From Stª. Apolónia to Xabregas to Tejo.

Duarte João de Sousa Azaruja

EXTENDED ABSTRACT

Guide: Professor Carlos Moniz de Almada Azenha Pereira da Cruz

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This report is divided into four chapters and it describes and supports an urban plan designed for port and rail infrastructures.

In the first chapter, we intend to examine the evolution of the urban area of intervention, the physical geography of the place, mobility, green spaces and cycle-pedestrian network, as well as public and built areas, equipment and uses, the description of coastlines and eventually we intend to analyse the case studies.

The urban development was marked by the 1755 earthquake that partially reached the Convent of Santos-o-Novo and by the construction of buildings that belonged to religious orders throughout the "Eastern Path". The coastline allowed the anchoring of small boats.

In the nineteenth century there was the construction of Santa Apolónia Station, the railway line and the Xabregas viaduct. Once again there was a change in the coastline, when the small docks and berths were replaced by leisure and socialising areas - the beaches.

From this period on up to the 60s in the twentieth century, the growing rural exodus influenced the urban evolution in the intervention area. The Gualdim Pais and Mouzinho de Albuquerque Avenues connecting to Infante D. Henrique Avenue were built. The latter allowed the connection between downtown and the eastern edge of Lisbon. Once again the coastline was redesigned also due to the construction of the Memorial Pier and some public spaces and buildings.

After the road and rail upgrade, the building of the Port of Lisbon occurred and consequently the redesign of the coastline from Xabregas.

In terms of the physiographic description of the targeted area, we highlight that the riverside strip and the Chelas Valley are at a height below 20 meters; that the hillsides of the valleys of Santo António and Chelas have slopes greater than 12%; that much of the study area has ideal solar orientation; that we identified the damp and river estuary transition systems along the riverside track and in the valleys; that the probability of flooding is high at the end of Diogo Couto Street and Mouzinho de Alburquerque Avenue and very high in Gualdim Pais Avenue, while it is moderate along the riverside track; and that the occurrence of strand movements is more likely to happen next to Santa Apolónia Station, in front of the Monastery of Santos-o-Novo and nearby the railway line.

In terms of road network, we identified the Mouzinho de Albuquerque Avenue, the Gualdim Pais Avenue and the eastern section of the Infante D. Henrique Avenue as being of 2nd level ones. The western section of this avenue is a 3rd level one. The 4th level consists on a set of routes parallel to the Infante D. Henrique Avenue and the Diogo Couto Street. Santa Apolónia Station is considered a 1st level interface, where the metropolitan, rail, river and public transport networks are assured. The road flows are more intense from the Santo António Valley onwards. Conflicts in the "Eastern Path" are mostly caused by the non-compliance with the width of roads and sidewalks.

Green spaces are nonexistent in the intervention area and we can find only one cycle-pedestrian route parallel to the Infante D. Henrique Avenue and leading to the Xabregas Valley.

By analysing these public spaces we can conclude that they are mostly at the level of pedestrian circulation. We have also identified the buildings in poor conservation state.

In the intervention area we managed to identify equipment (rail, port, museums, etc.), trades and services (offices, catering, etc.) and housing.

The cuts along the intervention area were helpful in identifying its main uses, the relationship between the spaces, the differences in terms of quotas, the steepness of the slopes, the road

conflicts generated by the defaults in the dimensions of walks and paths, and finally, in realizing that the construction of landfills contributed to the urban development of the targeted area.

The case study of the new Cruise Terminal at Santa Apolónia helped to understand whether the continuity of the various urban systems along the urban design is possible.

The urban plan "La Spina Centrale" promoted the rehabilitation of industrial uses.

In Manhattan, the urban project "The Big U" intends to requalify a riverfront subject to flooding.

Back in Seattle, in the Olympic Sculpture Park, passages to a higher quota were created allowing people to overcome two barriers: the road axis and the railway line.

In the second chapter we intend to address the main constraints concerning the implementation of the urban plan.

The first depends on the continuity of the Containers Port, since it is planned to be transferred to Barreiro.

The second one focuses on two scenarios: one related to the train (transference or elimination) and the other with the underground (continuation or creation).

The last constraint is based on the seven objectives set by the Lisbon City Council: "to attract more inhabitants, to attract more businesses and jobs, to boost urban renewal, to qualify the public space, to restore the riverfront to the citizens, to promote sustainable mobility and to encourage environmental efficiency ".

In the third chapter we will explain the urban strategy, the restructuring of different urban systems and also describe several areas of the urban design.

We have defined the following strategy: replace the train terminal by a light rail line; introduce a new ecological system; reduce the traffic flow to downtown; boost urban renewal and readjust industrial uses.

We suggested that some specific changes were to be carried out in the road network and that traffic to downtown was to be reduced. To achieve these goals we suggested the decrease in the number of tracks and the changing in the direction of some roads. We also propose the replacement of the Santa Apolónia railway line by a light metropolitan line on the surface that will link this area to the Oriente Station.

The deficit of green spaces makes these areas vulnerable to flooding.

The occupation of the largest public spaces is located in areas where vulnerability to flooding is less risky.

SANTA APOLÓNIA RAILWAY MUSEUM

The closing of the Santa Apolónia rail terminal will allow the first upgrading and renovation of a suggested venue - the Santa Apolónia Train Museum.

The station courtyard will be connected to an adjacent public square where the old sheds that sheltered those waiting for the trains to the north existed.

The surrounding road network has been re-profiled, large trees were planted on the sidewalks and a low tree alignment was set in the central reservation lane.

In the surrounding urban fabric we can still observe the rehabilitation of some houses that were previously identified as being in poor condition.

DIOGO COUTO ECOLOGICAL HUB, SANTA APOLÓNIA OFFICES AND ARTS WORKSHOP

In this area we can see that the first urban park is crossed by the extension of Diogo Couto Street which guarantees the access to Infante D. Henrique Avenue and to the suggested Arts Workshop. The subway line runs through a water mirror, which is drawn through the first coastline.

We suggest the renewal of a housing set as well as the upgrading of rail use for trade and areas reserved for offices.

SANTO ANTÓNIO VALLEY ECOLOGICAL HUB

The street that guaranteed access to a railway zone is transformed into the entry and exit of a car park, which allows the transitional quota. It is in this green area that we can observe the beginning of our proposal concerning the traffic split for the light rail line. In the center of this green area we can see a path towards the river that gives access to a skatepark and that connects two public spaces, promoting a continuum between them.

HOUSING AREAS, LIBRARY AND CO-WORKING SPACES

This housing project seeks to address the accessibility between the high quota and the quota of the landfill, where we can find a Library.

Co-working spaces will also arise in the former area of the Port of Lisbon. It is a "new world" where people can work at any time of the day, exchange ideas, have access to information and services through shared multi-disciplinary spaces.

XABREGAS VALLEY ECOLOGICAL HUB

The urban park completes the urban design proposal. The Xabregas overpass was partly removed and in the other part it was replaced by a pedestrian route. A new junction is designed in order to reduce traffic to downtown. In the urban park we can still observe parking lots, a public garden and sports fields.

In the last chapter we will assess whether the proposed objectives were fully or partially achieved.