RECLAIMING INDUSTRIAL PALIMPSESTS: MUSEUMS WITHOUT WALLS FOR ADAPTIVE REUSE AND COLLECTIVE MEMORY OF POST-INDUSTRIAL SITES/

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Abstract. Abandoned industrial sites in contemporary cities are treated as urban voids which represents both challenges and opportunities. The Bagnoli district in Naples, is among one of the most relevant districts in Naples in this sense. This area exemplifies a regenerative urban void, where decaying steelworks, rail infrastructure, and industrial remnants are present. There is an opportunity in this scenario for transforming the area into living civic landscapes. This study investigates how post-industrial sites can serve as ecological, social, and cultural infrastructures which serve the contemporary needs (Ahern, 2007). This structure tries to integrate memory, heritage, and community engagement into urban regeneration. The focus is to consider this area as a museum without walls and borders that creates a living testimony of rich history of steelworks in Naples through an accessible urban park (Hayden, 1995).

For better setting the scene, a similar project, the case study of Landschaftspark Duisburg-Nord in Germany, is chosen (Latz, 2001). This park is a critical example of urban regeneration of a post-industrial site, that can present similar necessities for rehabilitation (Reed, 2005).

The research proposes interventions for Bagnoli's Mediterranean setting, including urban regeneration of public green space and architectural adaptations for existing forms. The idea of "living memory" is crucial in this study where industrial fragments mediate between past and future (Nora, 1989). This will foster inclusivity, environmental recovery, and civic identity. By considering industrial sites as urban voids that are not pure remnants but active resources, the study tries to have a model for regenerative urban landscapes that combines historical continuity, ecological resilience, and social vitality (Rossi, 1982).

From wasteland to civic landscape; Bagnoli reclaimed. Bagnoli, the western district of Naples, lies in between the Bay of Pozzuoli and the slopes of Posillipo Hill. The landscape of Bagnoli is a palimpsest of industry in the 20th century – a steel factory developed starting in the 1910s and employed a multitude of workers and turned a rural seaside into an industrial zone. This location provides expansive views of Nisida, Ischia, and Procida. However, its coastline reveals a completely different reality. A landscape contaminated by the remains of abandoned factories. Italsider, one of the biggest steelworks in Italy, was once located here. It was a large industrial complex that dominated the neighborhood. The remnants of the plant have hung over the community since its closure in 1992. The plant left behind pollution for the population and lead to economic decline for this once-thriving area. The contamination is so extreme that swimming is prohibited in the bay. Previous attempts to redevelop the site—one as a sports park and another as science museums—were unsuccessful, eventually leading to the site's complete abandonment over time (Latz, 1999). Even with the physical decay, Bagnoli's industrial past lives on in collective memory. Local communities in Naples have connections to the steelwork's era, and the remnants from massive sheds to old rail lines are regarded not just as remnants but as relics of work and sacrifices made. Here, heritage value is intangible. Regeneration will have to account for this layer of memory: reconciling valuing Bagnoli's past and its trauma of environmental degradation with a new identity. In this regard, the Bagnoli site is a shared landscape of memory where the story of a community's labor and loss are literally rooted in the land and the steel.

As Figure 1 indicates, Bagnoli was a compact industrial zone of the city where majority of the land was taken in favour of the industrial steelwork site.

Landschaftspark Duisburg-Nord: A Model for Adaptive Reuse in Post-Industrial Regeneration. Instead of treating the industrial remnants as insignificant, in the contemporary regenerative design field, they are considered as valuable resources (Mostafavi & Leatherbarrow, 1993). The concept of adaptive reuse encourages one to find an alternate use for post-industrial sites, embedding artifacts of the past to help shape the inclusive public space. This is consistent with circular urbanism, which wants to prolong the service life of built environments and materials instead of demolishing and rebuilding (Storm, 2014). To consider this approach for the Bagnoli industrial site, a similar case studies which faced the challenges of ironworks site regeneration in Germany is worth mentioning.

The Landschaftspark Duisburg-Nord shown in figure 02, is among the several important cases of post-industrial site regeneration in Europe. It is in the Ruhr district of Germany, on a site which was originally established as an ironworks. It was founded in 1902 by August Thyssen to provide iron for his steel construction, with the first blast furnace lit in 1903. Over the next few decades, it grew into a complex of furnaces, coke works, sinter plants, power stations, and casting halls. By the middle of the twentieth century it was the time of decline in the steel industry in europe. In the 1960s and 1970s, furnaces were disassembled, and in 1985 the last blast furnace was shut down. This resulted in leaving a 200-hectare ruinous landscape of rusting machinery, contaminated soils, and abandoned rail lines. Rather than demolish the site, the city saw potential in this industrial site. In 1989, as part of the International Building Exhibition (IBA) Emscher Park an international design competition was launched. In this exhibition, landscape architect Peter Latz and his firm won in 1991 with a pioneering approach; instead of erasing the past, they proposed to highlight it. Latz's design emphasized "making time visible" by preserving blast furnaces, chimneys, bunkers, and pipelines as cultural monuments, while allowing nature to reclaim the site. At the time, this approach was among the first to consider regenerating post-industrial sites while preserving their character. In this approach, Polluted soils were stabilized or planted over instead

of removed, bunkers were reused as sealed storage or as experimental gardens, and new water systems of canals and retention basins were installed to manage runoff and create ecological habitats. The park opened to visitors in 1994 and has since been developed in phases. As it can be deducted from figure 03, there is an important attempt to integrate the industrial forms shown in red within the contemporary forms. In this project many Industrial buildings were adapted for cultural use. An as example the casting hall and blower house now host concerts, theatre, and festivals, while the former power station became a visitor center and restaurant. Ore bunkers were turned into climbing gardens, a flooded gasometer became a training ground for divers, and old bunkers and walls became popular for urban climbing routes. At night, the steel structures are illuminated with colored light installations, transforming relics of heavy industry into glowing landmarks. Meanwhile, ecological processes flourished. More than 700 plant species, along with birds, bats, and insects, now inhabit the grounds, making the park both a biodiversity hotspot and a living laboratory for ecological succession.

Adapting the Duisburg Model to the Mediterranean Context. Duisburg in comparison to Bagnoli case study has critical differences. Its coast, its climate, and its cultural identity all hint at a different story. Where the Ruhr valley found rehabilitation via foresting and aquatic systems, Bagnoli has a marine landscape that can become an ecological driver. Apart from their differences, the approach in Duisburg can be re-interpreted in Bagnoli. The polluted shoreline in Bagnoli currently acts as a barrier between residents and the sea. This could be transformed through controlled phytoremediation zones, floating wetlands, and public boardwalks into a visible laboratory of coastal recovery. Instead of considering change in the polluted soils on a massive scale, as this was previously suggested in past redevelopment plans, a phased eco-remediation strategy could stabilize contamination. This will also allow gradual access to the public in the site. Architectural ruins such as sheds, chimneys, and conveyor bridges can become shade structures along pedestrian corridors, viewing platforms toward the Gulf, or hosts for solar infrastructures (Reed, 2005). Inside these bodies, a covered museum can be considered to showcase the history and importance of the Bagnoli site. Their shadows and surfaces can be reclaimed as public microclimates, making post-industrial ruins, environmental assets in a hot Mediterranean climate. Just as Duisburg allowed climbing, diving, and cultural festivals among blast furnaces, so Bagnoli could develop open-air cinemas in warehouses, maritime workshops in former depots, scientific residencies in silos, or community gardens inside ore bunkers.

Reclaiming Memory Through Space. Any attempt to regenerate Bagnoli must confront its historical and symbolic dimensions. The steelworks has long shaped Neapolitan identity. The generations of workers forged not only steel, but livelihoods, political struggles, and urban culture. Erasing completely the scene of industrial site, will result in a clean landscape with no memory. Preservation without activation would produce a museum of loss instead of museum of memory. The proposed approach insists on a third path: living memory—where architecture acts as a mediator between past and future. In this sense, memory cannot be reduced to a static collection of objects. What matters is the cultural environment they generate. This is the lived relationships between people, space, and history. This resonates with Roberto Pane's notion of Ambiente, where heritage is understood not as isolated monuments, but as an ensemble of Identity, spatial atmospheres, and everyday practices that give meaning to a place. For Pane, the authenticity of a site lies precisely in this unity of architecture, landscape, and social life. To remove the ruins of industrial sites, is removing the ambient that they created and keeping them inside the broader context of the museum without wall is using the memory through architectural elements of industrial sites as witness of time.

Applying Pane's perspective to Bagnoli means recognising the steelworks as a cultural environment, not merely a decommissioned factory. Its workshops, rail lines, yards, and workers' neighbourhoods form a network of visual and spatial relationships that continue to speak—even in ruin—of labour, hope, pollution, struggle, and pride. A regeneration guided by Ambiente concept would therefore seek to protect these relationships while reactivating them through new uses (Hayden, 1995). Industrial fragments can become thresholds, shelters, gardens, or stages. Communities can gather in different occasion using the industrial fragments as forms of collective gathering points. There is also vast opportunity in recreation of green space in this wide area that can increase the ecological benefits of this regeneration act.

Here, architecture does not stage an open-air museum of the industrial past, nor does it overwrite it with a neutral tabula rasa. Instead, it constructs a living environment of memory, where the past and present coexist productively. This approach foregrounds the dignity of labour, acknowledges environmental wounds, and offers future generations a tangible, inhabitable history. In Pane's terms, the goal is not to preserve an object, but to sustain an Ambiente—a cultural atmosphere in which Bagnoli's identity can continue to evolve.

Design Framework and Strategies for the Regeneration of Bagnoli: Toward a Museum Without Walls. The transformation of Bagnoli from an abandoned industrial wasteland into a lived civic landscape requires a well-thought design methodology. This method should simultaneously respect the historical layer. It should also try and restore its ecological systems and reopens its coastline to the public. In this sense, the proposal operates as a museum without walls. As shown by Figure 04, in similar approach to Landschaftspark case study, there is an attempt in this project to integrate better the industrial assets into contemporary urban fabric. It is a spatial platform where architecture and forgotten heritage converge together. This will construct an open, accessible, and evolving cultural territory. The design framework is focused in four interconnected principles: adaptive reuse, ecological regeneration, memory-based interpretation, and public activation. Adaptive Reuse as Spatial Backbone

At the core of the project lies the reinterpretation of existing industrial structures as architectural infrastructures for civic life (Plevoets & Van Cleempoel, 2019). Rather than demolishing the large sheds, silos,

chimneys, and conveyor frames, the design adopts a strategy of minimal and reversible intervention. The large longitudinal shed visible in the figure 05 previously was a decaying steel skeleton. This structure becomes a principal anchor for the regenerated landscape. Its restored roof and preserved façade rhythm allow the building to maintain its industrial identity. whereas its interior is adapted for exhibitions, open-air galleries, and flexible public events. As figure 06 shows the site in view, new pavilions, designed with light materiality and restrained forms, complement the monumental presence of the industrial structures. They function as interpretive centers, cafés, research stations, or community workshops. These additions deliberately avoid competing with the historic architecture. Instead, they strengthen its legibility and expand its functionality. The adaptive reuse strategy therefore positions the industrial buildings not as relics, but as spatial mediators between past and future. This enables the site to hold memory while supporting contemporary demands.

Ecological Regeneration as Territorial Infrastructure

The landscape strategy addresses not only aesthetic transformation but also ecological remediation (Ahern, 2007). Bagnoli's soils was long contaminated by heavy industry. This site is reimagined as productive ecological infrastructures which is capable of self-restoration. The project employs a phased remediation approach that allows the landscape to open gradually to the public. This can happen while the site undergoes ecological healing. In the proposal, phytoremediation fields, sediment gardens, and constructed wetlands occupy the former industrial yards. This will convert polluted terrain into visible laboratories of environmental recovery. This approach results in having living ecological machines, demonstrating the potential of nature-based solutions in post-industrial regeneration. The design uses the former rail corridors and production lines as solution for new circulation paths and planted terraces. The greenery is designed to follow the industrial former traces. This allows ecological processes to highlight the site's spatial history. As time passes, reforested slopes and biodiversity corridors reconnect Bagnoli with the Mediterranean coastal ecosystem. This phenomenon restores habitat conditions once erased by industrial expansion.

Concluding remarks. The regeneration of Bagnoli demonstrates how post-industrial sites which are often dismissed as obsolete or contaminated voids, can become powerful catalysts for cultural, ecological, and civic renewal (Loures, 2015). With considering them as industrial palimpsests, this study argues that the remains of steel production, contain embedded narratives of labour, conflict, and identity that cannot be replaced by a neglecting approach of total demolition. Instead, they must be reinterpreted as active element of design, within contemporary urban transformation. The Landschaftspark Duisburg-Nord as an example illustrates how adaptive reuse and ecological remediation can exist alongside. This offers a compelling strategy for reclaiming industrial ruins without erasure (Rossi, 1982). Yet Bagnoli's Mediterranean context, its coastline, and its deeply rooted collective memory require a distinct methodology. A methodology in which social meaning is balanced with environmental recovery. This project reframes Bagnoli not as a decommissioned factory, but as a cultural environment whose authenticity lies in the reciprocal relationship between architecture and industrial heritage. The proposed design strategies which often include minimal intervention, ecological infrastructures, memory-based routes, and the reconnection of the waterfront, construct a museum without walls, where history is not fossilized but made inhabitable. Through phased remediation, adaptive reuse, and the integration of public programs, industrial fragments revive again. They become thresholds, shelters, ecological devices, and collective gathering spaces. Ultimately, the regeneration of Bagnoli becomes an act of cultural responsibility. It celebrates industrial ruins as resources for learning, reflection, and renewal of the neighbourhood. By aligning continuity inside historic industrial elements and ecological resilience in Bagnoli, the project offers a model for post-industrial landscapes. A model in which ruin becomes resilience also decay becomes possibility. In this sense, Ambiental memory becomes a dynamic foundation for future urban life.

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Figures.

FIGURE 1 - Bagnoli site past.
FIGURE 2 - Landschaftspark Duisburg Nord, Germany.
FIGURE 3 - Site of Duisburg in abstraction (in Red industrial buildings, in black contemporary buildings).
FIGURE 4 - Site of Bagnoli in abstraction (in Red industrial buildings, in black contemporary buildings).
FIGURE 5 -Bagnoli state of the art.
FIGURE 6 - Project proposal for Bagnoli site

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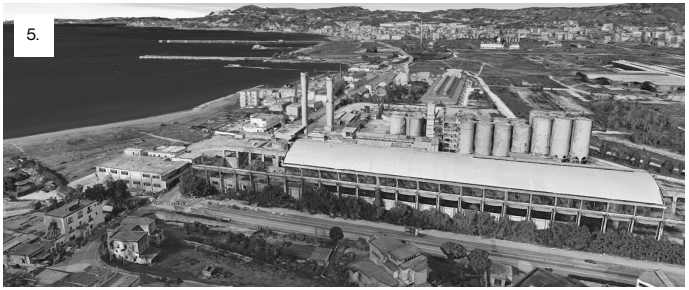
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LIVING AFTER THE DISASTER, THE CASE OF POST-EARTHQUAKE EMERGENCY HOUSING IN CENTRAL ITALY (2016)/

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Abstract. This contribution focuses on architectural resilience in extreme conditions, particularly through the lens of self-sufficient refugee settlements and emergency architecture. The 2016 earthquake in Central Italy caused extensive damage and numerous casualties, especially in towns such as Amatrice-almost completely destroyed-Accumoli, and Arquata del Tronto.

One of the most pressing issues in the aftermath was the urgent need to provide housing for displaced residents who wished to remain in their native areas, rejecting relocation to distant hotels.

The aspect I would like to discuss, however, concerns the depth of design and the quality of the interior spaces, which in the cited case appears to be minimal or entirely absent. The same can be said for the aggregation of housing units and the quality of the urban space that is created-an element that should help restore the sense of community torn apart by the earthquake.

Through the analysis of high-quality interventions in similar emergency contexts-characterized by comparable cost constraints and tight execution timelines-it is possible to identify the qualities that emergency housing units must possess, both individually and as part of a larger aggregation. While maintaining the goal of creating affordable, emergency housing for all, the concept of home held by the inhabitants of a region-shaped by their culture and history-must be the starting point. Lastly, particular attention should be given to the issue of the reversibility of the intervention, as well as the potential for repurposing and reusing materials-features that were planned but remained merely theoretical due to the rapid deterioration of components and illogical choices, such as building on concrete platforms that are difficult and costly to remove once the housing units are dismantled.

Introduction.

"Cities, like dreams, are built of desires and fears..." (*Calvino, 1972*)

An earthquake can destroy entire cities or damage them severely, forcing inhabitants to abandon their homes temporarily or permanently, as has already happened many times in the past.

Similarly, other climate-related natural phenomena-now increasingly frequent in recent years and in an ever-growing number of countries-can cause devastation, (Piccardo, 2006).

Looking at the photo of the red zone of Amatrice, or of any other affected town - the 2016 earthquake caused immense damage and numerous casualties, especially in the municipalities of Amatrice, which was razed to the ground, Accumoli, and Arquata del Tronto, along with many other consequences that were extremely complex to manage - it is possible to grasp the scale of destruction produced by the quake as it devastated both the built fabric and the human relationships of the population that inhabited the town and nearby villages .

Complexity. The topic of the post-earthquake phase has often been addressed from multiple angles: from the architectural and urban-planning perspective, but also from the sociological standpoint and that of the psycho-physical well-being of the surviving victims of the disaster (Artoni, 2018 and Grappasonni, 2019).

Time becomes a decisive factor: on the one hand, there is the will to clear the areas covered by rubble, initiate the design and authorization procedures - different for public and private works - and eventually rebuild the structures; on the other hand, there is the need to comply with complex Italian regulations, whose lengthy processes have, even now, almost ten years later, made it impossible to complete the reconstruction.

Once the immediate emergency phase has passed, and before considering the stages that will ultimately lead to reconstruction in its various forms, arises the need to find housing for those who have lost their homes.

The total number of SAE requested in the Amatrice municipality is 499 (Lazio Reconstruction Special Office data), a huge number compared to the number of residents before the earthquake (approximately 2,500, ISTAT data). Refusing relocation to hotels far from the area devastated by the earthquake, they wish to continue living where they were born and where they work.

The intervention of the Civil Protection Department, assisted by the army and other law-enforcement agencies, dictates that the very first post-earthquake response relies on available and still usable public facilities, supplemented by temporary structures such as tents or containers; the same occurs worldwide in response to all types of disaster.

Subsequently, less precarious yet still temporary structures are set up.

We must reflect on the adjective "temporary". Can we call something temporary if it lasts more than ten years? Can we consider the emergency phase and the removal of rubble to last more than two or three years?

These time frames match the reality, and thus the notion of a short-term duration-something unstable, non-lasting, or non-definitive-blurs into the idea of a long-term provisional state, a semi-definitive temporary condition that persists until further notice.

My contribution aims to address the theme of "Architectural resilience in extreme conditions", and in particular "Self-sufficient refugee settlements and emergency architecture", with specific reference to the events that followed the 2016 Central Italy earthquake.

Analyzing and comparing the emergency housing solutions built in Italy after the latest earthquakes, Colfiorito 1997, L'Aquila 2009, Emilia Romagna 2012, is very difficult.

Each intervention differs from the other due to different political and