

# Madrid Río

**Twelfth Veronica Rudge Green Prize**  
Harvard Graduate School of Design

Ginés Garrido [Team Director]

**Burgos & Garrido | Porras La Casta | Rubio & Álvarez-Sala | West 8**



Madrid, November10, 2015

We are delighted to announce that the Madrid Rio Project, designed by the team lead by Ginés Garrido and composed of the architecture offices Burgos & Garrido, Porrás La Casta, Rubio & Álvarez-Sala and West 8, has received the XII Veronica Rudge Green Prize in Urban Design, awarded by the Harvard Graduate School of Design [Harvard GSD].

The award, probably the most important one in the world, is granted to urban design projects and honors projects built in the last ten years which stand out for their excellent design and ability to transform cities through carefully planned interventions comprising responsible social strategies that improve public space and the citizens' quality of life.

Eduardo Souto de Moura for the metro in Oporto, Weiss/Manfredi for the Olympic Sculpture Park in Seattle, Foster and Partners for the Carré d' Art in Nimes, Fumihiko Maki for the Hillside Terrace Complex in Tokio, Alvaro Siza for the Malagueira neighborhood in Evora o Ralph Erskine for the Byker Development in Newcastle are some of the winners of previous editions of the prize.

The prize is awarded biennially since 1986 as a celebration of Harvard University 350th anniversary and the 50th anniversary of the Harvard Graduate School of Design.

The award ceremony will be held at the GSD on February 2, 2016 and the exhibition on the project will be on view at the GSD's Gund Hall gallery from January 18, 2016 and will remain open to the public for three months.

Madrid Rio, finished in 2015, is a project we have worked on since 2005 and which took place as a consequence of the burying of 40km of urban motorways that belonged to Madrid's first high-intensity traffic ring, built on the edges of the Manzanares River and which had erased the bonds between the city and its river. Madrid Rio connects the heart of the city to the exterior landscapes that surround it and thus, the Manzanares River is transformed into a connection point between the city and its geography.

Madrid Río occupies 150 hectares of green areas and 7 hectares of public facilities, such as sport areas, art centers, urban beaches, playgrounds, kiosks and cafes.

More information available at:

[www.gsd.harvard.edu/#/news/madrid-r-o-wins-2015-veronica-rudge-green-prize-in-urban-design.html](http://www.gsd.harvard.edu/#/news/madrid-r-o-wins-2015-veronica-rudge-green-prize-in-urban-design.html)



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Madrid Río: A Case Study

## Madrid Has a River, Again

In 2003, Madrid Council decided to build a tunnel for a 5 mile stretch of the main ring road around the city, which ran along the banks of the River Manzanares. The construction of this road 30 years ago, removed the city's connection to its river, rendering it inaccessible and invisible. As a result of this major infrastructural works, valued at \$4,874m, an enormous public space has been created in the heart of Madrid.

Developed from the 2006 international design competition winning entry, (a competition entered by Eisenman/Field Operations, Herzog & de Meuron, Navarro Baldeweg, Dominique Perrault and SANAA, among others). The *Madrid Río* project includes the re-organising of 6 miles of public space along the banks of the River Manzanares. Passing through the city, the design encompasses 360 acres of parks, a dozen bridges and 14.8 acres of public and sports facilities, art centres, an urban beach, children's areas and cafés, and the restoration of the river's hydraulic architectural heritage. In addition, a master plan was extended over an additional 1,680 acres to ensure the public space in the districts closest to the river are given a prominent role in the wider urban context.

The complexity of work involved in the construction of the vehicular tunnels provided us with an unprecedented opportunity to better anchor the city of Madrid within its natural surroundings. The project establishes a physical and conceptual continuity, which did not previously exist, between the city centre and the valuable countryside that surrounds it, and as a result the River Manzanares has been transformed into the point that connects the city with its geography.

On top of this huge "underground construction" vegetation was employed as the predominant material, in order to construct a dense and ecologically rich environment that would function as a living landscape on an inert underground substrate. Almost half of the project's surface area exists on top of the tunnels, making complicated technical services and details essential to the success of the project *Madrid Río* is a truly exceptional project.

Undoubtedly it is the most important project executed in Madrid over the last few decades and probably one of the most ambitious projects carried out in Europe in recent times. It is only comparable to the *Big Dig*, which was recently completed in Boston, USA. This is perhaps the first project that truly integrates large infrastructure and the built urban fabric with the natural environment that surround them. To produce a place in which the landscape, the city, the architecture and urban infrastructure combine to create greater environmental biodiversity and a city that is not only greener but also more habitable and sustainable.

The highly complex nature of the project demanded solutions that tested the limit of what was technically possible within the realms of design and engineering. The team led by Ginés Garrido comprised three architecture offices from Madrid, Burgos & Garrido; Porrás La Casta; Rubio & Álvarez-Sala; and West 8 Urban Design & Landscape Architecture, from Rotterdam, as well as more than a dozen specialist engineers and consultants that were contracted to construct the *Madrid Río* project. The team was solely responsible for managing all the architecture and landscape architecture designs and all the technical work required to complete the project on time and to budget.



2003

Virgen del Puerto Gardens



2011

## A Holistic Urban Project That Encompasses Everything

*Madrid Río* is a large-scale urban project that involves a significant swath of the city. Its dimensions and scope impact every aspect of the urban fabric, affecting its complete metabolism. The intervention encompasses everything from the deepest functional levels underground to the new continuity elements on the surface of the ground.

The process has incorporated a variety of plans featuring new urban mobility elements (25 miles of tunnels used by more than 200,000 vehicles every day), the tunnelling of the electrical power lines that transport 40 percent of the city's energy, the complete renovation of the system for collecting and filtering rainwater, the flood protection system, the construction of 21 bridges to connect neighbourhoods, and the development of a single green public space covering more than 360 acres.

The most ambitious, complex and multi-faceted project ever built in Madrid, it has involved every technical discipline and actor in this vibrant city and has had a direct, positive impact on more than 1 million residents.



**2006-2015**

The works

## Political Commitment and Technical Responsibility

The project would not have been possible without the firm commitment of the city's mayor, Alberto Ruiz-Gallardón. Supported by his teams and confident of the capacity of the country's main construction companies, he was willing to accept the enormous risks involved.

Mayor Ruiz-Gallardón's strong political leadership was further reaffirmed by the consensus between his party, with its liberal outlook, and the main opposition party, social democrats. This fact—unique in the context of this country—played a crucial role in the dynamics of the process.

The mayor was assisted by three complementary teams: the economic-administrative team, the team of engineers, and the team of architects responsible for the urban design. The teams were given the utmost freedom to carry out their duties but were subjected to intense media exposure and enormous pressure to meet very tight deadlines. This meant that they were also subjected to considerable political tension, which forced them to assume much more than their specific responsibilities. They nevertheless went about their work with the firm conviction of the importance and innovative nature of the end result, as well as the immense repercussions for the city of a process which at times tested the limits of science.



**2007-2011**

The city mayor

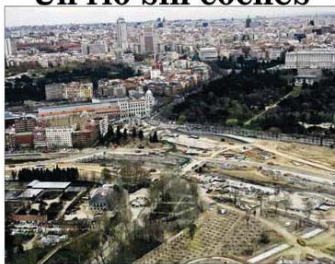


## Economics at the Service of the Public

Eighty percent of the economic resources allocated to the entire project—approximately \$4.5 billion for urban engineering works and \$480 million for urban design works—were provided by the City Council through its borrowing capacity. Contrary to press reports, the economic-administrative team’s imaginative, rigorous and well-constructed financial engineering enabled the municipal team to articulate the financial burdens in line with the economic capacity of the city, with a GDP of \$225.38 million.

Most important of all, and truly extraordinary, all of the economic resources were employed in the construction of public infrastructures and spaces without any economic return from the sale of assets. The majority of the best urban improvements have taken place in the most disadvantaged neighbourhoods, which suffered the aggressive impact of the motorway, neglect of the river, poor connections with the city centre, a shortage of public amenities, deterioration of the urban fabric, and no quality public space whatsoever.

### Un río sin coches



Gallardón habla de «día histórico» al inaugurar el túnel entre Marqués de Monistrol y el Nudo Sur que soterra la M-30 /16-17

MADRID

EL PAÍS, jueves 9 de agosto de 20



### Abrir una ventana cerrada hace 33 años

os vecinos de la M-30 desde el momento del Manzanares, entre el puente de Segura y el estadio. Fuente: El País

## Territories and Geographies

The strategy of tunnelling the motorway that crossed the city along the banks of the River Manzanares has opened up an opportunity which nevertheless exceeds the urban scope of the project. The intervention has acquired a territorial dimension involving the entire Manzanares basin, which covers more than 57 miles. The scale of the project contemplates the creation of physical, cultural, visual and conceptual links between the landscapes surrounding the city, including the forests and mountains to the north and the plateaus and meadows to the south. Thanks to the river, which has become an efficient connector, the geography on which the city of Madrid was developed but which had been hidden beneath the network of urban infrastructures and the built fabric has now emerged and is clearly visible.

This geographical awareness has been a central part of the project, which has established a deliberate dialogue with the biological resources of the river and its landscape of varying heights, ranging from 7,400 ft at its source to 1,230 ft at its mouth. The design of the public space has taken full account of this changing scenery, setting it in careful juxtaposition to the urban features.



**Philip IV Hunting Wild Boar**  
Diego Velázquez, 1635-1640

## Public Space as a Vehicle of Social Cohesion

The project is founded on the linear dimensions of the river, which has three aspects that lend themselves to its role as a social catalyst. The first is its continuity, which links and connects the neighbourhoods in the north-west, with an income per person of \$34,500, to those of south-west where the most disadvantaged sectors of the population live and which are characterised by large numbers of immigrants and an income per person of \$19,500. The second is the vast contact capacity of its two facades, which stretch over more than 3.5 miles and permit intense participation by the residents of six neighbourhoods. Its third quality in this respect is its transversal connection with the new bridges that have brought the different neighbourhoods into much closer contact with each other.

All the local residents use the new public space simultaneously, each in their own way. The park has rectified a distinct shortage of freely accessible green zones and open spaces in the south-east and south-west of the greater Madrid area, but also within the city itself where the neighbourhoods are very dense and compact and where opening up pockets of space is a difficult, controversial, costly and very drawn-out process.



## Public Agora, for everyone

In addition to its qualities as a green space for strolling and leisure activities, the project includes eight sports facilities in a 16-acre area, 15 playgrounds, 18 miles of bike lanes, two restaurants, six cafes, and two open-air spaces for miscellaneous events.

Also located within its boundaries is the *Centro de Creación Contemporánea Matadero Madrid* [[www.mataderomadrid.org](http://www.mataderomadrid.org)], which comprises the city's old slaughterhouse, built between 1912 and 1925 and now completely renovated to house a vast laboratory for multidisciplinary contemporary creation. With its firm emphasis on citizen participation, the complex acts as a social and cultural catalyst, receives more than 1 million visitors a year and organises more than 4,000 activities.

In addition to a cinema, theatre, library, design centre, breeding ground for citizens' projects, cultural factory, exhibition halls, etc., all operating simultaneously but independently, *Matadero Madrid* is also home to the *Compañía Nacional de Danza*. As a world-renowned benchmark in the management of spaces for innovation and high culture, it has become a vibrant setting for the initiatives of citizens and neighbourhood associations.



## Urban Ecologies

The setting in which the project has taken place is a completely consolidated, complex urban fabric that spreads from north to south across one of the most densely populated parts of the city. The central nature of the operation not only impacts a vast number of directly affected people but also the city's most important services: its facilities and transport routes.

Furthermore, the riverbanks have been directly integrated with the roof structures over the tunnels, using all of the same functional mechanisms: accesses and ramps, air filters, ventilation shafts, emergency exits, electrical rooms, etc. The strategy employed to build the public space has therefore clearly taken into account the fact that it belongs to an eminently urban and artificial ecological system.

However, the project has been transformed into a green corridor by the principal material used—vegetation. More than 35,000 carefully selected mature, native trees have been planted, along with more than 2,000 small trees and around 400,000 shrubs related to the flora commonly found in the Madrid region. It is an artificial project built out of nature.

Another fundamental aspect of the project was the design of a watering system that uses regenerated water from the city's treatment plants and the drainage systems of the metro lines. The entire park has been conceived to recycle this type of water.



**2005**

The River Manzanares



## Recycling of Industrial Heritage

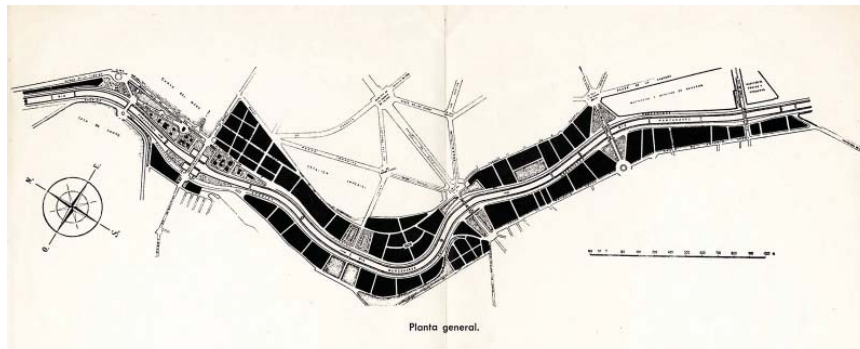
The presence of the River Manzanares as a fundamental part of the project has been translated into the renovation of all the hydraulic control systems along its course.

The river is channelled and controlled by seven urban dams built in the 1950s. Both the training walls that stretch for just under three miles along the banks of the river and the dams themselves were built as part of a single project and with the materials available in the city since it was first founded—the same materials, in fact, that were used to build the Royal Palace.

The uniform nature of these elements and their construction merits lend great unity to the urban riverscape.

The *Madrid Río* project has included the renovation of these features and their recycling for public uses while maintaining their function as infrastructures. Similarly, a bridge over the old motorway has been turned into tree-lined passage for pedestrians and cyclists.

Another aspect of the recovery of industrial heritage within the project's area of influence is the conversion of the old slaughterhouse, a microcity that now acts as hub of cultural creation.



**River Manzanares.** General Plan. 1946.

## Restoration of Historical Architectures

As another fundamental part of its scope, *Madrid Río* has included the regeneration of the most important historical elements associated with the river.

The urban integration of the main historical bridges, once linked to the roads that connected the nearest towns founded in Roman times, has been one of the key aims of the project. However, the renovation works have not only affected the historical structures (Puente de Segovia, 1584; Puente de Toledo, 1832; Puente del Rey, 1828) but the surrounding area as well, creating new spatial relationships between the monuments and the city.

Within the context of the recovery of historical heritage, the project has also impacted on the area adjacent to the Shrine of La Virgen del Puerto (1725) and the access to the Casa de Campo (1561), the former hunting ground of the House of Habsburg and now a vast public park and orchard.

The connection created between *Madrid Río* and the city centre, articulated around Madrid's first railway station (1880) and the Royal Palace gardens and adjacent area, has completely changed the way in which the old part of the city relates to the river.



**La Pradera de San Isidro**  
Francisco de Goya, 1788

## Citizen Appropriation and Identification

In its early stages, the project met with considerable opposition from most of the city's residents. The tunnelling of the motorway, which took more than three years to complete, gave rise to numerous inconveniences, such as traffic disruption for vehicles, since the motorway remained open to traffic for the duration of the works, and the extreme environmental impact for the neighbourhoods in direct contact with the complex tasks involved. This meant that the project was not only risky but difficult to explain, and initially it encountered political opposition and was widely questioned by leftist groups.

However, following the completion of the first stage of construction, which culminated in the opening of the tunnels in 2007, citizens' began to view the operation more favourably. After the public space was completed, they gradually claimed possession and now use it intensively.

Today, identification with the end result and the sense of ownership experienced by the local residents are undeniable.

They not only continue to live in the area but appreciate and identify with it. The challenge now is to minimise gentrification and enrich the urban fabric with processes that introduce buildings of greater quality.





## Universal and Local Model

The last decade has seen many exemplary urban interventions along riverbanks and coastlines, such as those undertaken in places like Seoul, Paris, Ljubljana and Barcelona. Some interventions have resulted in a superimposition of uses, such as the *Olympic Sculpture Park* in Seattle and the *Rose Fitzgerald Kennedy Greenway* in Boston. Many of them have included the novel integration of major road infrastructures, and as interventions on a territorial scale they have built new ecologies. We have also witnessed the advent of smart and sustainable urban mobility initiatives (Porto and Medellín), pedestrianisation projects (Lyon), and of course the creation of wonderful urban parks that incorporate activities and amenities.

These actions have rarely been simultaneously accompanied by a sequence of completely integrated physical, procedural, temporal and systematic layers, “one on top of the other”, but this is precisely what has happened in Madrid. And for that reason *Madrid Río* has become a universal model for other cities around the globe that want to implement these kinds of interventions.

However, the concrete and material fulfilment of the project, and even the philosophy on which it is founded, has also become a model for Madrid itself, which has been deeply involved in the design and finer details that have now become a type of “best practice” guide for the city.



Olympic Sculpture Park, Seattle USA. 2007  
Weiss Manfredi Architects

## A Specific Place

Since it opened, *Madrid Río* has become one of the city's main icons. Its enormous accessibility and capacity to connect green and inhabited areas that were once unconnected have made it a very visible element, in spite of the fact that it is a horizontal development, at ground level.

Its capacity to accommodate and attract all and sundry has transcended the interests of the immediate neighbourhoods, and almost instantaneously it has acquired a value as a metropolitan condenser.

Meanwhile, its unified, comprehensive design, which encompasses everything from urban strategies to local details, without any special stand-out features but finely attuned to different urban idiosyncrasies, has given an easily identifiable image.

For these and many other reasons, it has already found its way into city guidebooks, taking its place alongside the Prado Museum, El Retiro Park and the historic Austrias quarters. In contrast to these, *Madrid Río* emerges as the personification of the city of the future.

It is therefore perceived as a unique phenomenon which has immediately entered the collective imagination of residents and visitors alike, in spite of its location in a complex and multi-faceted urban environment like Madrid.



**Madrid Tourist Map.**  
Including Madrid Río as a Touristic spot

## Madrid Río, A Case Study

The social repercussions of *Madrid Río* have been complemented by interest in the project from academic circles. In addition to its impact in international forums, and having twice made the front cover of the *New York Times* (first the park and then Matadero), architecture schools and postgraduate schools have shown enormous interest in the political, economic, urban and social phenomenon that the project has become in the context of a leading European capital like Madrid.

Although most of the works were completed in the autumn of 2011, every year sees more and more visits by delegations from academic centres around the globe. The scale and complexity of the project make it difficult to grasp that it was an integrated process, and it can only be properly analysed as a case study by experiencing the place first-hand and talking to the numerous agents that were involved in its development. In the years since its completion, the project has received several national and international awards in recognition of the diverse advantages it offers as the city's great new infrastructure.

MADRID — Even on a chilly Thursday afternoon in December, the old men, engulfed in cigar smoke and reading newspapers, were sitting around chess tables under tall pines. Nearby, a young woman had strung her line between the trunks of two mulberry trees to practice tightrope walking.

Behind her, hypnotized toddlers stared into a small oval fountain full of swirling water, and cyclists pedaled across new bridges with cement roofs that are shaped like upside-down canoes and also across a new steel forked bridge, an elegant nod to industrial-age steelwork, with a great view of the royal palace on its hill.

The park here, called Madrid Río, has largely been finished. More than six miles long, it transforms a formerly neglected area in the middle of Spain's capital. Its creation, in four years, atop a complex network of tunnels dug to bury an intrusive highway, also rejuvenates a long-lost stretch of the Manzanares River, and in so doing knits together neighborhoods that the highway had cut off from the city center.

All around the world, highways are being torn down and water-

fronts reclaimed; decades of thinking about cars and cities reversed; new public spaces created.

Most famously, in beauty-mad San Francisco, the 1989 earthquake overcame years of entrenched thinking: the Embarcadero Freeway was taken down, which reconnected the city with its now glorious waterfront. In Seoul, the removal of a stretch of highway along the now-revived Gaechon stream has made room for a five-mile-long recreation area called Cheonggyecheon. In Milwaukee, the destruction of the Park East freeway spur has liberated acres of downtown for parks and neighborhood development. Even the nearly 30-year, bank-busting Big Dig fiasco made Boston a better place by tunneling a downtown highway, though it was obviously nobody's idea of a stellar urban redevelopment.

Continued on Page A3

**MICHAEL KIMMELMAN**  
CRITIC'S NOTEBOOK



MADRID: A.S.POTTE FOR THE NEW YORK TIMES

Madrid Río park has transformed a neglected area in the middle of the Spanish capital.

Madrid Río at The New York Times  
New York, Tuesday, December 27, 2011

# Madrid Río

Ginés Garrido [Team Director]

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