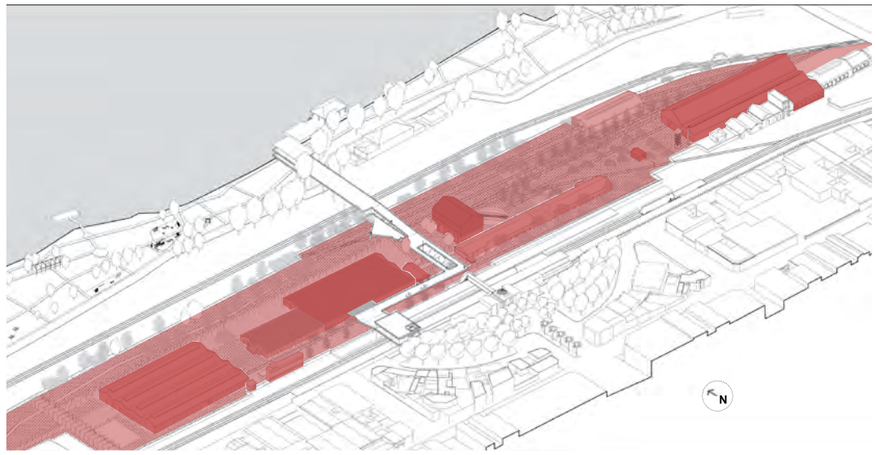
Figure 9: Action plan timeline. Own elaboration.



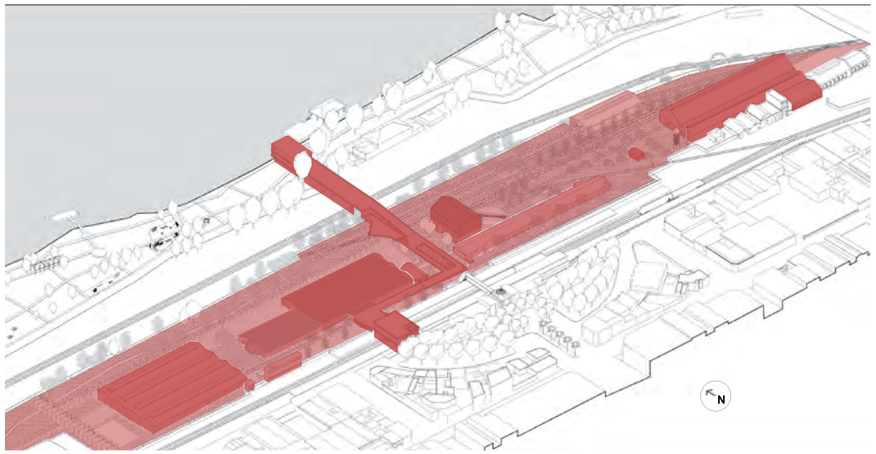
I. Cleaning, gradual colonization and construction of the public space.



II. Gastronomical programs development



III. Reuse of the remaining buildings according to the intended programs use



IV. Construction of the bridge

The activities

Aside from the proposed programs for the buildings, the activities that can lead to a *sense of belonging* may be some weekend events, such as:

-Tree-Planting events

-Local food, plants and artisans' markets

-Open air concerts, theatre plays, dance shows & art expositions

-Murals painting, street artists.

-Games and competitions.

Potential investors and advocates

The proposed investors have been selected according to their in uence in the city. For example, the companies always invest in Campana and organize events. The 'educational' ones are private schools that have many students and normally get involved in the city's activities. The 'minor industries' is based on merchants that would get bene ts right away. The 'organizations' are groups of people who could advocate and help seek funding.

Companies: Tenaris, Axion, Toyota

Public entities: Municipality of Campana.

Educational: Escuela Técnica Rocca, Unidad Académica Dante Alighieri, Universidad Técnica Nacional.

Minor industries: shops and gastronomy owners, local entrepreneurs

Organizatoins: Architects' and engineers' college, neighboorhood organizations.

Possible outcomes

What is currently an urban barrier has the potential to transform into a gathering place, not only accommodating the proposed activities but also serving as an extension to various institutions. For instance, schools could bring their students to engage in activities in the orchard for a day or to host exhibitions and public events. The municipality might organize events that attract not only the citizens of Campana but also those from nearby areas, thereby increasing tourism. The redesigned waterfront, already a space for people of all ages, would be expanded and complemented by the proposed public park.

On a different note, the issue of security will be addressed. During the night, the area becomes too dark and uninhabited. However, with the addition of urban furniture, services, and the implementation of programs such as restaurants and bars — potentially open until midnight or later — the increased presence of people will contribute to a greater sense of security. This, in turn, will continue the cycle of attracting more individuals to the area.

VII. **Finalthoughts**

These workshops have been on my mind since childhood but became more prominent with the redesign of the waterfront, allowing citizens direct access to the river and therefore a better view of the buildings. In 2021, as I stepped onto the revamped waterfront, I realized that the river was now public, no longer limited to exclusive sports clubs or requiring a trip to the island. The redesigned waterfront gave visibility to the river, offering the people of Campana a shared experience, evoking nostalgia among the older residents, and introducing the youngest to an aspect they had never encountered.

On that rst day on the waterfront with a friend, we re ected on the neglected state of the railway workshops. Little did I expect this academic journey to lead me to Italy to pursue a master's in heritage, culminating in the opportunity to write a thesis about said workshops.

Throughout the project's research and design, my main goal was to give the citizens of Campana a tangible vision for the future. Echoing Amanda Burden's insight shared during Torino Stratosferica in 2022, "if you let people see what something can be, it will get stuck in their minds, and they will ght for it. People cannot desire what they don't know they could have." While the realization of this project may not exactly match my initial vision, I hope it plants a seed in the collective consciousness of my fellow citizens. If it sparks an aspiration for the reuse of the workshops—an integral part of our landscape for generations—I will consider this thesis a success.

VIII. **BibliographicalReferences**

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