

## **APPROACH AND DEVELOPMENT PROCESS OF AN URBAN AREA Arganda del Rey - Madrid - 1999**

### **0.- INTRODUCTION.**

The “**URBAN SPACE STUDY OF THE NEIGHBOURHOOD OF THE ARGANDA DEL REY STATION**” was commissioned by the **AUTONOMOUS COMMUNITY GOVERNMENT OF MADRID** to **Javier de Mesones** and **Adriana Dal Cin**, with whom I had the opportunity to work as a student.

The study of the Station surrounding neighbourhood is an **urban planning typological investigation** that leads to a concrete and finished proposal for the organisation of the urban space.

**Arganda del Rey**, located in the **Southeast territory of the region of Madrid**, occupies a singular position in the **REGIONAL PLAN OF TERRITORIAL STRATEGY** and it resembles a peninsula getting into the Castilian plateau towards the East.

This privileged situation and its direct connection with the **underground railway of Madrid set Arganda del Rey in an exceptional position** as the chief town of the region.

The terminal station of the **shuttle to Madrid** is situated in this area and a thirty-minute-ride unites Arganda del Rey with the metropolis centre.

In the other hand, Arganda is located in the proximity of the future **Transoceanic Airport of Campo Real** which will receive about 30 million passengers for the year 2025.

An **HISTORICAL ANALYSIS** of **typical architectural and urban planning invariants**, an **Urban Planning Information** and the definition of the **OBJECTIVES** of the study produce and develop several **ALTERNATIVES** that **will be evaluated** according to the mentioned Objectives to discriminate which one of them obtains the highest punctuation. **The aptest** alternative will subsequently be developed as an answer to the established requirements.

## 1.- HISTORICAL ANALYSIS OF THE URBAN INVARIANTS IN SQUARES AND ITS SURROUNDING AREAS.

Before to start the studying of the area and the definition of the proposals for its organisation, it is mandatory to make an **analysis of the traditional areas of the Region**.

The **historical analysis of typical urban invariants** in Castilian settlements in general and Madrilanian settlements in particular is done by studying the traits of some of the most significant traditional towns in the Region like **Alcalá de Henares, Arganda del Rey, Colmenar de Oreja, Chinchón** and **Navalcarnero**.

The analisis process of these urban area has been organised by studying the following **basic elements**:

- \_ **Urban mesh**, square localisation and approximation process.
- \_ **Interrelation** with adjoining areas.
- \_ Study of **empty and full spaces**.
- \_ **Accesses** to the area.
- \_ **The square itself**.
- \_ **Visual elements** within and without the area.
- \_ **Landmarks**: typology, localisation, protagonism and impact.

Once the analysis has been carried out, several apprehensible **urban invariants are deduced** from the studied cases.

The **urban mesh** that leads to the square has an outstanding spatial value. The approximation to the square **configures a succession of preceding smaller spaces** that prepare or disguise the bigger space and enlarge the visual impact of the visitor.

The **articulation of public spaces** is a basic constant. Sometimes it is attained through a **wide range of spatial forms**, others, it does not mean more than a **succession of spaces** that precedes the most significant space in the way of anterooms to a final and bigger chamber.

The **combination of full and empty spaces** is also rather peculiar. There is no general rule. What it is perceived, though, is that **it has harmony and balance** although sometimes

the full spaces predominate over the empty spaces. However, the harmonic rule generates an interrelation that, in its spatial configuration, it always has an **attractive, enriching result** that it is difficult to apprehend in its totality. Every time one walks about, a different aspect of the area is perceived. **Accesses are not completely open.** The whole spatial composition invites to a continuous **search and discovery.**

The **square** itself is a **regularly shaped polygon** that may be apprehended in one look. That is to say, it is a **peaceful clearly defined space** that has no breaks or joints at first sight. Another variant of Castilian square is an **irregular polygonal space**, with a difficult direct apprehension, that requires a walking tour in order to grasp its complexity.

The **sight from the outside does not directly reach the central space** and it usually needs a series of preparatory focuses.

The **sight from within the square is constantly changing** because the visitor discovers the **different accesses and breaks** that allow new combinations of lights and landscape. Depending on the situation, there is a **clear or an insinuating apparition of landmarks** that represent either the **civil** or the **religious powers** in the company of culture and the marketplace.

The **main landmarks** are: the **Town Council**, always located in the square -although often not situated in the most outstanding place. **The church** that may be in the same square but that is mostly located in a little adjacent square. And in some other cases, the church stands on a turn that may be glimpsed but not entirely seen from within the square. The position and location of the church is always an outstanding element. Sometimes its bell tower is the most remarkable symbol of the city and it becomes its main reference.

Other support landmarks are: **the theatre** often built much later (with very few exceptions) but without a strong impact in the area. And the **marketplace**, always near the main square but never directly connected with it.

## **2.- MORPHOLOGICAL ANALYSIS OF BLOCKS.**

In the same way **historic centres are studied and analysed** so is the morphology of blocks in some urban areas.

The typical Madrilenian block is **rectangularly shaped** with **high building intensities** which brings about an **absolute lack of interior openness**. Most plots do present three party walls and only one façade, that is to say, they could be said to be shaped like a drawer. Dwellings, usually two in every landing, open to small inner patios. Family living rooms face the street. In spite of the high density, apartments are rather spacious but with much too little light.

**Blocks in Alcalá de Henares** are **irregular in shape and dimension** and have a quite **heterogeneous morphology**. They have **wide inner spaces** which generate an uncrowded mesh with open internal sights. Plots also show several alternatives since they may have three party walls and a façade, two façades, a blind party wall and another party wall facing an interior space or they may even have three external party walls and an internal one. The distribution of dwellings is also diverse. Rooms open to big or small public spaces and to inner courtyards and gardens.

**Blocks in Chinchón** also present **irregular shapes and diverse dimensions**. The **big original openness** has been dramatically reduced by building the plots as far as their back boundary. Plots have diverse morphologies and one can find the drawer shaped buildings and those with two and three party walls facing the street. The distribution of dwellings also offers a wide range of possibilities.

### **3.- STUDY OF FAÇADES AND ARCHITECTURAL DETAILS.**

The façades are **stuccoed with lime** and are sometimes subsequently **whitewashed with a natural pigment coloured lime**. Other façades have an **uncovered masonry or brick structure** as in the **mudéjar** tradition. Walls are often **covered with a granite plinth** that may be sometimes as high as the ground **floor**. **Façades are very simple**: it is a straight wall with vertical proportioned openings. **Vertical windows** dressed with inside blinds and shutters allow a better light and intimacy control with respect to neighbours specially when they face a limited public space; and they also allow a better relation with this space. **The first floor** often has **big windows** from floor to ceiling **with a balcony**.

The **second floor** has **smaller windows**, something that is quite logical considering that it has more natural light. **The size of the windows usually depends on the use** given to the room.

**Decorative elements** are found in the wrought iron of the **balconies**, the **main doors** and the **cornices**.

**Windows** are made of **woodwork**, subdivided by either squared or rectangled angle bars. Woodwork is set 12 inches inside the external wall. Doors and main fronts show their Castilian style.

#### **4.- BASIC CONDITIONS.**

The basic conditions that must be taken into account when proposing new ideas for the future development of the station area are of diverse nature and integrate a mesh of interrelations.

**The area is an empty space** with very few vital functions that may last into the future.

\_ **Line 9 of the underground railway**, buried at little profundity, generates a virtual and **real physical barrier** that divides the area into two different spaces. These spaces may be easily connected but buildings must conform to the existing barrier.

\_ The **underground station** has already been built and it is a **landmark** to be taken into account. Its regional importance reinforces its character of landmark and convergence centre.

\_ **The area is limited by important city connections** that must also be taken into account.

\_ The **access to Madrid** is one of the **vertexes** of the area. It must be considered as a reference point. And as the most important access, it requires a specific treatment.

\_ **Unconnected areas** adjacent to the area of study **require their interconnection** to conform an only urban organism.

\_ There are **some few buildings** that deserve preservation and rehabilitation or others that must be completely rebuilt, as it is the case with the **School** or the adjoining **stockyard**, among others.

## 5.- OBJECTIVES.

The proposal of objectives has been divided into four categories:

**ECONOMIC AND FINANCIAL OBJECTIVES,  
FUNCTIONAL OBJECTIVES,  
ENVIRONMENTAL OBJECTIVES and  
IDENTITY OBJECTIVES.**

Due to its more characteristic importance only the **IDENTITY OBJECTIVES** will be developed bellow:

### 5.1.- Identity Objectives.

- 1.- To preserve the **traditional invariants of the classic Castilian urban developments.**
- 2.- To apply **traditional modes** without impairing modern ways.
- 3.- **To avoid anonymous “stereotyped” or the so-called “European” or “international” solutions** that prevent the preservation of identity marks and impede people to recognise the urban spaces as their own.
- 4.- **To flee from the so-called Social-Commercial Centres** in the style of certain great capital promotions or **American Shopping Malls.**
- 5.- To propitiate **architectural realisations in accordance with local traditional layouts** and compositions but without ignoring modern design or the use of appropriate present-day materials.
- 6.- To use **certain composition elements**, no only because of their traditional use, but due to their proven **functionality and beauty**
- 7.- To build, in short, an **urban setting that, being simple and functional**, strikes the visitor and shows successive changes in sight as he advances along any circuit by proposing different perspectives ahead, behind and on both sides.

## 6.- GENERATION AND EVALUATION OF ALTERNATIVES.

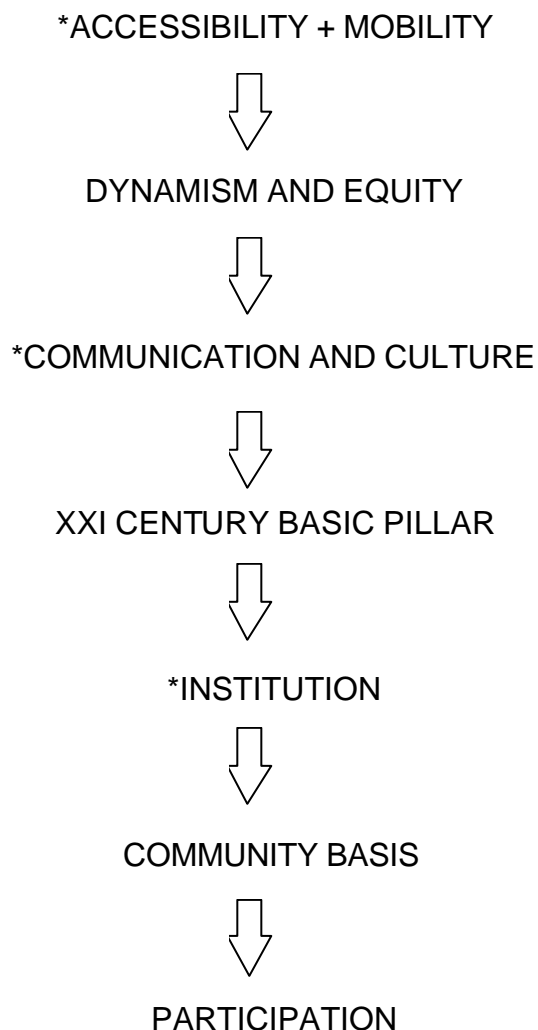
Subsequently **different Alternatives are designed**. And which one is the most qualified? It is a difficult question to answer. It can only be answered through an **evaluation process** that specifies whether it conforms to the previously established objectives or not.

## 7.- PROPOSAL.

### 7.1.- Structure.

As it has been expressed above, the main idea consists on the accomplishing of **an integrating space** that **coheres a city conformed by different functional areas** that have developed in a disjointed way -without a clear articulation with the original organism.

The linking joint area is sustained on **three points**:



With these **premises**, and taking into consideration the **basic conditionings** of the area and the **analyses of the typical urban invariants** of the region, the proposed structure advocates in favour of a **recovery of the spatial urban tradition**, which is considered to carry along a **higher quality of life**.

A **plaza** that pretends to become **the agora of the city**, is planned above the **axis drawn by the subway railroad**.

**This urban space is correlated to other smaller spaces** that gather the functions that complement the polar trilogy defined as a starting point. In this way, **institutions, accessibility and culture** are represented as the **key elements of the new area**.

The **mesh** that gives support to all the functions developed in the area must have the substance of the **traditional mesh**. The **articulation of bigger and smaller spaces** must be the dominant keynote. **Full spaces are designed to predominate over empty spaces. Blocks will open** to allow **alternative ways** that help to generate constant changing and surprising spaces.

The wide range of spaces goes **from the open space of the central plaza** to the **small squares of the urban mesh** that are articulated with each other and conform, in this way, the spatial network that supports the whole structure: **promenades and small squares** lined with trees, a **theatre-plaza** in the open, as well as **inaccessible empty spaces**.

The **central plaza is a peaceful space**, captivated by the eye in one only look, although the space flows in the direction of the subway axis.

The **theatre-plaza complements the auditorium** and is at the end of the promenade that originates in the bay-window of the **“Puerta de Madrid (Madrid Gate)”**. It vertebrates one of the accesses with the central area. The theatre-plaza allows **several uses**.

The **“hall”** areas of the **different perimetral neighbourhoods** that meet at the linking joint area are quiet and peaceful empty spaces full of trees.



## 7.2.- Road Network.

### Surface road network

**Two typologies** are defined concerning the road network: **the first one –for wheeled traffic-** corresponds to the **existing perimetral roads** that are subject to improvements in order to adapt them to the new axes from future development areas. The **second type** corresponds to the **new interior ways and is mainly for pedestrians** and restricted services and emergency traffic.

With respect to the **internal network**, it must be pointed out that the area of study **has never had any wheeled traffic**. If certain areas in cities –areas with the function of leisure, culture, etc.- are changed into restricted wheeled traffic, why not take advantage of the circumstance when in this case the process does not have to be reverted? Why not act directly by avoiding the vehicular phase?

### Subterranean road network

The subterranean road network is **organised to give access to parking lots** and to the **interurban bus depot** that will be connected with the **subway station**.

The subterranean space is divided into **two independent sectors** by the subway railroad.

Parking lots are organised into **two underground floors**. Both floors harbour **independent public** and **private parking lots**. The first floor contains a higher percentage of public parking lots and other public facilities just below the central plaza.

**Every block has its own independent parking** lot for the inhabitants and the workers in the tertiary sector.

Public parking plots must include a sector with the modality of “**dissuasion**” parking.

The **bus depot** is located in the **second underground floor** and has **independent access** and **exit**.

### 7.3.- Spaces and Volumes.

**Volumes** are organised with **block surrounding streets** that allow the access –through certain carefully studied openings- to the **interior of the blocks**.

Every area within the blocks is **like an arena** where life within differs from life without.

The **interior space** holds **private communal gardens, little plazas** and **small areas** to sit or to walk about.

**Volumes are organised over a wide range of plots** that enriches the configuration and the expression of the resulting inner and outer spaces. The **combination of full and empty spaces** must reach and keep a **human size**.

### 7.4.- Uses.

The area is **multifunctional** and it retrieves the **traditional combination of uses** found in all cities.

**Ground floors have a tertiary use** with **services** and **facilities**. **Higher floors are predominantly residential**.

There are, of course, building with a **sole use**, as it is the case with, among others, the **subway station**, the **administrative-institutional site**, the **market**, the **auditorium**, the **library**, the **school** or the **hotel**.

## 8.- GENERAL TRAITS OF THE AREA.

<b>NET TOTAL SURFACE</b> .....	<b>147.737</b>	<b>sqm</b>
<b>P.O.S. (Public Open Spaces)SURFACE</b> .....	<b>28.828</b>	<b>sqm</b>
<b>SQM P.O.S/DWELLING</b> .....	<b>25,17</b>	<b>sqm</b>
<b>P.O.S.SURFACE/NET SURFACE</b> .....	<b>20,84</b>	<b>%</b>
<b>BUILDABILITY TOTAL</b> .....	<b>174.349</b>	<b>sqm</b>
Residential.....	53	%
Tertiary .....	38	%
Facilities .....	9	%
<b>NUMBER OF DWELLINGS</b> (?100sqm/dwelling).....	<b>1.150</b>	<b>Dwellings</b>
<b>NUMBER OF INHABITANTS</b> (?3,5 Inhab./dwelling) .....	<b>4.000</b>	<b>Inhab.</b>
<b>NUMBER OF PARKING SPOTS</b> .....	<b>6.900</b>	<b>P.S.</b>

## 9.- ECONOMIC EVALUATION.

The area of study has a net surface of **138.307m<sup>2</sup>**.

A cost of urbanization of **120 E/sqm** is considered taking into consideration similar public works in the Community of Madrid.

The **total cost** will be around **16,000,000 E**.

The total cost would mean some **95 E/sqm for every buildable square meter** in the area (**174,349sqm**).

Considering that the incidence of the costs on commercial surface is of a 1,20 as compared to the 1,00 of the residential surface, economic repercussions would be of **85 E/residential sqm** and **105 E/commercial sqm**.

It is evident that the **total emptying proves to be cheaper per cubic metre than the separate emptying** of each one of the underground floors for each individual plot. Not only because it is much easier to use heavy and powerful machinery but because **HUNDREDS OF METERS OF 6-METER-HIGH PERIMETRAL CONTAINING WALLS ARE AVOIDED**, walls that may be substituted by simple structural pillars and plain walls.

But this is not the only saving brought about by the proposed proceeding. There are others much more important, economically speaking, that are exposed below.

**First: Many linear meters of façades and commercial surface are won** –or better said they are not lost- by eliminating the accesses to the car parks through the ground floors. This gain turns out to be a very high percentage (sometimes up to a 50%) with respect to the gross total of commercial surface due to the reduced dimensions of the plots.

**Second:** A complementary gain derived from the previous point is that **ramps are hardly necessary between the ground floor and the first underground floor**. It is even possible to eliminate the ramps between the first and the second underground floors, since they both have their own accesses which means a 25% increase –or more- in parking spots without meaning a higher cost.

**Madrid, July 2002  
Verónica Glez**