

RE-SOURCING

HARVESTING WATER: A NEW CITY LAYER



LISBOA, PORTUGAL
EUROPAN 18 - 2025



TABLE OF CONTENTS

1.	INTRODUCTION	3
1.1.	COMPETITION TASK	3
1.2.	THEME: RE-SOURCING	3
1.3.	IMPLEMENTATION PROCESS	3
2.	SITE INFORMATION	4
2.1.	ALCÂNTARA VALLEY	4
2.2.	HISTORICAL CONTEXT	6
2.3.	BIOPHYSICAL CONTEXT	9
2.4.	BUILT CONTEXT	10
2.5.	SOCIAL CONTEXT	11
3.	DESIGN BRIEF	12
3.1.	OBJECTIVES	12
3.2.	HARVESTING WATER	12
3.3.	A NEW CITY LAYER	12
4.	PROJECT GUIDELINES	12
4.1.	FUNCTIONAL PROGRAM	12
4.2.	URBAN MORPHOLOGY	13
4.3.	SUSTAINABILITY	13
5.	SUBMISSION DRAWINGS	14
6.	EVALUATION CRITERIA	14
7.	JURY COMPOSITION	15
8.	USEFUL LINKS	16

1. INTRODUCTION

Lisboa is the country's capital and most populous city. In a broader scale, Lisboa corresponds to the consolidated and densely built central area of a Metropolitan Area, composed of 18 municipalities where nearly 3,000,000 inhabitants live, around the Tejo River Estuary. The Municipality of Lisboa comprises a 100 km² area with 544,000 inhabitants, representing the heart of the territory of its Metropolitan Area.

1.1. COMPETITION TASK

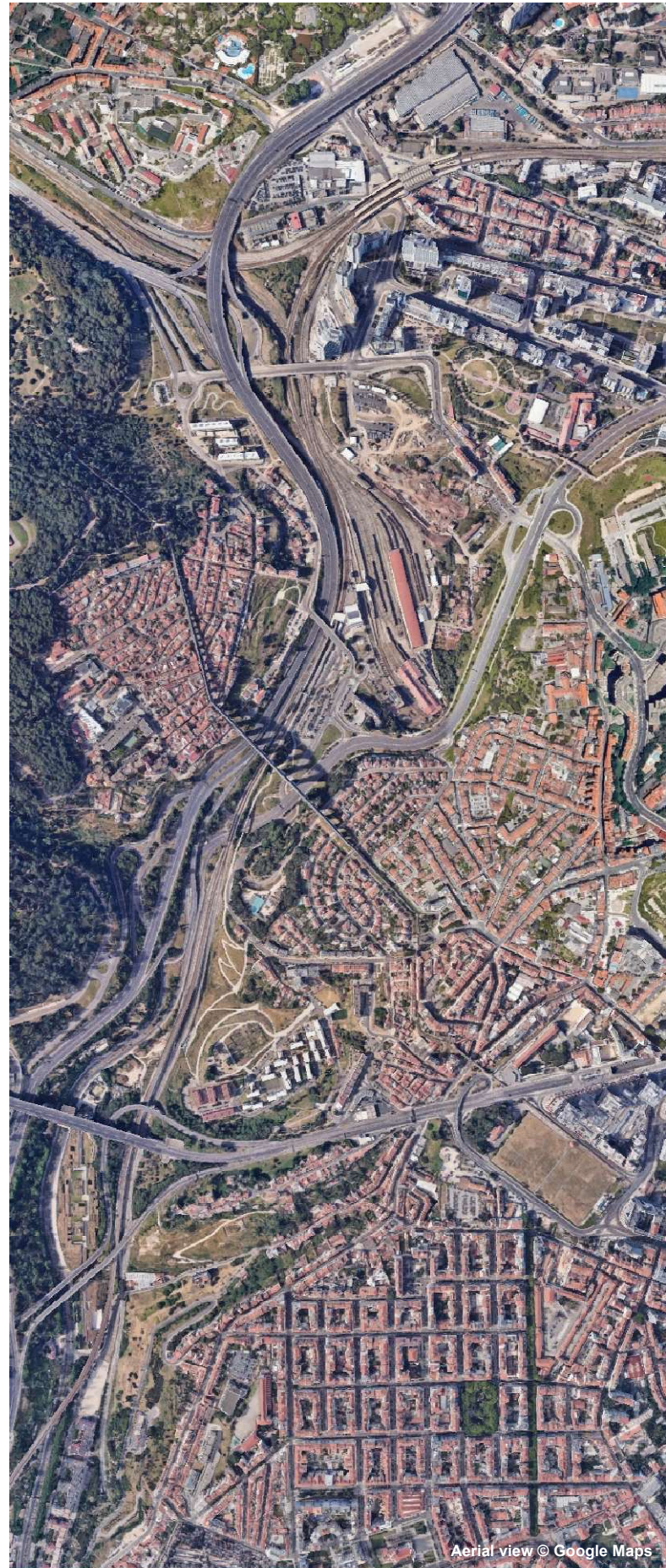
The competition calls for beautiful, inclusive and sustainable solutions that provide housing and habitat in a fragmented territory with a twofold purpose: to project the future of Alcântara Valley but also to seek a historical repair of a piece of urban fabric that has been isolated by cutting-through-infrastructure in the recent centuries.

1.2. THEME: RE-SOURCING

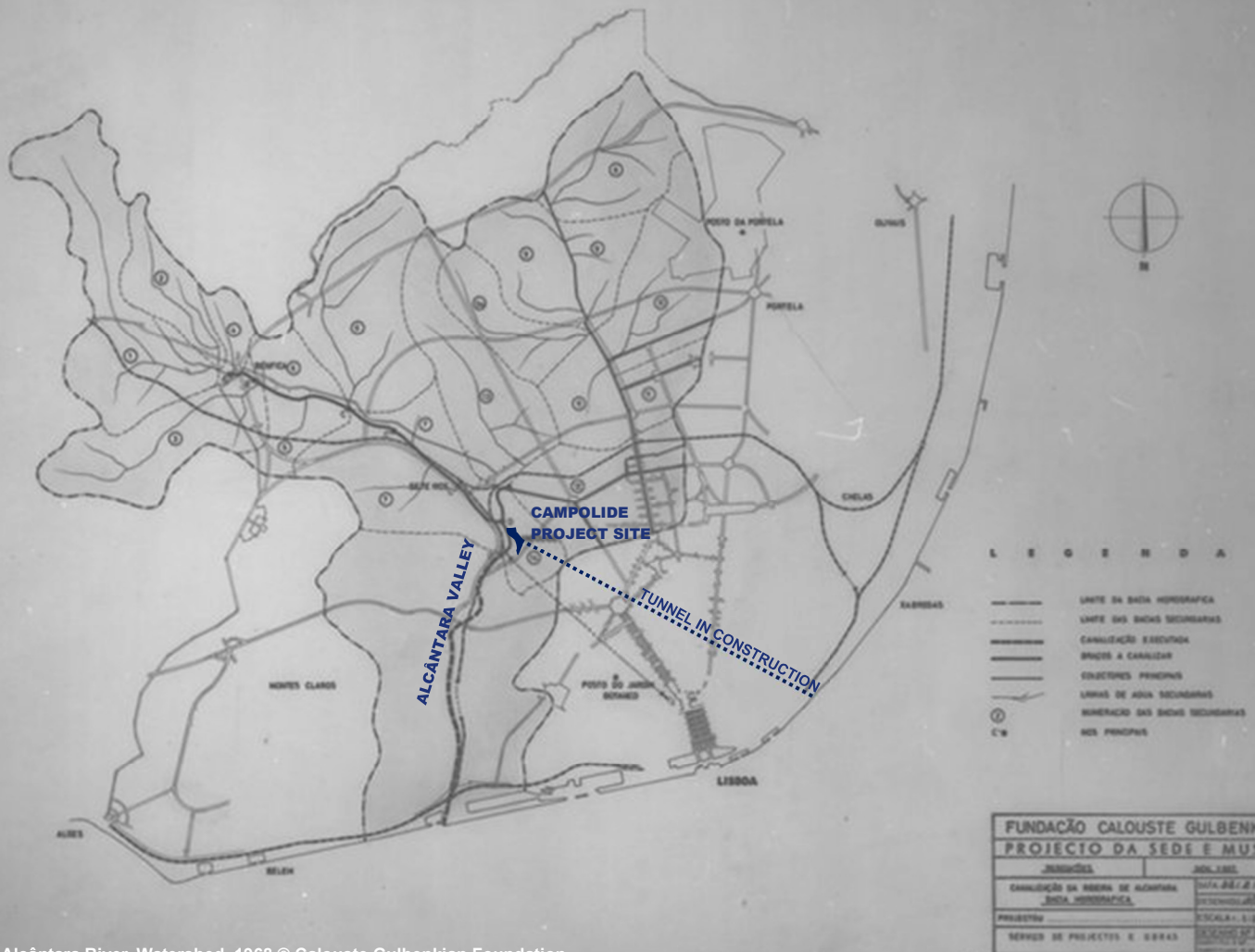
The competition is launched in the context of the construction of the largest public work in Lisboa's General Drainage Plan. The project site is currently under construction at what will become its underground level, developing a 5km-length tunnel (currently halfway built) that departs from a massive water cistern in Campolide to meet the river Tagus waters in Santa Apolónia, preparing the city for flooding events. This tunnel will operate a basin transfer solution, where natural flows that usually create inundation problems downstream in Alcântara Valley will be automatically re-directed in the case of extreme events. This new underground connection will also work as an infrastructure for distributing recycled water for non-potable uses. The "cornerstone" of this project is already in place: a heavy infrastructure under construction that requires a future innovative urban morphology on top of it. A new city layer for tomorrow.

1.3. IMPLEMENTATION PROCESS

The Municipality of Lisboa, as promoter, is looking for the best proposal for the reorganisation of what will be the new urban surface after the construction of the largest public work in Lisboa's General Drainage Plan. The intention is to commission the winner(s) at the level of landscape and construction design in the context of an urban rehabilitation operation plan to be developed for the post-tunnel construction phase.



2. SITE INFORMATION



Channeling of the Alcântara River. Watershed. 1968 © Calouste Gulbenkian Foundation

2.1. ALCÂNTARA VALLEY

Campolide, is a urban area with a unique identity: on the one hand, it is isolated from the adjacent urban fabric by roads and railway lines, with a complex morphology and steep slopes, still reflecting a past of agricultural and working-class character, devalued and degraded; on the other hand, it is located on a west-facing slope, integrated into the city's structuring system of green corridors, with panoramic views. The Alcântara Valley is a structural natural north-south axis, with expressive slopes and wide views on both sides, east and west. The Alcântara Stream was the protagonist of this place in its rural phase. The Águas Livres Aqueduct (18th century) is an extraordinary landmark of site south views, crossing the

valley with its stone arches and entering the largest green city area, the Monsanto Forest Park, on the west side.

In the 20th century, the Caneiro de Alcântara (a 10 km-long underground sewer) was built on the axis of the natural Alcântara Valley, draining a wide upstream area that kept on growing onwards, with buildings and demography.

Currently, as part of the Lisboa General Drainage Plan (PGDL), the construction of an underground tunnel between Campolide and Santa Apolónia is underway, which will connect to the Caneiro de Alcântara (main city sewer) at Quinta José Pinto and cross the project site, with planned protection zones.



Silva Pinto Lisboa Survey, 1911 © Lisboa City

2.2. HISTORICAL CONTEXT

The densification of this territory's occupation and its integration into the city took place progressively at the beginning of the 20th century, as a result of the construction of the Oeste railway line and Campolide Station in 1877. The presence of manufacturing units also served as an attraction for the installation of working-class and popular populations.

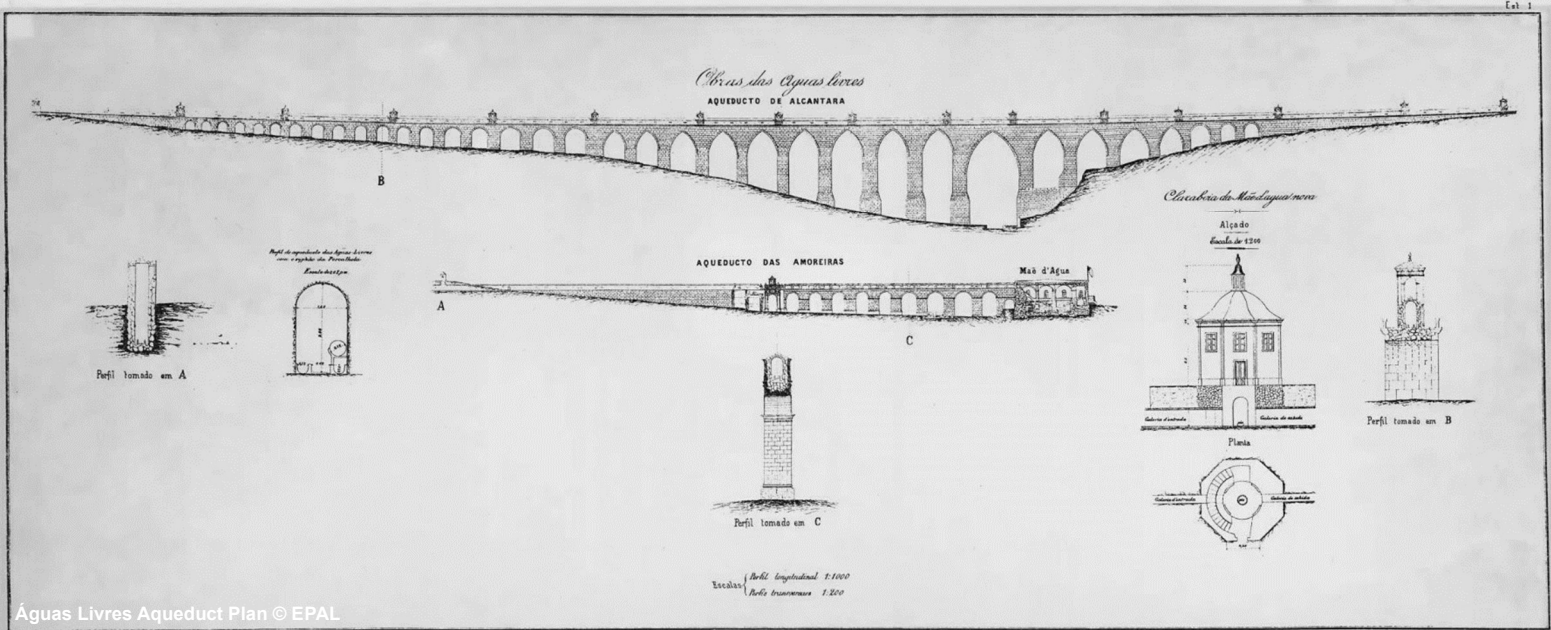
In the past, this was a rural area of farms, that took advantage of the good exposure to the southwest and the gentle slope towards the river-bed of Alcântara, and it was adjacent to an exit axis from the city and the connection to its "hinterland" via the current Rua de Campolide, where the clusters were established, already identified on the plans of 1807 and 1911.

Between these dates, the situation of occupation with buildings remained practically unchanged, with only the 1950 map showing an increase in construction density, along Travessa da Rabicha and particularly along Travessa do Tarujo and the three private streets, which did not exist until then. These formed an incipient network of blocks that connected Rua de Campolide to the railway infrastructure to the south and west. During the 20th century, residences in the form of courtyards and villas were constructed in this territory, housing in precarious conditions. As a result, lists were published throughout the century recording courtyards here, such as the Gonçalves and Tarujo courtyards and the Elvira and Sousa Villas (recorded in a list dated before 1930).

This occupation has remained largely unaltered since then, with periods of higher population density until the mid-1960s, when Calouste Gulbenkian Avenue was opened. This led to significant demolitions, resulting in the ongoing presence of characteristics associated with a territory that has suffered from a lack of urban development and substandard housing conditions. The area remains disconnected from the surrounding city and marginal to it. This introverted character is further accentuated by the type of occupation that has taken place over time.

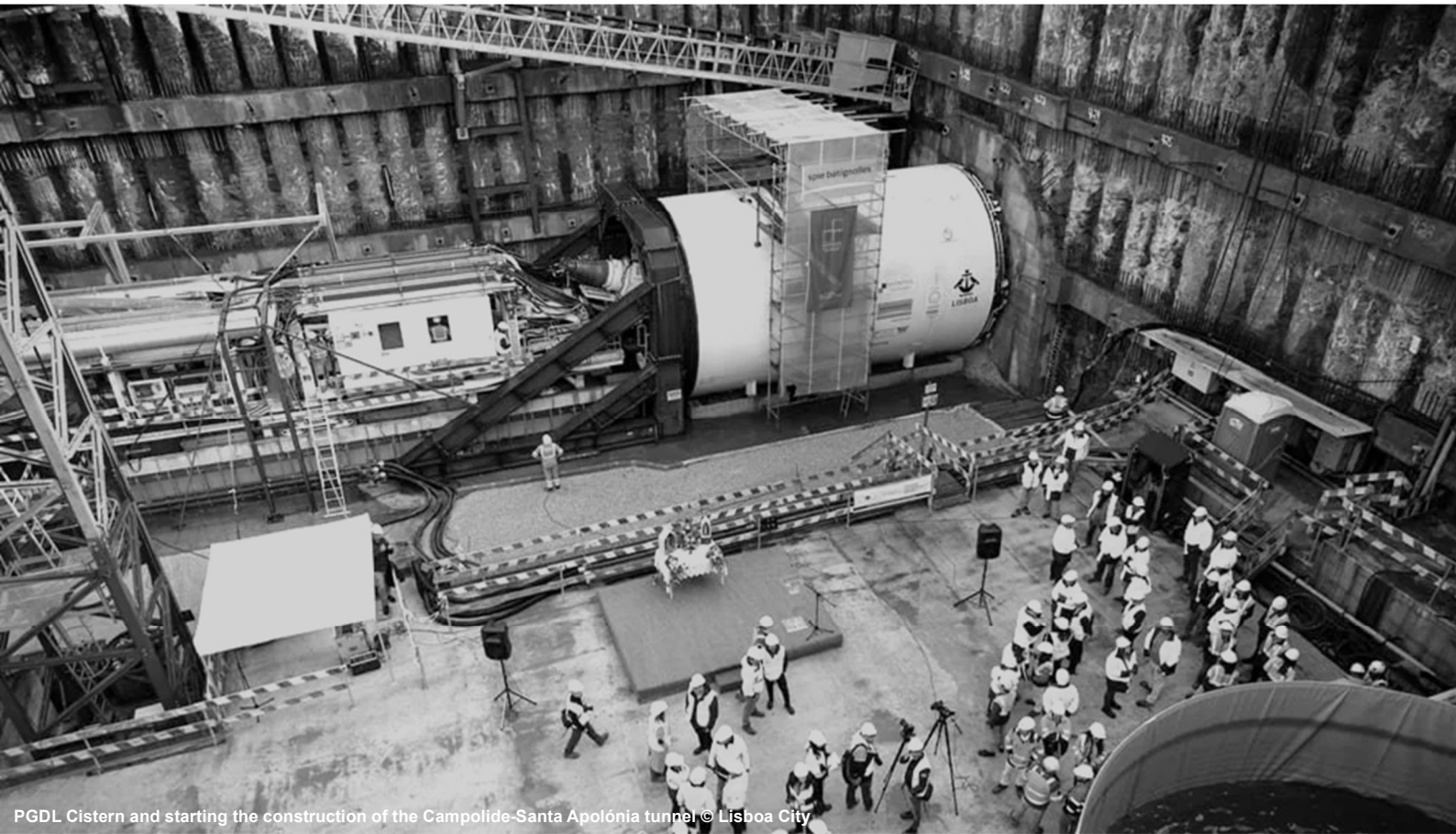
This area originally housed a working-class population that came to the city to work in the emerging industry and that benefited from the proximity of the workplaces. However, it was also a victim of the insalubrity and lack of habitable conditions that the weak public housing policies intensified together with a poor supply of affordable housing for the working classes; the courtyards and villas, sometimes almost self-built, were the only solution for accessing housing.

Today, these features are still visible, the degradation and concealment, along with the traces of rurality that have never disappeared. This is due to two main factors: firstly, the urban space has never been properly structured, and secondly, the local population has maintained their rural habits, taking advantage of the 'free' spaces to plant vegetable gardens.





Caneiro de Alcântara under construction (1940s-1960s) © Lisboa City



PGDL Cistern and starting the construction of the Campolide-Santa Apolónia tunnel © Lisboa City



PGDL Cistern and Campolide-Santa Apolónia tunnel under construction. 2025 © Lisboa City

2.3. BIOPHYSICAL CONTEXT

The project site, which covers an area of 11.6 hectares, is located on a western-facing slope overlooking the Alcântara river valley, integrated into Lisboa's largest river basin.

From this location, particularly from its upper limit, it is possible to enjoy panoramic views of the valley, the Águas Livres Aqueduct and the Monsanto Park, which greatly enhance the site's scenic quality.

The terrain is characterized by a complex morphology, with a generally steep slope, and an elevation difference of over 28 meters between the upper elevation, next to Av. Calouste Gulbenkian (75.70m) and the lower elevation, close to the entrance to the railway workshops (46.40m). With the exception of the northeast platform where there is a green area (Quinta José do Pinto), and the area where the existing buildings are located, both of which have a gentle slope, the rest of the project site generally has a slope greater than 18%, culminating in the south at the slope connecting to Av. Calouste Gulbenkian, with a very steep incline, exceeding 70%, which requires particular attention in the event of potential stability problems. On the western edge of the project site, next to the existing railway facilities in Campolide, the route of the Alcântara river was still visible on the 1950 map of the city of Lisboa, later channelled with the construction of the Caneiro de Alcântara.

In the current physiography, a subsidiary waterline of the previous one persists, which crosses the land near Vila Elvira transversally.

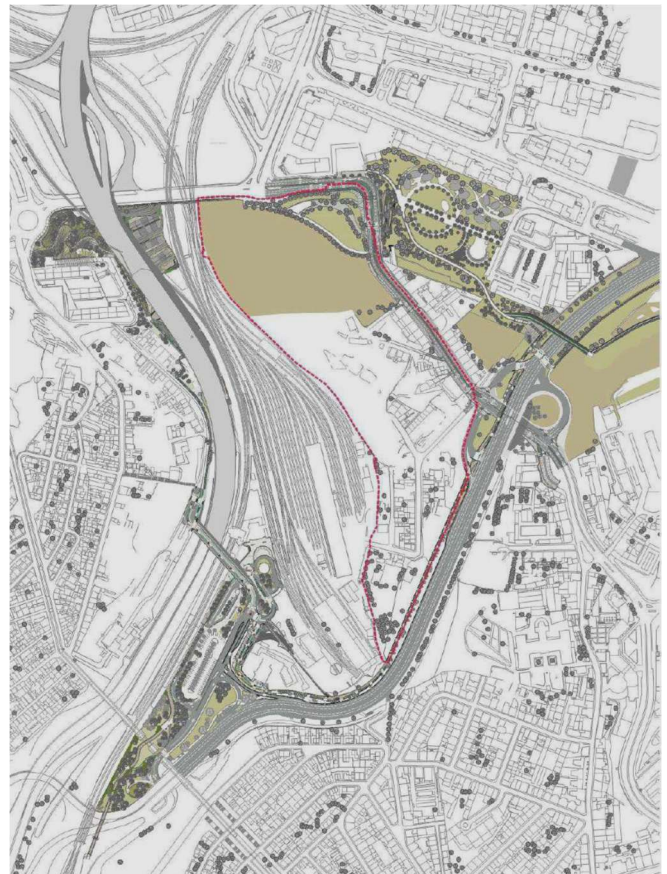
In geological terms, the area under study, like the Monsanto Park to the west, is mainly located in the Lisboa Volcanic Complex, with soils of basaltic origin, also identifying crystalline limestone formations with marine fossils and alluvial formations, associated with water courses.

Regarding hydrogeology, it is worth highlighting the fact that the aforementioned limestone formations, present in the extreme south of the project site, possess a high permeability which corresponds to a high-water infiltration capacity, and it is expected that they contribute to the feeding of underground water masses.

Once an area historically occupied by recreational and production farms, the project site is currently integrated into the structuring system of green corridors, being located at a

hinge point between the Monsanto green corridor and the Alcântara valley corridor. In this context, there is intentional urban agriculture, with the presence of a field on the Quinta José Pinto and vegetable gardens, both in the area under study and in the surrounding area, as is an excellent example of the Campolide horticultural park, integrated into the Amnesty International garden, designed by landscape architect Gonçalo Ribeiro Telles.

Due to its characteristics and current setting, circumscribed by road and rail infrastructures that isolate it from the rest of the territory (Campolide station and respective technical facilities to the east, Calouste Gulbenkian avenue to the south and east, and Campolide street itself to the north/northeast), this space should be considered a landscape unit that needs to be treated in an integrated manner.



Public space plan around project site © Lisboa City

2.4. BUILT CONTEXT

Construction Period

The intervention area is characterised by an occupation with collective housing buildings dating from 1946/60 next to Rua Campolide. These buildings range in height from five to seven floors, reflecting a period of significant construction density that corresponds to the rapid population growth experienced during those years.

Along the Rabicha/Pátio do Martins crossroads, you can see a cluster with some shack-like characteristics from the 1920/1945 period comprising one or two floors. From the same period, Vila Elvira and other buildings on Travessa do Tarujo can be identified, as well as on Rua Particular 2 on Travessa do Tarujo with two floors. These constructions are an expression of the working class housing of the time. More recent buildings, with 2 floors, dated 2001/2005 and 2006/2011, are distributed between Rua Particular 1 and 3 and Travessa do Tarujo. The first occupations are from before 1919, and the rural characteristics of Quinta José Pinto and Vila Machado remain clearly visible.



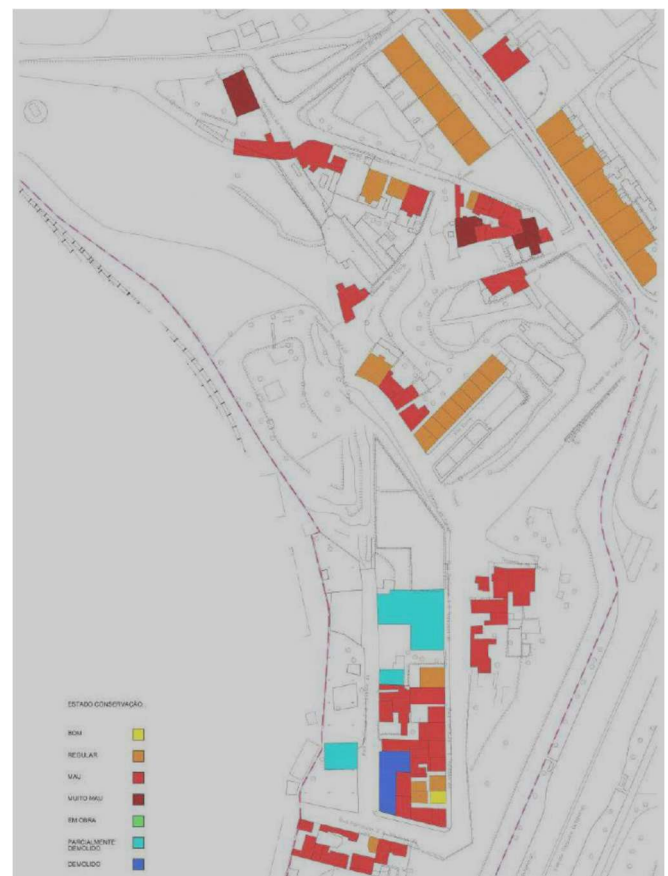
Existing buildings by construction period © Lisboa City

Color tone range:darkest tones represent older buildings (built before 1919); lighter tones represent recent buildings (until 2011).

Conservation State and Uses

A thorough analysis of the data pertaining to the various degrees of conservation, as ascertained during a field survey, reveals that 1 of the structures is in a good state of preservation, 22 are in a satisfactory state of repair, 38 are in a poor state, and 3 are in a very poor state. None under construction was identified and finally, the demolished and partially demolished buildings represent 4 of the approximately 66 identified constructions. In terms of commitments for the area in question, 2 active legalization processes were identified.

Building uses are essentially housing, except for Rua de Campolide that has mixed use with some street commerce – restaurant, café, pharmacy, garden hub, small university residence – while keeping a housing use dominance.



Existing buildings by conservation state © Lisboa City

Color tone range: yellow for GOOD; orange for REGULAR; red for BAD; dark red for VERY BAD; light blue for PARTIALLY DEMOLISHED; dark blue for DEMOLISHED.

2.5. SOCIAL CONTEXT

Firstly, it is important to draw attention to the fact that the socio-demographic occupation of this small territory in the parish of Campolide is part of an area undergoing structural change in terms of urban occupation, where residential occupation, in addition to having changed its residential model, was accompanied by tertiary occupation, hotels and services. This creates a consistent pattern aligned along the major road and rail routes, which rebuilt and cut off old communication axes.

This complex railway node represents a relationally insurmountable barrier. On the northeast side, the old communication axis (on a city scale), Rua de Campolide, is the small remaining segment that serves as the main route and allows residents and users to establish networks of relationships on a human scale, both with each other and with the surrounding socio-urban fabric.

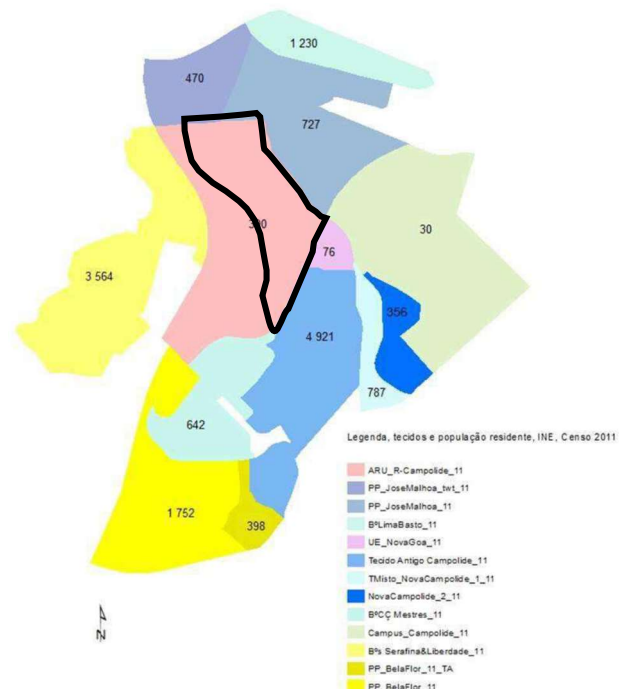
The area's small socio-urban fabric corresponds to a residential nucleus in sharp decline, characterised by popular housing types in the form of courtyards and villas, which will have been sedimented throughout the 20th century. Historical cartography indicates that the Campolide railway station (Linha do Oeste, 1877) and a group of factories located in the territory, next to the railway line and Aqueduct, have functioned as poles of attraction and residential fixation since the end of the 19th century.

Furthermore, the long-standing presence of precarious housing in this territory is confirmed by references in the various published lists of municipal surveys of that urban problem and respective resettlement needs, carried out throughout the 20th century. Firstly, the list of "courtyards and villas" existing in Lisboa before 1930, where the Joaquim Martins Courtyards, Courtyard 1, Captain Courtyard, Caliça Courtyard, Gonçalves Courtyard and Tarujo Courtyard and the Elvira e Sousa Villas are mentioned. As part of the SAAL Programme (a state housing construction programme that emerged after the April 1974 Revolution to meet the housing needs of underprivileged populations in Portugal), in 1976, 585 families in Tarujo were registered as needing rehousing and, between 1993 and 2013, 640 households were also registered in the Quinta José Pinto, Travessa da Rabicha, reflecting the same needs.

The small fabric was still heavily occupied in the 1980s and 1990s. According to the 1991 Census, 1600 people lived there. Since then, the houses have been progressively demolished, namely within the scope of the Special Rehousing Programme (PER) - at the beginning of the 1990s, thousands of families in Lisboa lived in precarious dwellings known as barracas (shacks), whose degrading conditions demanded a firm response. The PER was a fundamental political instrument for the eradication of these structures and the rehousing of families.

In 2011, around 300 people lived there. The area, which may come to define a new socio-urban fabric, is somehow "hidden". In fact, thanks to the steep slope of the area, it can be said that the fragmented residential territory is almost invisible to the "formal" city; only residents of buildings with more than 3 floors on Rua de Campolide see the buildings in the competition area.

According to data provided by the municipality's housing department, there are 211 houses in this small socio-urban area, 136 of which are currently inhabited, two homes are occupied by occupants without a rental contract and the remaining 75 are vacant and walled up. The municipality owns 59 houses and 65 are expected to be demolished. The buildings in Vila Elvira and Travessa do Tarujo (municipal housing) are currently undergoing renovation work.



Socio economic urban fabric units © Lisboa City

3. DESIGN BRIEF

Team composition: **Architect mandatory.**

It is compulsory to have at least one architect on the team.

3.1. OBJECTIVES

The main objective is to call for an urban solution that will create a new integrated piece of Lisboa, a new city centrality.

The city calls for a contemporary design approach that aligns with the objectives of the General Drainage Plan, which aims to establish a more harmonious relationship with water as a fundamental resource. The proposed solution should create a landscape unit connected with the surrounding green structure, an urban centrality with housing fostering the human scale and walkable connections, and an innovative urban identity that incorporates the existing fragile urban fabric.

3.2. HARVESTING WATER

The Lisboa site integrates European 18 sub-theme Re-Sourcing from Natural Elements. Under the motto Dealing with Water, it addresses a broader range of issues, including the role of water utilisation in revitalising inhabited milieus in the context of global warming. It also explores the challenges of adapting to risks such as flooding, marine submersion, coastline retreat, and drought, while aiming to restore ecological milieus to improve quality of life, health, and general well-being.

3.3. A NEW CITY LAYER

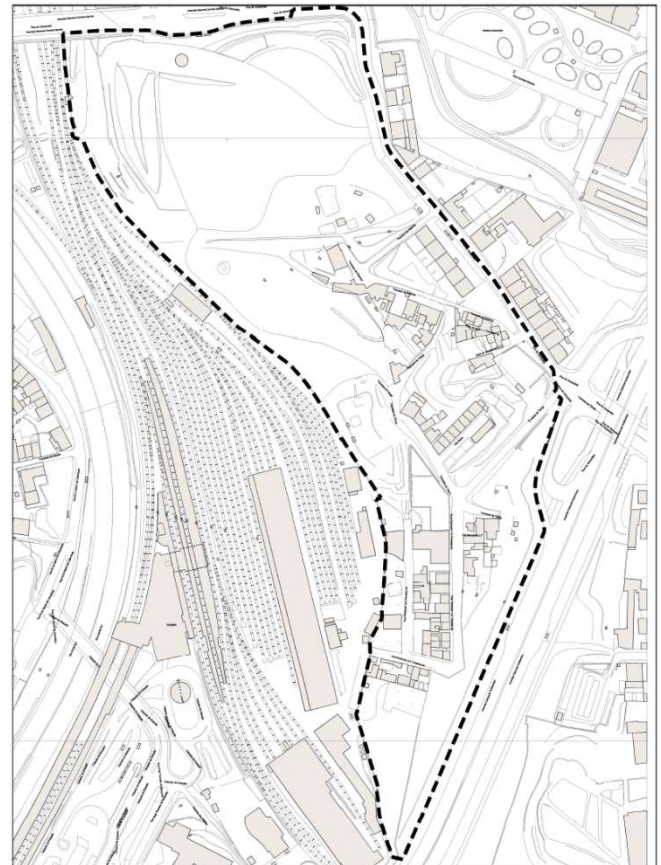
This new city layer should propose building scales and typology/typologies that result in an urban morphology consistent with a landscape unity.

Existing project site discontinuities should be solved and infrastructural barriers should be mitigated with creative solutions.

4. PROJECT GUIDELINES

4.1. FUNCTIONAL PROGRAM

The functional program for the project site should prioritize housing use, with expectation to integrate a minimum of 200 new housing units on the public property – this should be regarded as a reference number. Complementary uses may and should be proposed, considering they contribute to integrate physically and socially the existing and proposed urban morphology. All uses proposed should be clearly identified on the drawings and should be associated with urban morphology solutions; for example, public uses that punctuate the urban morphology with a collective use, should be linked to a particular landscape situation or site view or urban continuity.



Project Site: cartography of existing situation. © Lisboa City

4.2. URBAN MORPHOLOGY

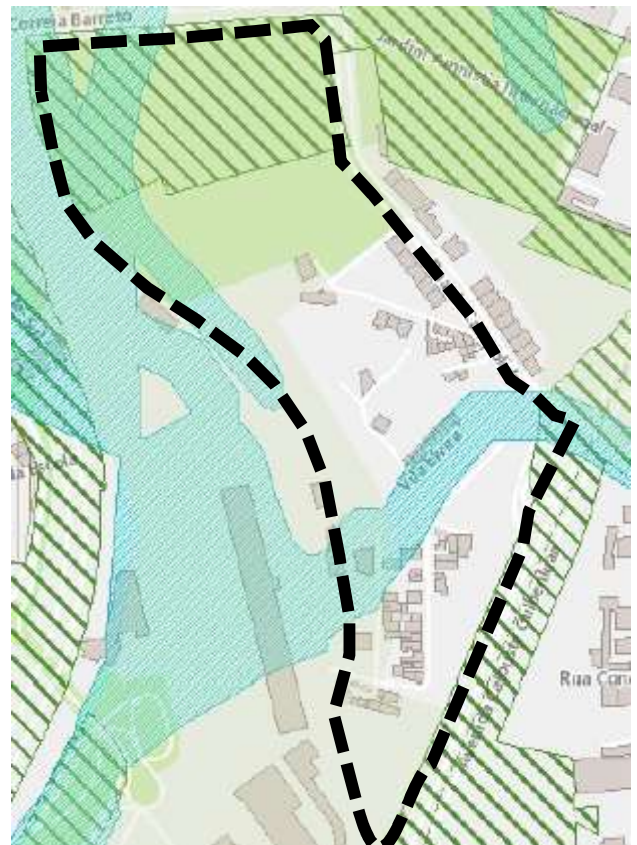
The solution should respect the municipal ecological structure, the view system and preferably, the public property. The new housing buildings to be proposed should be located on the public property part of the project site and existing buildings, public and private, would preferably be maintained. If the design concept so requires, these premises can be disregarded. However, it is important to note that greater respect for these premises will result in more feasible implementation of the design in future phases.

4.3. SUSTAINABILITY

Design solutions should be socially, environmentally, and economically sustainable. They should be in line with the Sustainable Development Goals and the New European Bauhaus principles.

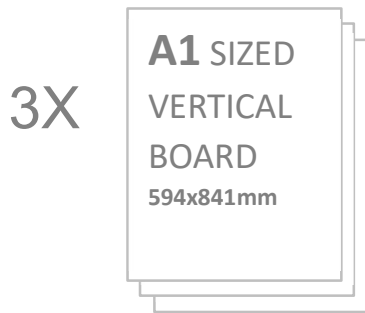


Municipal Public Property on the project site (yellow color) © Lisboa City



Municipal Ecological Structure © Lisboa City

5. SUBMISSION DRAWINGS



Please refer to point 4 of the competition rules, which details the process for submitting entries/items to submit.

On three vertical A1-sized panels, explain the urban ideas developed in the project with regards to the site issues and the thematic orientations of the session; develop the project as a whole, highlighting the architecture of the project, and particularly the relationship between the new developments and the site's existing context, including three-dimensional representations of the project; develop the method foreseen for the implementation process.

It is suggested to address the following contents, respectively:

1. Proposed solution at the scale of the Reflection Site;
2. Proposed solution at the scale of the Project Site;
3. Free composition and content.

Site plans show the project site's intervention in the context of the reflection site (panel 1); show the project site intervention at its own scale and proposed identity; include a representation of the main aspects of significance to the design concept (panel 2).

Concept and illustrations visualize the system of new elements and structures, highlighting connections and continuities. Ground-level view(s) illustrating the architectural and visual concept, including surface materials and vegetation. Show how the proposed structures adapt to different locations, including key architectural solutions, vegetation, and built elements.

Description text explain the concept outlined in the presentation panels. This text must present the ideas of the project and its relationship with the competition theme but also explain its processes and periods of implementation.

6. EVALUATION CRITERIA

The evaluation criteria of the submitted proposals will be based mainly on how it approaches/responds to the following programmatic issues:

Harvesting water as a foundational layer for urban development: how can this approach be transformed into an advantage and an effective starting point for shaping the site and city of tomorrow?

Does the proposed design succeed in creating new ways to use natural resources wisely in the built environment and boost ecological balance between natural flows and urban needs?

Does the proposed design succeed in creating an opportunity for the development of a new city centrality?

Does the urban morphology create a balance in terms of the proposed scales and uses, thereby fostering walkability and human scale interactions?

Do the proposed typologies represent adequate programmatic solutions?

Does the proposal establish effective connections between urban areas? Is the green city structure reinforced in the landscape solution?

Does the proposed design succeed in promoting a sustainable, beautiful and inclusive future while providing housing and habitat?

Is a new site identity proposed in this new city layer?

The competition proposal will be assessed primarily on its overall design, functionality, quality, and feasibility of development, rather than strictly adhering to individual evaluation criteria.



7. JURY COMPOSITION

In this edition, the national structure comprises the Portuguese Ordem dos Arquitectos, which coordinates the Lisbon/Campolide site competition as an associate of European Spain for the evaluation process, in accordance with the common theme, rules and calendar.

The Lisbon site entries will therefore be assessed by the Spanish jury, which includes a member appointed by the Ordem dos Arquitectos. The composition of the referred jury is as follows:

EUROPAN 18 SPANISH JURY

Representatives of the public or private order

Iñiqui Carnicero General Secretary Ministry of Housing and Urban Agenda _ www.mivau.gob.es/el-ministerio/biografia-de-altos-cargos-vivienda-agenda-urbana/secretario_general_agenda_urbana_vivienda

Xavier Monteys (ES) Architect, Professor _ www.cccb.org/en/participants/file/xavier-monteys/6949

Representatives of architectural and urban design

Fernanda Canales (MX) Architect _ www.fernandacanales.com

Ana Luisa Soares (PT) Architect _ Fala Atelier _ www.falaatelier.com/

Nader Tehrani (US) Urban Planning and Design _ www.nadaaa.com

Pascale Hannetel (FR) Landscaper _ www.hyl.fr

Débora Mesa (ES) Architect _ www.ensemble.info

David Lorente (ES) Architect _ Harquitectes _ www.harquitectes.com

Rui Florentino (PT) Architect, Professor at Portucalense University (UPT), Department of Architecture and Multimedia Gallaecia, and Researcher in the UPT branch of CIAUD, in urbanism and planning / appointed by the Ordem dos Arquitectos

Public figure

Fabrizio Gallanti (IT) Curator and architect. Director of arc en rêve – centre d'architecture, in Bordeaux _ www.arcenreve.eu

Substitutes

Catalina Salvà, Architect, winner in EUROPAN 14, 15 and 16 _ www.salvaortin.com

António Laúndes (PT) Architect, Ordem dos Arquitectos

8. USEFUL LINKS

PROJECT SITE ANALYSIS

The results of the site analysis are drawn from a study that was presented in July 2020. The study was elaborated by the Municipal Department of Urban Planning, Department of Urban Planning, Territorial Planning Division from the Municipality of Lisboa. The study presented on the link is the source of chapter 2 information.

https://www.lisboa.pt/fileadmin/portal/temas/urbanismo/reabilitacao_urbana/operacoes_reabilitacao/rua_campolide/aru_RuaCampolide_apresentacao.pdf

CURRENT CONSTRUCTION SITE (CAMPOLIDE MAJOR WORKS)

https://planodrenagem.lisboa.pt/fileadmin/pgdl/locais/campolide/Estaleiro_Campolide_TM1.pdf

LISBOA DRAINAGE GLOBAL PLAN

https://planodrenagem.lisboa.pt/fileadmin/pgdl/_ficheiros/Brochura_PGDL_eng.pdf

<https://planodrenagem.lisboa.pt/>

CANEIRO DE ALCÂNTARA HISTORY

<https://informacao.lisboa.pt/reportagens/caneiro-de-alcantara>

ÁGUAS LIVRES AQUEDUCT HISTORY

<https://www.epal.pt/EPAL/en/menu/water-museum/permanent-collection-and-associated-heritage/%C3%A1guas-livres-aqueduct>

LISBOA GIS VISUALIZER

<https://websig.cm-lisboa.pt/MuniSIG/visualizador/index.html?viewer=LxInterativa.LXi>

SUSTAINABLE DEVELOPMENT GOALS

<https://sdgs.un.org/>

NEW EUROPEAN BAUHAUS

https://new-european-bauhaus.europa.eu/index_en

Main credits: Urban Studies Division from Department of Public Space from Urban Planning Direction. @ Lisboa City



PGDL Cistern and Campolide-Santa Apolónia tunnel under construction. 2025 © Lisboa City