Madrid Rio - Spain's commitment to the public domain

Walking the streets of Madrid one is constantly presented with the legacy of more than 1400 years of urban growth and adaptation of the Spanish capital. Public life in Madrid is largely played out in the incredible system of streets and plazas that are typically surrounded by cafes, restaurants and shops, overlooked by mid-rise apartment buildings. The plazas are a record of the history of Madrid with the central medieval centre of the city extending back more than a thousand years to the Moors. In contrast a series of large-scale formal parks adjoin the city centre, including the Retiro, Campo del Moro adjoining the Royal Palace and Casa de Campo the former royal hunting grounds.

But now a third type of public space has been created in Madrid through completion of the Madrid Rio project. Transformation of a 10 km section of the Manzanares River has created 120 ha of new public open space and re-established the cross-city links that had been severed by a 1970's motorway along the river corridor.

Walking the full length of Madrid Rio provides some sense of the urban grandeur of this project but it is not until you drive through the 6kms of six-lane motorway reconstructed in a tunnel below the open space corridor that you get a true sense of its enormity. Commenced in 2004 and completed late 2011 the Madrid Rio had a purported budget of $5 billion, of which $4.5 billion was spent to bury the highway, making it the largest urban infrastructure project of its kind in recent European history.

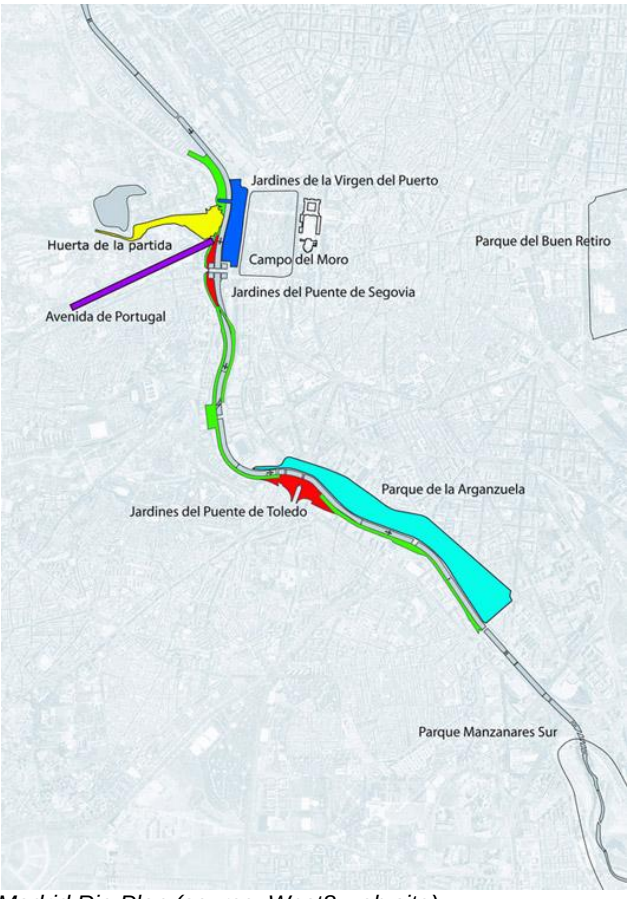
Besides the engineering feat of lowering the motorway below ground to create public open space above, the project reflects a particular cultural attitude to the social role of public space. Michael Kimmelman in his New York Times article (Dec. 26 2011) notes that the Madrid Rio project "… arises from a political culture which assumes that the public service is an end in itself." The Madrid Rio is a reminder of the social and political nature of large scale urban projects around the world.

Manzanares River and new Madrid Rio parkland with Glorieta de San Vicente gateway on skyline

Seen by many as a symbol of 'New Spain' the project was championed by Alberto Ruiz-Gallardon, former Mayor of Madrid and now Minister for Justice in the current conservative government. Madrid Rio has generated a great deal of controversy due to the amount of public money that was spent. Madrid-based Landscape Architect Eladio Hernando notes that the project absorbed so much public money it has significantly limited the availability of funding for other public domain project in the region. "Important projects in the East side of the region have been abandoned or stopped. Many small public spaces remain abandoned and the maintenance budgets greatly reduced, including for historical parks and gardens."

Time Line interpretation wall near Glorieta de San Vicente gateway to Madrid Rio

The master plan for Madrid Rio was generated through an international design competition that was won by the Dutch firm West8 in collaboration with three Spanish architectural firms. Referred to as the 3+30 strategy, the concept proposed three major projects combined with 30 smaller scale projects to be constructed in stages along the Madrid Rio corridor. The major components of the concept are illustrated on diagram below. which shows the variation in width along the open space corridor and indicates the connections with adjoining urban development.



Madrid Rio Plan (source: West8 web site)

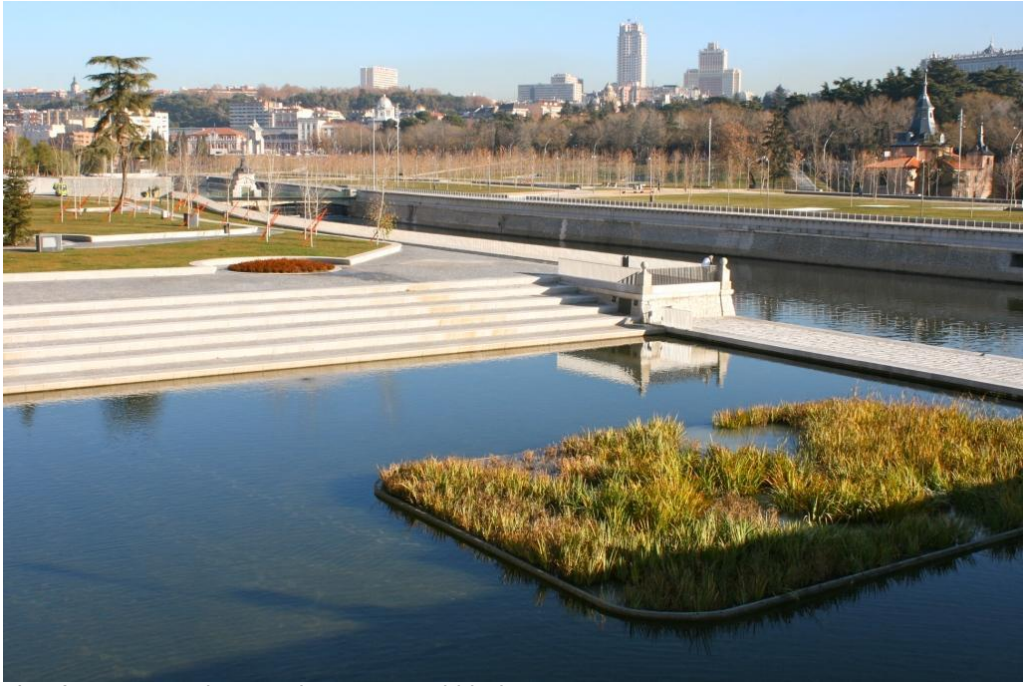
The Puente del Rey Esplanade is a very large area of patterned paving used for major public events and was the site of wild celebrations when Spain won the 2010 World Cup. The extensive use of granite combined with stone sets from Portugal, and careful attention to detailing, is impressive. However, it is easy to imagine that in the mid summer heat of Madrid that this very large area of paving is probably not a desirable place to be.

Paving on edge of Puente del Rey Esplanade

The adjoining 17th century orchard of the Huerta de la Partida has been restored and 870 fruit trees planted to create a distinctive cultural landscape character to the park.

Gateway from Puente del Rey Esplanade to Casa de Campo; a former Royal Hunting Park

Avenida de Portugal is a one kilometre long pedestrian boulevard with a distinctive floral paving pattern, inspired by the scenery of cherry blossoms that can be seen along the road to Portugal, separated from lawn and tree planted areas by sculptured seating walls. The boulevard sits on top of a road tunnel where the road from Madrid to Portugal begins. Placing the road underground has created easy pedestrian access to the huge public parkland of Casa de Campo, the former Royal hunting area. In honour of its neighbour Portugal, the paving pattern is a traditional Portuguese style and built by Portuguese craftsmen.



View from Puente de Segovia across Madrid Rio

View from Puente de Segovia across Madrid Rio to Almudena Cathedral on skyline

An element of continuity has been created along the length of the open space corridor by a ribbon of pine trees that is referred to as the Salon de Pinos. The close spacing of the pines creates an intimate space for pedestrians and cyclists moving along the corridor, particularly where it narrows to less than 40 metres between buildings and riverside. Approximately 8,000 pines, imported from Italy have been planted on top of the underground motorway. The shallow depth of soil provided on top of the motorway will mean that a high level of maintenance will be required for the pines to survive over time.

Salon de Pinos with pedestrian/cycle path and pine grove

The largest component of Madrid Rio is formed by Parque de Arganzuela. This 23 hectare parkland incorporates a diversity of recreation opportunities and cultural values. The original park has grown to host the main concentration of uses and activities of Madrid Rio. “You can find here different children´s play areas, sports grounds and facilities, a city beach, the rock climbing school, the Interpretation Centre for the Nature and History of the river and more.” Hernando.

Adaptive reuse of a former 19th century abattoir building has created the Arganzuela Greenhouse; a distinctive cast-iron and glass structure exhibiting a diverse range of ecosystems. Other former abattoir and livestock market buildings have been adapted to form the Madrid Matadero, which is a multi-function complex incorporating venues for exhibitions, music festivals, films and plays.

Arganzuela Greenhouse in a former century abattoir building forms part of Madrid Matadero

The newly created public open space above the motorway not only provide a vast range of recreation opportunities but also reconnects a large residential area to the historic centre of Madrid. Residents in the high-

rise buildings that formerly overlooked the motorway system with its noise and air pollution impacts, now overlook one of the most attractive public open spaces in Madrid.

A strong sense of flow and movement along the open space corridor is created by 30 km of pedestrian and cycle paths that connect the Madrid Rio to a regional cycle path network. Movement along the river corridor provides a constantly changing visual perspective. Madrid Rio has been designed to make it accessible to all people, including those with physical, mental and sensory impairments. Seating is extensively provided and varied in character.

Re-establishing the cross connections has been achieved through a combination of new bridges and restoration of existing bridges to reveal their historic significance to the city of Madrid. Grand open views from the historic 16th century Puente de Segovia Bridge contrast with the dramatic space of the Pasarela de Arganzuela, created by the helix form of this 274 metre long pedestrian/cycle bridge designed by French Architect Dominique Perrault.

Puente de Toledo over Manzanares River with pedestrian/cycle path, seating steps and gardens

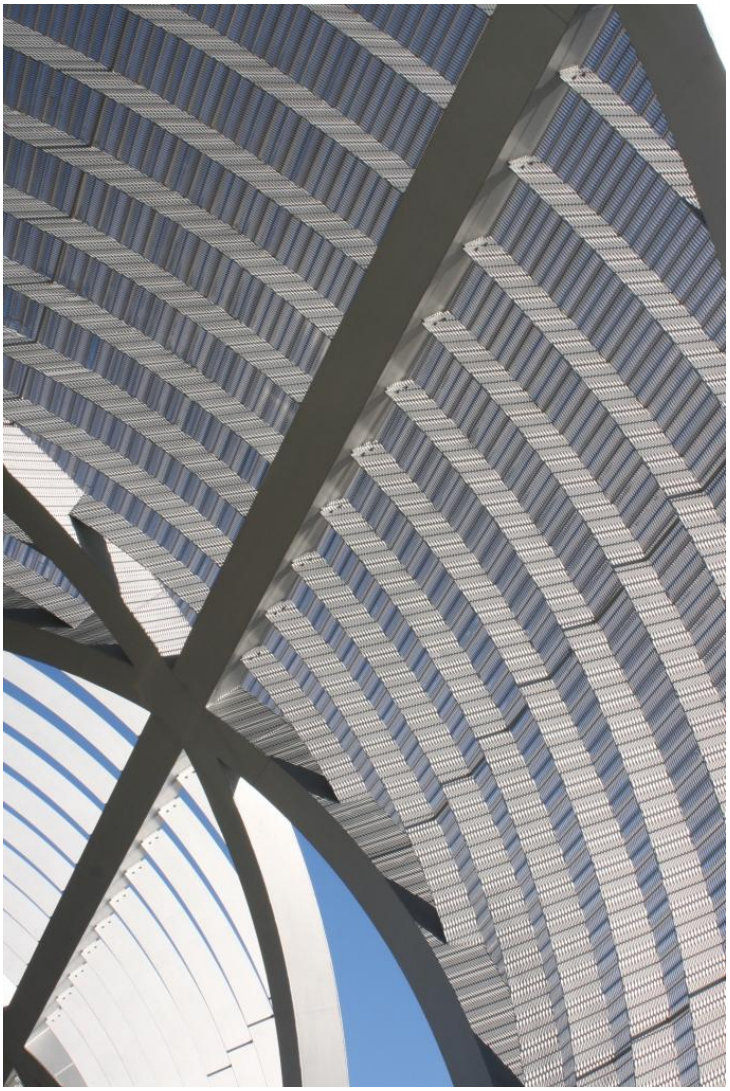
Oblique Bridge over Manzanares River with earth mounding, trees and pedestrian/cycle path

Puento del Principado de Andorra Arganzuela over Manzanares River

The two Pasarelas Cascara bridges designed by Hugo Corres incorporate public art in the form of ceramic mosaics by the artist Daniel Canogar lining the undersides of their concrete arching roofs.

Central section of pedestrian/cycle bridge crossing Arganzuela Park

El Puente Arganzuela pedestrian and cycle paths with seating



El Puente Arganzuela detail of steel structure and mesh

A feature of Madrid Rio is the creation of seventeen play spaces at regular intervals along the open space corridor, which are used by a wide range of age groups. Off-the-shelf play equipment is not apparent with most of the facilities being custom designed, including swings attached to the underside of a road bridge, adventure structures and large scale slides. Two skateboard areas, climbing wall, soccer pitches and basketball courts are centres of activity for young people.

Arganzuela Park with children's slides and gardens

'Pigs' as climbing structures for children

The very extensive planting throughout the Madrid Rio, which includes about 26,260 trees, is generally formal in character with large blocks of single species. It is surprising to learn that most of the advanced trees were transported from other European countries, due to the lack of a local tree production industry.

A major lesson to be learnt from this project is the need for collaboration between the engineers responsible for lowering the motorway below ground and the landscape architects responsible for design of the public open space on top of it. A higher degree of collaboration would have avoided many of the on-going landscape maintenance issues that now exist, particularly as a result of the shallow soil depth provided for tree planting.

As Eladio observed "Although almost all social organizations and many citizens have expressed concerns about the very high budget of these works, virtually no one has doubted the need for the city of Madrid to undertake this project in order to continue to provide public space for its citizens. Now everyone, local and foreigners, can enjoy this space that will help to generate a new relationship between neighbours and the Manzanares River, previously only a large ditch running through in the city."

Noel Corkery & Eladio Hernando

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