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Stories that aren't tales

Nature Narratives

FROM CONCRETE TO A LIVING RIVER

How Braga Brought Its Rivers Back to
the City



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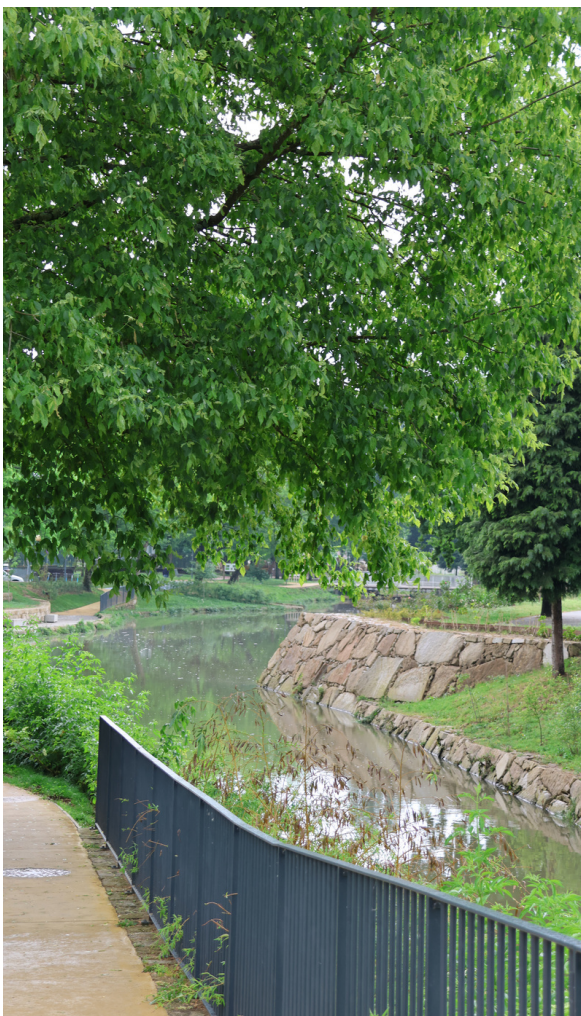


FROM CONCRETE TO A LIVING RIVER

How Braga Brought Its Rivers Back to the City

Not long ago, the River Este looked nothing like it does today. It ran through the heart of Braga confined between concrete walls, an engineered drainage canal rather than a living river, with no shade, no wildlife, and no place for people to stop and stay.

Today, otters swim where the water once ran grey and channelled. Herons stand along banks that are green rather than grey. This is the story of how Braga chose to work with its rivers instead of against them and what happened when it did.



Discovering a City's Turning Point

For decades, the Este, Castro, and Torto rivers were treated as infrastructure to be controlled, not landscapes to be lived in. Hard retaining walls, installed in the 1970s, kept the water moving fast and out of sight. There was no cycle path, no riverside walk, no reason for residents to linger.

The turning point came when the city decided to remove the concrete. **"This naturalisation was an important milestone with a clear before and after,"** the engineer behind the project recalls.

What followed was not a bigger wall or a stronger barrier, but the opposite: giving the river room to behave like a river again.

From Channel to River

The renaturalisation of the Este, Castro, and Torto rivers is a set of nature-based interventions across Braga's urban and peri-urban areas. On the Este alone, over 3 km of concrete lining has been removed, waste cleared, and native riparian vegetation reintroduced along the restored banks.

Impermeable surfaces were replaced with natural, permeable materials, and the corridor was fitted with accessible paths, cycling infrastructure, and space for leisure, sport, and culture. The investment exceeds €2.6 million, funded by APA and Municipality of Braga, with impacts reaching water, air, and soil quality alike.



What Came Back

The results arrived faster than expected. Slowing the water's flow reduced flooding both upstream and downstream and since the works were completed in 2016, the city has recorded no flooding, even through severe winters. Where there wasn't a single tree ten years ago, a green corridor now shades the water and cools the surrounding streets.

Wildlife followed the water back: otters, herons, and multiple fish species now share the river with the people who use it daily. The riverside greenway has become one of Braga's most heavily used public spaces with a route for walking, cycling, and commuting alike, connecting neighbourhoods that the old canal once cut off from one another.



What Braga Learned

Start Small, Think Big

The first intervention was modest: reshaping the banks of one stretch of the Este. It became the model for a phased, three-part programme that has since expanded across the Castro, the Torto, and the wider catchment.

Work with Nature

Rather than reinforcing the concrete walls built in the 1970s, Braga removed them and let the river regain its natural form. Slowing the water, not fighting it, turned out to be the more effective flood defence.

Observe and Learn

Results took time to show, the tree canopy now shading the Este took nearly a decade to mature. The city continues to monitor the river closely, responding to residents' reports of pollution as the system settles into place.

Replicable Solutions

Braga's approach has since been presented at conferences in Portugal and Spain, including by the President of the Portuguese Environment Agency, as a reference case for other municipalities considering nature-based river restoration.



Looking Forward

Braga isn't stopping at the Este. The city has entered the third phase of concrete removal along its riverbanks, and its next major undertaking is the River Ecological Park, a 12-hectare green space downstream, near the city centre, also backed by APA funding.

Designed entirely with nature-based engineering techniques, the park will preserve existing ecosystems while adding water retention basins to buffer future flooding, thus extending the same philosophy that transformed the Este to a much larger stretch of the city. **"It's a large-scale development for people to enjoy, in a highly natural and ecological setting,"** the engineer says. **"That's why we called it the Ecological Park."**







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