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Satélites Urbanos

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00. INTRODUCTION

00.01. Target and scope of the work

The current report aims to present and analyze project strategies for the program framework of the subject, Final Project, during the last semester of the year 2011/2012. The theme is “Urban Satellites” and is due to the existence of fragmented urban tissues, even inside the same parish, that create urban and social problems.

This title appears as a necessity of comprehension of the urban and social impacts of dispersed urban tissues in cities and what the possible transformations to change that are. The prime objective is to understand how these situations take form and develop. For that, it's needed to understand the city, not just as a central consolidate area, but as a wider territory which includes all the county area.

The proposed project consists in the making of a strategy for the North-West part of Lisbon, seen as a complex e multifaceted process, with strong relations with other subjects that intervene on the territory. This strategy includes the areas of Benfica, Pontinha and Carnide, where the objective is to find new ways of continuity between heterogeneous, disperse and fragmented urban tissues. In the project presented in this report, its development is in the Carnide area, comprising the Bairro Padre Cruz, Bairro das Camareiras, all the Lissolis area and de PMO area.

The project foresees real situations of the PDM and study or approved (by the CML) projects, with the new big entry and exit of Lisbon by Pontinha; the new business campus of Lisbon; the deactivation of the PMO; the expansion of LISPOLIS; the continuation of the Fundamental Ecological Structure; the demolition and reconstruction of part of the Bairro Padre Cruz. This way, it were needed several approaches, through analysis and studies in scales from 1:5000 to 1:500. After the main strategy defined, it was chosen a second area, smaller, where all the thoughts on urban morphology, mobility system, ecologic structure, typology and public space were introduced. For this it was chosen, as target, the Bairro Padre Cruz, a social neighborhood with strong urban and social problems.

Bearing in mind the potential of the area, given by the existence of important roads, proximity to big infrastructures and the existence of projects, with an attractive potential, being built, the Bairro Padre Cruz is an excellent model to apply reflections and concepts to help solve this type of peripheral situations.

00.02. Justification of the topic and motivation of the author

Lisbon has been suffering countless experiences in the field of architecture and urbanism, which contributed to the rupture in the urban development of the city. There was, simultaneously, a population and vehicle number growth, which has caused a disorderly and not programmed growth, giving place to segregated and dispersed areas. With this the road and the vehicle took priority over the urban planning. This led to the city we can see nowadays, with fragmented urban tissues.

This theme appears as a necessity to understand these broken urban tissues, especially when they are in the same parish, and how this affects the urban and social future of the area, when you don't intervene in them. This way, the interest and relevance of this work is attached with the will to find an answer, efficiently, to these problems, using the abilities and benefits of public spaces, and how these can solve the problem. This scenario is faced with the plans foreseen by the PDM and the CML and constitutes a common interest theme to the city users. This is done through analysis and reflection about the main problems which allow better solutions to be found.

01. DEVELOPMENT

01.01. Theory and references

The first chapter is responsible for the explanation of theoretical concepts and practical references of the thesis. In the theoretical analysis, some fundamental concepts are exploited for work, such as public spaces, aggregate, urban park, social neighborhood and territorial cohesion. These concepts are relevant because they represent a foundation and a base line for the proposed intervention. Following this approach of the main theme, case studies that allow to frame the proposal as part of Lisbon, are explored. It's searched a direct and pragmatic assessment of the case study, through analysis of arrays that focus on the key parameters of the project. The practical cases are explored in order to allow analysis in greater detail of all projectual and theoretical ideas that have been made over time in cities. This chapter is not meant only as demonstration and exhibition, but rather a dialogue between all these references so that they can lead a more credible justification of the solution found.

01.02. Analysis of the context and the study object

The second chapter focuses on a comprehensive and pragmatic analysis of the object of study, taking as the starting line, the conclusions drawn from the previous chapter. Initially, it will be addressed the City of Lisbon, focusing on the most significant moments and major historical and urban ruptures, with a view not only chronologically, but also with the intention to highlight all the important events and processes that lead to the change of the logic of a urban city. In the second phase will be analyzed, in detail, issues relevant to the city and area of study, which aim to conclude with a SWOT analysis (Strengths, Weaknesses, Threats, Opportunities). This analysis seeks a better view of the site and its entire context and possible areas of intervention required.

01.03. The project

The third chapter consists of the presentation of the project and is divided into three key stages: Objectives of the proposal; Strategy; Urban Project. In the first part, are set out general objectives of the proposal, being already addressed a number of indications with relevance. The second and third parts concentrate all solutions, although with different scales: the second has elements of the strategic plan for the scale of the North-West of Lisbon, Carnide and Bairro Padre Cruz, where the physical and theoretical solutions are evident for the whole area. The third part now focuses on the area of Carnide and Bairro Padre Cruz, where is made the urban and architectural project for this area in order to promote it as the initial objectives.

The general theme is called Satélites Urbanos. The proposal attempts to approximate the design of public space in this North-West of Lisbon to what is now the historic city center, where the squares come naturally defined by construction, the urban fabric is fully consolidated and all spaces are completed, and where there isn't the idea

of "islands" and isolation of certain areas. Thus, it is necessary to consider an alternative to the current situation so that there is urban planning so that forms part of the city and is not just as boundary divider of the city expansion. The major objective of this theme is to understand how is possible to transform an urban satellite, that is, what changes may these islands undergo that transform the character and its structure so that becomes integrated as part of the city and of the urban tissue. The big challenge will be to understand how you can accomplish this transformation in one of these dispersed areas, integrating them into the urban fabric, yet not withdrawing its identity and autonomy.

The proposed project consists in the development of a general strategy, which aims to meet the purposes of the new PDM, in which is pointed a necessary transformation of hierarchy and modes of land use. These modifications are intended to change the character of: obsolete areas, as the PMO and some industrial areas, landfills and abandoned areas, and areas of poor origins.

Taking into account the points reported, the main objectives are divided into three main themes: Socio-Territorial Cohesion; Mobility; Green Spaces. It is important to explore these concepts, since they contribute to the integration in the city. For that, it's used a direct and pragmatic evaluation of case studies through a matrix that focuses on fundamental parameters in order to fit, introduce and develop the project under the city of Lisbon.

The entire project is developed taking into account a general framework. Once the project is quite ambitious, it is necessary to understand all the implications of it, in order to create a scenario for the implementation of the new measures. It is important to understand all the systems, roads, natural and social, in order to understand what changes need to be made and what modifications are present in the PDM and plans, that must be taken into account.

Thus, the baseline scenario for the project is based on the completion of the: underground network, cycle paths, expropriation of the PMO and the finalization of the terminal Pontinha. The general idea is that all these facilities can be articulated and begin to serve and connect the urban fabric in a natural way.

With this scenario, it is possible a better, effective and sustainable intervention throughout the study area, creating a centrality that leverages socio-economic growth of the city and a link between the periphery, the center and the neighborhood with a growing 'healthy' cohesive and Lisbon.

The concept inherent in the project has to do with a structure of public space. The idea is that it is imposed throughout the project for the following purposes: to have an ecological component and make a union between the green spaces of the city belonging to the EEF, be able to create connections between areas that currently are scattered and isolated; able to leverage new drives and connections all over town; aggregate all urban networks through new pedestrian connections or new buildings, which also support a development of the area. For this concept to be well applied over all strategies - from the scale of Lisbon to scale the area of study, 1/500 – there were divided initially three programatic line of intervention, which will be explained in which actions necessary to obtain all these points resolved.

1. **Socio-Territorial Cohesion** - The objective of this approach is associated with the fact that the area needs to transform the character of city limit and peripheral island and move to a more urban that cannot repulse all surrounding urban experiences, but draw them to himself. Certain measures will be taken so that it can achieve the objective:
 - Consolidation of existing neighborhoods;
 - Reconstruction of the Bairro Padre Cruz;
 - Resolutions of social character with the implementation of new architectural elements that incorporate fundamental uses in those areas;
 - Strengthening and cohesion of the urban fabric;
 - Change the precarious and repulsive nature of certain areas;

2. **Mobility** – The point is to get a reduction to the essentials, the space required for automobiles, even in scenarios of increased traffic, promoting simpler connections and more skilled environments. In this programmatic line the desire is the transformation of Avenida Cidade de Praga into "urban boulevard" in which there is a greater integration of the banks and surrounding areas (equipment, services, trade, etc..) to boost the economy and dynamism in these areas:
 - Increased car parking areas;
 - Afforestation of margins and center paths towards greater urban character;
 - Changing the track profile to only two traffic lanes for each direction continuous;
 - Changes in the margins of the road;
 - Creation of a pedestrian axis that comes from Telheiras, crosses the proposal and divides into two branches, one to the Bairro Padre Cruz and another for Pontinha;

3. **Green Spaces** – Green spaces alone are able to solve urban problems, both social and urbanistic due to its great potential as polarizing element. Moreover, these are essential for proper functioning of the natural system, providing retention basins, water lines and green matter:
 - Continuation of the EEF;
 - Creating strong elements to binding tissues;

- Creation of polarizing spaces and infrastructure
- New connections to environmental and ecological

All of these aforementioned references are only general guidelines for an after application more detailed and accurate over all scales of study. However, the implementation of a follow-up thought is, first set to better control the strategies to be implemented. Thus, strategies were developed at three different scales to achieve better control of the project and plans and create an effective resolution of the proposed program. The scales are: North-West of Lisbon, Carnide, and Bairro Padre Cruz. It is necessary to mention also that many of the demolitions and expropriations are covered in PDM and plans of CML, some already in progress.

Following the strategy outlined in the previous chapter, it was designed a project that intends to create an intervention model that can be adapted to the projectual zone.

Initially the land was worked on a 1/2000 scale, intending to later evolve to scale 1/500 or 1/200, thus translating some detail about the area culmination, the Bairro Padre Cruz. The project is divided into four distinct zones, each with its purpose, function and relationship with the territory. The areas are:

1. Telheiras area and South part of Lispolis;
2. Bairro das Camareiras area and new business campus;
3. The urban park;
4. Bairro Padre Cruz;

Each zone, previously delineated, has several characteristics, which were taken into account in the projectual definitions that although they are specific to each case, they're part of a joint strategy for the entire area.

Area 1

Currently, this area is composed, for explanation of the project, by the end of Telheiras, Praça S. Francisco de Assis, the Lispolis area, composed of several cubic buildings; and Avenida Cidade de Praga. It is from this area that origins the axis that will make pedestrian connection to the Bairro Padre Cruz and Pontinha.

This area is dominated by the automobile, with little attention to public space. Starting with PSFA, which is actually a roundabout; it is completely out of scale, both in its urban relationship, as in its use. What is proposed to solve, is the replacement of the roundabout by a square, and make road connections through an intersection. To this end, the southeastern part of the roundabout is extended up to the ride, allowing the redevelopment of this new space as a new public space.

Crossing the road between this square and the terrain of Lispolis, one begins to notice a more cohesive business area and some roads aligned and simplified. This area currently has only six buildings constructed in a planning of seventeen. From this plan it was made an interpretation that resulted in twenty-two buildings, but they generate different spaces and relationships. The grid of cubic buildings, is completed, as suggested by the original plan. The configuration of the rest has prioritized the creation of several public spaces, inviting outsiders to business companies, providing living environments, even outside working hours.

On the road system, a route is withdrawn, in each direction, from the Avenida Cidade de Praga; afforestation is done on the board and central banks; solid and comfortable ride created, and replaced the intersection with Estrada do Paço do Lumiar, by a roundabout, which best meets the needs. It's created the possibility of crossing the Lispolis for access to the Largo da Luz, for example, and maintaining two routes like cul-de-sac in order to be only for local access.

All these spaces are crossed by the pedestrian axis, fundamental to the project. Always highlighted by the differentiation of texture, he guides and moves people, both for recreational purposes, such as for travel to work. Originates in the subway station of Telheiras, rises Alameda Roentgen and crosses this area continuing to the next.

Area 2

This area has two very distinct areas: the area of the new business park and the consolidation of the Bairro das Camareiras. This intervention is done essentially in a vacant lot, or in areas of truck loading and unloading containers.

Taking inspiration in some neighborhoods in the Plano de Alvalade, and how it works, it was created a consolidation of the Bairro das Camareiras, through addition of key equipment, play spaces and more housing in order to create a real sense of neighborhood. The residential buildings, follow the same height of the existing, and create small spaces sheltered within. It is crossed by two major axes, one roundabout that connects with the business park and another that runs through the urban park until the Bairro Padre Cruz.

The business part, diverges from the residential area, because here the intention is that this area is purely commercial, with constant use and relationships with the environment, but not as much as the southern Lispolis, as discussed previously. Three of the proposed buildings, as contemplated in the plan Lispolis make the closure of some situations, while the rest of the new zone is only indicated the proposed areas. That is, in this zone, only the divisions of the batch are considered.

Area 3

This zone is composed of a large wasteland, destroyed green areas, gardens, improvised gardens and the property of the PMO. This is the most important area of the project, the liaison and promoter of urban cohesion. It consists of three main parts: the park, the infrastructure and the axis.

The park is located at the EEF, which connects the Ameixoeira to the Quinta da Granja, which merges with the existing network of bike paths. This is originally a game of heights that makes the space very interesting, and was divided into four blocks; each has an environment and a different relationship with the environment. The most important part to discuss is the part making connection with Pontinha, Bairro Padre Cruz and the Carnide Park. With multiple paths, types of trees and small support infrastructures, aims to become the new living space in Lisbon, but mainly Carnide. It is this continuous green, which will climb the slope of the Bairro Padre Cruz and becomes structuring, as can be seen in the description of the area 4. The park boundaries are made mainly by a new road structure, clearer and more urban. Most notable is the large boulevard that comes from the new terminal Pontinha and crosses the whole space to the premises of IAPMEI. This whole road structure is provided with parking and trees, as well as rides comfortably wide.

The big infrastructure within the urban park and the former facilities of the PMO, in addition to serving its primary functionality, it also marks the territory with an icon. This icon, three-story high, is not only visual but also functional, capable of great polarization. This is a sports center, but with some differences from the original sense of the word. It consists on a part of sports, such as gyms, swimming pools and sports fields, but also by a health center, shopping and restaurants. Works in two different levels, the PMO and the park one, linked by a "green ramp", manages to maintain a strong relationship with it. In the PMO level, it has a wide variety of sports fields, a play space, shopping and restaurants. In the upper level there is a football field of eleven, health center, sports facilities and pedestrian access to the axis. This structure attempts to be used as support zone, joining the surroundings and not just an autonomous and independent object.

It is from the southern Lispolis end of the axis that it begins to gain importance and another highlight. Here he rises from the floor, as a wooden structure on concrete pillars, crossing the Avenida Cidade de Praga and leaning on sports center. Hence, he continues and is divided into two paths, one towards Pontinha and the other to Bairro Padre Cruz, and then poses on the floor, inside the park. This creates a crossing and access, complementary, with a new point of view and experience of the city. This axis is not only passing, but also to remain.

Area 4

Finally, this area is what aroused more attention to the author. It is in this area that was made an approximation of scale, by the will and need to tackle various problems.

The design of the proposal is based on three axes very strong and of different character, the road axis of the Rio Douro Street, the green axis of the park and the pedestrian axis. The green axis, originates from the urban park, with its center in the pedestrian axis that comes from Telheiras and is divided into three zones. The first area is flat and takes advantage of the new configuration of Avenida Professor Francisco Caeiro da Gama, to join in the same space the school, the church and a leftover space that will be a nursery. This space being used by students and parents who then have to go to work, one of the entrances to the subway is located here. This space can create a more secure and friendly area for children and youth, and a waiting room and living outside of the church service.

From the second part of this park is that it becomes more complex but simple. The slope of this area is very steep and impossible for any movement for people with mobility difficulties or cycling. At the same time, this zone, in the central district, had to have sufficient conditions to attract people and invites them to stay. It was then necessary and possible to draw the pedestrian axis, a system of stairways and ramps, to comply with all applicable regulations. This led to a division of the park into two parts: the west platform aimed at events, fairs and festivals, and the east one more natural part of the park, following the original topography. This part is also traversed by the pedestrian axis of the neighborhood which will be explained later. Finally the last zone is equal to the second, except that the western area no longer has the objective of being used for events. Continues to have the same system of platforms, but here serves as a seating area with a more artificial green part, contrasting with the area that this is more organic.

The axis of the pedestrian district consists of the union of several public spaces, with different characters, starting at the Cultural Center of Carnide and ending in the new plaza entrance to the cemetery. It is along this that important and unique buildings cling. The first space, the CCC, also includes the new market of the neighborhood, the other subway entrance and a residential building with retail and services. Here the public space is divided into two levels, one at the elevation of the dwelling and another at level of the market, and moreover is served by a road with pedestrian priority. In the housing level, the space falls gently, skirting to the next level until they meet, at the same height, at the entrance of the market. It is at the same level as the entry of CCC and is the direct visual line of the axis. The residential and commercial building which appears here has an entrance to a courtyard, where the main square seeps, where besides space of stay, serves as communication with two axes of the upper district. In the other level, it was there is a place to stay outside supporting the market, the entrance to the car park and semi-public entrance to the subway. The second space, as characterized above, is the intersection with the green axis. The third zone is divided into two parts, sectioned along the road, but functions as one. It is supported by a residential and commercial building, similar to the first zone, a school, a stadium and infrastructure support, a shopping center, a health center and the Police station. This space appears as an immediate need to create a space to hold together the activities of the stadium, which can be enjoyed even days that there is nothing there. It is then combined with the space, equipment needed and with constant use, so they can create a constant movement. The fourth and fifth area fall within the new limits of the neighborhood. Here is an area of trade and services, a continuation of the business park on the other side of the park, but this time merges with the neighborhood. On the fourth we have a space that serves primarily the hotel, while the fifth is a large area of service to businesses and the cemetery. It should be noted that in similarity with the other business area, these areas are the areas of reference and not allotment of the building itself.

Above the Rio Douro Street, is the most housing, quiet and private part of the neighborhood. In terms of equipment, we find the only nursing home in one of the highest points and privileged neighborhood. Along the street, buildings appear parallel to it, with a commercial center, and a pedestrian walkway in the middle. These passages continue and form small public gardens, surrounded by residential buildings, creating spaces like the existing in Nations Park South, where the flows are more local and protected.

02. CONCLUSION

Regardless of the result or degree of success of a project, it is considered that the exercise of intervening in the urban instills great responsibility to the designer, which involves the reflection of choices, where the benefit of certain aspects may jeopardize the integrity of other. In this sense, this chapter is mainly intended to point or question certain options.

This study sought to present and analyze a project on an urban scale, carried out under the discipline of Final Draft. Interested in enhancing the relevance of the theme, proposed by the teachers, introducing profound reflections on urban issues, in a context of strategies that are currently being considered and defined. As a conclusion of the reflections and strategies developed over a year of work, this thesis was a key element in the presentation, justification and synthesis of all results, raising questions and presenting methodologies essential for the study of these issues. In this sense, it is of interest to report enriching sequence that could be achieved with the development of the project both theoretical to the practical part, allowing both support each other and be more aware of strategies enabling transformation of the territory.

The theoretical reflections on the concept of territorial cohesion and public space, as well as practical analysis of the case studies, were critical to the development of the work, providing a comparison of the academic exercise with real situations and allowing us to understand the feasibility and limitations of proposal. You can now see the true potential of public space as a generator of town and base for the proposal.

It is believed that in general the project responds to the strategy adopted, and that has theoretical basis and the knowledge of the agents that influence the intervention area. It is intended to achieve an overall reading, taking into account the quality of public space in its different valences from the exploitation of base concepts, proposal, and, consequently, its application. Giving priority to the interests of the local population was also the motor of changes as revitalization strategy of appropriation of space. The decision to approach the project at a territorial level, assigning an added relevance to the theme of cities multipolar poses a risk to the understanding of the proposal to address several topics of current urban problems, given the limited scope of the document.

In terms of the proposal itself, the author recognizes the magnitude of the area addressed and the problems that it comes from. The risk of this was helpful as far as which strongly contributed to the choices made in the Bairro Padre Cruz, which came to be taken as a major focus. However, it is recognized that certain parts of the project were the development of a sin deeper as zone two.

Finally, this paper has helped achieve a critical project, concluding that successfully responds to the objectives. It should be noted, however, that certain failures are also checked, in ways that were poorly developed or addressed incorrectly. Essentially, both the project and the dissertation, allowed to realize the responsibility, complexity and significance of a proposal of this magnitude, showing that quality does not come from urban buildings but public spaces, generated by such a time.