

Promoting Industrial Heritage

Greta Montanari*

Architect, Grant Researcher at DIAPReM, Department of Architecture of the University of Ferrara, via Quartieri 8, 44121, Ferrara (FE), Italy

Email: greta.montanari@unife.it

Abstract - Countless are abandoned industrial buildings that dominate the skyline of today's urbanized areas and which, thanks to their imposing size, have now become part of all those intrinsic characteristics that make up the identity of a place. For many, these buildings are part of a historical moment that saw them as a symbol of progress and wealth, but following the awareness of planetary pollution and the need to reflect on the theme of environmental protection, the situations in which these industrial complexes have been abandoned have become increasingly common. To prevent these buildings from being left in a state of neglect, a mere memory now without function, how to redeem them giving industrial buildings a new life in the changing society? Often a demolition and reconstruction process deprives a place of its collective identity, which could instead be maintained in a strategic operation of "adaptive reuse". Will be proposed a reflection on some examples of the successful redevelopment of industrial complexes in Europe will be illustrated a study done in collaboration with Betrice Mazzucco on the regeneration of the industrial area ex-SAROM on the dock of the city of Ravenna, aiming at the integration of its two cooling towers into a multifunctional park. The Hammon towers, visible from every point of the city, have become for the inhabitants an essential landmark, but they are located within the disused factory area which makes their integration impossible into everyday urban life, giving us an ideal example to work on.

Keywords - industrial heritage, regeneration, adaptive reuse, Ravenna, ex-SAROM, reversibility

-----X-----

De-industrialization process

For a long time, and often still today, industrial buildings are not valued as they deserve for their rugged beauty and search for extreme functionality. The enhancement and reuse of industrial architecture began following the de-industrialization period and it opens the door to an archeology that wants to redeem the industrial heritage of buildings that were formerly factories and which could now acquire new functions within the community. The process of de-industrialization that began in the 1970s has generated "grey zones" in Europe in areas where industrial facilities were once located, now separated from urban life. Countless abandoned industrial buildings dominate the skyline of today's urbanized areas and which, due to their imposing size, have now become part of all those intrinsic characteristics that make up the identity of a place (Camporesi, 2016).

For many, these industrial buildings are part of a historical moment that saw them as a symbol of progress and wealth but following the awareness of planetary pollution and the need to reflect on the theme of environmental protection, situations in which these industrial complexes have been abandoned have become increasingly common, no longer a symbol of wealth but of past abuse of natural

resources. Due to the passage of time and anthropic abandonment, these manufacturing plants, once a symbol of wealth and progress, find themselves to be silent spectators of the urban life that happens around them, no longer part of it. The risk is that over time this industrial heritage will completely lose its meaning and value, both in architectural and historical terms, inevitably leading to the demolition and consequently the cancellation of that piece of history that has seen them as the main character of the productive evolution of society.

Adaptive reuse

Moreover, in many cases, the integration of these buildings with the surrounding context is undeniable, and we have often witnessed the population's opposition to the plans to demolish these industrial giants, which the community now considers part of the area's history. In fact, one of the most interesting features of the processes that seek to restore meaning to these "urban voids" is the effect of strong social and cultural involvement that is usually triggered as a result. Often a process of demolition and reconstruction deprives a place of its collective identity, which could instead be maintained in a strategic operation of *adaptive reuse*: this is an intervention where it would not be performed on the

building an intervention of philological restoration but a readaptation of the structures to give those buildings a new life. Technically *adaptive reuse* refers to a procedure of reusing an existing building for a different purpose from the one it was originally built or designed for. The population usually responds better to a process of adaptation and change of function with the retention of existing buildings than to demolition and new construction.

Therefore, the theme of reusing existing buildings and redeveloping highly strategic urban areas, such as former industrial areas, becomes central. In fact, they have characteristics in common that make them particularly interesting: location adjacent to the city and often in correspondence of a waterway, high size of the area, low density of building, often developed in height and large industrial buildings easily reusable. In most cases where industrial regeneration projects have been successful, it has been because of the ability to exploit the qualities of these buildings to become real containers, both because of their large size and because of their flexible character, suitable to accommodate the most diverse uses. Reversibility is certainly a very topical issue and can be considered one of the most interesting aspects of the recovery of industrial buildings, thanks to their adaptable spaces according to different needs. Thanks to new technologies, these industrial shells become a stage for introducing new building strategies in the context of reuse, for an architecture based on a circular strategic design that goes hand in hand with environmental regeneration (Plevoets, Van Cleempoel, 2019). The phenomenon of adaptive reuse, therefore, aims to reconcile the gap between the original functions of buildings and the emerging needs, giving rise to a transformation of spaces thanks to an effective and sustainable design that allows a fast and dynamic updating of these spaces. During the years following deindustrialization, there have been several examples of reuse and redevelopment of industrial areas, which have given rise to various urban regeneration projects that are still working.

Some Examples

The most striking example and on a larger scale is the redevelopment of the Ruhr area, an area of over 4,000 square meters, located in the north-western part of Germany, where the land rich in coal and iron allowed the birth of one of the largest iron and steel mining districts in Europe. But after the oil shock of 1973, the mines began to close and the choice of Germany was not to demolish but to transform: more than 1,000 industrial monuments were recovered, some with a museum function in memory of their previous function, others completely changing their use. In particular, the Zollverein mine near Essen has become an emblem of how industrial heritage can be given a second life: as early as 1987, it was planned to restructure the site to use it as a catalyst for social and cultural transformation.

Today Eisbahn Kokerei Zollverein is a multifunctional park that fosters the creation of a new cultural environment in the region, based on a process of reconversion of the local economy, promoting the redevelopment of the area and new development prospects for the local community. (From the research project Reuse). One of the keys to the success of this redevelopment was the widespread strategy, which took place by entrusting the general master plan to the Dutch architect Rem Koolhaas who, with his studio, carried out an environmental redevelopment project that provides citizens with a cycle-pedestrian path that retraces the former industrial route marked by the rails. A design solution that recalls an important historical phase for the country as a great iron and steel mining power and that at the same time provides for a redevelopment of the landscape and a widespread network of urban services. Another successful example of industrial building rehabilitation can also be found in Liverpool in the context of the old port warehouses and offices. Albert Dock is noted for being the first structure in Britain to be built entirely of cast iron, brick and stone, without using wood and consequently fireproof. In 1972 Albert Dock was closed and in 1981 began a restyling work that led to a transformation of the buildings in which today tourists find museums, such as the Tate Liverpool, hotels, restaurants and the Beatles Story, dedicated to the musical group that was born in this city. Today, most of the city's tourist economy revolves around this building (Brown, 2017).

The case study of ex-S.A.R.O.M. (Società Anonima Raffinazione Olio Minerale)

The ex-SAROM industrial area, on the Dock of Ravenna, represents an ideal example of a hypothetical redevelopment of an industrial zone and reuse of its buildings. The site is located relatively close to the city centre, bounded by the Candiano Canal to the north and the Via Trieste highway to the south, but the site seems extremely remote and difficult to reach. The strong caesuras between the lot and the historic city are mostly defined by a fast road system surrounding the area and the private ownership status of the lot, factors that cause an abrupt interruption of the bicycle and pedestrian promenade on the shore of the Dock.

After a careful historical and geographical analysis, we also focused on the population and especially its relationship with the factory. The documentary film "Il Gigante di Ravenna" tells the story of the construction of one of the largest chemical plants in Europe, conceived by the first President of ENI, Enrico Mattei, entrusting it to ANIC, under the direction of Engineers Angelo Fornara and Gino Pagano, and choosing Ravenna as the site for its construction. The Petrochemical Complex used methane gas, discovered by AGIP in the Po Valley and off the coast of Ravenna, gas which was used for the first time as a raw material for the production of chemical products. Once the concession was obtained in December 1951, the works started,

carried out by A.C.M.A.R., born in the same year. In the first years the factory, under the direction of Attilio Monti, was refined mainly for the English B.P. (British Petroleum) and the Dutch Shell. The landscape, which previously hosted a naturally marshy area and pine forest, changed drastically in a few years, replacing the natural elements with an artificial world of platforms and chimneys, a symbol of the economic and social transformation that the factory brought. Monti left the presidency of S.A.R.O.M. spa at the beginning of the eighties; oil refining was no longer a flourishing market as it had been before and the refinery closed in 1985. Later, the property became the property of Agip Petroli, which used the plant mainly as a fuel depot. Subsequently, the area became the property of the Eni group (Biscioni, 2005). Between the '50s and the '80s, the factory brought a radical change not only to the society but also to the landscape of Ravenna: still nowadays the two cooling towers, called Hammon towers, are a historical bulwark of what happened and the S.A.R.O.M. factory remains an iconic place for the contemporary collective imagination, made immortal by the famous masterpiece of Michelangelo Antonioni's cinema "Deserto Rosso", where the cooling towers stand out in the landscape remaining a constant landmark.

In 2011, a long discussion was ignited to decide whether or not to demolish the towers in the process of redevelopment of the area. Many citizens, linked to the period of an industrial Ravenna, were firmly opposed, believing that both buildings should be preserved, protected as historical monument that has long been integrated into the surrounding landscape. Even though the footprint of the towers is not particularly large, their demolition seemed to be the main condition to advance the redevelopment project of the area, which included the arrival of a nautical centre and the creation of about 5000 new jobs. Following the opposition of the citizens of Ravenna, who were against the demolition, in 2013 the funds allocated to the so-called "Cittadella della Nautica" were diverted to the university hub. Today the "Hammon" cooling towers of the factory are the last bastion of the former "S.A.R.O.M." area and the area is still closed to the public due to the process of phytobonification on-site by Eni Rewind.

From Silvia Camporesi's photographic exhibition "Sarom", from the article of S. Simoni



The will to rehabilitate this area and to involve it again in urban life is evident in the citizens, in whom arises the curiosity to rediscover an area where for years access has been forbidden. In the past few years, photographic tours have been organized to catalogue and keep the memory of the towers and in July 2021 Silvia Camporesi's photographic exhibition "Sarom" was opened to the public, which manifested itself in the immersive installation "Appunti per un Terzo Paesaggio 2021" (Notes for a Third Landscape 2021) curated by Sabina Ghinassi, recalling in its title the famous definition by Gilles Clément (Clément, 2014).

In order to arrive at the proposal of a hypothetical redevelopment of the site of the former S.A.R.O.M. refinery, the GIS data provided by the regional site of Emilia Romagna were consulted, providing necessary parameters for a reading of the area on a territorial scale. The objective is to restore an area that today is in a state of disuse and to bring back a strong identity that years before had characterized it. To do this, the POC of Ravenna (Thematic Municipal Operational Plan), approved in February 2015 by the city council, was consulted. This document insists on the sector of the city dock and is composed of compartments to be redeveloped, redeveloped compartments and external compartments, such as the FS station, the former freight yard and the Park of Theodoric. The main idea of the POC is to build a single territorial system that stretches from the city to the sea, to enhance the role of Ravenna, as a "gateway to the sea", re-establishing the urban functions in an industrial port area largely abandoned but partly still operational.



Hypothetical bicycle and pedestrian path that connects the natural places around Ravenna (image from the thesis study done on the area, in collaboration with Beatrice Mazzucco):



The lack of a green lung close to the city and the previous status of the lagoon oasis of the site led to the decision to rethink the former S.A.R.O.M. area as a new residential neighbourhood where 76% of the area was dedicated to a large park,

characterized by a constant differentiation of green and an educational path to discover the landscape. It has been decided to partially reintroduce the natural environment of the marshy oasis that preceded the construction of the former S.A.R.O.M., to restore the connection between the freshwater oasis from Ravenna to the sea. This particular ecosystem, gradually formed over the millennia, thanks to the sediments of the rivers flowing down from the Alps and the Apennines towards the Adriatic Sea, has shaped a delicate and unique landscape that has remained underestimated (Pupillo, Montanari, Gasparini, Spagnesi, 2018).

In order to protect this natural area, particularly at risk, a pedestrian cycle path of minimal impact has been conceived, which starts from the city dock crosses the new city park located in the former S.A.R.O.M. factory, continuing through the countryside of Ravenna, through the marshy oasis, until reaching the sea. In this way, we intend to create a tourism aware and respectful of the territory. In fact, the nature trail is designed to have a low impact on the landscape both from a visual point of view and of the activities proposed: it is thought of as a simple slow road immersed in the green, enriched only by the services necessary for shortstops and observation.

The two cooling towers remain in the park a landmark visible from all around and take on a new function as reception points for the immersive and educational experience inside the park.

The two industrial buildings are not altered in their architecture: new transparent and light structures are hypothesized to be inserted at the base of the two towers, with a semicircular shape, allowing visitors to walk inside the towers and appreciate their original spatiality. Inside the new buildings, a variety of uses are added: information and reception, bicycle rental, catering, changing rooms and services for outdoor sports activities. It is therefore proposed a re-integration of the dock in the city life, but no longer with a commercial function, but a place full of recreational and sports activities. In an operation of requalification of disused urban areas through commercial operations of waterfront enhancement, particular attention must be paid not to incur the risk of standardization of the intervention: often the same strategies are used, treating similarly different cities and different social contexts.

As a result of this phenomenon, a place devoid of authenticity emerges, a mere container of functions without its own identity, resulting in the emergence of places known as "international blandscapes sameness" (Definition of "International blandscapes sameness", landscapes without identity, from Short, 1989). For this reason, the differentiation of the greenery and the paths that cross it is a fundamental element of the project, which allows the site to maintain a strong identity in each of its spaces. In particular, in the northeast of the park botanical gardens are alternated with museums and educational buildings, all

characterized by a circular shape, tracing the geometry of the former tanks of the ex-SAROM. In the central area of the park instead, on the banks of the Darsena, the ancient oasis mentioned above is restored: this marshy area is located in front of the Monumental Cemetery of Ravenna and establishes with it a silent dialogue of mutual respect.

The main intention of the project is therefore to introduce in the collective imagination the idea of the former S.A.R.O.M. factory as a public place, indispensable for the psycho-physical well-being of the city, in an attempt to fight the privatization of this area and to claim this historical place as a space for people, for leisure and socialization. The similarity between the problems encountered in this case study with other cases in which are former industrial areas, helped us to understand from previous examples how to develop the design method. At the same time, however, this comparison also led us to understand how much each single process should be treated as a *unicum* and how its integration with the community and the history that surrounds it is the key to the success of such an intervention.



The naturalistic oasis restored in the project (image from the thesis study done on the area, in collaboration with Beatrice Mazzucco)

BIBLIOGRAPHY

Biscioni R., *Il porto di Ravenna fra Ottocento e Novecento: un percorso fra fotografia storica e archeologia industriale*, in *Ricerche Storiche*, 2005, Ravenna, pp. 148-153

Brown, G.P., *The Edge of Creation. Competitive Territories and design Networks*. pp. 159-164. ISSN 2239-4222

Camocini B., *Adapting reuse: strategie di conversione d'uso degli interni e di rinnovamento urbano*, Franco Angeli Editore, 2014

Camporesi P., *Le belle contrade. Nascita del paesaggio italiano*, Milano, Il Saggiatore editore, 2016

Clément G., *Manifeste du Tiers paysage*, Sens et Tonka, 2014

Mancuso S., *Plant Revolution*, Firenze, Giunti Editore, 2017

Marini S., *Architettura parassita, strategie di riciclaggio per la città*, Quodlibet, third edition, 2015

Pupillo P., Montanari F. L., Gasparini L., Spagnesi M., *Le Oasi palustri ravennati, un paesaggio instabile e minacciato*, concerning the Conference realized by the Municipality of Ravenna, MultiCenter of Environmental Sustainability (CEAS), Regional Park of the Delta del Po Emilia-Romagna, University of Bologna Campus of Ravenna, National Federation Pro Natura, Union of Naturalisti di Bologna (Ravenna, November 23, 2018). Pp. 7, introduction of Gregorio G.

Definition of "International landscape seaminess", landscapes without identity, from Short J.R., *The humane city: cities as if people matter*, Blackwell, Oxford, 1989

Turner M. G., Gardner R. H., *Landscape Ecology in Theory and Practice*, second edition, London, Springer, 2015

Bie Plevoets, Koenraad Van Cleempoel, *Adaptive Reuse of the Built Heritage: Concepts and Cases of an Emerging Discipline*, Routledge, 2019

SITOGRAPHY

The Edge of Creation Gary Brown, Department of Architecture Liverpool John Moores University, <https://researchonline.ljmu.ac.uk/id/eprint/7981/1/The%20edge%20of%20Creation%2020.pdf>

Geoportale Emilia-Romagna, <https://geoportale.regione.emilia-romagna.it/>

Corresponding Author

Greta Montanari*

Architect, Grant Researcher at DIAPReM, Department of Architecture of the University of Ferrara, via Quartieri 8, 44121, Ferrara (FE), Italy