

Volver a la Frontera/Barrio

Barcelona (ES)
Font Del Gos

La Font del Gos is an informally developed, ecologically fragile neighborhood situated on the peri-urban edge of Barcelona, bordering the Consortium Parc Natural de Collserola. The area faces a complex set of environmental and human-induced challenges, including natural and anthropic risks, poor integration into metropolitan planning, insufficient infrastructure and public services, traffic congestion, parking shortages, and structurally unsafe buildings. Rather than viewing these conditions as peripheral liabilities, the project reimagines La Font del Gos as a living prototype for a new model of peri-urban regeneration where environmental systems, circular economies, and inclusive governance are woven into a coherent, multi-scalar strategy.

Development unfolds incrementally over several years, beginning with low-budget, low-impact interventions that establish the groundwork for long-term transformation. To ensure continuity and accountability, a stable governance and funding structure is put in place to support ongoing

regeneration efforts. A multi-actor governance model is established, integrating stakeholders such as local committees from La Font del Gos, community groups, the Ajuntament de Barcelona, Transports Metropolitans de Barcelona (TMB), and the Consortium of Parc Natural de Collserola. This collaborative framework guarantees that planning remains participatory and grounded in the lived experiences, needs, and aspirations of the community.

Framed by the European 18 theme “Resourcing from natural elements. Regenerating Landscapes”, the project proposes an integrated approach rooted in ecological processes, circular economic systems, and active community participation. Implementation is structured in phases across three interconnected scales—territorial, metropolitan, and local—progressively advancing from landscape management to full urban integration.

Repositioning as Ecological and Infrastructural Node

scale	territorial risks and metropolitan issues	coordination and stakeholder
Territorial (XL) + Metropolitan (L/M)	Soil erosion, biodiversity loss, land degradation, lack of maintenance, exposure to climate-related hazards, and social and spatial isolation between Font del Gos and the Barcelona Metropolitan Area.	 Consortium Parc Natural de Collserola Transport Metropolitans de Barcelona (TMB)/ Ajuntament de Barcelona
dynamic strategy		
S1-Resoiling existing forest ecosystems		Climate change mitigation and adaptation through forest management
S2-Resourcing productive habitats through periurban and rural agriculture		Inclusive economic growth by redistributing and reinvesting local resources
S3-Foster accessibility through improved public transportation		Reduce social and spatial isolation

At the territorial and metropolitan scale, La Font del Gos is reimagined as a vital ecological and infrastructural hinge linking Barcelona Metropolitan Area to its peri-urban landscape. The site is integrated into a broader ecological corridor that restores degraded hydrological and botanical systems, enhances climate resilience, and strengthens inclusive economic and social linkages between the Consortium Parc Natural de Collserola and Barcelona. The role within the metropolitan fabric is strengthened through the development of green infrastructure, mobility networks, and resource flows. These interventions are guided and refined over time by short-, medium-, and long-term monitoring systems that track slope stability, water cycles, and biodiversity health.

The strategic implementation begins with thorough diagnostics and risk mitigation, starting with comprehensive mapping to assess slope stability, hydrological patterns, and biodiversity baselines. These

insights guide targeted interventions to address natural hazards—especially wildfires, soil degradation, and erosion—through reforestation of vulnerable slopes based on ecological succession and re-soiling principles, using native species from the Consortium Parc Natural de Collserola. Simultaneously, a dedicated bus service is established to reconnect La Font del Gos with the wider urban fabric, enhancing accessibility and promoting community integration. Strategically placed parking areas are thoughtfully integrated into the landscape, linking housing and productive infrastructure while minimizing environmental impact. Finally, existing trekking paths are revitalized to improve safety and connectivity, transforming them into vibrant corridors for recreation, environmental education, and gentle mobility, further strengthening the neighborhood's bond with the surrounding natural environment.

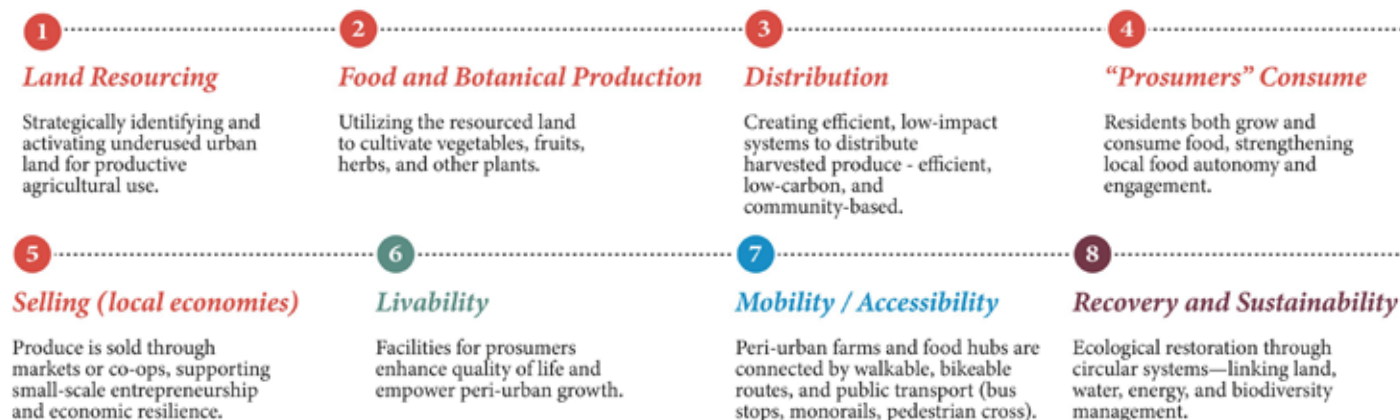
In the following years, while continuing with forest

management, underused peri-urban lands are revitalized for sustainable food production, reconnecting the area's agricultural propensity with a climate-resilient future and economic growth. These new productive habitats are populated with species adapted from analogous ecosystems within the Consortium Parc Natural de Collserola. This enhances habitat resilience and establish biodiversity corridors

that connect the urban fabric with the surrounding natural environment.

Ultimately, in thirty years, the site evolves into a resilient ecological-urban interface seamlessly integrated within the green infrastructure. Continuous biodiversity monitoring, supported by sensor-based tracking and adaptive management, ensures sustained ecological health.

Circular Productive Barrio



At the metropolitan and local scale, agricultural activity emerges as a key driver of the local circular productive economy, supported by ongoing ecological monitoring and sustainable cultivation practices. Harvested produce is distributed through low-impact, community-based systems that supply both local markets and cooperatives.

In the initial stage, the project installs composting hubs and introduces demonstration plots as experimental sites for circular resource management and food productivity. As the strategy expands, over 100 hectares of underutilized land are transformed into a diverse agro-ecological landscape featuring vineyards, olive groves, orchards, and medicinal herb gardens (species already existing in Collserola Parc). The agricultural production becomes embedded within the Barrio's economic development framework, ensuring long-term structural and financial sustainability as a resilient and diversified green economy thrives. Over the years, regenerative urban metabolism that boosts habitat performance and climate resilience is fostered through bioengineering techniques and strategic infrastructure investments support this transition, with a closed-loop resource system—incorporating biomass energy production, swales and check dams for stormwater management, and ecosystem-based land management.

Residents, acting as prosumers, play an active role in

cultivating these areas while generating seasonal and permanent employment in harvesting, composting, and food processing. These roles involve green jobs, both in primary-sector agricultural labor and in tertiary-sector employment in ecological education, agrotourism, landscape management, and sustainable logistics (as Fab-Lab, Co-op Agriculture, Educational Centre, Production Centre, Logistic Centre, Oil and Wine production). A dynamic employment ecosystem takes shape, comprising both permanent positions in agriculture, food production, and retail, and seasonal roles supporting the agricultural cycle. This growing green economy also attracts new residents and visitors, positioning La Font del Gos as a destination for sustainable tourism rooted in ecological restoration.

Public spaces, transport and new cultural facilities come together to create a vibrant ecosystem supported by active civic participation. New community services, including kindergartens, pharmacies, and cultural venues, promote social inclusion and significantly enhance residents' quality of life.

To further improve accessibility and livability in the Barrio, a multi-modal transportation system is implemented, centered around a monorail line linking the Barrio's Nùcleos and complemented by integrated pedestrian and cycling networks ensuring slow mobility throughout the neighborhood.

The new Rambla Font del Gos serves as the physical and social centerpiece of interventions, featuring

shops and commercial spaces that foster community cohesion and energize urban life. Following its historic route, the Rambla links and centralizes the two neighborhoods—Font del Gos and Cal Notari—acting as a vibrant economic hub. It also connects to newly activated productive habitats via a lightweight monorail system, facilitating the efficient movement of goods. Surrounding the Rambla, the area is gradually transformed into a productive landscape combining orchards and vineyards with high-quality public spaces that offer shaded play and rest areas, as well as an amphitheater for public gatherings and relaxation. Beyond this, the space between the Rambla and the Ronda de Dalt is redesigned as a green buffer zone, emphasizing ornamental and pollinator-friendly plants to create a vital ecological corridor for local flora and fauna.

This park is envisioned as an intergenerational leisure area with gentle interventions and walkable paths that encourage connection with nature.

Through this integrated framework, La Font del Gos is reimagined as a pioneering model of sustainable, productive, and inclusive peri-urban living, demonstrating the long-term potential of circular economies rooted in ecological resilience and social equity.

Typological Adaptation and Material Circularity

At the local scale, the project addresses the site's informal character through strategies of incremental adaptation, spatial inclusion, and material reuse, while also introducing a new housing system designed to accommodate both incoming residents and future workers.

In the initial stage, rather than erasing the existing urban fabric, the project builds upon it, offering legal frameworks and design toolkits that empower residents to incrementally improve and formalize their homes. Safe structures are retrofitted with measures such as structural reinforcement, solar panels, greywater recycling, and improved insulation, enhancing both habitability and environmental performance. In contrast, unsafe and irreparable buildings—such as selected ones in Cal Notari—are removed through participatory relocation processes, creating space for new, multifunctional buildings.

As architectural consolidation progresses, the neighborhood advances toward full circular autonomy, with durable, low-impact buildings embedded in a strong culture of participatory governance and

community care.

Over time, the community evolves from initial legalization efforts to the development of formal housing. New residential clusters are built utilizing modular construction systems, passive environmental strategies, and adaptable layouts that support multigenerational living. These buildings accommodate a mix of uses—housing, productive spaces, and essential services—fostering a resilient, integrated, and future-oriented urban fabric. Modular units are reconfigured into single or duplex residences, each with access to private green areas or terraces.

In parallel, to address longstanding challenges posed by the steep terrain of Cal Notari, a comprehensive mobility strategy is introduced. This includes an interconnected network of pedestrian pathways, terrain-sensitive stairways, improved lighting, designated parking zones, widened sidewalks, and a lightweight monorail system. Together, these interventions transform the area into a safer, more navigable, and inclusive environment.

Circular economy practices become firmly established, with materials reused from deconstructed homes creatively repurposed into public furniture, retaining walls, and paving, minimizing waste while preserving the area's unique character. Infrastructure becomes increasingly self-sufficient through water reuse systems, biomass energy, stormwater gardens, and active community engagement in ongoing maintenance, reinforcing a resilient, self-reliant peri-urban environment.

New buildings use a prefabricated timber frame system with dry assembly techniques, enabling fast construction, high environmental performance, and future disassembly for reuse, thus reducing waste and ensuring long-term adaptability.

This intervention guides the gradual formalization of the neighborhood, preserving its unique identity while enhancing safety, livability, and ecological resilience. It positions residents as active participants in shaping their environment.

Mobility / Accessibility



- 1 Pedestrian Infrastructure**
Strategy: Reconnect fragmented urban areas.
Action: Rambla Font del Gos and pedestrian bridges to link neighborhoods safely and comfortably.

Mobility / Accessibility



- 2 Vertical Mobility Solutions**
Strategy: Ensure inclusive mobility across elevation changes for all, including elderly and disabled residents.
Action: Elevators, stairs, and monorails.

Mobility / Accessibility



- 3 Urban Street Enhancements**
Strategy: Redesign streets as safe, multifunctional public spaces.
Action: Lighting, parking, and sidewalks.

Productivity/Selling



- 4 Terraces and Market Spaces**
Strategy: Reactivate unused areas to foster local economies and community engagement.
Action: Market squares using recycled and local materials.

Livability



- 5 Public Spaces**
Strategy: Transform underused spaces into active, inclusive public realms that support ecological restoration, everyday social life, and collective care.
Action: Playgrounds and parks.

Recovery/Sustainability



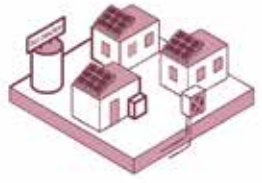
- 6 Biodiversity Restoration**
Strategy: Restore ecological balance and environmental quality.
Action: Resoil and rewild neglected private and public plots.

Recovery/Sustainability



- 7 Permeable Surfaces**
Strategy: Integrate sustainable drainage and microclimate solutions.
Action: Porous pavements in gardens, private and public areas.

Recovery/Sustainability



- 8 Renewable Energy Integration**
Strategy: Drive the shift toward low-carbon, energy-autonomous living.
Action: Solar panels and other renewable technologies (e.g., bio-mass).

Recovery/Sustainability



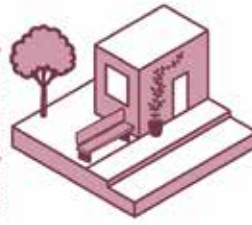
- 9 Water Harvesting Systems**
Strategy: Increase water resilience and resource circularity (supporting irrigation and consumption).
Action: Rainwater collection and greywater reuse systems in homes and fields.

Recovery/Sustainability



- 10 Structural Stabilization**
Strategy: Strengthen physical resilience in vulnerable built environments.
Action: Soil consolidation and structural reinforcement (e.g., pile foundations; stone wall terracing).

Recovery/Sustainability



- 11 Houses dignity**
Strategy: Reinforce identity and pride through small-scale architectural upgrades.
Action: Enhance building facades and entrances with color, greenery, and design features.

Livability



- 12 Sustainable new-build housing**
Strategy: Promote environmentally responsible and energy-efficient living through new house design.
Action: New low-carbon, energy self-sufficient homes, building system with prefabricated timber frame dry assembled.

From Urban Periphery to Regenerative Prototype

La Font del Gos transforms from a precarious urban periphery into a pioneering model of ecological restoration and spatial justice. This project embodies recognition, adaptation, and sustainable coexistence with the land.

The neighborhood emerges as a prototype for a new form of peri-urbanism—one that is replicable, adaptable, and capable of evolving across metropolitan regions

in Southern Europe and beyond. Through a phased, multi-scalar strategy, La Font del Gos evolves from a forgotten fringe into a resilient frontier, seamlessly integrated into the ecological and social metabolism of the city.

Hence the title ‘Volver a la Frontera/Barrio’.

