



International Student Competition

Guimarães Green Infrastructure - Bairro C

Couros Connecting Creating Culture

Winning teams and finalists

Working Period: October 2025 - January 2026

<https://forum.ln-institute.org/international-student-competition-2025-2026>

The river that never disappeared

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The proposal is based on strengthening the relationship between landscape and city treating the landscape as an active system that fundamentally shapes the quality of the urban environment. It links ecological, social, and spatial strategies across multiple scales — from the open landscape to the Bairro C district — into one coherent concept that supports sustainability and long-term territorial functionality.

In the open landscape, the design activates unused land by transforming it into orchards, flower meadows, small-scale cultivation areas, beekeeping zones, and new forest stands. These interventions enhance biodiversity, improve the microclimate, and increase ecological stability, while understanding the landscape as both productive and ecologically functional. Water is a key theme, seen as a formative element of both landscape and city. The project responds to climate change by slowing runoff, retaining rainwater, and reducing flood risks through swales, wetlands, and dry polders that also create new habitats.

In several sections, the watercourse is widened, made accessible, and integrated into public space. Natural and technical water purification methods are combined, environmental education is supported, and further industrial pollution is reduced. This establishes a continuous corridor of blue-green infrastructure connecting landscape and city.

In Bairro C, the design links the river, the heritage of the tanning industry, community life, and greenery. It reduces car traffic while promoting walking, cycling, and public transport. Key areas are transformed, abandoned factories gain multifunctional use, and new public spaces improve quality of life and neighborhood attractiveness.

**FIRST
PRIZE**

033 The river that never disappeared

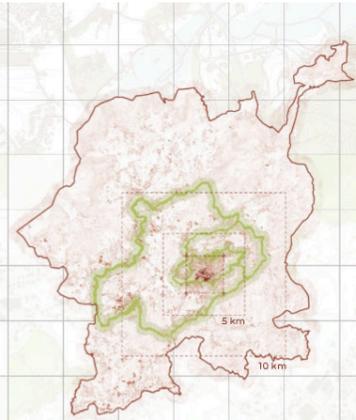
The river played a fundamental role in shaping the city of Guimarães as well as the historical development of Bairro C. Although it is no longer continuously visible in the urban landscape, it still flows through the entire district quietly beneath the surface. In a few places, the water briefly reappears, and elsewhere it can be heard moving under pavements, subtle reminders that the river never truly disappeared.

It remained embedded in the structure of the city and in the collective memory of the place. The proposal builds upon this hidden yet persistent presence and brings it back into the everyday life of the city in a legible way. The project does not invent a new element, but helps the river to reconnect with people and regain the significance it once held during the period of the tanning industry.

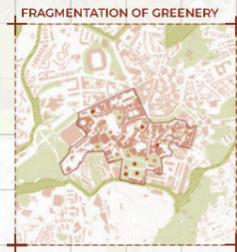
The river becomes the main connecting element between urban, residential, and natural layers of the area. Rather than creating a new landmark, the project rediscovers its original role as a carrier of life, public space, and ecological relationships. The river thus emerges as a continuous line that has always been there and now once again actively shapes Bairro C.



Guimarães

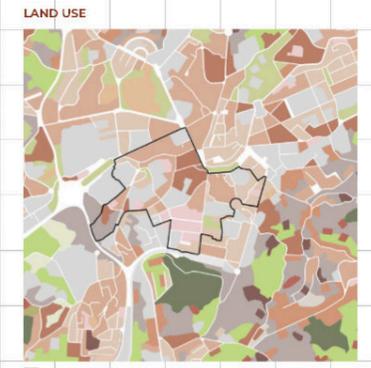
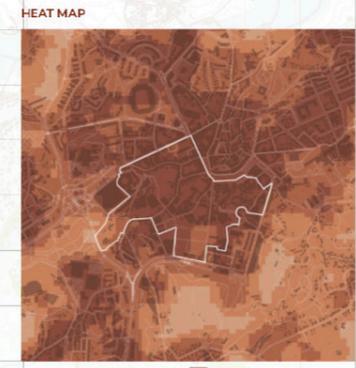


THREE RINGS STRATEGY
This is a long-term municipal strategy aimed at strengthening green infrastructure and ecological connectivity across the city of Guimarães. Building upon this framework ensures that the proposal is not an isolated intervention, but part of a larger, coherent vision.



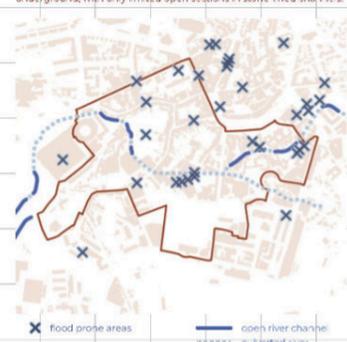
Assessment of individual green areas in Bairro C as a basis for designing a new connected green corridor linking the district with the rest of the city and the surrounding landscape.

- very low overall quality
- moderate overall quality
- high overall quality



VISIBLE AND HIDDEN RIVER - CURRENT CONDITION

The Costa-Couros River runs through the site, mostly culverted underground, with only limited open sections in stone-lined channels.



MULTILAYER RIVER POTENTIALS

Identification of key locations where the river can regain ecological function, strengthen spatial connections, and support social and climate resilience within the district.



RIVER AS URBAN RESILIENCE

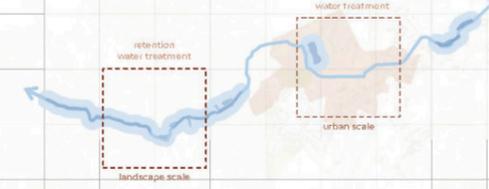
URBAN STREAM SYNDROME OF COSTA-COUROS

- Culvering**
The Costa-Couros River is largely culverted, losing ecological function and its direct relationship with public space.
- Concrete channels**
Engineered concrete channels disrupt natural river dynamics and significantly limit the formation of diverse habitats.
- Low infiltration**
Impervious urban surfaces limit infiltration, increase runoff, and expose the river to sudden peak flows during rainfall.
- Pollution**
Surface runoff from streets and industrial areas carries pollutants into the river, degrading water quality and conditions for aquatic life.
- Low biodiversity**
Simplified river and bank environments result in low species diversity and reduced ecological resilience of the area.

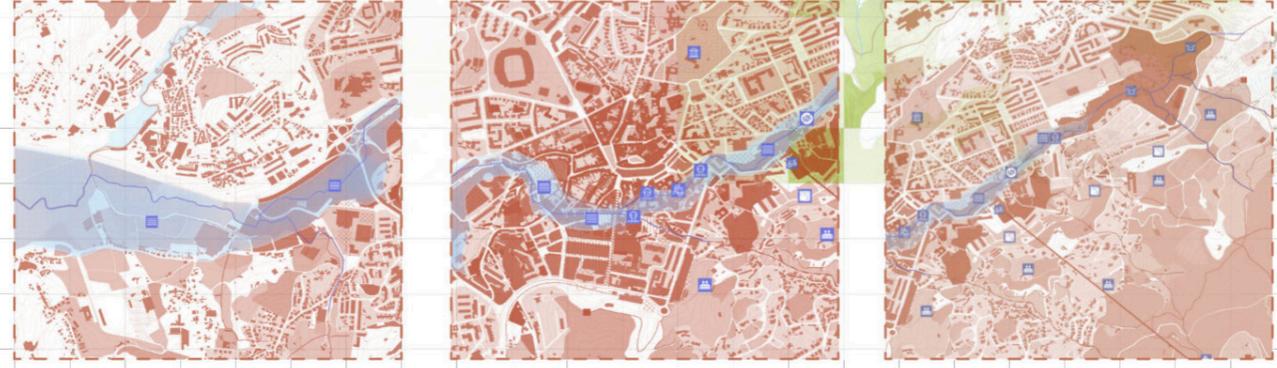
The proposal strengthens connectivity and transforms Bairro C into a key linking element between the urban structure and the surrounding landscape.

The river is restored closer to its natural regime, where it can slow runoff and retain water within the landscape. Nature-based treatment systems are introduced along its course to improve water quality and enable the safe daylighting of the stream in the urban environment. The river thus becomes a visible part of the city, allowing direct contact between people and water.

WATERCOURSE DESIGN CONCEPT



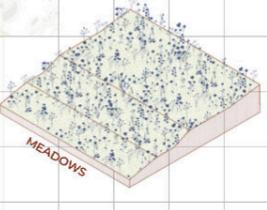
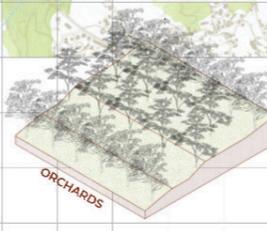
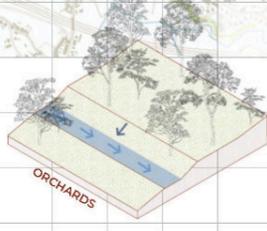
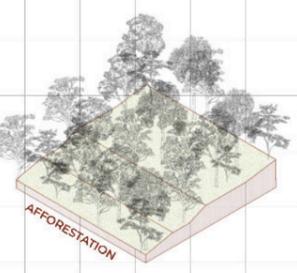
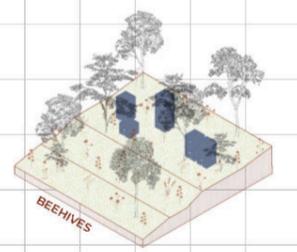
ANALYSES OF THE COSTA COUROS RIVER WATERCOURSE



LIVING LANDSCAPE

The proposal strengthens connectivity and transforms Bairro C into a key linking element between the urban structure and the surrounding landscape. The river is restored closer to its natural regime, where it can slow runoff and retain water within the landscape. Nature-based treatment systems are introduced along its course to improve water quality and enable the safe daylighting of the stream in the urban environment. The river thus becomes a visible part of the city, allowing direct contact between people and water.

- UNESCO
- FLOODPLAIN
- VEGETATION
- PUBLIC TRANSPORT
- CYCLE ROUTES

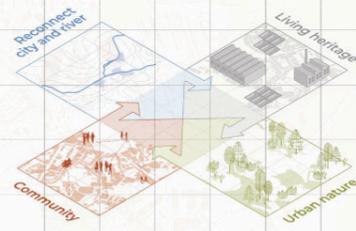


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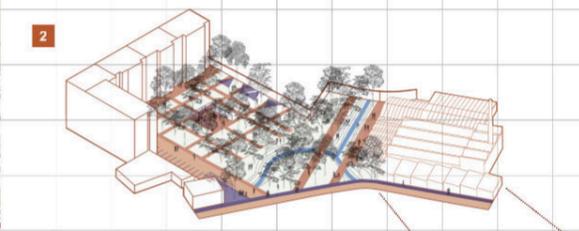
REDISCOVERING WATER

The design approaches the area as an interconnected organism, in which the individual layers of the city and landscape do not function separately, but complement and reinforce one another. The concept is based on linking four main systems: the river, living heritage, community and urban nature.

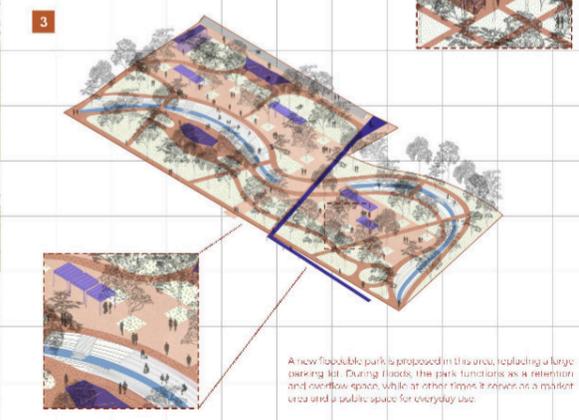
The Costa-Couros stream, formerly confined to an underground pipe, has been reimagined as a vibrant public blue-green corridor within the city. It now promotes neighbourhood identity, health and well-being, intergenerational connections, recreation, climate resilience, outdoor learning and habitats that support biodiversity. An area that once lacked access to public green space has been transformed into a lively environment rich in nature and biophilic places for gathering.



In this area, there is space for increased river meandering and for integrating the stream into a more natural, grassy shaded channel without hard engineering. Water is made accessible here through terraced seating steps.

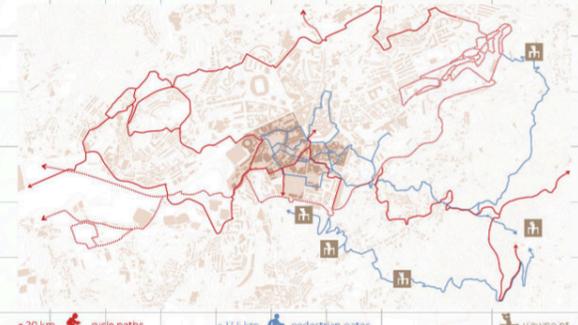
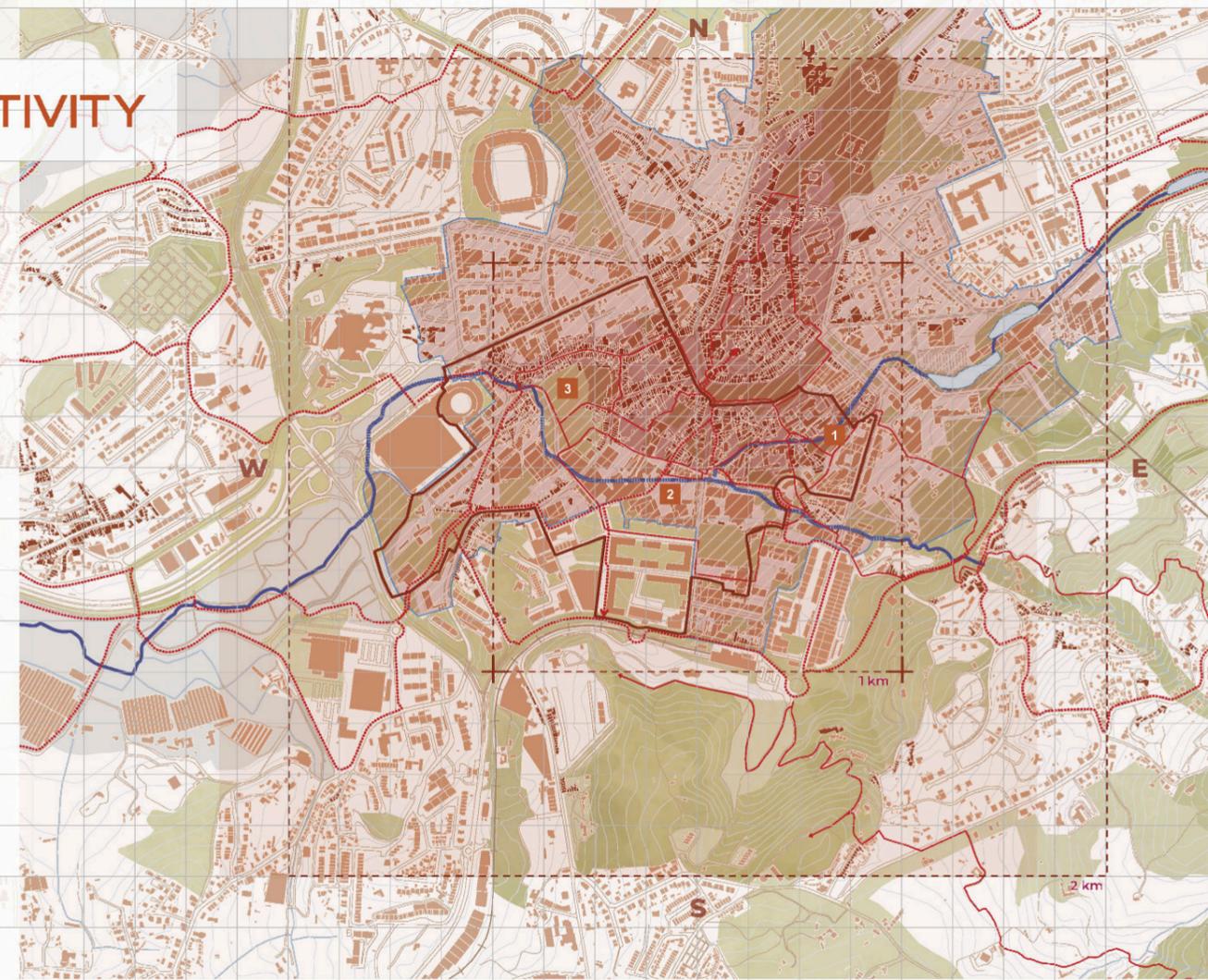
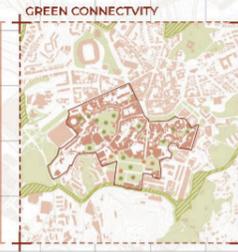


At this location, the stream currently runs only beneath the pavement in a stone-covered channel. The proposal restores opportunities for people to interact with the water, which enhances comfort and cools the space. The stream is reimagined here in a more natural channel form.

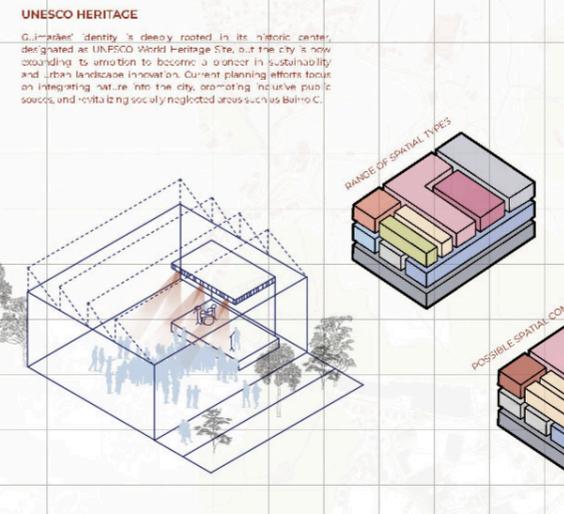


A new floodable park is proposed in this area, including a large parking lot. During floods, the park functions as a retention and overflow space, while at other times it serves as a market area and a public space for everyday use.

CONNECTIVITY



HERITAGE IN TRANSITION



SECOND LIFE FOR FORMER INDUSTRIAL BUILDINGS
The former factory buildings, remaining as traces of the tanning industry, are understood in the proposal as key assets for a new urban structure. Instead of being isolated or losing their significance, they are transformed into multifunctional hubs that connect education, work, creativity, and everyday urban life. These buildings provide spaces for educational activities, creative workshops and studios, facilities for local entrepreneurs, offices, cafes, and complementary parking. Through this programmatic diversity, they become active nodes within the district, supporting the local economy, knowledge exchange, and community interaction. The design thus gives these industrial structures a new meaning and a second life. The historical layer of the area does not remain a static memory of the past, but becomes an active part of the district's present, where industrial heritage naturally connects with innovation, education, and creative production.

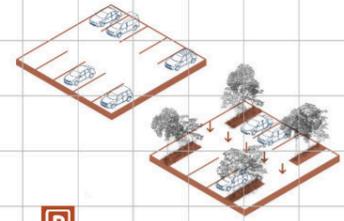
- Creative hub/workshops
- Start-up space/business
- Movement and food service
- Offices and cowork
- Galleries and exhibition spaces
- Community centers
- Parking
- Markets



The first diagram illustrates the current structure of the transport system, in which private car traffic plays a dominant role. The second diagram presents a vision for 2050, showing a shift toward public transport, walking, and cycling, alongside a reduced share of car traffic. This transition reflects a move toward a more sustainable, efficient, and spatially optimized urban mobility system.

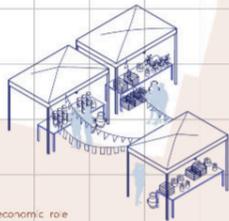


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PARKING AREA REDESIGN

Fig. 1 shows a conventional parking area dominated by hard, impermeable surfaces and a lack of vegetation, resulting in excessive heat accumulation, rapid runoff of rainwater, and poor spatial quality. Fig. 2 illustrates a redesigned parking environment that integrates permeable pavements, planting beds, and shade-providing trees, improving stormwater management, moderating the microclimate, and creating a more comfortable and sustainable public space.



LOCAL MARKETS

LOCAL MARKETS

Markets play an important social and economic role in the area, with a strong focus on local entrepreneurs from Guimarães. The proposal supports small-scale producers, artisans, and local businesses by providing spaces within the neighbourhood where they can create, work, and present their products.

The markets are therefore not only temporary events, but part of a broader system that strengthens the local economy, supports creative production, and builds a closer relationship between production, community, and public space. This connection helps root economic activity directly in the district and reinforces its identity and everyday life.

Historic tanning vats from the former leather industry are preserved in the design as an important part of the site's identity. They are complemented by a connected building that functions as an art factory, providing space for independent artists.

Steel silhouettes of workers are placed within the area, recalling the original working processes, and are accompanied by information panels presenting the history of leather production.

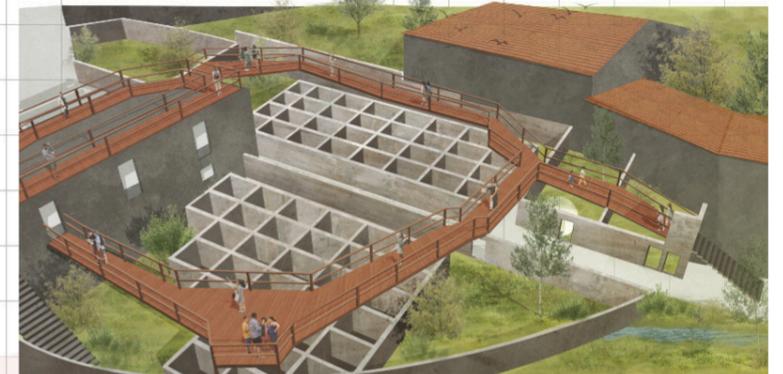
A pedestrian footbridge runs through the site, enabling movement across the area while also offering views from above into the individual historic vats.

The proposal includes an accessible water stream with a recreational function, becoming an integral part of the public space.

New vats are introduced, formally referencing the historical originals while incorporating water-cleaning technology; they therefore serve not only an ecological function but also an educational one.

Former factory buildings are adapted for markets, gastronomy, and community activities, supporting the social life of the area.

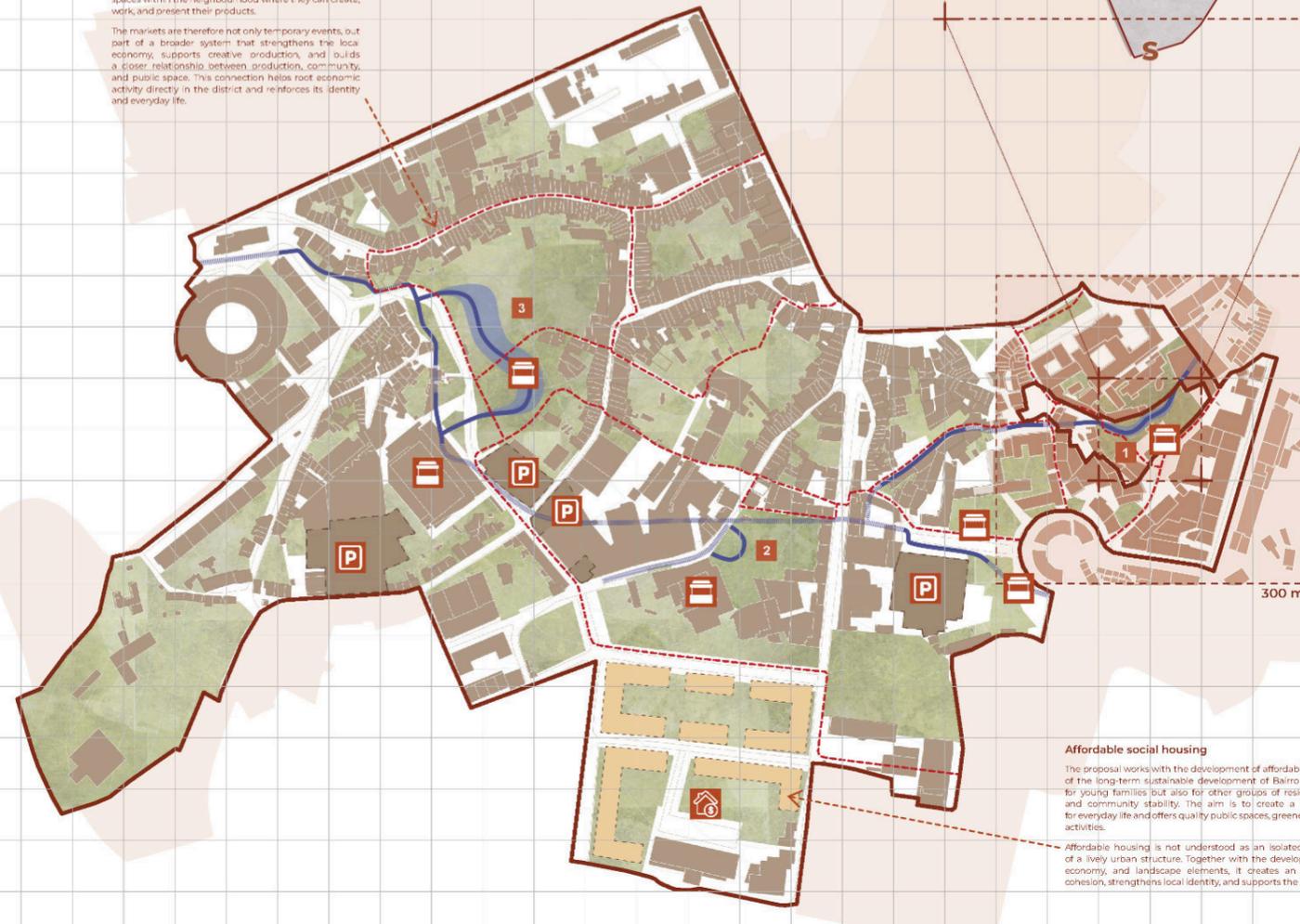
CO-CREATION & PARTICIPATION



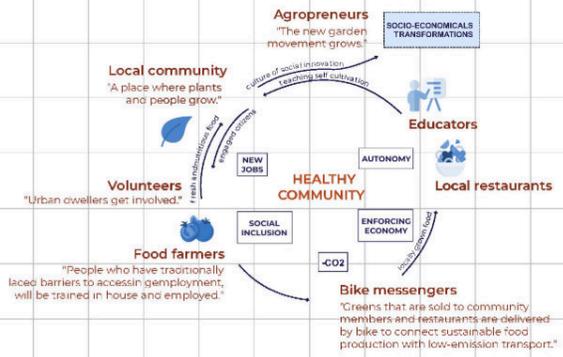
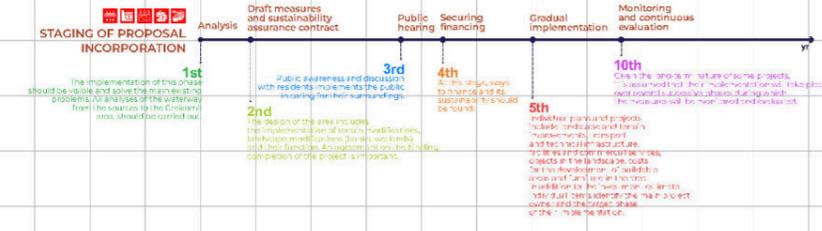
Affordable social housing

The proposal works with the development of affordable social housing as a key element of the long-term sustainable development of Bairro C. Housing is designed not only for young families but also for other groups of residents, supporting social diversity and community stability. The aim is to create a neighbourhood that is pleasant for everyday life and offers quality public spaces, greenery, work opportunities, and leisure activities.

Affordable housing is not understood as an isolated program, but as a natural part of a lively urban structure. Together with the development of public spaces, the local economy, and landscape elements, it creates an environment that fosters social cohesion, strengthens local identity, and supports the long-term viability of the area.



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STOP RIVER POLLUTION AT ITS SOURCE

River water is currently burdened by pollution from industrial facilities and sewer inlets, which significantly impacts ecological function and prevents its safe use within public space.

The proposal incorporates constructed wetland and treatment systems, which represent a nature-based technology capable of removing up to 50% of pollutants while gradually restoring the ecological health of the river. These systems support natural self-purification processes and are an important step toward the regeneration of the watercourse.

However, treatment alone is not sufficient. The healing process can only be successful if polluted discharges from industry and sewage systems are reduced and eventually completely stopped. The wetlands therefore function as a transitional solution. They support regeneration, while long-term measures aim to eliminate pollution at its source.

URBAN TREATMENT WETLANDS

Wetland filter option 1

Wastewater mechanically pre-treated to remove coarse impurities, passes through a filtration medium (such as coarse aggregates or bio-filters), where beneficial bacteria establish themselves. These bacteria oxidize harmful substances, such as ammonia, and convert them into less harmful compounds, allowing the biological filter to purify the water.

The system is planted with aquatic vegetation and a mulch layer supports biofiltering.

TREATMENT WETLANDS

Wetland filter option 2

In this second treatment system, water first passes through a vortex separator, where coarse impurities are removed. It then flows into a constructed wetland planted with aquatic vegetation, which contributes to water purification while preventing sediment accumulation. The treatment process continues as water moves upward through a permeable substrate, such as gravel. This vertical flow supports aerobic processes, enabling oxidation and precipitation of metals such as iron and manganese.

In addition to improving water quality, the system enhances habitat conditions and supports biodiversity.

- RIVER REGENERATION STRATEGIES**
- natural wetlands
 - dry retention basin
 - river channel widening
 - treatment wetlands
 - grazing areas
 - foodplain park
 - urban treatment wetlands
 - restoring the urban river
 - educational centre

SWALE

Artificially created terrain waves in the slopes slow down and retain the runoff of water from the hills. This prevents flooding from occurring at the beginning. New biotopes are created, the microclimate at the site is changed, and with the simultaneous planting of forests, the landscape character is also changed. We propose them in places where they will be useful.

WETLAND

Wetlands are purposefully created outside the city. They increase water retention in the landscape, creating biotopes for many species of animals, from insects to amphibians to mammals. They retain water that would otherwise flow away without benefit and improve the microclimate. Their function is explained in more detail in the education center. They are located outside the city in land below the educational garden, whose educational function they follow.

DRY RETENTION BASIN

They are depressions in the terrain below the riverbed, with controlled overflow at elevated water levels. They prevent flooding in the city, retain water in the landscape. They form a separate biotope, and help biodiversity in the area. They are proposed in the territory of the city's Parque da Cidade to protect the center of the main city from floods. They have a retention effect, controlling flooding during floods and subsequent emptying. In the dry season, they can serve as urban oases for sheep and goats.

CHANNEL WIDENING

Where possible, we propose restoring the original appearance of the river and freeing the river from excessive regulation. And adding berms. The material excavated during the deepening of the river is used to create a wide embankment that slows down the river flow and creates a reserve for the volume of water that would otherwise soil over the landscape. The goal is to slow down the flow of water, change the microclimate, increase biodiversity and succession along the river. Create new areas for recreation and paths for pedestrians and cyclists. This restores the permeability of the landscape.

REACTIVATED COMMUNITY

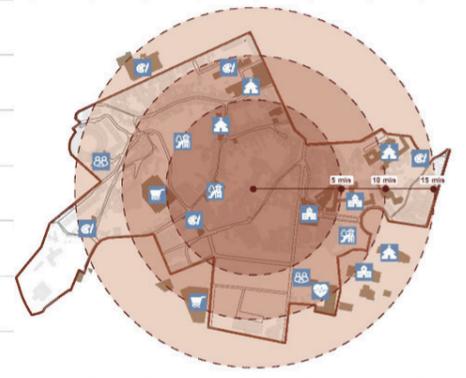
HOUSING REVERSAL COMMUNITY

Community education is essential for the long-term sustainability of any environmental design, because physical interventions alone are not enough. When residents understand how the landscape works, why water is not used, why certain areas may flood, or why biodiversity is supported, they become active participants in the system rather than passive users. An informed community is more likely to accept environmental dynamics, adopt responsible behavior, and contribute to the protection and further development of the area. Education therefore strengthens people's relationship with place, builds a sense of responsibility, and ensures that the design functions not only today but also in the future.

- religion
- education
- museums and galleries
- stores
- healthcare
- family and community hubs
- playgrounds and sport activities

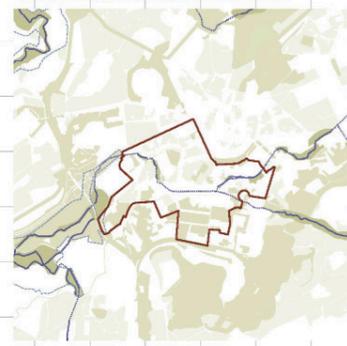
COMMUNITY EDUCATION

Community education is essential for the long-term sustainability of any environmental design, because physical interventions alone are not enough. When residents understand how the landscape works, why water is retained, why certain areas may flood, or why biodiversity is supported, they become active participants in the system rather than passive users. An informed community is more likely to accept environmental dynamics, adopt responsible behavior, and contribute to the protection and further development of the area. Education therefore strengthens people's relationship with place, builds a sense of responsibility, and ensures that the design functions not only today but also in the future.

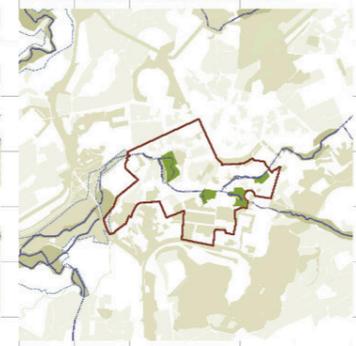


BLUE-GREEN INFRASTRUCTURE

INFRASTRUCTURE BEFORE THE INTERVENTION



INFRASTRUCTURE AFTER THE INTERVENTION



BLUE-GREEN INFRASTRUCTURE

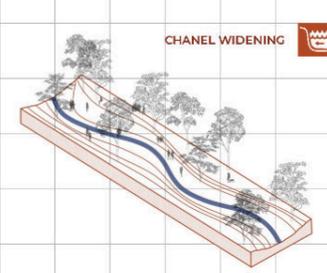
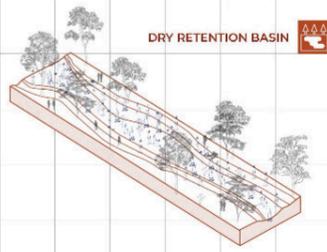
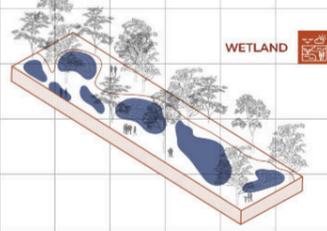
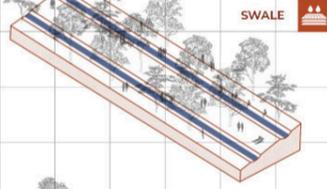
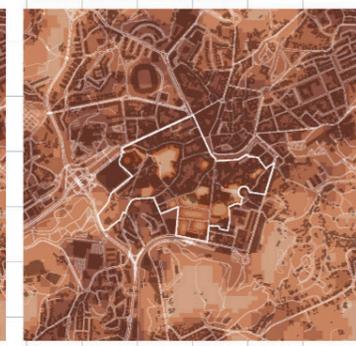
Our proposal aims to establish the most natural and continuous network of blue-green infrastructure across the entire Baixa district. Despite the overall fragmentation of green spaces within the neighborhood, the design strategy aims to reconnect these areas by integrating vegetation and the river as the main structure as backbone of the blue-green system. The river, which is currently diverted and hidden in many sections, is brought back to the surface in as many locations as possible. Whenever the river is daylighted through the proposal, new green public spaces are created, strengthening ecological connectivity while also providing accessible recreational areas for residents. In this way, the project not only responds to the existing problem of fragmented greenery, but actively transforms it into an opportunity to build a resilient and interconnected landscape structure.

- 24,08 - 27,872
- 27,87 - 31,215
- 31,216 - 33,593
- 33,594 - 35,65
- 35,651 - 40,471

HEAT MAP BEFORE THE INTERVENTION



HEAT MAP AFTER THE INTERVENTION



Reweaving the Costa Couros Corridor

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This project explores how landscape can act as infrastructure, rather than proposing a fixed final form, it focuses on long-term processes that reconnect water, public space and everyday use within Bairro C.

The proposals align with the methodology of landscape urbanism: flood adaptability, water filtration within the landscape, human-nature coexistence - community action and ecological processes are inline with one another.

We see the Costa-Couros river as the main feature of Guimarães but over the years development of the city resulted in the river being overshadowed - functioning as a fragmented and constrained system. We propose changes to the current condition of blue infrastructure - the Couros River should function as a continuous and adaptive landscape system rather than a constrained urban channel.

Bairro C is a post-industrial urban area characterised by fragmented open spaces, former industrial plots of land and weak connections between the river, surrounding neighbourhoods and public life. Despite its central location, the area remains in comparison underused and spatially disconnected. There is a high potential in a number of areas which can be transformed into a cohesive green-blue infrastructural network. Proposed tools to convert said neglected area are as follows: forming green corridors with existing nearby green landmarks, pedestrian, cycling, blue infrastructure, flood mitigation and prevention using natural engineering, greenery and sustainable urban drainage solutions, reuse of unused/disused spaces and buildings, uplifting,

SECOND PRIZE

protecting and nurturing local heritage, as well as preservation and restoration.

Caldeirôa focus area, located along Caldeirôa Street, within Bairro C, is situated at the interface between reused industrial buildings, the Couros river corridor and fragmented public spaces, making it a key point for spatial and landscape transformation. On the north-western side one may find a group of historical tanneries which, in our project, become of the key points of inspiration and idea garnering.

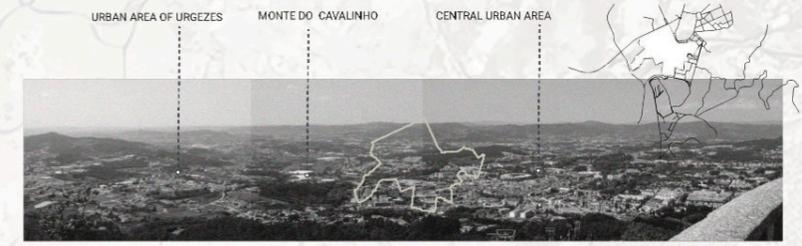
Phase approach - in each of the scales we propose a number of steps with instructions which will lead to the betterment of the city: gradual development rather than fast radical change, formation of strong connections between residents and their surrounding environment, respecting and integrating heritage, development of green and blue infrastructure systems, accessibility focus, community forming and engagement.

Reweaving the Costa | Couros Corridor

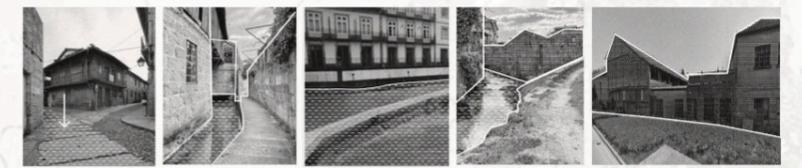
LANDSCAPE SCALE

The Ribeira de Couros is reimagined as landscape infrastructure, structuring Guimarães through a continuous green-blue system from the Penha water basin, through the urban fabric, to the Creixomil floodplain. The strategy shifts from short-term control towards long-term, process-based adaptation to water, climate and urban change.

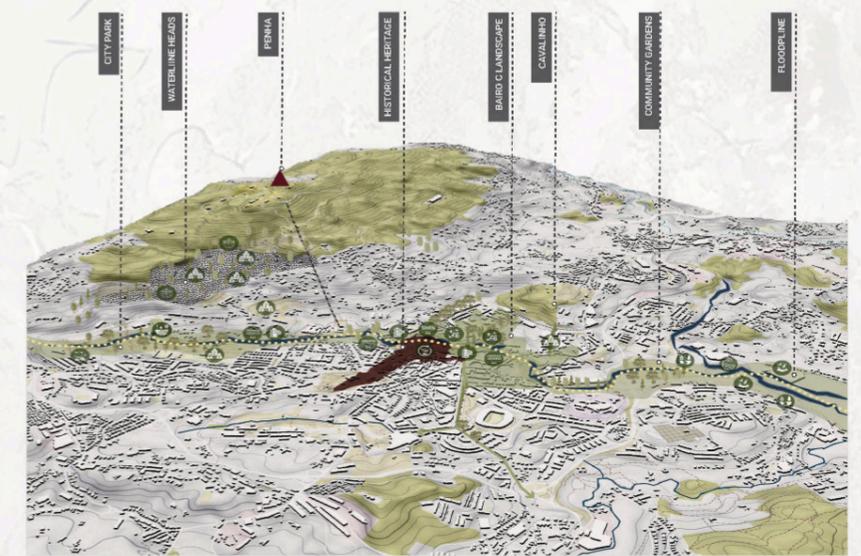
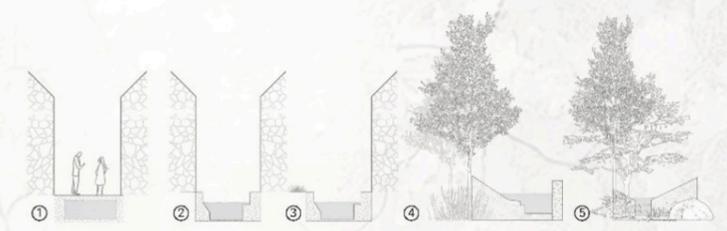
LANDSCAPE FRAMEWORK PLAN
M1: 10 000



FRAGMENTED COUROS RIVER EXISTING CONDITIONS



The Couros River is fragmented by culverting and hard infrastructure, limiting its ecological continuity and its capacity to function as an adaptive urban landscape.



How the landscape works today

Adaptive landscape (50-year vision)

012

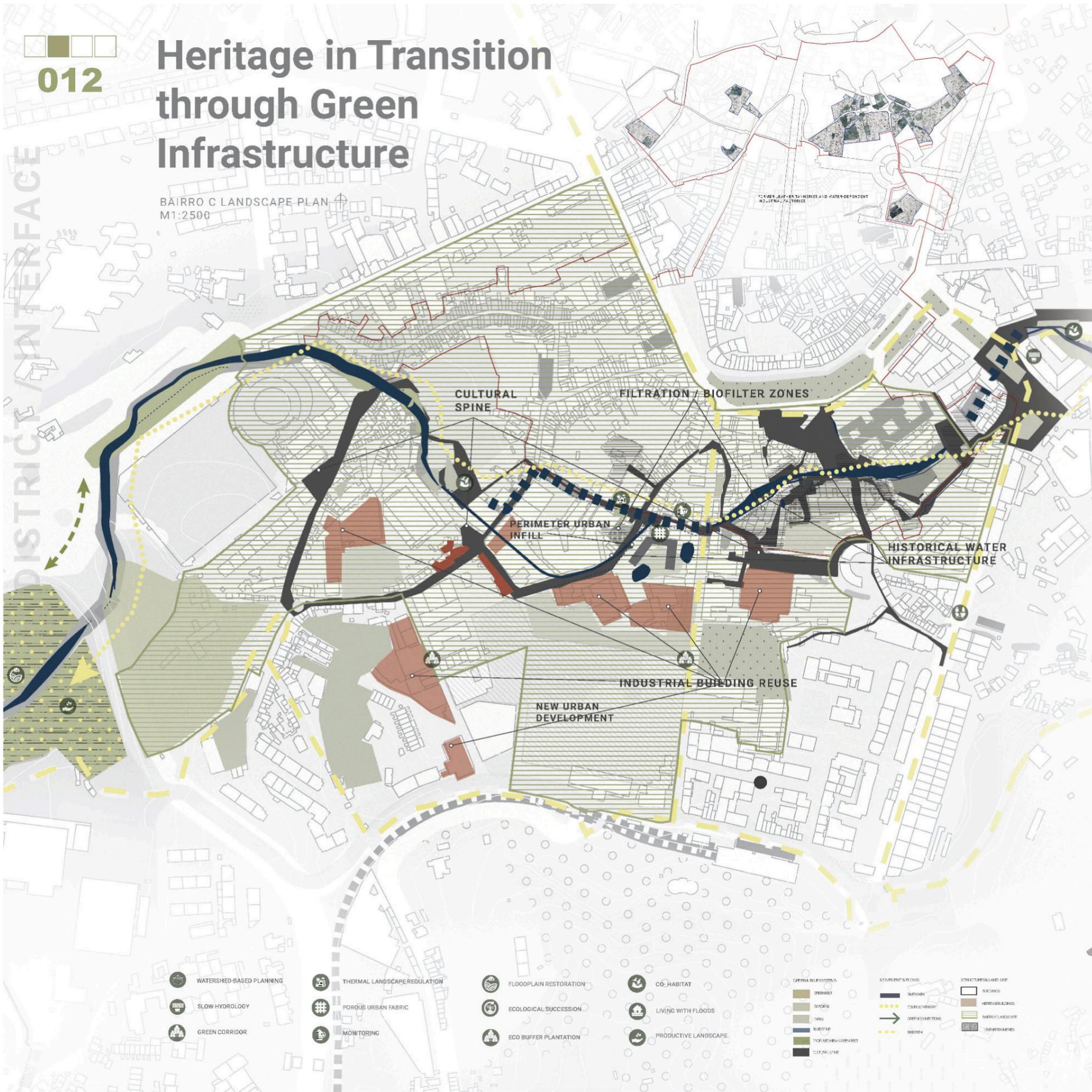
Heritage in Transition through Green Infrastructure

BAIRRO C LANDSCAPE PLAN
M1:2500



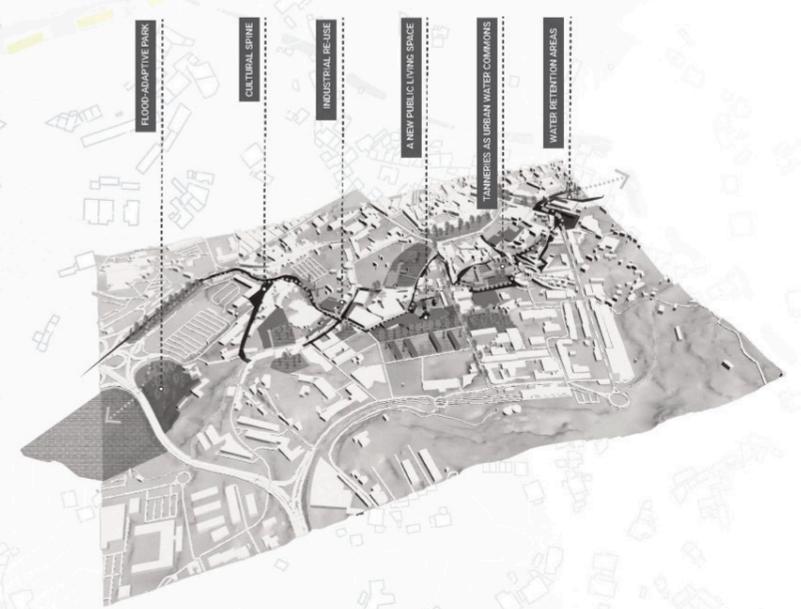
Historically, this area hosted leather tanneries and dyeing factories, where water from the Couros River was a key resource for industrial production. These activities shaped the urban fabric and water infrastructure of Bairro C. Today, the area is reimaged through adaptive reuse, transforming former industrial structures into shared public and water-related spaces.

DISTRICT INTERFACE



Phasing Bairro C

- Phase 1 : Water & Soil**
Opening sealed surfaces and activating water retention and filtration.
- Phase 2 : Public Space & Connections**
Forming blue - green public spaces and connecting the river, heritage and daily routes.
- Phase 3 : Adaptive Urban Infill**
Selective reuse and infill guided by established landscape processes.



- | | | | | | | |
|--------------------------|------------------------------|------------------------|----------------------|-------------------|-----------------------|-----------------------|
| WATERSHED-BASED PLANNING | THERMAL LANDSCAPE REGULATION | FLOODPLAIN RESTORATION | CO-HABITAT | COPING MECHANISMS | STREETS AND FLOWS | STRUCTURAL LANDSCAPE |
| SLOW HYDROLOGY | POROUS URBAN FABRIC | ECOLOGICAL SUCCESSION | LIVING WITH FLOODS | GREEN CORRIDOR | MONITORING | ECOLOGICAL SUCCESSION |
| GREEN CORRIDOR | MONITORING | ECO BUFFER PLANTATION | PRODUCTIVE LANDSCAPE | URBAN FOREST | ECOLOGICAL SUCCESSION | ECOLOGICAL SUCCESSION |

012

From System to Place: Regenerative Landscape Intervention

FOCUS AREA SCALE



CALDEIRÃO MASTER PLAN
M1: 2500

Caldeirão is a former industrial site currently used as a surface parking area, lacking a clear urban role. The proposal introduces a flexible spatial framework shaped by local needs, water systems and heritage.

New buildings define the street edge and structure the site, creating a public zone along Caldeirão Street and a quieter residential courtyard. Rainwater filtration, surface water traces and green islands reveal the hidden Cours river and organise the space into a square, park and yard.

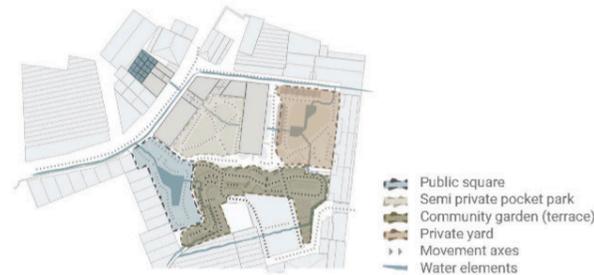
Community gardens, shared spaces and adaptable ground-floor uses support everyday life, balancing nature, heritage and urban development.

- | | | | | |
|---|---|---|--|--|
| <ul style="list-style-type: none"> Park pavement primary Park pavement secondary Gravel Sidewalk Street cobblestone Rubber playground tiles | <ul style="list-style-type: none"> Cross-section Contour line Stairs Ramp Tactile paving Warning tactile paving | <ul style="list-style-type: none"> Body of water Tannery Existing urban stream Underground urban stream Urban stream through surface Green island | <ul style="list-style-type: none"> Community garden bed Pergola & vines Tiered seating Existing building Planned building Entrance | <ul style="list-style-type: none"> Bench Table Play equipment |
|---|---|---|--|--|

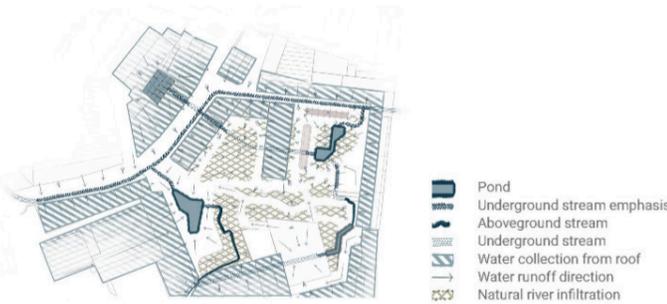
The local residents want change for the better and are eager to participate in activities but there's a lack of connectivity, green space and general identity in the focus area which make it difficult for a community to form. With our proposal we strive to create a space for people to connect with each other as well as the heritage of the district and nature. The end result is representative of the local population - it respects the existing heritage, reintegrates the space into the city all while providing lots of options for community activities.



CONCEPT PLAN



ZONING & MOVEMENT PLAN



WATER MANAGEMENT PLAN



CROSS SECTION A-A



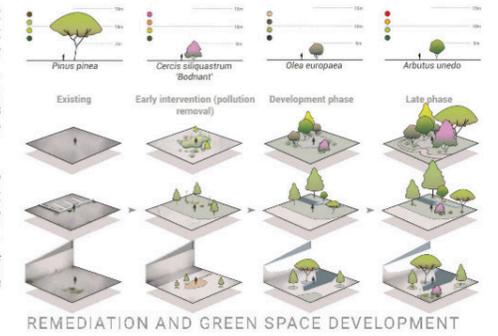
CROSS SECTION B-B



CROSS SECTION C-C

The existing focus area in its current state is not suited for urban reuse - it has been influenced by leather tanneries, textile and heavy industries. The effects of ground pollution from different industrial processes and years of misuse remain at large to this day even if factories are now dormant.

Thus soil remediation is a prerequisite requirement for any future development of green space or any human activity within the focus and surrounding areas. On the right a visual representation of the strategy on how to prepare the focus area for further development.



REMEDATION AND GREEN SPACE DEVELOPMENT



Trama de Azul & Verde

Giulia Bitto & Olivia Cimpan

Politecnico di Milano, Italy

Bairro C is a place of transition, rich in untapped potential, and a connection point within the ecological network of Guimarães. The undisputed protagonist of our proposal is water, which becomes an integral and fundamental part of a large-scale network. The Project investigates the relationship between urban morphological development and the CorsoCourois River – city and water – aiming to heal the relationship between man and nature by restoring the supremacy of water and the consequent ecological benefits it brings.

The 10-year vision seeks to solve the most obvious problems related to climate change, the 25-year vision involves more structured interventions that attempt to anticipate future problems, while the 50-year vision is a more utopian one in which nature and water regain dominance over the built environment.

The project restores space and authority to nature, through specific interventions in the City and on a medium scale in peri-urban areas, building a green system interconnected with the current structure, intensifying and expanding the efforts made so far. The main interventions are daylighting and the design of the river geometry: an ecological corridor that brings health, intergenerational interaction, environmental education and biodiversity.

THIRD PRIZE

The design builds on the river to interconnect different green areas of the city and to enhance the industrial history of District C. The tanning tanks are connected to each other, becoming monuments and usable spaces for workshops.

The buildings are secondary, with only a few being retained as meeting and Exchange places for the community for educational workshops and second-hand fairs.

A CHANGING RELATIONSHIP

A NEW KIND OF RELATIONSHIP

The project investigates the relationship between urban development and the Corso-Courous river: as it was, as it is and as it will be. The aim is to restore the relationship between man and nature by reviving the supremacy of water and its ecological benefits.

The 10-year vision aims to solve problems related to climate change: flooding risk during intense rainfall. The focuses are daylighting and design of a new river section that allows water to flow freely, without overflowing.

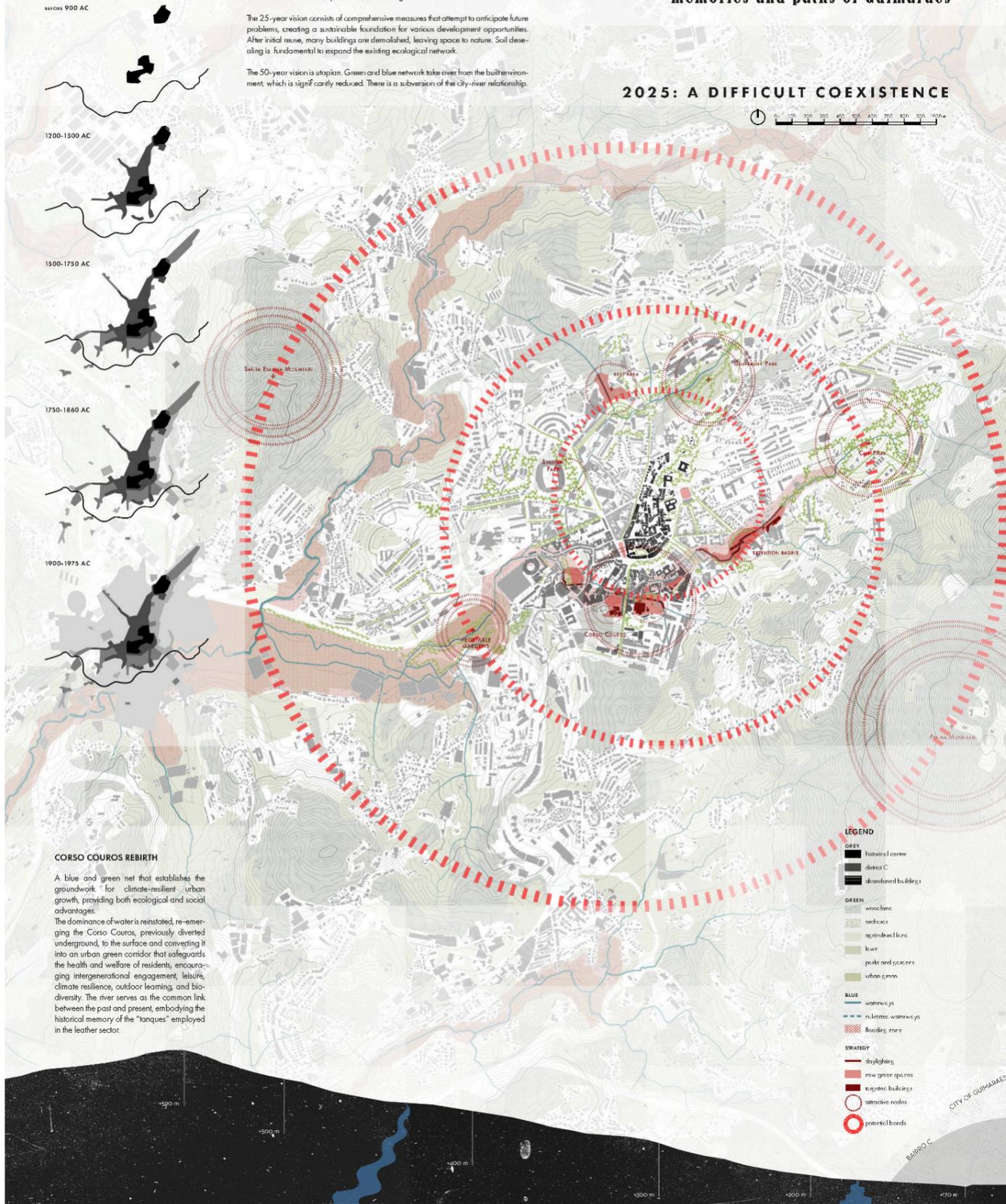
The 25-year vision consists of comprehensive measures that attempt to anticipate future problems, creating a sustainable foundation for various development opportunities. After initial reuse, many buildings are demolished, leaving space to nature. Soil de-sealing is fundamental to expand the existing ecological network.

The 50-year vision is utopian. Green and blue network take over from the built environment, which is significantly reduced. There is a subversion of the city-river relationship.

TRAMA DE AZUL & VERDE

memories and paths of Guimarães

2025: A DIFFICULT COEXISTENCE



CORSO COUROS REBIRTH

A blue and green net that establishes the groundwork for climate-resilient urban growth, providing both ecological and social advantages.

The dominance of water is reinstated, re-emerging the Corso Couros, previously diverted underground, to the surface and converting it into an urban green corridor that safeguards the health and welfare of residents, encouraging intergenerational engagement, leisure, climate resilience, outdoor learning, and biodiversity. The river serves as the common link between the past and present, embodying the historical memory of the "tanques" employed in the leather sector.

2025



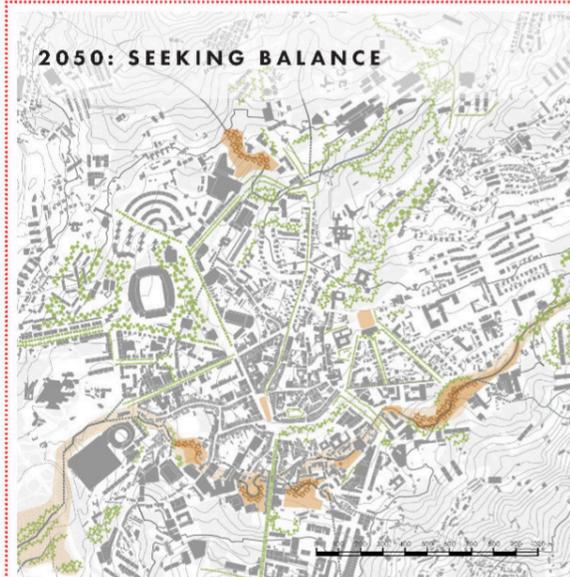
2035



2035: REDISCOVERING A DIALOGUE



2050: SEEKING BALANCE



FORECASTING 2050

- DAYLIGHTING
- SOIL DESEALING
- BUILDINGS REUSE
- BUILDING DEMOLITION
- SYSTEMATIZATION GREEN NETWORK
- OPEN SPACES
- HEDGE ROWS
- PHYTOREMEDIATION
- WATER COLLECTION
- NEW ARCHITECTURAL INTERVENTION

2025



2050



FORECASTING 2075

- DAYLIGHTING
- SOIL DESEALING
- BUILDINGS REUSE
- BUILDING DEMOLITION
- SYSTEMATIZATION GREEN NETWORK
- OPEN SPACES
- HEDGE ROWS
- PHYTOREMEDIATION
- WATER COLLECTION
- NEW ARCHITECTURAL INTERVENTION

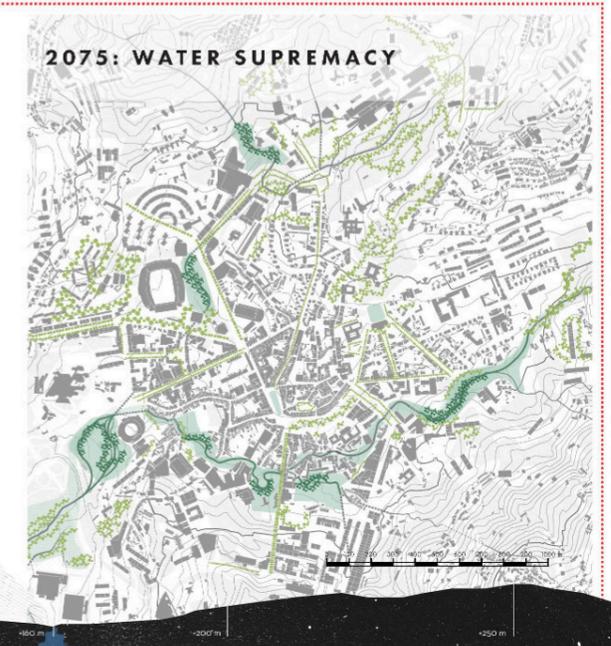
2025

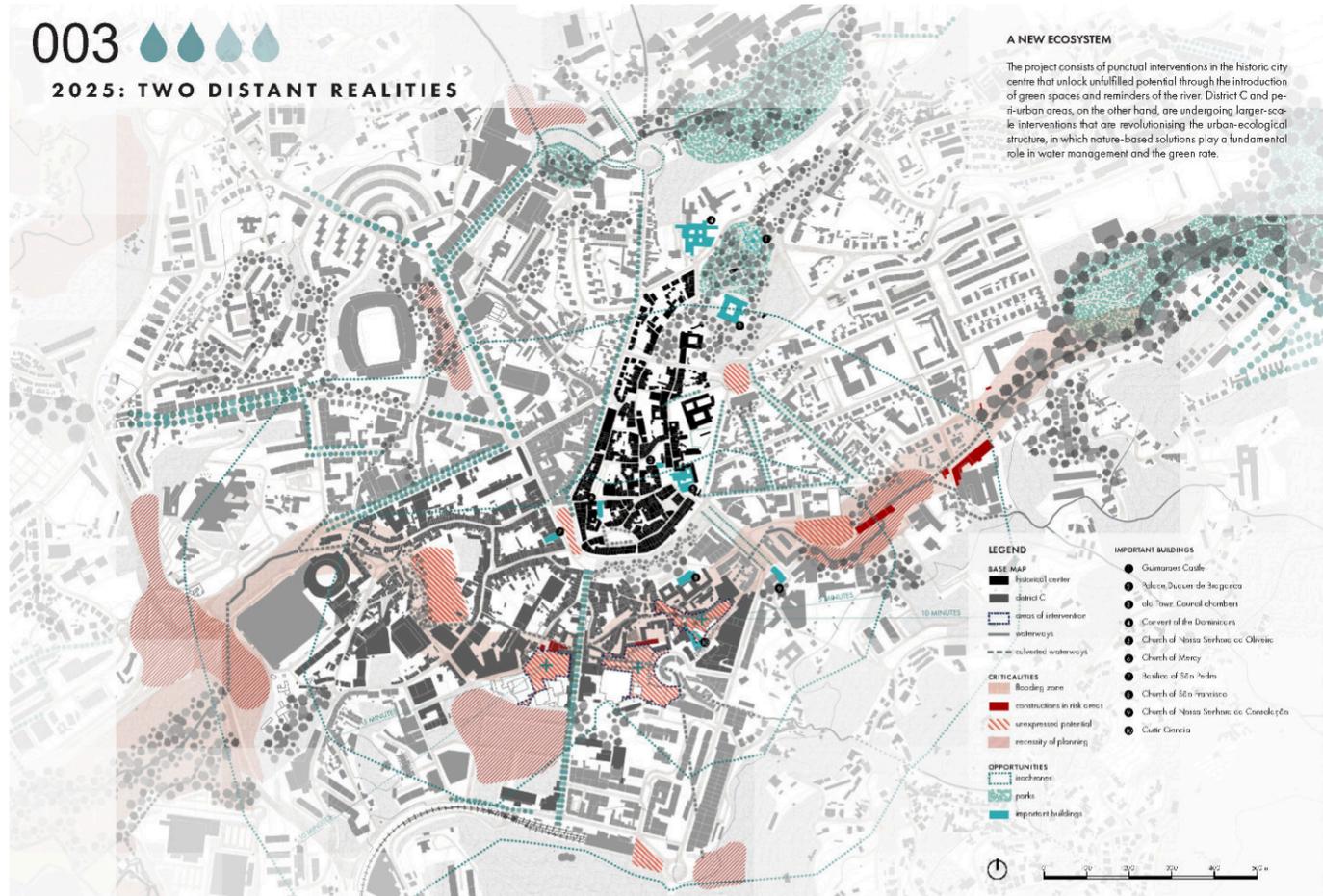


2075

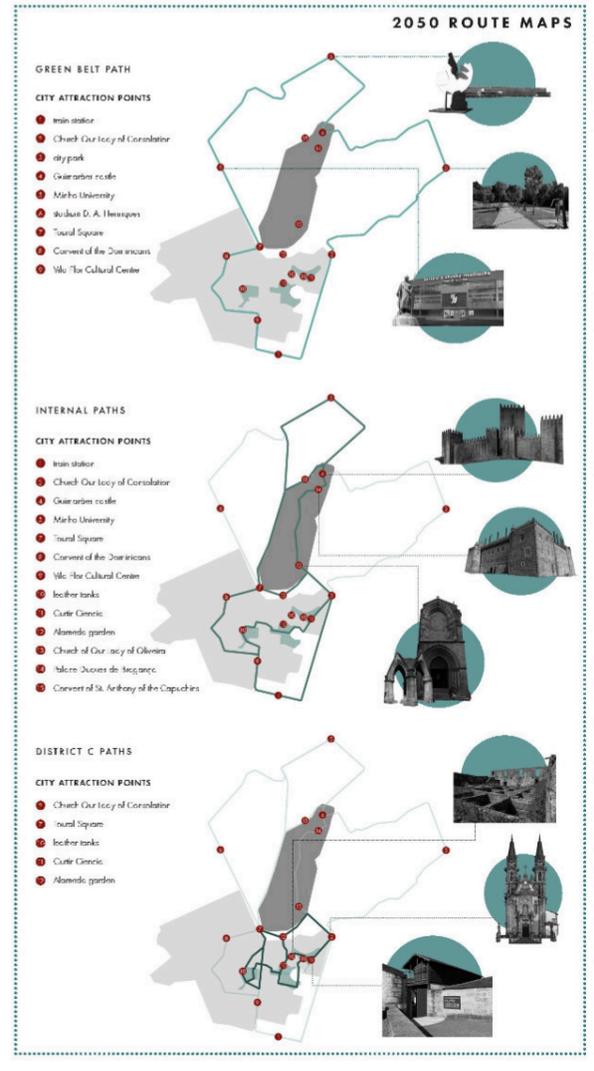
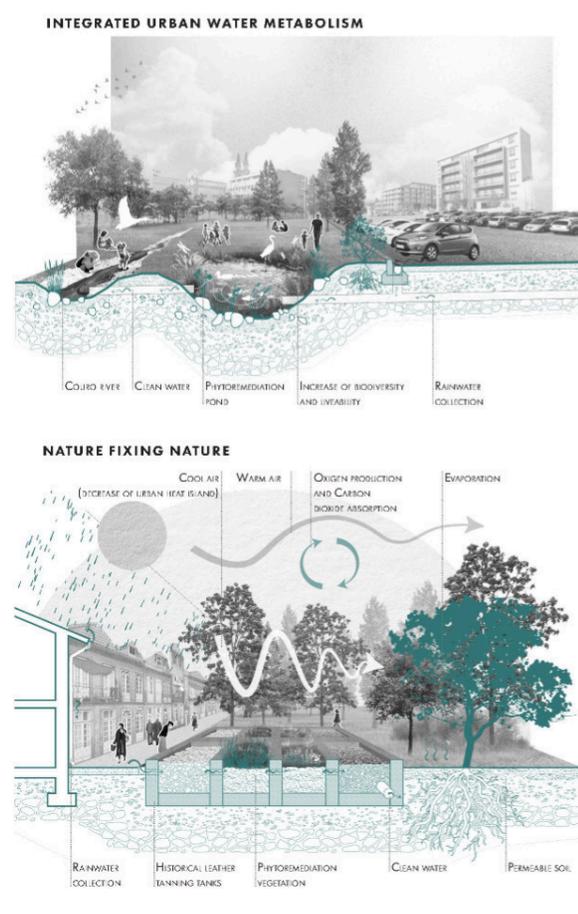
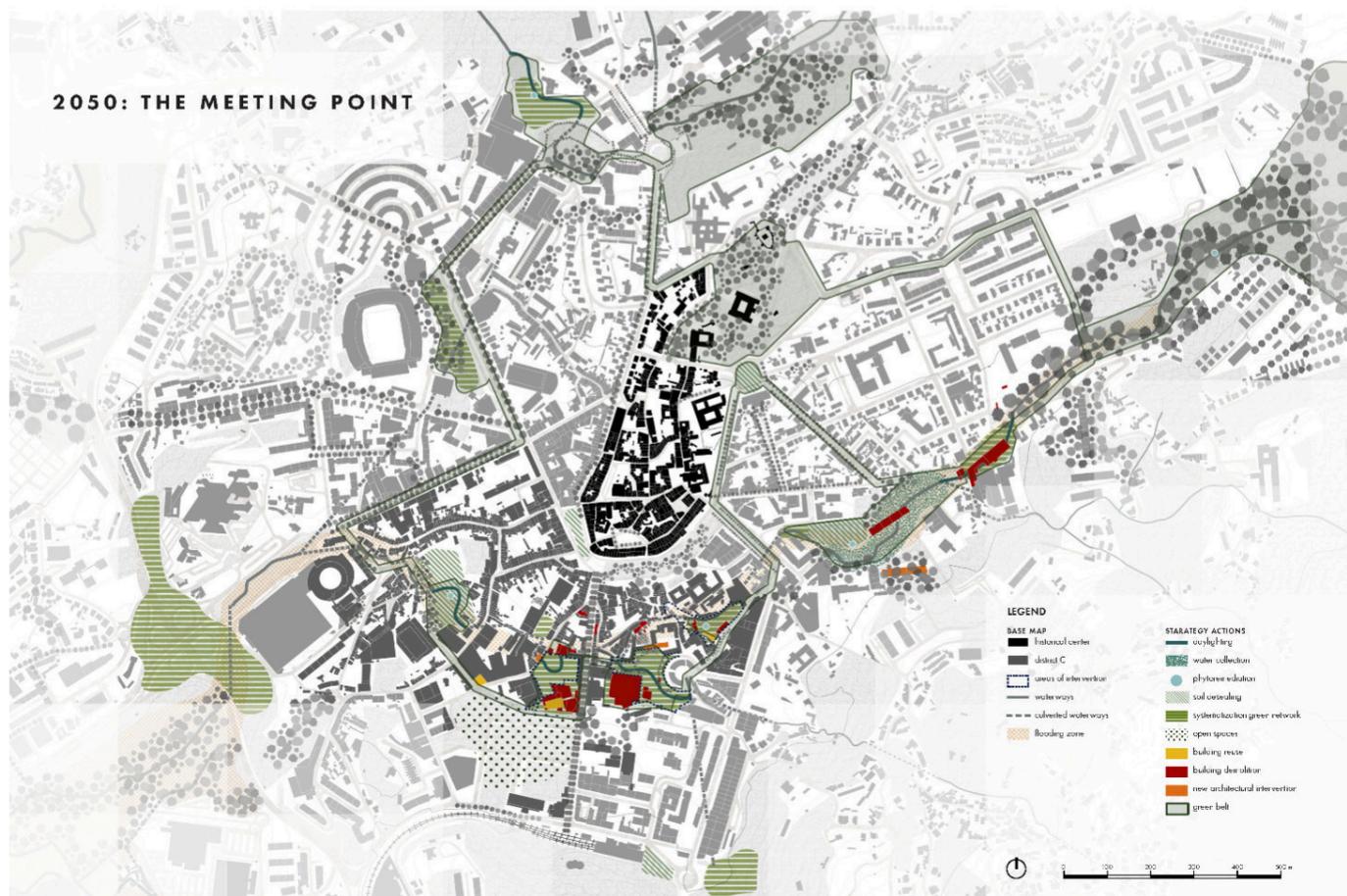
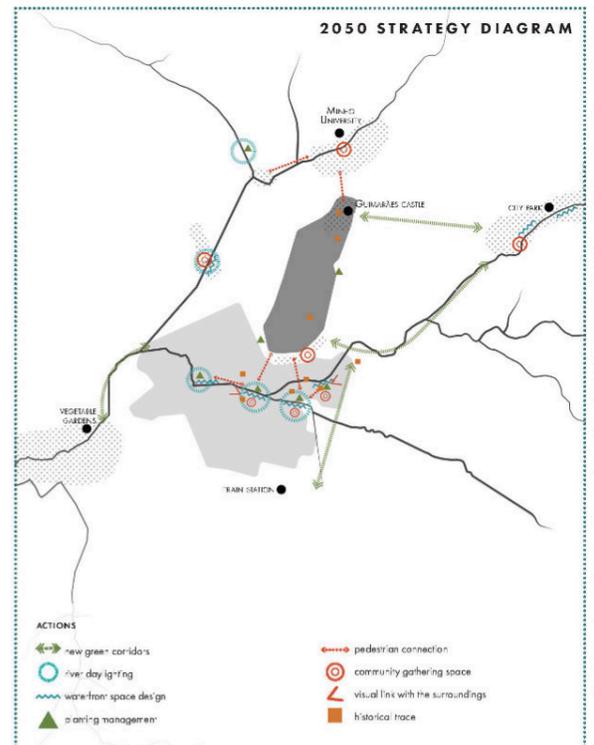


2075: WATER SUPREMACY





2050 KEY STRATEGIES



2050: A MOSAIC OF GREENS



DESIGN PRINCIPLES

URBAN NATURE THRESHOLD

The urban spaces - road and buildings - enter in the natural one, following a perpendicular direction.

RIVER BETWEEN LAND & WATER

The river bed aims to connect two points in which the river is underground.

GRID AS STARTING POINT

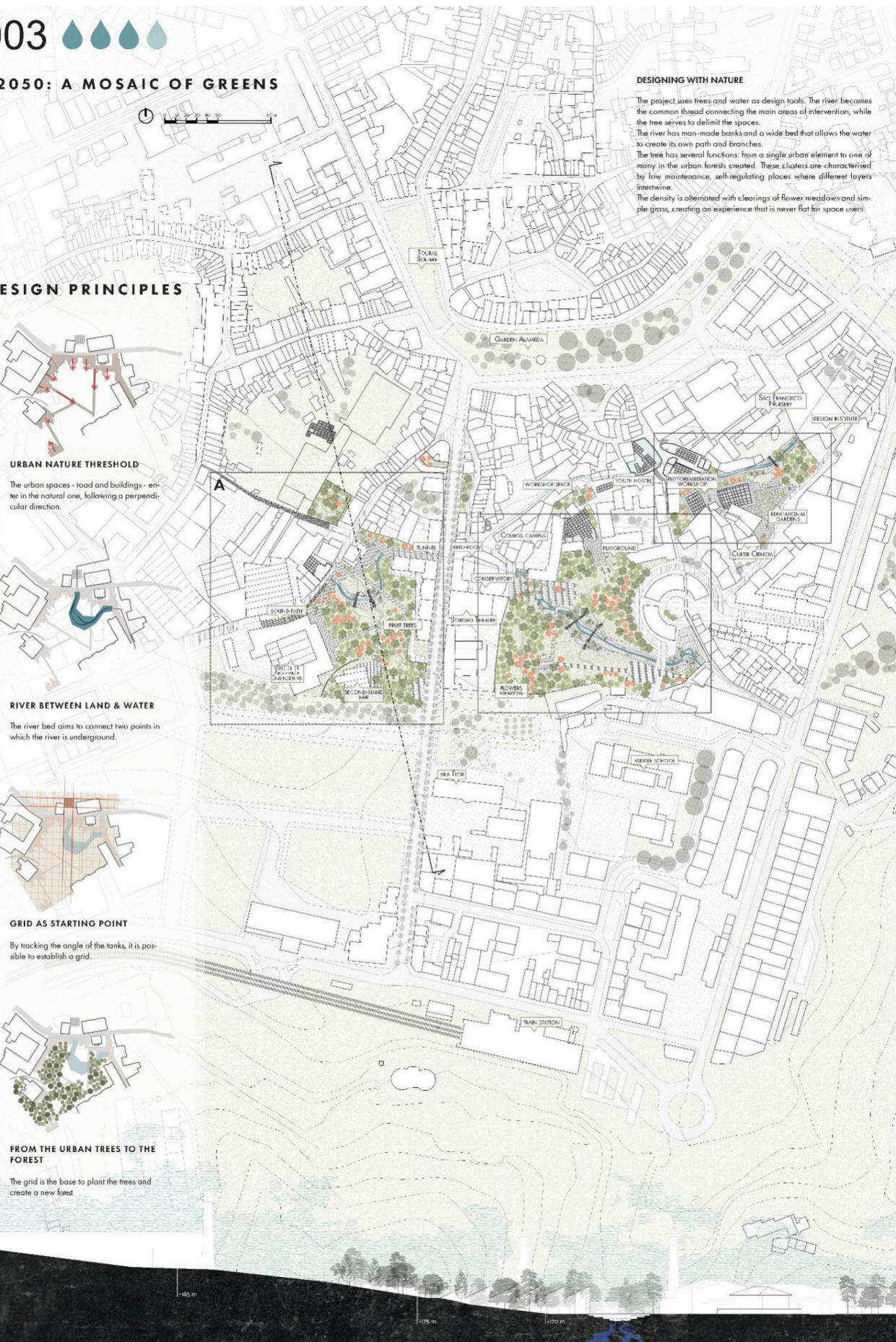
By tracking the angle of the tanks, it is possible to establish a grid.

FROM THE URBAN TREES TO THE FOREST

The grid is the base to plant the trees and create a new forest.

DESIGNING WITH NATURE

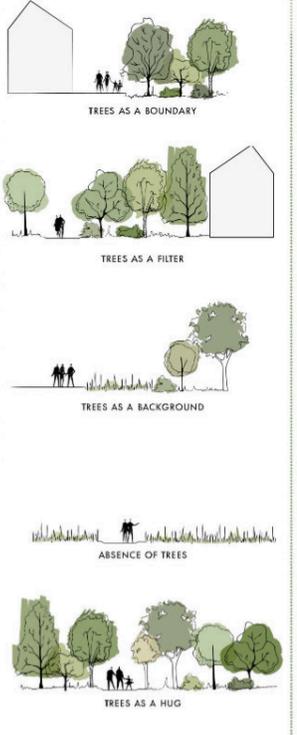
The project uses trees and water as design tools. The river becomes the common thread connecting the main areas of intervention, while the tree serves to delimit the spaces. The river has man-made banks and a wide bed that allows the water to create its own path and branches. The tree has several functions: from a single urban element to one of many in the urban forests created. These clusters are characterised by low maintenance, self-regulating places where different layers intertwine. The density is alternated with clearings of flower meadows and simple grass, creating an experience that is never flat for space users.



2050: BACK TO LIFE



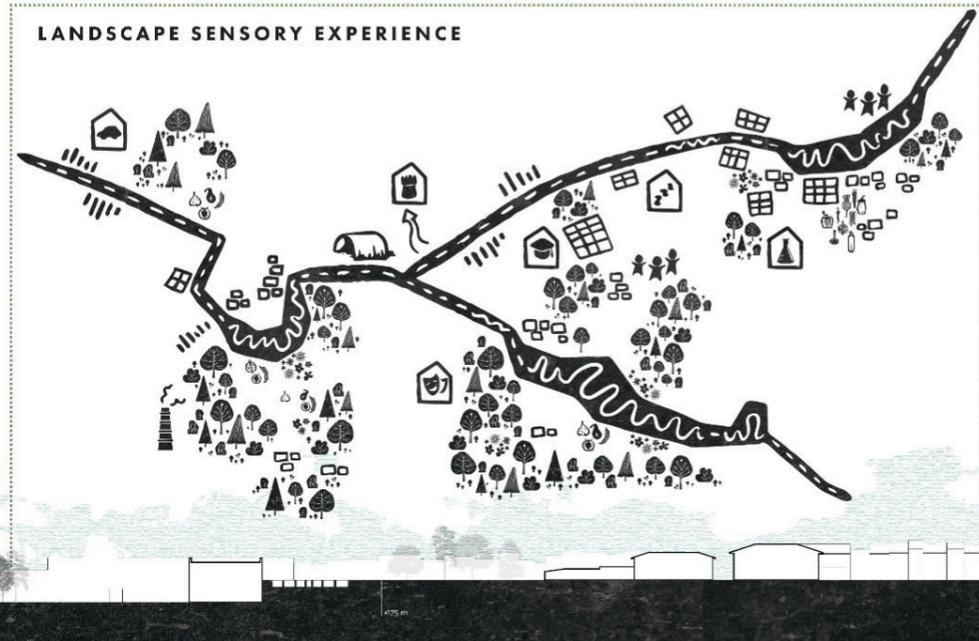
TREES AS A DESIGN TOOL



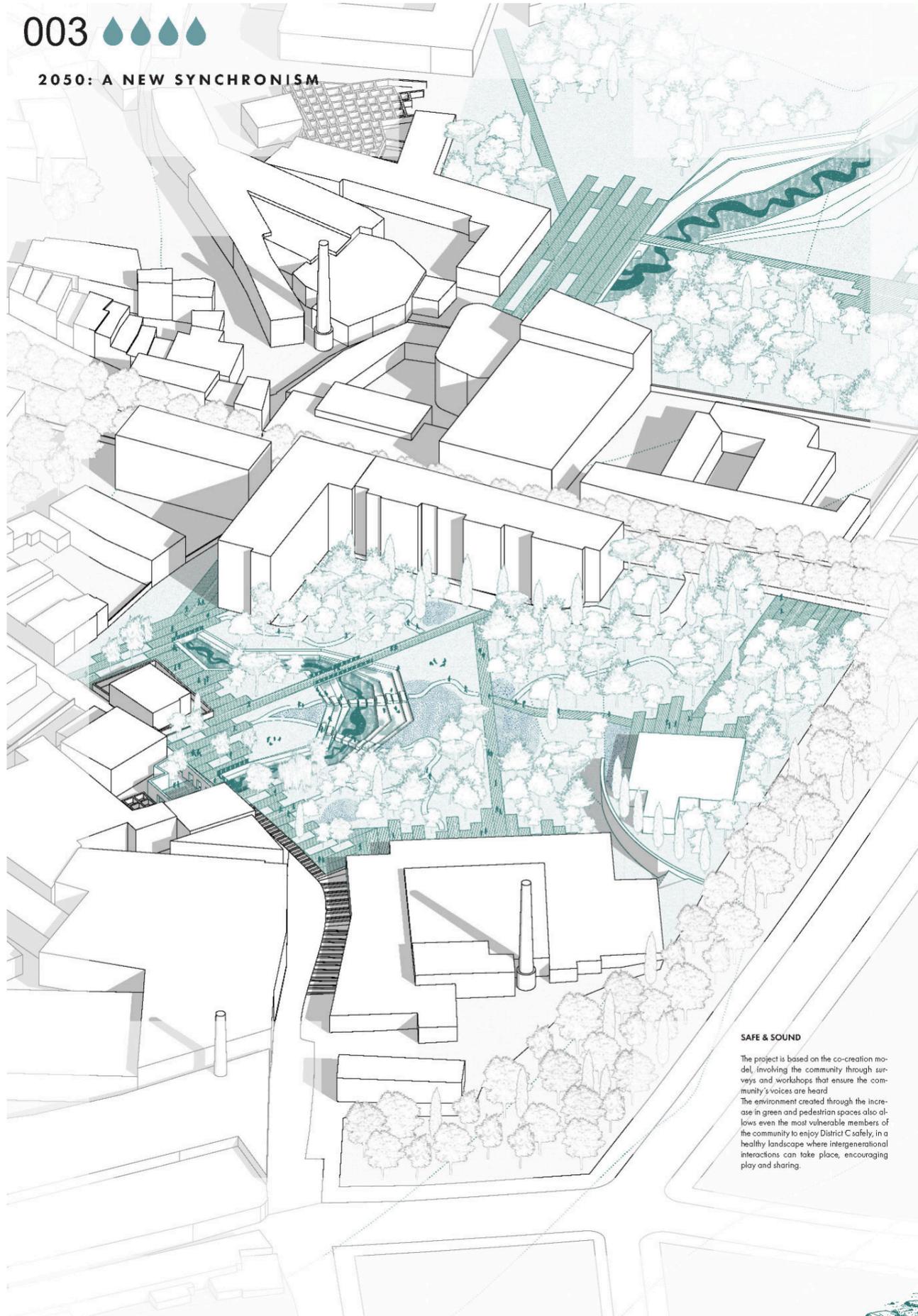
SPATIAL SHAPES



LANDSCAPE SENSORY EXPERIENCE



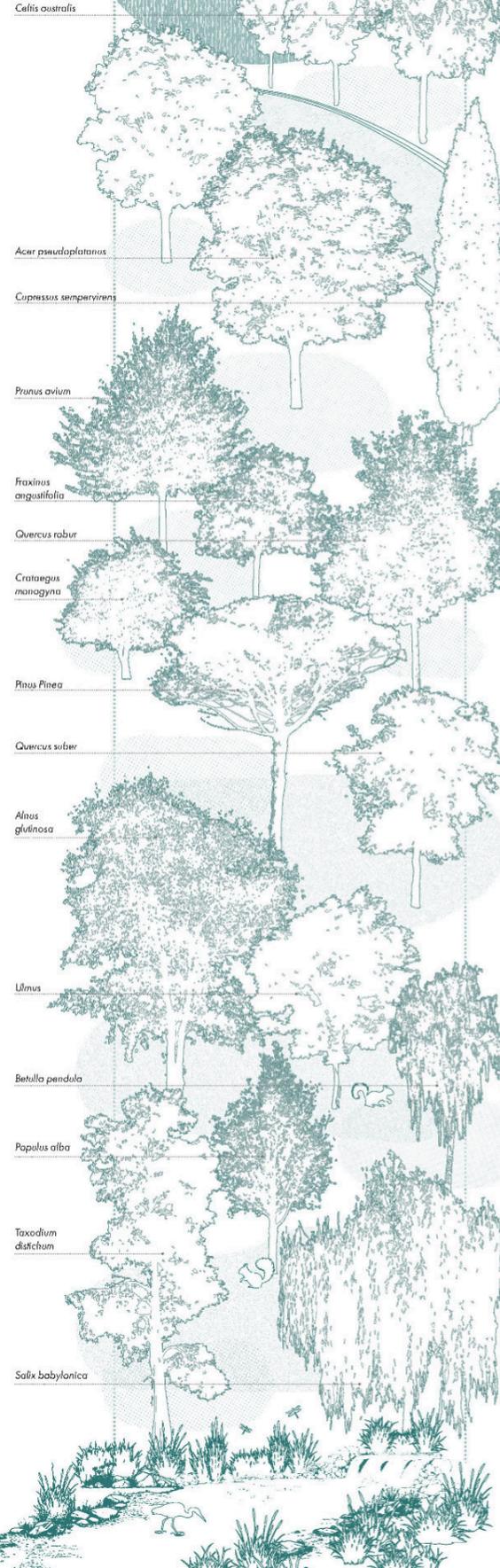
2050: A NEW SYNCHRONISM



SAFE & SOUND

The project is based on the co-creation model, involving the community through surveys and workshops that ensure the community's voices are heard. The environment created through the increase in green and pedestrian spaces also allows even the most vulnerable members of the community to enjoy District C safely, in a healthy landscape where intergenerational interactions can take place, encouraging play and sharing.

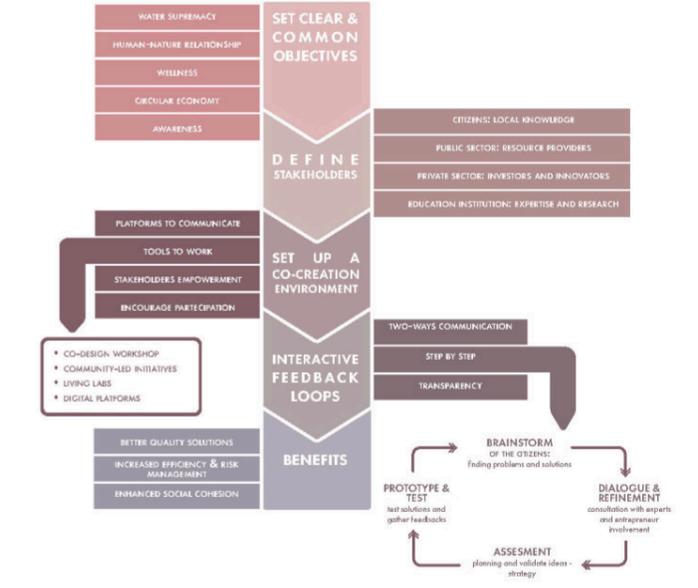
TO EACH LANDSCAPE ITS TREES



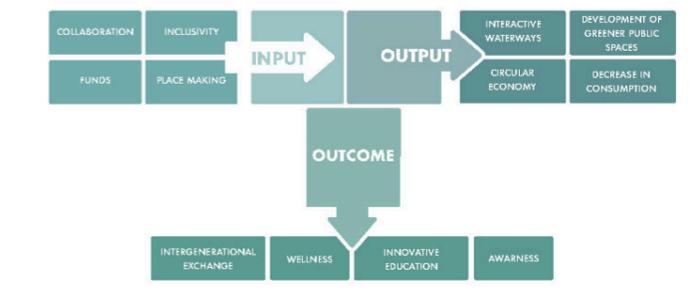
BUSINESS MODEL CANVAS



CO-CREATION MODEL



CO-CREATION SYSTEM



Woven Blue Green Veins

Lu Liu, Chenyang Tang, Zexuan Wu

Huazhong Agricultural University, PR of China

1. Introduction: The Broken Link

Bairro C stands as a critical fracture in Guimarães' "Three Rings" green infrastructure. Historically an "extra-mural" industrial zone fueled by the Costa-Couros river, the district now suffers from a dual crisis: the ecological severance of the buried river and the decay of its industrial heritage. As the city moves towards a sustainable future, Bairro C represents a unique opportunity to transform post-industrial scars into vital urban arteries.

2. Macro-Strategy: Reconnecting the Artery

Our proposal, "Woven Blue-Green Veins," restores the Costa-Couros river corridor as the Primary spine connecting Penha Mountain (Ring 3) to the Creixomil floodplain (Ring 1). Anchored in Hydrological Restoration, the strategy daylight key river sections and integrates flood Detention parks to mitigate chronic flooding. This "Blue Vein" intertwines with a biodiversity-rich "Green Vein" to alleviate urban heat. Simultaneously, a "Heritage Vein" stitches the fragmented industrial fabric back into the city's cultural narrative, linking the UNESCO center to the new district.

3. District Masterplan: The Living Sponge

At the district scale (1:5000), the masterplan functions as a "Living Sponge." Addressing the conflict between urban density and water management, we introduce permeable paving, rain gardens, and green roofs to capture and purify stormwater, turning flood risks into landscape assets. Spatially, a "Core-Radiate" strategy extends heritage corridors from the historic center, organizing the site into three zones: The Heritage Buffer: A respectful

HONORABLE MENTION

transition protecting the UNESCO edge. The Leather Culture District: A regeneration core where industry meets creativity. The Vibrant Community District: A zone prioritizing sports, leisure, and resident well-being

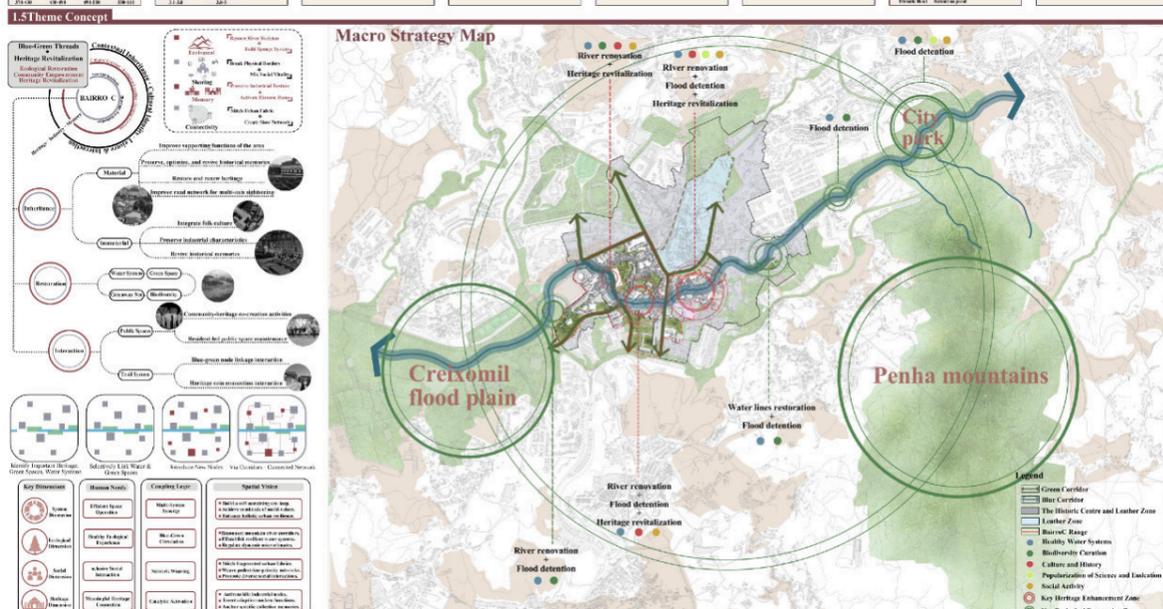
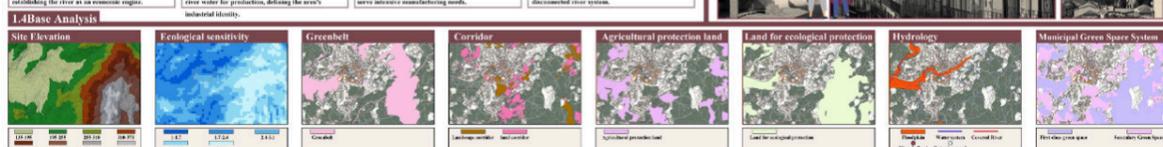
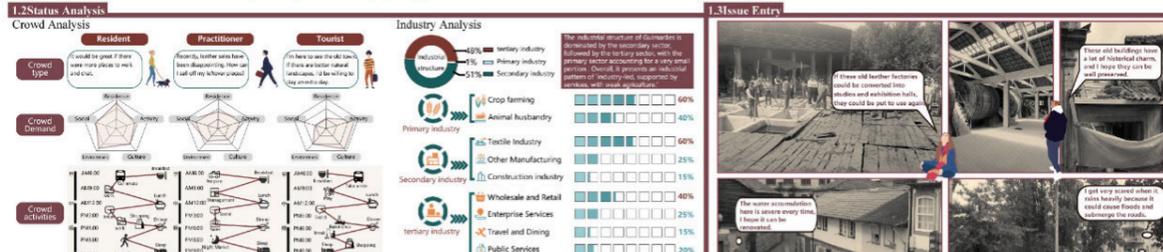
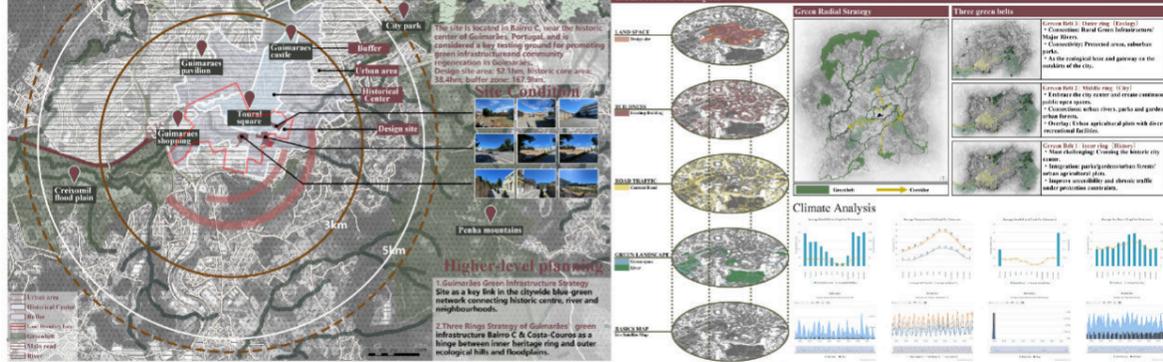
4. Place Design: The Living Interface

At the human scale (1:500), specific interventions weave history into daily life: The Tanning Pools Heritage Park: Derelict stone tanks are reimaged as a water purification garden. Elevated walkways allow visitors to observe the interplay between industrial memory and spontaneous vegetation. The Community Canopy Plaza: An "Urban Living Room" featuring large white parasols and modular wooden benches with pale red accents, bridging the gap between tourists and residents. Adaptive Reuse Market: Preserved factory facades are opened with high-transparency glass, transforming closed workshops into vibrant maker's markets and community hubs.

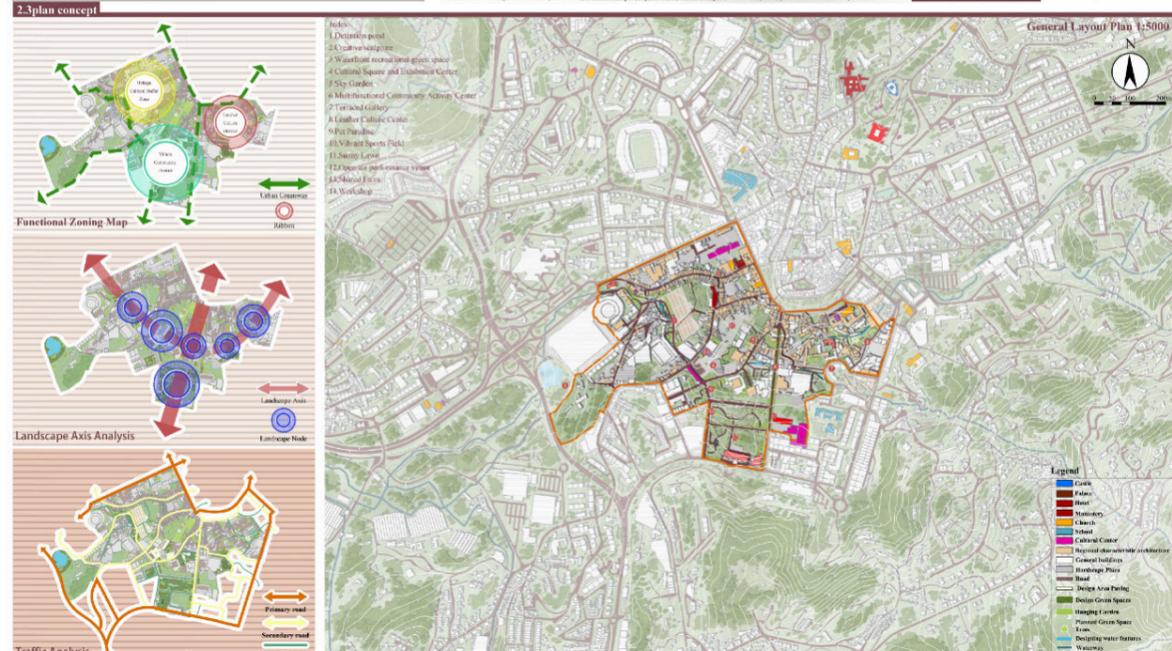
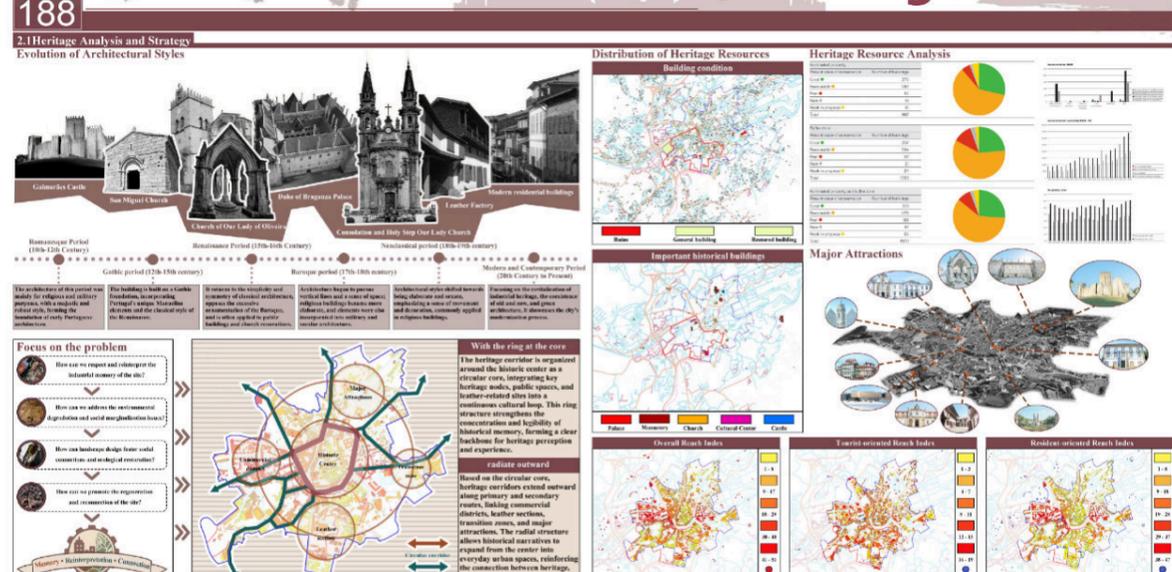
5. Landscape Economy & Transition Model

Our vision extends to a sustainable Landscape Economy. We propose a closed-loop "Productive Landscape Chain": dye plants cultivated along the river (phytoremediation) supply local leather and botanical scent ateliers, reviving traditional crafts through a sustainable lens. Governed by a "Metabolic System" where residents co-manage resources (rainwater, organic waste), the project ensures long-term resilience. By unifying social activation with ecological restoration, Bairro C is reborn as a model for regenerative urban transition.

188 Woven Blue-Green Veins, Heritage Reborn ①

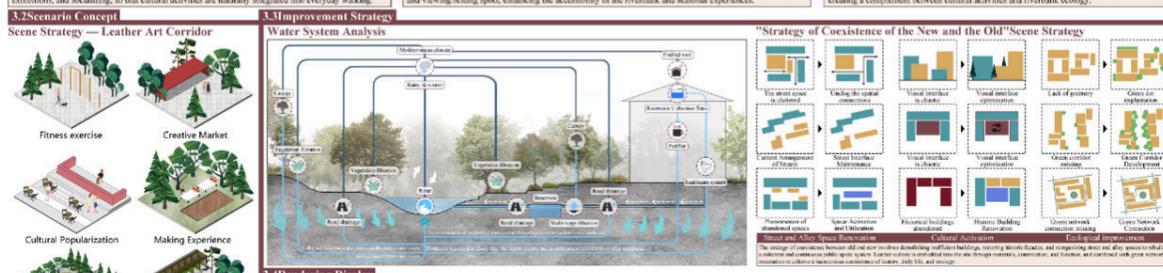
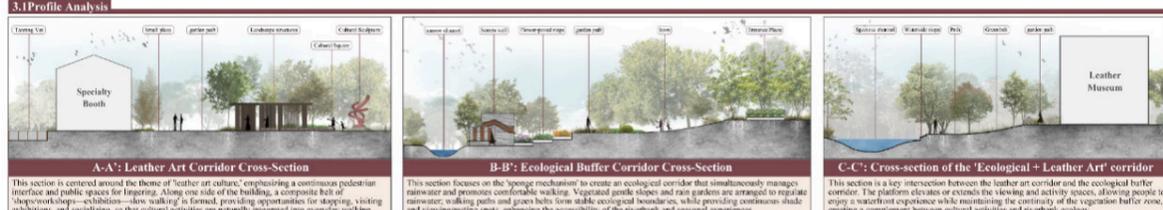


188 Woven Blue-Green Veins, Heritage Reborn ②



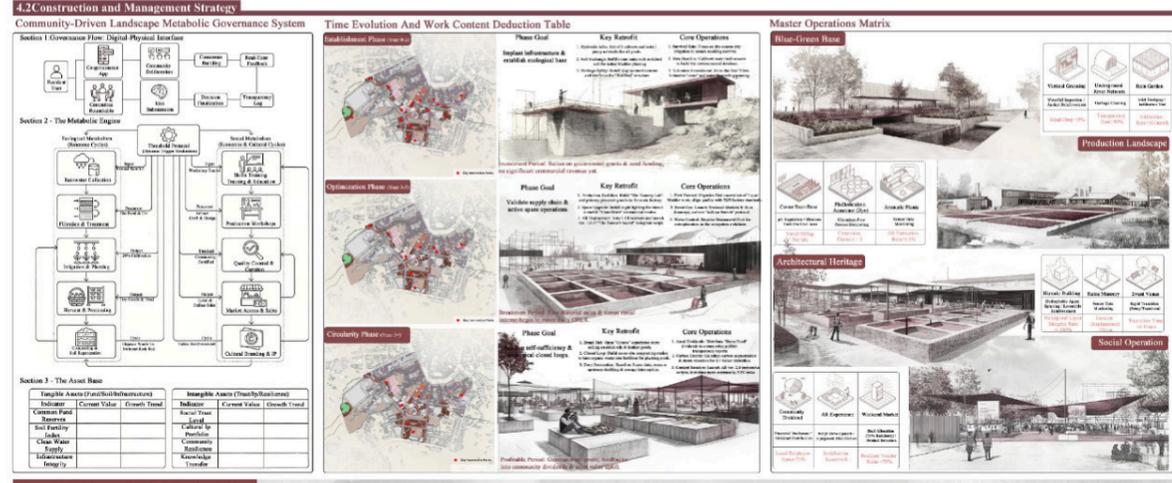
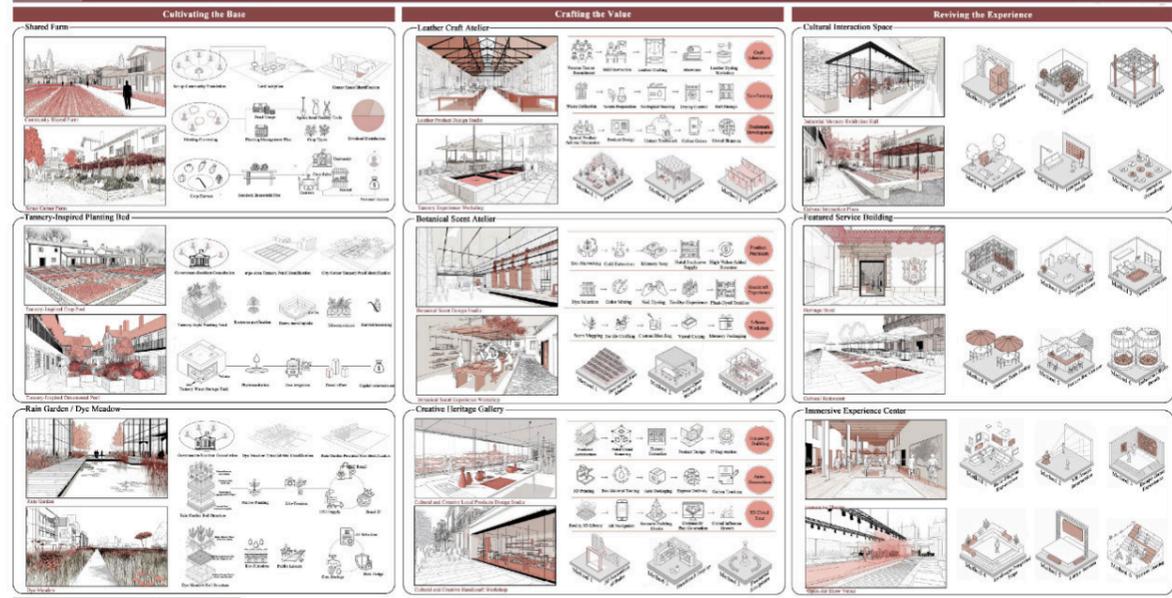
③ Woven Blue-Green Veins, Heritage Reborn

188



④ Woven Blue-Green Veins, Heritage Reborn

188



Pick up the Thread

**Márton Bella, Krisztina Ferencz,
Levente Homoki, Bíborka Korbodi,
Gergő Pintér**

Hungarian University of Agriculture and Life Sciences - MATE

The Moura Who Wove by Moonlight

In an old village with Roman stones on the hillside, a crumbling tower stands. People avoid it at night, for they say a Moura appears there during the full moon. One summer night, a young shepherd wanders by. As the moon rises, he hears a delicate tapping— not footsteps, but the rhythmic clatter of a loom.

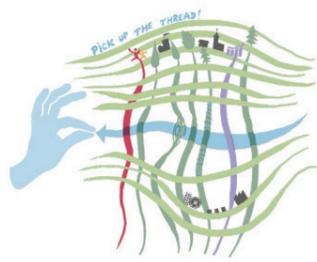
He peers inside. A woman sits at a loom, dressed in white, her long black hair reaching the ground. The thread she weaves shines like moonlight, forming patterns of springs, roads, stars, and ancient signs.

She notices the boy and speaks calmly: “I have waited a long time. If I finish this weaving before dawn, I will be freed. But I cannot do it alone.” The boy asks how he can help. The Moura replies: “Pick up the thread, and ask nothing. Do not count the time. Do not speak my name.”

The boy was holding the thread all night, when a rooster crows and the first sunlight appears, the boy asks: “How much time is left?” At that moment, the thread snaps. The loom falls silent, the cloth vanishes, and the Moura slowly turns to stone with her loom. Only a small piece of fabric remains: the corner of a scarf with an unfinished pattern.

It's said that anyone who reweaves it will dream of paths they have never walked before. The Moura still waits in the tower for someone who can finish her work without questions.

HONORABLE MENTION



The diversity and richness of Guimarães extend beyond its historical significance, lying in the close interweaving of cultural heritage, community life, and the landscape, together forming a living, organic fabric. The textile industry has played a defining role in the city's development for centuries, serving not only as an economic driving force but also as an identity-shaping element that remains present in both the landscape and the built environment to this day. This legacy is legible in the patterns, colors, and formal language of the urban fabric.

Despite of the importance the city had for centuries, in the end of the twentieth century it began to lose it because of the accelerating urbanisation tendencies. The citizens are moving, mainly to Porto, to reverse this process, we would like to recover the historical legacy of the settlement in a renewed form, reflecting today's way of thinking.

One of the settlement's most valuable natural assets is the Couras River, which in recent decades has repeatedly flooded the city as a result of intense rainfall causing significant disruption to urban life and damage to the UNESCO World Heritage-listed historic city center. For us, addressing the challenge of flooding offers an opportunity to re-define green spaces, public realms, and the built environment, while grasping a more flexible and resilient urban infrastructure. The aim of the process is to ensure that flood management is not treated as an isolated technical intervention, but as an integral part of the urban and landscape structure, while also establishing a coherent landscape and urban network capable of responding to the challenges of climate change and strengthening local identity.

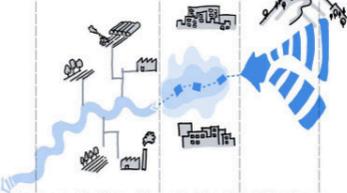
In the long term, the concept seeks to create a sustainable and adaptive system that not only preserves the cultural and natural values of Guimarães, but also establishes new relationships between people and landscape, forming a fabric in which the heritage of the past and the present are harmoniously interwoven.

LONG TERM VISION: UNDERSTANDING THE WHOLE

Guimarães is one of the oldest cities of Portugal, located 111 kilometers North-East from Porto, having a rich, thousand-year-old heritage. It's usually referred to as the "birthplace of Portugal".

By the Fourteenth-Fifteenth centuries, Guimarães had an important role as a religious and economic center regionally. It has also become a pilgrimage site. The structure of the historical city center and many of its sites remain from this era.

CHARACTERISTIC RIVER SEGMENTATION



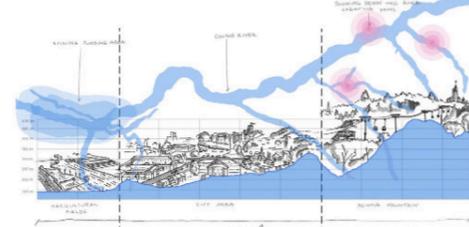
The Couras River flows with varying intensity in different parts of the town. On Penha Mountain, the water flow is greater, especially after rainfall, allowing water to flow unimpeded into the town center, where it slows down, accumulates, and causes flooding. Later, the water can spread even further in the floodplain, where it can be used for agricultural activities.

THE GREEN BELT CONNECTED BY THE WATER



In order to develop the green ring, we also recommend greening the areas along the river, including the expanded river sections, which would connect the ring and the inner areas. In other words, we would develop proceeding from the inside outwards.

CHARACTERISTIC CROSS-SECTION OF THE CITY



Guimarães' characteristic urban section clearly reveals the landscape character and the land-use patterns, derived from it. The elevated terrain of Mount Penha functions as a major recreational area for residents, while the city's hilly zones support a diverse residential fabric shaped by a rich historical legacy. To the west, the flat lowlands are predominantly devoted to agricultural production.

The Couras River mirrors this spatial land-use structure: however, floodplains are only available along the agricultural stretches. During extreme precipitation events, there are no effective measures to slow down or retain the rapidly accumulating runoff descending from the slopes of Mount Penha. As a result, large volumes of water concentrate within the urban area, leading to recurrent flooding.

For this reason, stormwater management and retention should be addressed already along the river's upper reaches on Mount Penha. Such an approach would not only enhance public safety and overall urban livability, but would also contribute to the city's economic resilience. By mitigating flood risks upstream, substantial long-term economic losses associated with flood damage can be avoided.

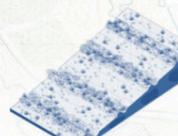
Bioswales on Penha Mountain during the dry season



Bioswales on Penha Mountain during the rainy season



Collecting drainage channel system during the dry season



Collecting drainage channel system during the rainy season



Multi-channel river during the dry season



Multi-channel river during the rainy season



- BLUE INFRASTRUCTURE
- GREEN INFRASTRUCTURE
- COMMUNITY
- CULTURE
- ECONOMY

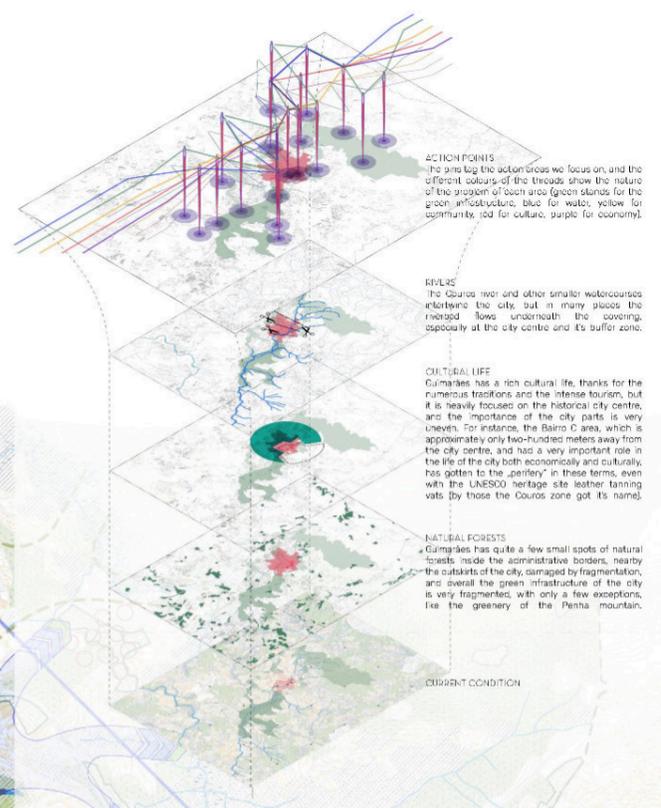
- Flood-prone areas
- boundary of Bairro C district
- boundary of Guimarães
- topography lines
- small-scale planning areas
- national agricultural reserve
- natural forest
- planted forest
- agricultural fields
- water surfaces
- Couras river
- UNESCO site buffer zone
- UNESCO site
- road network
- current and planned green belts
- intervention points
- future expansion of green spaces
- future spread of water surfaces
- natural water surfaces
- water treatment strategies
- river
- flood areas
- landing spots
- habitat
- urban green
- view points
- Mediterranean vegetation of Penha Mountain
- Atlantic vegetation of Penha Mountain
- Agricultural fields
- Agricultural farms

Creixomil floodplain

The Creixomil floodplain near Guimarães comprises farm and wetlands and "cattle" habitats. Its restoration enhances biodiversity, stabilizes riverbanks and improves recreational spaces, while providing a novel looking soft-tissue "cage" for wind use and landscape sensitive planning for the city's sustainable future.

Mount Penha

The urban vegetation around Creixomil, to the northern limit of a region, is particularly old and diverse because the area lies in a transition zone between Atlantic, Iberian and Mediterranean climate influences. As a result, the Penha mountain shows two distinct "trees" was characterized by wide and dense, and the other by narrow and tall Mediterranean vegetation. The road through the hillside was once a well will continue to influence the development of the approach to the mountain.



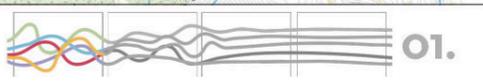
INTERPOINTS
The one big the action areas we focus on, and the different colours of the threads show the nature of the program of each area (green stands for the green infrastructure, blue for water, yellow for opportunity, red for culture, purple for economy).

RIVERS
The Couras river and other smaller watercourses interweave the city, but in many places the riverbed flows underneath the covering, especially at the city center and its buffer zone.

CULTURAL LIFE
Guimarães has a rich cultural life, thanks for the numerous traditions and the intense tourism, but it is heavily focused on the historical city center, and the importance of the city parts is very uneven. For instance, the Bairro C area, which is approximately only two hundred meters away from the city center, and has a very important role in the life of the city both economically and culturally, has gotten to the periphery in these terms, even with the UNESCO heritage site leather tanning vats by those the Couras zone got its name.

NATURAL FORESTS
Guimarães has quite a few small spots of natural forests inside the administrative borders, nearby the outskirts of the city, damaged by fragmentation, and overall the green infrastructure of the city is very fragmented, with only a few exceptions, like the greenery of the Penha mountain.

CURRENT CONDITION



GENERAL CONCEPT

The chosen area is located in the central, dense built part of Barro C, functioning as an urban sub-center, with a small portion situated within the UNESCO World Heritage zone. The site is surrounded by a diverse set of public and institutional buildings, including a university campus, a music conservatory, a social service center, a theatre, a former factory building, an elementary school, and a private clinic.

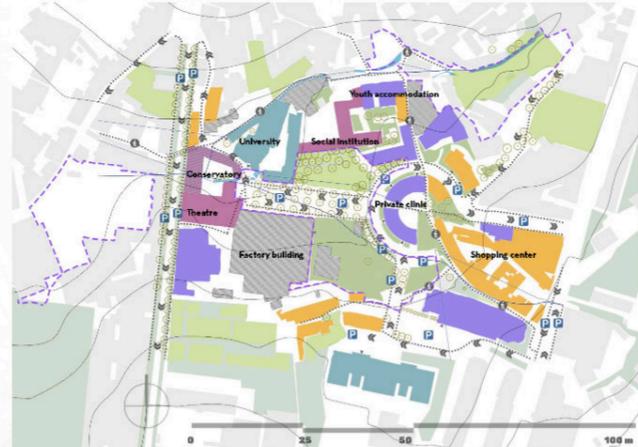
Adjacent to the former factory building lies a fenced, currently unused, sloping green area characterized by continuous grassy surfaces. This space is bordered by a road leading to the school and a large paved parking area situated between the clinic and the theatre. The road serves both vehicular and pedestrian traffic, which is particularly significant due to the proximity of the school and other public services.

The core elements of the design concept include the daylighting of the currently underground river, the creation of a recreational riverbank, terrain reshaping, and the transformation of existing green areas into accessible and functional public spaces.

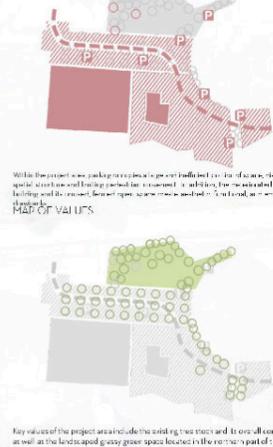
On the northern edge of the site, behind the social service buildings, a historically significant farming basin is currently hidden and difficult to access. The proposal integrates this heritage element into the park through a passage running through the building, creating a visually screened yet clear spatial and conceptual connection to the project area.

To maintain accessibility, the main road remains unchanged; however, vehicular access to the former parking area will be eliminated. A fundamental aspect of the proposal is the introduction of new pedestrian entrances, providing access from the upper edge of the sloping terrain, from the road toward the river, and from the riverbank down to the water itself.

CURRENT CONDITIONS



CONFLICT MAP



BRINGING THE WATER TO THE SURFACE

The most important element of the new design is the demolition of the parking lot and the exposure of the river flowing beneath it. To achieve this, the masses of the three rows of trees in the parking lot must be removed, while the other two will remain.

The excessive water surface on the side facing the hall would be designed with an ornamental, sloped solution, while on the other side, close to the clinic, would be naturalistic spaces. This would make the water accessible from both directions. A small area of the parking lot pavement will remain next to the theatre for safety reasons (fire department access, etc.).

Next to the paved area of the entrance to the hall, we have created a decorative drain, from which the water flows through the sidewalk into the river, where we have provided a sloping stone to ensure passage.

REACHING THE TERRAIN

The terrain sloping down from the school towards the river cannot be used in its current state. To solve this problem, the terrain is to be flattened into terraces, using retaining walls to create usable space.

Some parts of these walls will also serve as benches, the terraced terraces are to be covered with grass, sun umbrellas, with furniture in some places. The individual terraces are connected by stairs integrated into the wall and a ramp, ensuring barrier-free access.

At the bottom of the terrain, which is in level with the entrance of the building, there is a small paved area, which is the reception area of the building, but can be used flexibly, for example as an event space or stage. The terrace design is advantageous for this, as it also functions as a structure.

A row retaining wall will also be built on the lawn north of the former parking lot, creating a more open, terraced and a deeper ground level in front of the building to be demolished.

EXPANDING THE GREENERY

In order to improve the current vegetation, we would create new wooded areas. The trees in the central row of the parking lot will be moved to the top of the terraces and supplemented with newly planted trees to create a pleasant, shaded place to relax.

New trees would also be planted in the smaller grassy area separated by the road, and due to its size and location, this area could function as a community garden.

The banks of the river are also covered with lawn, and spots of plants typical of riverbanks.

RENEWAL OF THE FACTORY BUILDING

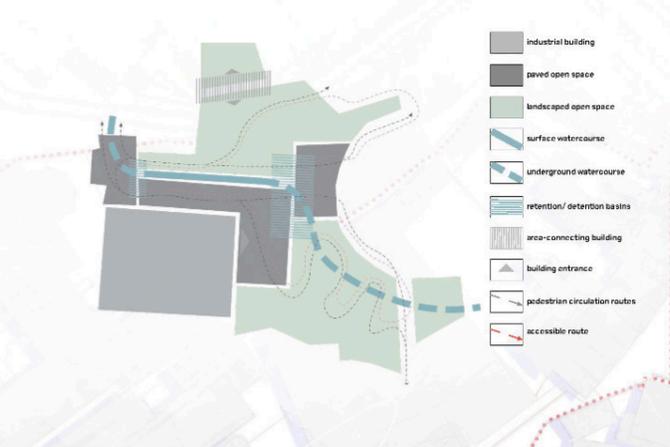
An important element of the concept is the integration of the disused factory building, which currently stands out as a prominent feature of the area, but has great potential for creating a multifunctional community space.

In terms of its economic appeal, it could function as a classic market hall, or as a market for produce and products grown in community gardens by local residents.

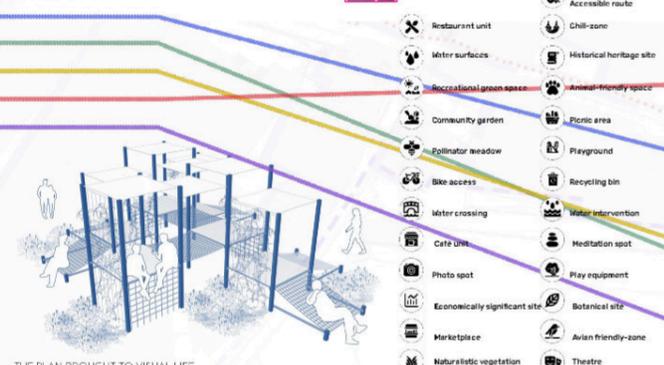
In addition, almost any type of catering unit or shop could be set up in it as required. This would ensure a steady income for the building operator, encourage local farmers and artisans to produce, and likely become an important commercial unit within the district or the whole city.

Having a cultural role is an important aspect of the concept, for example as an exhibition space or market place for local artists, or it could even be linked to the venues of the annual local art biennale.

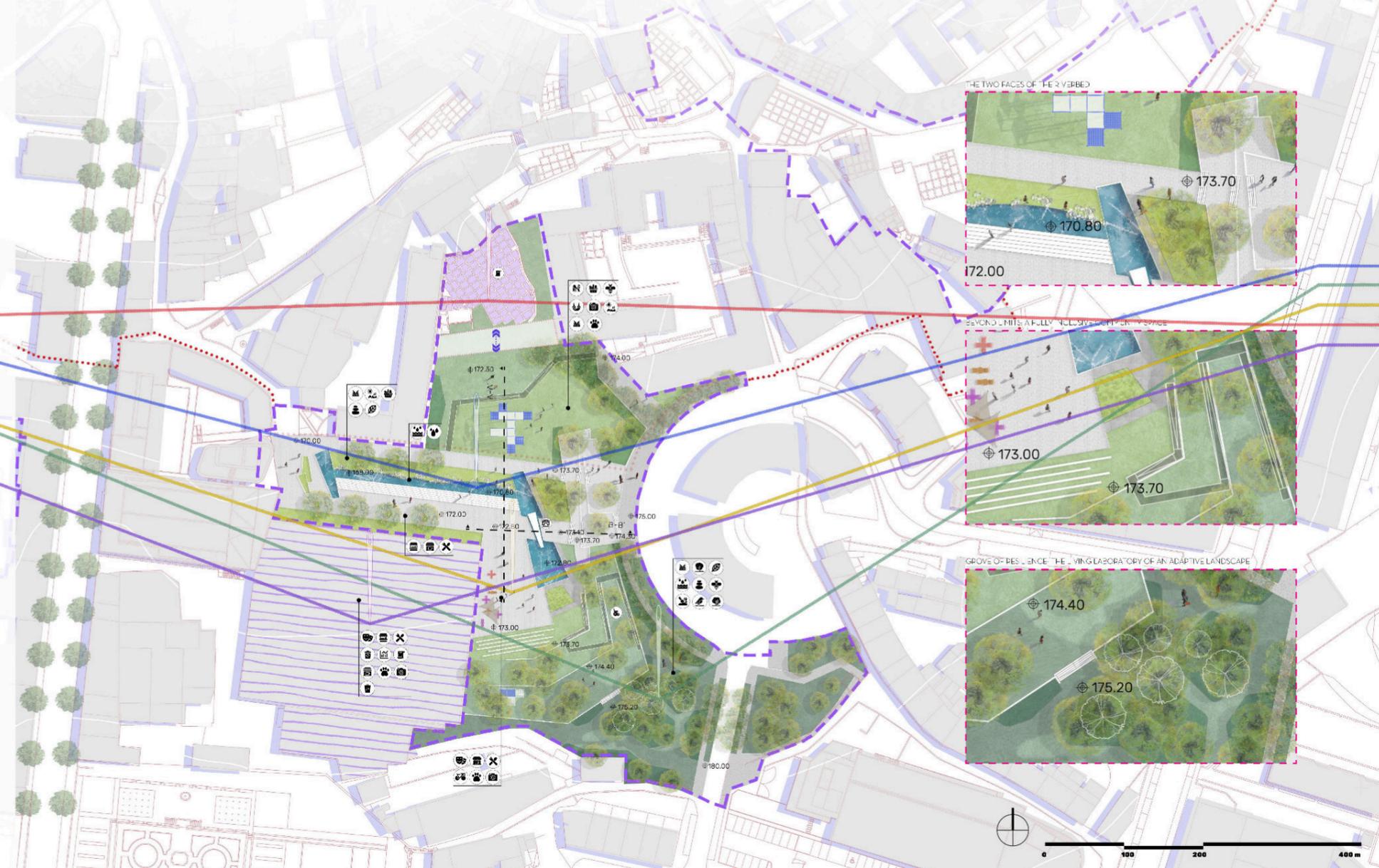
PLANNED FUNCTIONAL SCHEMA



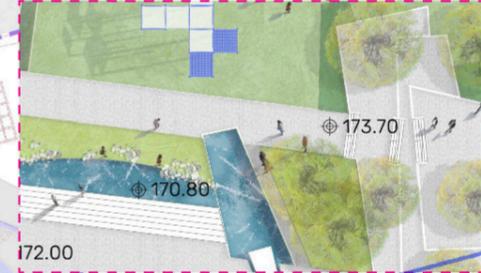
SECTION DRAWING



THE PLAN BROUGHT TO VISUAL LIFE



THE TWO FACES OF THE RIVERBED



BEYOND THE WALLS: FULLY INCLUDING COMMUNITY SERVICES



GROVE OF RESILIENCE: THE LIVING LABORATORY OF AN ADAPTIVE LANDSCAPE



THE PATTERN OF THE FABRIC

The visual and spatial concept of the proposal is woven together by five colored threads that, referencing Guimarães' textile heritage, guide the viewer through the city's various intervention points. Beyond their graphic role, the threads provide an interpretative framework: conflict-prone, underused, or damaged areas of the urban fabric are understood as "holes" that require stitching together and healing through integrated design responses. The blue (river), green (green infrastructure), yellow (community), red (culture), and purple (economy) threads each carry distinct meanings, yet are inseparably interwoven into a complex, living urban system.

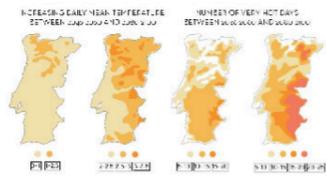
Along the blue infrastructure thread, the exposure and reinterpretation of the Couraço River addresses flood-related challenges while reintegrating water into everyday urban life. Making the river visible and perceptible improves the microclimate, enhances biodiversity, and encourages more nature-oriented community activities in the short term, while in the long term it leads to significant economic savings through damage prevention and contributes to the strengthening of ecological networks at the landscape scale.

The green and yellow threads connect the system of urban green spaces, public realms, and community functions. The proposed walking routes and nodes reveal lesser-known layers of the city, providing a clear spatial structure for recreation while creating places for meeting, resting, and urban life beyond building interiors. These elements generate new cultural and recreational qualities and, in the long run, support tourism and the vitality of local hospitality and services.

The purple thread represents the economic layer, weaving together environmental and community-based interventions. It makes visible how water management, green infrastructure,

and social initiatives generate not only ecological value but also tangible economic benefits. Community gardens, for example, support self-sufficiency and the production of healthy, locally grown food, while fostering long-term community cohesion and reducing the city's dependence on global supply chains.

Taken together, the network of threads is not merely a graphic device but the manifestation of an integrated urban and landscape-based approach, in which challenges are addressed not through isolated interventions but through mutually reinforcing systems. The concept aims to create a flexible, resilient, and identity-strengthening urban fabric, where the heritage of the past and the challenges of the future are interwoven into a single, coherent structure.



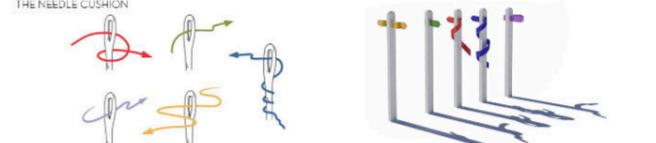
Northern Portugal has a generally mild oceanic-Mediterranean climate, cooler and wetter than southern regions due to Atlantic influence. Climate projections indicate warmer and drier summers, more frequent heatwaves, and increasing frequency of rainfall events, with a shift toward Mediterranean characteristics. Average temperatures are expected to rise by approximately 1-2 °C by mid-century and up to 2.5-3 °C by the end of the century, accompanied by more hot days and fewer frost events.

THE NEEDLE CUSHION

Our public furniture collection was inspired by the concept of the "pin-cushion." The point-like, acupuncture-style interventions in the landscape of Guimarães are represented on the map with pins, visually and conceptually resembling a pin-cushion. This approach reflects the small, localized interventions in the urban space through the design of the furniture.

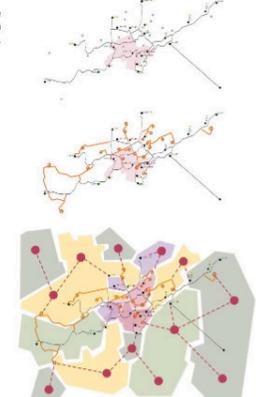


THE NEEDLE CUSHION



At key nodes along the walking routes, information panels are installed to present the thematic highlights of each node for educational purposes. Each panel features a color-coded map of the walking network and indicates the nearest thematically differentiated nodes, guiding visitors onward and supporting clear orientation.

PHASING OF THE WALKING ROUTES



The development of the walking route network unfolds across three time horizons. It begins with the designation and consolidation of the proposed routes and nodes, followed by inter-city expansion up to 2040. Linking additional thematic sites, by 2050, the network extends beyond the urban fabric towards the surrounding landscape character areas, strengthening the relationship between Guimarães and its wider landscape context.

GROVE OF RESILIENCE: THE LIVING LABORATORY OF AN ADAPTIVE LANDSCAPE

In the southern part of the open space design area, an approximately 800 m² experimental shrub-tree grove is proposed, aiming to explore the potential of climate-adaptive plant use in an urban context. The area will be planted with vegetation that experimentally responds to the projected climatic changes of Guimarães over the next 50-100 years.

The primary objective of the grove is to test drought-tolerant, heat-resilient, and urban-compatible green communities that may be applied in the long term across various components of the city's green infrastructure, including public spaces, private gardens, and peri-urban, semi-natural areas.

The planting concept is structured across multiple layers—lawn, perennial, shrub, tree, and climbing plant levels—thereby enhancing ecological stability and biodiversity.

The grove functions as an open and publicly accessible space with a park character, while also fulfilling a pronounced experimental and educational role. The knowledge gained from this site can support the city in making informed, long-term decisions regarding climate-adaptive planting strategies. As part of the proposal, similar experimental plantings are recommended for other currently underused or functionless areas within Guimarães, contributing to the development of a city-wide adaptive green network.

The planting design follows a climate-adaptive approach, aiming to enhance biodiversity and improve the urban microclimate. A multi-layered vegetation structure (turf – perennial herbaceous plants – shrubs – trees – climbers) creates a resilient and long-term sustainable green infrastructure. The experimental grove in the southern zone is intended for testing drought-tolerant and heat-resilient species, which can be implemented in other urban areas in the future.

ENHANCING BIODIVERSITY THROUGH POLLINATOR- AND BIRD-FRIENDLY DESIGN

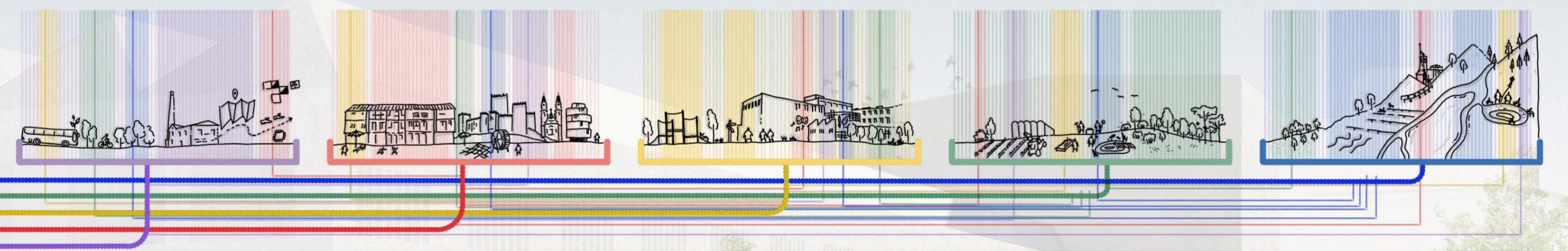
Urban expansion in Guimarães increasingly threatens pollinators through habitat loss and fragmentation. The redesign of open spaces and the integration of green corridors aim to restore ecological connectivity and create more favourable conditions for biodiversity. Community-based gardening plays an important role in this approach, as it provides pesticide-free, small-scale habitats that support bees, butterflies, and other pollinating insects.

The inclusion of nectar-rich ornamental and herbaceous plants further enhances food availability. Bee populations are additionally threatened by the spread of the Asian hornet, which requires active monitoring and early detection. To support ecological pest control in a sustainable way, the artificial grove is designed to be bird-friendly, encouraging insectivorous bird species that help regulate pest populations naturally.

SUGGESTED CLIMATE RESILIENT PLANTS



THE FINISHED FABRIC OF MOURA



Riverlink

Hanna Englert & Maria Jany

Weihenstephan-Triesdorf University of Applied Sciences

This project understands Guimarães as a continuous system shaped by water, nature and culture. The foundations of a new spatial narrative are the ecological spaces around the city, historic industrial structures and hidden waterways. Its aim is to reconnect the city with the natural processes around it, rather than separating nature, people and heritage from one another. This concept weaves those into one landscape framework that supports biodiversity, climate resilience and public use.

The ecological ring around Guimarães is a protecting landscape, where agricultural production, habitats for amphibians, insects and wetland species, forested slopes and rocky areas of Penha form a living landscape system. Hydrology, topography and vegetation structure build a continuous chain of habitats around the city. The Landscape Strategy offers new destinations for residents and tourists. By Guiding tourism into surrounding areas, pressure on the historic city centre decreases, so climate change and increasing tourism are addressed through a holistic approach.

Within the urban area, alongside the Couros river, former industrial sites along the water are reinterpreted as green corridors, learning landscapes and social Meeting points. Water once hidden, now becomes a guiding element, a cultural spine and an ecological connector for the city.

FINALIST

At the scale of Bairro C, heritage, landscape and people intersect. Historic tanning basins and other industrial remnants are not treated as isolated monuments but as active elements of public space and participation. Bairro C linking the UNESCO World Heritage city center with the train station can act as a string of cultural pearls, leading people to Guimarães historical core.

Design elements play a key role in revealing invisible processes. Indicator tree species like Zelkova serrata or Sorbus aucuparia but also Mosaic pathways mark the presence of underground waterflows and translate hydrological conditions into visible landscape language. Design is becoming a narrative tool, allowing visitors to perceive hidden systems through spatial experience.

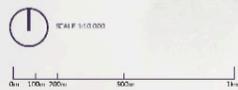
The landscape framework is completed by participation and collective use. Participation focuses on “the Line”, the new green corridor in Bairro C. Different zones are defined, each focusing on its own stakeholders and pursuing different

participation goals. People are integrated into the planning process, from vision to coproduction. This gives people the opportunity to connect with their surroundings.

084 RIVERLINK



THE WATERWAY CONNECTS BAIRRO C TO THE SURROUNDING LANDSCAPE, HIGHLIGHTING ITS HISTORIC USE.



0 100 200 300



SONG THRUSH
Turdus philomelos

Functioning group of urban and woodland songbirds

HABITAT: MEADOWS, GARDENS, FOREST EDGES
FOOD: INSECTS, WORMS, SNAILS, BERRIES AND FRUIT
BENEFITS: INSECT CONTROL, SEED DISPERSAL AND PSYCHOLOGICAL WELLBEING
NEEDS: DENSE VEGETATION, LEAF LITTER, BERRY PRODUCING SHRUBS



ESCALERA'S MOUSE-EARED BAT
Myotis escaleri

Functioning group of nightly insect-hunting guild

HABITAT: FOREST EDGES, RIVER CORRIDORS AND CAVES, OLD BUILDINGS, BRIDGES
FOOD: NIGHT FLYING INSECTS, MOTHS, PUPAE, SMALL BEETLES
BENEFITS: NATURAL INSECT CONTROL, HEALTHY NIGHT-TIME ECOSYSTEM
NEEDS: QUIET NIGHT-TIME DARK CORRIDORS, GREEN WATER AREAS



KEELED SKIMMER
Orthetrum coerulescens

Functioning group of aquatic insects

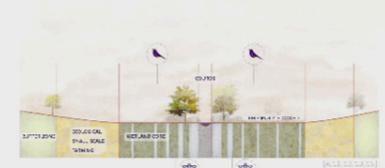
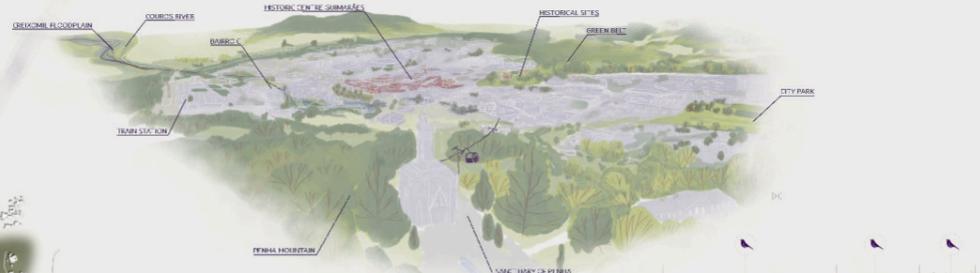
HABITAT: SLOW FLOWING STREAMS, PONDS, WETLANDS
FOOD: AQUATIC INSECTS, MOSQUITOES, SMALL FLEA BEETLES
BENEFITS: INDICATOR OF CLEAN AND WELL-STRUCTURED WATER HABITATS
NEEDS: SMALL PONDS, SHALLOW STREAMS, EMERGENT PLANTS, SUNSPOTS



IBERIAN NEWT
Lisotriton boscai

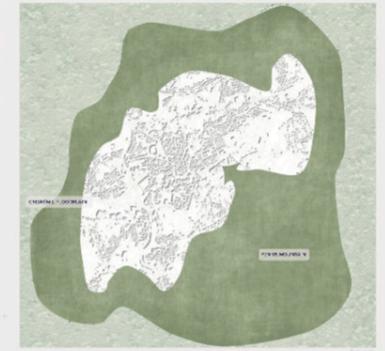
Functioning group of wetland inhabitants

HABITAT: SHALLOW PONDS, STREAMS, WETLANDS, DEAD WOOD
FOOD: WATER INSECTS, SMALL INVERTEBRATES, LARVAE
BENEFITS: INDICATOR OF CLEAN AND BIODEVERSE WATER, FOOD FOR BIRDS
NEEDS: WATER PLANTS, SHORE VEGETATION, LEAVES, DAMP SHELTERS



CREIXOMIL FLOODPLAIN

THE CREIXOMIL FLOODPLAIN IS A HYBRID LANDSCAPE OF ECOLOGY AND PRODUCTION. ITS A SPACIOUS WITH AND SUPPORTS BIODIVERSITY. THE SAME AS "TRADITIONAL FARMING LAND" BUT IT ALSO SERVES AS A NATURAL BUFFER AND A SOURCE OF WATER. IT ALSO SERVES AS A NATURAL BUFFER AND A SOURCE OF WATER. IT ALSO SERVES AS A NATURAL BUFFER AND A SOURCE OF WATER.



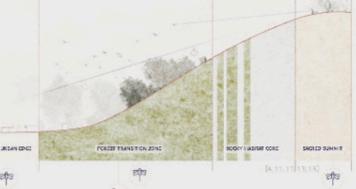
LANDSCAPE STRATEGY

THE LANDSCAPE STRATEGY FORMS A PROTECTIVE LANDSCAPE RING AROUND THE CITY OF GUIMARÃES. IT NOT ONLY SUPPORTS BIODIVERSITY AND ECOLOGICAL CONNECTIVITY BUT IT ALSO LEADS TO SUBSIDIOUS RECREATIONAL AND RELAXATION AREAS FOR RESIDENTS AND EXTERNAL VISITORS. THIS DECONGESTION LEADS TO LESS OVERDOSE AND THEREFORE TO PROTECTION OF THE HISTORIC CITY CENTER. THE MAIN FACTOR OF URBANIZATION THAT CLIMATE CHANGE CAN ONLY BE ADDRESSED BY A HOLISTIC SOLUTION.



COURAIS CONNECTION

THE WATERWAYS IN GUIMARÃES FORM A BEAUTIFUL OPPORTUNITY FOR THE CITY TO BUILD A NEW IDENTITY. HIDDEN WATER PLAYS AN IMPROVED ROLE IN THE CITY HISTORY AND IN THE URBAN TRANSFORMATION. HIDDEN WATER PLAYS AN IMPROVED ROLE IN THE CITY HISTORY AND IN THE URBAN TRANSFORMATION.



PENHA MOUNTAIN

PENHA MOUNTAIN FORMS A NATURAL BARRIER AND CULTURAL LANDSCAPE CONNECTING THE URBAN FABRIC OF GUIMARÃES WITH A SAFETY NATURAL SUBMIT THE SPACIOUS WITH A GRADUAL TRANSITION FROM THE URBAN LEVEL TO THE MOUNTAIN LEVEL. IT ALSO SERVES AS A NATURAL BUFFER AND A SOURCE OF WATER. IT ALSO SERVES AS A NATURAL BUFFER AND A SOURCE OF WATER.



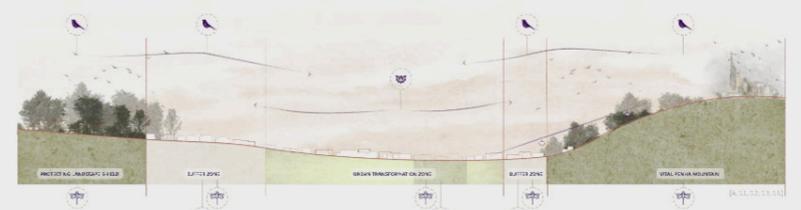
URBAN TRANSFORMATION

IN THE CITY CENTER, THE COURAIS BECOMES A DRIVER OF SUSTAINABLE DEVELOPMENT. HIDDEN FOR DECADES, A NEW CONCEPT OF VISIBILITY AND ACCESSIBILITY OF WATER IS ONCE AGAIN PLAYING A MAJOR ROLE IN THE URBAN TRANSFORMATION.



HERITAGE CORRIDOR

BAIRRO C IS DIAGNOSED AS A CRUCIAL JUNCTION BETWEEN THE LANDSCAPE, URBAN LIFE, TOURISM AND CULTURAL HERITAGE. THE IMPROVED VISIBILITY AND ACCESSIBILITY OF WATER IS ONCE AGAIN PLAYING A MAJOR ROLE IN THE URBAN TRANSFORMATION.



COURAIS CONNECTION

THE COURAIS CONNECTION IS A HYBRID LANDSCAPE OF ECOLOGY AND PRODUCTION. ITS A SPACIOUS WITH AND SUPPORTS BIODIVERSITY. THE SAME AS "TRADITIONAL FARMING LAND" BUT IT ALSO SERVES AS A NATURAL BUFFER AND A SOURCE OF WATER. IT ALSO SERVES AS A NATURAL BUFFER AND A SOURCE OF WATER.

084 CONNECTED COMMUNITIES

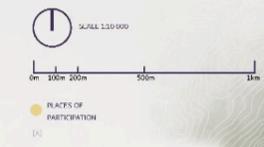
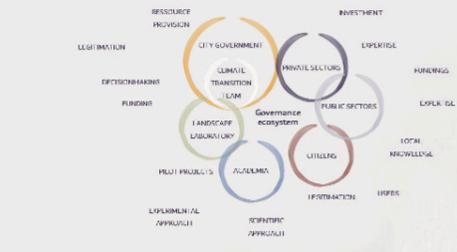
INFORMING THE PEOPLE ABOUT THE PROJECT

TO PROVIDE RESIDENTS AND INTERESTED INDIVIDUALS WITH INFORMATION ABOUT THE PROJECT PROCESS AND PARTICIPATION OPPORTUNITIES, A MAGAZINE IS GOING TO BE CREATED. IT WILL BE DISTRIBUTED THROUGH LETTERBOXES AROUND THE CITY. AN ONLINE VERSION WILL ALSO BE AVAILABLE FOR THOSE WHO PREFER DIGITAL CONTENT. THE MAGAZINE IS FREE.

3 Layers
THE PARTICIPATION PROCESS IS INTEGRATED INTO THREE DIFFERENT LAYERS: THE LANDSCAPE RING, THE RESILIENT URBANISM RING, AND THE LINE. THE PROCESS VARIES IN EACH LAYER TO FIT THE CIRCUMSTANCES.

Integration of participation in the planning process
THE PARTICIPATION IS INTEGRATED INTO THE VARIOUS STAGES OF URBAN PLANNING: VISION, INFORMATION, DISCUSSION, DECISION, PLANNING, REALIZATION AND USAGE. EACH STAGE HAS ITS OWN METHODS TO GIVE PEOPLE THE OPPORTUNITY TO GET INVOLVED.

THE STAKEHOLDERS AND THEIR FUNCTION



THREE LAYERS, THREE STRATEGIES

1. LANDSCAPE RING

INFORMATION - DISCUSSION - REALISATION - USAGE

THE LANDSCAPE RING IS GOING TO BE DEVELOPED IN A HOLISTIC WAY. THE FOCUS OF THE PARTICIPATION IS THE PENHA MOUNTAIN AND THE CIRCUMVAL FLOODPLAIN, WITH THE AIM OF STRENGTHENING THE CONNECTION BETWEEN THEM.

Ecological agriculture - Craixoml floodplain

- BUILDING PLATFORM - KNOWLEDGE EXCHANGE
- AGRICULTURAL COMMUNITY-DRIVEN AREAS - E.G. ORCHARD, FIELD PLOT FOR PERSONAL USE
- FINANCING SYSTEM FOR A MORE WATER-RESILIENT AND ECOLOGICAL AGRICULTURE

Nature reserve - Penha Mountain

- NATURE EXPERIENCE FOR THE RESIDENTS OF GUMBARRES WORKSHOPS IN THE NATURE ABOUT FLORA AND FAUNA
- IMPROVING THE BIODIVERSITY & CONNECTION OF THE DIFFERENT GREEN FRAGMENTS - NEW PROTECTED AREAS
- REN - FOREST PROTECTION
- ADAPTION TO CLIMATE CHANGE, IMPROVEMENT OF THE BIODIVERSITY

Goals: Legitimation & Democracy

INVITATION: SOCIOGEOGRAPHIC CROSS-SECTION & OPEN ACCESS

Stakeholder mapping

2. RESILIENT URBANISM RING

INFORMATION - USAGE

THE MAIN STRATEGY OF THE RESILIENT URBANISM RING IS THE NEW MODEL OF LOCALITY. ALL THE MOBILITIES IMPROVED THROUGH FOUR GOALS:

1. IMPROVE THE CITY CENTER ZONE AND THE NATURE EXPERIENCE ZONE. THE LOCALIZATION ZONE IMPROVES THE SPACE AND COMMON USE CYCLES & MOBILITIES.
2. IN THE CITY CENTER ZONE, THE IMPROVED TEAM CONCEPTS (URBANISM) IS TO BE USED IN THE LOCALIZATION ZONE, LOCALIZATION ZONE IS TO BE USED IN THE LOCALIZATION ZONE, LOCALIZATION ZONE IS TO BE USED IN THE LOCALIZATION ZONE.

Implementation

THE FUTURE TEAM IS SET TO BE DEVELOPED THROUGH THE FOLLOWING STRATEGIES:

1. IMPROVE THE CITY CENTER ZONE AND THE NATURE EXPERIENCE ZONE. THE LOCALIZATION ZONE IMPROVES THE SPACE AND COMMON USE CYCLES & MOBILITIES.
2. IN THE CITY CENTER ZONE, THE IMPROVED TEAM CONCEPTS (URBANISM) IS TO BE USED IN THE LOCALIZATION ZONE, LOCALIZATION ZONE IS TO BE USED IN THE LOCALIZATION ZONE, LOCALIZATION ZONE IS TO BE USED IN THE LOCALIZATION ZONE.

Goals: Quality & Democracy

INVITATION: EXPERTISE & OPEN ACCESS

Stakeholder mapping

3. THE LINE - GREEN CORRIDOR

VISION - INFORMATION - PLANNING - REALISATION - USAGE

THE PARTICIPATORY DEVELOPMENT OF THE LINE IS INTEGRATED INTO THE THREE PHASES OF DEVELOPMENT:

1. PHASE 1 - SHORT TERM
2. PHASE 2 - MEDIUM TERM
3. PHASE 3 - LONG TERM

THE LINE CAN BE CATEGORIZED INTO FIVE ZONES, WHICH VARY ACCORDING TO THE STAKEHOLDERS AND ZONES OF PARTICIPATION. THESE ARE THE CULTURE ZONE, THE RELAXATION ZONE, THE PLAYGROUND ZONE, THE SPORTS ZONE AND THE RENOVATION ZONE.

THE NEW INDUSTRIAL AREA ACKNOWLEDGES THE HISTORY OF BARROCO IT SUPPORTS INNOVATIVE STARTUPS AND PROMOTES THE CONVERSION OF THE CAR PARK INTO OFFICES PROVIDES ADDITIONAL SPACE. THE AVAILABILITY OF THESE PRODUCTIVE SPACES ATTRACTS PIONEERS WHO BRING NEW IDEAS TO THE DISTRICT.

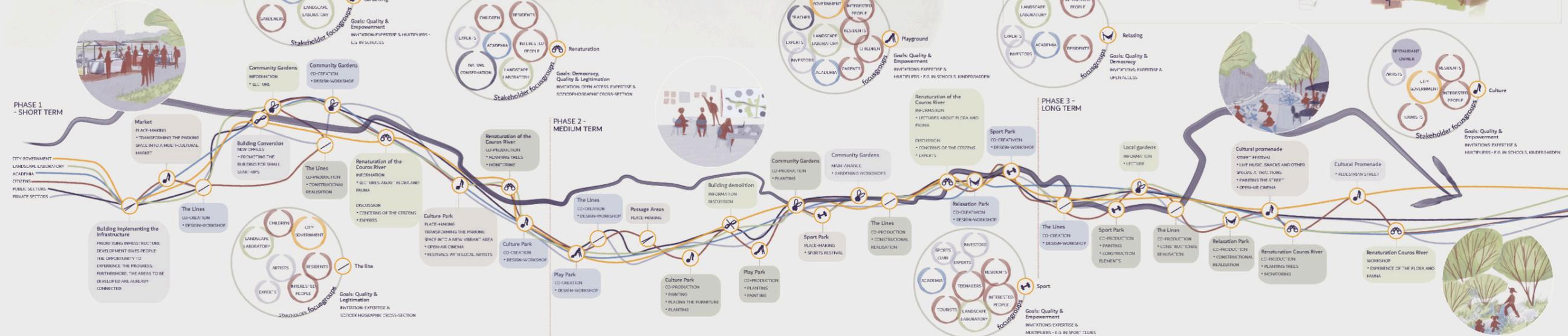
Implementation

Goals: Quality & Empowerment

INVITATION: EXPERTISE & MULTIPLES - E.G. IN SCHOOLS & KINDERGARTEN

Stakeholder mapping

TIME-LINE - DEVELOPMENT OF THE NEW GREEN CORRIDOR



Redefining Guimarães

FINALIST

**Ormándi Boglárka, Bianka Demeter,
Dorottya Balázs István Lukács, Jakab-
Nyitrai, Erzsébet Varga, Zsombor Zsigmond**

Hungarian University of Agriculture and Life Sciences - MATE

We believe that landscape architecture in the 21st century is not merely an aesthetic intervention, but a fundamental instrument for urban resilience. We must take responsibility for influencing our surroundings considering the climate problem and the rising danger of flash floods. As a result, our design offers Guimarães a sustainable, ecologically oriented solution, rejecting the conventional practice of concealing water and excluding nature. Based on this understanding, we divided our concept into the following four phases, adapting to the nature of the different scales.

The first phase addresses the relationship between greenery, the river, and the built environment, aiming for a stable Green Ring through the green ring initiative. It proposes a reinterpretation of the river with an integrated flood management system, utilizing nature-based solutions to create a resilient "Blue-Green Spine" that supports wildlife movement and fosters a resilient ecosystem. We create a direct link between the urban lowlands and the protected Penha Hill by filling in the gaps left by the infrastructure. We were also focusing on revitalizing the Couros River and breaking up concrete pavements to restore the natural bed wherever possible, transforming the waterfront from a dangerous area to a vibrant community site.

Although adjacent to the biodiverse Green Ring, Bairro C remains physically disconnected from it. The proposed solution involves creating "green fingers" to facilitate the flow of greenery into the urban area. The process involves identifying existing urban green spaces that have the potential to form an ecological network. The objective is to integrate these isolated patches into continuous green wedges extending throughout the city and reaching Barrio C's boundaries. Our strategy focuses not merely on visual appeal but on

ecological restoration, advocating for the removal of invasive species like Eucalyptus in favor of native plants, and the utilization of drought-tolerant species for the granite slopes of Penha Hill and deep-rooted species along the river to prevent erosion and mitigate urban heat.

In the Bairro C area, characterized by dense urbanization and industrialization, the Focus shifts from blue-green infrastructure to the development of open space and an ecological network. The strategy emphasizes outdoor connections and aims to integrate natural and cultural elements, continuing the established green connections throughout the area. We explored the open-closed relationships of the open space network and categorized the existing natural elements, searching for areas that can potentially serve as both open spaces and green spaces.

For the last phase, the concept is still based on allowing nature back into the urban space along the river as a shaping and organizing force. The opening up of the area, the arcaded connections and the "room-park"-like space create a more intimate, yet permeable urban environment. The project aims to be a small-scale, yet complex urban and ecological valuecreating intervention that actively operates from a community, environmental and Climate adaptive perspective. By designing hiking trails that originate from our site, our goal is to take people out into nature, introduce them to the beauty and diversity of Penha Hill, the cultural heritage of the city, and the principles of nature-based thinking in agriculture and Flood protection.

With our urban planning suggestions, we rewrite not just the physical area but also the citizens' mental map. We foresee a Guimarães where nature, heritage, and community once again form an organic union.

Guimaraes_106

REDEFINING GUIMARAES

BY THE RIVER

1. We divided the presentation of our work on the four posters along the four pillars of our concept, showing how these elements are combined and how we move from the challenges of the river and nature, through the relationship between the natural and urban fabric, and then the duality of the city's historical and industrial heritage, to the connection of culture and society with the help of the river, which closes the harmonious cycle of our concept.
- 2.
- 3.
- 4.

Guimaraes is shaped by a dual identity: a UNESCO World Heritage city known as the "Cradle of Portugal" and a vibrant textile center of the Ave Valley. Located at the foot of Penha Hill, the city's historical development has been closely intertwined with its waterways, particularly the Courous River. However, rapid urbanization and industrial growth have severed this long-standing relationship. Today, the urban fabric functions more as a barrier than a connector, turning away from water systems and disrupting ecological continuity between the protected hill-sides and the valley floor. The city now faces the challenge of reconciling its rich built heritage with its overlooked natural geography.



Pre-Design Analysis

Topology
The result of our topographic survey revealed the vertical dominance of Penha Hill and the horizontal extension of the Courous Valley. The slopes direct the natural water to flow towards the city and at the same time provides a visual experience: the mountain presents visitors with a magnificent panorama and diverse recreational opportunities. The valley provides a great location for agriculture, and the forests surrounding the city are good starting points for creating a green ring and green fingers protecting the city.

Soil
The area is characterized by a geological duality defined by the relief. The steep slopes are covered by shallow, acidic, granite-based cambisol soils, which historically limited use for forestry and erosion control (Penha Hill). In contrast, the valleys contain deep, fertile alluvial soils accumulated by the river network, which form the basis of the region's intensive agriculture and productive landscapes (Veiga Plain).

Sustainable Agriculture Strategy



Agricultural Floodplain

The goal is to revive the riverside landscape by aligning agriculture with natural water cycles. These sites use the nutrient-rich alluvial soils for flood-tolerant crops and seasonal grazing. The floodplain acts as a safety buffer, allowing controlled flooding during rainfall and serving as productive land during dry periods.

Shelterbelt

Linear strips of native trees and shrubs protect agricultural plots from erosion and drying. They also form vital ecological corridors, providing habitat for both mammals and pollinators, which naturally control pests and reduce the need for chemical inputs.



Community Garden

These sites function as transitional zones between the city and the countryside, enabling urban residents to participate in the productive landscape, fostering a deeper connection with the region's agricultural heritage while promoting self-sufficiency.

Crop Rotation

This is a long-established soil management technique aimed at preserving soil fertility. Rotating crop species on the same fields prevents nutrient depletion and pest overpopulation, while promoting soil biodiversity and enhancing its resilience.

Multi-Scale Landscape Concept



Peri-Urban Layer

The first phase addresses the relationship between greenery, the river, and the built environment, aiming for a stable Green Ring through the green ring initiative. It proposes a reinterpretation of the river with an integrated flood management system, utilizing nature-based solutions to create a resilient "Blue-Green Spine" that supports wildlife movement and fosters a resilient ecosystem.

Urban Layer

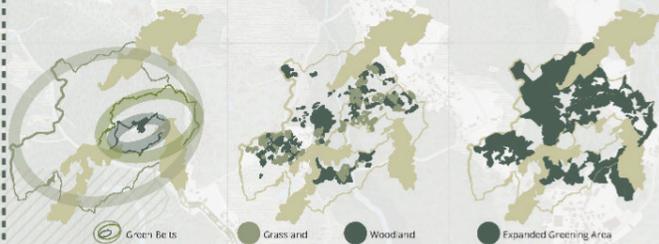
Although adjacent to the biodiverse Green Ring, Bairro C remains physically disconnected from it. The proposed solution involves creating "green fingers" to facilitate the flow of greenery into the urban area. The process involves identifying existing urban green spaces that have the potential to form an ecological network. The objective is to integrate these isolated patches into continuous green wedges extending throughout the city and reaching Bairro C's boundaries.

Site-Specific Layer

In the Bairro C area, characterized by dense urbanization and industrialization, the focus shifts from blue-green infrastructure to the development of open space and an ecological network. The strategy emphasizes outdoor connections and aims to integrate natural and cultural elements, continuing the established green connections throughout the area.

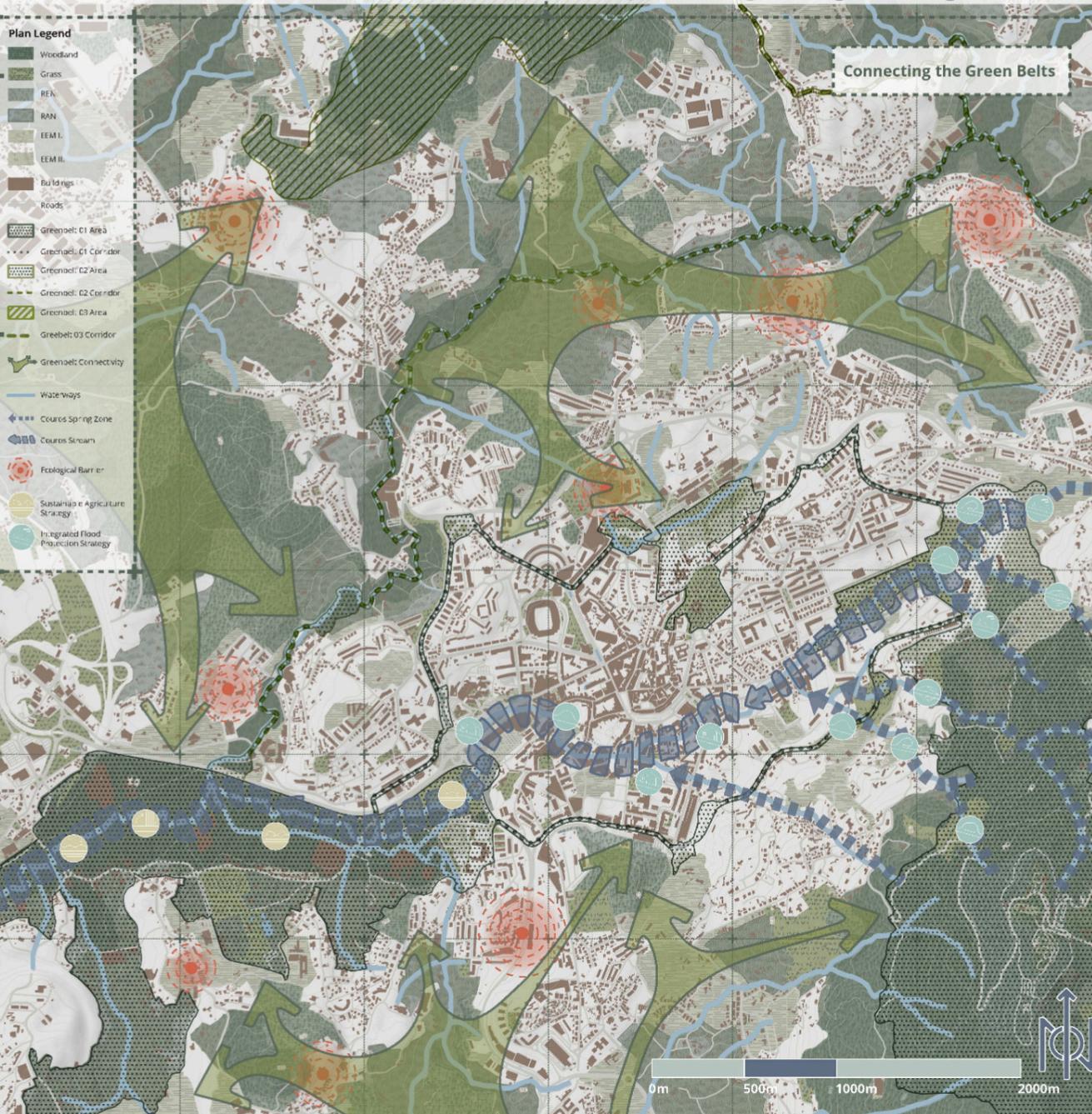
Greenbelt Connectivity Strategy

We began our concept by mapping the current green ring initiative and identifying the ruptures that result in the current fragmented landscape. Although Penha Mountain and the agricultural valleys have significant green values, they are isolated by the expanding urban fabric. The lack of continuity prevents the free movement of wildlife, creates heat islands in the city center, and disrupts the natural water cycle. Our strategy proposes "ecological stepping stones" to bridge these gaps. We have laid out the forests, fields and grasslands that are essential elements and provide help in connecting the city with the green ring. This phase focuses on the transitional zone where the built environment meets nature. The ultimate vision is a stable, continuous Green Ring that surrounds and weaves through Guimaraes. This restored network allows for the unobstructed movement of wildlife from the mountains to the river valleys, as well as creating a resilient ecosystem that can mitigate floods, cool the city, and provide a unified recreational landscape for the community.



Plan Legend

- Woodland
- Grass
- REN
- RAN
- EEM I
- EEM II
- Buildings
- Roads
- Greenbelt: C1 Area
- Greenbelt: C1 Corridor
- Greenbelt: C2 Area
- Greenbelt: C2 Corridor
- Greenbelt: C3 Area
- Greenbelt: C3 Corridor
- Greenbelt: Connectivity
- Waterways
- Courous Spring Zone
- Courous Stream
- Ecological Barrier
- Sustainable Agriculture Strategy
- Integrated Flood Protection Strategy



Connecting the Green Belts

River System Analysis

One of the main focuses of the hydrological analysis is the urban section of the Courous River, which revealed that a significant portion of the watercourse runs underground in pipes or concrete channels. This condition results in a fragmented ecological system and a complete lack of public accessibility and visibility. The analysis identifies key spatial intersections where the hidden water system meets underutilized public spaces, highlighting the strategic potential for bringing the water to the surface and restoring ecological connections. Another emphasis of our research was the risk of flash floods affecting the city and also its vulnerability, aggravated by the abrupt topographic transition between the steep slopes of Penha Mountain and the paved urban valley floor.

Design Response

The design response proposes the unfolding and reinterpretation of the river. The strategy focuses on breaking open covered sections and, where spatial conditions allow, restoring the natural riverbed or making the water visible and accessible at least in more architectural form. The concept also outlines an integrated flood management system: by applying nature-based solutions - from sediment retention lagoons to water-retaining wetland mosaics - the proposal transforms the river into a resilient "Blue-Green Spine." This approach both moderates flood risk by slowing water flow and reclaims the waterfront as a diverse and active recreational space, physically reconnecting Penha Hill with the historic urban fabric.



Existing River Environment



Current Conditions



Proposed River Revitalization Measures



Flood Protection Measures



Flood Protection Strategy



Urban Riverside Access

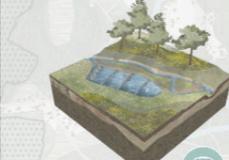
The terraced waterfront strengthens the connection between the city and the stream. It provides safe access for residents, functions as a community space during dry periods, and can be flooded during high water, creating a resilient interface between urban life and the water.

Multi Channel River

The goal is to distribute flow energy by splitting the main channel into smaller ones. This increases the river's width, slows water velocity during floods, and reduces destructive impact. In addition the resulting islands serve as protected nesting microhabitats for wildlife.

Wetland Mosaic

A system of shallow basins and marsh vegetation functions as a biological sponge, absorbing excess rainfall and delaying flood peaks. The dense roots of the reeds naturally filter pollutants, improving water quality before it returns to the main branch of the river.



Trap Lagoons

These sedimentation basins serve a dual purpose. By widening the cross-section, they reduce flow velocity, allowing temporary water storage while sediment and debris can settle before reaching the city center, thereby protecting infrastructure downstream.



On-line Bays

The lateral bulges are designed to increase storage capacity. The widened sections act as temporary reservoirs during heavy rainfall, retaining excess water and reducing pressure on the narrower, channelled sections in the city center.



Backwaters

The channels connected to the river provide calm water refuge for fish and amphibians during fast floods, slowing the flow and acting as obstacles. In flood-free periods, they serve as warm, nutrient-rich nurseries for young aquatic life.

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Planting Strategy

Our strategy focuses not merely on visual appeal but on ecological restoration, advocating for the removal of invasive species like Eucalyptus in favor of native plants. Specific initiatives include replanting traditional Chestnut Groves with Sweet Chestnut (*Castanea sativa*) to honor local heritage and selecting drought-tolerant species for the granite slopes of Penha to mitigate erosion and urban heat. Additionally, a riverside gallery forest will be developed along the Courros River, utilizing deep-rooted species to prevent erosion and Willows (*Salix*) to filter pollutants and provide shade.



Nature-Trails

By designing hiking trails, our goal is to take people out into nature, introduce them to the beauty and diversity of Penha Hill, the cultural heritage of the city, and the principles of nature-based thinking in agriculture and food protection. Heading east from the city, the Penha Hill hiking trail takes us through the sacred silence of the mountain, where the valley opens up from lookouts set into granite cliffs, while information boards and interactive stations help us learn about the natural wildlife of the area. At the foot of the mountain, the trail joins the Courros River hiking trail. Here, the new water management and flood protection strategy facilities are accessible via riverside boardwalks and footbridges, while rest areas have been designed to allow for a glimpse of aquatic life. Conversely, heading west, the Eco-Agro hiking trail leads to the farming landscape around the city. On the winding road between community gardens and orchards, temporary market pavilions connect local producers with the population, giving a new community and agritourism function to the green ring on the outskirts of the city.



- | | | |
|---|---|---|
| <p>ECO-AGRO NATURE-TRAIL</p> <ul style="list-style-type: none"> 1 Portão do Jardim
The Garden Gate 2 Talhão das Possibilidades
The Possibility Plot 3 Terminal do Ribeiro
The Stream Terminal 4 Raízes Comunitárias
The Community Roots 5 Escudo Verde
The Green Shield 6 Campo Mosaico
The Mosaic Field 7 Jardim Ribeirinho
The Riparian Garden 8 Parque da Colheita
The Harvest Park | <p>CURROS RIVER NATURE-TRAIL</p> <ul style="list-style-type: none"> 1 Laboratório da Paisagem
The Landscape Lab 2 Horta Pedagógica
The Teaching Garden 3 Meandro do Rio
The River Meander 4 Planície Fértil
The Fertile Plain 5 Observatório de Aves
The Bird Observatory 6 Moinhos de Água
The Watermills 7 Galeria Ripícola
The Riparian Gallery 8 Caminho Real
The Royal Path | <p>PENHA HILL NATURE-TRAIL</p> <ul style="list-style-type: none"> 1 A Porta do Vale Sagrado
The Sacred Valley Gate 2 Lago do Reflexo
The Reflection Pool 3 Gigantes de Granito
The Granite Giants 4 Ninho da Águia
The Eagle's Nest 5 Balcoio do Horizonte
The Sky Swing 6 Centro da Biodiversidade
The Biodiversity Hub 7 Cascata Verde
The Green Cascade 8 Portal Real
The Royal Gateway |
|---|---|---|

Connecting the Green Belt to Bairro C



Barrio C is surrounded by the rich biodiversity of the Green Ring, but is physically separated from it. We would create "green fingers" that can fill out this incomplete connection. The goal is to channel the external green flows towards the center of the city and quarter.

In the next step, we identified urban green spaces suitable for ecological integration. These important elements include, among others, existing street trees, public parks, and urban lawns. Although they currently operate as standalone elements, these green patches are what could act as a link between the green ring and Barrio C.

By connecting scattered existing patches, our goal is to create continuous green wedges that extend deep into the city, up until the boundary of Barrio C. Furthermore, we make suggestions on what elements can be added to the existing green infrastructure to create this green and ecological connection.

Integrated Green Connectivity Strategy

Urban Woodland
An urban woodland is a densely treed urban area that improves air quality, reduces the urban heat island effect, supports biodiversity, provides recreational and leisure space, and contributes to stormwater management and the overall resilience of the urban environment.

Modular Urban Planting
Modular urban planting uses a flexible, unit-based city structure that can quickly adapt to changing needs. It improves infrastructure efficiency, promotes sustainability, enhances the functionality of urban spaces, and supports community engagement.

Urban Tree Planting
Street tree planting increases urban green spaces, improves air quality, reduces the urban heat island effect, mitigates noise, supports biodiversity, provides shade and comfort for pedestrians, and enhances both the aesthetic and social value of streets.

Green Wall
A green wall is a vertical structure of living plants that can increase urban green space on a small footprint. It improves air quality, reduces the urban heat island effect, insulates buildings, supports biodiversity, creates a visually pleasant environment, and enhances the urban microclimate.

Green Roof
A green roof is a building roof covered with living plants. It improves thermal insulation, manages stormwater, supports biodiversity, creates a visually pleasant environment, increases energy efficiency, and enhances the urban microclimate.

Wildlife Overpass
A wildlife overpass is a vegetated bridge that links different natural habitats, providing connectivity between them. It primarily supports biodiversity and offers passage and refuge for animals, but also manages stormwater, improves air quality, and can provide recreational space for residents.

Plan Legend

- Green Belt 01
- Greenbelt Connections
- Existing Green Spaces inside the Green Belt
- Green Connectivity inside the Green Belt
- Integrated Green Connectivity Strategies
- Barrio C Border
- Eco-Agro Nature-Trail
- Courros River Nature-Trail
- Penha Hill Nature-Trail
- Penha Hill Cable Car



The Green Connectivity System



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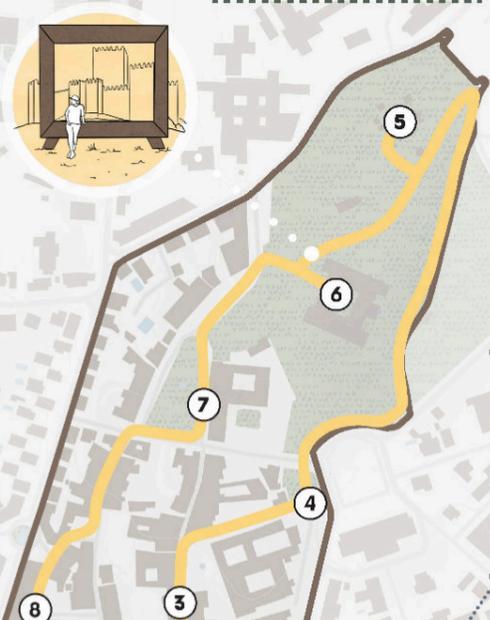
The Open Space and Green Network of Bairro C

As the third part of our concept, we reach the Bairro C area, which, as a dense urban and industrially loaded area, deviates from the tools used so far, and instead of focusing on blue-green infrastructure, our strategy focuses on the examination and development of open space and the ecological network. As a continuation of the already established green connections, the area is organized based on and along outdoor connections while integrating as many natural and cultural elements as possible.

We began our research by exploring the open-closed relationships of the outdoor network, that is, we differentiated which areas are open or closed to public use and also categorized the existing natural elements, also keeping in mind the exploration of potential new green spaces. From the intersection of these two analyses we created a map that displays areas that can potentially serve as both open spaces and green spaces, grouped according to their current design and the opportunities they offer.

The obtained object-level results were then further analyzed at network level. On one hand, we looked for outdoor connections that form a system, and where the appearing obstacles could be bridged with minimal intervention. On the other hand, we looked for similar connections between green spaces and tried to find optimal solutions so that their network can provide ecosystem services properly. Finally, by comparing these two networks, we got one of the outdoor elements that also have some green space quality, meaning existing and potential intervention areas and connections that are useful not only for people but also for the ecosystem.

The New Green Infrastructure



Pre-Analysis - Culture

In our analysis, we examined not only the built heritage but also the vibrant, intangible cultural heritage: we learned about Guimaraes' festivals, including the Batalha das Flores, the unique Azeite (oil) art, and the deep-rooted textile traditions, the Traje de Lavadeira folk costume.



UNESCO WORLD HERITAGE CITY-TRAIL

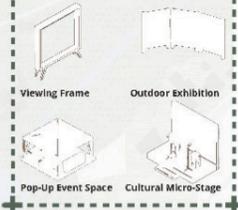
- 1 Cruzeiro da Igreja de São Francisco
Cross of the Church of St. Francis
- 2 Padrao do Salado
Salado Memorial
- 3 Arco do Amor
Arch of Love
- 4 Porta do Burgo
Burgo Gate
- 5 Guimarães Castle
Guimarães Castle
- 6 Palace Duques de Braganca
Palace of the Dukes of Braganca
- 7 Painel de azulejos à Virgem Maria
Tile Panel of the Virgin Mary
- 8 Casa das Rótulas
House of the Lattices
- 9 Igreja da Misericórdia
Church of Mercy
- 10 Largo do Toural
Toural Square

INDUSTRIAL & CULTURAL HERITAGE CITY-TRAIL

- 1 Fio de Água
The Water Thread
- 2 Tanques de Memória
The Memory Basins
- 3 A Costura Urbana
The Urban Seam
- 4 Carretel Verde
The Green Spool
- 5 A Tapeçaria de Pedra
The Stone Tapestry
- 6 A Roda de Fiar
The Spinning Wheel
- 7 Alfinete de Granito
The Granite Pin
- 8 As Pregas Industriais
The Industrial Pleats
- 9 A Tela das Artes
The Arts Canvas
- 10 Jardim Bordado
The Embroidered Garden

City-Trails

These two routes connect the city's industrial assets and UNESCO heritage elements to bring them closer to the population and enhance the city's local identity. Along the water line, old tanning pools and concrete ramps are transformed into lively community points, open-air exhibition spaces tell the story of the past, while temporary stages and market pavilions provide space for contemporary events. On the UNESCO heritage site route photo frames placed at strategic points direct the visitor's gaze to the most beautiful details of history.



The Transformed Tanning Basins



Nature's Room

A small urban space where nature is allowed to return
The presence of the open watercourse, which offers a rare opportunity for a direct connection between urban space and water, played a major role in the selection of the planning area. The concept is based on allowing nature back into the urban space along the river as a shaping and organizing force. The project does not seek to improve existing, rigid urban structures, but to open them up: the pavements are fragmented, the continuity of the surfaces is broken, giving space to natural processes. This transformation is a response to the challenges posed by climate change, creating a more resilient, nature-based system.

Vegetation settles on the fragmented surfaces of the space, water visibly shapes the space, and the passage of time is also reflected in the use of materials. Locally recycled construction debris and wood as ecological elements - bug hotels, lizard beds - reinforce the character of nature's free operation and its superiority and dominance over artificial elements. The river is the central organizing element of the space, with its slightly widened riverbed, accessible banks and concrete cube elements that also functions as a seating, crossing and playing surface. By shaping the terrain, the area also functions as a flood protection tool and a kind of water reservoir during heavy rains. Furthermore, the UNESCO-protected leather tanning basins are transformed into ornamental and plant-filled water surfaces, reinterpreting industrial heritage. The opening up of the area, the arcade connections and the 'room-park-like' space create a more intimate, yet permeable urban environment. The plant application is lush, diverse and resistant, with lawns appearing only in prominent spots. The project aims to be a small-scale, yet complex urban and ecological value-creating intervention that actively operates from a community, environmental and climate adaptive perspective.



Conflicts



Concept



Solution



Planting Strategy

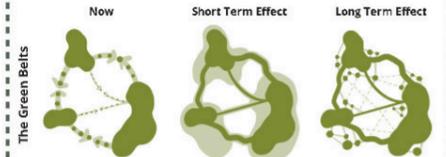
From Pavement to Riverbed

The planting concept is based on a deliberate ecological transition from paved urban surfaces to the natural bed of the Courós River. Vegetation density gradually increases from the rigid pavement, with species selected for Guimaraes' climate zone and local acidic soils. Green inserts in the pavement break monotony. Sunny areas feature drought-tolerant, fragrant species such as *Lavandula stoechas* and *Thymus serpyllum*, while shaded zones are covered with robust groundcovers like *Vinca major* 'Variegata' and *Liriope muscari*. The geometric structures of former industrial tanning basins are highlighted with textured ornamental grasses. Fine strands of *Calamagrostis acutiflora* and *Miscanthus 'Little Zebra'* recall the textile past, while *Equisetum hyemale* and *Juncus effusus* evoke the presence of water. Near the river, native, pollinator-friendly shrubs such as *Cistus salvifolius* and *Arbutus unedo* form a dense transitional zone. Along the Courós, *Carex pendula* and *Iris pseudocorus* appear, while native trees like *Salix atrocinerea* and *Betula celtiberica* provide canopy and create new habitats.



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REDEFINING GUIMARAES BY THE PEOPLE



Mapping connection points enables the first linking green areas and provides direction on where deficiencies need to be addressed and interventions need to be made. The improved connectivity between green areas strengthens biodiversity and recreational functions. The long term effect is a unified, year-round green network that maximizes ecological, health- and community benefits.



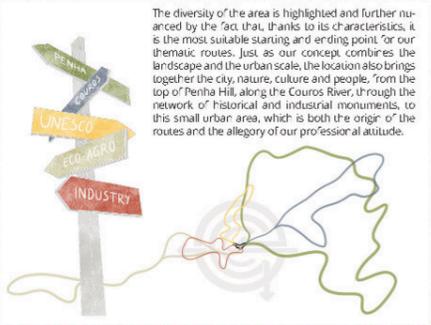
Initially, we will make the river more accessible and organic with targeted interventions, such as uncovering and coastal recreation opportunities, so that people can connect more easily. In the long term, full river network rehabilitation and linked recreational zones create a unified waterside experience, maximizing biodiversity and ecosystem services sustainably.



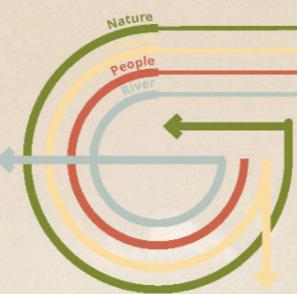
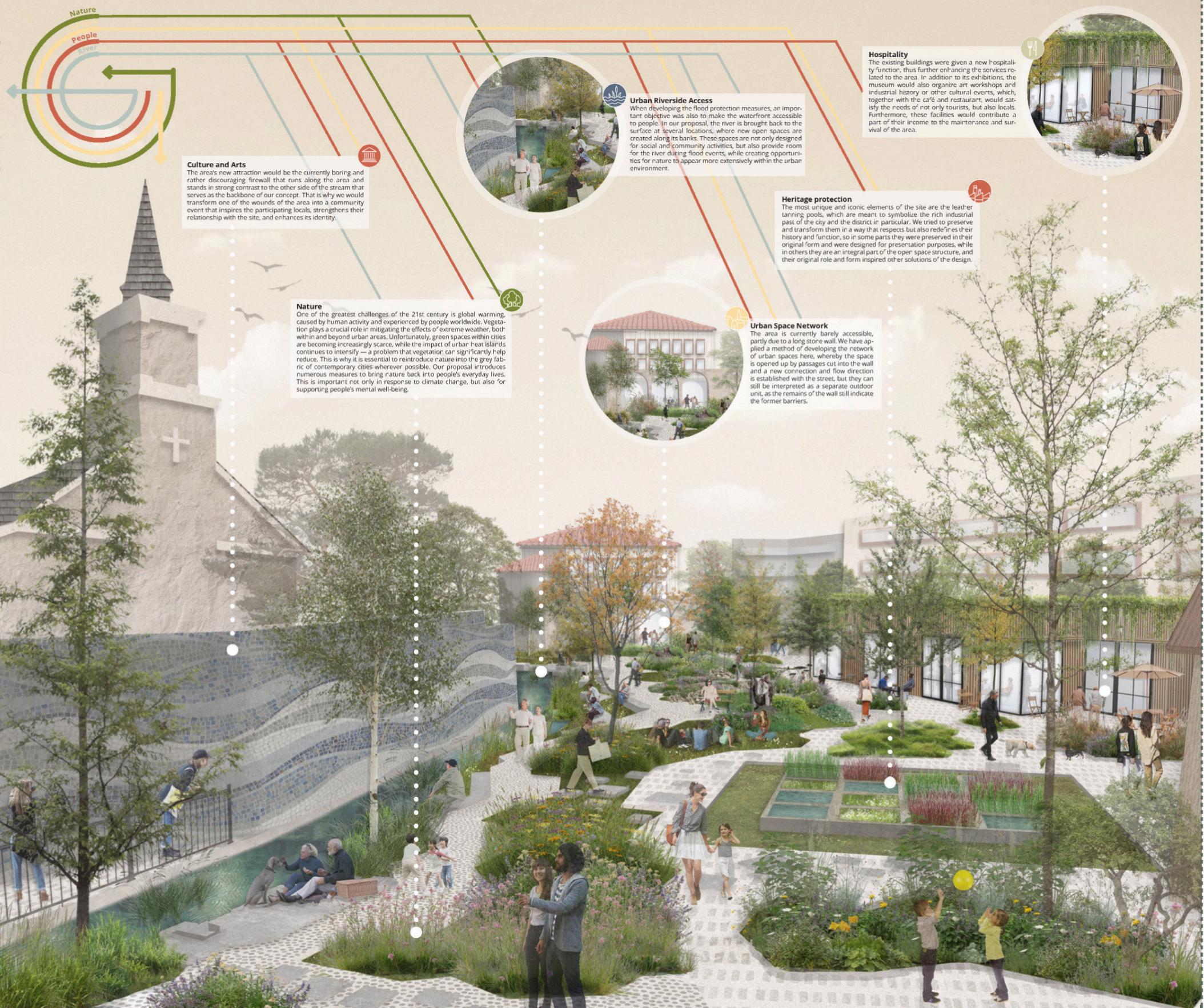
After we have identified and selected cultural participants who are willing to join our initiative, we will create a network that will attract interested parties. As the locations develop, the value of the network will increase, demand will increase, and the number of participating businesses will increase. A network is created that is present everywhere and it is a status to belong to it.

Comprehensive Management

- Cooperation**
To ensure long-term resilience, we propose a collaborative model in which the Municipality would provide the legal framework and finance the basic infrastructure, while Local Industry would actively support hiking trails through social responsibility and sponsorship. LivingLab could guarantee the scientific integrity of projects through continuous biodiversity monitoring. In addition the public is integrated not only as users but also as active caretakers, taking responsibility for cultivating community gardens and reporting maintenance needs.
- Financing**
 - Corporate Stewardship ("Adopt a spot"): Local businesses sponsor specific project elements - such as new lookouts, community spaces or tree planting - as part of their Social Responsibility initiatives.
 - Circular Agriculture: Goods produced on community fields are sold at local markets, and the proceeds are directly invested back into the park's maintenance fund.
 - Rentable Event Spaces: Generating revenue from rental fees for temporary outdoor events, festivals and markets held in newly created multi-functional spaces.
 - Income from Ecotourism: Revenue from guided nature walks organized along the revitalized green corridors and themed heritage tours to the Old Town and through Bairro C.
- Maintenance**
We are transforming maintenance from a municipal burden into a shared community responsibility through a Zoned Management Strategy. While high-traffic urban spaces receive intensive, daily care, the riverside areas and the Penha slopes receive extensive management, with mowing once a year, supporting wild biodiversity and reducing costs. This is complemented by "Digital Stewardship", where residents use the existing BiodiversityGO! app to report problems (e.g. broken benches, slippery pavement due to debris, architectural elements to be renovated). By involving volunteers in simpler gardening tasks, the community transforms from passive users to active guardians of the landscape.



The diversity of the area is highlighted and further nuanced by the fact that, thanks to its characteristics, it is the most suitable starting and ending point for our thematic routes. Just as our concept combines the landscape and the urban scale, the location also brings together the city, nature, culture and people, from the top of Penha Hill, along the Couros River, through the network of historical and industrial monuments, to this small urban area, which is both the origin of the routes and the allegory of our professional attitude.



Culture and Arts
The area's new attraction would be the currently boring and rather discouraging firewall that runs along the area and stands in strong contrast to the other side of the stream that serves as the backbone of our concept. That is why we would transform one of the wounds of the area into a community event that inspires the participating locals, strengthens their relationship with the site, and enhances its identity.

Nature
One of the greatest challenges of the 21st century is global warming, caused by human activity and experienced by people worldwide. Vegetation plays a crucial role in mitigating the effects of extreme weather, both within and beyond urban areas. Unfortunately, green spaces within cities are becoming increasingly scarce, while the impact of urban heat islands continues to intensify - a problem that vegetation can significantly help reduce. This is why it is essential to reintroduce nature into the grey fabric of contemporary cities wherever possible. Our proposal introduces numerous measures to bring nature back into people's everyday lives. This is important not only in response to climate change, but also for supporting people's mental well-being.

Urban Riverside Access
When developing the flood protection measures, an important objective was also to make the waterfront accessible to people. In our proposal, the river is brought back to the surface at several locations, where new open spaces are created along its banks. These spaces are not only designed for social and community activities, but also provide room for the river during flood events, while creating opportunities for nature to appear more extensively within the urban environment.

Heritage protection
The most unique and iconic elements of the site are the leather tanning pools, which are meant to symbolize the rich industrial past of the city and the district in particular. We tried to preserve and transform them in a way that respects but also redefines their history and function, so in some parts they were preserved in their original form and were designed for presentation purposes, while in others they are an integral part of the open space structure, and their original role and form inspired other solutions of the design.

Urban Space Network
The area is currently barely accessible, partly due to a long stone wall. We have applied a method of developing the network of urban spaces here, whereby the space is opened up by passages cut into the wall and a new connection and flow direction is established with the street, but they can still be interpreted as a separate outdoor unit, as the remains of the wall still indicate the former barriers.

Hospitality
The existing buildings were given a new hospitality function, thus further enhancing the services related to the area. In addition to its exhibitions, the museum would also organize art workshops and industrial history or other cultural events, which, together with the cafe and restaurant, would satisfy the needs of not only tourists, but also locals. Furthermore, these facilities would contribute a part of their income to the maintenance and survival of the area.



Interwoven Narratives

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Wang Siqi, Liu Yutong, He Ziyi**

Huazhong Agricultural University, PR of China

Guided by the dual visions of the "Green Capital" and "Social Justice," this design posits that in an era of intertwined ecological and social crises, landscape architecture must remain steadfastly human-centric while strategically leveraging cultural heritage. We have identified two Primary dimensions: People (addressing the symbiotic needs of tourist experiences and local daily life) and Built Environment (balancing heritage preservation with adaptive reuse). From these emerge four critical challenges: elevating cultural tourism, ensuring social equity, fortifying heritage resilience, and reconstructing forgotten histories.

These challenges are not isolated but exist within a complex Nexus, influencing and shaping one another. By unravelling these Logical interdependencies, we propose four transformative visions: Revitalizing the Blue-Green Network, Constructing Zero-Carbon Slow-Mobility Landscapes, Co-creating Multi-dimensional Social Catalysts for Landscape Democracy, and Activating Industrial Heritage.

FINALIST

The narrative unfolds across four thematic posters:

Poster 1: Synthesis · Vision – Analyzes site mechanisms and systemic issues to establish the four overarching visions through a 1:10,000 regional master plan.

Poster 2: Integration · Strategy – Develops targeted, interconnected strategies for the identified challenges, illustrated via a detailed 1:5,000 strategic framework.

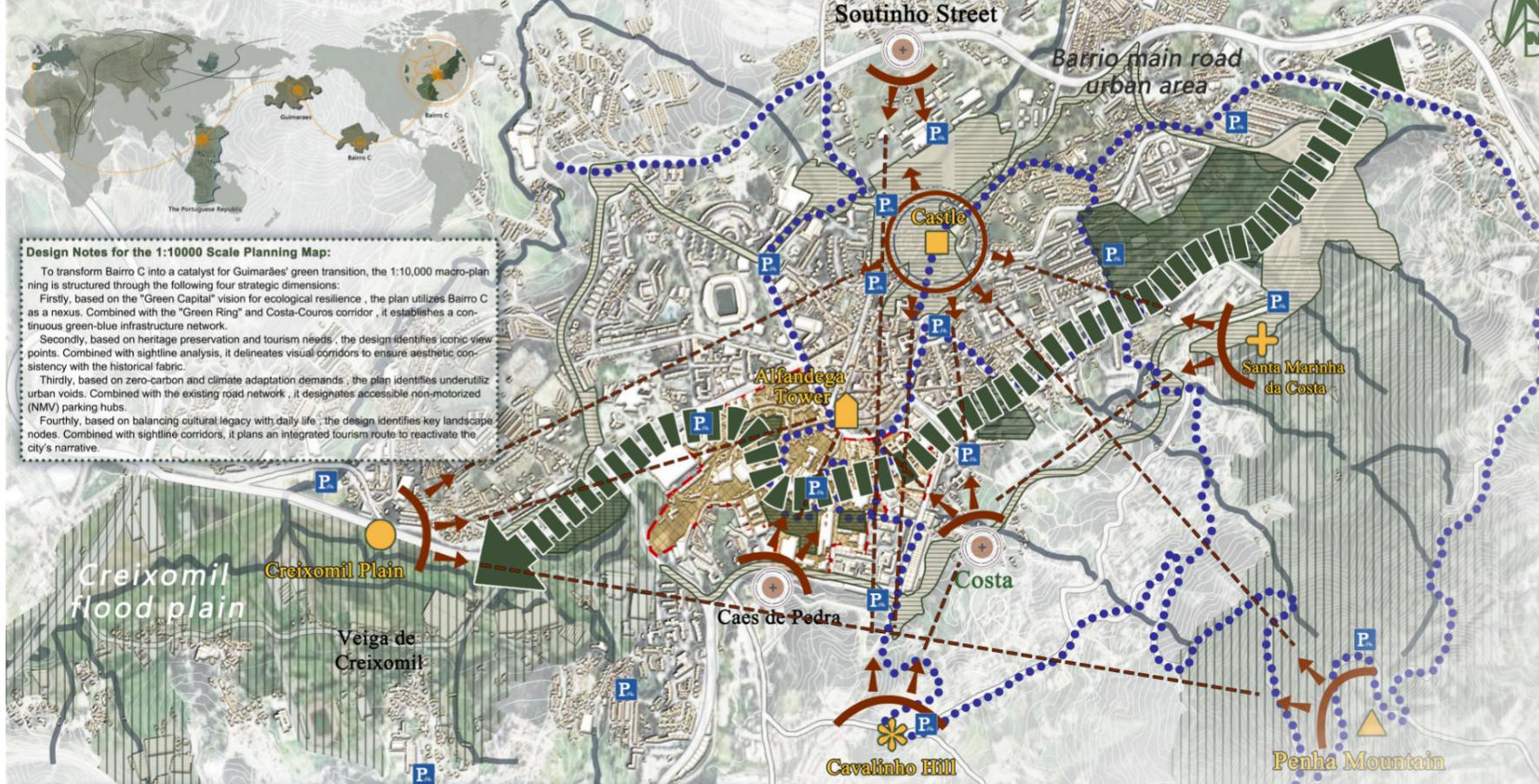
Poster 3: Regeneration · Catalyst – Zooms into the site-specific scale, utilizing a comprehensive design intervention as a pilot case to demonstrate the core design philosophy.

Poster 4: Evolution · Paradigm – Projects future trends based on empirical site data, presenting a visionary paradigm of how the four strategies will evolve over the coming decades.

INTERVOWEN NARRATIVES — Social Inclusion and Adaptive Planning for Bairro C under the Green Capital Framework

V. Macro-Planning Strategy: Interwoven Narratives

01 SYNTNESIS · VISION



Design Notes for the 1:10000 Scale Planning Map:

To transform Bairro C into a catalyst for Guimarães' green transition, the 1:10,000 macro-planing is structured through the following four strategic dimensions:

Firstly, based on the "Green Capital" vision for ecological resilience, the plan utilizes Bairro C as a nexus. Combined with the "Green Ring" and Costa-Couros corridor, it establishes a continuous green-blue infrastructure network.

Secondly, based on heritage preservation and tourism needs, the design identifies iconic view points. Combined with sightline analysis, it delineates visual corridors to ensure aesthetic consistency with the historical fabric.

Thirdly, based on zero-carbon and climate adaptation demands, the plan identifies underutilized urban voids. Combined with the existing road network, it designates accessible non-motorized (NMV) parking hubs.

Fourthly, based on balancing cultural legacy with daily life, the design identifies key landscape nodes. Combined with sightline corridors, it plans an integrated tourism route to reactivate the city's narrative.

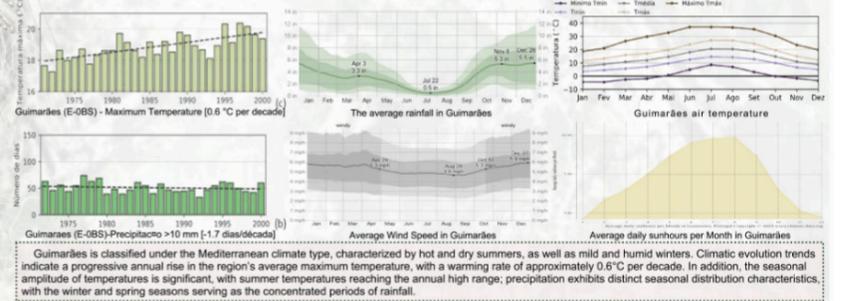
DESIGN NOTES:

Taking the "European Green Capital" vision and the pursuit of social justice as primary entry points, this design posits that landscape interventions must adhere to human-centric principles while strategically revitalizing historical heritage. Our logical framework anchors on two core dimensions: People—addressing the divergent needs of global tourists and local residents—and Buildings—balancing heritage preservation with adaptive revitalization. This inquiry identifies four interwoven challenges: enhancing tourism culture, ensuring social equity, maintaining heritage resilience, and reconstructing forgotten narratives.

Recognizing that these issues are deeply interconnected, the project proposes four strategic visions: Resurfacing Blue-Green Vitality, Constructing Zero-Carbon Daily Landscapes, Co-creating Multi-dimensional Social Catalysts, and Activating Industrial Legacies. Poster 1 provides a diagnostic mechanism analysis and introduces the 1:10,000 Strategic Planning Map.

I. Location and Site Analysis

Current Climate Situation



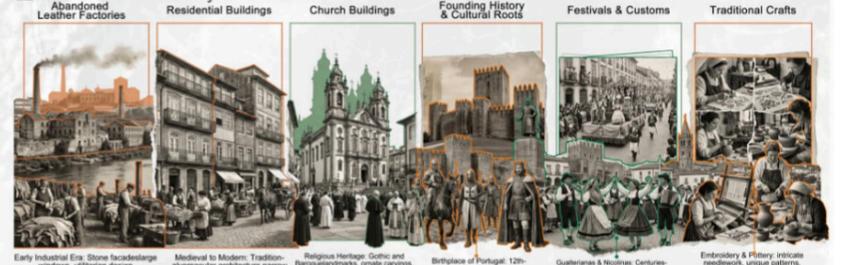
Crowd Analysis



Crowd demands



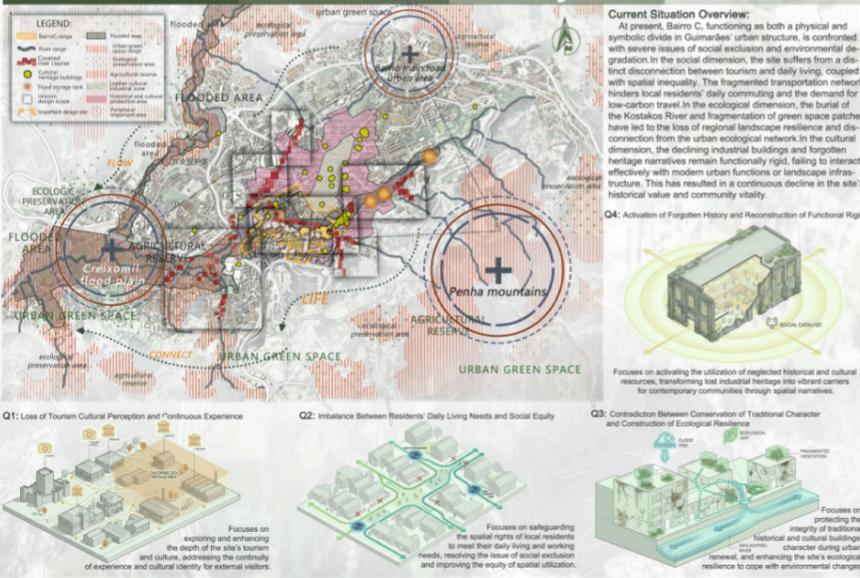
Evolution of History and Culture



IV. Design Vision



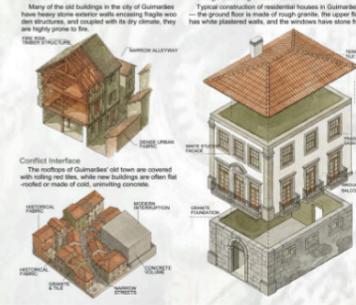
II. Current Situation Problem Analysis



III. Demand Deduction and Explanation



Architecture — Conservation Demand



Architecture — Tourism Demand



INTERVOWEN NARRATIVES — Social Inclusion and Adaptive Planning for Bairro C under the Green Capital Framework

II. Architecture – Revitalization Strategy

New Significance of Historical Facilities

For Water Heritage:

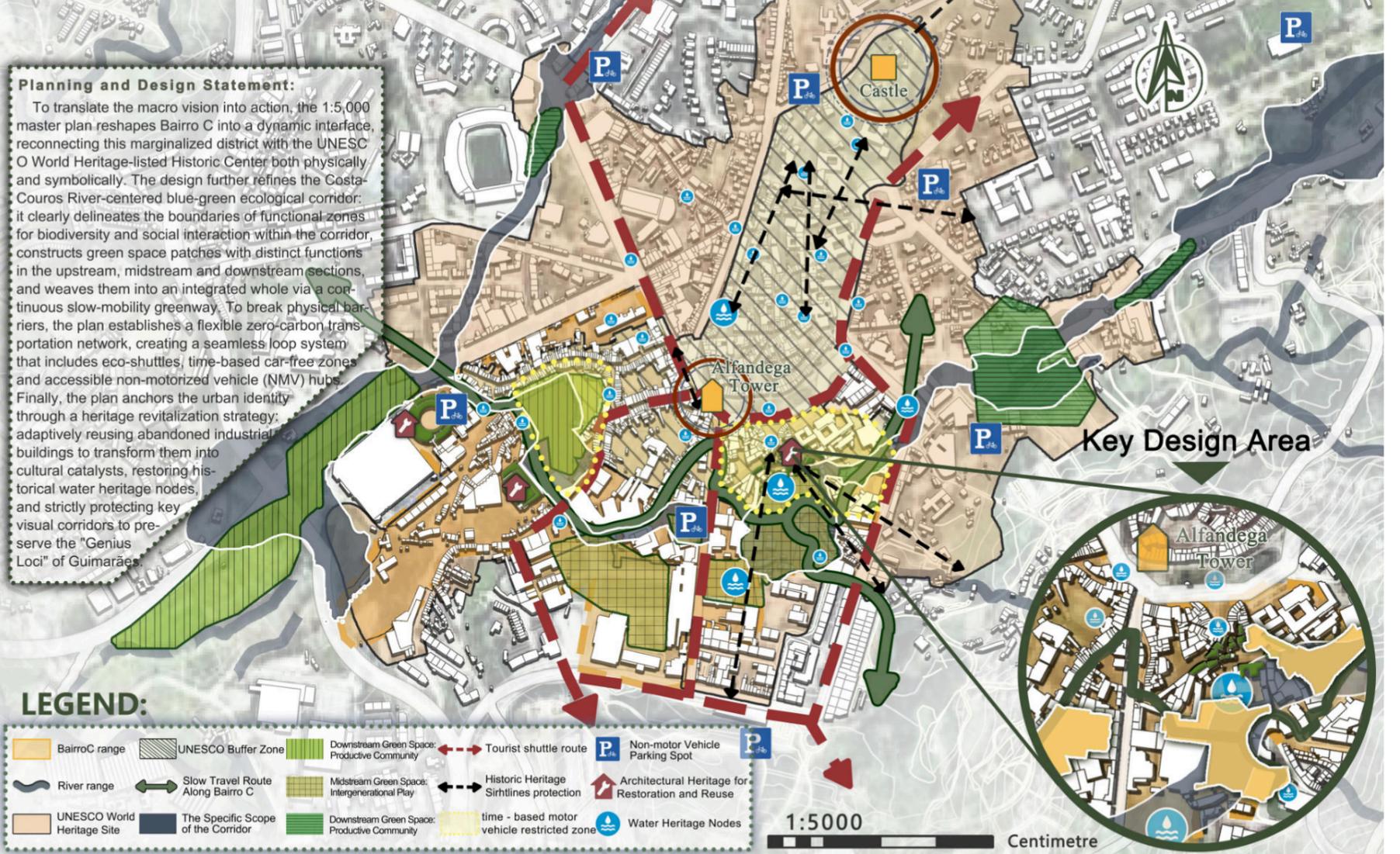
- Green rainwater facilities: Enhance stormwater management. Rainwater garden, Water collection tree box, Water storage ecological grass.
- Establishing sponge cities: Enhancing urban resilience. Green Square, Permeable pavement, Vegetation buffering.
- Various types of mobile convenience service facilities: Photovoltaic lamp, Green energy-saving device.

I.1:5000 Detailed Planning and Design Layout Plan

Planning and Design Statement:

To translate the macro vision into action, the 1:5,000 master plan reshapes Bairro C into a dynamic interface, reconnecting this marginalized district with the UNESCO World Heritage-listed Historic Center both physically and symbolically. The design further refines the Costa-Couros River-centered blue-green ecological corridor: it clearly delineates the boundaries of functional zones for biodiversity and social interaction within the corridor, constructs green space patches with distinct functions in the upstream, midstream and downstream sections, and weaves them into an integrated whole via a continuous slow-mobility greenway. To break physical barriers, the plan establishes a flexible zero-carbon transportation network, creating a seamless loop system that includes eco-shuttles, time-based car-free zones and accessible non-motorized vehicle (NMV) hubs. Finally, the plan anchors the urban identity through a heritage revitalization strategy: adaptively reusing abandoned industrial buildings to transform them into cultural catalysts, restoring historical water heritage nodes, and strictly protecting key visual corridors to preserve the "Genius Loci" of Guimarães.

02 INTEGRATION · STRATEGY



III. Architecture – Heritage Conservation

STRATEGY 1: Sightlines Protection

- Trim plants to create a clear sightline
- Vertical Greenery & Screening

STRATEGY 2: Couros River Memory Restoration

- Riverbed 'Uncovering and Resurfacing'
- Protection and Functional Revival of Historical Water Facilities

STRATEGY 3: Urban Stormwater Management Sys

- Permeable System Integrated with the Landscape
- Green Stormwater Infrastructure

This strategy harmonizes visual integrity with ecological restoration. Visual protection zones are established to safeguard key sightlines toward UNESCO landmarks through strategic vegetation management—trimming to frame views and screening intrusive structures with native greenery. The Costa-Couros River connectivity is restored by transforming all adjacent green spaces into "Sponge Infrastructures" for flood regulation. Finally, the Water Heritage System is revitalized through a dual-layer approach: under-ground ecological engineering (dredging, permeable technologies) restores flow, while surface paving and traffic calming measures symbolize the "Invisible River," integrating historical water nodes into a coherent tourism trail.

IV. People – Recreation Strategy

According to the different needs of the elderly and children, and based on the geographical location of the river, public spaces are set up in different types.

Facing problems:

- 1. Lack of suitable public spaces and exercise venues.
- 2. Lack of public spaces for children and elderly.
- 3. Lack of public spaces for communication and interaction.

Solution strategy:

- 1. Design public spaces in the form of agricultural and urban spaces.
- 2. Design public spaces in the form of forest and communication venues.
- 3. Design public spaces in the form of forest area adventure and recreation space.

V. People – Transportation Strategy

Reconstructing the urban circulatory system through a dual approach of Network Construction and Space Vitalization: Adaptive Route System: We implement a "Road Diet" on primary arteries to reserve right-of-way for expanded public transport and tourist shuttle loops. A Time-Sharing Management mechanism is adopted to restrict private vehicle access during market days and peak tourist seasons, prioritizing pedestrian safety.

Specialized Slow-Traffic Network: A dedicated system of bike lanes and pedestrian trails is developed to connect historic monuments and the River Couros corridor. This "River + Green Path + Neighborhood" trail is integrated with deployed public bicycle service stations and existing electric transit to form a seamless green transport combination.

Space Vitalization via Management: To reclaim street vitality, the plan optimizes parking resource allocation by upgrading and expanding centralized parking facilities, effectively shifting stationary vehicles off-street to release public space for community life.

INTERVOWEN NARRATIVES — Social Inclusion and Adaptive Planning for Bairro C under the Green Capital Framework

03 REGENERATION · CATALYST

I. Circulation and Ground Plane Analysis

Before



After



- Circulation: Conditional Access Routes, Traffic Direction, Pedestrian
- Ground Plane: Water, Paved, Permeable Surface, Natural Paved Stones
- Interruption Path: Gate, Temporary Entrance
- Elevated Walkway
- Solid Granite Slab (Historic Material Restoration)
- Wood Slab Control with Red Paint (Historic Material Restoration)
- Stone Bridge (Constructed in accordance with [2019])

Restoring Historical Justice: Accessibility

According to the serial heritage nomination documents T02, T04, and T05, a primary issue currently facing the historic leather district of Couros is insufficient accessibility. The passage connecting to Ramada Street is interrupted, and the narrow medieval-era streets starkly contrast with the enclosed leather factories characterized by high walls and columnar structures. The restoration design therefore addresses two key aspects. Firstly, on the level of historical character, it involves reinstating the original crushed granite and grass pavement, while utilizing the topography to incorporate elevated walkways. The restoration of the crushed granite surface follows recommendations from the World Heritage nomination documents, whereas the elevated pedestrian walkway represents an innovative feature of this design.

Restoring Historical Justice: Sightlines

- Existing World Heritage & Landmark Lines of View Before
- Existing World Heritage & Landmark Lines of View After
- Key Viewpoints & Viewsheds

The design will enhance the visibility of the historic leather district by adding visual corridors. These corridors will integrate with the pathways outlined in the official World Heritage nomination documents, forming new visual focal points.



- Legend:
- Site Entrances
 - Building Entrances
 - Site Boundary
 - Key Viewpoints
 - Viewsheds

II. Heritage Activation and Adaptive Reuse Analysis



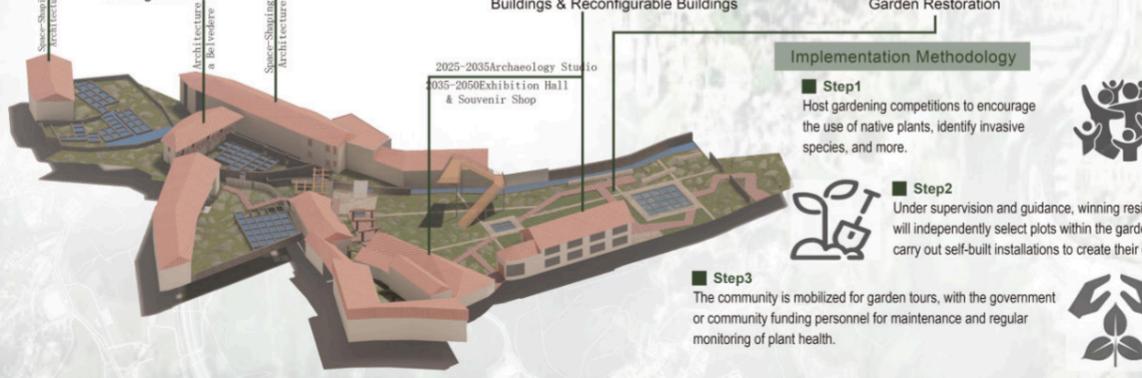
Type 1: Authentic Restoration of the Building to its Original State



Type 2: Historic Buildings Adapted into Green Buildings & Reconfigurable Buildings

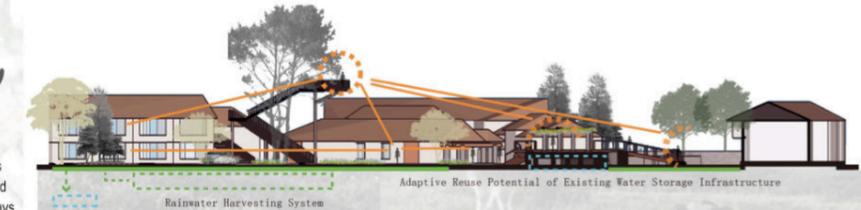


Type 3: Community-Engaged Green Space or Garden Restoration



- #### Implementation Methodology
- Step 1** Host gardening competitions to encourage the use of native plants, identify invasive species, and more.
 - Step 2** Under supervision and guidance, winning residents will independently select plots within the garden and carry out self-built installations to create their displays.
 - Step 3** The community is mobilized for garden tours, with the government or community funding personnel for maintenance and regular monitoring of plant health.

III. Grading and Sightline Analysis



Develop tailored restoration strategies
Based on the condition of each Tank, incorporating granite structures to enable the Tanks to resume their water storage function. The design integrates SuDS to mimic the pre-development hydrologic regime.

III. Detailed Design Illustration

Pergola

The form of the pergola corresponds to the grid pattern of the water pool below, uniquely revealing the historical remains concealed beneath the granite slabs. As people pass through, they can tangibly perceive the scale of the Tank. Local grapes can be planted on the pergola.

Leisure Platform

The platform restores the building's load-bearing structure—granite and wood—on the original site, allowing visitors to see this historical structure with their own eyes.

Observation Tower

The design intent was to create a vantage point from which all the nearby Tank ruins could be viewed as a whole. These pools are particularly distinctive in their planar layout, and viewing them from an elevated position allows people to appreciate how the river, buildings, and pools were organically integrated. Looking south, one can also see the distant Peña Mountain, understanding how the broader natural environment was utilized for leather manufacturing. Furthermore, the observation tower supplements the historical sightlines, providing a visual focal point from which the leather district can be discovered from afar.

Aerial wooden walkways

Aerial wooden walkways have been designed to leverage the terrain. These walkways adopt the material palette of the historic buildings' external corridors in the leather district: wood painted red, all constructed using vintage techniques. The wooden platforms will also provide a floating, elevated perspective overlooking the pools, offering visitors a new vantage point to observe the Tanks and their material textures. The boardwalk will pass through pergolas, whose columns are arranged along the edges of the pools below, forming narrow passageways. This allows people to experience the pool spaces from the "inside," gaining a deeper understanding of the history, while also serving as a key entrance route into the Archaeology Garden.

Tank Ruins

A shaped granite border has been designed around the site, serving multiple functions as archaeological work progresses. It both defines the protected area and, upon completion of the excavation, will form a corridor.



Scene 1: View from the Stone Bridge towards the Archaeology Garden



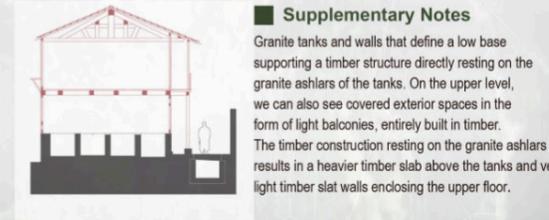
Scene 2: View from the South Side of the Archaeology Garden towards the Observation Tower



Scene 3: View from the Entrance of Cima Tanning Factory: Pergola and Wooden Walkway



Scene 3: View from the Entrance of Cima Tanning Factory: Pergola and Wooden Walkway

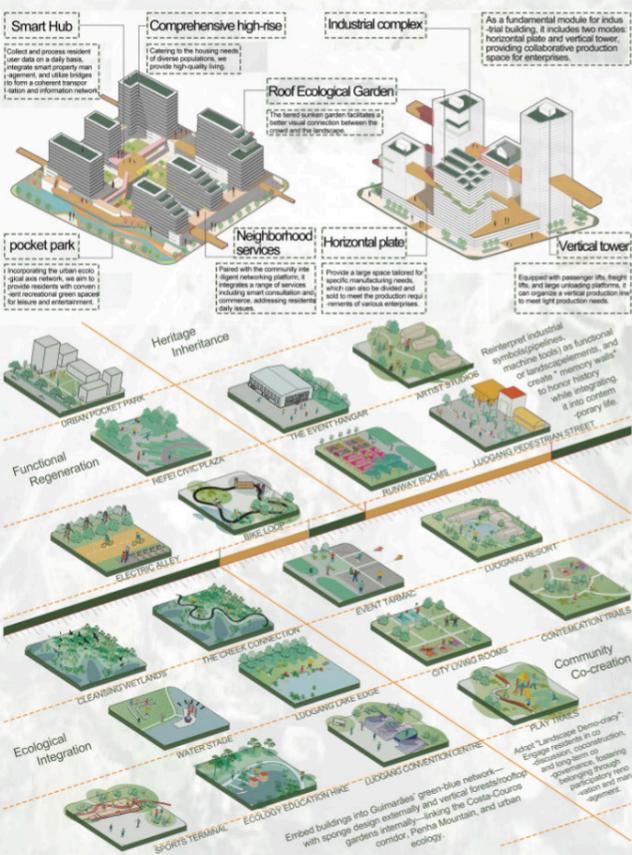


Supplementary Notes

Granite tanks and walls that define a low base supporting a timber structure directly resting on the granite ashlars of the tanks. On the upper level, we can also see covered exterior spaces in the form of light balconies, entirely built in timber. The timber construction resting on the granite ashlars results in a heavier timber slab above the tanks and light timber slat walls enclosing the upper floor.

INTERVOWEN NARRATIVES — Social Inclusion and Adaptive Planning for Bairro C under the Green Capital Framework

I. Future Activated State of Architecture



II. Future Conservation State of Heritage

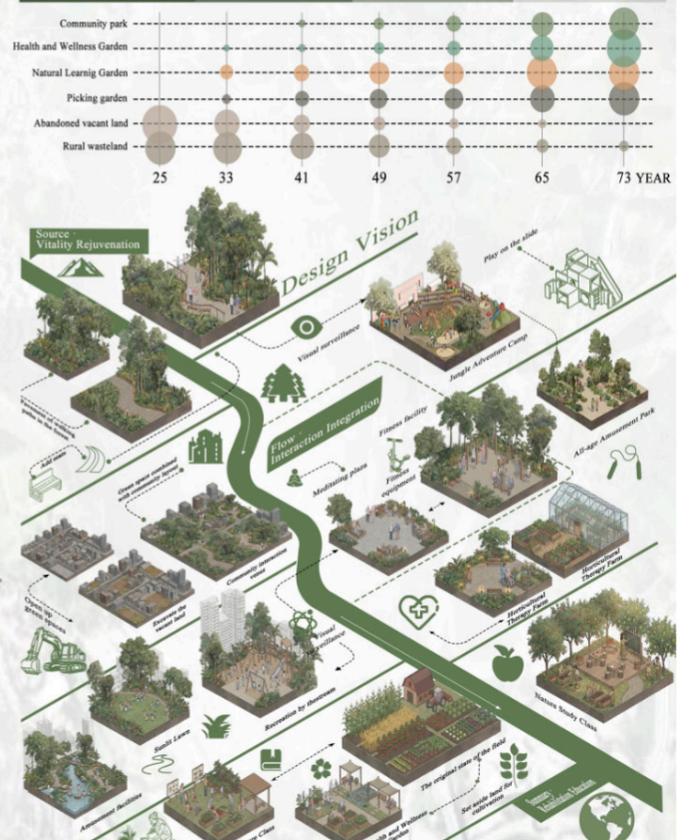


III. Future Just State of Space



04 EVOLUTION · PARADIGM

IV. Future Beautiful State of Landscape



V. Aerial View of the Future Vision



Weaving for Renewal

**Sun Ran, Wu Jinglai, Wang Jingxuan,
Xin Liwei, Zhou Lu, Dai Yincheng,
Zheng Ziweu**

Huazhong Agricultural University, PR of China

FINALIST

Titled "Grey-Green Regeneration: Weaving for Renewal," this proposal presents an integrated vision for Bairro C in Guimarães, Portugal. It addresses the area's post-industrial decline, fragmented grey spaces, and the buried

Costa-Couros river through a multi-scale "Three Rings" green infrastructure strategy. At the landscape scale, it reconnects Bairro C to Penha Mountain and the Creixomil floodplain, reviving the river as a blue-green corridor.

At the district scale, the "One Axis, Three Belts" strategy introduces a central ecological axis flanked by thematic belts (Living, History, Leather) to reactivate community life, cultural memory, and industrial heritage. At the site scale, targeted interventions—such as constructed wetlands, community co-creation gardens, and industrial building retrofits—demonstrate regenerative design, biodiversity enhancement, and stormwater management.

Supported by a robust governance ecosystem, innovative collaboration models, and circular economy mechanisms, the project transforms Bairro C into a resilient, inclusive, and culturally vibrant hub. It ultimately aims to seamlessly weave ecological restoration, social cohesion, and cultural revival into the fabric of Guimarães' sustainable future.

Grey-Green Regeneration: Weaving for Renewal

Planning Vision: With the core concept of "Grey-Green Symbiosis - Weaving for Renewal", this plan integrates the fragmented grey spaces and inefficient grey infrastructure in Bairro C, and constructs a green network connecting ecology, culture and communities. It aims to create "a regenerated land with interwoven blue-green spaces, a livable community with activated cultural memories, and an inclusive benchmark for urban transformation". The post-industrial declining area will be upgraded into the core hub of Guimarães' green infrastructure, realizing the coordinated development of ecological resilience, cultural inheritance and social vitality.

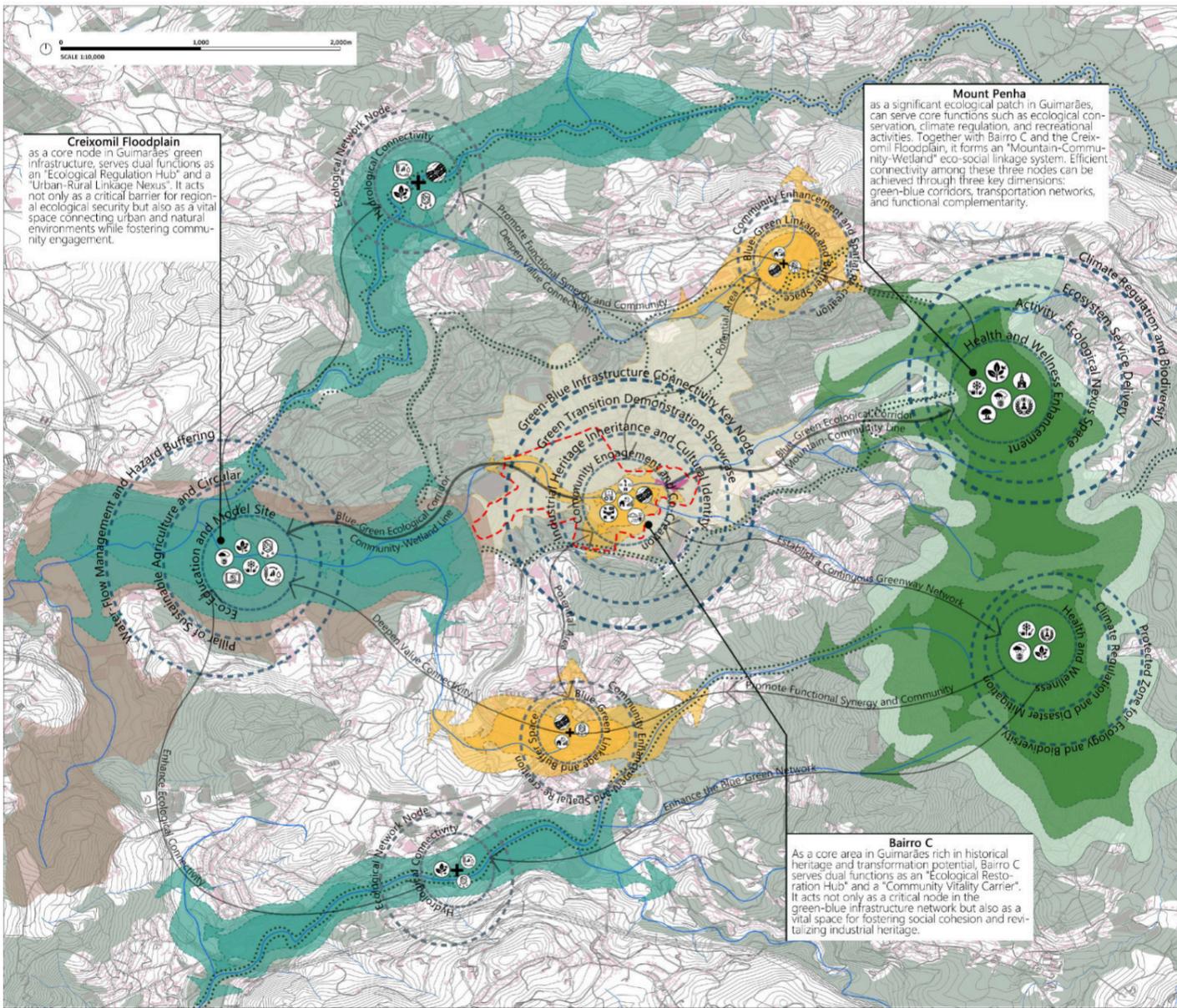
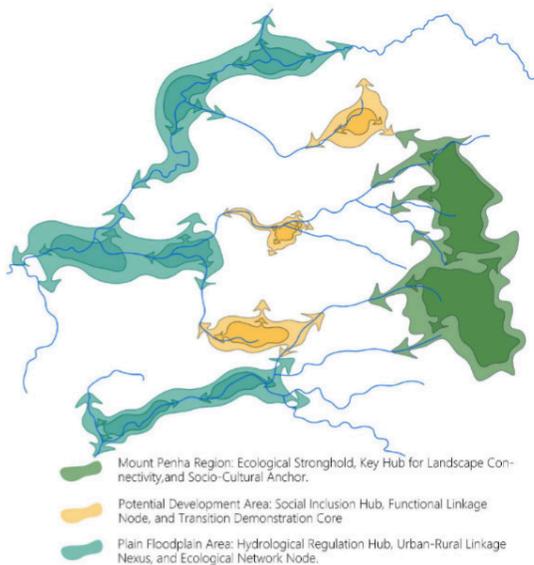
Location



Objectives



- Ecological Objectives:** Restore the fractured sections of the Costa-Couros River Corridor, address seasonal flooding and water scarcity, improve the regional microclimate, and reduce air and noise pollution.
- Cultural Objectives:** Integrate scattered industrial and world heritage resources, activate industrial memories and traditional buildings, create "culture + tourism + surrounding areas" integrated products, and develop cultural IP-derived products.
- Social Objectives:** Eliminate spatial segregation and social exclusion, and strengthen community participation.
- Industrial Objectives:** Promote the industrial transformation from "post-industrial stagnation" to "green cultural tourism + new-type transit", and activate the productive value of grey spaces.

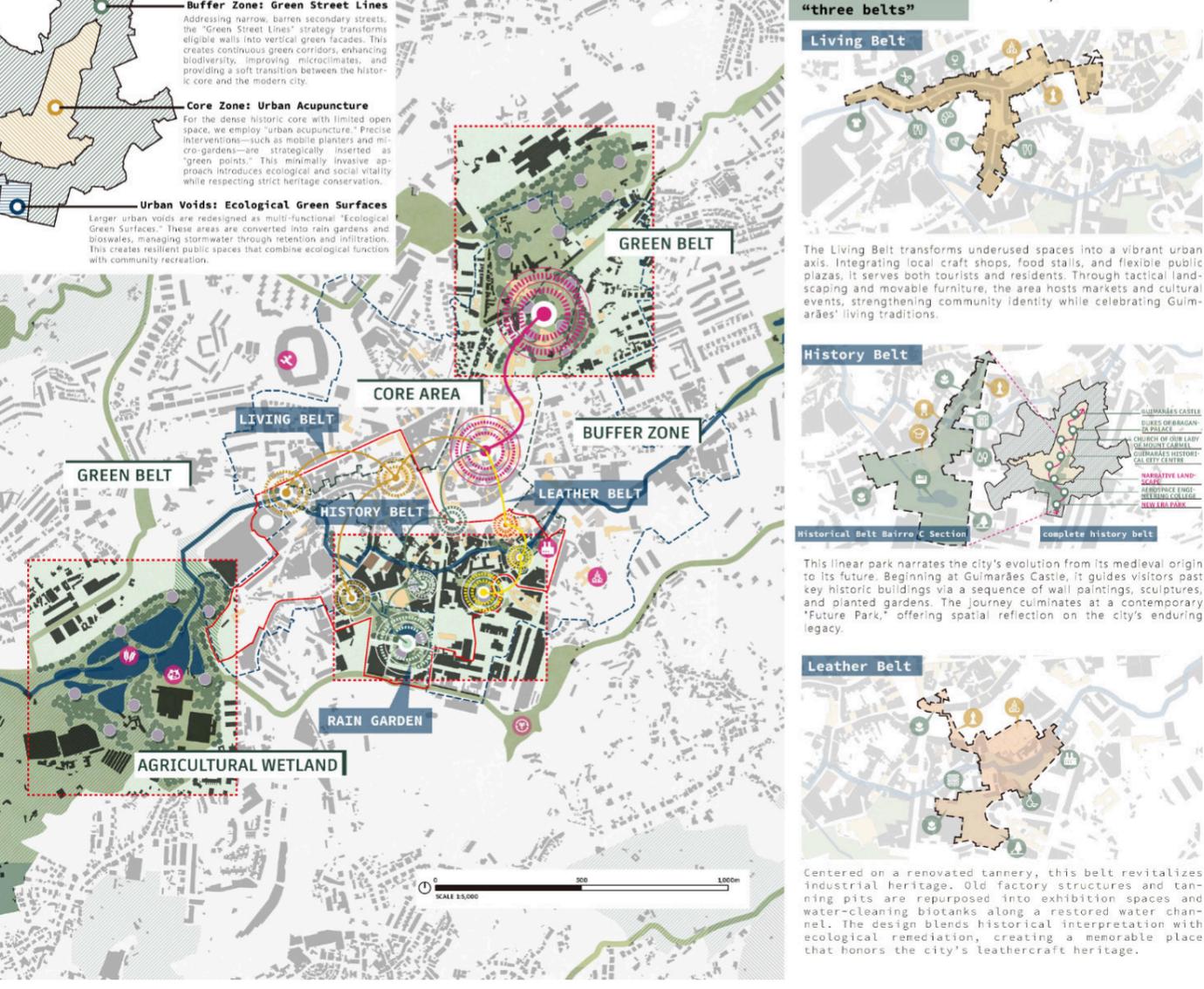
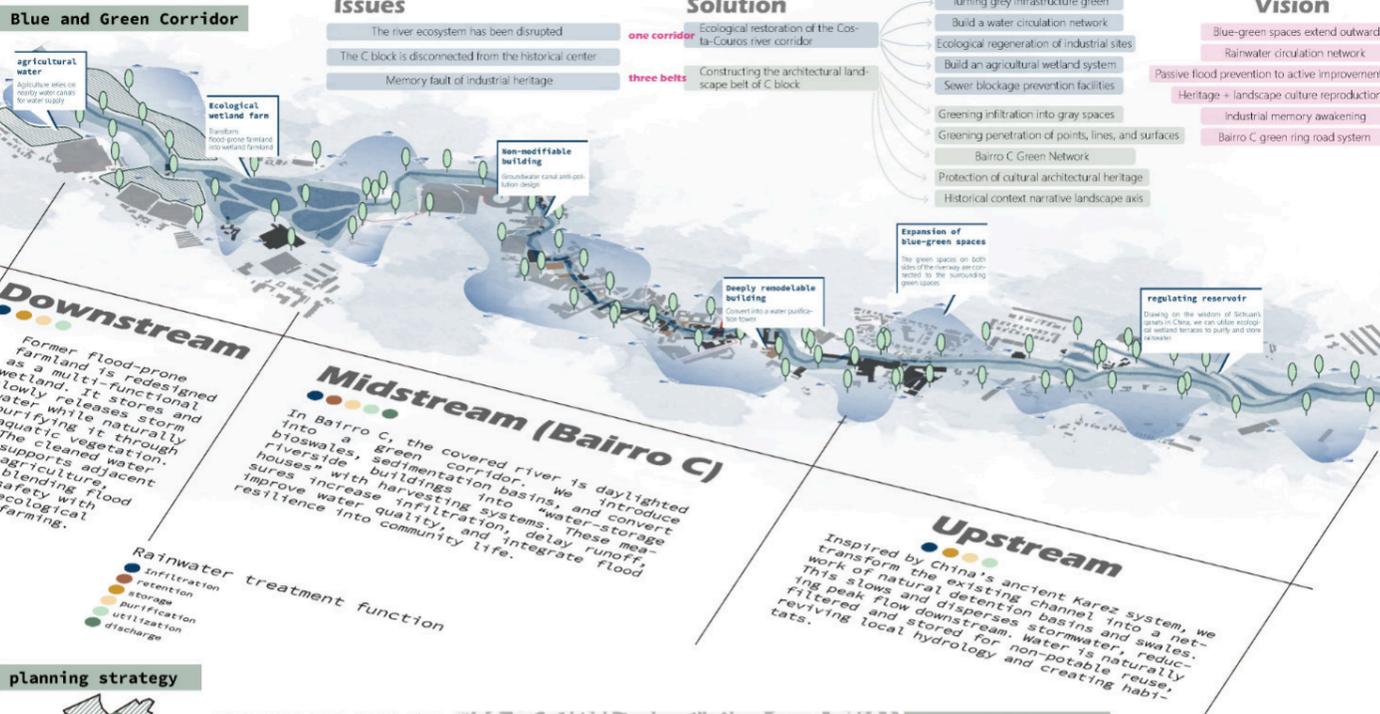


- Living Heritage of Industrial Sites
- Green-Blue Infrastructure Interconnection Node
- Showcase for Green Transformation
- Agricultural Circular Economy
- Microclimate Regulation
- Ecological Adaptation Buffer Space
- Public Space Placemaking
- Community Participation and Co-Creation Platform
- Ecosystem Service Provision
- Ecological Activity Engage-
- Ecological Education and Demonstration
- Biodiversity Conservation
- Hydrological Regulation and Disaster Buffering
- Carrier of Cultural Heritage
- Recreational Activities for Wellness Enhancement
- Green Infrastructure Strategic Area
- National Ecological Protection Area
- World Heritage Region
- Floodplain Buffer Zone
- Primary Watercourse Path
- Relational Connection Nexus
- Green Belt Area
- Bairro C
- Site-Specific Choices in Bairro C

137 Grey-Green Regeneration : Weaving for Renewal



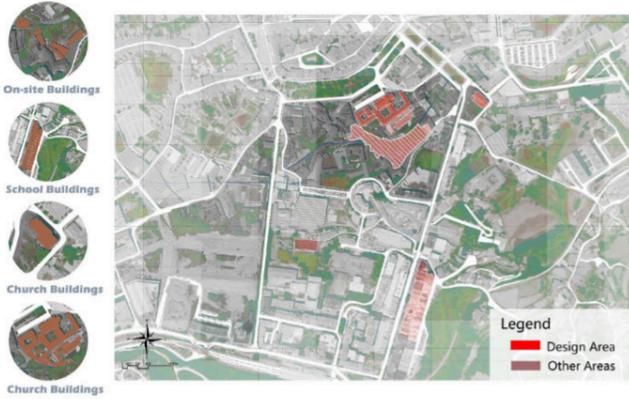
The Bairro C district in Guimarães, Portugal, faces three interrelated challenges. The Costa-Couros watercourse has been buried, degrading biodiversity and overloading grey infrastructure, leading to flooding risks. Its industrial and architectural heritage is fragmented—with valuable buildings scattered, abandoned structures underused, and cultural memory fading. The proposal introduces an integrated "One Axis, Three Belts" strategy. The central "Costa-Couros River Habitat Axis" revives the river as a blue-green corridor, combining ecological restoration, sustainable drainage, and public space. Three thematic landscape belts then reconnect and activate the district: the "Living Belt" strengthens community and commercial life; the "History Belt" uses narrative landscapes to trace Guimarães' timeline; and the "Leather Belt" adapts former tanneries into cultural-ecological anchors. Together, they form a continuous green network. This plan transforms Bairro C into a resilient, culturally vibrant district. Blue-green infrastructure forms an interconnected ring. Improving water management and biodiversity. Heritage is woven into daily life through engaging landscapes, and renewed public spaces foster community. Bairro C thus becomes an integral, sustainable, and memorable part of Guimarães' future.



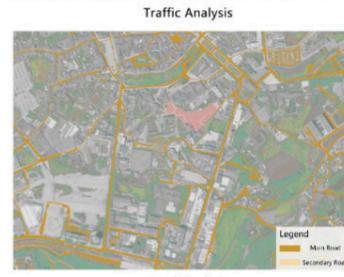
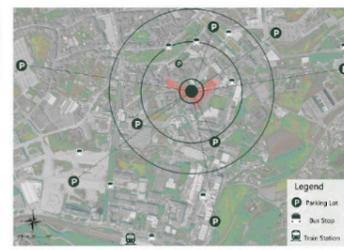
137 Grey-Green Regeneration : Weaving for Renewal

This proposal presents a strategic vision for a key site within Guimarães, Portugal, transforming a central yet underutilized spatial hub into a dynamic ecological and social catalyst. The core Design Area, indicated in red, is strategically positioned as a connective tissue within the urban fabric. Our intervention is not an isolated object but a responsive system, meticulously derived from a tripartite site analysis encompassing locational significance, hydrological patterns, and existing architectural heritage. The design aims to synthesize these conditions into a coherent landscape infrastructure that reinforces local identity, enhances biodiversity, and creates a resilient public realm.

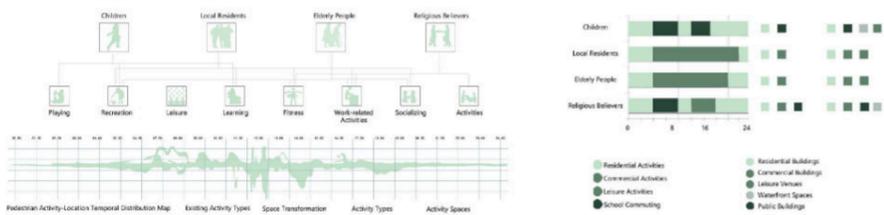
Site Condition Analysis



Site Location
 This design is carried out for the site in Guimarães, Portugal, corresponding to the site condition analysis in the diagram, focusing on the core Design Area (the red block). Location of the Design Area: The red block in the diagram is the core Design Area, located at the spatial hub of the Guimarães site. It connects the surrounding existing green spaces and building clusters, which can link the internal and external spaces of the site and fit the local spatial texture of Guimarães.
Hydrological Conditions: A groundwater system naturally flows through the site. This resource will serve as the core carrier of ecological design. Subsequently, a small hydrological cycle system can be built based on it, creating a natural habitat suitable for local plant communities.
Existing Buildings: The site includes on-site buildings, as well as local School Buildings and Church Buildings in Guimarães. The spatial interface characteristics of these buildings will guide the layout direction of the site's plant communities to echo the spatial atmosphere of local buildings.



Crowd Analysis



Design Strategy

Site Regeneration Design Strategy

The leather tanning industry causes water pollution, soil contamination, and a decline in species diversity. We can construct constructed wetlands for water and soil purification, and plant species with strong remediation capabilities to reconstruct biodiversity. This will enable the regeneration of the site.



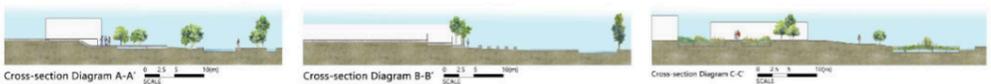
Blue-Green Space Connection Strategy

Area C is located in the middle reaches of the river and serves as a crucial node on the water axis in the macro-strategy. The design will integrate the blue spaces and green spaces within the site, turning it into an ecological space in Block C that regulates rainwater runoff and increases green coverage.

Industrial Heritage Revitalization Strategy

There are several abandoned factory buildings in Area C. We will install vegetation on their facades to increase three-dimensional green volume, transforming the grey spaces into vibrant green spaces.

Longitudinal Section



Master Plan



137 Grey-Green Regeneration : Weaving for Renewal

Key Points for implementation

- Planning coordination**
Ensure the in-depth integration of the Three-Ring strategy with the urban master plan (Plano Diretor Municipal, SECAP2030, the Biodiversity Action Plan, etc.)
- Technology empowerment**
With the support of landscape LABS and digital platforms, continuous monitoring and assessment of the ecological benefits of the three rings are carried out to achieve precise intervention.
- Cultural leadership**
Deeply integrate historical culture and ecological transformation in the first ring to create a replicable "green regeneration of cultural heritage" model.
- Fairness and Inclusion**
Ensure the accessibility of green spaces in the construction of the third ring Road, benefiting all citizens through measures such as free public transportation and community-shared gardens.
- Regional linkage**
Connect the third Ring with the regional ecological network to enhance the ecological security and resilience of Guimarães at the regional scale.

Spatial Strategy

- Three-Ring Green Infrastructure Network**
- First Ring:** The Ring of History and Culture Core: UNESCO Historical Centre and Kuros District, Urban Core parks and gardens, Memorial forest land, urban agricultural land.
Strategy: Promote the green transformation of cultural heritage areas, build car-free zones, expand pedestrian zones, integrate cultural displays and ecological experiences, and create zero-carbon cultural and creative clusters (such as District C pilot).
 - Second Ring:** Connecting and Transforming Ring Core: Urban river corridors (such as Ave River, Selho River), linear parks and community gardens, urban forest patches, recreational and sports facilities.
Strategy: Restore 61 kilometers of riverbanks and build blue-green ecological corridors, Connect residential areas with green spaces through 30-kilometer-per-hour speed-limited zones and bicycle networks; Promote sponge facilities such as rain gardens and green roofs.
 - Third Ring:** The core of the natural and ecological ring Peripheral farmlands and forests, major river basins, nature reserves (such as Penha Mountain), country parks.
Strategy: Strengthening ecological barriers and enhancing carbon sink capacity through the "Guimarães + Forest" program; Develop eco-agriculture and rural tourism; Build regional

Governance and Engagement Model Zone

- 2030 Governance Ecosystem:** Integrating municipal departments, universities, civic organizations and external experts to form a multi-stakeholder collaborative decision-making structure.
- Climate City Pact:** Through a "fast-track engagement" mechanism, it mobilizes citizens and stakeholders to jointly implement emission reduction and ecological projects.
- Green Brigades:** Build a network of citizen volunteers across 79% of the territory to carry out local actions such as tree planting.
- Citizen councils and ecological councils:** Regularly hold youth and citizen climate councils to incorporate public opinion into landscape planning and policy-making.

Innovative collaboration Model Zone

- Landscape Lab:** As a municipal research and education platform, it conducts community environmental education and actions as part of the PEGADAS program.
- External Advisory Board:** Bring together international experts to provide strategic consulting and knowledge transfer.
- University-Industry-Research Collaboration:** Partner with institutions such as the University of Minho to carry out multi-dimensional monitoring and pilot innovative technologies.
- EU Project Network:** Share experiences with European cities and pilot transition pathways (e.g., ZeroCarbonCities, URBACT, and Life).

Landscape Economy and Funding Model Zone

- Green Public Procurement:** Incorporating climate and biodiversity standards into municipal procurement to prioritize ecological economy products and services.
- Circular Economy Fund:** Incentivizes resource recycling. Set up a fund to support water recycling and medium-sized enterprises in green innovation within the Third Ring Road.
- Diversified Financing:** Combining municipal budgets, EU funds grants and private investments, establishing a dedicated financing mechanism for projects of different scales within the Third Ring Road.
- Eco-value realization:** Develop eco-tourism and carbon sink products based on the three-ring network to drive green economic growth.

Implementation Strategies and Transition Pathways Zone

- Short-term (2024-2026):** The three-ring system planning is completed, with a focus on the immediate restoration of the Second Ring and the ecological renewal of the First Ring.
- Mid-term (2026-2030):** The three-ring ecological network is fully connected, and 100% electrification of public transport will be achieved.
- Long-term (2030-2050):** The three-ring governance ecosystem will achieve climate neutrality, and ecological footprint drops to the level of "one planet".

Manage and maintain the framework area

- Smart monitoring platform:** Integrate data from the Three-Ring Road for dynamic management and public information access, including noise, biodiversity, and climate resilience.
- Hierarchical maintenance mechanism:** The First Ring is mainly managed by municipal professional teams, while the Second and Third Rings introduce community and corporate custodians. The Third Ring strengthens collaboration with farmers and protected area managers.
- Community empowerment:** Mobilize citizens to participate in the daily care and maintenance of the Third Ring through networks such as green clubs, community gardens, and school eco-clubs.

Design Review

- Compliance**
Aligns with EU policy orientations including the Green Deal, Biodiversity Strategy 2030, and Climate-Neutral and Smart Cities Mission, and connects with Portuguese national laws and municipal plans.
- Safety**
Adheres to safety standards such as flood management, forest fire prevention, and species protection; all public space designs consider accessibility and emergency evacuation functions.
- Feasibility**
Built on Guimarães' mature implemented cases, with a replicable and scalable implementation foundation. It is recommended to maintain close collaboration with municipal engineering departments, financial institutions, and EU project offices to ensure project financing and engineering technology implementation.



Aqui cresce Portugal

**Len Malengier, Maité van Scherpenzeel
Thim, Viktor Vindevogel, Leander Ysveld**

HoGent, School of Arts, Belgium

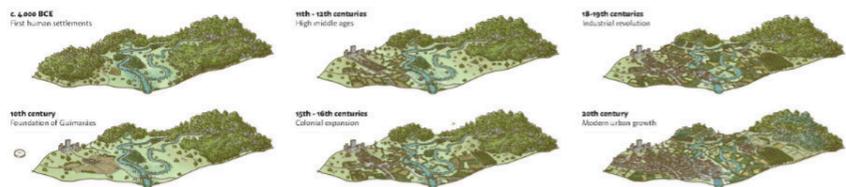
FINALIST

Guimarães holds a rich history as the birthplace of Portugal. Over generations, the relationship between the city and its hinterland became unbalanced. With nature under pressure and the “urban heat island” effect rising, we must act to guarantee a future for the next generations and create an environment where children can grow up. Our core value is to transform the place where Portugal was born (Aqui nasceu Portugal) into one where Portugal grows (Aqui cresce Portugal).

We build upon the “Green Strategy” of Guimarães. While the core nature forms the lungs and the green belts act as arteries, we introduce a fine-grained patchwork of capillaries to bring this strategy deep into the urban and agricultural fabric. To translate this vision into practice, three toolboxes are developed for the urban, forested, and agricultural landscape.

This project focuses on the Urban Toolbox, with Bairro C as a beating heart. Strategically located, this industrial area, once a site of economic growth becomes a living lab. At the center of the transformation lies the Costa Couros, once a bearer of life and now our backbone for climate adaptation. With this, we address other issues like car-dominated infrastructure and the lack of social spaces.

Our masterplan follows three storylines: health, movement, and identity. Utilizing a chain of buffer parks for natural air conditioning and water management we also fulfill social needs of different neighbourhoods. We showcase this vision through our zoomin on ‘Campus C’ and ‘Quadra de Couros’ (Area 3). The realisation happens in four phases, encouraging bottom-up engagement to create socially robust, climate-adaptive environment with a shared responsibility. Here the future generations of Portugal can grow up, inspiring other regions in their Transition toward a climate-adaptive future.



Vision
The urban history of Guimarães has played a crucial role in the formation of Portugal and is widely recognized as the birthplace of the nation. This identity is expressed through the remains of the medieval city walls, bearing the inscription "Tudo nasce em Guimarães" (Portugal nasceu aqui). It is a source of pride for local inhabitants, embedded in everyday life and visible in the urban fabric. For this reason, the historic city centre of Guimarães is protected as a UNESCO world heritage site.

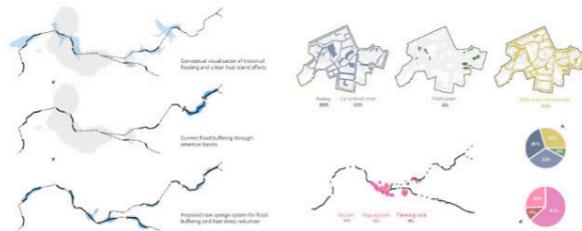
In recent decades urban expansion has taken place in an increasingly uncontrolled manner, often at the expense of the surrounding landscape. This has led to growing environmental pressures, including heat stress, water-related challenges, biodiversity loss, pollution, and the gradual disappearance of green spaces. These issues are no longer isolated, but are widely present across the landscape.

This project aims to plant a seed for the future. A seed that encourages growth towards a more balanced relationship between human settlement and the landscape system, and towards a more sustainable spatial development for Portugal. This ambition is reflected in the project title "Aqui cresce Portugal" (Portugal grows here), which builds upon the strong identity of the area while looking ahead to strengthening the landscape and improving livability for future generations.

The social ecological cascade
There is a strong local support for climate action in Guimarães, reflected in initiatives led by both the municipality and its residents. Examples include the establishment of the Landscape Laboratory, the Green Brigades, and the city's recognition as European Green Capital. Building upon these existing pillars, the project develops a green and blue mosaic network embedded within the urban fabric.

Urban heat island analysis reveals that rising temperatures are most pronounced in areas where the Costa-Couros River is currently channelled and where industrial structures are most dominant. In combination with recurring flooding caused by river fluctuations and spatial confinement within the city, the restoration of the Costa-Couros River becomes the central driver of the proposed landscape network. Through daylighting the river and structuring it as a cascade of water-filtering spaces, the project introduces a strong cooling element while significantly increasing the city's capacity to buffer stormwater both from upstream flows entering via the river and from rainfall occurring within the city.

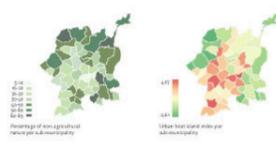
Rainwater is captured and guided through a network of rain gardens distributed across the city, transforming the landscape into a sponge-like system. To reinforce cooling effects and spatial continuity, the urban tree canopy is rationally increased along streets and within public spaces, resulting in the creation of a distinct and resilient urban microclimate.



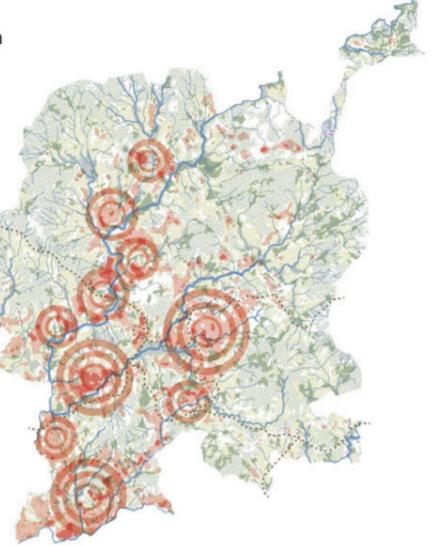
A city to grow in
Climate adaptation not only improves environmental performance, but also directly enhances urban livability. It offers a strong opportunity to meet social interaction, movement, and local identity for the inhabitants of the city. As this project addresses the city as the primary habitat of its residents, the design is approached through the perspective of the child. By creating a high-quality living environment for the developing child, the overall quality of life for the entire community is inherently strengthened.

An analysis of Bairro C reveals a strong spatial imbalance in the use of public space. The area is currently dominated by car-bound mobility, with vehicles occupying approximately 80% of the available open space, while only 15% is allocated to green space (including street greenery). In addition, the presence of vacant and underused industrial heritage contributes to the marginalization of the neighbourhood.

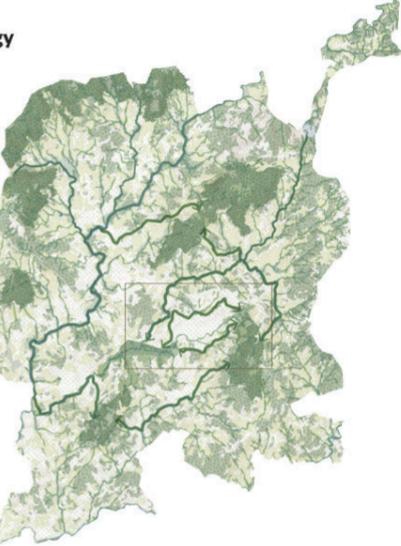
Addressing these challenges requires a fundamental shift in how urban space is arranged and valued. Rather than prioritizing traffic efficiency and residual spaces, this project reclaims public space for people, nature, and collective use. Through this shift, Bairro C is reimagined as a climate-resilient and socially active neighbourhood in which people can grow across all stages of life. To articulate this transformation, three interrelated narratives are defined: addressing climate resilience, spatial connectivity, and local identity as the foundation for long-term urban quality.



Problem



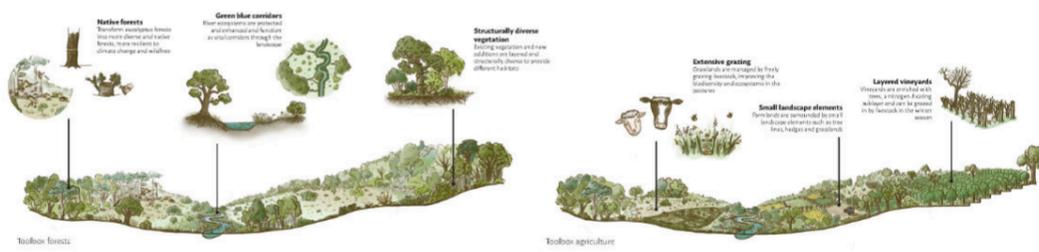
Strategy



Landscape fragmentation and climate vulnerability
Within the landscape of Guimarães, urban development has historically concentrated along river corridors, where heat stress is most severe. In many locations, rivers have been channelled or contained by infrastructural and industrial development, leading to increased thermal stress, pollution, and ecological degradation. Combined with unsustainable agricultural practices, this spatial pattern has resulted in a highly fragmented landscape system.

This fragmentation is further intensified by the large-scale introduction of non-native plantations, which have displaced more biodiverse and resilient native forests. As a result, the landscape has become increasingly unstable, characterized by monoculture forest complexes with high risk and reduced ecological resilience. Together, these dynamics form the basis of the region's current climate-related challenges, including heat stress, flooding, biodiversity loss, and low resiliability.

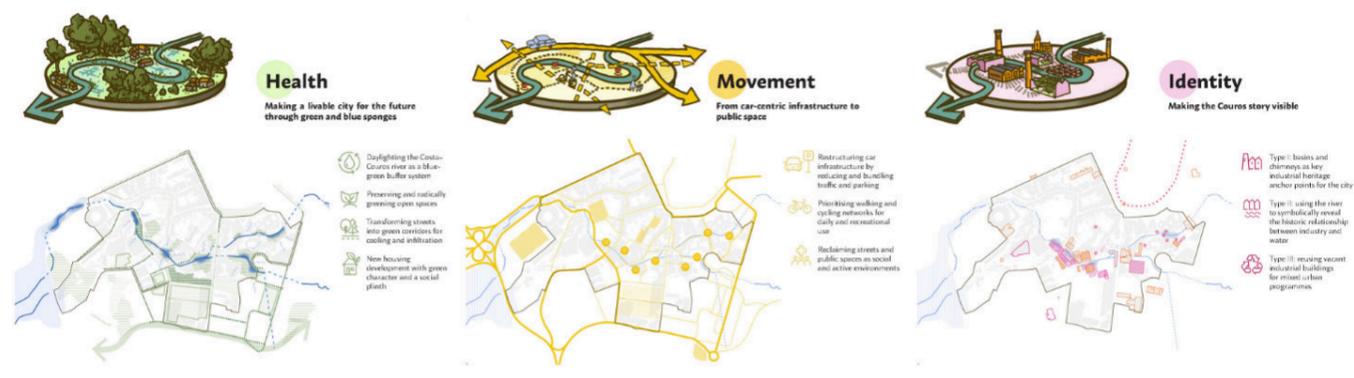
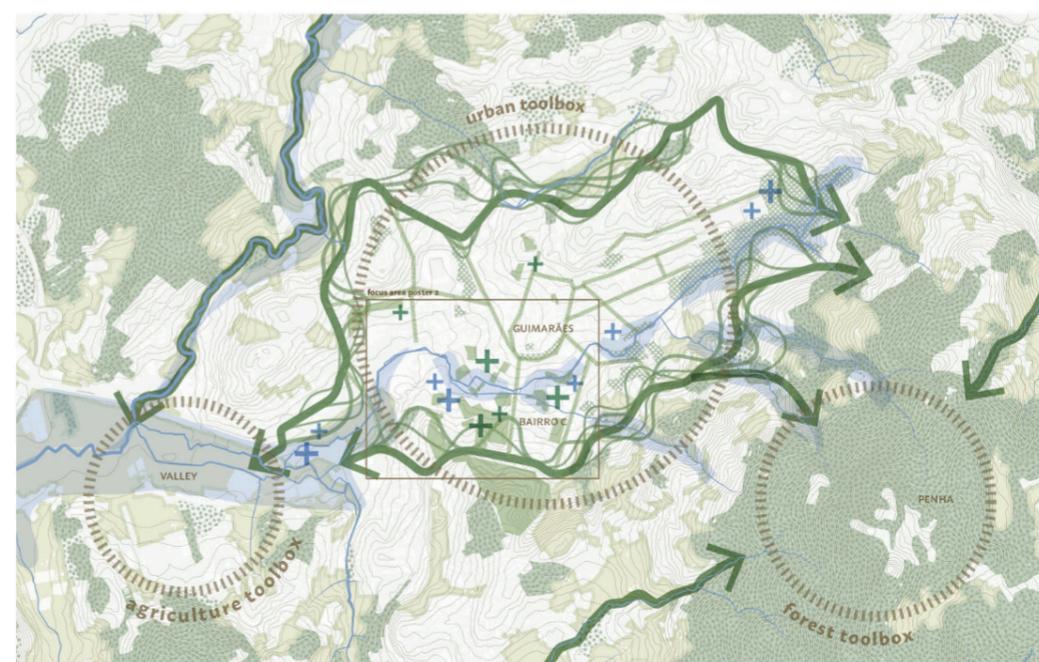
To address these challenges, a landscape strategy is developed as an extension of the Green Rural Strategy. Core landscape areas are strengthened and protected, while the green belts function as continuous green corridors connecting these zones. Within the urban and agricultural fabric, a mosaic patchwork is introduced to address the origins and impacts of these challenges, at the scale where they are most strongly felt. This integrative approach aims to stabilize the landscape system and support a more climate-resilient future for Guimarães.



The mosaic patchwork and landscape toolboxes
The mosaic patchwork is structured as a network of green connections, corridors, and landscape patches woven through the human-dominated landscape. They serve as a reinforcement of the existing green structure belts. To translate our strategy into a clear and transferable approach, a set of landscape toolboxes is defined for the main landscape typologies within the region.

The first toolbox addresses the core landscape zones, which are predominantly forested. Here, the objective is to transition monoculture eucalyptus plantations into biodiverse and resilient forest systems. The second toolbox focuses on the agricultural landscape, where the aim is to implement green networks through and at the edges of the farmlands. This was even the agricultural landscape can become home to a more biodiverse ecosystem and combat heat stress. Secondly, the goal is to support and inspire farmers to adopt more sustainable and landscape-sensitive practices.

The third toolbox operates within the urban fabric, where landscape structures are extended deep into the city. Of the three toolboxes, this project focuses on the development of the urban toolbox. Bairro C is selected as a living laboratory due to its position as an urban centre situated between agricultural land and forest areas. Combined with that is the presence of a wide range of urban typologies ranging from medieval narrow streets, industrial zones, recently developed neighbourhoods and future development sites. Through this Bairro C forms a representative cross-section of Guimarães and will be the beating heart of this transition. As such, it functions as a demonstrative testing ground for climate action at the human scale, allowing strategies developed here to be transferable to other parts of the city and region.



The social basins
We zoom in on the area surrounding Area 5. This is a place where all narratives come together. This area is structured around two basins from the proposed water buffercascade. These basins capture floodwater, provide cooling, and most importantly bring the coveted Costa-Coursos river back to the surface, giving it a prominent role in the public space. From a climatic perspective, this is highly beneficial for biodiversity and for cooling the city.

To make this possible, space is reclaimed by reweaving the historical relationship between the river and the leather industry, which led to the river being enclosed. Vacant industrial buildings built on top of the river are stripped back so that only their structural frames remain. This approach symbolically restores the connection between water and industry, while creating space for the river to fluctuate and for residents to move through and linger among the remnants of the past. Additional space is gained through the establishment of breaking up parking lots and reweaving streets.

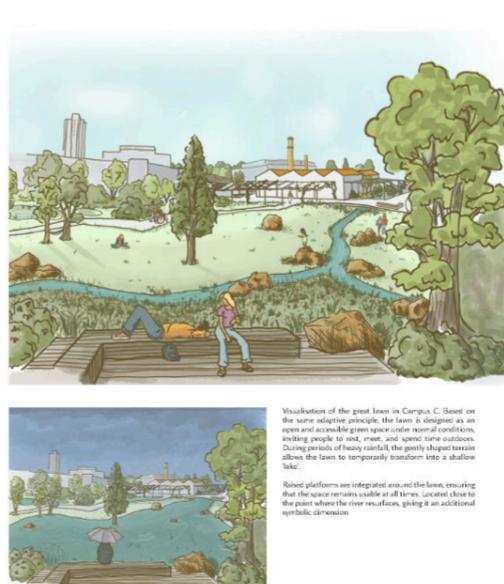
The spatial design follows a form-follows-nature approach, where the basins serve as the foundation and integrate seamlessly with the surrounding green structures. On top of this, a geometric design language is introduced to preserve the industrial aesthetic, emphasizing the contrast of nature breaking through the urban fabric. The social program responds to the adjacent buildings, such as the university and the nearby sports facilities.



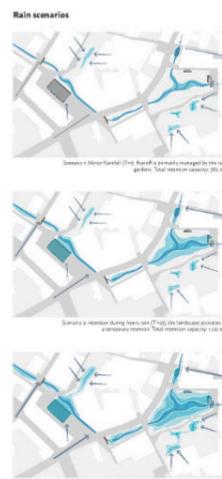
- Legend**
- Key locations
 - 01. great lawn
 - 02. dynamic platforms
 - 03. water patio
 - 04. courts plaza
 - 05. hi-story bench
 - 06. view of the Parha
 - 07. stairs with balconies
 - 08. overflow from rain garden
 - Infrastructure
 - grassland
 - lower vegetation
 - planted trees
 - existing trees
 - climbing plants
 - apian plants
 - Infrastructure
 - granite pathway
 - granite road
 - asphalt road
 - handrail



Visualization of the court in Quai de Coiro. Under everyday conditions, the court functions as an outdoor public place for sports, play, and informal gathering. Its open structure and surrounding industrial remnants frame a flexible space that adapts to different rhythms of use. During periods of heavy rainfall, the court temporarily transforms into the water-buffering basin, allowing stormwater to be stored within the space before gradually draining away. In this way, the court combines social activity with climate adaptation, accommodating both daily life and extreme weather conditions.



Visualization of the great lawn in Campus C. Based on the same adaptive principle, the lawn is designed as an open and accessible green space under normal conditions, inviting people to rest, meet, and spend time outdoors. During periods of heavy rainfall, the gently sloped terrain allows the lawn to temporarily transform into a shallow lake. Raised platforms are integrated around the lawn, ensuring that the space remains usable at all times, located close to the point where the river surfaces, giving it an additional symbolic dimension.

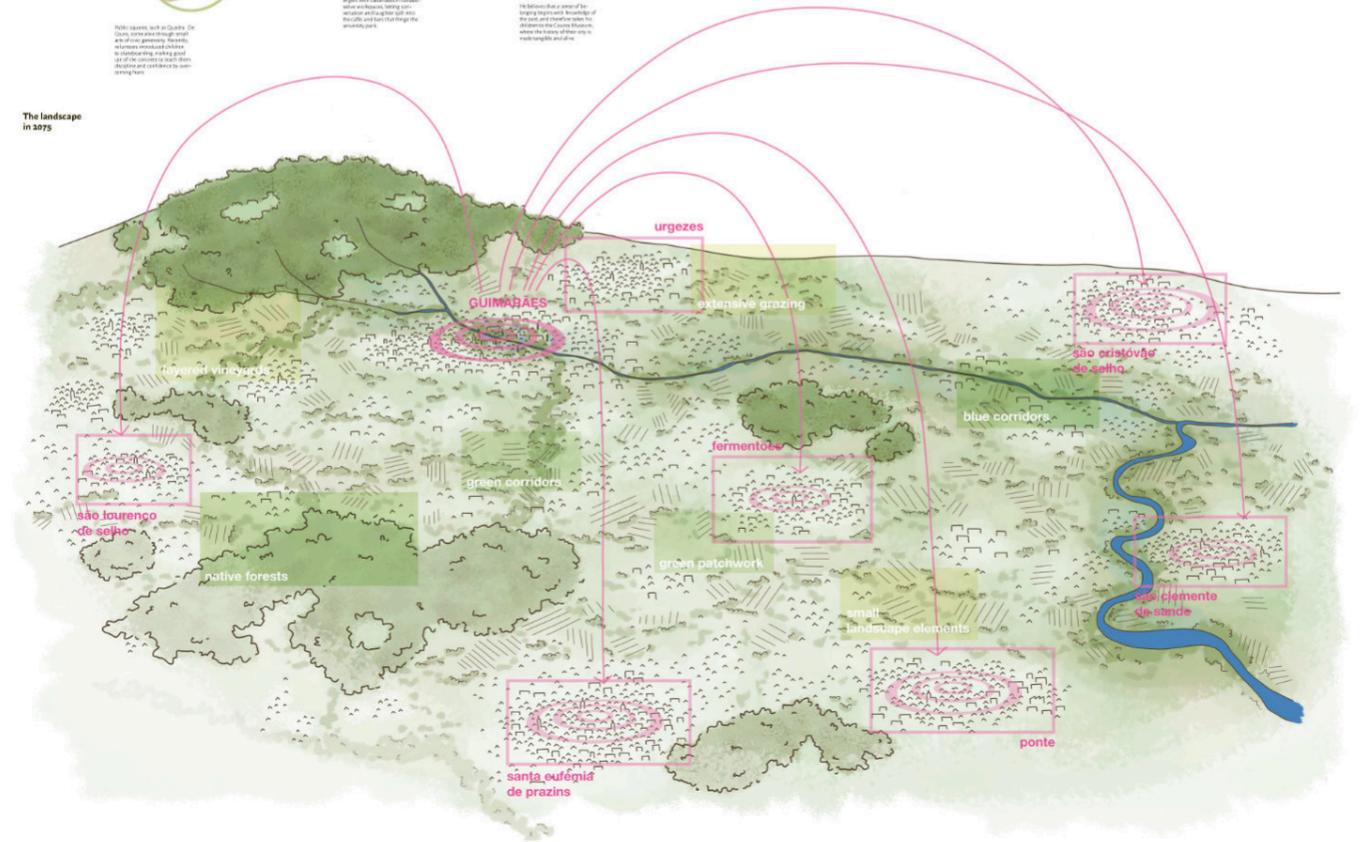
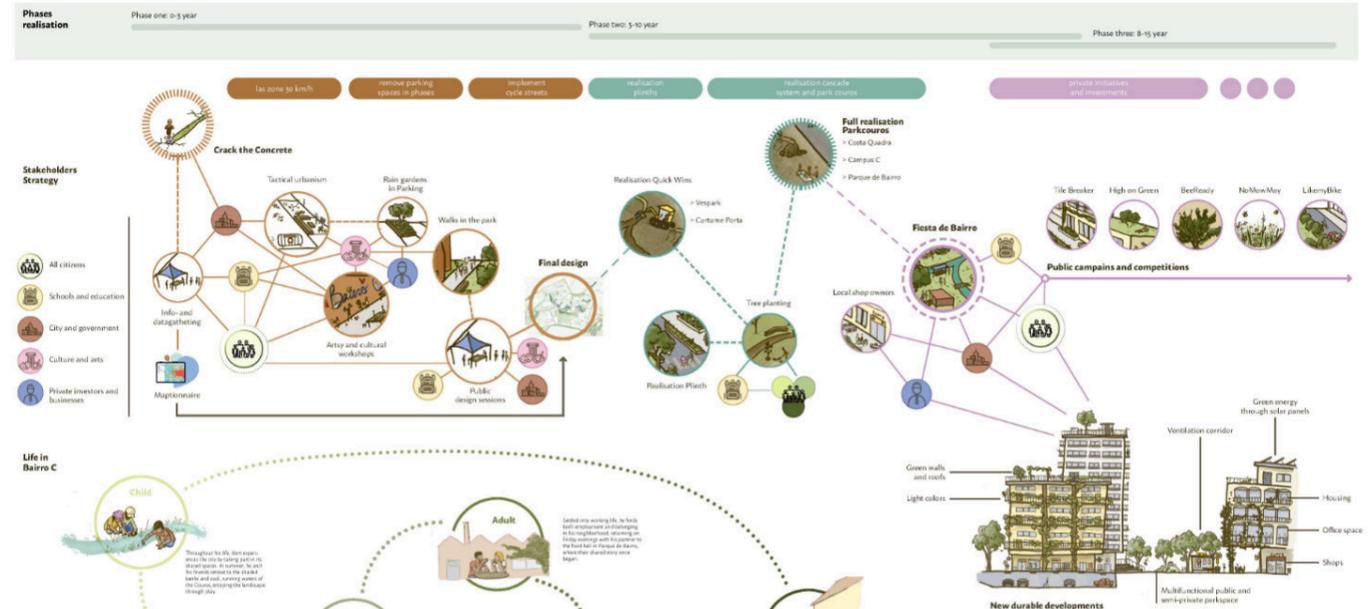


Show, don't tell (phase one: 0-3 year)
On Foster's, we show what the potential of the site is. Should we win this competition, we will take a step back. We maintain the core values (health, movement, and identity). However, the local design (such as the social programming of the Bi.Bio) will be shaped together with the citizens. We will do this by showing it to them clearly and iteratively. We will work on the local level of government where we intend to open the river, these "tracks" will be woven with a flower mix. Around this, we will start a participatory trajectory (see timeline) to show the value of the project and create support and habitation among the residents.

Building the landscape system (phase two: 3-10 year)
Once the final design is completed, the actual execution begins. In the preceding years, small-scale interventions will have taken place, such as implementing public zones or bicycle streets and the gradual transformation of parking spaces. This allows for systemic restoration: the large-scale removal of hard surfaces, the degrading of the Costa-Coursos river, the installation of water buffers, and the construction of new pathways. The primary goal of this stage is the effective recovery of the natural landscape and its underlying ecological systems.

Climate resilience is a shared responsibility (phase three: 8-15 year)
As the new public realm becomes established, it weaves itself into the existing urban fabric. The safe and socially valuable space increases investment willingness from the private sector, accelerating the transformation of vacant or dilapidated buildings. In collaboration with the municipality, we will establish regulations to ensure that repurposing happens with respect for heritage and maintains social functions. Furthermore, we encourage the city to provide subsidies and campaigns to engage the private sector and residents in climate-adaptive initiatives, such as green roofs, facade gardens, and using sustainable transport.

An urban ecosystem that inspires (phase four)
The vision is now a reality: trees provide shade, water flows freely, and children play outside. The public space has become a functional ecosystem, anchored by repurposed heritage and connecting green streets. As a successful proof-of-concept, this integrated system reduces climate risks while redefining and strengthening urban space. It not only avoids future disaster-related costs but also delivers long-term value for the city and its inhabitants. Bairro C becomes an example that can inspire other areas, using the organic patchwork strategy as a transferable toolset. In this way, Guimarães, besides its historical significance as the birthplace, can also become an example for Portugal in the transition to a climate-adaptive future.



Secunda Vida

**Marko Verbič, Mirta Dolinšek,
Vasilija Petrovic, Nan Wu,
Zhan Bochen**

University of Ljubljana, Biotechnical Faculty, Slovenia

The Costa-Couros shaped Guimarães from the very beginning. From the first inhabitants who sought refuge near the castle, to the neighbourhoods that grew along its banks, to the leather industry it eventually powered. The river defined this city. Then it was buried, and Bairro C was slowly forgotten with it.

We propose daylighting the river at three key sites, each serving as a social green hub at the crossing point between the green belt and the old city centre. Site I, with the most open water, functions as a strong ecological corridor and water retention area during rainy seasons. Site II gains microclimate regulation from the daylighted river, giving

inhabitants a cooler gathering space and direct water interaction. Site III undergoes complete transformation. The ruined buildings around it repurposed to complement its new use and connectivity.

Yet physical transformation is only part of the story. The modern world moves fast and demands more from its spaces. Places survive only

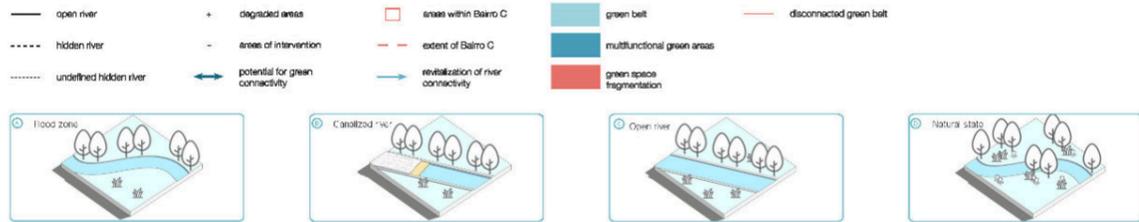
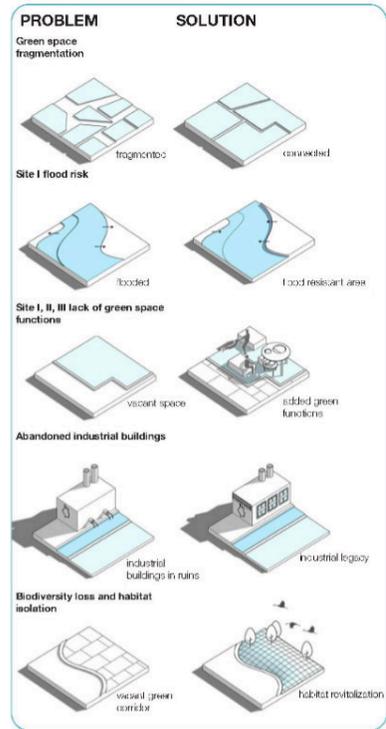
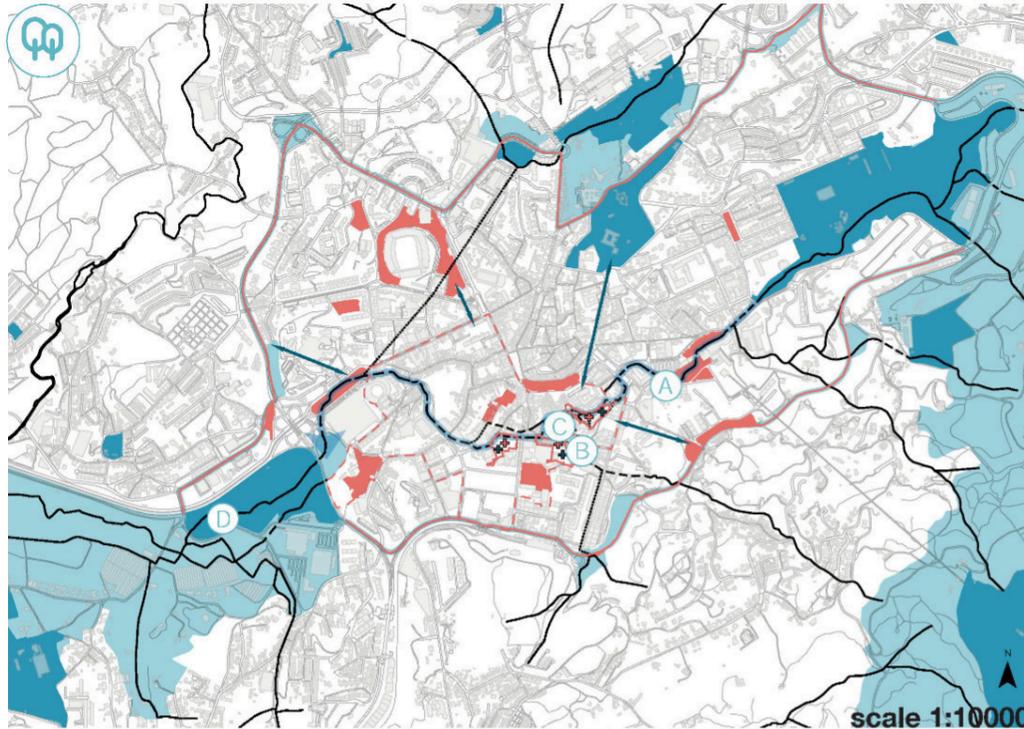
FINALIST

when they offer multiple reasons to visit, to stay, to return. We want places where people of all ages meet, work, grow, and rest. Through co-creation, residents shape decisions from the start, eventually managing these spaces themselves. Abandoned industrial buildings find new life as greenhouses, creative workshops, and community spaces, honouring industrial Memory while serving present needs.

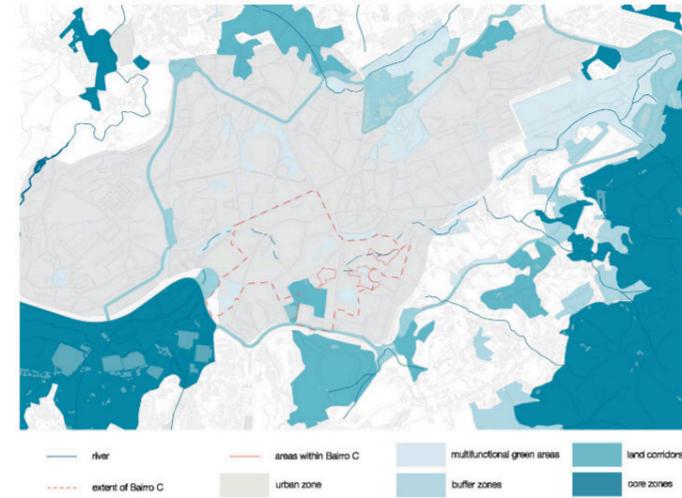
Site III shows how this model works. Children play where workers once laboured, where design speaks of memory, and a forgotten neighbourhood remembers what it was and starts its new path of growth.

SEGUNDA VIDA

FRAGMENTED GREEN NETWORK AND RECONNECTION STRATEGY



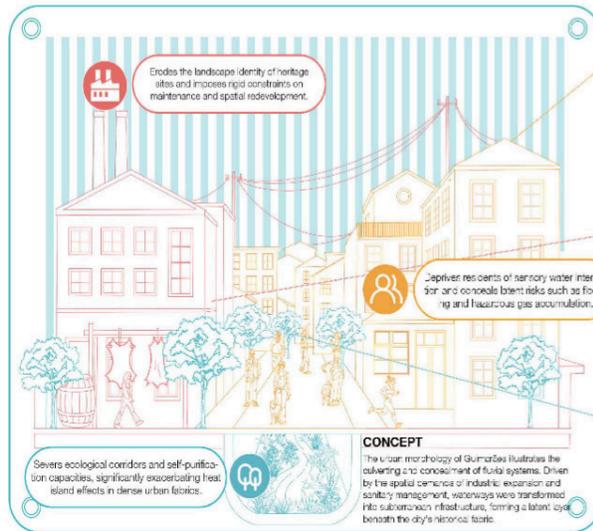
ECOLOGICAL CONNECTIVITY FOR INDICATOR SPECIES



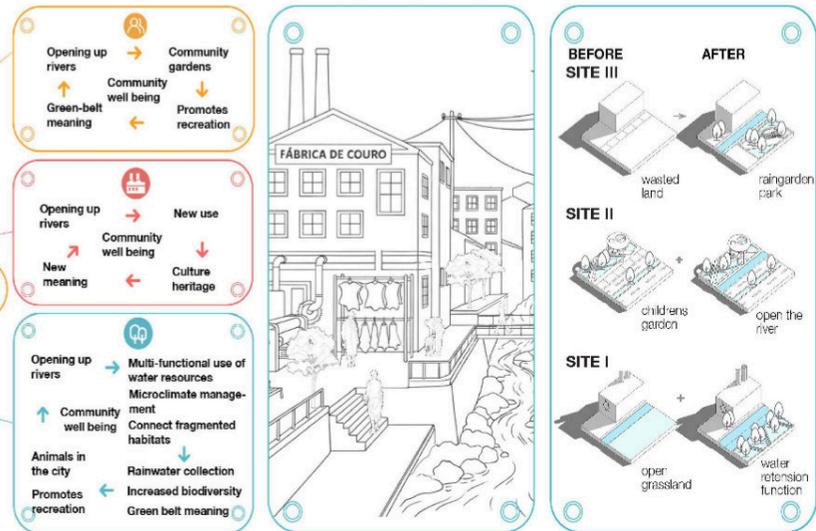
The chosen animal species were chosen based on the following criteria: easily recognizable, common in the region and easily found. They are indicators of corridor connectivity, clear water and are safe for interaction with people.

- Red squirrel (*Sciurus vulgaris*)** lives in woodlands, parks and large gardens. Their diet consists of seeds, cones, nuts (hazelnuts, acorns, beech nuts, walnuts), fungi, berries, fruit, tree buds and occasionally insects and bird eggs. The ideal distance between the trees is 3 - 5 m. Green spaces through the city are too fragmented and not connected. Trees and shrubs should be denser, because red squirrels rely on continuous canopy.
- European turtle dove (*Streptopelia turtur*)** lives in woodland edges, scattered trees, hedgerows and shrubs, open farmland with low-intensity agriculture and orchards. They avoid dense and closed forests and trees for roosting. They are seed specialists. They eat wildflower seeds like fennel, knotgrass, chickweed and clover. Occasionally they eat small fruits. They usually nest 1 - 5 m high in hedgerows, shrubs and smaller trees (hawthorn, blackthorn, willow, bramble). Loss of wild seed sources is a major cause of decline in population. European turtle dove requires regular access to open water that is within 1 - 3 km of nesting sites.
- Southern damselfly (*Zygoptera maculata*)** lives in clean and slow-flowing streams that are 5 - 30 cm deep. They are very sensitive to pollution, so the water should have low nutrient levels. They need the right type of vegetation: water forget-me-not (*Myosotis scorpioides*), watercress (*Barbarea officinalis*), brooklime (*Veronica beccabunga*), water mint (*Monarda aquatica*) and fine grasses and sedges along margins. Vegetation needs to be emergent and submerged, but not too dense, because larvae need open water too. Connectivity between suitable stream is vital. Their diet consists of small flying insects such as midges, mosquitoes and small flies. Larvae are aquatic predators; they feed with aquatic vertebrates, tiny crustaceans and insect larvae.

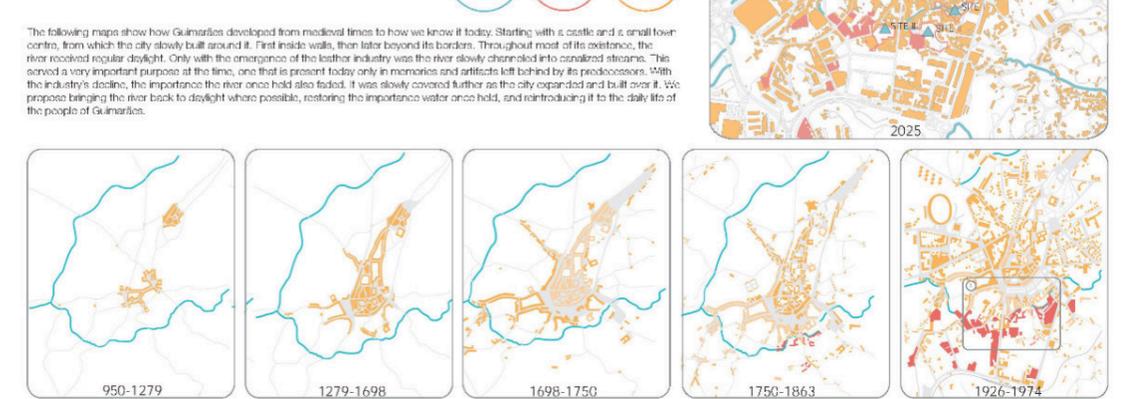
HIDDEN RIVER



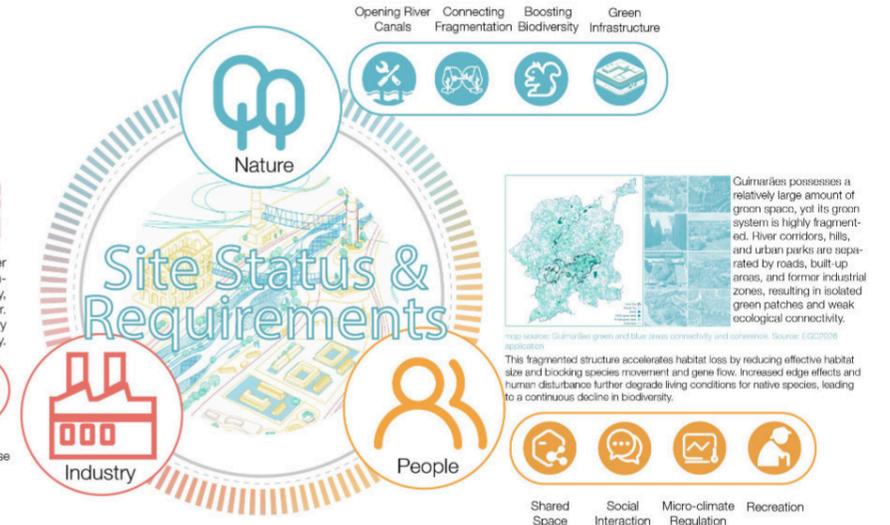
WHERE THE RIVER RESURFACES



THE BURIED RIVER, 1000 YEARS OF URBAN GROWTH

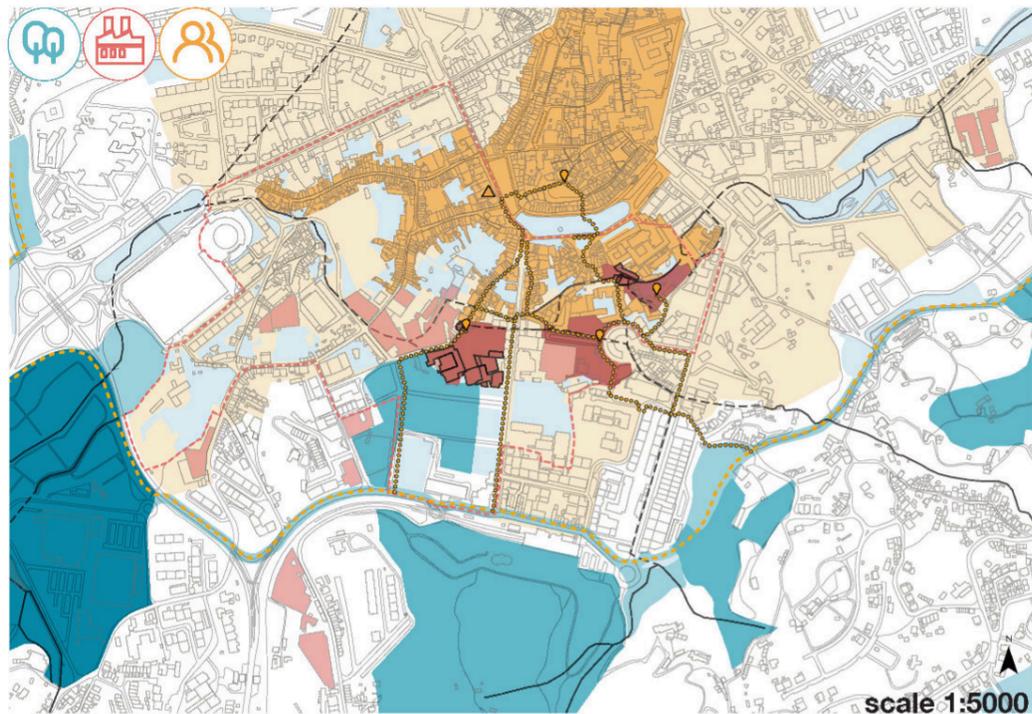


The following maps show how Guimarães developed from medieval times to how we know it today. Starting with a castle and a small town center, from which the city slowly built around it. First inside walls, then later beyond its borders. Throughout most of its existence, the river received regular daylight. Only with the emergence of the leather industry was the river slowly channeled into canalized streams. This served a very important purpose at the time, one that is present today only in memories and artifacts left behind by its predecessors. With the industry's decline, the importance the river once held also faded. It was slowly covered further as the city expanded and built over it. We propose bringing the river back to daylight where possible, restoring the importance water once held, and reintroducing it to the daily life of the people of Guimarães.



SEGUNDA VIDA

HERITAGE, HABITAT, AND SOCIAL HUB



SITE INTERVENTIONS

Site 1

rain garden park

Site 2

open the river

Site 3

water retention function

Site 1

Widen the river

Site 2

Open river by the street

Site 3

On-site water circulation system

DESIGN VOCABULARY

Cidade e caminho de ligação a Urgezes - 1880

Vista panorâmica da cidade a partir do Teatro Jordão - circa 1950

Rua de Caldeira - circa 2014

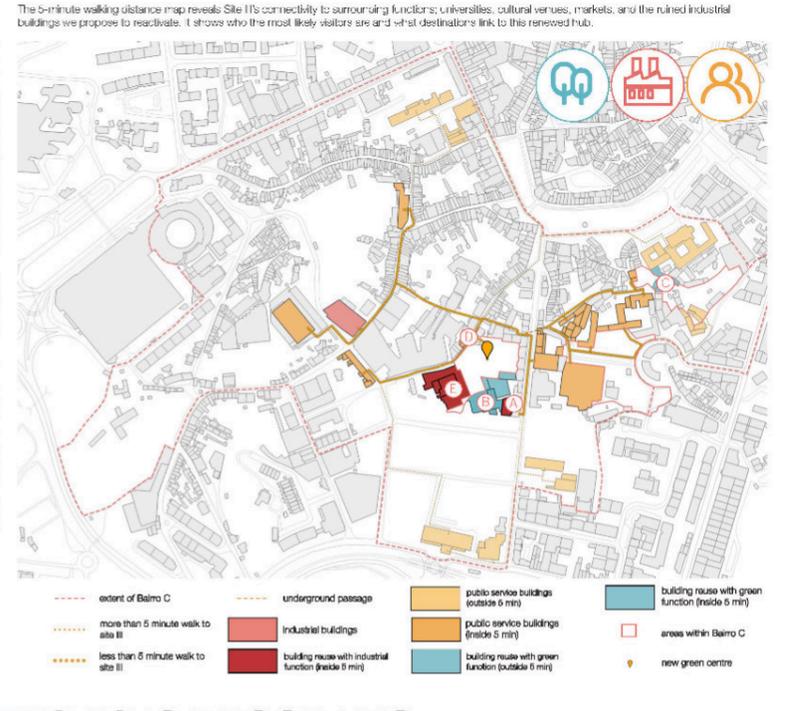
LESS THAN 5 MIN

- Campus de Colares
- Space Research Centre
- Center for Art and Architecture
- Convento das Damas
- Wood Factory
- Fraternidade (public cooperative)
- Colares Museum
- Jordão Theatre
- Marketplace
- University of Architecture, Art, and Design
- Youth Hostel
- Abandoned Hall

MORE THAN 5 MIN

- Vila Flor Cultural Centre
- Church of Saint Francis
- Art Center
- Hotel de Guimarães
- Hotel Fundador
- Guimarães Live Science Centre
- Vila Flor
- Site I ruins

5-MINUTE WALK TO GREEN FUNCTIONS



PROPOSED BUILDING PROGRAMS

A

New function: Edifício Vila-Flor centre

Edifício Vila-Flor centre is a creative hub where visitors can make everything by themselves or with the help of skilled mentors. It is a space for creative learning with lecture rooms, production labs and a café for relaxed breaks. In production labs they use use traditional hand tools and the latest technologies. During open sessions visitors can come and use machinery in the labs independently or they can learn how to use it through guided workshops. The opportunity to work with traditional hand tools is a way to keep the industrial heritage alive and pass it to younger generations.

B

New function: Greenhouses

We propose these buildings be repurposed as greenhouses. Their existing shape already supports such use, and residents of nearby buildings would benefit from the activity. Plants grown here could be sold at the local market, giving the area a productive function similar to its industrial past, but with a green focus. This new use would bring the community closer together and give elderly and young residents a shared activity to form connections. The deteriorating roof needs repair regardless, so replacing it with a glass roof is a practical solution that serves the new function.

C

New function: Site I ruins

We propose a strategy of managed rewilding for the ruins at Site 1. Rather than full restoration, the structure would be stabilised for safety while allowing controlled naturalization to occur. These ruins would become shelter for target species identified in our habitat map: birds nesting in walls, insects in crevices, and feeding grounds for squirrels. This approach allows nature to gradually reclaim industry, honouring the past while creating new ecological value.

D

New function: Museum

We propose this building serve as a natural history exhibition space, showcasing the biodiversity of the Guimarães municipality and monitoring the current state of its wildlife and plant species. It would function as the "green hub" for Site 3. An optional centre for ecological education and awareness.

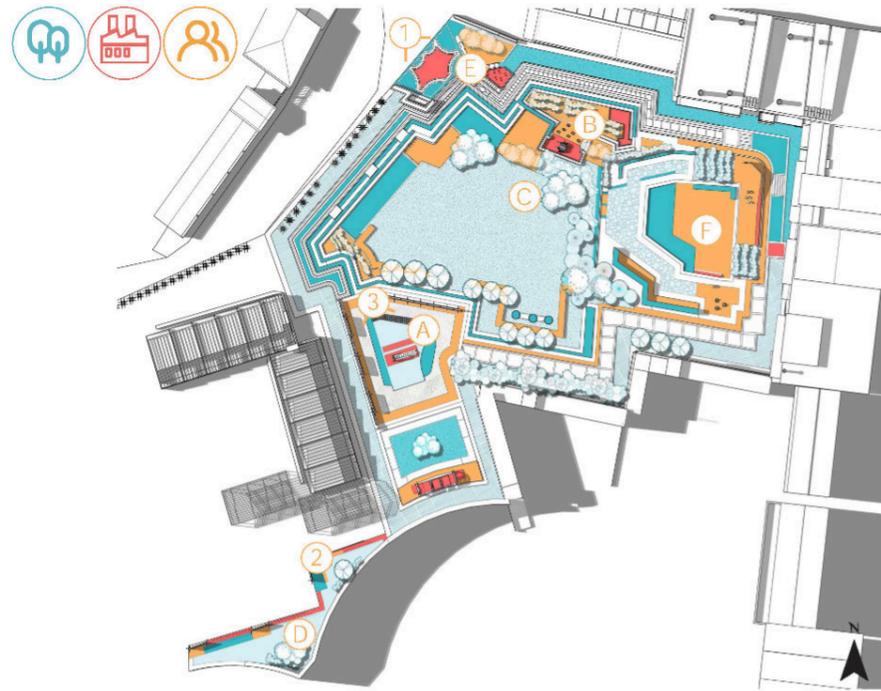
E

New function: Space centre

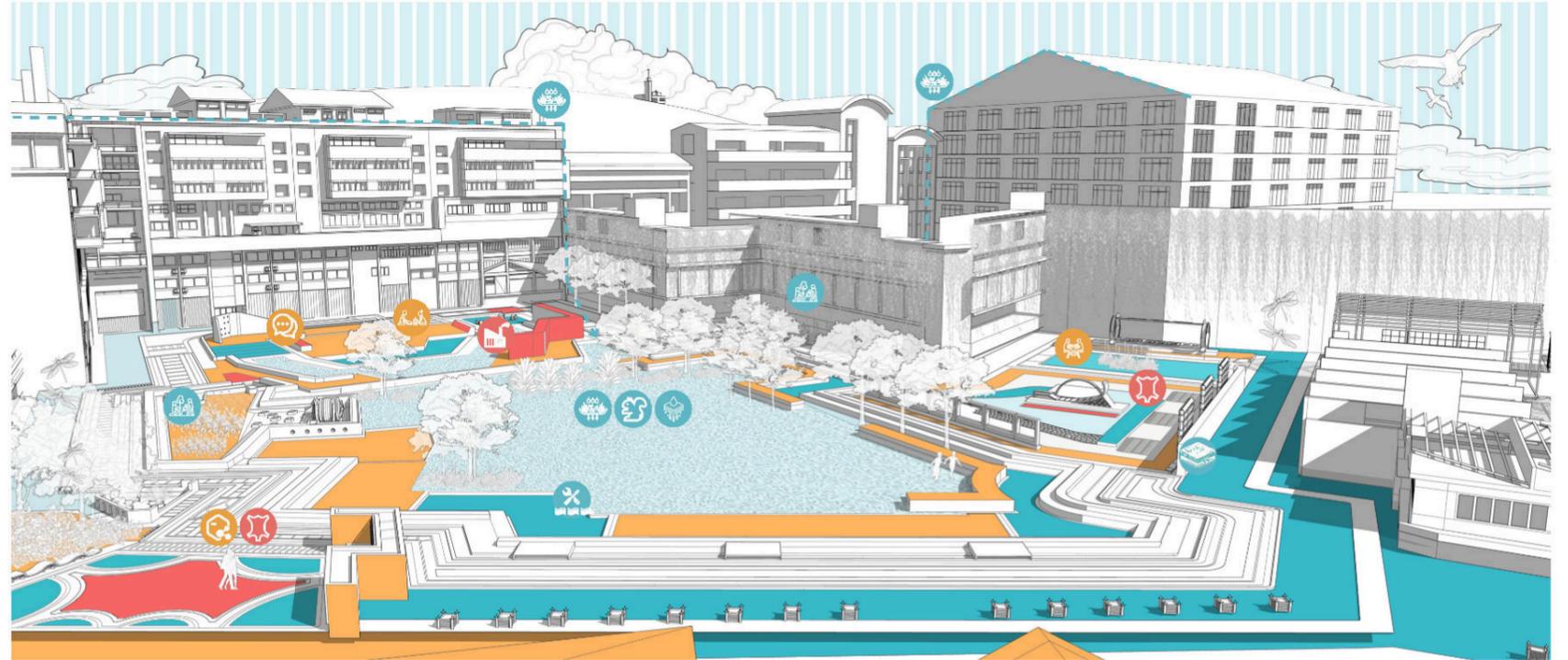
Space research centre is already in the making. It will broaden our knowledge about outer space and about Earth. It is an essential contribution to the city and society.

SEGUNDA VIDA

SITE III: HERITAGE CORE AND WATER COLLECTION

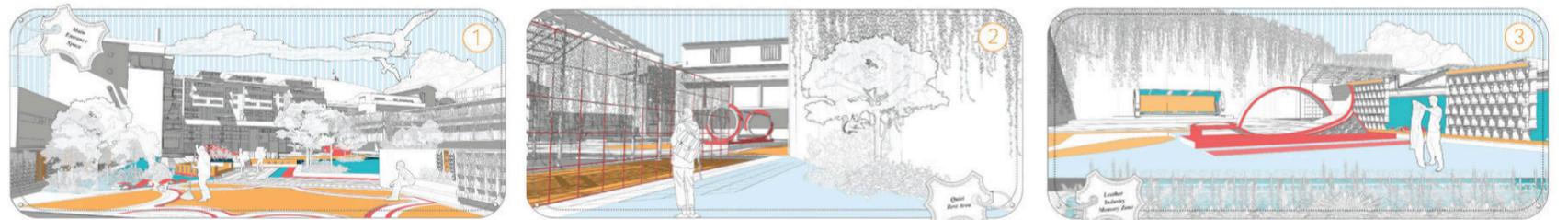


scale 1:500



DESIGN ELEMENTS: MEMORY, WATER, PEOPLE

 Leather Display Walls Va.	 Leather Knife Sculpture I.	 Leather Tactile Interaction I.
 Rainwater device Va.	 Energy Dissipating Planting Pool Va.	 Rainwater Collection Barrel II.
 Rain Garden Ma.	 Cultural Display Green Wall Ma.	 Leather-themed seats I.
 Leather-themed Rain Garden Va.	 Scenario Wall II.	 Leather-themed seats I.

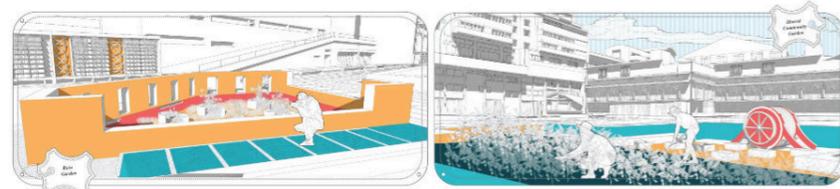
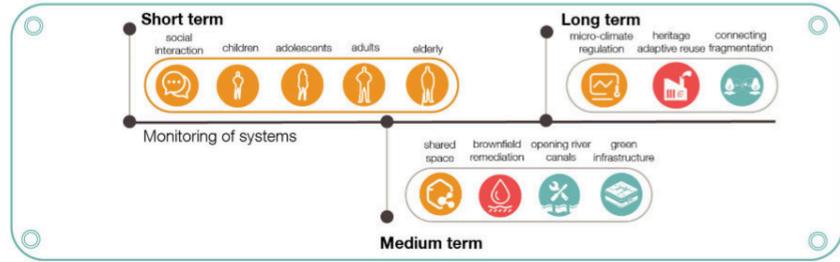
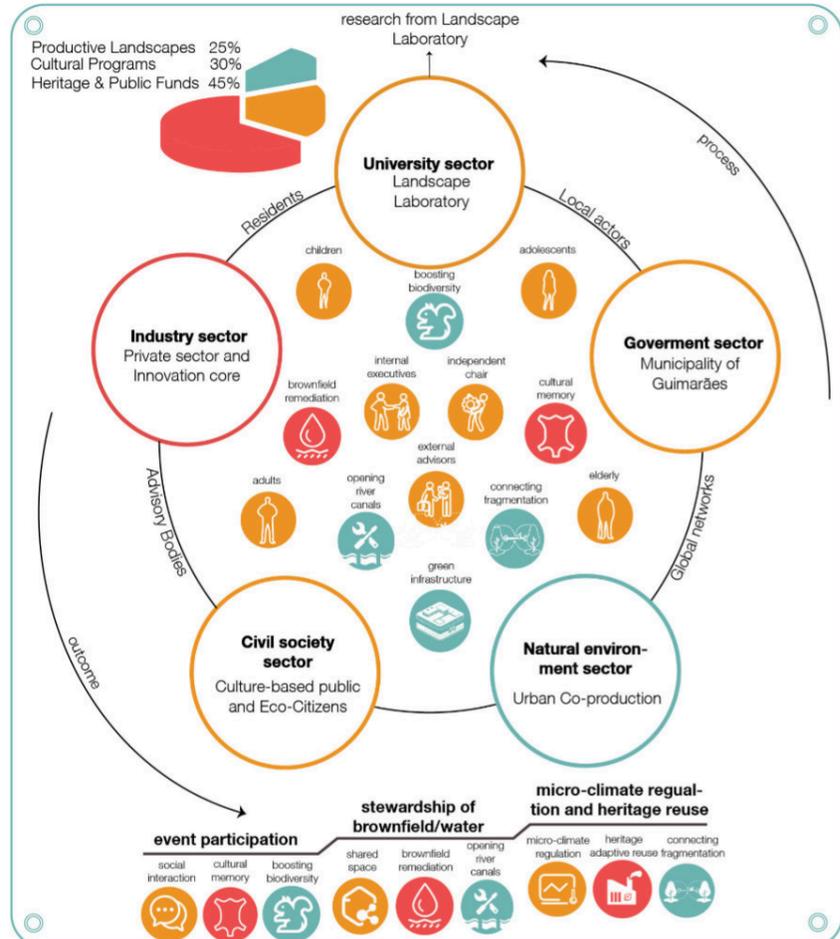
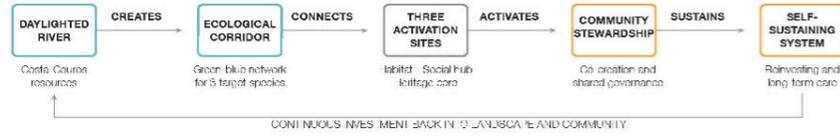


SITE III IN DETAIL

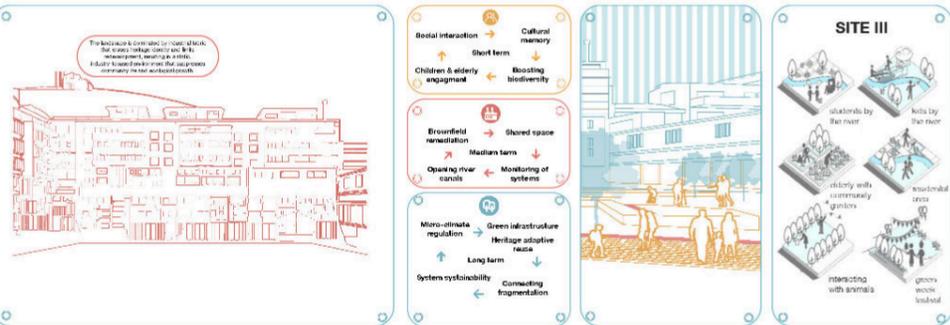
 Leather industry memorial space Located near the main entrance, this space greets visitors with a green wall memorial whose design draws from the city's industrial heritage. Two industrial-style sculptures complement the setting, one doubling as seating, to invite both contemplation and rest. Together, these elements create a shared gathering space where visitors of all ages can meet and interact. II. Va. I.	 Main water collection area This area serves as the primary water collection zone. Its impervious surface gathers rainwater across the site and from nearby buildings, connecting all areas within Site II. The visible presence of water reinforces its importance to the design while adding to the site's spatial appeal. II. Va.	 Main entrance area The main entrance from Rua de Caldeira opens onto the full extent of the design. Industrial heritage details greet visitors immediately, while the open layout signals that everyone is welcome here. II. Va. I.
 Community shared planting area A smaller, quieter area designed for community cultivation. Allotment gardens bring residents together to grow food, share knowledge, and contribute to something larger than themselves. The space welcomes young adults, adults, and elderly alike, a place to connect across generations. Va. Va. I.	 Quiet rest area Patterned green walls line this passage, guiding visitors through the space. A number of trees add vertical dimension and invites people deeper into the site. II. Va.	 Residential area A residential garden for inhabitants of the surrounding buildings. The peaceful green setting supports local wildlife, like the indicator species we chose. It offers a place to rest, for workers after a long day, for students between classes, for anyone seeking a quiet moment. II. Va.

SEGUNDA VIDA

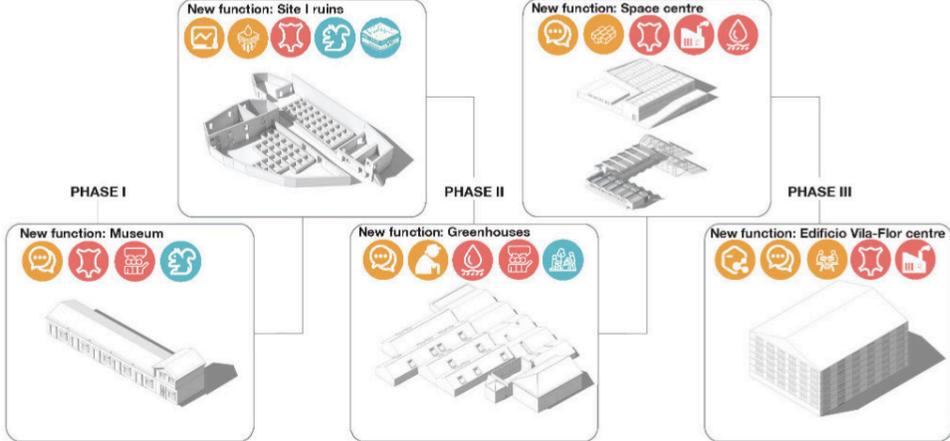
FRAMEWORK DIAGRAM



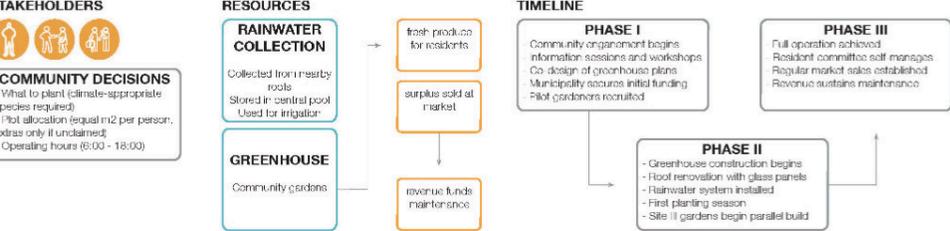
CURRENT SITUATION



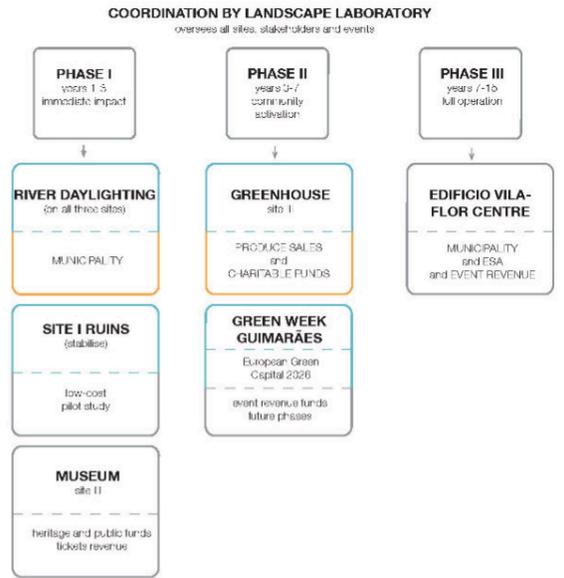
BUILDING REPURPOSE CHAIN



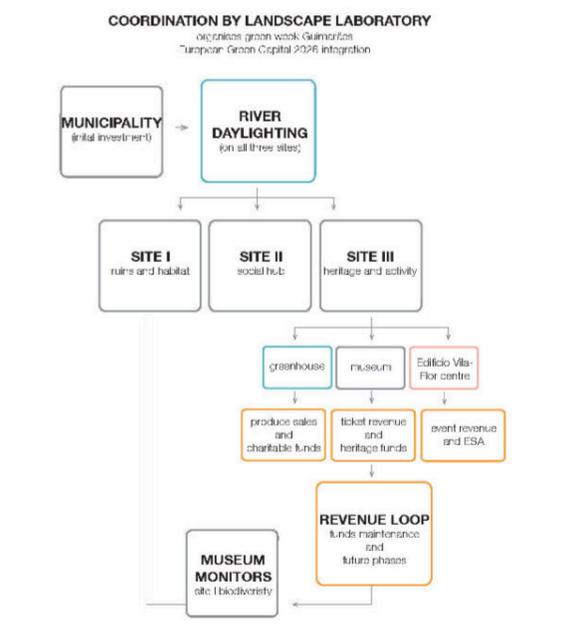
GREENHOUSE CO-CREATION MODEL



TIMELINE DIAGRAM



FUNDING DIAGRAM



LEGEND

SOURCE	FUNDS WHAT	PHASE
Municipality	River daylighting, Edifício Vila-Flor centre	1, 3
Habitat & public funds	Museum	1
Charitable/social funds	Greenhouse employment	1, 2
Produce sales	Greenhouse maintenance	2, 3
Museum ticket revenue, event revenue	Museum and biodiversity monitoring	1, 2, 3
ESA partnership	Future phases, Edifício Vila-Flor centre	3