

## **NEW URBAN PERSPECTIVES FOR SOUTH-WEST MADRID METROPOLITAN AREA: URBAN INTERVENTIONS AND PUBLIC SPACE IN THE NEAR FUTURE TO CREATE AN SMART AN LIVEBLE CITY**



The New District we will be working on is located southeast of the city of Madrid and surroundings, and constitutes the most important piece to complete this area of the metropolitan city, whit almost 200 Ha. + 600 Ha.

The district has to be a fine-grained, mixed and lively place, at the same time it has the potential for a globally exemplary sustainable project that takes limited resources into account. Around 10,000 apartments have to be planned, rented and owned, for cooperatives and building associations, of which a half are subsidized apartments.

The social infrastructure with primary school and day care centers as well as new offers for local supply, sport and culture will also find their place here. In addition, locating workspaces to house a number at least greater than 10,000 jobs will be a chance.

The noise from the road A5, one of the most important access to Madrid city from the east of the metropolitan area, and other residential sectors in arounds makes it more difficult to create or built more apartments if there is not a solution implemented to convert this road axis into a principal street.

Close to the New District, a large green area of around 1,700 hectares called Casa de Campo, are expected to be fully integrated in the city, which invite for leisure and sports use.

We will work in the urban scale as a tool that challenges people to choose a more sustainable, more social, more liveable future as a chance for the future. We will work in the value of urban density to prevent the land-consuming sprawl of Madrid city and its peripheries.

### **Introduction: a look at history**

The Extremadura highway (A5) is the backbone of the neighborhoods that extend to the southwest of Madrid, in the district of Latina: Batán, Puerta del Ángel, Aluche, Campamento, Cuatro Vientos, Alcorcón ...

They have all grown around this main road. Looking back, we can establish a chronology of its transformation. Much of this territory belonged to the municipalities of Carabanchel Alto and Bajo, until its definitive annexation to the city of Madrid in 1948. It was a place of pasture and agricultural use that was urbanizing at the rate that marked the growth of the city, and also the infrastructures.

Natural roads gradually gave way to streets, railways, and highways. At the other end remains the natural border of Casa de Campo.

Further away from the city, the barracks proliferated, arising around a powder keg in the mid-19th century. The military settlements gave their name to the Campamento neighborhood.

In the 1950s, the tram was the only form of public transport for the residents of these neighborhoods. The 53 (and later 54) toured Puerta del Ángel, Paseo de Extremadura, Campamento and Cuatro Vientos, "The End of the World", as it was then called.

In 1963 the EMT abolished the circulation of open trams to gradually replace them with bus lines. Precisely in the 1950s the demographic expansion began in Madrid. The agricultural landscape of areas such as the Luche stream, today Aluche, was disappearing at the accelerated pace of residential construction.

The access roads to the city, increasingly crowded, were growing at the same rate as road traffic until they became motorways, as is the case of the Extremadura highway. And with them, the demands of their neighbors who demanded less traffic and less noise in their houses. However, to date, no urban development operation has been carried out to replace the obsolete spaces occupied by the barracks, and the physical fracture of the Extremadura highway continues. surrounding an area that can be considered within the city of Madrid.

## **1. Competitive dialogue between urban development, public space and integration with the consolidated city/ neighborhoods in its environment and metropolitan open spaces**

For the urban planning and open space planning qualification of the new district, a high-quality urban planning and open space-related functional planning should be created.

The proposal will continue the process of urban transformation started with the burial of the M-30 and the execution of the Madrid River Project on public land, proposing in the recovered river axis, a strategy comprehensive for intervention in the building and space free private and in the fabric of social activities and economic, through an innovative proposal in Sustainable rehabilitation, revitalization and renewal of the building and the urban scene, which will transform the relations between the A5 border, existing city, Casa de Campo Park and the neighboring districts.

There has been another interesting competition called “Bosque Metropolitano” (Metropolitan Forest), prepared from the Madrid city hall, with a deeper reflection on the value of the void for its orientation to the creation of a great green belt.

## **2. The New District of WEST MADRID, between existing city and Casa de Campo Park – and open spaces at municipality of Alcorcon:**

The challenges and opportunities of urban development are closely related to the development of a sensitivity with urban edges, with integration criteria adapting to the size and scale of the neighboring districts:

- *Equipment that can contribute to satisfying the deficits in its immediate environment and to completing existing equipment.*
- *Activity and commerce: the A5 axis and interior axes associated with large urban boulevards, qualified public spaces.*
- *Green Infrastructure (GI) based on the principle that ‘protecting and enhancing nature and natural processes consciously integrated into spatial planning and territorial development’. Create a Green Infrastructure Strategy as ‘a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services’ in both rural and urban settings as a part of the Metropolitan south west area.*

### **3. Innovations for the district of the future as part of a large inner-city transformation space**

Developing a district like this offers great opportunities to find future-proof solutions for innovative urban development, sustainable urbanism, embracing social housing, good public and collective spaces, greenery, creating communities that will be resilient in the face of future challenges:

- *Spatial and usage-related identity formation of the subspaces / quarters*
- *Density and inner-city usage intensity*
- *High-quality freedom and promotion of urban ecosystems – greenery*
- *Urbanity through a mix of uses from living, office, education, culture, research and development*
- *Consideration of biodiversity and climate change in aspects of the urban climate and urban water cycles. Innovative supply and disposal (CO2 neutrality).*
- *Development of a sustainable development and mobility concept*
- *Noise protection against the traffic in A5 in the east border*

## CONTENTS FOR FIRST WORKSHOP APPROACH SINTHESYS 20.09.2021 – 25.10.2021

Prof. José María Ezquiaga // Prof. Gemma Peribáñez Ayala

### Diagnosis and first project approaches presentation (2 panels A1):

A synthetic presentation has to be made of the most significant contents regarding the different topics of urban study developed for the definition of the intervention programs. The most significant elements are:

1. Focus on a general diagnosis view about the concepts: “urban obsolescence problems and urban regeneration needed + green infrastructure”, with some of these topics:
  - a. Location context: Central/Peripheral location respect to the city of Madrid, constituting nevertheless a barrier for its own urban integration. Urban pattern, limits and barriers.
  - b. Connectivity: visual and functional connections between buildings and places.
  - c. Integration: land use, built form, landscaping and public space design
  - d. Accessibility: clear and simple access for all types of users
  - e. Mobility, as a part of the city design
  - f. Scale: heights and building mass respect context
  - g. Safety: sense of comfort and location of places that provides a sense of security at all times.
  - h. Quality: materials, durability, comfort ...
  - i. Resilience: flexibility and adaptations to changes of the area
  - j. Diversity of places and people.
2. The vision of the area made from the perspective of understanding the use of public space by the population and the integration in a consolidated area of the city: residential, offices, commercial, green areas, facilities ...
3. Proposal approach: Main factors involved in sustainable urban planning, as much as the topics enunciated at first point:
  - a. Microclimate and topography - the solar path and its role on urban design and streets distribution under standard and energy efficient point of view.
  - b. The influence of ground lots shape and the density over the construction of a balanced public space, capable of reducing mobility, reducing energy consumptions ...

- c. The adequate ground uses distribution for rational district use, adequate vegetation integration, comfort of the public spaces, etc.

## **CONTENTS FOR FINAL WORKSHOP**

Prof. José María Ezquiaga // Prof. Gemma Peribáñez Ayala

### I. Diagnosis and project approaches (1 panel A1):

- Synthetic presentation of the most significant contents regarding the different topics of urban study developed for the definition of the intervention programs at the area. The most significant elements are: context, connectivity, integration, accessibility, mobility, scale, safety, quality, resilience and diversity.
- Characteristic pattern which gives to the project located at this part of Madrid City an image, the sense of the proposal and means of orientation.

### II. Project Development (2 panels A1):

The Urban Design Element concerns the physical character and order of the city, and the relationship between people and their environment.

Identification of priorities and relevant items at the strategic thematic areas:

- Context as “urban structure” + “green infrastructure”.
- Urban Design Excellence, focused in the topics of urban diagnosis, adding: flood protection, water management, greenery and natural systems, solar control, compactness, energy efficiency, spatial decentration and a sustainable mobility.
- Urban Design Guidelines as a design review process:
  - Recognize and emphasize major views in the area, with particular attention to those of open space, green spaces and water. Increase the visibility of major destination areas and other points for orientation.
  - Recognize the existing street pattern, especially as it is related to topography.
  - Promote large-scale landscaping and open space that define the project and topography.
  - Emphasize the special nature of the project through distinctive landscaping and other features.
  - Recognize the natural and artificial boundaries of the area, and promote connections between areas around.
  - Design street areas in terms of all the public values that streets afford.

- Promote harmony in the visual relationships and transitions between new and older buildings.
- Promote building forms that will respect and improve the integrity of open spaces and other public areas.
- Relate the height of buildings to important attributes of the city pattern and public spaces dimensions.
- Protect residential areas from the noise, pollution and physical danger of excessive traffic.
- Provide buffering for residential properties when heavy traffic cannot be avoided.
- Provide adequate lighting in public areas.
- Design walkways and parking facilities to minimize danger to pedestrians.
- Emphasize the importance of local centers providing commercial and government services. Provide convenient access to a variety of recreation opportunities.
- Improve pedestrian areas by providing human scale and interest.

### III. Project Details (1 panel A1):

- Public space proposal
- Density and buildings dimension for different uses: residential, offices, services, ...

### IV. Urban Project Reflections: Digital technology (BIG DATA) in the construction of the city and the governance of the urban project developed

Has the digital technology dematerialized the city or the territory, Big Data as a constructor of the city? It's widely acknowledged that the analysis of large amounts of data, Big Data, could provide considerable insight and opportunities for addressing challenges from health to security to transport, and transform planning development of the urban process. Yet, its full potential remains untapped, particularly in public sector decision-making focused in urban planning.

BIM and Geographic Information Systems (GIS) technologies, aggregating real-time data from sensors, telephone interaction flows, social networks, and even data reported by services companies or citizens, are intended to allow various prospective uses, including the acceleration of open innovation projects and services for the citizen's use.

Many companies produce urban databases with spatial reference, and many others are producing other elements (autonomous cars, buses, shared housing, shared facilities, ...) that can transform the way of using the public spaces, the city and the territories.