

> Angel Cerezo Cerezo
> Alejandro Ribas Mercou

Milano Renatur

Abstract

MILANO RENATUR explores how the negative effects of urban development can effectively be reversed or reinterpreted to stimulate a healthy community and ecosystem. The project blurs the limits between the city and its natural ecosystems without creating an invasive and disconnected landscape of abandoned buildings and villas. The authors go on to outline a concept for the renaturalisation and reagriculturalisation of the southern part of Milan, developed by the architecture firm AAIMM.

> The economic romance

The political and economical “romance” of Margaret Thatcher and Ronald Reagan during the 1980s introduced a new world order, a new way of understanding and operating the economy based on principles and ideas from the 1920s, which promoted free markets and an unregulated economic playground that would ultimately affect the way we programme and understand housing and landscape design, effectively achieving a negative influence in those realms.



Fig1 - Urban limits of Milan

The consequences that cities have to deal with when a non-regulated economy is put in place include:

- private, and usually foreign, investments are promoted, which would only be interested in real state opportunities and not in the health and wellbeing of the neighbourhood
- design and construction are usually externalised to enterprises with no protection of the identity of the local landscape
- land's requalification and reassigning permits are issued to create a flow in plot prices and to destabilise neighbourhoods and communities
- citizens lack the economic power to consume in local stores, which sell products from the vicinity
- small city halls and municipal governments lack the power to restrain all these actors to invest and reorganise their communities because of the economic investment they tempt big-scale governments offices with.

Given all these circumstances, the landscape is promoted not as a public realm with an intrinsic environmental value and one provided by their communities in a sustainable relationship with the ecosystem, but as a market asset, which can ultimately be developed.

> Unstable ecosystems

This dynamic destroys communities, creates wasted landscapes voided of function or use, and foments real state developments and real state bubbles beyond the city limits, invading the natural realm by expanding the city into the rural realm. This creates irreversible instabilities in the ecosystems the developments are planned for, and segregates communities into locals with no power and powerful economic forces - often international - which are constantly in conflict with each other.

> The urban scale: geography / origins

The urban geography of Milan is that of a radial city that has been growing like an oil spot with different concentric rings (bastions). It is a city located between the Alps and the Padana plain.

The project is focused on the Southern area, an agroforestry mosaic and fields. This was originally a transition zone between the dense forest and the basins of rivers and torrents (such as Vettabbia).

To REinvent the city, or at least a portion of it, one must search its origins, which are, in this case: water and nature.

During the Middle Ages, Milan was a compact city that gradually grew beyond its walls in an organic way and measured by the need for expansion and conquest.

Our place is a limit, a vague limit in the city, located between what is built up (the urban) and the countryside (the agroforestry park).

This vague boundary is the casual and non-planned result of the city.

Our RENATUR project finds its opportunity in this strategy: we want to re-naturalize the city and get a limit that is not a physical, tacit, social, ecologically strong wall, but an open and permeable green boundary for a sustainable future.



Fig 2- City connections - exterior



Fig 3- City connections - interior

> Project strategy: The place / green genius loci

The project is an open door between the existing park and the city and towards the agricultural landscape through a park that introduces the green fields into the city.

The proposed strategy is very clear: these green wedges are useful to RE-NATURAlize the city and to prevent the built stain or spot from invading the city.

This RE-NATURAlization process is done with a series of compatible sportive, productive, ludic, recreational uses.

We search to create urban and green smart synergies.

We believe that the best way to pursue the project is to create a free open space. This quality space will be used as a filter (not as a barrier) related to a path system. An open, permeable, and cosy space that becomes a reference point.



Fig 4- Master plan and functions

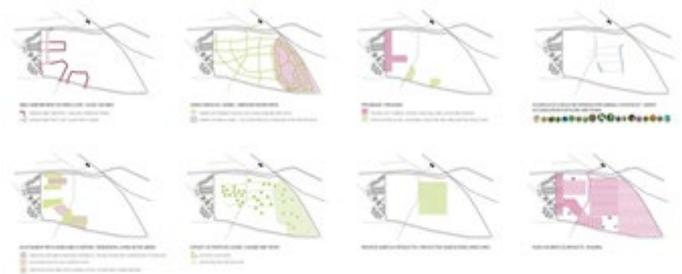


Fig 5- Urban schemes

The paths system (routes) is the way with which we want to give continuity to this free space in the project. We provide this continuity through the paths and by connecting them with the existing routes.

The paths system aims to connect the existing city (Quartiere Mazzini district), the agricultural park (Parco Sud), the dumping site, the historical farmhouses (cascine), the Abbey (Chiaravalle) and the existing bike paths.

> Landscape: productive gardens / dynamic landscapes

The main protagonist is the landscape and not the buildings.

The landscape should not be static, but dynamic and changing over time. The park is composed of a mosaic of trees that create a productive garden.

This landscape can absorb different situations: sports uses, outdoors ludic spaces, residential, urban gardens, vegetable patches, stores, and public space.

We do not want to imitate either the nature or the city. It is a weave of black poplars of different varieties, but essentially from *Populus nigra Italica* (very common in Lombardy), suitable for intensive cultivation.



Fig 5- View



Fig 6 - View

It is a domesticated nature that gives quality to the project area.

The intensive cultivation of wood is done with fast-growing trees: up to 15m in three years (the plantation frame is 10m x 10m).

These trees are very productive and biodiesel and biomass can be obtained from them.

Energy, economic and environmental profit can also be obtained (closed-loop approach to sustainability).



Fig 7- View

> Conclusions

The project promotes the re-naturalisation of the Southern part of Milan, an area on the edge of the town and currently of an ambiguous nature, unused, with no character, and prone to progressive deterioration as a result of undesirable uses.

The adjacent community's everyday life is reinvented through productive landscaping strategies - the main element of the proposal - which also include a scattered residential programme for young citizens fighting for their emancipation and eager to explore new forms of cohabitation, complete with sports facilities, effectively blurring the limits between the city and the rural landscape through a progressive density lowering strategy as one moves further away from the city.

The sports landscape, in particular, is a gradient between the city and nature, completing a progressive replacement of the built landscape with a completely natural and rural landscape.

The sustainability of the ecosystem has been a key consideration behind the design of the project, affecting all the decisions made in order to provide the community with a project coherent with the natural environment in the area and one that does not require excessive maintenance or has negative influence in any way.

These strategies include:

- regeneration of old rivers and water canals for the irrigation of the whole site and also to mark the limits to the developments, avoiding the use of potable water from non-sustainable resources
- collection of rainwater for drop irrigation purposes
- housing is to achieve passive standards of energy consumption, applying passive bioclimatic strategies, such as greenhouse effects, solar collectors, ventilation, insulation, and shading

- low-scale rentable spaces for food production introduce crops as a positive landscape feature, different from those that require resources and investment. Low-scale food production effectively reduces CO₂ emissions, cutting transportation, production and delivery emissions of high-scale production
- use of autochthonous vegetation that promotes equilibrium between all forces of the ecosystem and provides the natural resources required to keep it stable, reducing water consumption and the need for maintenance
- local resources and low-cost materials for all constructions to avoid the need to transport materials, which would create CO₂ emissions and which, in turn, would affect the ecological footprint of the whole development via the introduction of non-organic materials
- treatment of roads and pathways with hierarchies of use has been assessed to reduce emissions and promote efficient means of circulation, healthy habits and the reduction of carbon emissions from the transport sector
- renewable energy sources and a sustainable system of biomass production to generate energy. Wind turbines provide electricity to the network, while the city's trees are used to create energy through a biomass cauldron, respecting the cycles of nature and growth.

The whole RENATUR site is meant to be a community effort, where citizens can not only share facilities and housing arrangements but also promote a caring sentiment for their own accomplished landscape and community, creating a positive effect, which is pedagogic, experimental, and real in an otherwise wasted and unoccupied land waiting to be developed with high density and profitable real estate strategies.

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