

LISBON WATERFRONT

CONTEMPORARY BUILDINGS AND PUBLIC SPACES 1991-2021

Lisbon and the River Laboratory
Final Architecture Project 2020-2021
Integrated Master in Architecture
Department of Architecture and Urbanism
Iscte - University Institute of Lisbon
CRIA-Iscte, DINÂMIA'CET- Iscte
Lisbon, February 2022

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Since its foundation, the river's presence it's a distinctive mark of the city of Lisbon. The relationship between the river and the city provides a large investigation field for Architecture and Urbanism.

Within the ambit of the Lisbon and the River Laboratory for Final Architecture Design 2020/2021 of the ISCTE-IUL's Integrated Master in Architecture, we proposed to investigate existing examples of large projects of Portuguese Architecture located on the riverfront. These projects, notably, came and transformed the city. These constructions, as referred by Graça Dias (Graça Dias, 2015) take place after a long tradition in positioning "large items" along the riverfront, such as the Jerónimo's Monestary (XVI century), Comércio's Square (second half of the XVIII century), Cordoaria Nacional (1779), Central Tejo (1909), and the Portuguese Industries Fair, now named

Congress Center (1957). Moreover, as a consequence of the post-industrial city, and as a result of Expo'98 urbanistic operation, the city of Lisbon, in the early 2000's was set to solve the necessity of a new vision for its large accessibility infrastructures and for its harbor superstructures" (Ferreira, 2016:85), as well as, re-relate Lisbon with the river (Trigueiros, 1998).

"The ideas contest (1988), the design and construction of Belém's Cultural Center (1988-92), the Strategic Plan and Municipal Master Plan (1990-94), the POZOR – Riverside Area Development Plan (1993-94), and the decision to hold the Expo'98 event in the oriental part of the city, are important milestones and recent evidences of a turn in the way we perceive the relationship between the city and the river, as well as an opportunity to rethink Lisbon as a riverfront city" (Soares, apud Trigueiros et al., 1998:19).

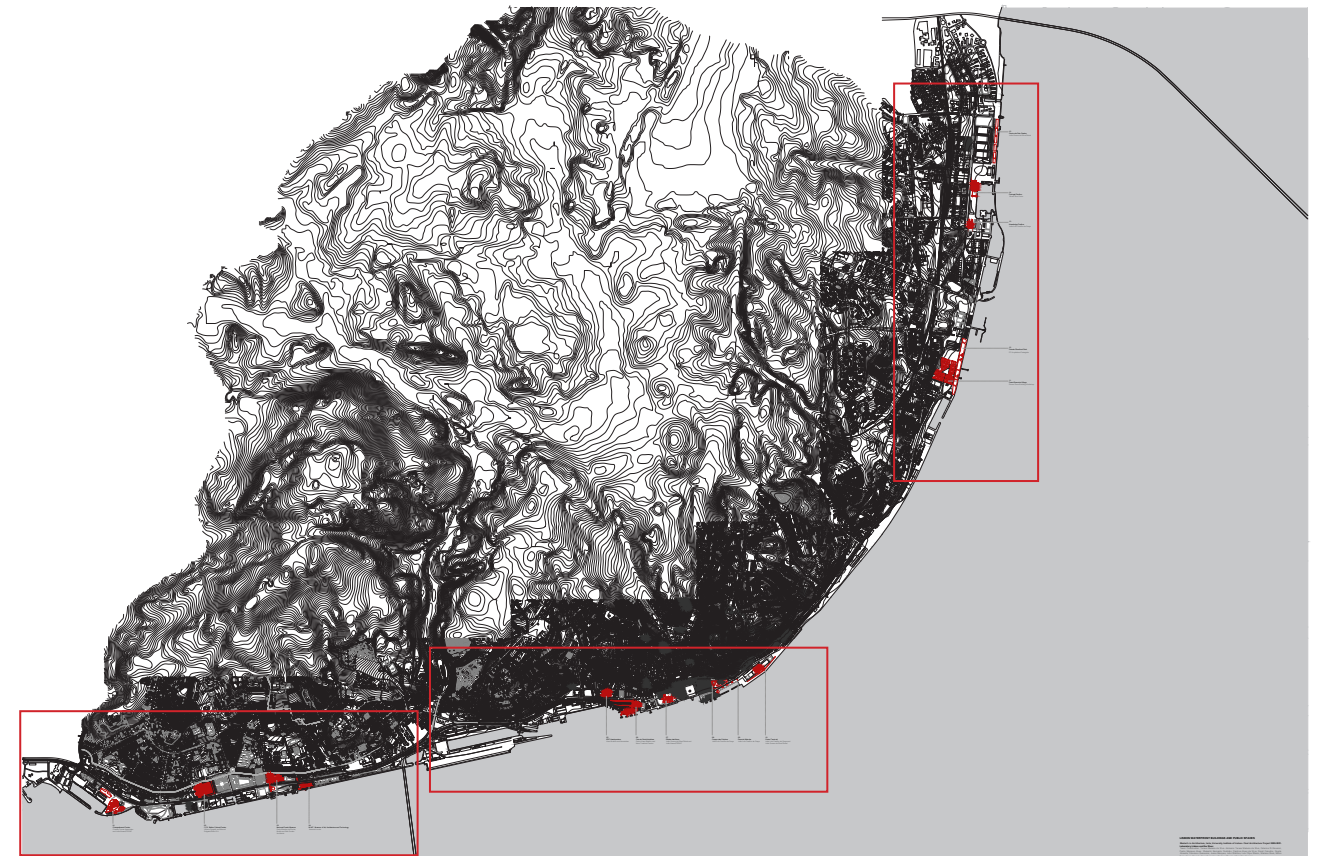


Figure 1 Lisbon map with indication of areas 1, 2 and 3 (Adapted by the students of the Lisbon and Rio Laboratory).

It this context, in what once were deactivated and obsolesces harbor industrial areas, took place the construction of important cultural equipment's and public space arrangements. These caused compelling effects to the transformation of the city.

Just like in other cities, in the 1990's, there was an urban policy trend to value the installation of cultural equipment's, "as a result the cities were looking up to affirm themselves as cultural "brands"" (Mota, 2016:7). In that sense, "the restructuring and revitalizing of the city reaches its peak with the construction of cultural equipment's, seen as generators of sociocultural values, capable of rebranding the city, defining themselves as architectural landmarks". (Mota, 2016)

In Lisbon, along the riverfront we have several examples of new configurations set around cultural or services equipment's: Belém's Cultural Center (CCB), designed by Vittorio Gregotti and Manuel Salgado / Risco between the 1980's and 1992; the Knowledge Pavilion, designed by João Luis Carrilho da Graça, and Portugal's Pavilion, designed by Siza Vieira, both built in the context of the Expo'98; the Champalimaud Center, designed by Charles Correa, finished in 2010; the Coche's Museum, designed by Paulo Mendes da Rocha and Bak Gordon Architects, fi-

nished in 2015; and, more recently the Museum of Art, Architecture and Technology, designed by Amanda Levet's AL_A office, finished in 2016.

The study that resulted in the current e-book, designated Contemporary Buildings and Public Spaces in Lisbon's Riverfront, considered 4 topics for analysis: a) the building implementation, b) its relation with the surroundings (views, topography and relation with the outside public spaces), c) the form and figure, and, d) the scale relation between the building and the pre-existing buildings in its surrounding.

The theoretical body consists of two dimensions: a) bibliography and iconography about great interventions in Lisbon's Riverfront, based on references from authors that have focused on the theme of Lisbon's transformations and it's riverside, such as Salgado (s.d.), Salgado e Lourenço (2006), Aires Mateus et al. (2005), Carrilho da Graça (2015, Dias 2016, 2018, 2020), Ressano Garcia (2008, 2009), Lisbon's Harbor Administration (APL 1987, 2008), Lisbon's Municipal Office (CML 2008); and, b) bibliography and graphic material over the selected case study projects, some of them from the websites of the architects who designed them, such as Proap, Global, Bak Gordon, Carrilho da Graça, Siza Vieira, or, from the institutions

that occupy these buildings, like Centro Champalimaud and MAAT. We must also highlight the monographs about Expo'98 (Trigueiros et al. 1996, 1998), Nuno Grande's CCB investigation (2018), the Architectural Guides of Álvaro Siza Vieira and Carrilho da Graça, edited by Melo and Toussaint and with texts by Sequeira and Toussaint (Melo et al. 2017, 2019), and, about Coche's Museum, the monograph coodenated by José Manuel das Neves (2015), as well as the Doctoral Thesis by Nuno Tavares da Costa (Costa 2020), among others.

The approach method was largely based on the redrawing of the architectural designs, using different sources: current and historical cartography of the intervention areas, photography of this areas (before, during and after the construction), design plans, primary and secondary bibliography, and, observation. Visiting the buildings and their surroundings, in the riverfront and from the river, allowed us to deepen the topics we've proposed to study, and to build different viewpoints about the study area.

We set a theoretical frame for each of the study cases. This frame was based on historical elements and data collection that informs the technical sheet of each of the interventions. Because all interventions are built on the current riverfront, on

landfills, 3 maps were fundamental to understand how these city areas were occupied and how the waterline as changed over the years: the historical map of Filipe Folque from 1856-58, the historical map of Silva Pinto from 1904-11, and a more recent map of Lisbon's Municipal Office, from the 1980's.

The comparison of the territory thru these maps allowed us to observe the constructions of the landfills, and, more recently, how the transformations that occurred in the industrial areas of Lisbon's harbor resulted in border line areas between the old city and the river. In this border line areas the waterline moves back and forth. The city "draws" the river (Aires Mateus, et al., 2005) with its own identity.

The study area it's defined on the west side by the Champalimaud Centre, and, on the east side by Parque das Nações. It was also divided in three areas:

In the AREA 1 (west side) we have studied four buildings: 1) the Champalimaud Centre, located in Brasilia Avenue, at Pedrouços, Belém, designed by Charles Correa and João Nunes / Proap in 2004 and built between 2008 and 2010; 2) Belém's

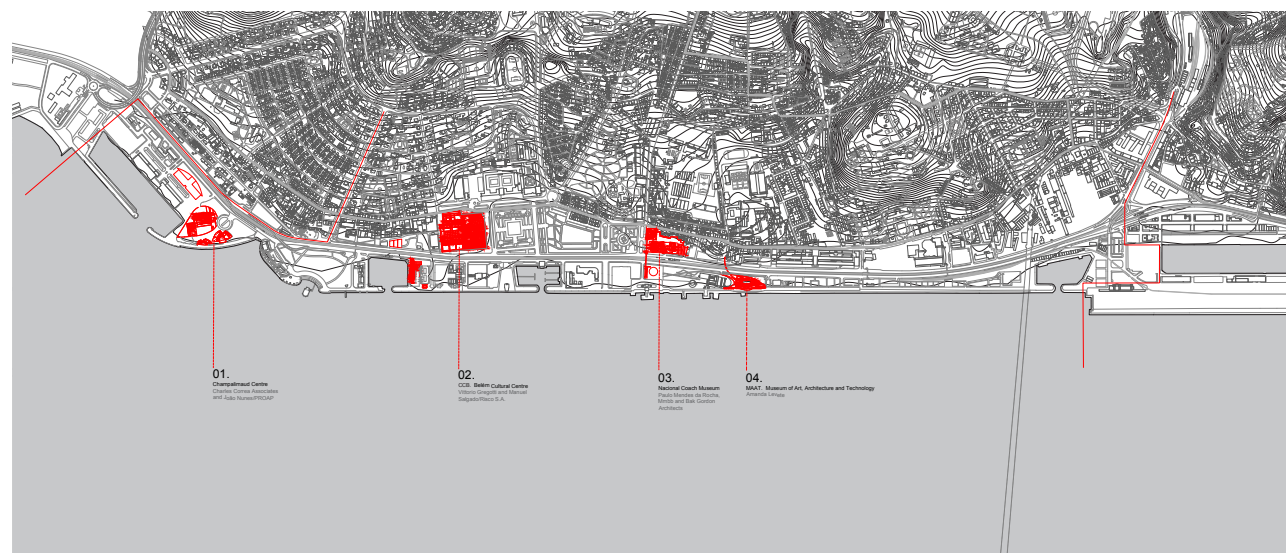


Figure 2 AREA 1, west side. 01. Champalimaud Centre, 02. Belém Cultural Centre, 03. Coches Museum, 04. Museu of Art, Architecture and Technology. (Adapted by the students of the Lisbon and the River Laboratory).

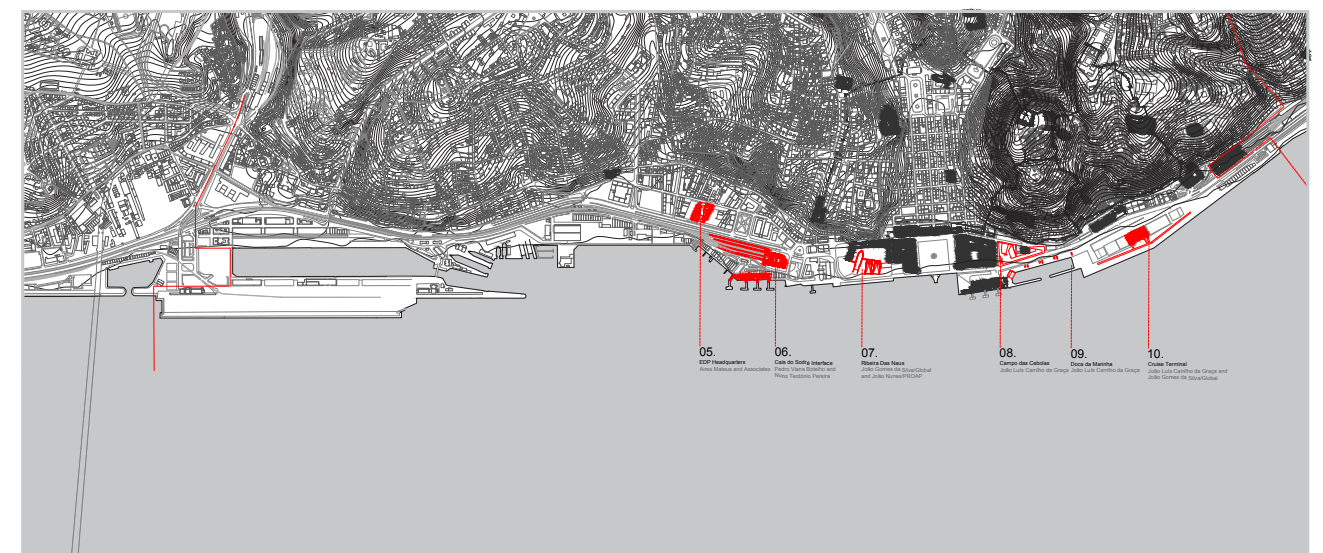


Figure 3 AREA 2, centre side. 05. EDP Headquarters, 06. Cais do Sodré Station, 06. Ribeira das Naus, 06. Campo das Cebolas, 07. Marinha Dock, 08. Cruise Terminal, 09. Casa da Música, 10. Casa da Música. (Adapted by the students of the Lisbon and the River Laboratory).

Cultural Centre (CCB), located in the Imperio's square, next to the Jerónimo's Monestary, designed by Vittorio Gregotti / Gregotti Associati e Manuel Salgado / Risco, SA in 2008, and built in 1992; 3) the Coches Museum, located in Índia Avenue, in Belém, designed by Paulo Mendes da Rocha, MMBB e Ricardo Bak Gordon in 2008, and built in 2015; e, 4) the Museum of Art, Architecture and Technology (MAAT), located in Brasília Avenue, in Belém, designed by Amanda Levet, between 2011 and 2013, and built between 2015 and 2016. (figure 1)

In the AREA 2 (centre) we have studied three buildings and three public spaces: 1) the EDP headquarters, located in 24th of July Avenue, designed by Aires Mateus e Associados in 2008 and built in 2015; 2) Cais do Sodré Station, located in the Duque de Terceira's square, designed by Pedro Botelho and Nuno Teotónio Pereira between 1993 and 1997, and between 1998 and 2004, and built in 2009; 3) the public space Ribeira das Naus, located in the old shipyard between Cais do Sodré and Comércio's Square, designed by João Gomes da Silva / Global and João Nunes / Proap between 2009 and 2015; and, three interventions designed

by João Luis Carrilho da Graça, 4) Campo das Ce-bolas, located in Infante D. Henrique Avenue, designed in 2010 and built between 2012 and 2013; 5) Marinha's Dock located in Infante D. Henrique Avenue, designed in 2018 and built in 2020; and, 6) Cruise Terminal, located in Jardim do Tabaco Dock, designed in 2010 and built in 2018. (figure 2).

In the AREA 3 (east side) we have studied one housing complex, two cultural buildings and two public spaces: 1) the Braço de Prata Housing Complex, designed by Renzo Piano between 1996 and 2016, built between 2017 and 2020; 2) the Orient Riverfront Park, designed by Filipa Cardoso de Menezes e Catarina Assis Pacheco in 2017, built between 2018 and 2020; both located at the Cintura do Porto Street, Braço de Prata; 3) the Knowledge Pavilion, located at José Mariano Gago Square, designed by João Luis Carrilho da Graça in 1995, built between 1997 and 1998; 4) Portugal's Pavilion, located at Oceanos Alameda, designed by Álvaro Siza Vieira in 1995, built between 1997 and 1998; and, 5) Garcia da Horta Garden, located at Pimenta Street, designed by João Gomes da Silva / Global in 1994, built in 1998; the last three located at Parque das Nações. (Figure 3).

In the context of this investigation, the students participated in the "International Conference 'Grand Projects - Urban Legacies of the late 20th Century'", (coord. Paulo Tormenta Pinto, DINÂMIA'CET-Iscte). The presentation session took place on February 17, 2021 and the Conference published the work developed in English (our translation), called "Lisbon Waterfront Buildings and Public Spaces", accessible on the conference website at: <https://www.grandprojects2021.com/side-event>

A proposal for a scientific article entitled "Major Projects in the Riverside Zone of Lisbon: Image, Identity and Content" was also sent to the journal *Cidades, Comunidades e Territórios* and is awaiting peer review.

As guiding mentor of the students involved in this investigation's development, I want to express our interest and commitment while studying the city of Lisbon, its riverfront and the relation between the city and the river. I must highlight the excellent team work developed by the students in order to make this investigation.

I also want to highlight that the support of the co-mentors Caterina Di Giovanni and Pedro Marques Alves were crucial for the work developed. Part of this investigation took place during the Covid 19 confinement. Naturally, this brought difficulties of access to archives and to the inside of some of the studied buildings. On the other hand, much of the archive's material is now published and accessible thru websites. On a certain way, this worked as way to fill the gap set by this difficulty.

This e-book is not an exhaustive investigation about Lisbon's riverfront, but, allows us to make contact whit several examples of existing contemporary architecture in Lisbon, therefore, informing the development of future research and investigation within the ambit of Architecture and Urban Studies.

Teresa Madeira da Silva
Lisbon, february 2022

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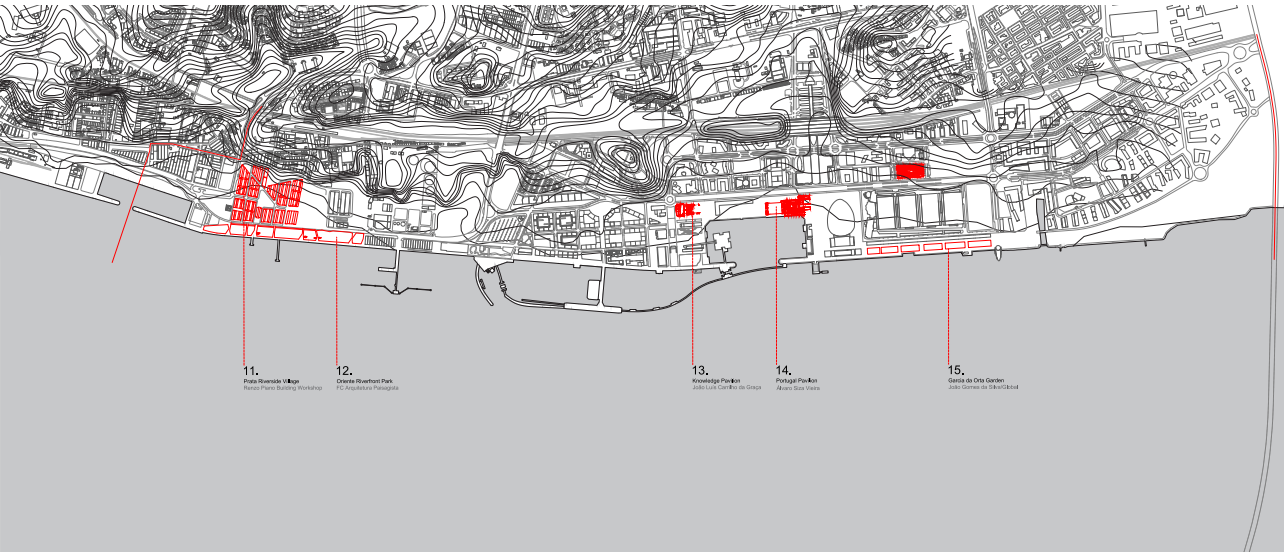


Figure 4 AREA 3, east side. 09. Braço de Prata Housing Complex, 10. Orient Riverfront Park, 11. Knowledge Pavilion, 12. Portugal Pavilion, 13. Garcia da Orta Garden. (Adapted by the students of the Lisbon and the River Laboratory).

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01

CHAMPALIMAUD CENTRE

CHARLES CORREA ASSOCIATES + JOÃO NUNES/PROAP



01 View to the Tejo riverside of the Champalimaud Centre (Carolina Alves da Silva, 2020)

38°41'35"N, 9°13'18"W

01

CHAMPALIMAUD CENTRE CHARLES CORREA ASSOCIATES + JOÃO NUNES/PROAP

ARCHITECT

Charles Correa

CLIENT/PROMOTER

António de Sommer Champalimaud

TEAM

Architecture: Charles Correa Associates, Sachin Agshikar, Manas Vanwari, Dhaval Malesha, Glinntt (responsible), João Pedro Fernandes Abreu, Paulo Daniel Amorim Teixeira (Lisbon)

Landscape: Proap, João Nunes, Inaki Zoilo, Marta Palha, Mafalda Silva, Mariana Sargo, Rui Sequeira, Federico Molfetta, Jan Derveaux, Sara Ratola, Isacco Rama, António de Magalhães Carvalho

PROJET DATE

2004

CONSTRUCTION DATE

2008-2010

LOCATION

Brasília Avenue, Pedrouços, Belém, Lisbon

SITE AREA

60 000 m²

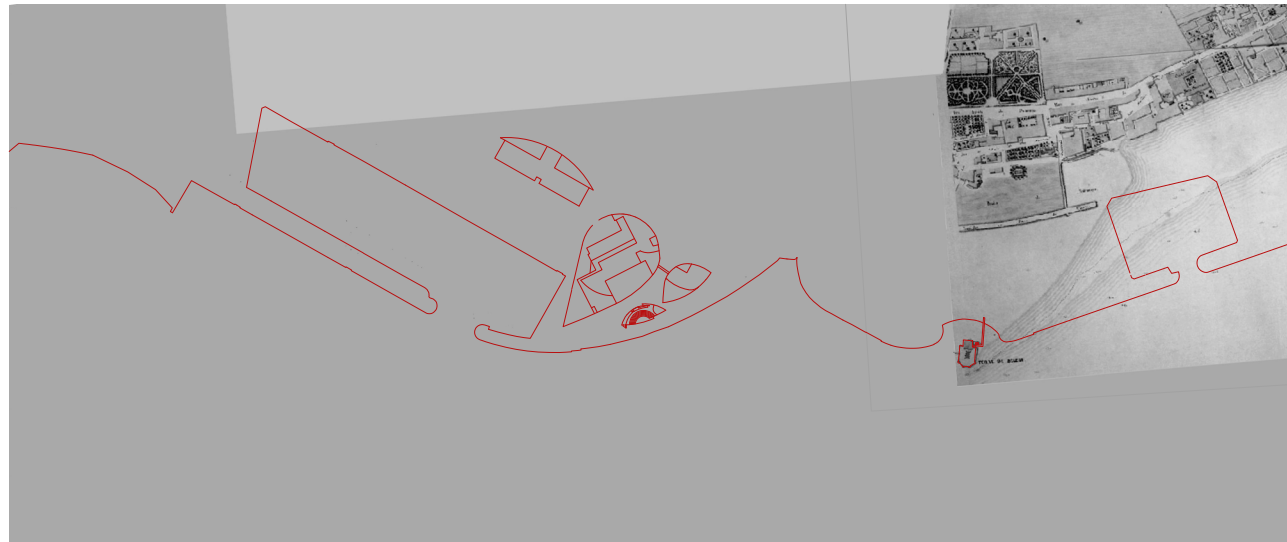
PUBLIC SPACE AREA

40 000 m²

AWARDS

Honorable Mention Valmor and Municipal Architecture Award (2011)





02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

The Centre is characterized as a complex of public fruition, where the outdoor spaces were designed to be enjoyed by everyone. The set formed by the public walk which gently slopes forward to reveal the sea, the outdoor amphitheatre and the water mirror are already part of the city's heritage. It gave back to the city wide garden areas for pedestrian circulation, which surround the buildings and accompany them along the river. Perfectly integrated with the surrounding environment, the green spaces seek to continue the will to renovate Lisbon's riverfront area. (Fundação Champalimaud, n.d.) Charles Correa explains in an interview with the newspaper Público: "What we did was to let the public spaces complement the private spaces. I think it is a stance similar to the ying-yang of Chinese philosophy, in which both parts are independent and, at the same time, complementary" (Milheiro, 2010).

When arriving at the Champalimaud Centre people are welcomed by the Anna Sommer Garden. The Garden was named after the Founder's mother and includes a wide green space, without fences, for the benefit of all. The shadows cast by the trees give shelter, the stone paths guide the walk, and the green involves and returns this area to the public. (Fundação Champalimaud, s.d.) This requalification guarantees, on the other hand, a total permeability of pedestrian circulation between the Brasília Avenue and the river, but it also gives continuity to the system of pedestrian and cyclical circulation along the river (PROAP, n.d.).

The project stands out in the landscape because of its dimension and irregular shape (Vieira, 2018). It consists of three volumes: two buildings and an outdoor amphitheatre. The main volume, where the first building is located, is of restricted access and occupies the largest area of the land. The second building is intended for a community use, in which we can find a temporary exhibition area, an auditorium and a restaurant, the Darwin's Cafe. (Fundação Champalimaud, n.d.).



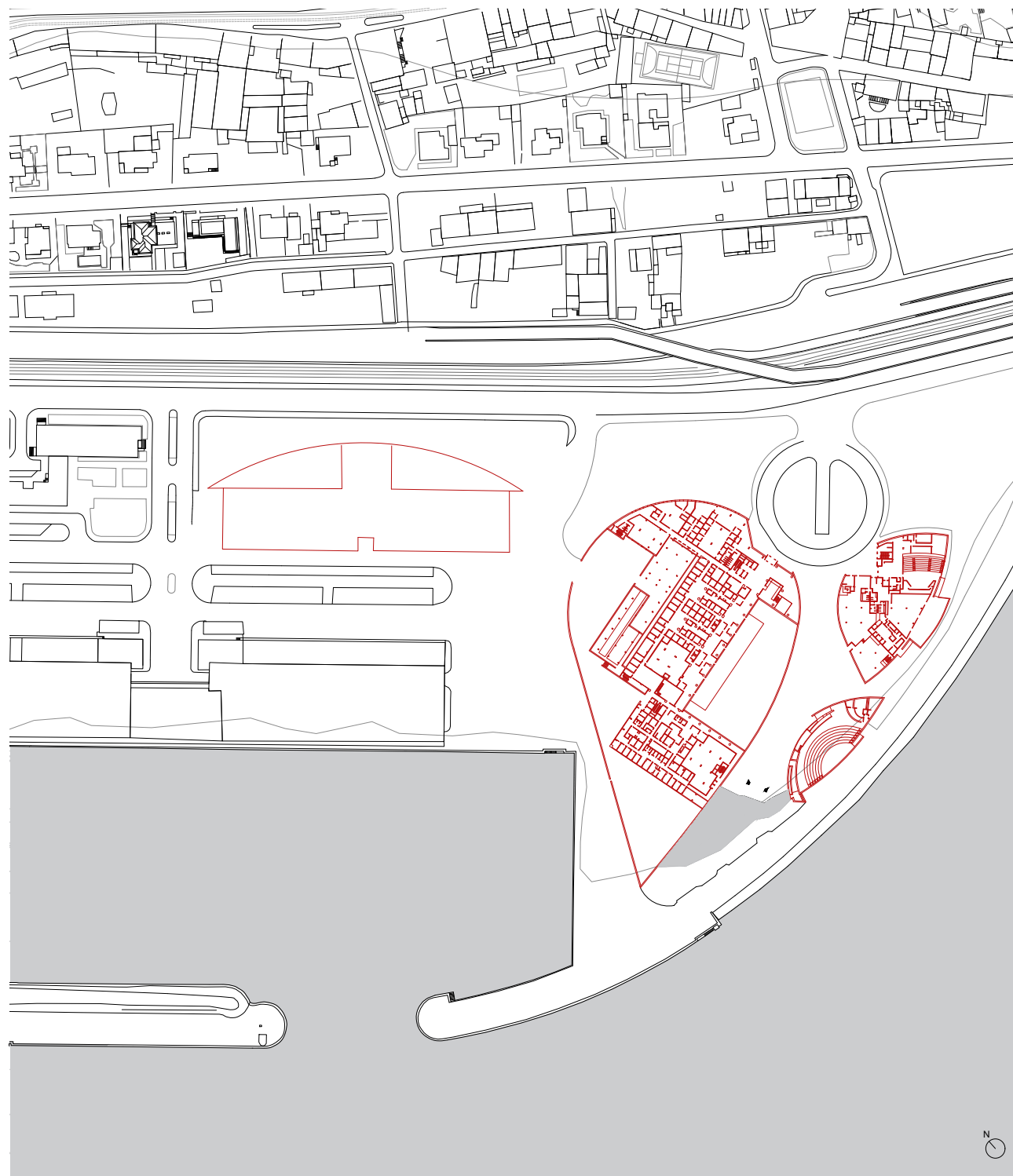
05 Construction of the Champalimaud Centre (Grupo confrasilvas, n.d., adapted)



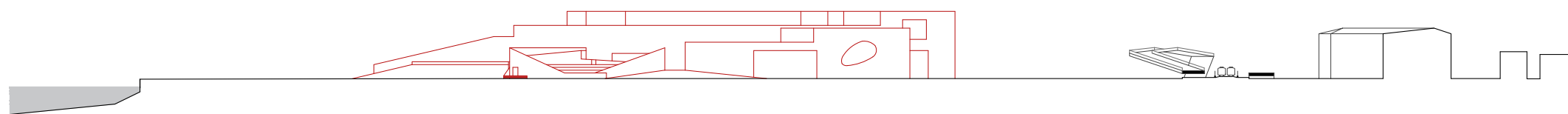
06 Construction of the Champalimaud Centre, (Grupo confrasilvas, n.d., adapted)



07 Construction of the Champalimaud Centre (Anon. in Fundação Champalimaud, n.d., adapted)



08 Site Plan



09 Elevation

The two buildings of the complex are connected by a glazed tube, a walkway over the public space, “a piece of jewellery that German engineers designed”, according to Charles Correa. Inside the buildings there is a flow in the circulation, as the spaces communicate with each other, which creates a rich and complex internal environment. (Fundação Champalimaud, n.d.). The third volume, the amphitheatre, is integrated in the public space facing the river and the “implantation follows the curve of the public promenade that was already there”. (Milheiro, 2010)

The inside tropical garden of the Champalimaud Centre is the most remarkable area of the main building. According to Charles Correa, he imagined it “(...) as a tropical forest, dense as a jungle, with butterflies and snakes”. (Milheiro, 2010) It is covered by a pergola and surrounded by a glass facade, which creates an ideal microclimate for the development of species originating from Brazil, Africa, India, Timor and the Far East. A path guides the way through this tropical and exotic environment, punctuated with rest areas inviting to a pause. This Garden is a space of conditioned public usage allowing, when possible, people to enjoy the luxurious green surroundings and the tranquillity of a space designed for everyone. (Fundação Champalimaud, n.d.)

It is also in the same volume where the main building is located, that one can find the Zen Garden. The Garden is for the benefit of the users of medical care, and it was especially designed for patients to receive their treatment in an environment that seeks to promote serenity and well-being. Due to the serenity provided by this place, the space is much more than a garden, it is nature at the service of therapy. (Fundação Champalimaud, n.d.)



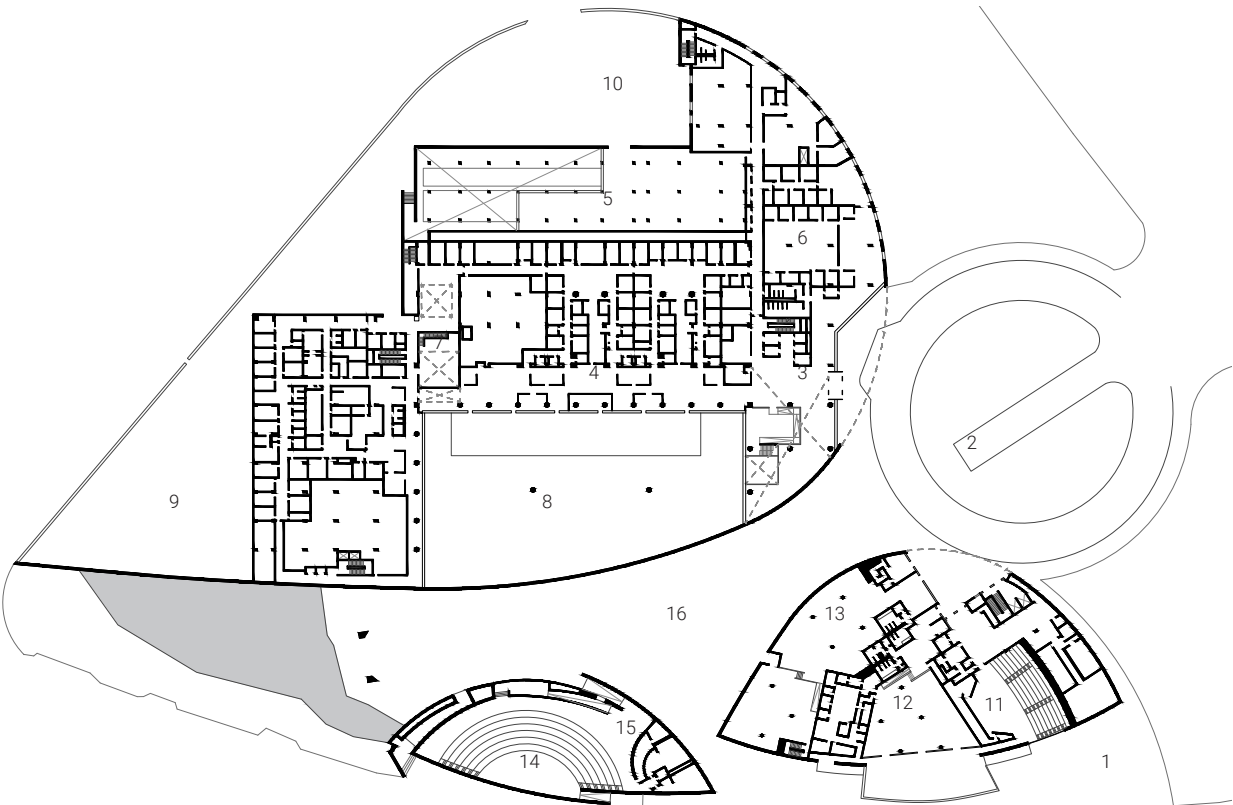
10 Water at the end of the sloped walkway, appearing to flow into the sea (Afonso Gonçalves, 2021)



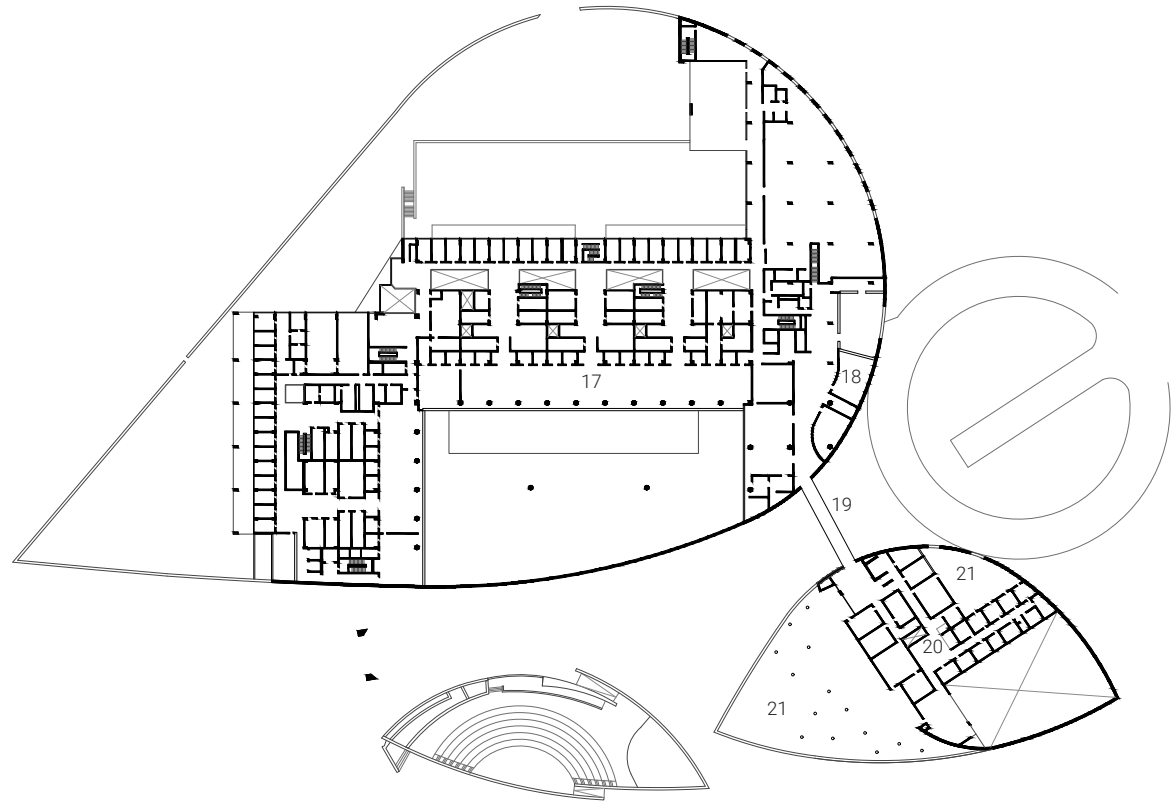
11 Window detail overlooking the Tropical interior Garden (Carolina Alves da Silva, 2020)



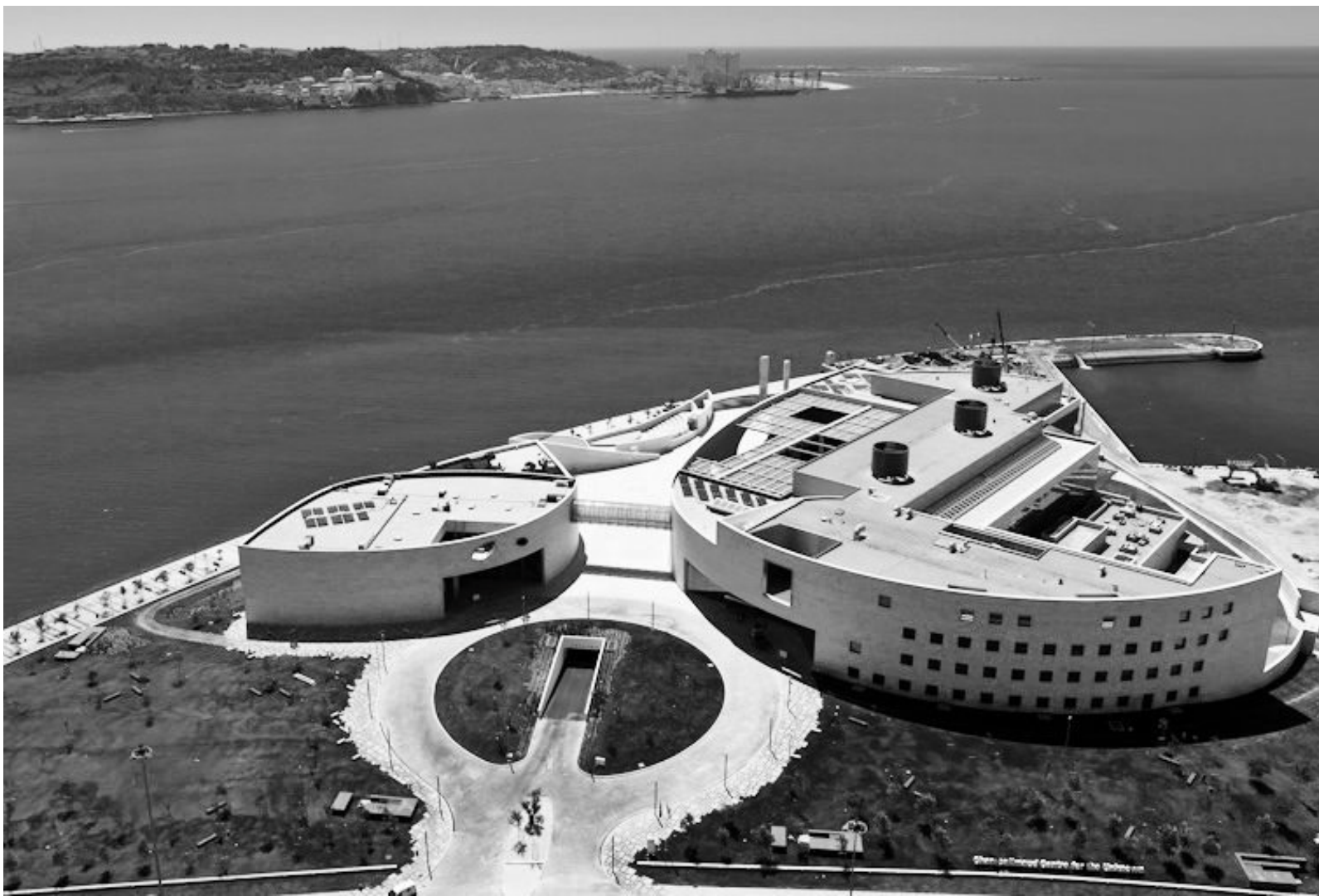
12 Darwin's Café outside (Carolina Alves da Silva, 2020)



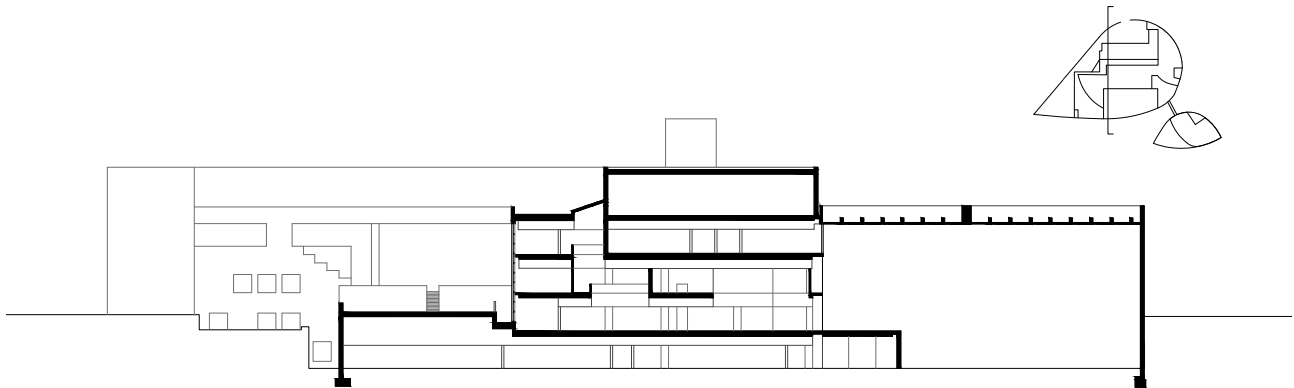
13 Floor Plan 0. 1 - Anna Sommer Garden, 2 - Garage Entrance, 3 - Reception, 4 - Waiting area, 5 - Vivarium, 6 - Administration, 7 - Library, 8 - Tropical Interior Garden, 9 - Zen Garden, 10 - Service Entrance, 11 - Auditorium, 12 - Darwin's Cafe, 13 - Exhibition area, 14 - Amphitheatre, 15 - Bar, 16 - Public space



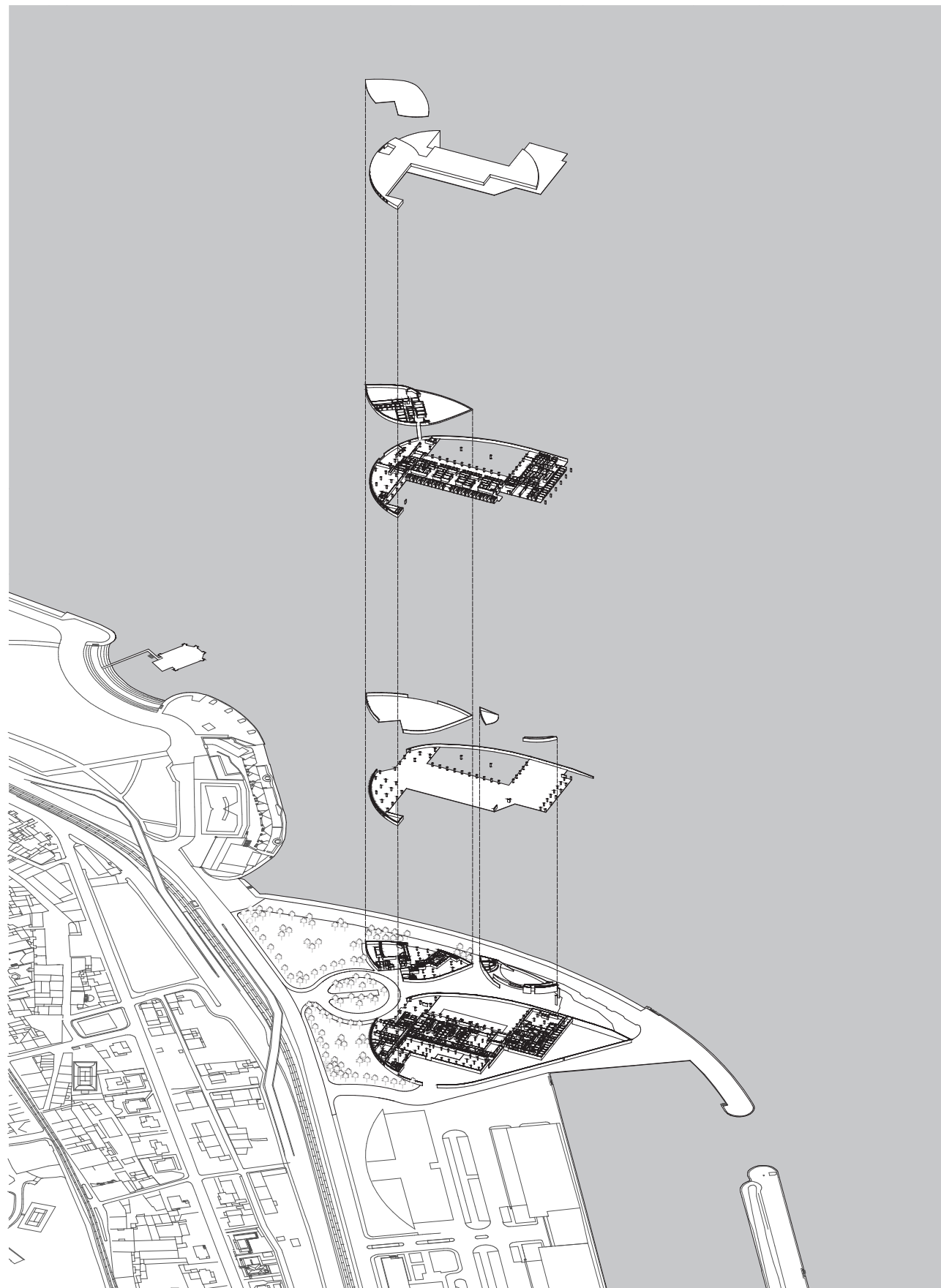
14 Floor Plan 2. 17 - Laboratories, 18 - Meeting rooms, 19 - Glass Bridge, 20 - Foundation Offices, 21 - Terrace garden.



15 Bird's-eye view of the Champalimaud Centre (Anon., n.d., adapted)



16 Section



17 Axonometry

In the second building is the Champalimaud Centre's Auditorium, with a prime location, the large ellipse window overlooks the Tejo River and the Belém Tower. In the same building, next to the auditorium is the Darwin's Café, which benefits from a privileged location on the riverfront. The windows facing the river invite to contemplate the view of the Tejo River. The Exhibition Centre, which was specially designed to host exhibitions and events, is located next to the Auditorium and the Darwin's Café. (Fundação Champalimaud, n.d.). One of the most striking architectural elements in the Champalimaud Centre is its outdoor amphitheatre. Its shape, was inspired by the ancient Greek arena theatres, benefiting from a unique acoustic that characterizes this type of space for hosting shows. Facing the Tejo River, it reaches the water and meets on the other side of the riverbank the neighbouring Porto Brandão and Trafaria, which captures the sights of those who walk by or stay there. Looking to the distance, the framework given by the Belém Tower, the 25th of April Bridge and Cristo Rei transform this place into a true postcard of Lisbon. "Sunrise and sunset have their best stage and audience here." (Fundação Champalimaud, n.d.).

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18 Window overlooking the Tropical Interior Garden (Carolina Alves da Silva, 2020)



19 Inside the Auditorium (António Barreto, 2016)



20 Outdoor amphitheatre (Carolina Alves da Silva, 2020)

“Architecture as sculpture. Architecture as beauty. Beauty as therapy.”
(Architect Charles Correa, 2010 in Fundação Champalimaud, n.d.)



21 View from the Tagus riverside to the Champalimaud Centre (Carolina Alves da Silva, 2020)

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Shtefura, Luís Filipe Ribeiro, Mariana Rosa, Milton Perry, Nuno Almeida, Nuno Bernardes, Rodrigo Oliveira, Vilma Nico Ferreira.
Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

02

CCB. BELÉM CULTURAL CENTRE
VITTORIO GREGOTTI + MANUEL SALGADO

38°41'45.65"N, 09°12'27.07"W

02

CCB. BELÉM CULTURAL CENTRE VITTORIO GREGOTTI + MANUEL SALGADO

ARCHITECTS

Vittorio Gregotti / Gregotti Associati, SRL
Manuel Salgado / RISCO, SA

CLIENT/PROMOTER

State Secretariat of Culture
“Descobertas” Foundation

TEAM

Architecture: Gregotti Associati, Atelier RISCO
Landscape Architecture: Francisco Caldeira Cabral
Sturctural Project: Segadães Tavares & Associados
Interior Design: Daciano da Costa

PROJECT DATE

1988

CONSTRUCTION DATE

1992

LOCATION

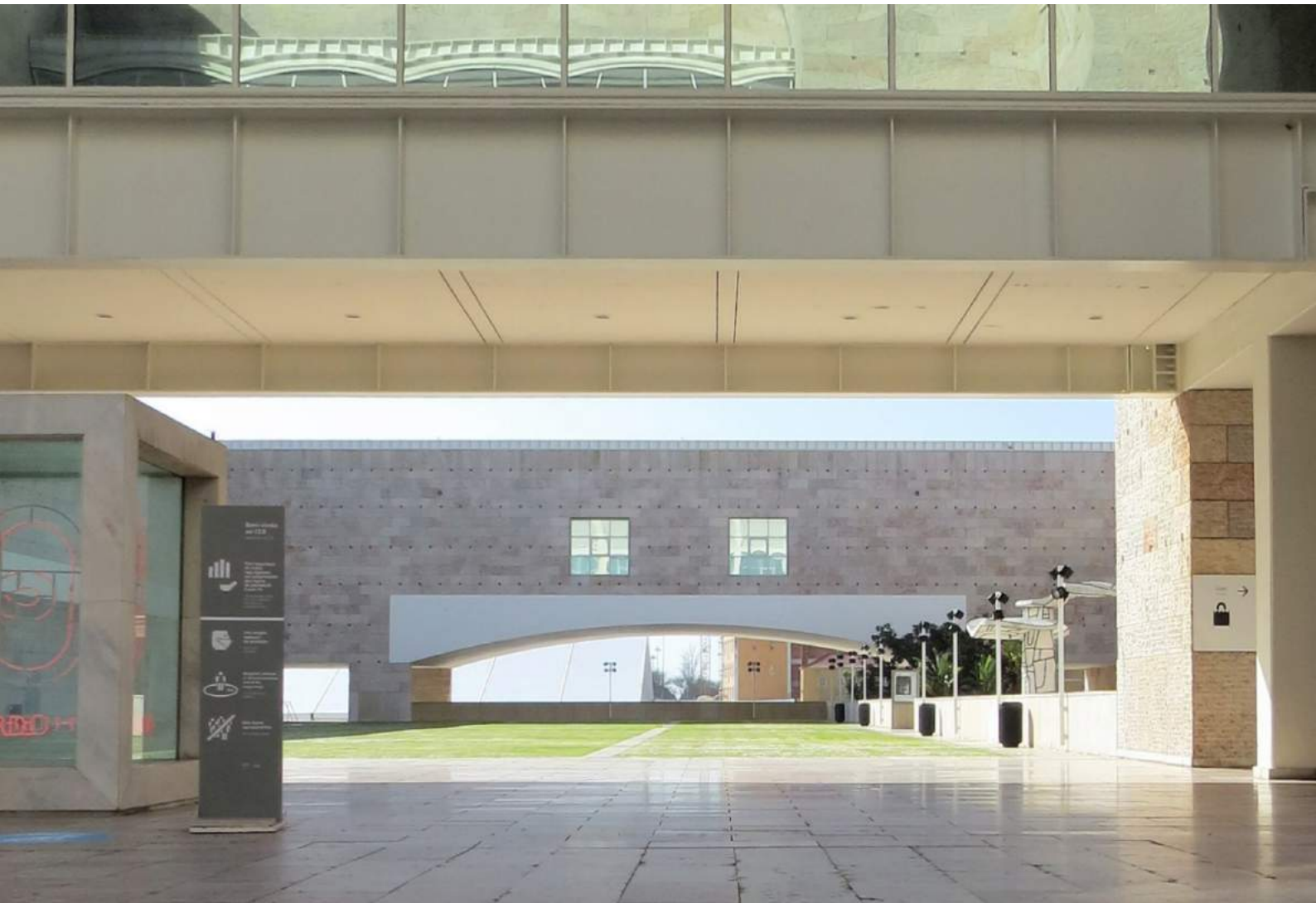
Praça do Império, Belém, Lisboa

CONSTRUCTION AREA

140.000 m2

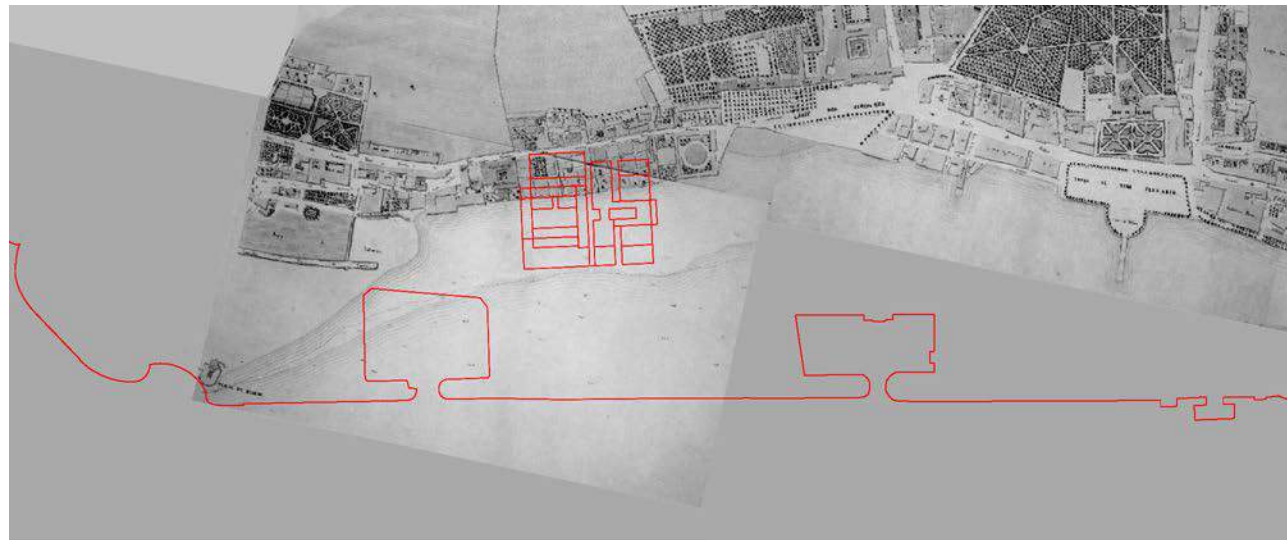
AWARDS

International Stone Architecture Award (1992)
Monument of Public Interest (2002)



01 CCB. View of the project's central square. (Madeira da Silva, 2020. Adapted by Nuno Almeida, 2020)

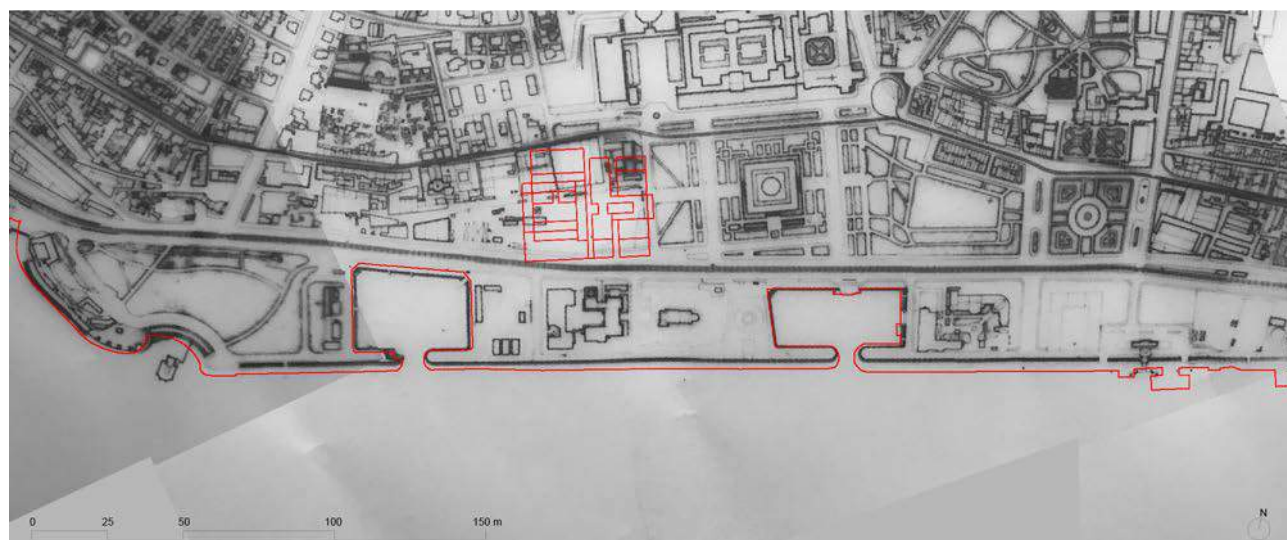




02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

After 1940, all the pavilions referring to the exhibition were destroyed and this area in Belém went into great disrepair, left almost abandoned and serving the Lisbon City Council as a construction site for the city (Santos, 2008).

The competition was composed of a multi-disciplinary jury made up of prominent national and international names, the competition was very competitive, and 53 projects were received in the first phase.

Six proposals went to a final stage: from the French Jean Tribel and Jean Pistre (Valode & Pistre), from the Italian Renzo Piano Building Workshop, from the Portuguese Manuel Tainha and Gonçalo Byrne and also from a consortium between the Italian Vittorio Gregotti (Gregotti Associati, SRL) and the Portuguese Manuel Salgado (Risco, SA) (Grande, 2018, p.19).

This consortium of architects Vittorio Gregotti and Manuel Salgado won the competition, presenting a proposal that recovers the memory of the great convents and monasteries of the city and of Lisbon's walled fortifications (Feldman, Colaço & Graça Dias, 1994).

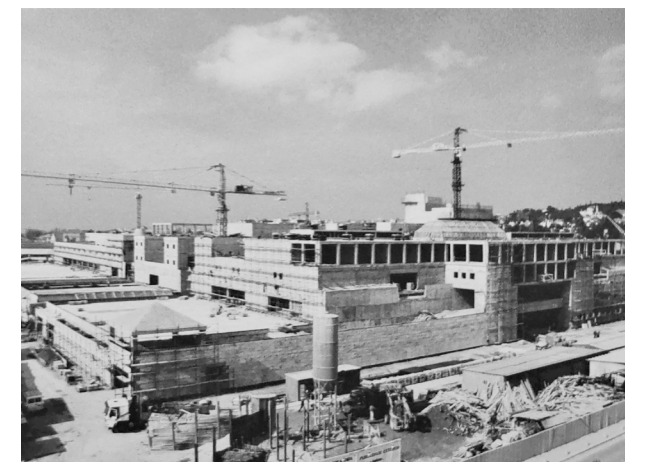
They create a small city within the city, through an urban and orthogonal mesh that frames a set of parallelepiped buildings of different sizes and functions, composed of two axes perpendicular to the river, intersected by a large central axis parallel to it that connects the Império Square and the Belém Tower (Ibidem).

This allows a great permeability between the interior spaces and the variety of exterior spaces of the centre, composed of streets, ramps, bridges, squares, balconies, terraces, lakes and gardens, which transform it from what could be considered a very closed building, into a small open city in which people move and walk around very easily and fluidly (Santos, 2008).

The implantation of the CCB, interprets the historical evolution of the occupation of that territory and imposes itself as the western limit of the Império Square, framing the Jerónimos Monastery (Feldman, Colaço & Graça Dias, 1994).



Daniel Malhão ©

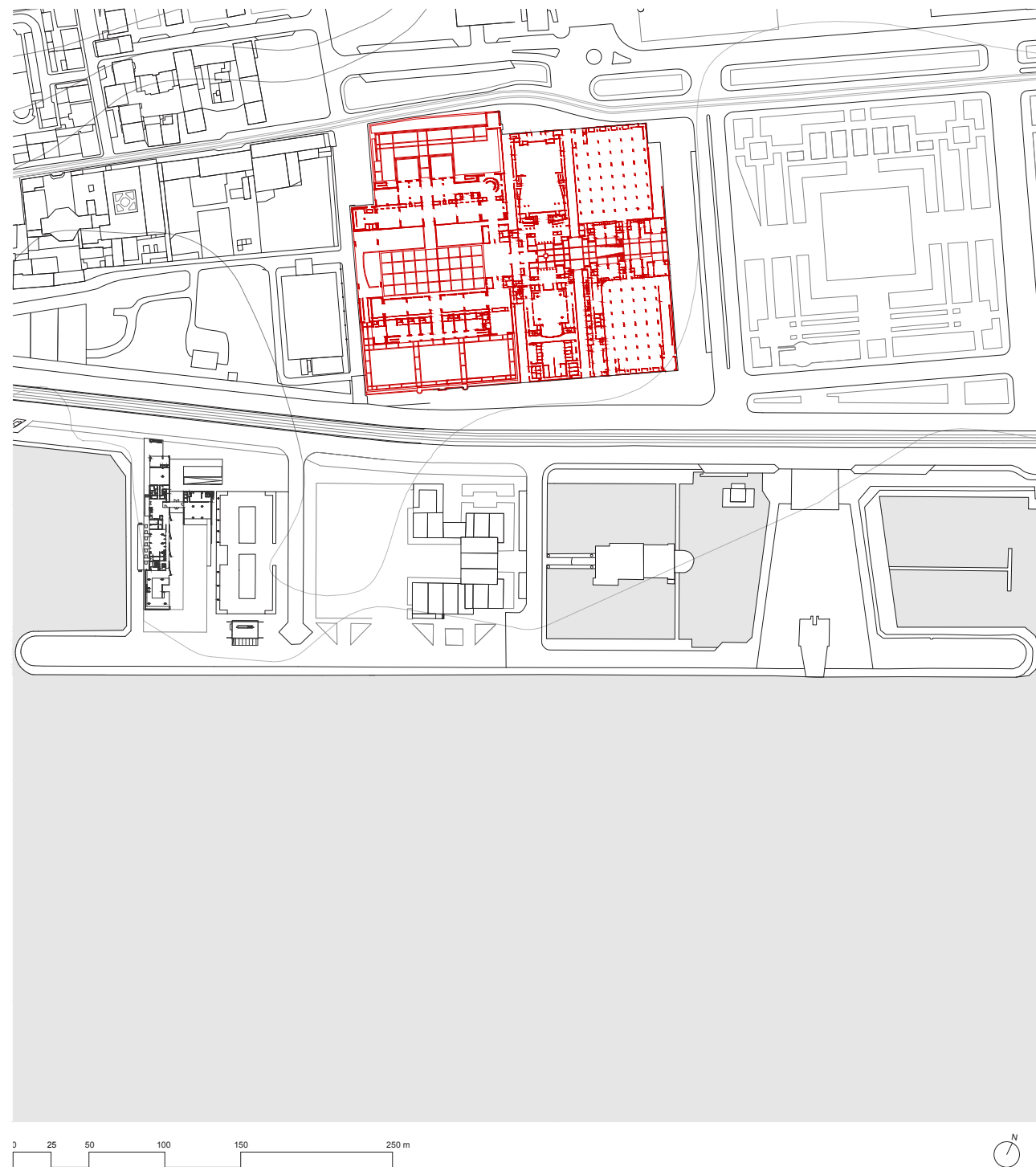
05 CCB's model
(Daniel Malhão, 2014. Adapted by Nuno Almeida, 2020)

06 CCB's construction, 1990. (F. Leite Pinto and M. Valle de Figueiredo. Adapted by Nuno Almeida, 2020)

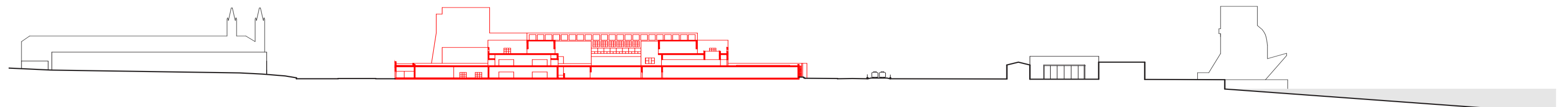


Giovanni Amato ©

07 Bird's-eye view of the CCB
(Giovanni Amato, 2018. Adapted by Nuno Almeida, 2020)



08 Site plan



11 Cross section to the Tagus River

The building ensemble follows the alignment established by one of the towers that limits the Monastery's body, as well as attempting to create a dialogue of equals with it, in that the scale, design, alignment of the height, rhythm and cladding of the façade allowed the architectural objects to be in harmony with each other, without subservience or imposition of one to the other (Ibidem).

The Belém Cultural Centre was originally designed to consist of 5 modules, which enabled a phased construction of the work, with only the first 3 being built (Grande, 2018, p.26).

Module 1 is the meeting centre, with the main façade facing the Império Square and bordering the western side of the same. Its function is to house the central services and to host meetings and congresses, as well as a restaurant, bars, shops and garages, with a total gross area of 30,500 m².

Module 2 refers to the performance centre, and with about 22 000m² of gross area, is the heart of the CCB, with its large auditorium, which is considered the hall of choice for the most grandiose shows, with a capacity of 1429 seats and which has served as a stage for the most varied popular or erudite artists, from the most diverse countries.

It also has a small auditorium with capacity for 348 seats, enabling other types of smaller and more intimate performance activities.

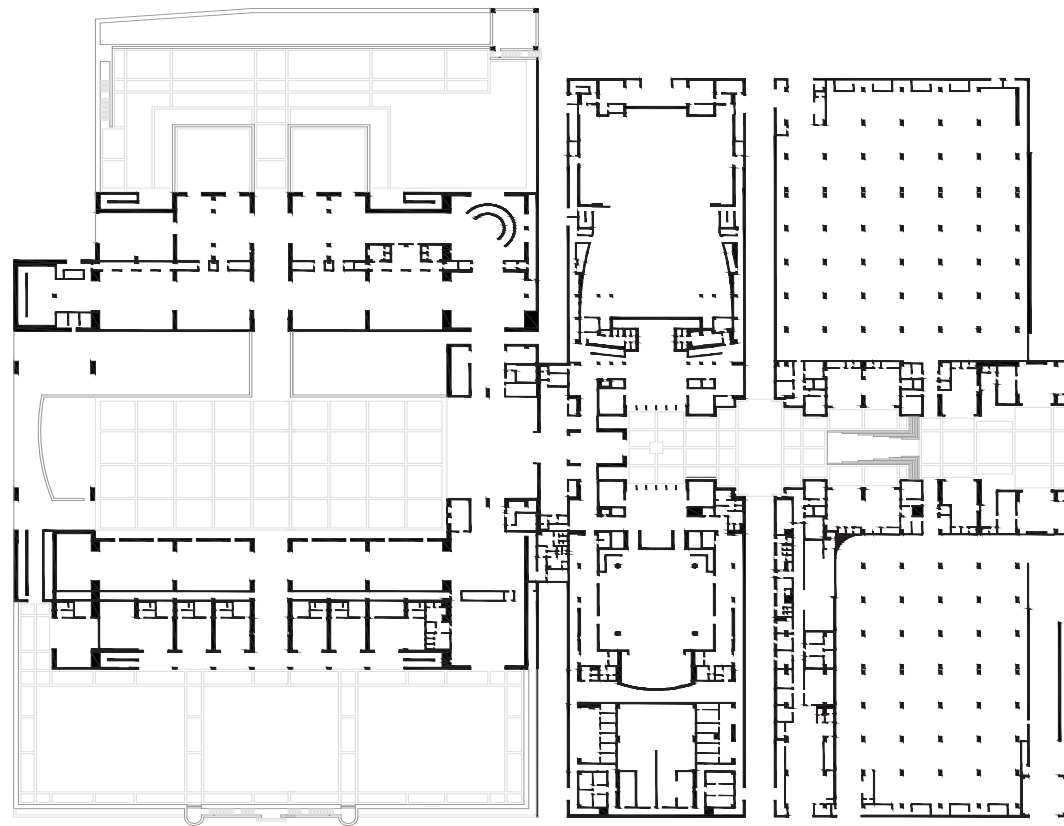
Module 3 contains the exhibition centre, with approximately 35,000 m², consisting of 4 galleries and 1 museum (Santos, 2008). Due to the speed of the project's execution and the absolute vagueness of the programme, the exhibition spaces did not fully respond to the needs that were assigned to them after their construction, as the architects did not know the specific purpose that the rooms would serve when they were designed (Feldman, Colaço & Graça Dias, 1994).



09 Axis perpendicular to the Tagus River (Giovanni Amato, 2018. Adapted by Nuno Almeida, 2020)



10 José Saramago's Path, axis parallel to the Tagus River (Giovanni Amato, 2018. Adapted by Nuno Almeida, 2020)



12 Plan of modules 1, 2 and 3, at elevation 9m

However, the rationality of the construction allows for the polyvalence of its spaces, in which both the foyers and the circulation spaces and rooms make it possible to have other uses and serve various events, as a result of the fluidity that all the spaces provide. (Ibidem).

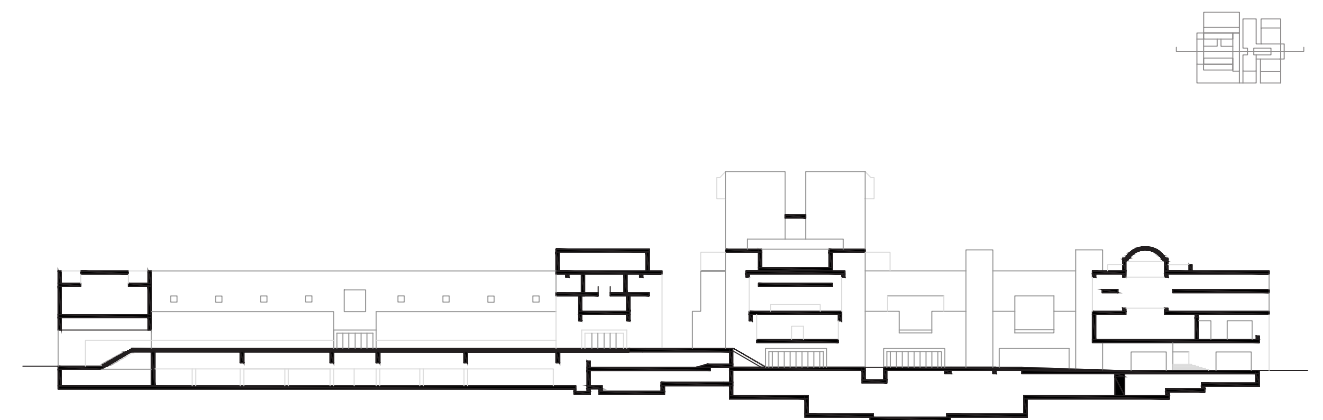
The three modules function as independent units, in which each module has its own features, but with an almost “umbilical” connection between the buildings (Santos, 2008), as both by the interior and by the articulation of the exterior spaces, the buildings complete each other as a whole and allow for the diversity of events and their organization. (Pinto, 1988).

Modules 4 and 5, not built, will consist of a luxury hotel unit and another auditorium that will complement the performance and congress centre, and will have intermediate dimensions between the large and the small auditorium, allowing for events to be organised according to the circumstances of each show. (Ibidem).

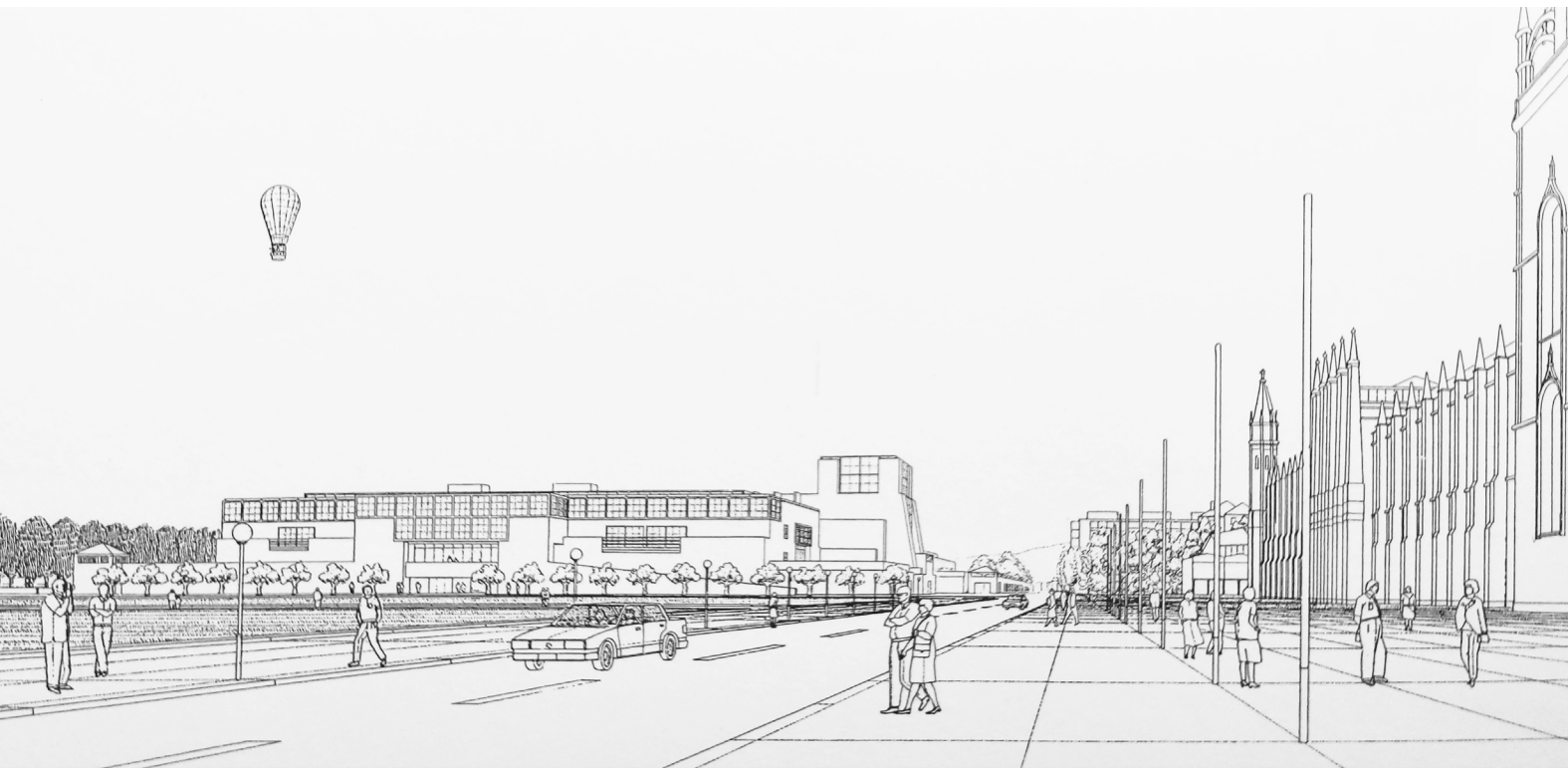
Besides the programmatic aspect, these last two modules (4 and 5) make an important transition between the monumental area of the Império Square and the Jerónimos Monastery and a more domestic and popular area, further west, where the Bairro do Bom Sucesso is located, through a configuration of the built form and scale more adapted to the residential context. (Costa, Louçã & Estrela, 2008).



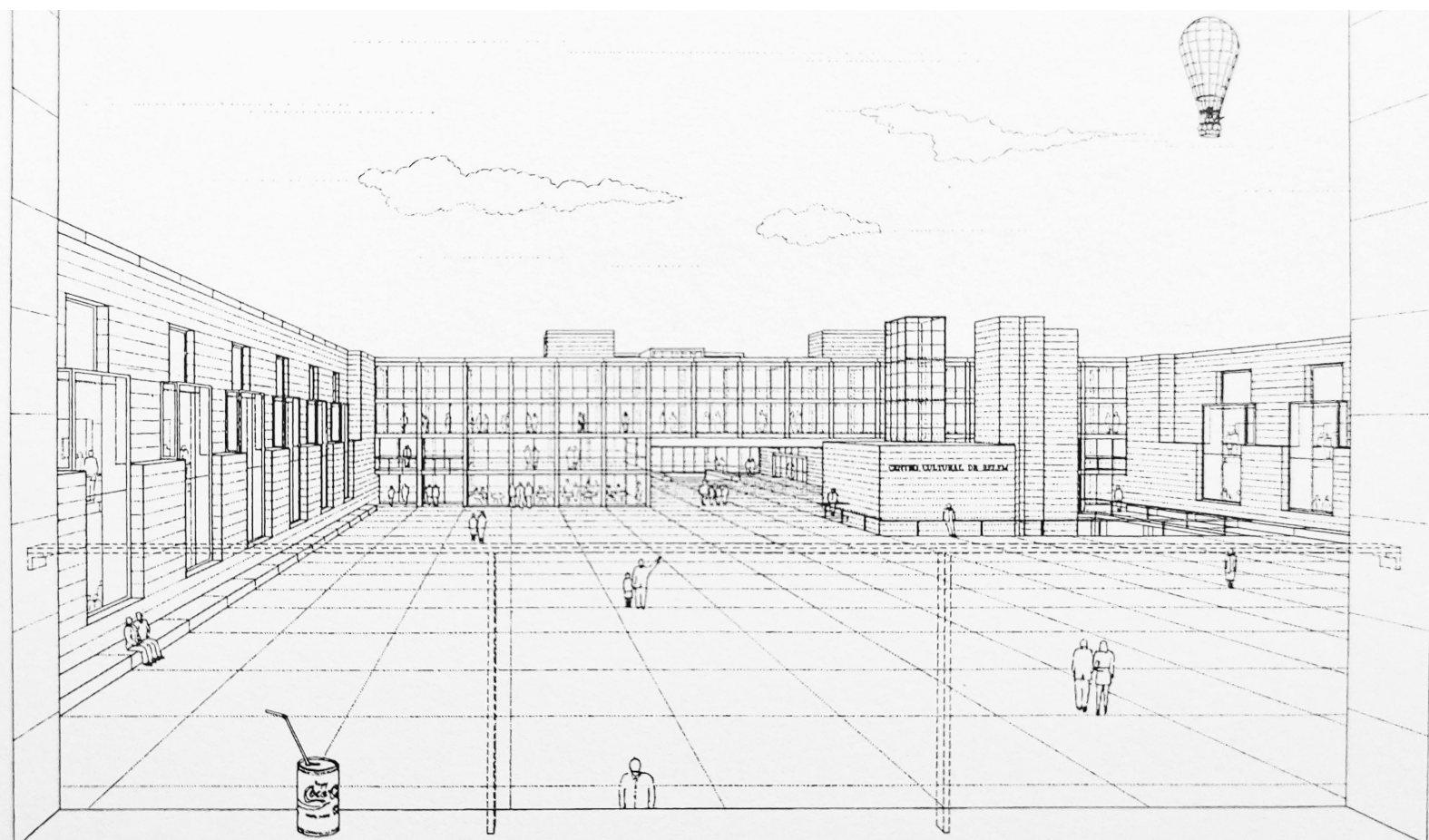
13 North Tower hosting the Grand Auditorium (Giovanni Amato, 2018. Adapted by Nuno Almeida, 2020)



14 Longitudinal section along the Saramago Way



15 Perspective of the CCB from the Jerónimos Monastery (V. Gregotti and M. Salgado, 1988. Adapted by Nuno Almeida, 2020)



16 Perspective of the exhibition centre square (V. Gregotti and M. Salgado, 1988. Adapted by Nuno Almeida, 2020)

Following a quadrangular 7.5m x 7.5m modular grid, which pragmatically solved the problems in the project's preparation, the entire structure of the CCB's buildings is made of reinforced concrete, composed of slabs, columns, beams and entire walls, with the exception of some spans which use a prestressed metal structure or metal tie-rods, but always based on the modular grid, enabling a constant rule and metric for structural and spatial organization. (Santos, 2008)

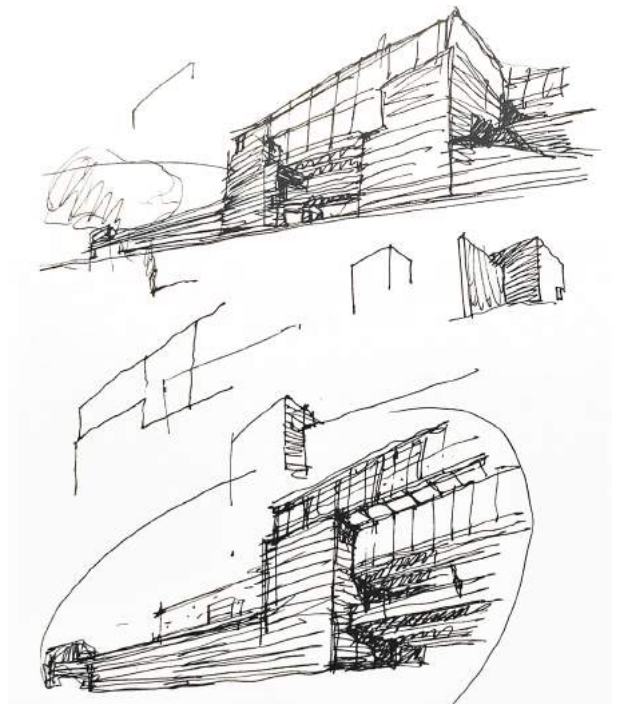
Working as a second layer to the structural outer wall, another concrete wall was built to support the external cladding of the façades, made of "Abancado de Pêro Pinheiro" limestone slabs with a "Rustico Gastejado" finish, which gives it its characteristic roughness and brings it closer to the appearance and tonalities of the neighbouring Jerónimos Monastery. (Ibidem)

The interior is mostly covered with plaster-board panels, stuccoed and painted white, and flooring in American oak, so that the interior space, which seems enclosed by the hard and austere stone of the exterior, is, however, invaded by a natural zenith light that runs through the whole space through several lamps and skylights, reflected on the walls and on the floor itself, with light having a fundamental role in the qualification of this building's interior. (Ibidem)

It is also worth mentioning the work of Daciano da Costa in the design of the furnishings and interior equipment and of Francisco Caldeira Cabral in the landscaping of the green spaces, which raised the overall quality of the Belém Cultural Centre project.

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17 Project sketches (Vittorio Gregotti and Manuel Salgado. Adapted by Nuno Almeida, 2020)



18 Façade from the East/North angle (Giovanni Amato, 2018. Adapted by Nuno Almeida, 2020)

- . SANTOS, J. J. (Producer). (2008, January 25). A Construção do Centro Cultural de Belém. [Episode 3 TV programme]. *Obra de Arte II* [TV Programme]. Lisbon: RTP3. <https://arquivos.rtp.pt/conteudos/a-construcao-do-centro-cultural-de-belem/>
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"We must know that the world changes, transforms, modifies itself and therefore intensely apprehends the radicalness of places. Understanding the kind of transformation of those places is a very important process for us. So, what is around the place - what we call "context" - includes not only the flows that existed before, but also how they have been modified. For example, and looking at the context of the CCB, I like to understand how that hydraulic extension was transformed into urban land."

(Vittorio Gregotti in Grande, 2018)



19 Entrance of the Performance Centre, seen from the project's central square.
(Giovanni Amato, 2018. Adapted by Nuno Almeida, 2020)

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Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

03

NATIONAL COACH MUSEUM

PAULO MENDES DA ROCHA+ MMBB + BAK GORDON ARQUITECTOS

38°41'48.8"N 9°11'55.3"W

03

NATIONAL COACH MUSEUM

PAULO MENDES DA ROCHA+ MMBB + BAK GORDON ARQUITECTOS

ARCHITECTS

Paulo Mendes da Rocha
MMBB
Bak Gordon Arquitectos

CLIENT/PROMOTER

Frente Tejo/Estado Português

TEAM

Paulo Mendes da Rocha: Edison Hiroshima,
Giovanni Meirelles, José Paulo Gouvêa,
Luís Pedro Pinto, Pedro Serrazina, Marina
Sabino, Nuno Velhinho, Rui Cancela, Sónia
Silva, Vera Higinio, Walter Perdigão, MMBB:
Fernando de Mello Franco, Marta Moreira
e Milton Braga. Bak Gordon Arquitectos:
Ricardo Bak Gordon, Nuno Tavares da Costa
(coord.)

PROJET DATE

2008

CONSTRUCTION DATE

2015

LOCATION

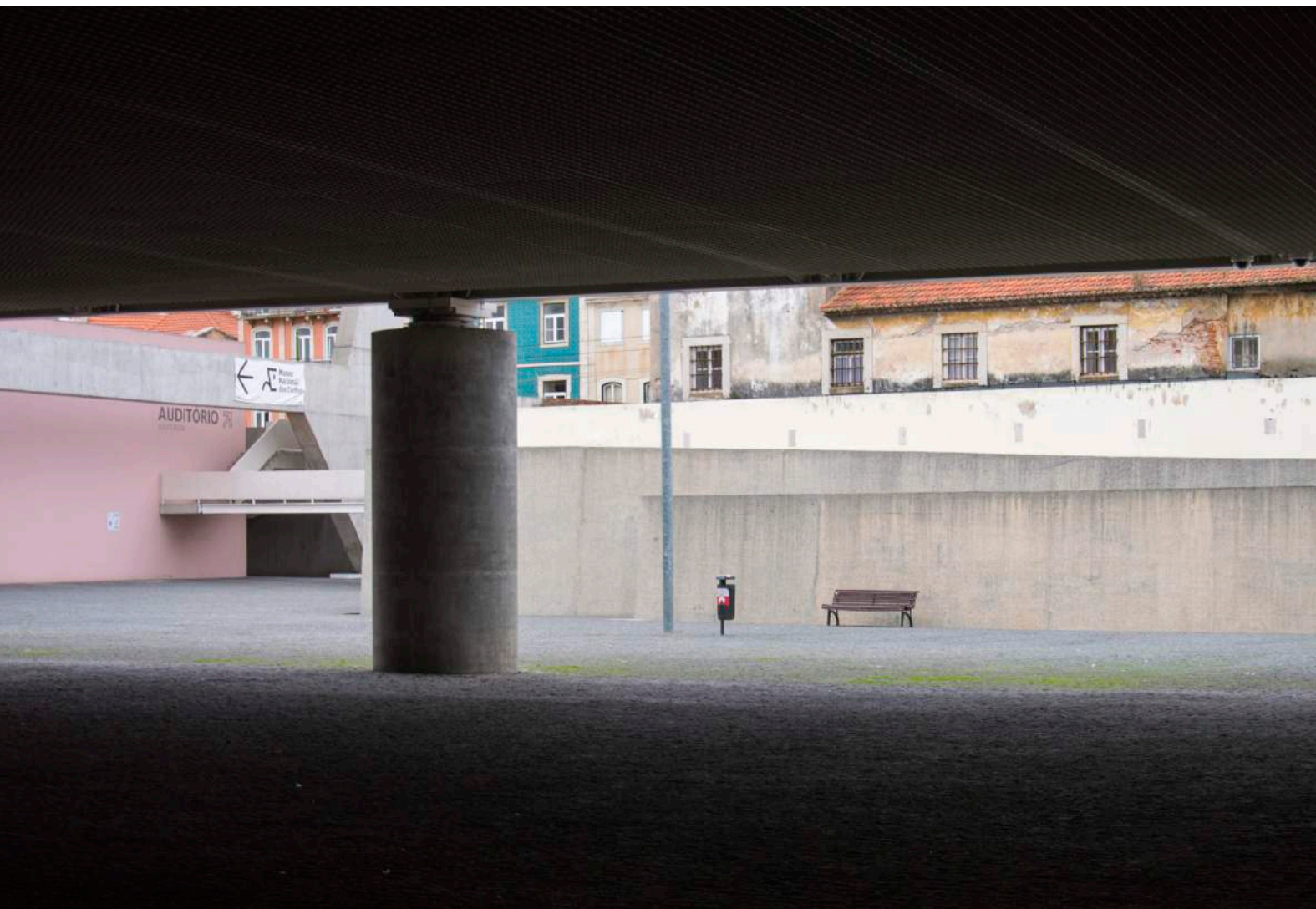
Av. da Índia, nº 136, Belém, Lisboa

CONSTRUCTION AREA

16170m²

AWARDS

CICA Award (2015)



01 National Coach Museum, covered public space and indoor square (David Carvalho, 2020)





02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)

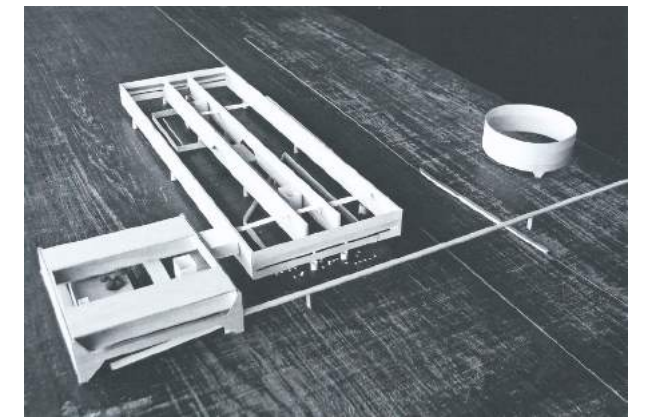


04 1980's. Adapted from Lisbon City Map (2020)

Belém, a small village located on the west coast of Lisbon, will have originated around the eighteenth century in a natural anchorage that provided the first quay on arrival in Lisbon. Belém quickly developed through commercial activities linked to naval equipment and the local linen spinning industry, becoming the quay of that riverside territory. However, the growth of this nucleus will have had a great increase with the implantation of the Jerónimos Monastery. Urbanistically, this village was constituted by a main axis, the Direita de Belém street, and a secondary street, the Cais de Belém street, both parallel to the river. The remaining streets consisted of cross streets, perpendicular to the main axis, and had names that reflected the functions that took place there. According to José Manuel Fernandes, the buildings were developed in "simple blocks, lot by lot, in a linear arrangement, to the south and north of Direita Street with residential and commercial buildings with two to three floors, and narrow façades", which were interrupted by the presence of the monastery church, where it gave way to Belém's large sandy beach, which resisted in time until the construction of the embankments in the late nineteenth century (Fernandes, 2015).

The industrial and railway embankments distanced the water from the old quays, inevitably breaking the relationship between Belém and the river. Only later, in 1938-1940, with the works for the "Exposição do Mundo Português", the Belém area underwent considerable changes that symbolically and functionally enhanced this place. Over time this place gained a vocation of public space, thus becoming a monumental enclosure of the city of Lisbon. Until the implementation of the Museum, this area was bordered to the east by a walled space, where the army electrical workshops were once located (Bak Gordon, n.d.).

According to the architect Paulo Mendes da Rocha, this project raises two main questions. As far as museology is concerned, the criterion adopted is centred on the idea of a strongbox that allows the "definitive preservation, forever, of the guarded treasure". From the urban



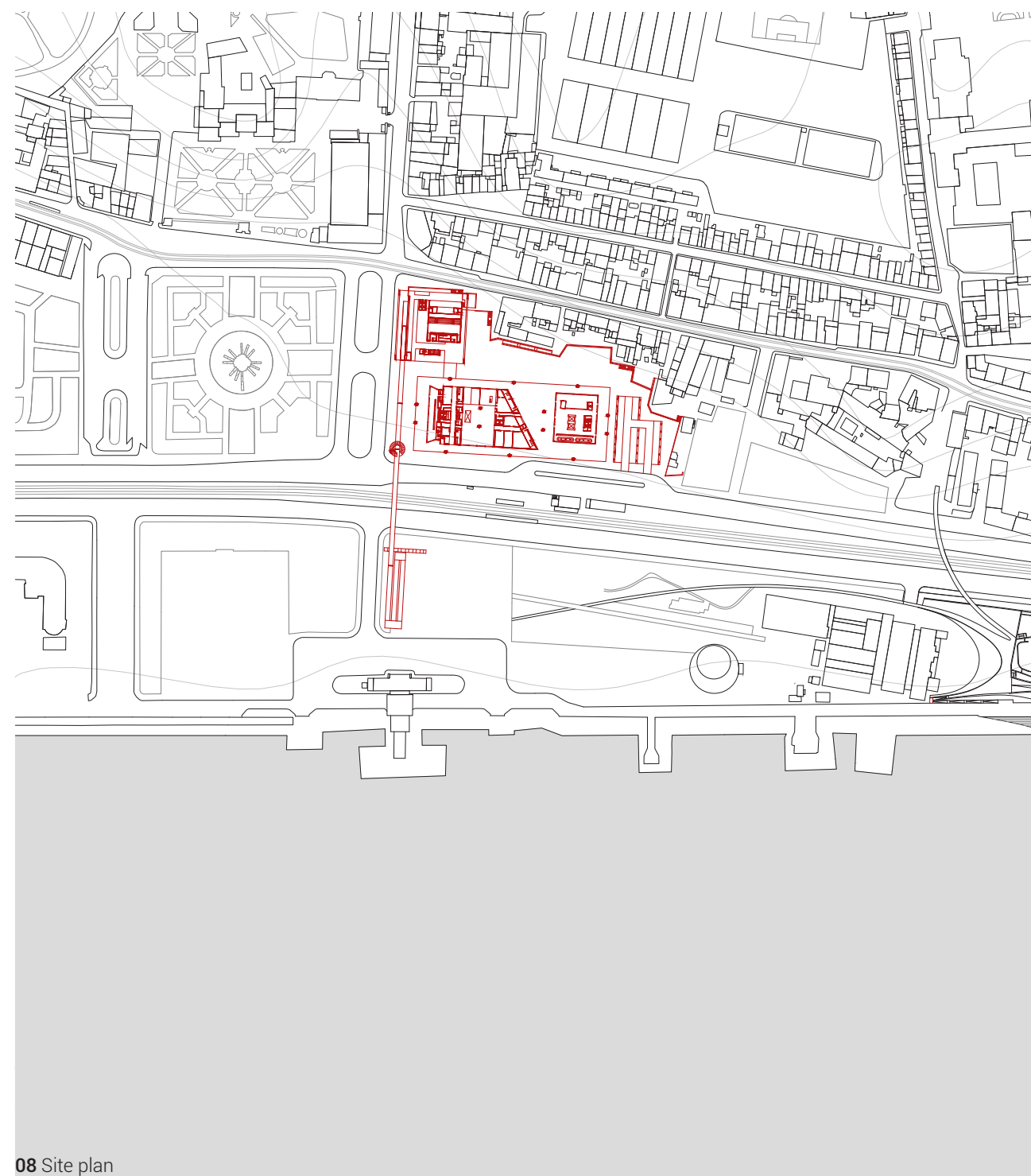
05 Project study model (Paulo Mendes da Rocha, adapted by David Carvalho, 2020)



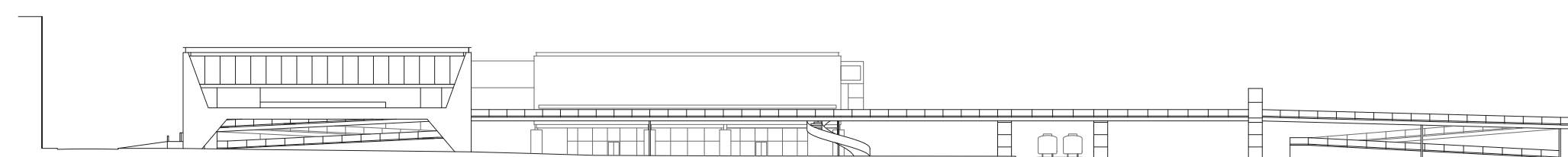
06 Southeast view, construction site (Bak Gordon Arquitectos Archive, adapted by David Carvalho, 2020)



07 View of the south exhibition hall under construction (Bak Gordon Arquitectos Archive, adapted by David Carvalho, 2020)



08 Site plan

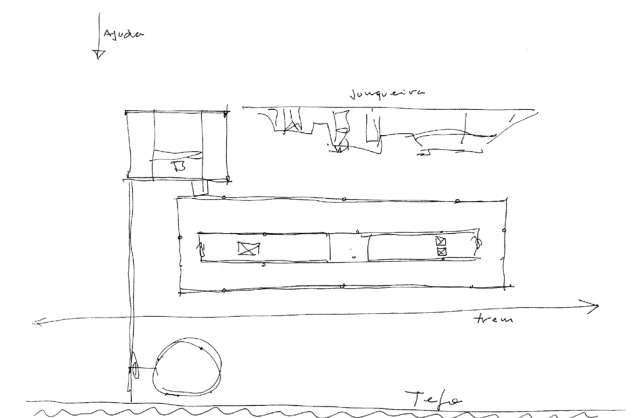


09 Cross Section

point of view, the aim was to find the exact spatial arrangement for the integration of the museum in a monumental area of the city, framed by the government programme "Belém Redescoberta" (Mendes da Rocha, 2008).

In this sense, it is essential to point out two fundamental aspects. The pedestrian and cyclable overpass, that following the calçada da Ajuda, crosses Índia avenue, Brasília avenue and the railway line, reaching the river at the Belém river station. And the set of existing buildings along Junqueira street, whose rear elevation of each plot is related to the old Cais da Alfândega Velha street, which now faces the new Museum Square, stimulating future interventions related to local commerce. This square, between the historic town and the museum, extends beneath two volumes set freely on a black granite surface. In counterpoint, at a higher elevation, we have the "small and intricate" scale of the old town, which allows the creation of a series of accesses with different scales and experiences of crossing this place (Bak Gordon, n.d.).

The main pavilion unfolds above the ground, landed on fourteen concrete pillars with one meter eighty in diameter. A white parallelepiped, whose walls hide a steel truss superstructure, revealed in the shapes of the openings subtracted from the volume. On the ground floor, the glass volume that draws the entrance highlights the views of the public space outside and contrasts with a concrete volume, opaque in red tones (colour of the 25 de Abril bridge), where the private areas of the museum and workshops are installed, and to which it is possible to look through an opening along Índia Avenue. On the west side of this volume, also in glass, there is a cafeteria which opens onto the Afonso de Albuquerque garden. To reach the level



10 Project sketch (Paulo Mendes da Rocha, s.d.)



11 Pedestrian and cyclable overpass (David Carvalho, 2020)



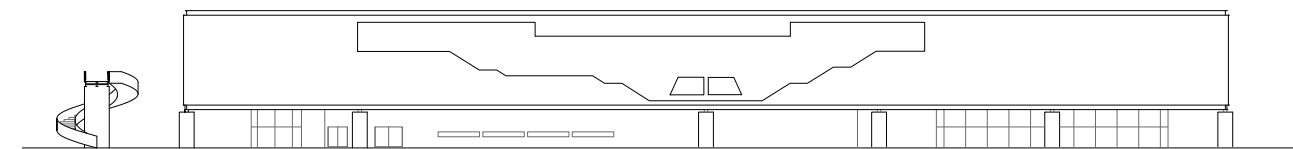
12 Exhibition pavilion (David Carvalho, 2020)

of the exhibition space, vertical access is provided by two large lifts capable of carrying 75 people each. On the upper floor there are two naves, with polished concrete floors, long white walls, and on the ceiling is suspended a steel grid where all the infrastructures are organised. Through an elevated circuit, it is possible to observe the collection from above and also access an exterior balcony, in which we have contact with the urban surroundings. Between the two main naves, each with 125x17m, there is a central space, where accesses, temporary exhibition rooms and a workshop are installed, which through a platform lift, allows the transportation of carriages to the warehouse on the ground floor. On the second floor, in ad-

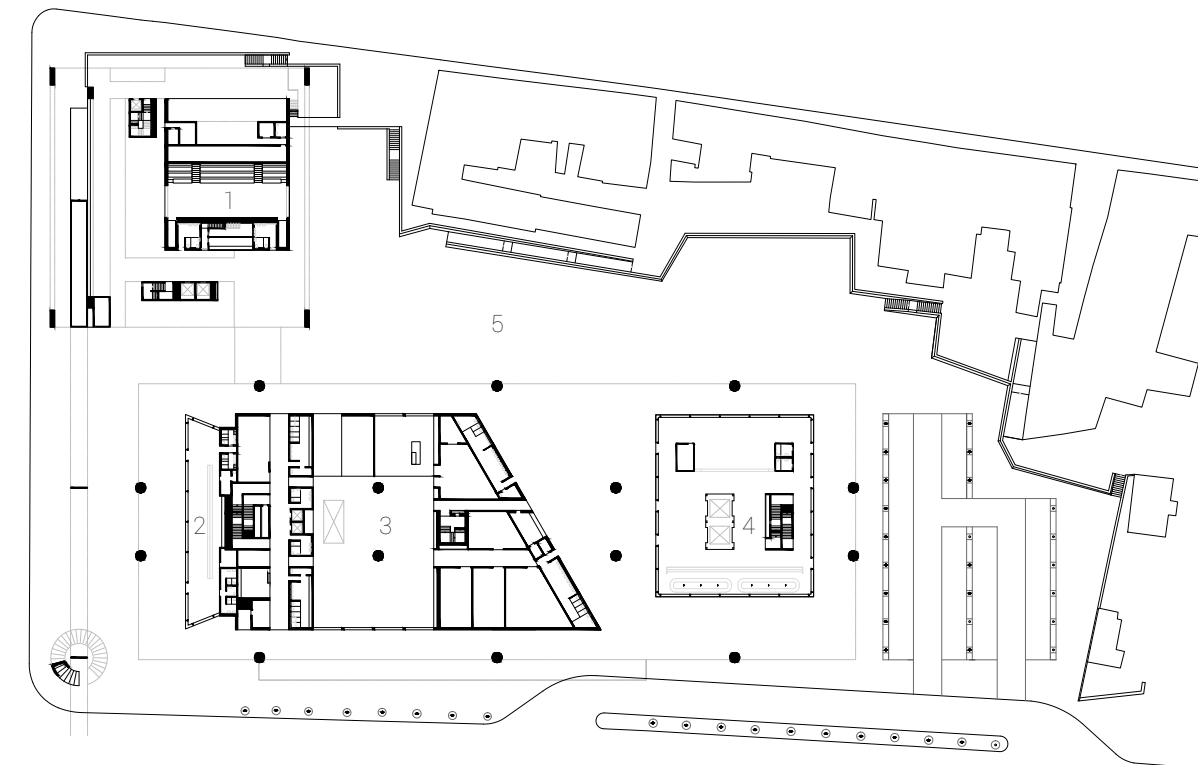
dition to the visiting route, there is also an educational service, access to two outdoor spaces where most of the technical equipment is located and a connection to the annex building (Bak Gordon, n.d.).

The annex building is located on the corner of Junqueira street and Afonso de Albuquerque square. Here we find two volumes suspended in a concrete structure, the restaurant and the administration building. Inside this structure, there are several volumes that correspond to accesses (public and private) and also an auditorium, in a pink colour similar to the Palácio de Belém that looms there.

In order to create an informal environment, the auditorium is an indoor amphitheater, composed of bleachers with street benches and two large steel



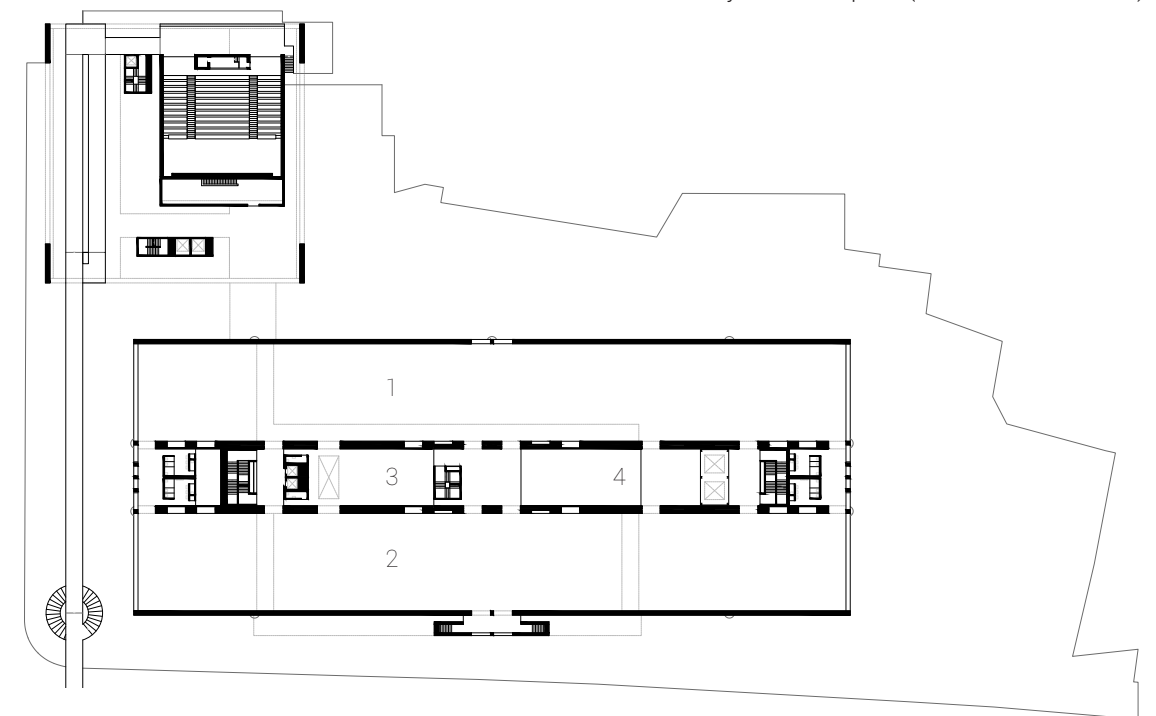
13 South elevation



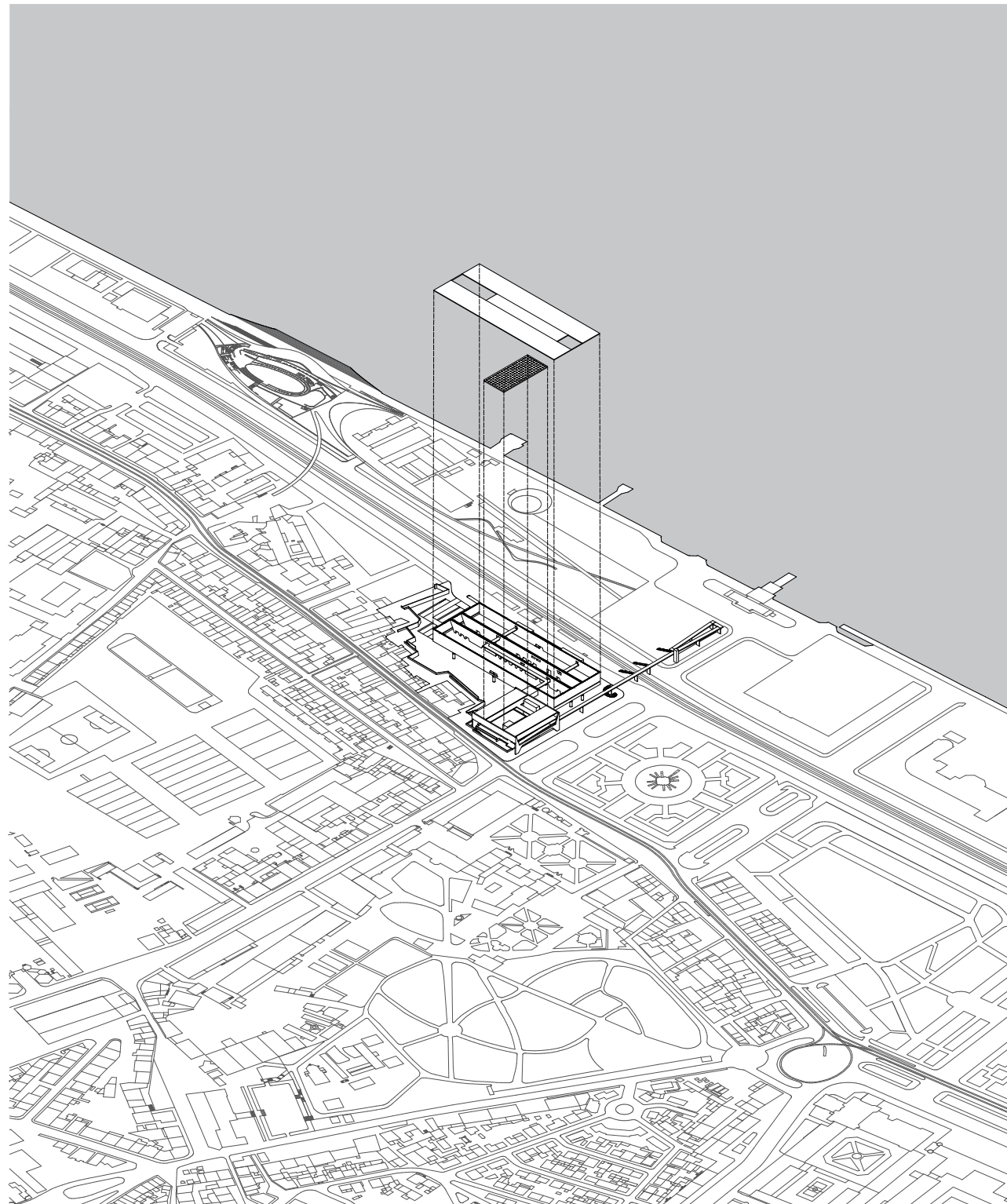
14 Ground floor plan. 1 - Auditorium, 2 - Cafeteria, 3 - Private areas/workshop, 4 - Museum entrance, 5 - New square



15 Pedestrian and cyclable overpass (David Carvalho, 2020).



16 First floor plan. 1 - North exhibition nave, 2 - South exhibition nave, 3 - Workshop with platform lift, 4 - Temporary exhibition space.



17 Axonometry

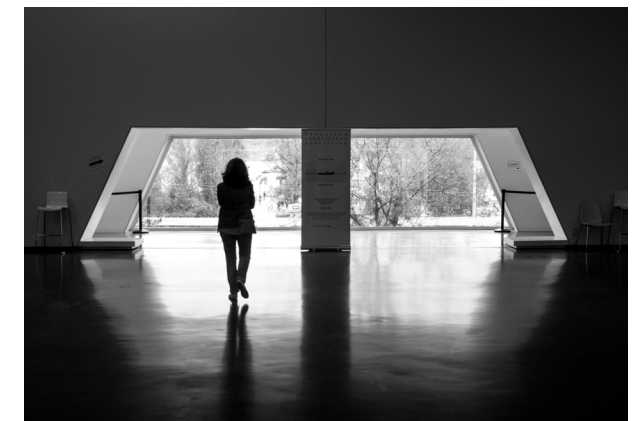
gates, opposite to one another, which allow a carriage to enter the space and cross through the stage. On an upper level there is a balcony through which the auditorium, Junqueira street or the pedestrian bridge can be accessed. On the second level, two bridges connect the restaurant and the administration building. In this covered outdoor space, it is possible to observe the city below by experiencing the natural light that passes through the roof lanterns and is then reflected in the water mirror on the roof of the auditorium. Both the restaurant and administration volumes have long openings to east and west. While the restaurant is a large open space, the administration volume provides spaces for the director and curator's office, a library, and a connection to the exhibition pavilion, a white bridge, on which the security center is installed, which, through a gap in the lower part of the bridge, provides a view over the museum square. When at its level, the bridge also frames the statue of Afonso de Albuquerque in the background (Bak Gordon, n.d.).

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18 Passage between exhibition spaces (Fernando Guerra, adaptado por David Carvalho, 2020)

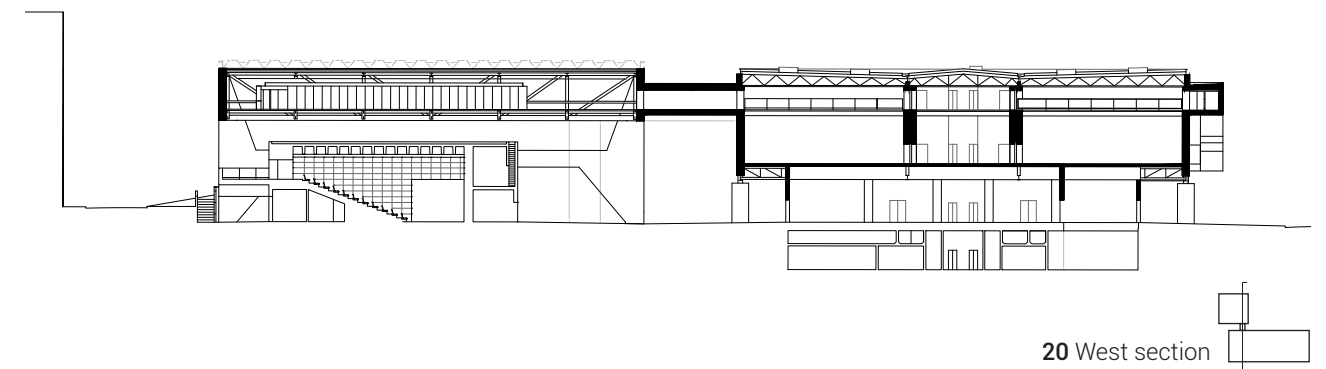


19 South view from the museum (David Carvalho, 2020)

sumária do projeto novo museu nacional dos coches. <https://www.arquitectos.pt/documentos/1224766685P4mG14sx6D-k56IV2.pdf>

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20 West section

"The exterior space should be enjoyed by the public, it should stay open and accessible.
The city is for everyone, or it is not."

(Mendes da Rocha, 2015)



21 North façade of the main building, reflecting Junqueira street (David Carvalho, 2020)

Integrated Master in Architecture, Iscte - University Institute of Lisbon.
Final Architecture Project 2020-2021. Lisbon and the River Laboratory.
Team: Coordination: Teresa Madeira da Silva. Supervisors: Teresa Madeira da Silva, Caterina Di Giovanni, Pedro Marques Alves.
Students: Bernardo Custódio, Carolina Alves da Silva, David Carvalho, Duarte Almeida, Francisco Quaresma, Joana Marques, Julia Shtefura, Luís Filipe Ribeiro, Mariana Rosa, Milton Perry, Nuno Almeida, Nuno Bernardes, Rodrigo Oliveira, Vilma Nico Ferreira.
Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

04

MUSEUM OF ART, ARCHITECTURE AND TECHNOLOGY

AMANDA LEVETE



01 MAAT. View from the main entrance (Julia Shtefura, 2020)

38°44'44.41"N, 9°11'36.87"W

The Museum of Art, Architecture and Technology (MAAT) is located on Lisbon's waterfront in the historic area of Belém. The building is located on the EDP Foundation campus with an area of 38,000 square meters that includes the reconverted thermoelectric power station - the Tagus Power Station, built in 1908 - the new museum building, designed recently by the London-based architect Amanda Levete's studio and a garden linking the two buildings, designed by Lebanese landscape architect Vladimir Djurovic. The campus hosts two permanent installations: Placed on Either Side of the Light (1999) by Lawrence Weiner and Central Tagus (2018) by Pedro Cabrita Reis, as well as temporary artistic interventions and public programmes organised throughout the year. (MAAT, n.d.).

The campus where the MAAT building is located is limited, to the north, by the Brasília Avenue and the railway line that connects Lisbon to Cascais and, to the south, by the river Tagus. To connect the museum and the riverfront to the northern part of the city a pedestrian walkway was created over Brasília Avenue and the railway line that starts at the rooftop of the building and ends at Marquess Angeja Square. The museum is located in one of the areas of the Tagus where, in the 15th century, the greatest Portuguese explorers departed from. At that time and until the 20th century the riverside area was a long way from where it is today - it was about 150 meters to the north. MAAT took a little over two years to be built, more precisely its construction took place between 2013 and

04

MUSEU DE ARTE, ARQUITETURA E TECNOLOGIA AMANDA LEVETE

ARCHITECT
Amanda Levete

CLIENT/PROMOTOR
Foundation EDP

TEAM
Architecture: AL_A, Amanda Levete (responsible), Maximiliano Arro-cet (director do projecto), Fernando Ruiz Barberan, Mirta Bilos, Alex Bulygin, Grace Chan, Sara Ortiz Cortijo, Alice Dietsch, Ciriaco Castro Diez, Yoo Jin Kim, Ilina Kroushovski, Michael Levy, Cristina Revilla Madrigal, Stanislaw Mlynski, Ho-Yin Ng, Giulio Pellizzon, Raffael Petrovic, Chloe Piper, Filippo Previtali, Arya Safavi, Maria Alvarez-Santullano, Joe Shepherd, Paula Vega, Konstantinos Zaverdinos. Aires Mateus Associados (local architect).
Landscape Architecture: Vladimir Djurovic Landscape Architecture

PROJET DATE
2011 - 2013

CONSTRUCTION DATE
2015 - 2016

LOCATION
Av. Brasília, Belem, Lisbon

SITE AREA
8.100m²

GROSS AREA
7.400m²

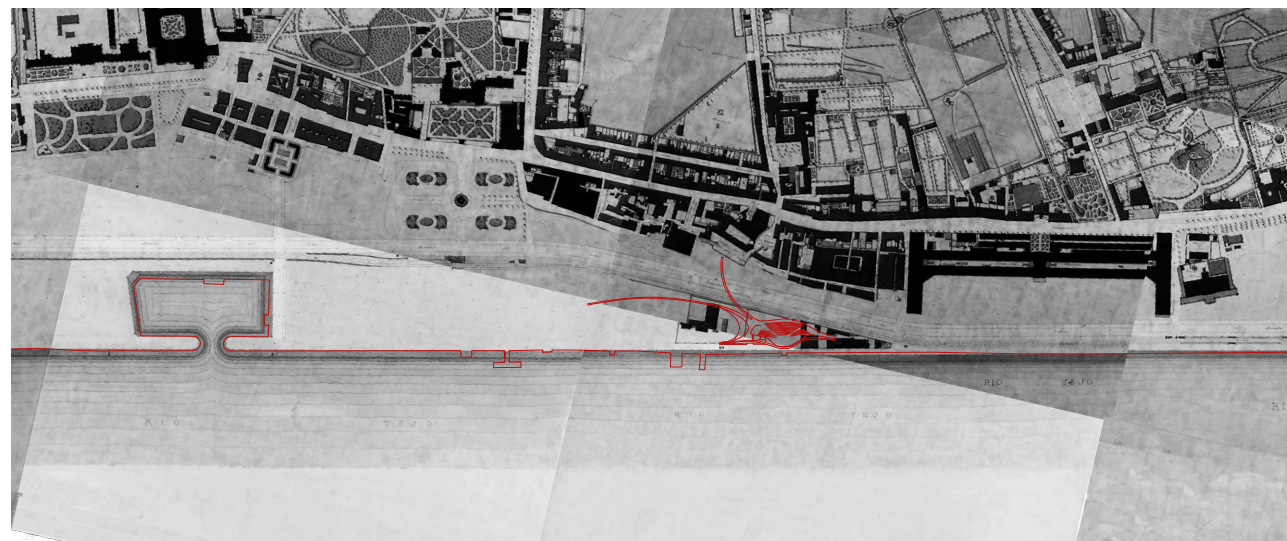
PUBLIC SPACE AREA
9.430m²

AWARDS
Design Prize 2017; Shortlist EU Mies van der Rohe Prize 2017; Winner Architecture Best of Best Iconic Award 2017; Finalist World Architecture Festival 2017; ECCS Steel Design Award of Merit 2017; Highly Comened, Blueprint Awards 2017; finalist, Tiles of Spain Awards 2017; Honorable Mention, Valmor and Municipal Architecture Award 2017; Best Museum Architecture, Leading Cultural Destination Awards 2017; Supreme Winner and Public Building category Winner, Surface Design Awards 2018.





02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

2016 to be built. The inauguration, on the 4th of October 2016, was marked by the presence of a large-scale work created by the French artist Dominique Gonzalez-Foerster specifically designed for the museum space (Santos, 2016).

The museum is the place where three ideas of the building converge - contemporary art, architecture and technology. One of the aims of the project was to create "fluidity of movement, space for experimental works, so that artists could make specific works and advance the debate." (Santos, 2016).

The Museum is the first building in the city of Lisbon whose architectural form is made according to the organic style. The curve of the roof is reminiscent of a wave from the sea that continued to land and was based on the context and history of the site, seeking to establish connections between the river and the land. In the words of the architect, the building proposes "a new relationship with the river and the outside world, the museum is a powerful yet delicately structured, low-rise building that explores the convergence of contemporary art, architecture and technology." (MAAT, n.d.).

The museum building offers four exhibition galleries under an elegant roof that serves as a public space with elevated panoramic views over the river. The ALA architectural team sought an architectural solution while maintaining the connection with the public architecture of the past and the public architecture of the future and presented this meeting in a beautiful piece of contemporary art. Using the concept of the kunsthalle the project was designed to allow people to pass over, under and through the building. The architect's idea was to integrate the landscape, leaving the view unobstructed to the city and the river (MAAT ALA, 2016).

The museum consists of a set of several galleries and rooms totaling about 3,000 square meters that are emerging from the changing relationship between art and visitors. At the heart of the building is the Oval Gallery to which a large curved staircase descends from the entrance. This gallery space has an area of 1,200 square meters along a long curve where circulation and exhibition space mix. Surrounding it



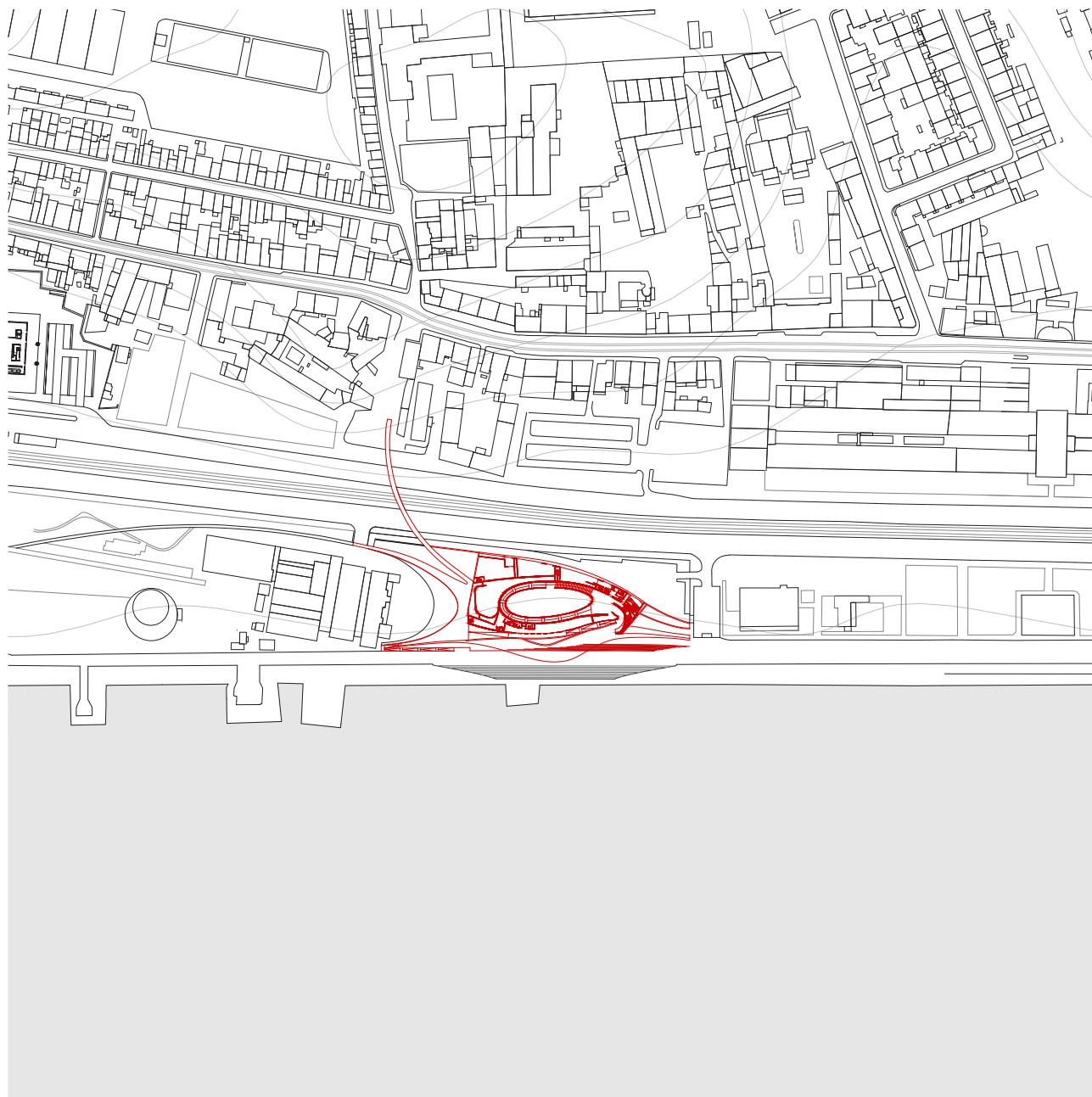
05 MAAT's construction (Afaconsult, 2015)



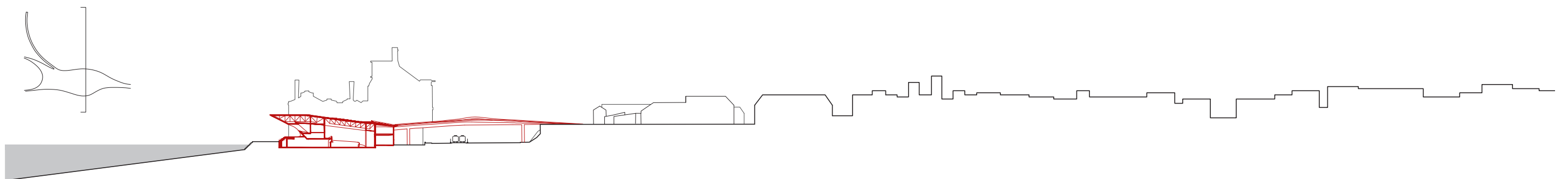
06 MAAT's construction (Afaconsult, 2015)



07 MAAT's model (ALA, 2014)



08 Site plan



09 Section

is the Main Gallery, the Project Room, the Video Room and two smaller spaces for installations or projections. The Main Gallery is a flexible space with an area of 1,000 square meters and is located on the lowest floor of the building below the water level of the river.

In turn, the Project Room and the Video Room are designed for the presentation of projects in film, video or other installations. All these spaces have great flexibility to adapt and change use according to the needs over time. The interior spaces do not receive natural light, which allows the exhibitions to be illuminated in the most appropriate way for the objectives.

The MAAT project has created over 7000 square meters of new public space for the Lisbon's Riverside area. The riverfront is conceived as a kind of amphitheatre with large steps leading down from the main entrance of the museum to the river. This space brings people closer to the river allowing a greater connection with the water, not only through the gaze but also through the physical connection. When the river tide rises, some steps hide under the water, creating a permeable threshold that changes with the tide. The roof of the museum is walkable and is also conceived as a public space. (MAAT ALA, 2016).

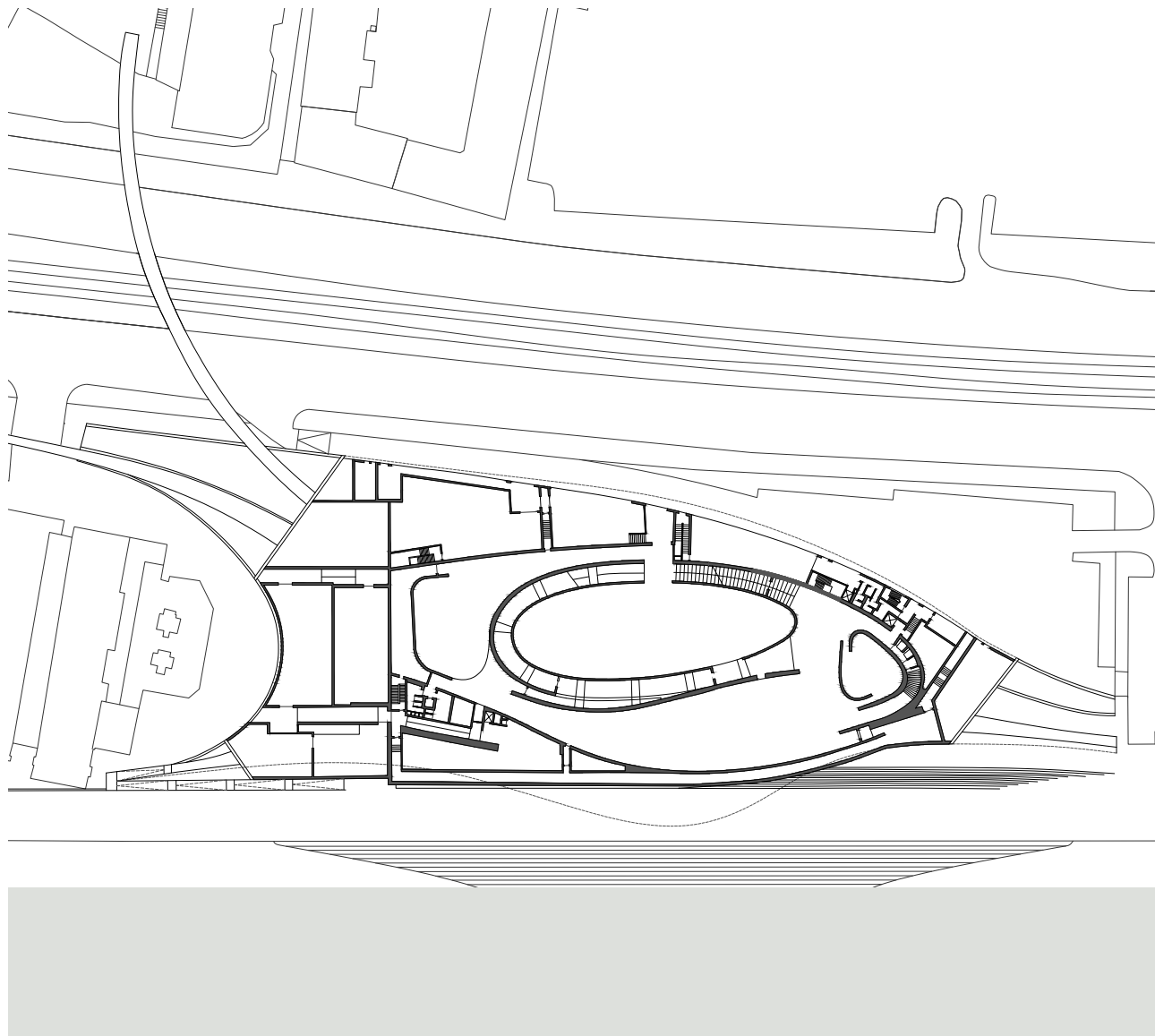
Access to the roof can be made by the staircase on the east side, the ramp on the west side, the bridge on the north side and the door that plays the role of the second main entrance. On the roof, were designed small steps, making it an open-air room. The roof is a small belvedere that has a 360° view of the river, the city and the 25 de Abril bridge and also of the Belém



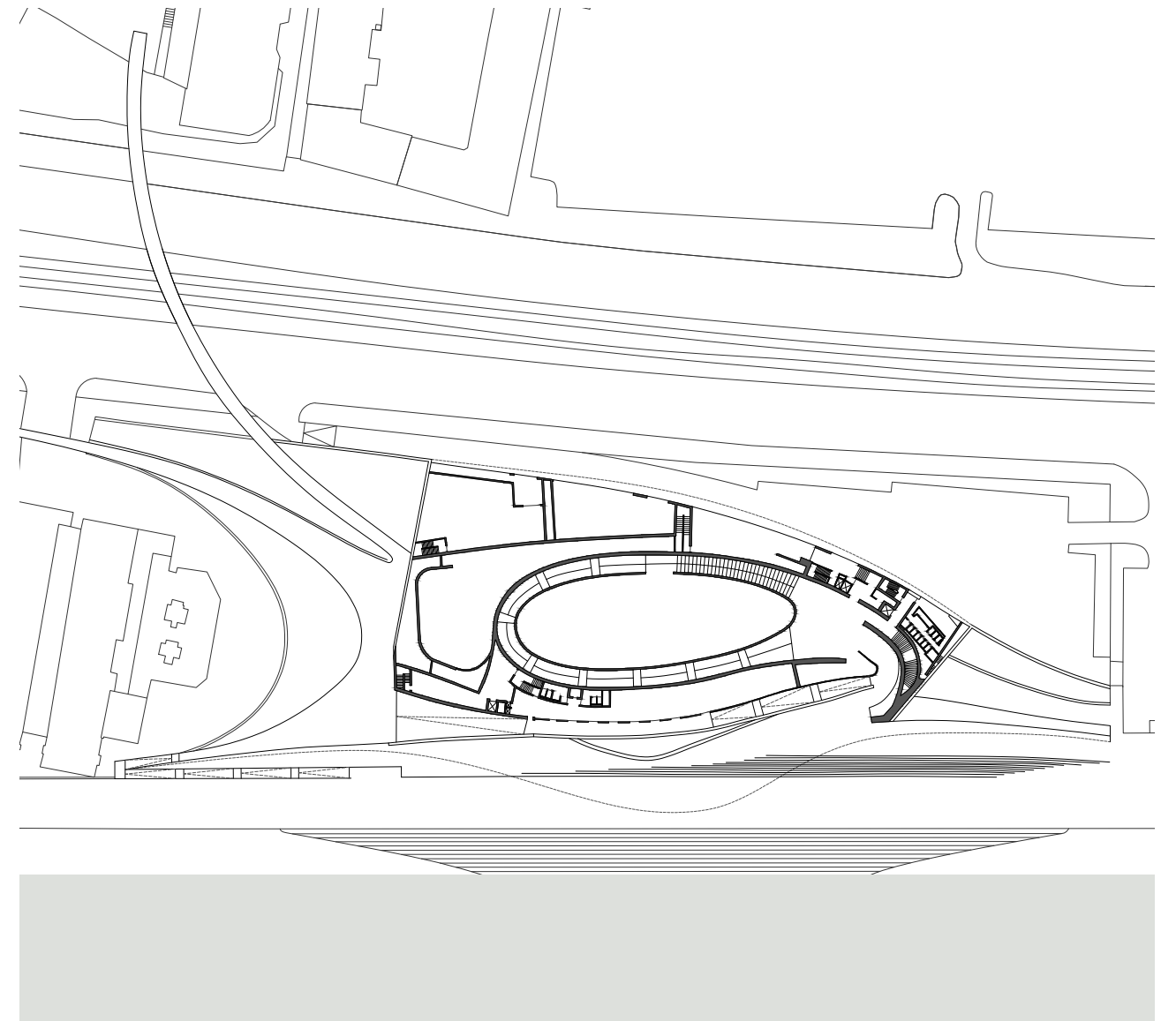
10 View on the rooftop (Julia Shtefura, 2020)



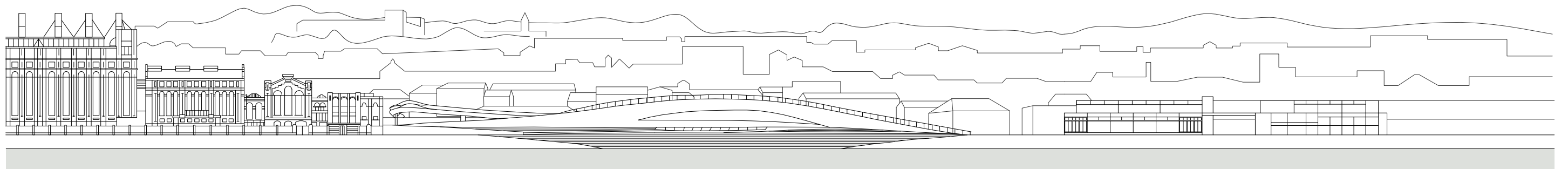
11 Façade detail (Julia Shtefura, 2020)



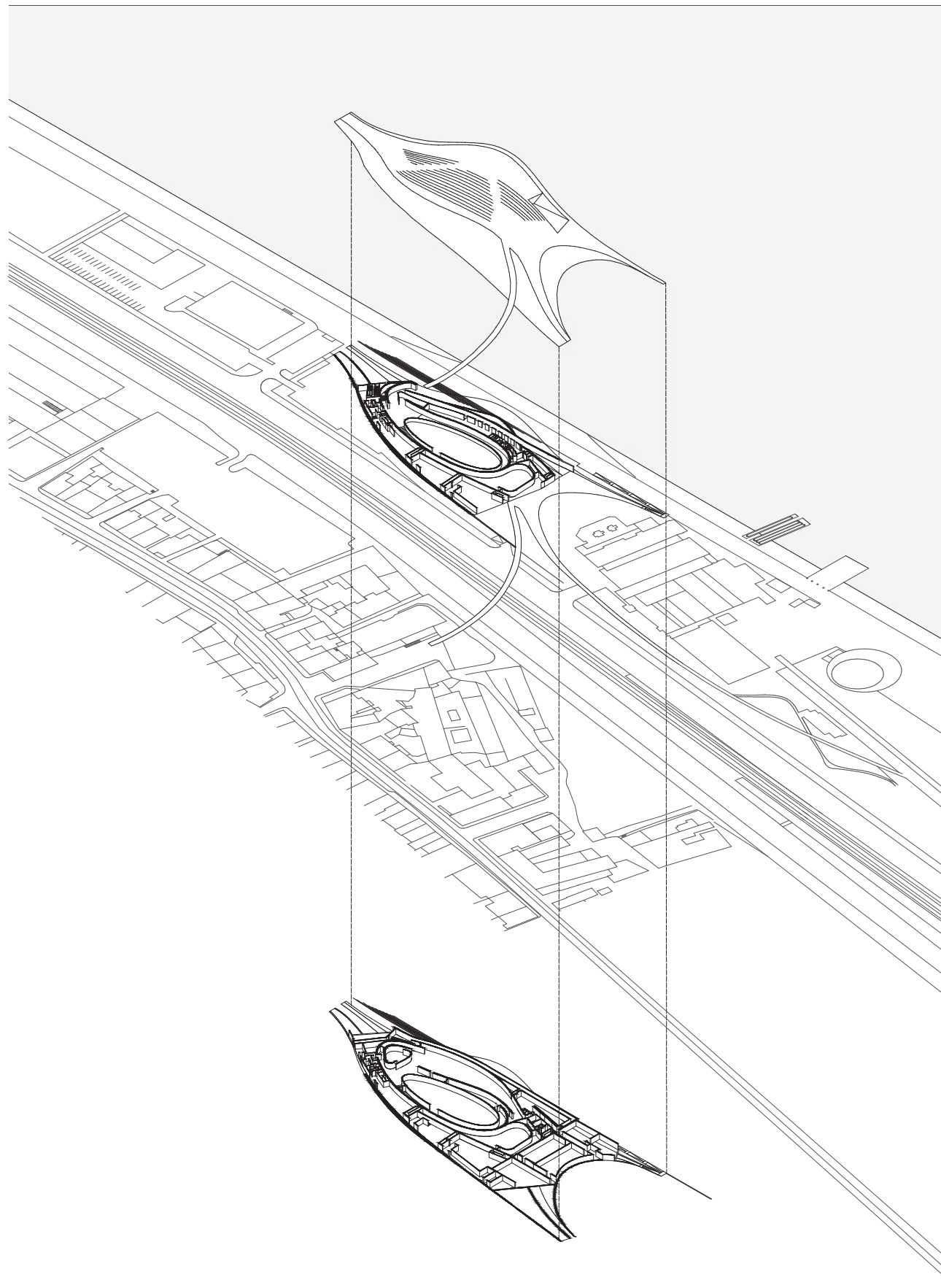
12 Floor Plan 0



13 Floor Plan 1



14 South elevation



15 Axonometry

area. The aim of the project was not to disturb the view of the historic area nor to cover the river, but to bring all these places into one point.

The Museum is conceived as a complex surface through its covering, a contemporary expression of the traditional Portuguese material, the azulejo. Thus, the main façade is clad with almost 15,000 enamelled tiles in three-dimensional form that came from Barcelona, made by the family company that worked with the Catalan Antoni Gaudi on the Sagrada Família. The tiles are 60 centimeters high and sit on perforated metal plates to make them lighter. The choice of this material for the main façade is a gesture based on Portuguese artisan tradition. Depending on the position of the sun during the day and the different seasons of the year, the tiles can capture the changing light and provide different readings that make the façade produce exceptionally striking effects. "The wide sloping south façade is the most iconic element of the building and acts as a great reflector in interaction with the light from the river. The angle and position of the mosaics were calculated to create specific light effects depending on the time of day and year." (Afaconsult., n.d.). The shape of the suspended roof creates a welcoming shadow over the main entrance reflecting the sea light into the museum.

The Museum of Art, Architecture and Technology is a unique and one of a kind building - it responds to all the needs requested by the client by creating a complex of public spaces where both indoor and outdoor spaces maintain a connection between the city and the river. Due to its conceptual richness and diversity of programmes and spaces, the museum brings a new cultural and landscape impulse to the city of Lisbon, becoming an important point in the cultural itinerary of the city designed for all audiences of all ages.



16 Pedestrian walkway (Julia Shtefura, 2020)



17 Oval Gallery (Julia Shtefura, 2020)

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“We have a responsibility to be radical and sensitive”

(Amanda Levetete in Santos, 2016)



18 View over the river (Julia Shtefura, 2020)

Integrated Master in Architecture, Iscte - University Institute of Lisbon.
Final Architecture Project 2020-2021. Lisbon and the River Laboratory.
Team: Coordination: Teresa Madeira da Silva. Supervisors: Teresa Madeira da Silva, Caterina Di Giovanni, Pedro Marques Alves. Students:
Bernardo Custódio, Carolina Alves da Silva, David Carvalho, Duarte Almeida, Francisco Quaresma, Joana Marques, Julia Shtefura, Luís
Filipe Ribeiro, Mariana Rosa, Milton Perry, Nuno Almeida, Nuno Bernardes, Rodrigo Oliveira, Vilma Nico Ferreira.
Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

05

EDP HEAD OFFICE
AIRES MATEUS

38°42'24.94"N, 9° 8'56.24"W

05

EDP HEAD OFFICE AIRES MATEUS

ARCHITECTS

Manuel Aires Mateus
Francisco Aires Mateus / Aires Mateus e Associates

CLIENT/PROMOTER

Energias de Portugal

TEAM

Architecture by Aires Mateus e Associates

PROJECT DATE

2008

CONSTRUCTION DATE

2015

LOCATION

Avenida 24 de Julho, Lisbon

CONSTRUCTION AREA

46.222 m²

AWARDS

Valmor and Municipal Architecture Award (2017)



01 EDP Head Office. View of the project central square (Teresa Madeira da Silva, 2021)

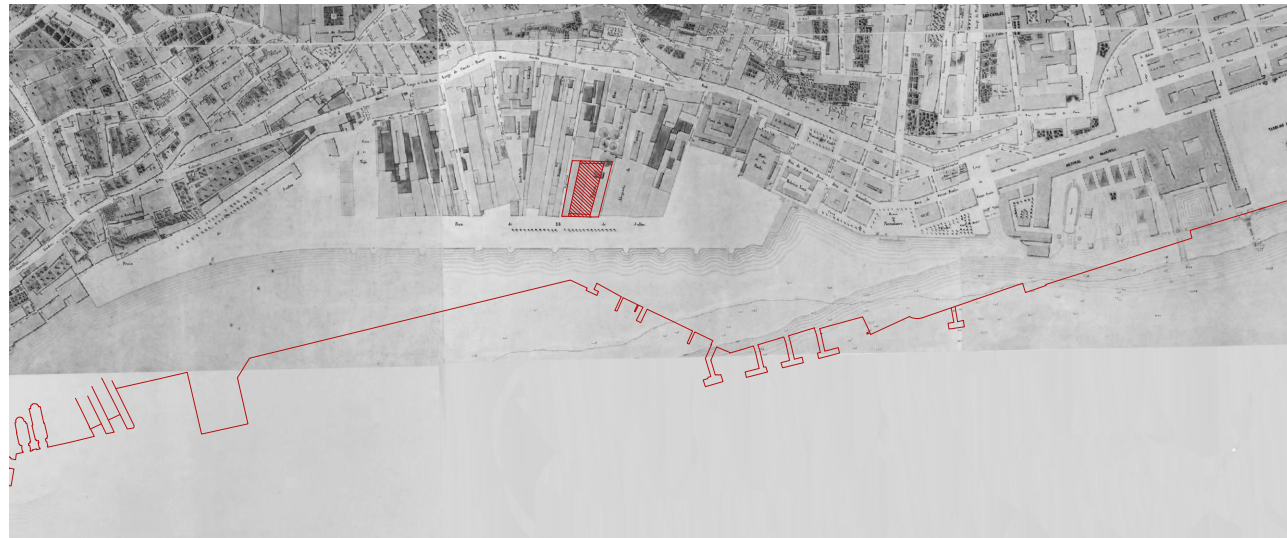
The EDP head office is a unique work in the panorama of the city of Lisbon, both for its scale and formal aspect, as well as for the importance that the building has in the revitalisation of the Lisbon waterfront, and more specifically the Boavista embankment (Tavares, 2015).

Through a competition launched by EDP (Energias De Portugal), 6 Portuguese teams of architects were invited, Gonalo Byrne, Nuno and Jos  Mateus (ARX), Jos  Lu s Carrilho da Graa, Manuel Graa Dias, Eduardo Souto de Moura and Manuel and Francisco Aires Mateus.

This competition was launched in April 2008, with the aim of designing the new head office in north of Boavista landfill, between Avenida 24 de Julho and Rua D. Lu s I, replacing the old head office at Marqu s de Pombal Square and hosting 750 employees dispersed in several offices (Tavares, 2015). With the transformation that the Boavista Landfill have gone through, the buildings that have been built spontaneously over the century and the old port constructions perpendicular to the Tejo River are the target of redevelopment and recovery (Ibidem).

Inserted in the Detailed Plan for the embankment, by the architect Jos  Lu s Carrilho da Graa, which aims at the urban development of this part of the city, the EDP head office would play a fundamental role in this point.

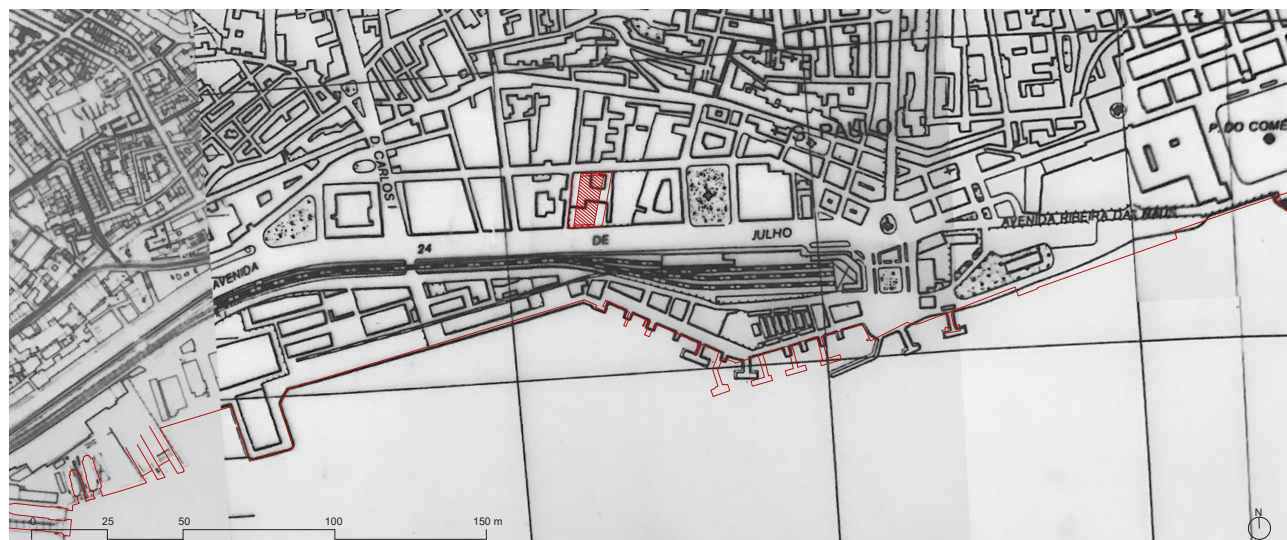




02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

The winning project of the competition was attributed to Manuel and Francisco Aires Mateus, for their project consisting of two elevated office blocks at the east and west which follow the alignments of the streets perpendicular to the coastline (former openings towards the river the river between the warehouses and shipyards) (Aires Mateus, in Salema; Carvalho, 2015).

These blocks form a central square on the ground floor, limited by two suspended galleries that connect the two blocks and follow the parallel alignment of Rua D. Luís I and 24 de Julho Avenue to the south (Ibidem).

The central square is considered the heart of the project, also due to the sun light that brights this space in a beautiful but controlled way, since a set of shading blades is present.

It presents an urban character in the transition that allows between axes and by the public space it offers the city, as well as by the commerce and restaurants that flank the square (Ibidem). It is a singular space, since it is not fully covered, but makes up the feeling of sheltering, it is an open space, but in which we notice its limits, not ceasing to be ample despite being confined between the blocks and galleries (Tavares, 2015).

From this square, access to a lower floor is made by two staircases, lit by courtyards, in which is located the entrance to the office blocks (Aires Mateus, in Salema; Carvalho, 2015).

This floor presents itself as a foyer where collective spaces, such as the auditorium, as well as serving as a distribution platform for the lifts serving the upper floors, which also includes four levels of below ground parking (Ibidem).



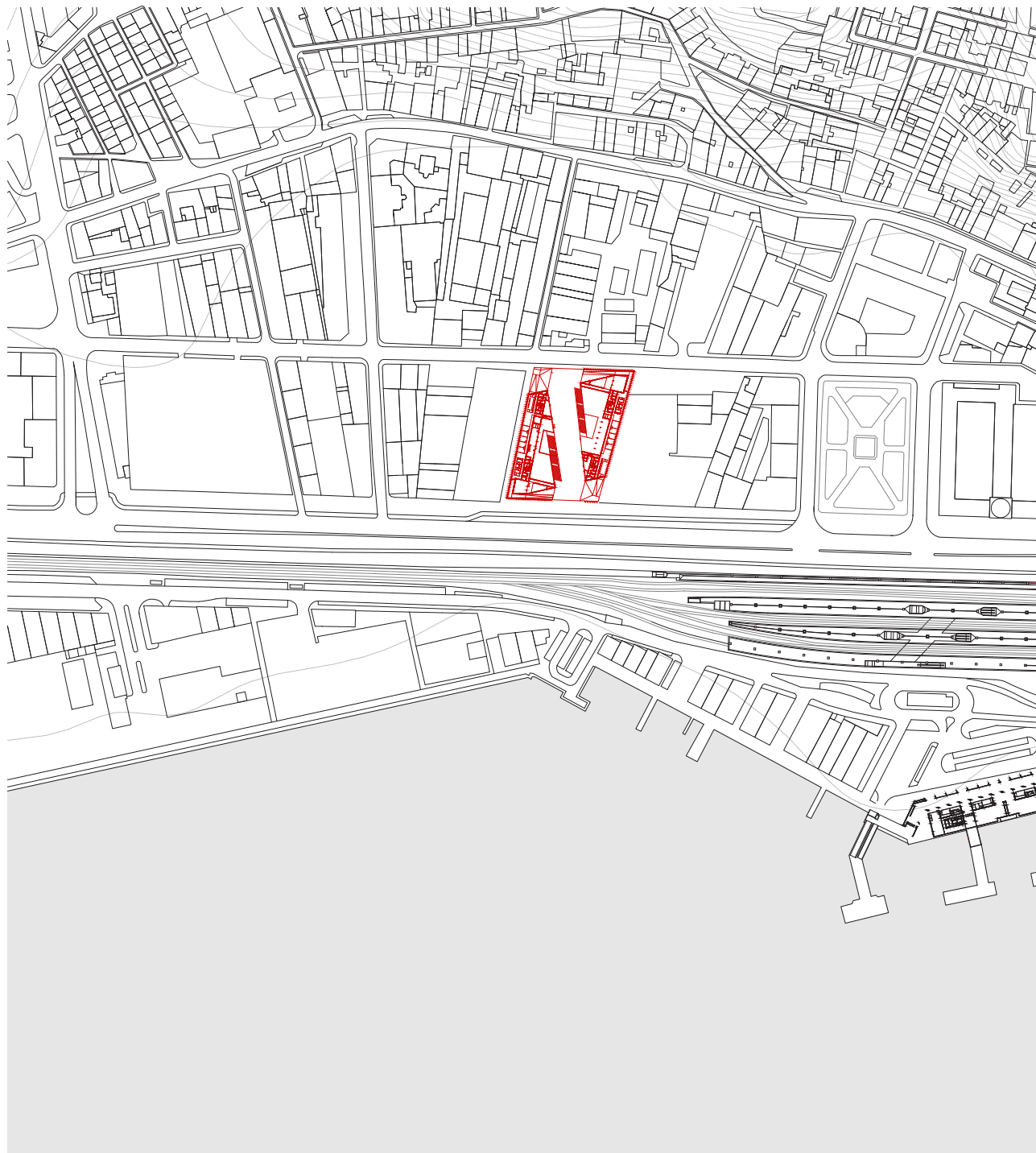
05 EDP Head Office's construction (Juan Rodriguez, 2015. Adapted by Francisco Quaresma, 2020)



06 View over the central Plaza (Juan Rodriguez, 2016. Adapted by Francisco Quaresma, 2020)



07 EDP Head Office's model. (Juan Rodriguez, 201-)



08 Site plan

The white shape that characterizes it is made up by a vertical precast fiber-reinforced cement (GRC) slats that form a rhythm throughout the façade, skewed in relation to the façade plane, and which allow various different views of the building (Tavares, 2015).

From a perspective in which we see the blades from the front, we can observe a rhythm between glass, patios and cladding. And from another perspective where we see the blades from the side, we can observe what appears to be two opaque white blocks rising up from the landfill.

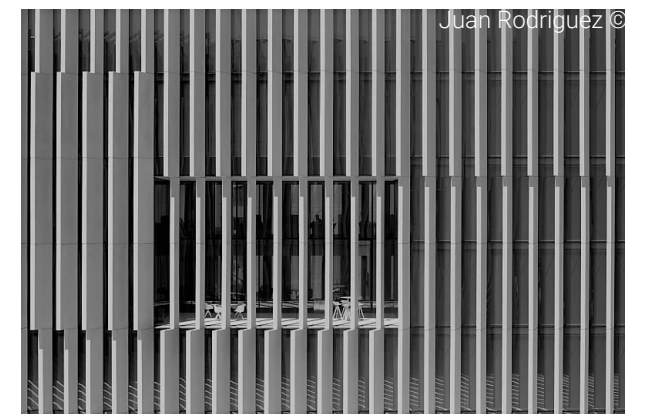
As this was a project to house the headquarters of an energy company, it was one of the premises of the competition that the chosen solution should have an environmental component as the basis of its construction (Aires Mateus, in Salema; Carvalho, 2015).

Thus, the architects opted for using a curtain wall façade with high performance glass, which would have the incidence of sunlight controlled by these blades that make up all the façades and roof of the blocks, galleries and the roof of the square, unifying the whole building. This cladding has a function that is not only aesthetic but also as solar control, as well as hiding the structural system.

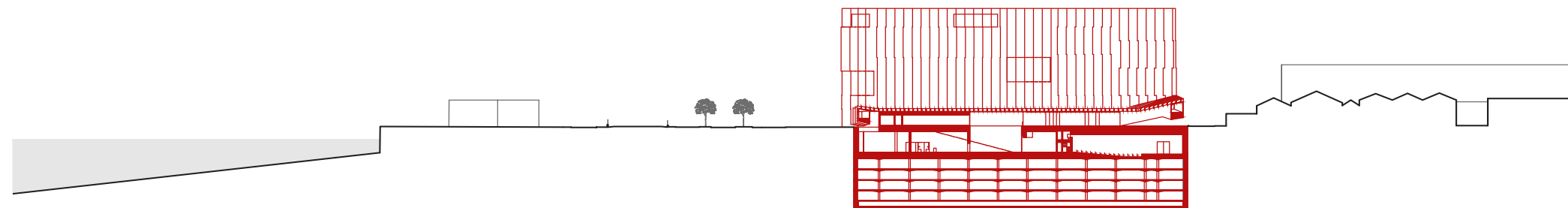
This complex system is based on a structural organization that is divided between a reinforced concrete base that is below the earth line and a metallic structure cage, in which is integrated the aforementioned system, which lifts all the buildings built above the ground (Tavares, 2015).



09 EDP Head Office. Access stairs to the Foyer (Juan Rodriguez, 2016. Adapted by Francisco Quaresma, 2020)



10 View from the patio to the façade (Juan Rodriguez, 2016. Adaptado por Francisco Quaresma, 2020)



11 Section



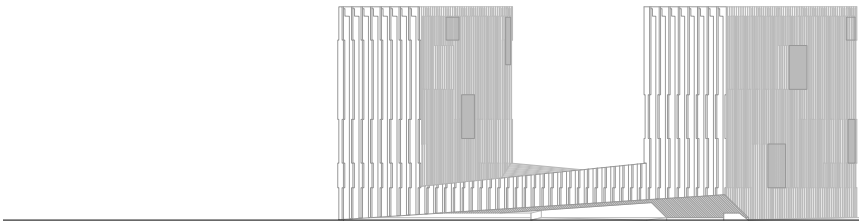
12 Plan Floor 0 and module



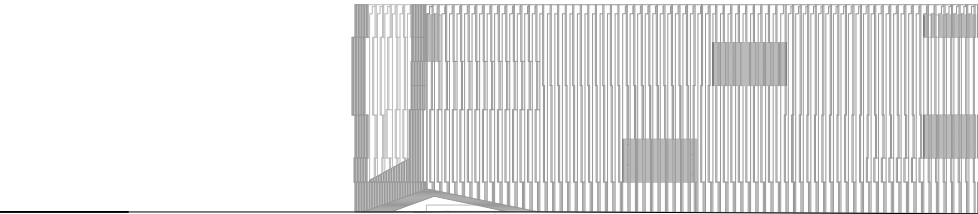
14 View to the central square (Juan Rodriguez, 2016. Adapted by Francisco Quaresma, 2020)



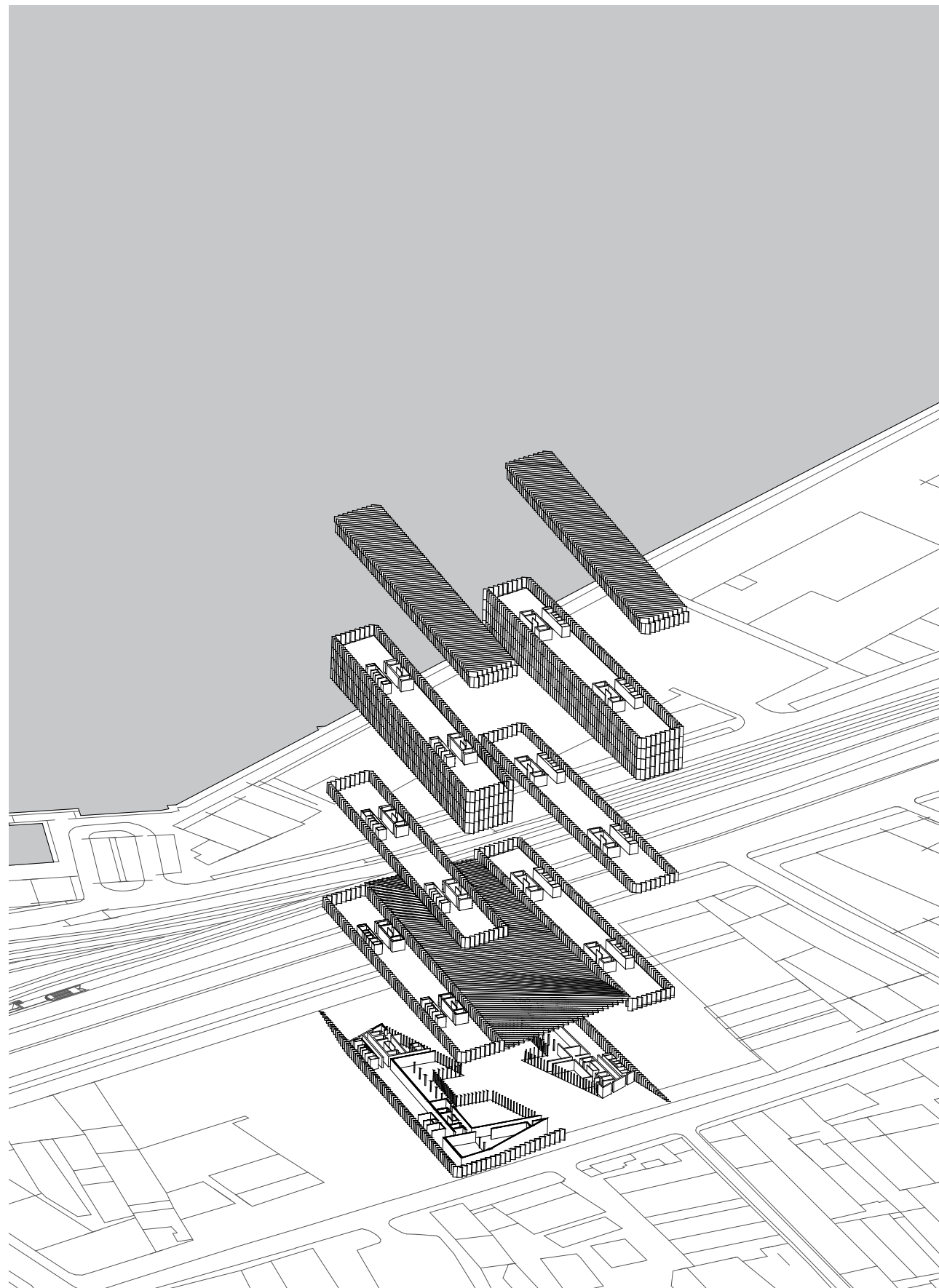
13 Patios view to Tejo River (Juan Rodriguez, 2016. Adapted by Francisco Quaresma, 2020)



15 South elevation



16 East elevation



17 Axonometry

The slats are parallel to each other and follow, the spatial organisation of the interior with three variations in what appears to be an exhaustive repetition of the same covering, in a “game” of light control, perspectives, views and rhythms (Tavares, 2015).

The curtain wall itself is interrupted occasionally by courtyards in the office blocks, counteracting the monotony and spatial organization of each floor. In this building the structure, located on the façade and hidden by the shading blades, holds both the floors and the glass planes of the façades, as well as allows a freer organization of the plan.

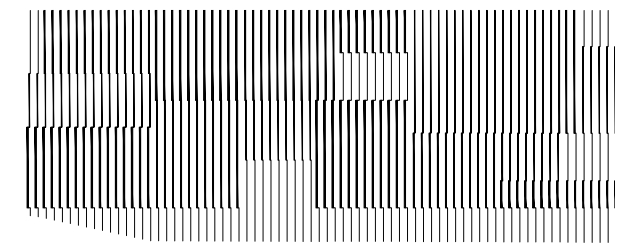
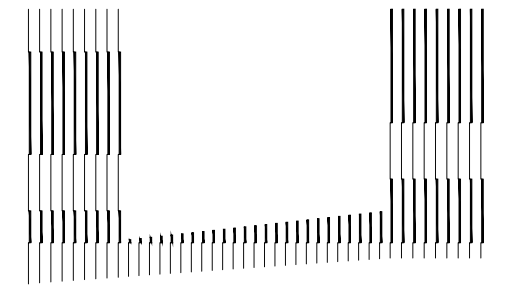
Deep down, as Francisco Aires Mateus states, this building “(...) is a kind of skeleton, it is now the EDP Head Office, but it could be transformed into a housing, hospital or a nursing room. A skeleton design that could support anything in the future”.

This architectural object, by its abstract and conceptual image, hides in its simplicity and functionality what is in fact a complex system of spatial, technical and structural organization. (Ibidem)

On top of that this building responds as a program for the EDP Head Office, it has a relationship with the city, with people and with public space, and a future development for the Boavista embankment.

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18 Project's diagrams (Aires Mateus, s.d.)



19 View over the central square towards the Tejo river (Juan Rodriguez, 2016. Adapted by Francisco Quaresma, 2020)

“The void is the center of architecture.”
(Aires Mateus, M. apud Salema et al., 2015)



20 View from Rua Dom Luís I
(Juan Rodriguez, 2016. Adapted by Francisco Quaresma, 2020)

Integrated Master in Architecture, Iscte - University Institute of Lisbon.
Final Architecture Project 2020-2021. Lisbon and the River Laboratory.
Team: Coordination: Teresa Madeira da Silva. Supervisors: Teresa Madeira da Silva, Caterina Di Giovanni, Pedro Marques Alves.
Students: Bernardo Custódio, Carolina Alves da Silva, David Carvalho, Duarte Almeida, Francisco Quaresma, Joana Marques, Julia
Shtefura, Luís Filipe Ribeiro, Mariana Rosa, Milton Perry, Nuno Almeida, Nuno Bernardes, Rodrigo Oliveira, Vilma Nico Ferreira.
Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

06

CAIS DO SODRÉ INTERFACE

PEDRO VIANA BOTELHO + NUNO TEOTÓNIO PEREIRA ARCHITECTS

38° 42' 21,844" N | 9° 8' 38,488" W

06

CAIS DO SODRÉ INTERFACE

PEDRO VIANA BOTELHO + NUNO TEOTÓNIO PEREIRA ARCHITECTS



01 Cais do Sodré Interface (Teresa Madeira da Silva, 2020)

The recent intervention in Cais do Sodré Interface is a rehabilitation project of the former train station designed by the architect Porfírio Pardal Monteiro, and an extension of the faculties of the set including not only the metro, boat and bus networks, but also a commercial and service area. Today the complex is an intermodal station incorporating the train, metro, boat and bus networks.

According to the project's architects "it was the answer to a series of images related to the site and a need to identify Cais do Sodré as an indivisible unit" (AAVV., *Espólio de Nuno Teotónio Pereira*).

On the other hand the need for organization and it's harmonious interconnection of traffic offering the general public a structure to the enjoyment and full use of the site, whether these are recreational activities, or the need for one or more means of transportation.

All the valences included in the project are articulated in a singular way seeking the "dignification of the public space" (Tostões, (coord.) 2004: 228).

ARCHITECTS

Pedro Viana Botelho and Nuno Teotónio Pereira

CUSTOMER/PROMOTER

Lisbon Underground (EP)

ARCHITECTURE TEAM

1993 - 1997

Carlos Reis e Luís Borges da Gama;

1998 - 2004

Luís Borges da Gama, Sotero Ferreira, Francisco

Eloy, Maria do Rosário Beija e Sara Eloy

Artistas Plásticos: António Dacosta, Pedro Moraes

e Irene Buarque

PROJECT DATE

1993, 1995 - 1997, 1998 - 2004

CONSTRUCTION DATE

2009

LOCATION

Cais do Sodré, Praça Duque de Terceira, Lisboa

CONSTRUCTION AREA

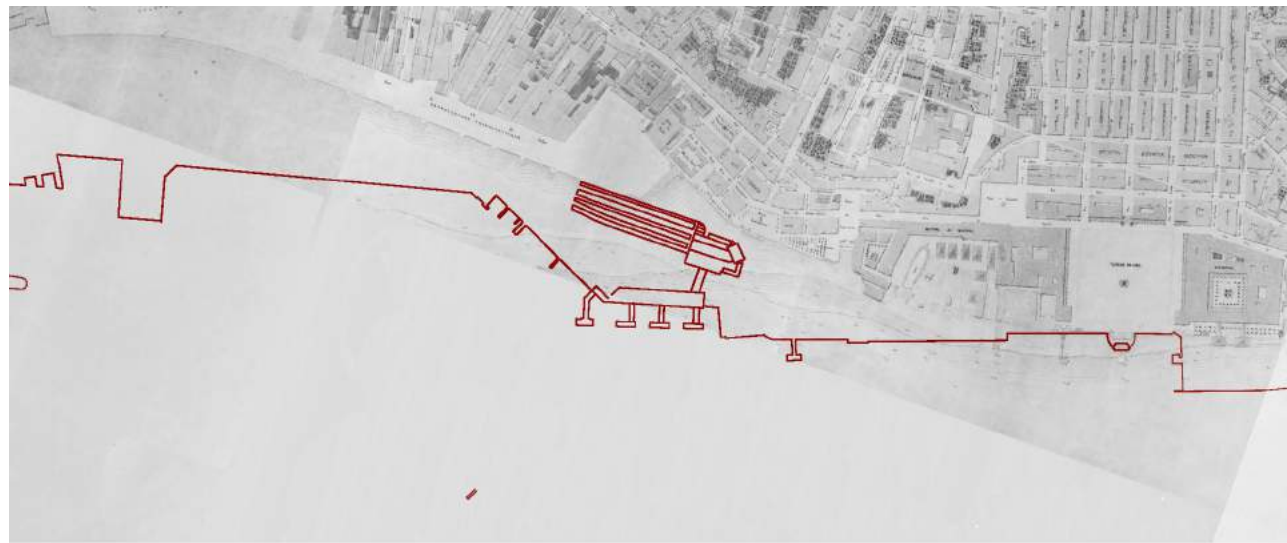
52145 m²

AWARDS

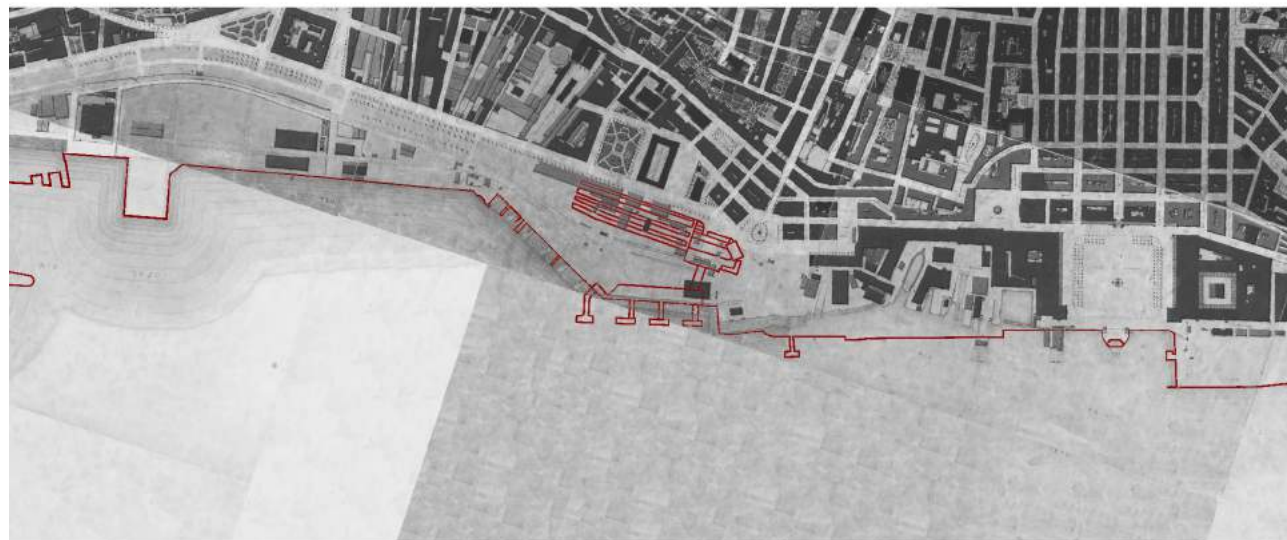
Valmor and Municipal Architecture Award (2008)

Monument of Public Interest (2012)





02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

In Filipe Folque's 1856-58 plan, the embankment where the interface of the cais do sodré exists today was not visible. Until then, the current place where the building is located was dominated by the river, the beach of Boa Vista and the boqueirões where the boats moored.

It was this "mire and drains that enhanced the existence of insalubrious stagnant waters and mosquitoes yellow fever carriers" (Martins, 1995: 325), making it until the construction of this landfill a focal place of diseases. To fight these hygienic but also infrastructural issues, it was elaborated, based on a study for Port of Lisbon, the "landfill and primitive construction of the then Rua 24 de Julho, wide and with a line of trees. However, the urban structure dependent on the axis of Rua da Boavista, and the lengthy parcel were kept intact" (Costa, João Pedro, 2007: 79).

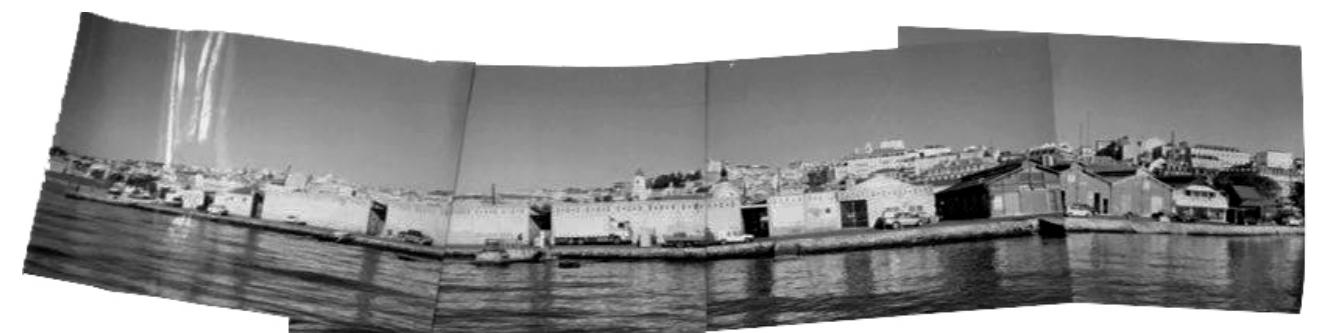
In the 1911 plan, by Silva Pinto, the Port of Lisbon had already been built, which contemplated the construction of a closed port, containing a railway line and the construction of a marine doc. A set of "other urban operations" were also carried out with the goal of improving internal access and reorganizing the long blocks between Rua da Boavista and Rua 24 de Julho, bringing the dimension of the blocks closer to the one that guided the growth of the city to the north through its tear with a longitudinal median street to the Tagus - Rua Vasco da Gama, current Rua D. Luís I (...)" (Proença, 2014: 186).



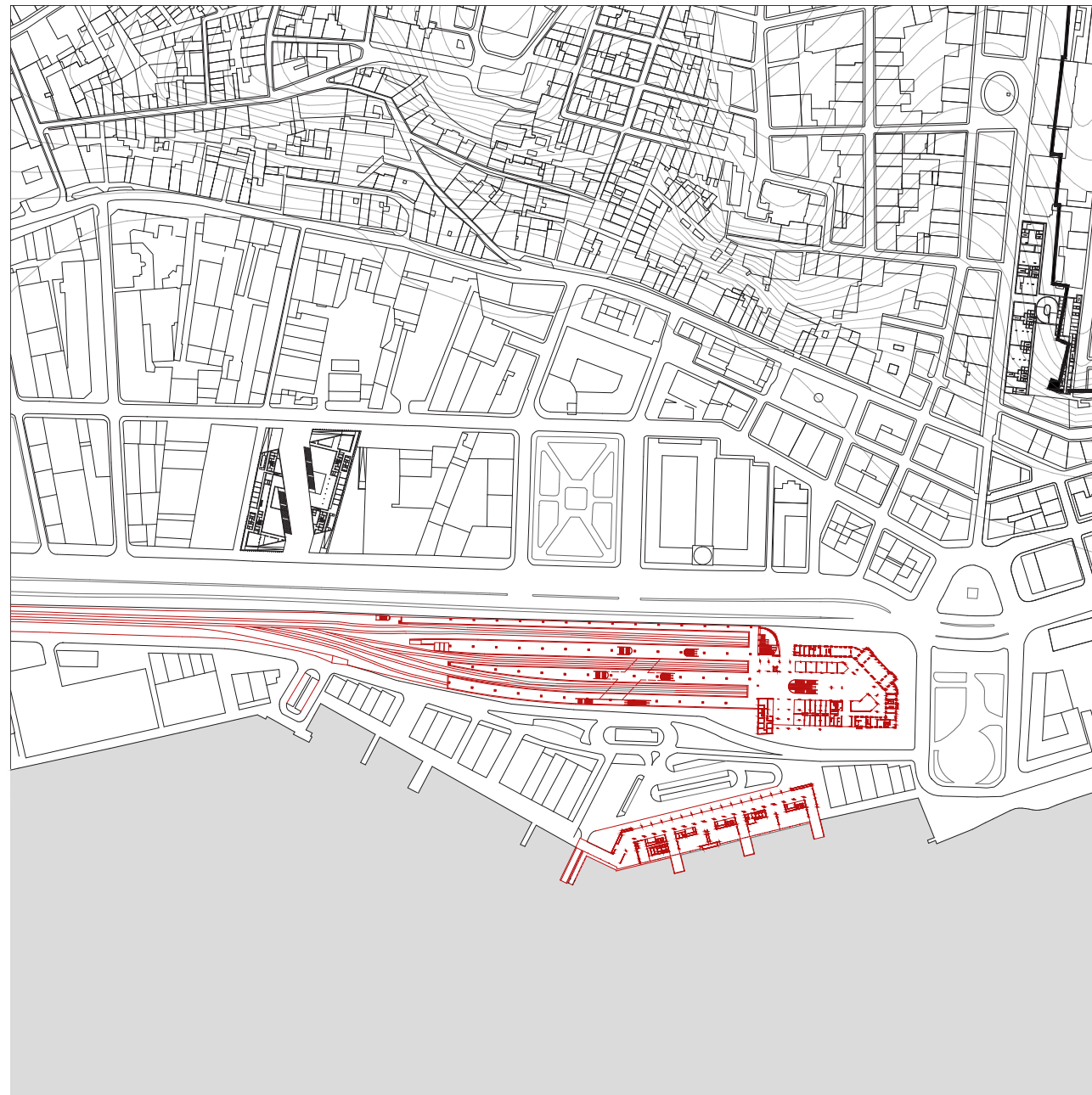
05 View of the Old Cais do Sodré Station, Praça Duque de Terceira and Avenida 24 de julho, in the year of the station's inauguration (1928) (Judah Benoliel, adapted by Duarte Almeida, 2020)



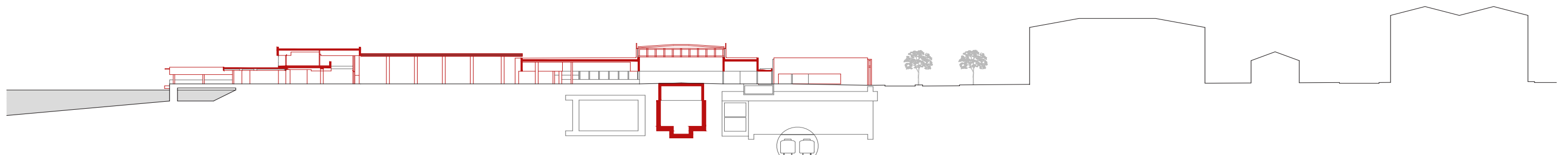
06 Bird's-eye view of the old Cais do Sodré Station. (Nuno Teotónio Pereira Architects Archive, adapted by Duarte Almeida, 2020)



07 View of the river from the current site of the river pier (Nuno Teotónio Pereira Architects Archive. Adapted by Duarte Almeida, 2020)



08 Site Plan



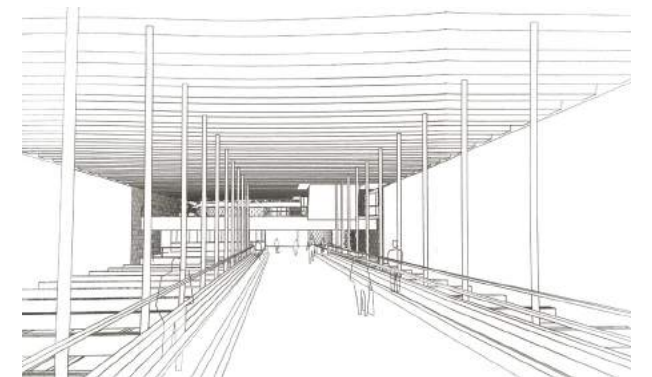
09 Longitudinal Section

Still at the end of the 19th century, the first stretch of the Cascais Line took place (1889). Until then the connection to Cais do Sodré was made by river. In 1895, the railway line was extended to the, until then, modest Cais do Sodré station. In the 1940 plan, the urban fabric of the Aterro do Boavista is visible, intact until today with the profiling of Rua D. Luís I completed, as well as the resizing of the blocks. Also visible is the new station designed by the architect Porfírio P. Monteiro (1928), with a monumental volume, reinforcing its status as a tourist line.

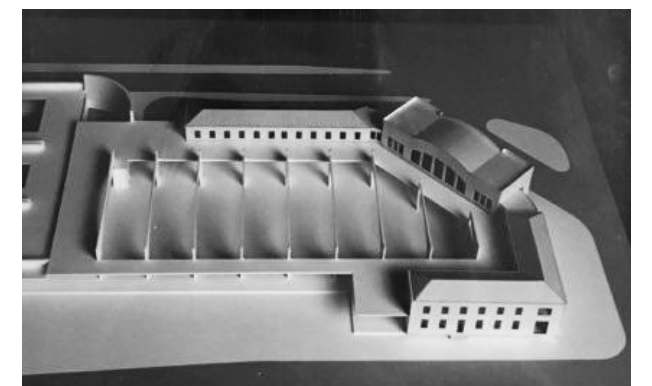
The project by architects Pedro Botelho and Nuno Teotónio Pereira, aimed at creating an intermodal station on the site of Cais do Sodré, in order to create a new polarity in the City of Lisbon and its peripheries (Cacilhas, Barreiro, Trafaria and Cascais). At the functional and programmatic level, this transport consists of two volumes: to the south the ferry station and to the north the metro and train station. As the focal point lies in "the covered square, designed as space generator. This central core of the interface (...), seeks to enhance the old Pardal Monteiro's station, maintaining it as the main entrance and ordering the routes from there.

The connection between the ferry and the train was thought out with circuits as a way of revitalizing the old station, guiding people to that central atrium". (Tostões (coord.) 2004: 228).

From the center of the square you can access the metro. The pier is on floor -3. It presents itself on a large-sized nave, the most extensive of the Lisbon metro network (224x23x12m) at the time named by Gonçalo Byrne as "the distinction of a tectonic cave" (Byrne in Tostões



10 View of the suspended platform connecting to the metro pier (Nuno Teotónio Pereira Architects Archive, adapted by Duarte Almeida, 2020)



11 Model proposal (Nuno Teotónio Pereira Architects Archive, adapted by Duarte Almeida, 2020)



12 Construction of the CP train platform (Metaloviana-Metalúrgia de Viana, S.A., adapted by Duarte Almeida 2020)

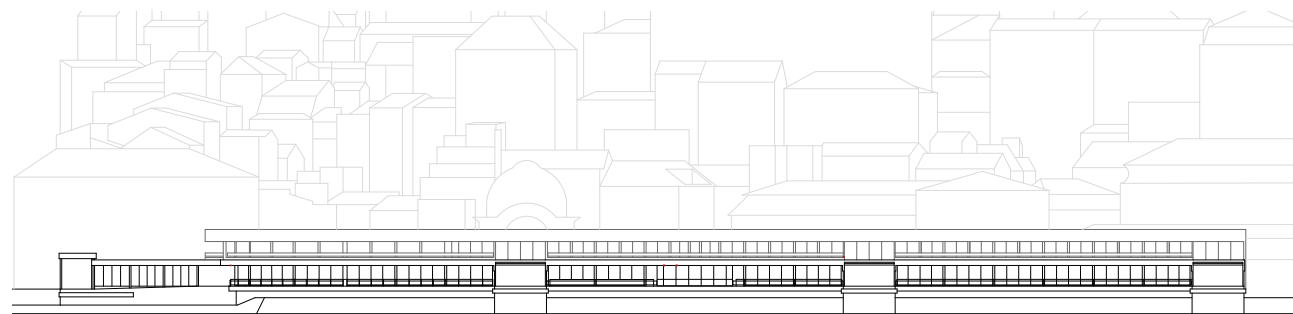
(coord.) 2004: 228), and has a side arrival dock and a central passenger departure pier. The station includes two extensive tile panels along the pier and at the entire height of the nave, reproducing a "running rabbit" according to the design by António Dacosta and arrangement by Pedro Morais. (Tostões (coord.) 2004: 228).

On floor -2, in the same alignment of the metro line, there is an extensive suspended platform, on the sides of which two moving walkways contribute to dispersing all the traffic of people entering and leaving the metro pier.

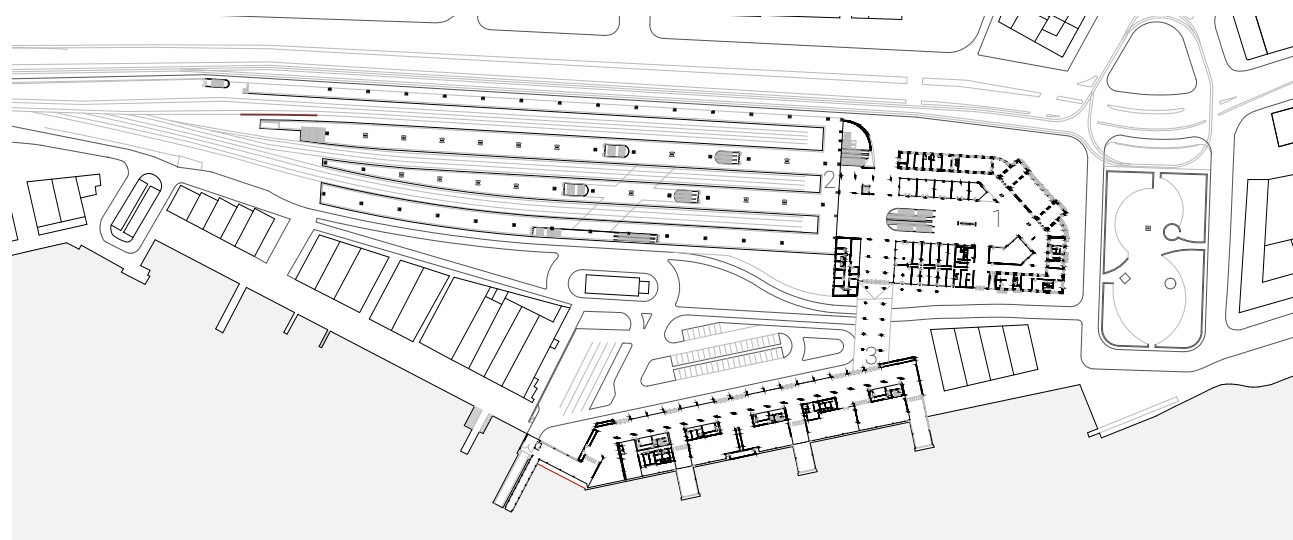
The train station as well as the metro station is accessible from the square. Vertical accesses emerge at each pier. These all connect in a diagonal corridor on floor -1, where the exit of

passengers moving from the train to the metro takes place. The ferry station, in turn, intensifies the relationship with the river and the other bank, through the fluidity of movement, open views and flexibility. On the ground floor the spaces are organized according to five volumes of parallelepiped forms. Inside there are vertical accesses, toilets and ticket offices. Outside these volumes a large circulation nave develops, to the North. On the river side are the several passenger waiting rooms. On the 1st floor there is a drop in volume compared to the river. It is here that the administrative area of the concessionaire company - Transtejo - is found.

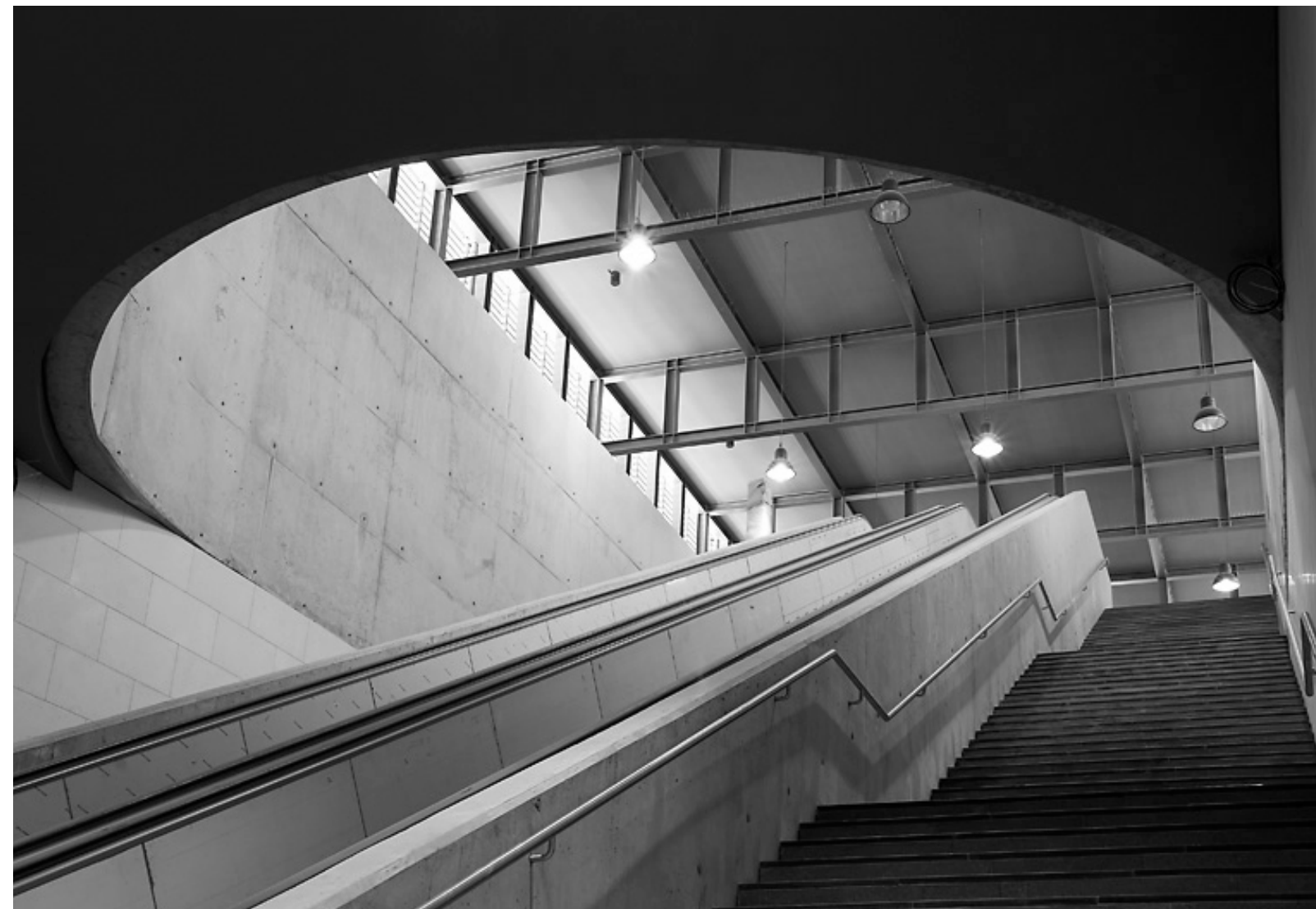
This area develops from an extensive central gallery



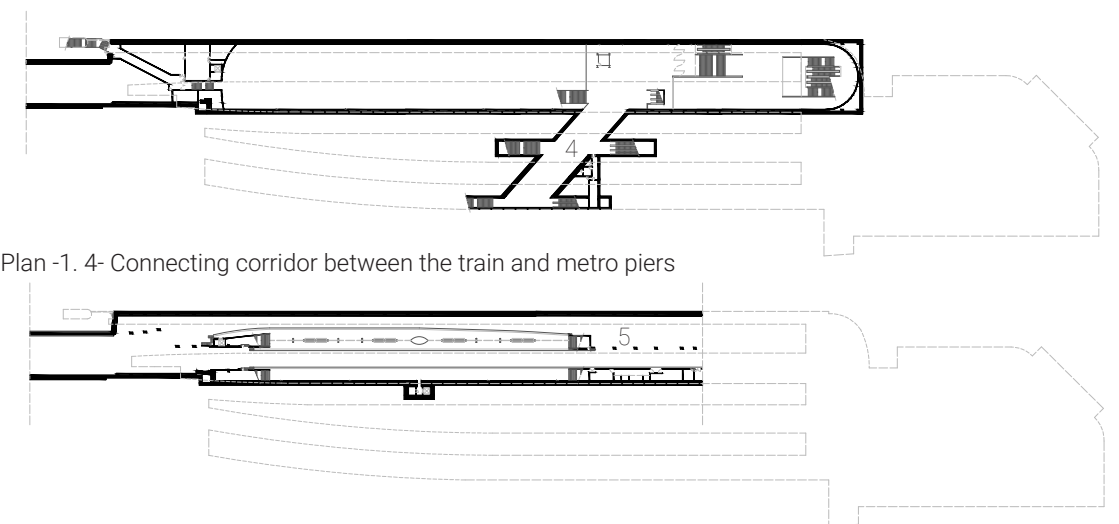
13 South Elevation



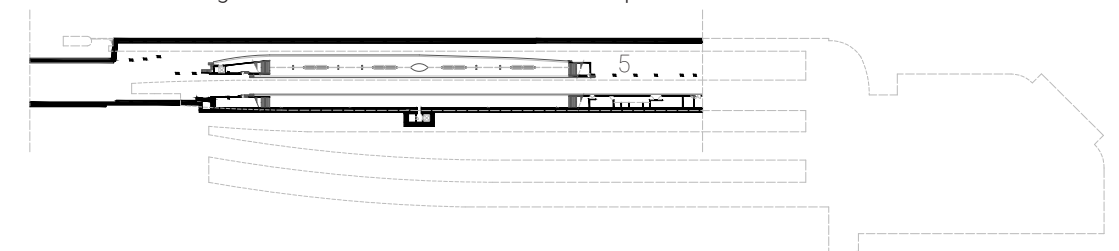
14 Ground Floor Plan. 1- covered square 2- train wharf 3- river station



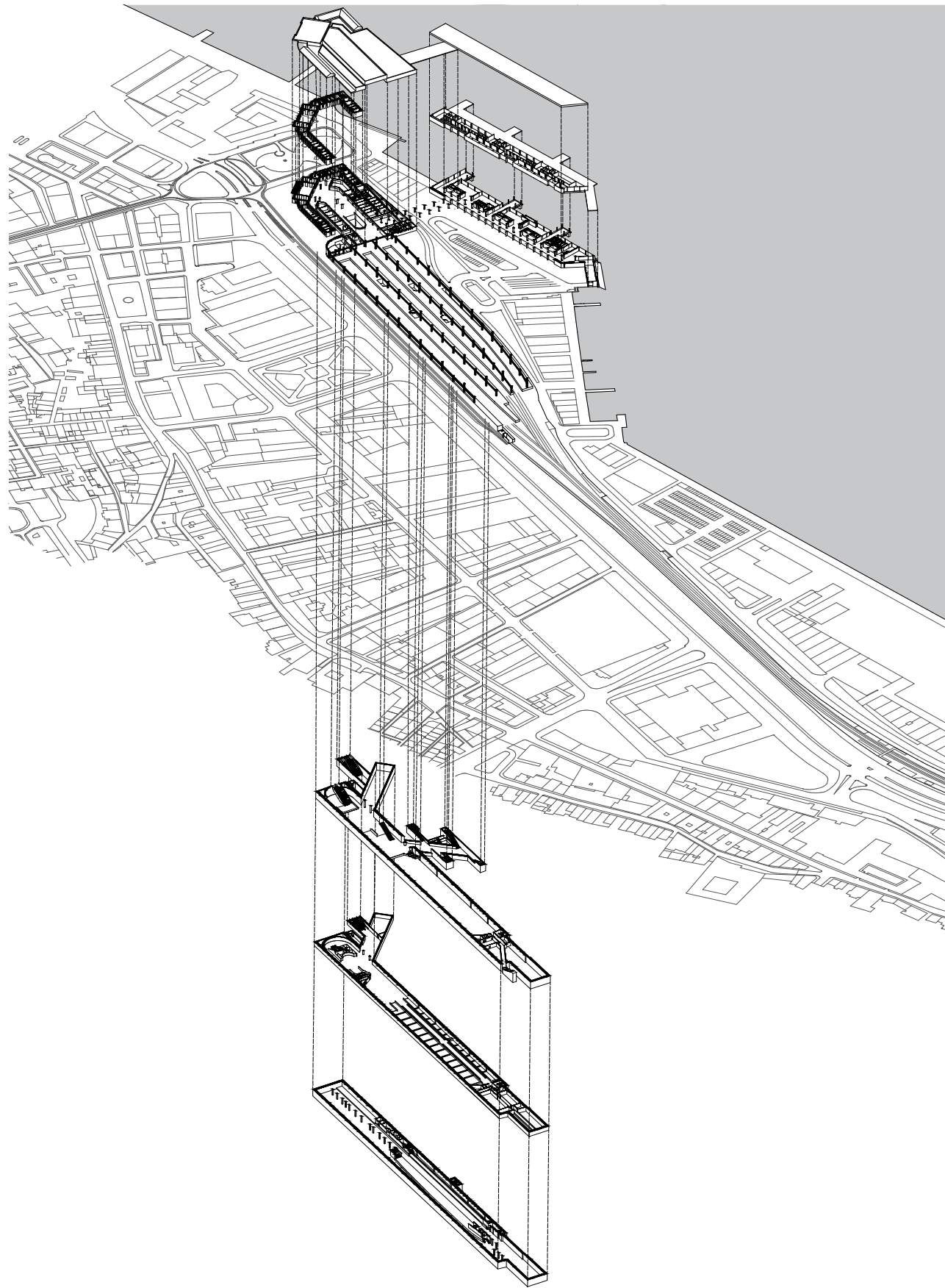
15 Central square staircase (Catarina Botelho, 2012)



16 Floor Plan -1. 4- Connecting corridor between the train and metro piers



17 Floor Plan -3. 5- Subway



18 Axonometry

that branches out to the various spaces.

This organization made it possible to create volumetric games and mezzanines overlooking the large nave and waiting rooms.

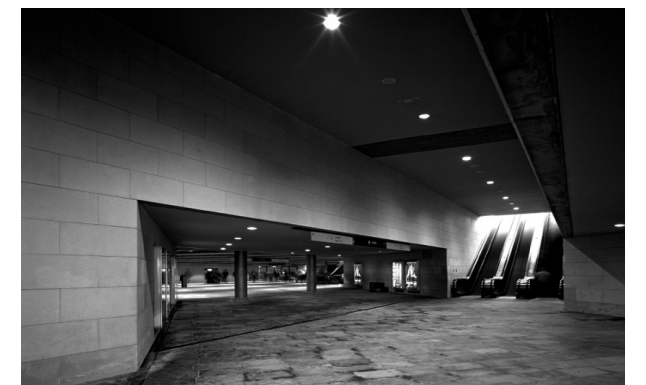
The intervention ends in the exterior "with the reconstruction of the pier understood as a space for collective use and leisure taking advantage of the proximity to the river. The jetty was replaced with the end emerging from the water and with a sculptural series of archipelago islands designed by Irene Buarque, using stones specially chosen and worked to be used as urban furniture". (Tostões (coord.) 2004: 228).

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19 Suspended platform for access to the subway pier (Ingolf, adapted by Duarte Almeida, 2020)



20 Connection between the train pier and the subway pier (AML, adapted by Duarte Almeida, 2020)



21 Embarkation pier of the river pier (Tiago A. Miranda, adapted by Duarte Almeida, 2020)

"The heart of the interface, which is inside the old train station (...) is sort of a small shopping and services centre, where people who use the various modes of transport converge."

(Nuno Teotónio Pereira in Mexia, José, 2004)



22 Outside of the river pier (Tiago A. Miranda, adapted by Duarte Almeida, 2020)

07

RIBEIRA DAS NAUS

JOÃO GOMES DA SILVA/GLOBAL+ JOÃO NUNES E CARLOS RIBAS/PROAP

38°42'22.07"N, 9°8'22.21"W

07

RIBEIRA DAS NAUS

JOÃO GOMES DA SILVA/GLOBAL + JOÃO NUNES E CARLOS RIBAS/PROAP

ARCHITECTS

João Gomes da Silva/ Global João Nunes/
PROAP

CLIENT

Câmara Municipal de Lisboa Sociedade
Frente Tejo, SA

TEAM

Miguel Domingues (coordination). Global:
Miguel Domingues, Pedro Gusmão, Filipa
Serra, Leonor Cardoso, Susana Frazão, Ar-
mando Ferreira, Catarina Raposo. Proap: Ana
Marques, Miguel Coelho de Sousa, Magda
Gonçalves, Mafalda Silva, Helena Palma,
Iñaki Zoilo, Bernardo Faria, Nuno Jacinto,
Sílvia Basílio, Andrea Battocchi, Ana Margari-
da Henriques.

PROJECT DATE

2009-2015

LOCATION

Ribeira das Naus, Lisbon

SITE AREA

62 500 m²



01 Ribeira das Naus. Main View (Caterina Di Giovanni, 2020)

The Tagus has always been an asset to Lisbon, the city grows at its feet and opens up to the world. In the Lisbon of the discoveries, the influences of the maritime routes arrive at Ribeira das Naus and the Tagus begins to connect the seas and oceans.

The riverfront became busy with the loading and unloading of merchandise and the creation of shipbuilding structures. The cartography before the earthquake bears the marks of the new House of India and the royal palace, but also the pontoons and the boats under repair, the quays and the moorings (Estácio dos Reis, 1988).

After the earthquake of 1755, the shipbuilding structures were reinforced and the Pomaline architects recovered the caldeira quay or "caldeirinha", now with a rectangular structure and bordered with lioz stone material of the region for excellence, taking shape a new structure: the dry dock, a prominent well lined with lioz and topped with a floodgate that allowed the entry of the boats and the water drainage (CML, 2013).

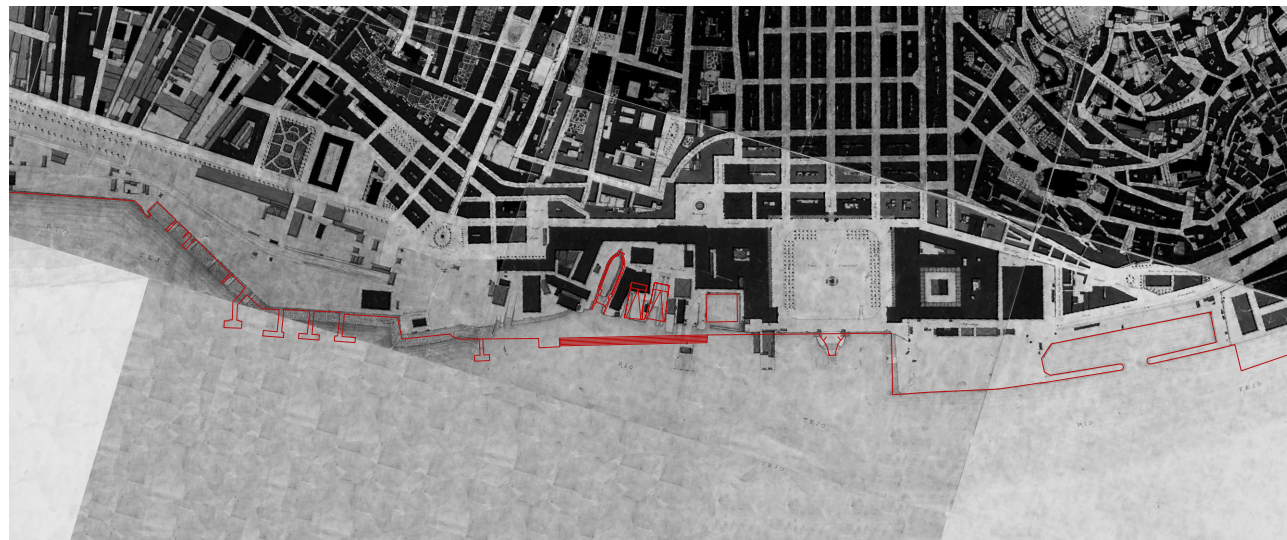
Ribeira das Naus took pride of place in the life of the city, becoming the place of experience, knowledge and discovery.

In 1939, the history of Ribeira das Naus suffered a radical change of direction, with the pressure of the automobiles, these, the new owners of the city, decided to bury the memory of





02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)

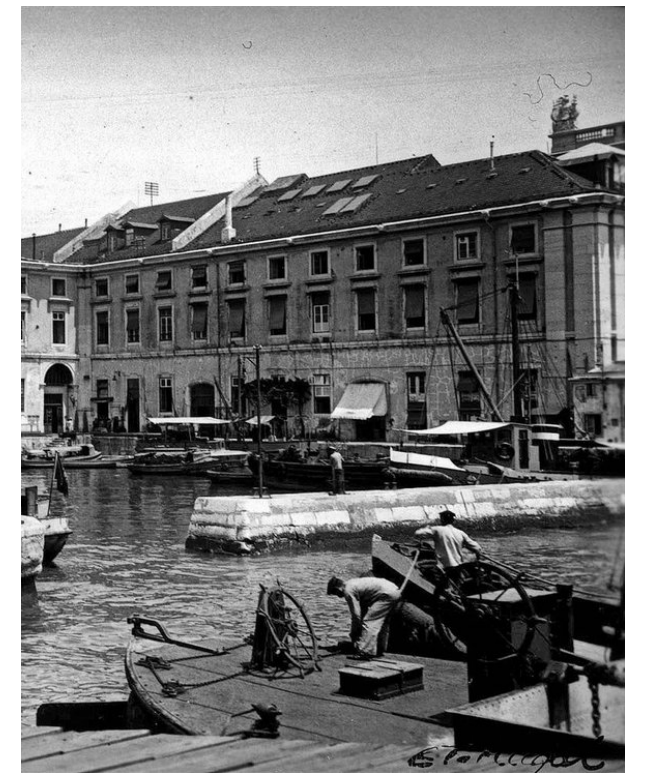


03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

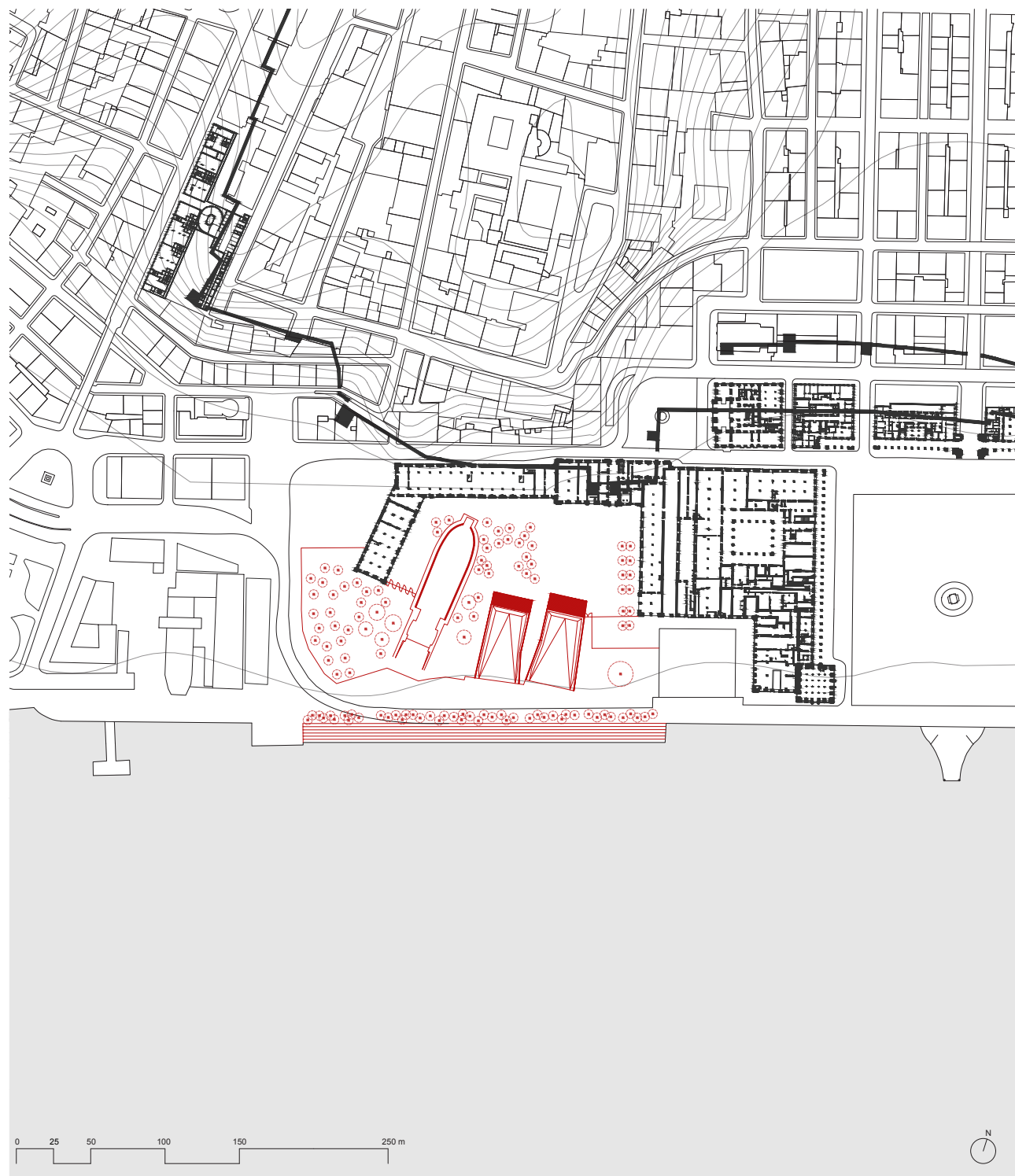
centuries-old heritage and open up four busy lanes in front of the Terreiro do Paço. Turning the docks area into an enclosed car park (Estácio dos Reis, 1988). Next to the river, only a small wooded longitudinal strip was left, thus creating in this half of the 20th century, a city with its back to the Tagus (Estácio dos Reis, 1988). Recently, the opportunity arose to recover the memory of Ribeira das Naus and unearth the heritage, giving it back to the city, but above all, Lisbon gains the opportunity to proudly look at the Tagus river again. Over time the city has been gaining ground to the river, on the old beach successive embankments were built opening paths for larger boats, the new project starts from the current building transforming it into a large garden where the history of the place and the archaeological remains have a prominent place, from the beginning digging up the dry dock and the Caldeirinha Dock, recovering the old slipways and transforming them into grassy ramps dedicated to the enjoyment of those who pass by (Global Arquitectura Paisagista, 2020). The new Ribeira das Naus leaves part of the buried infrastructures of the royal palace demolished by the earthquake open to the sky. "Ribeira das Naus is a mythical space in national and local identity, partly produced by the collective imagination, partly by official culture. The myth is rooted in the shipyard that actually operated in this place, and which had produced more than a century of vessels of various types" (Global Landscape Architecture, 2020). This project by Global and PROAP, maintains the matrix with the use of traditional stones and planting of tree species that are part of the site's history, now making the former beach transformed into a staircase that allows a subtle and informal contact with the river, creating a kind of amphitheatre with the estuary and the southern margin of the Tagus River as an open stage.



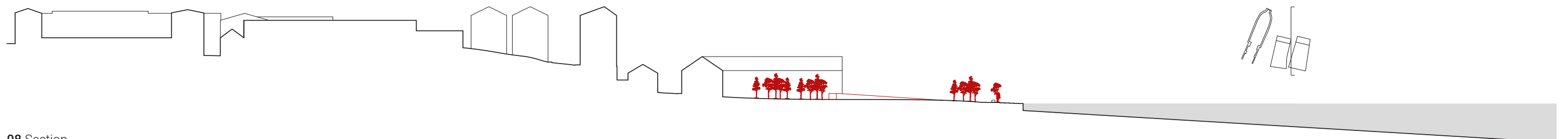
05 Ribeira das Naus, Caldeirinha Dock (Eduardo Portugal, 1939).



06 Plane View to Ribeira das Naus (West) (Unknown Author, 1952)



07 Site plan



08 Section

Requalified, the riverfront between the western part of Terreiro do Paço and Cais do Sodré, through Ribeira da Naus Avenue, now offers a wide riverside promenade for pedestrians and a new roadway (CML, 2015).

This is the result of work to advance the riverfront of a project that provides a green space and water mirror at the former Caldeirinha Dock (CML, 2015).

"The architecture of this space consists then, in the contraposition of fossil elements with contemporary elements, with the double sense of revealing the different times of the same place (culture of the city space) and of action in the use of the public space (circulation, permanence, contemplation, infrastructure)" (PROAP, 2020).

The works allowed to return to the public this Dock, a structure that dates back to 1500 and is now covered by water, which can be crossed through a wooden walkway and the Dry Dock where since the seventeenth century boats were recovered.

This new Ribeira das Naus Avenue allows a renewed road, pedestrian and cycling connection between Terreiro do Paço and Largo do Corpo do Santo / Cais do Sodré and the enjoyment of a new public garden and a footpath along the waterfront, promoted by a new public garden and a pedestrian pathway along the waterfront, promoted by resting areas and a wide staircase descending to the river, recreating the beach existing before the earthquake, with requalified infrastructures.

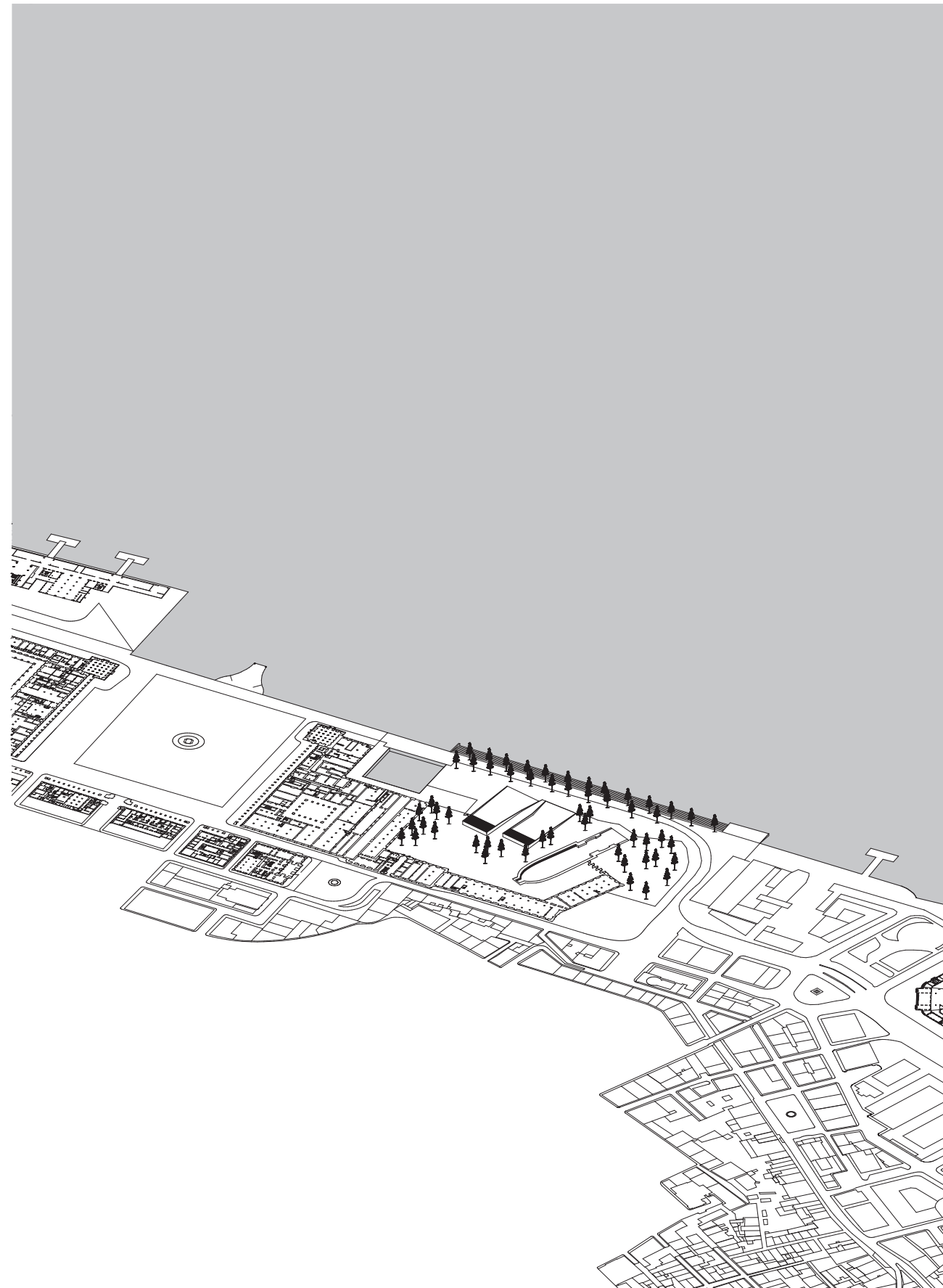
The intervention encompassed the requalification of the buried infrastructures and the advancement of the margin, creating a new riverside avenue and a staircase that is like the new urban beach of the city.



09 Garden View (Miguel Manso, 2014)



10 Caldeirinha Dock (Caterina Di Giovanni, 2020)



11 Axonometry

About the relationship with the river, the authors refer that the original limit of the coastline is implemented and materialized by an extensive black and basaltic surface that reflects the increase of the surface of the margin.

On reaching the marginal alignment, the slopes slide gently as an artificial beach contained by the two pontoons.

One, on the east side, extends the side wall of the Arsenal dock, while the other, to the west, extends the empty space of the Corpo Santo square, determining by opposition the set of tree alignments that extend along the river.

"On this black surface that absorbs us, the traffic of vehicles, bicycles and pedestrians runs, separated by stone or wooden signs that define directions, passages, or shared surfaces" (PROAP, 2020).

This new intervention then provides a new centrality, making this, an informal place without barriers or ties, making a large garden open to the city of Lisbon.

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12 Ribeira das Naus (Rolando Volzone, s.d.)



13 Main View from Caldeirinha Dock and the Ministry's Building (Luís Filipe Correia, 2018)

“We imagine that now we could go down the river, or even walk on the beach, the tides reveal cyclically, until we go up the stairs between the columns, and suddenly find the monumental Praça do Comércio square with its Castle raised against the sky”.

(Global Arquitetura Paisagista, n.d.)



14 Ribeira das Naus. View of the Tagus River (Stefano Serventi, n.d.)

Integrated Master in Architecture, Iscte - University Institute of Lisbon.
Final Architecture Project 2020-2021. Lisbon and the River Laboratory.
Team: Coordination: Teresa Madeira da Silva. Supervisors: Teresa Madeira da Silva, Caterina Di Giovanni, Pedro Marques Alves.
Students: Bernardo Custódio, Carolina Alves da Silva, David Carvalho, Duarte Almeida, Francisco Quaresma, Joana Marques, Julia Shtefura, Luís Filipe Ribeiro, Mariana Rosa, Milton Perry, Nuno Almeida, Nuno Bernardes, Rodrigo Oliveira, Vilma Nico Ferreira.
Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

08

CAMPO DAS CEBOLAS

JOÃO LUÍS CARRILHO DA GRAÇA + VICTOR BEIRAMAR DINIZ

38°42'29.4"N 9°07'51.2"W

08

CAMPO DAS CEBOLAS

JOÃO LUÍS CARRILHO DA GRAÇA + VÍCTOR BEIRAMAR DINIZ



01 Main Entrance to the parking (Luís Filipe Ribeiro, 2020)

Campo das Cebolas is located on the riverfront of Lisbon, at the base of the castle hill, facing south to the Tagus estuary. Located near Terreiro do Paço, the place of the old Ribeira Velha encompasses the current Campo das Cebolas and extends to the Doca da Marinha.

Campo das Cebolas, "has known a complex urban evolution, namely on its riverfront, associated with a high commercial and port activity, which has been felt at least since the post-medieval period. (Bettencourt et al., 2017: 1901).

In this sense, the project carried out by architect João Luís Carrilho da Graça in partnership with landscape architect Víctor Beiramar Diniz, for a public and international competition in 2012 at the 13th Venice Biennale, generated an opportunity to rethink the relationship between the city of Lisbon and the Tagus River, taking into account the historical load of the place and the heritage values associated with this space. The formal value of space provided a "new space [which] does not deny the evidence of its various previous urban forms, assuming itself as a unified space that recognizes its constituent parts and its different histories" (Carrilho da Graça, 2018).

ARCHITECT

João Luís Carrilho da Graça and
Víctor Beiramar Diniz

CLIENT/PROMOTOR

Câmara Municipal de Lisboa (CML)/ EMEL

TEAM

João Luís Carrilho da Graça, Francisco Freire, Nuno Pinho, Mariana Sanchez Salvador, Charbel Saad, Filipe Homem, Diana Ledo, Ana Teresa Hagatong, Beatrice Muzi, Pauline Chauvet, João Cruz, Filipe Louraço, Fábio Azevedo, Luís Cordeiro, Carlo Vincelli, Fabio Bonaventura, Margarida Lima Belo, João Aragão. Arquitetura Paisagista: Víctor Beiramar Diniz e Filipe Homem.

PROJECT DATE

2010

CONSTRUCTION DATE

2016-2018

LOCATION

Infante D. Henrique Avenue, Lisboa

SITE AREA

6.040 m²

GROSS AREA

26 690 m²

PUBLIC SPACE AREA

26 690 m²

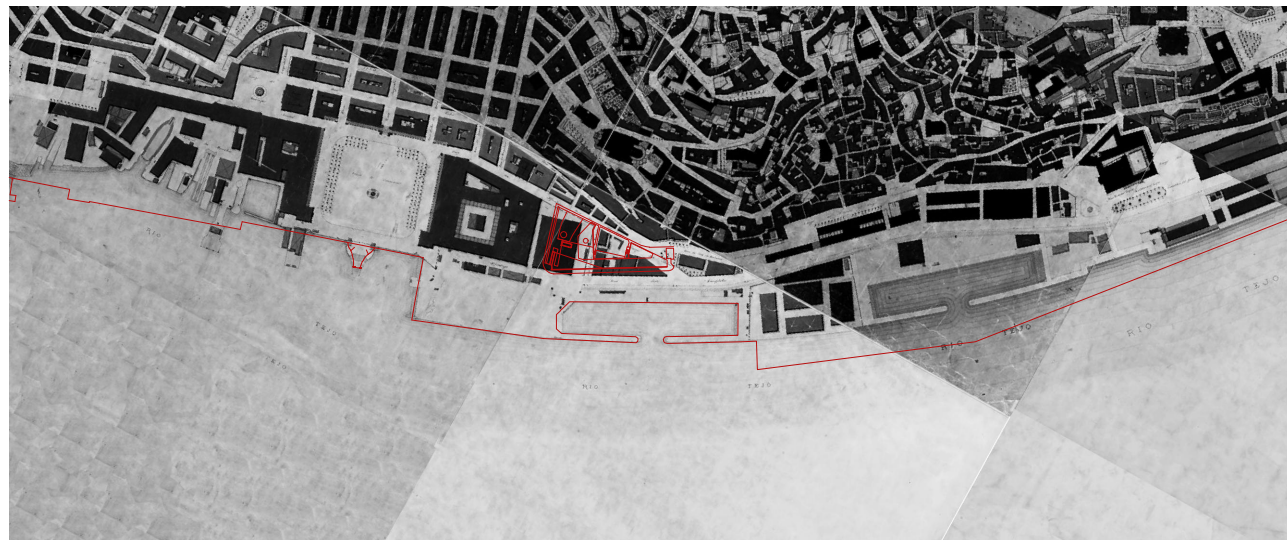
AWARDS

1st Price on International Public Tender (CML)





02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



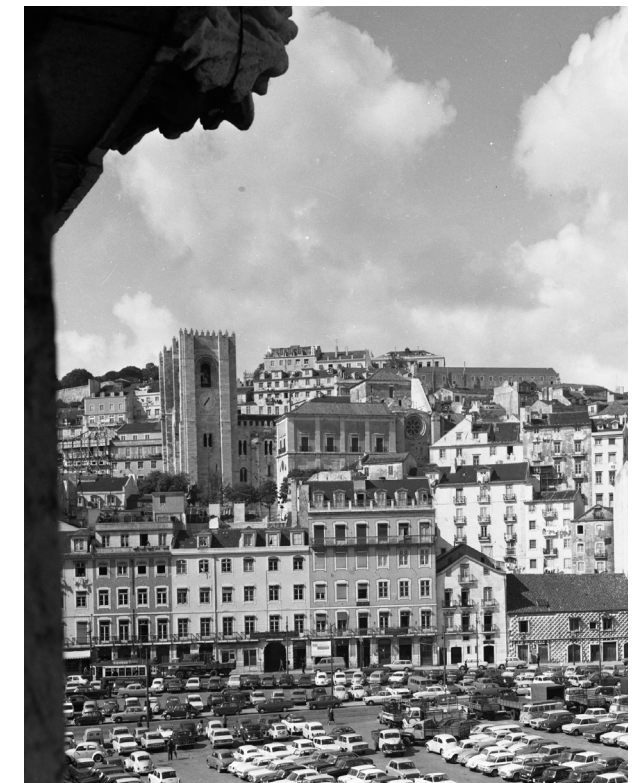
04 1980's. Adapted from Lisbon City Map (2020)

In this sense, the project had special sensitivity and attention to the archaeological excavation where seven vessels were later found "photographed, registered and dismantled", some walls - which were integrated into the car park and an attached archaeological area - and a large staircase - which establishes one of the accesses to the parking lot". (Melo et al, 2019).

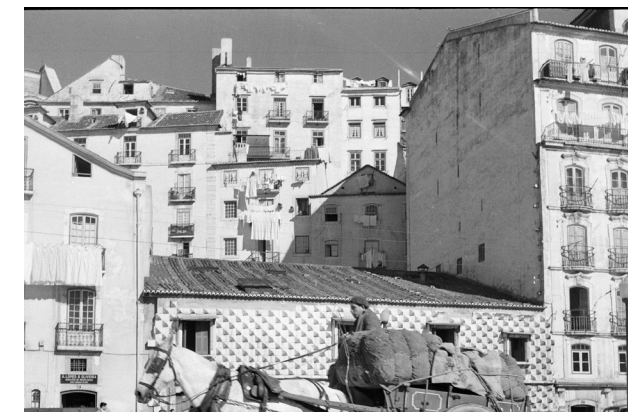
The project includes a half-buried, half-buried car park with around 200 parking spaces, 1.5 meters below city level and 1.5 meters above. The project "materializes through the deformation of the ground level, creating a slightly sloping stone-coated plane - an amphitheater - overturned onto the slope of the Cathedral, supported by a wall that echoes those of the former Ver-o-Peso wharf. / Ribeira Velha, plan that folds into a small podium that allows the gaze to extend above the riverside road and reach the dock and the river beyond". (Carrilho da Graça, 2018, our translation). With a slight inclination, this amphitheater that overlooks the slope of the Cathedral, is supported by a 19th-century wall of the former Ver-o-Peso wharf, and thus, the plan that folds into a small platform, offers a view over the Avenida Infante D. Henrique, over the dock and the Tagus river.

The triangular-shaped space next to Casa dos Bicos (building rehabilitated by architects José Daniel Santa-Rita, Manuel Vicente and João Santa Rita, now the Saramago Foundation) was based on a different strategy where it was decided to leave a clearing in front of it, giving another character to it. The space, also triangular in shape, which ends the square next to Avenida Infante D. Henrique is intended as a memorial to the victims of slavery, this being an ongoing competition commissioned by the Lisbon City Council.

The pavement of the square is in concrete combined with stones on several sides with all the shades of the limestone that build the city of Lisbon. This pavement was made using stones from squares that were being demolished or restored, resulting, according to the architect, in a kind of patchwork, bearing in mind the interventions in Athens. This solution allowed the square to gain some distance from the current



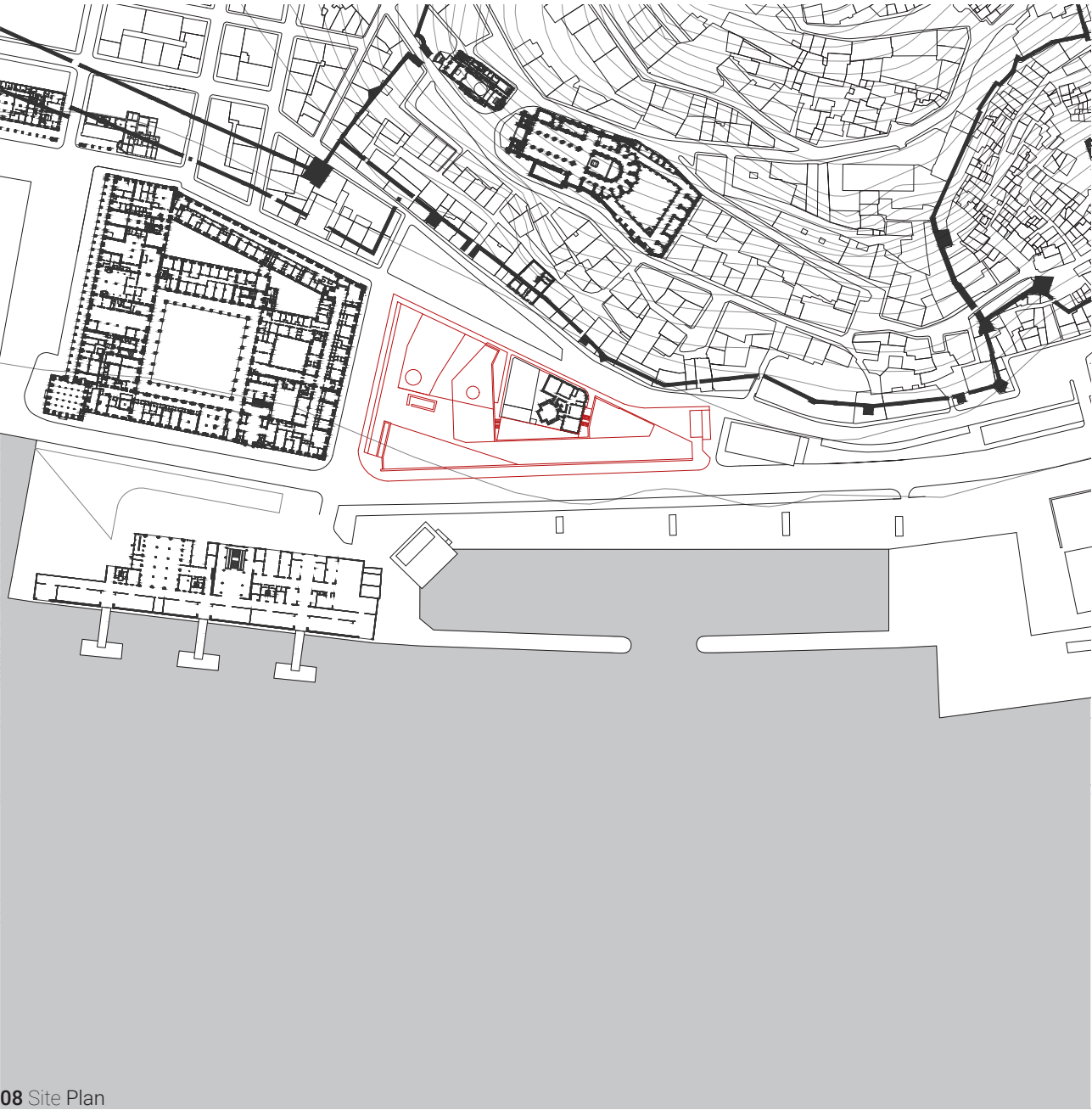
05 Campo das cebolas (Armando Serôdio, 1969)



06 Casa dos Bicos in the 50's (Salvador Fernandes, n.d.)

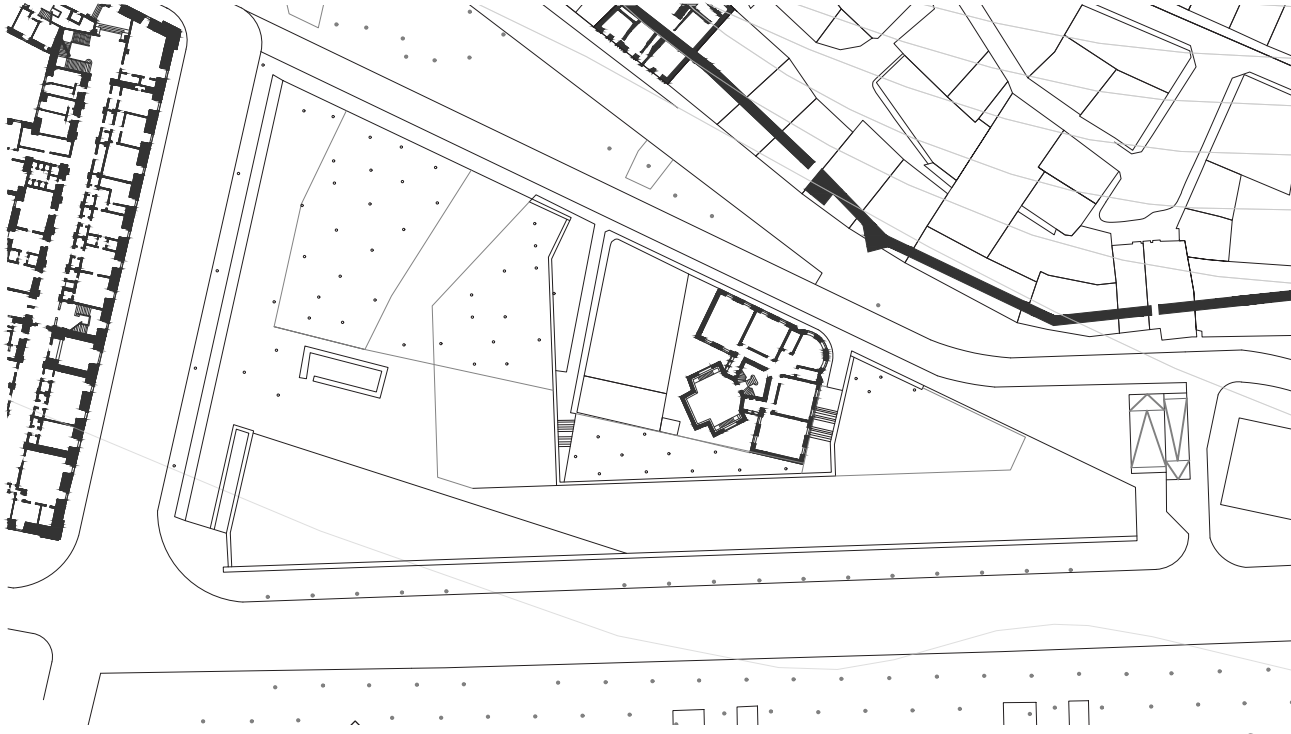


07 Old Pier stairs (Luís Filipe Ribeiro 2020).

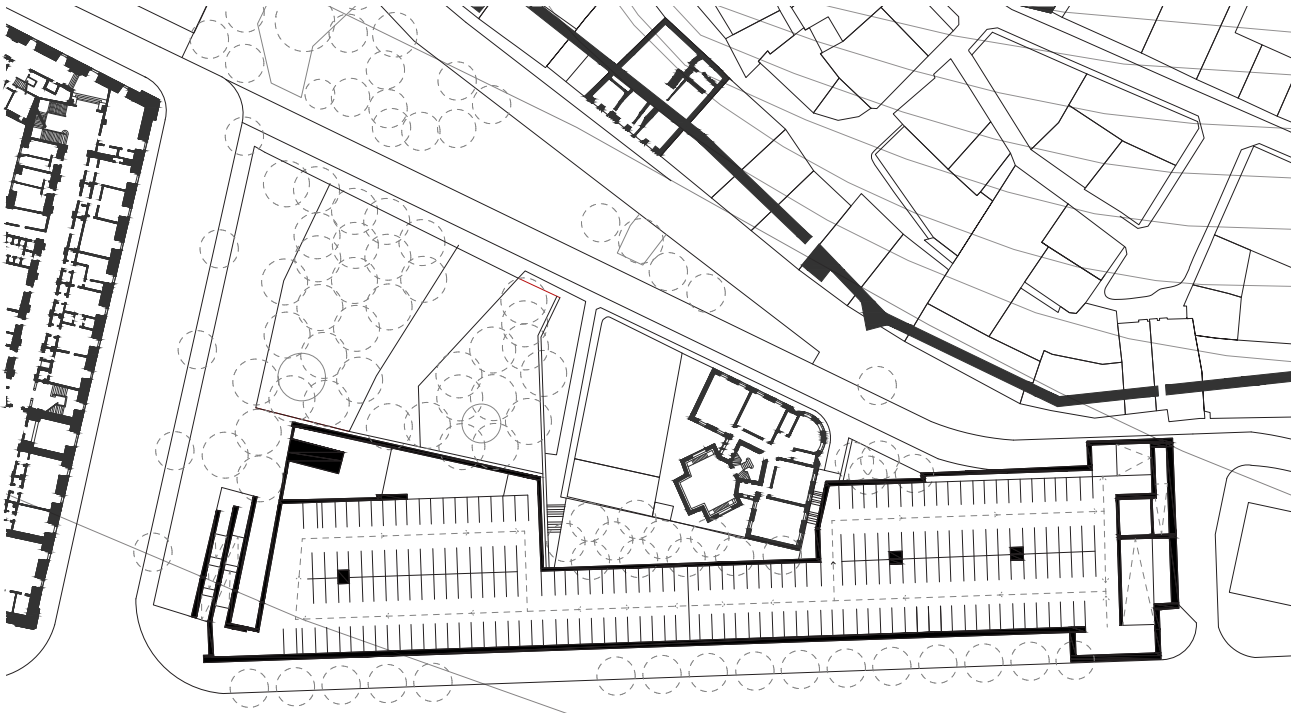


08 Site Plan

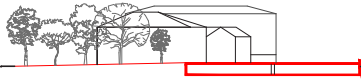
25 50 100 150 250 m

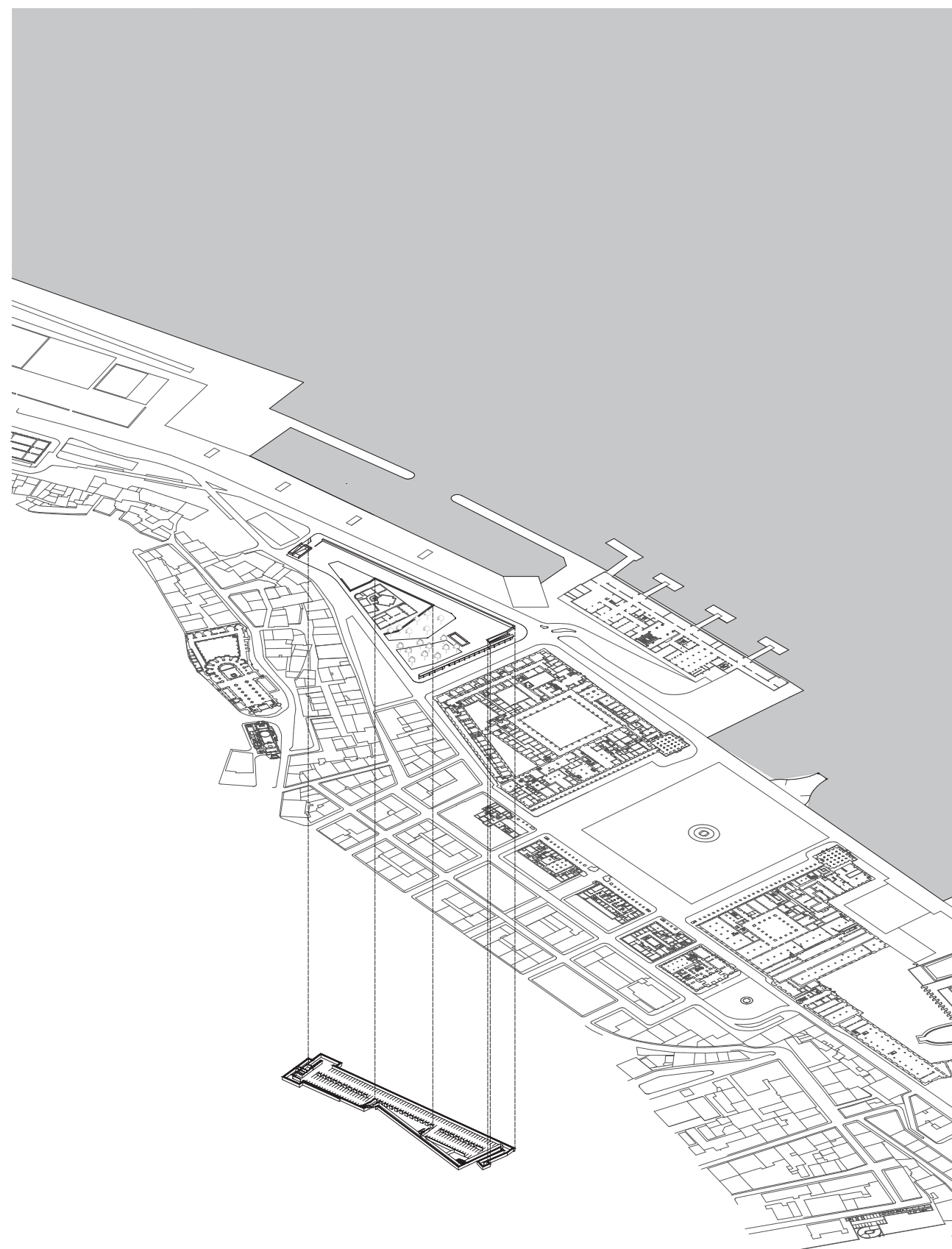


9 Ground floor



10 Parking plan





12 Axonometry

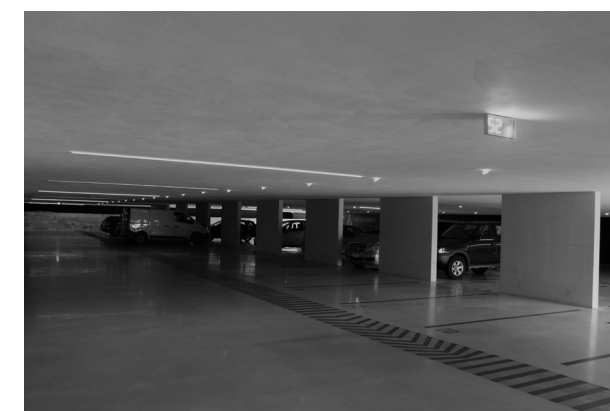
traffic on Avenida Infante D. Henrique. In the lower part of this platform, the underground car park is then developed, contained by the walls of the former Ver-o-peso wharf that are visible inside.

This semi-underground position and with a relatively simple organization system, allows easy access, without recourse to mechanical means, as well as ventilation and natural light via a small patio and small punctual openings along the avenue (Carrilho da Graça, 2018).

"The underground car park's ventilation and lighting systems were optimally designed to minimize the building's energy consumption. Of these systems, the exclusively natural ventilation and natural daytime lighting stand out, carried out through the central outdoor patio, the various accesses distributed throughout the building and punctual openings in the walls" (IHRU, n.d.).

This solution allows that in emergency cases it is not necessary to use forced ventilation or air conditioning. Trees were planted in this courtyard that, when they grow, will somehow complement a kind of block fragment that exists above. The lias staircase, referenced in historical cartography, and revealed by archaeological excavations, which allowed access to water, now has access from the parking lot to the surface level and all the stones found remained in place (Carrilho da Graça, 2016).

The parking deck, made of plant material including stone pine trees, on the side facing the city, is a leisure space that invites you to stay, enjoy the city and its relationship with the river and where there is a space for children to play. It should be noted that the relationship between Ribeira das Portas do Mar and the Doca da Marinha is particularly important, as it allows effective access to the river. Despite being mediated by Avenida Infante D. Henrique, this relationship is reprofiled with arboreal axes (IHRU, n.d.).



13 Parking (Luís Filipe Ribeiro, 2020).



14 Parking (Luís Filipe Ribeiro, 2020)

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"I don't start to imagine the result to imagine how to get there. I start from abstract concepts. I like to look at the territory not only as a form, but as content, with everything that culturally builds and occupies it - people, animals, plants, geology. Look at reality and history."

(Carrilho da Graça, 2016)



15 Campo das Cebolas Square (Luís Filipe Ribeiro, 2020)

Integrated Master in Architecture, Iscte - University Institute of Lisbon.
Final Architecture Project 2020-2021. Lisbon and the River Laboratory.
Team: Coordination: Teresa Madeira da Silva. Supervisors: Teresa Madeira da Silva, Caterina Di Giovanni, Pedro Marques Alves.
Students: Bernardo Custódio, Carolina Alves da Silva, David Carvalho, Duarte Almeida, Francisco Quaresma, Joana Marques, Julia Shtefura, Luís Filipe Ribeiro, Mariana Rosa, Milton Perry, Nuno Almeida, Nuno Bernardes, Rodrigo Oliveira, Vilma Nico Ferreira.
Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

09

DOCA DA MARINHA

JOÃO LUÍS CARRILHO DA GRAÇA + VÍCTOR BEIRAMAR DINIZ



01 Kiosks under construction (Luís Filipe Ribeiro, 2020)

38°42'29.4"N 9°07'51.2"W

09

DOCA DA MARINHA
JOÃO LUÍS CARRILHO DA GRAÇA + VÍCTOR BEIRAMAR DINIZ

Located on Avenida Infante D. Henrique, on the riverfront, Doca da Marinha, formerly called as Doca da Alfândega, was for centuries linked to the port. It is currently undergoing rehabilitation, the result of a project by the architect, João Luís Carrilho da Graça, resulting from an international public tender for the preparation of the Campo das Cebolas / Doca da Marinha project, launched in 2012 by the Lisbon City Council in the context of 13th Venice Biennale. (Melo et al, 2019).

The project intends to give a new meaning to that old port area of the city, rethinking the public space in relation to mobility, limits and arrival points, in the search for a consolidation of the riverside, standing out for the intention of connecting the city to the river .

The result of a protocol between the municipality, the Port of Lisbon Administration and the Navy, the intervention of the Navy Dock is an open, accessible space, providing a direct and walkable connection between the South and Southeast station and the Terminal de Cruises. This connection was non-existent until now due to the port activity located there. The project, like that of Campo das Cebolas, is carried out in conjunction with landscape architect Victor Beiramar Diniz, foreseeing the planting of trees, the creation of a bike path, a pedestrian area and a grass area to rest and see the river.

ARCHITECT

João Luís Carrilho da Graça com
Victor Beiramar Diniz

CLIENT/PROMOTOR

Câmara Municipal de Lisboa

TEAM

João Luís Carrilho da Graça
Victor Beiramar Diniz

PLASTIC ARTIST

Julião Sarmento

PROJECT DATE

2018

CONSTRUCTION DATE

2020-2021

LOCATION

Avenida Infante D. Henrique,
Lisboa

SITE AREA

62 500 m2

GROSS AREA (RESTAURANT)

1 145 m2

PUBLIC SPACE AREA

62 500 m2

AWARDS

1st Prize on International Public
Tender (CML)





02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

The project includes the construction of four kiosks overlooking the river. The first is intended as a ticket office for traditional boats (served by the dock) and the rest function as cafes with terraces and as support points for all that space. These interventions invite to be, to stay, to stay, or to physical activities, offering conditions of safety, accessibility and comfort, thus ensuring a space for public enjoyment. This space is designed on a pedestrian scale, ensuring the continuity of the pedestrian and cycling path that structures the riverside area.

The kiosks foresee an intervention by the artist Julião Sarmento, at the invitation of the Lisbon City Council, in which he proposes, in homage to Barnett Newman, the use of the three primary colors integrated in the retro-illuminated panels placed on the tops of the kiosks facing the Avenue Infante D. Henrique. Being designed with a very simple structure, the kiosks have a roof made with wooden beams that alternate with aluminum panels and sliding glass doors, which open completely. In summer the doors will all be open, making it a very open and ventilated space. In addition to these kiosks, on the dock, more precisely where there is a jagged angle to the west, a restaurant is planned, currently under construction. The restaurant consists of a basement, a kitchen relatively visible from the street, a counter, an interior main room and a terrace. These last two spaces, on days with favorable weather conditions, may come together as a sophisticated glass plan will be adopted that opens to both sides, thus allowing continuity between the living room space and the terrace (Carrilho da Graça, 2020, 00:55:00).



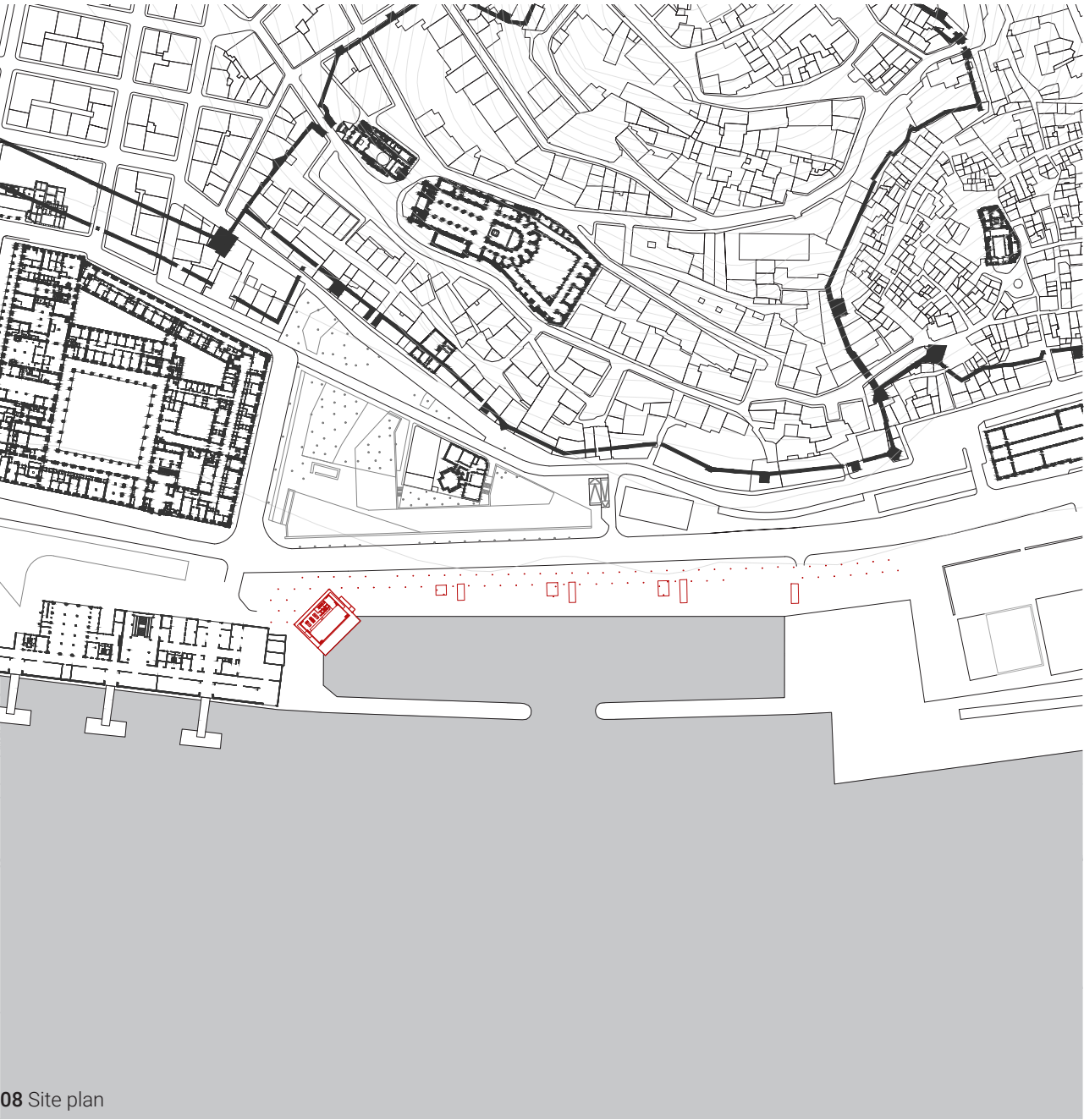
05 Doca da Marinha in the 50's (Arnaldo Madureira)



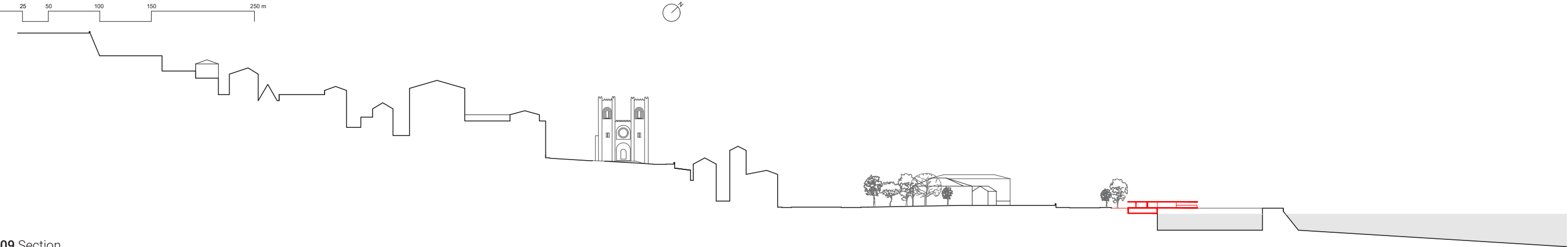
06 Doca da Marinha in the 50's (Arnaldo Madureira)



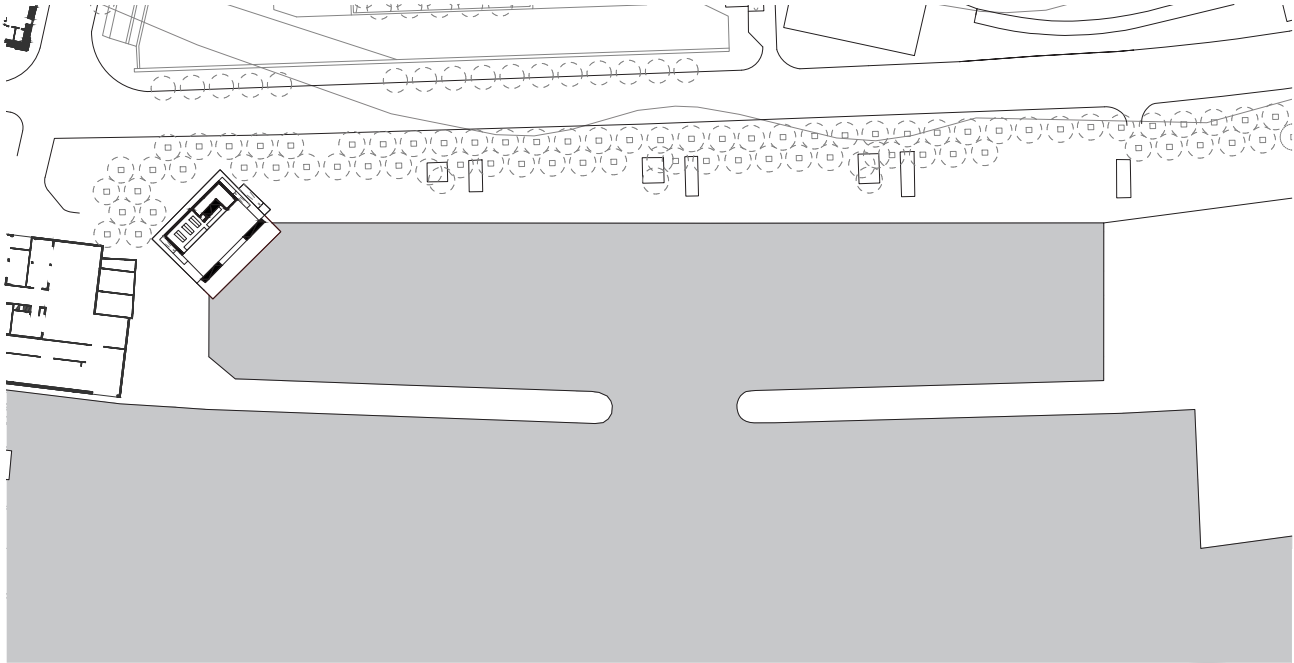
07 Model (João Luís Carrilho da Graça Archive)



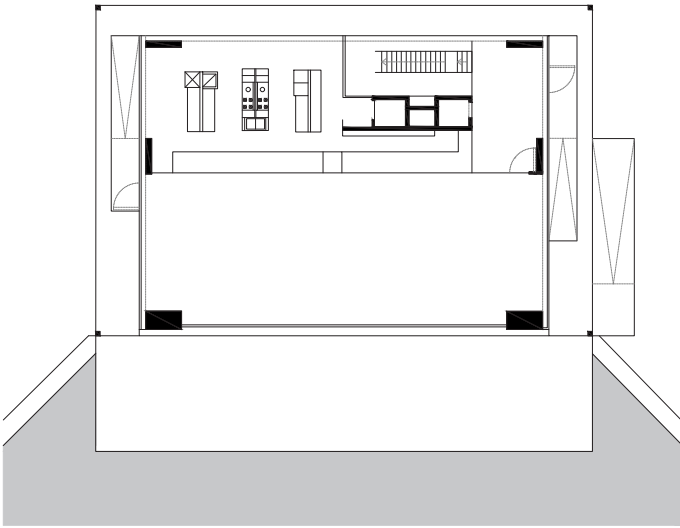
08 Site plan



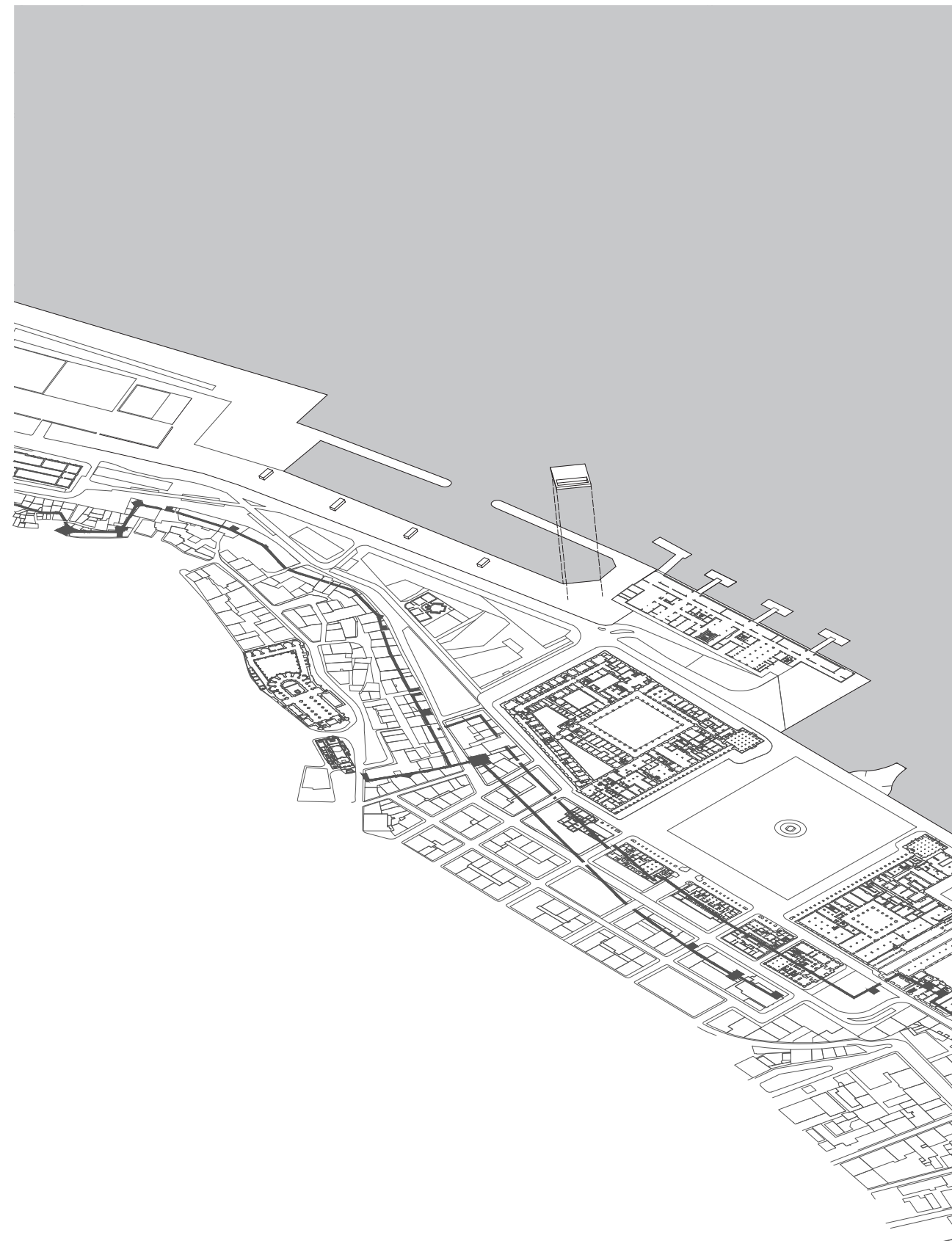
09 Section



10 Site plan



11 Restaurant, ground floor plan



12 Axonometry

The pavement of the public space will be composed of a combination of dark colored bituminous with fragments of light colored limestone, resembling a starry sky. The intention is that it does not overheat in the summer so as not to create any discomfort. Over time this material will change its hue becoming clearer. The Navy dock is also a small terminal for traditional pleasure craft. Next to the entrance to the dock, at the request of the Navy, there are a kind of lighthouses, at the end points of the two arms, one red and the other green, which represent the signs of navigation. These will be clearly visible when the dock receives the typical Tagus boats, with trips on the river (Faustino, 2019).

Like Campo das Cebola, Doca da Marinha intends to be a privileged leisure space, being close to the water and having, at the same time, the noblest views of the city over the slope of the Cathedral and over the Castle of São Jorge and over the Tagus River.

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13 Bird's-eye view of the Navy Dock (João Carrilho da Graça Archive)

“Unlike artists, we architects only have social justification if we solve problems”

(João Luís Carrilho da Graça, 2016)



14 Restaurant Render
(João Luís Carrilho da Graça Archive)

10

CRUISE TERMINAL

JOÃO LUÍS CARRILHO DA GRAÇA + JOÃO GOMES DA SILVA/GLOBAL



01 Cruise terminal, south elevation. Relationship of the building to the city (David Carvalho, 2020)

38°42'36.7"N, 9°07'35.6"W

10

CRUISE TERMINAL

JOÃO LUÍS CARRILHO DA GRAÇA + JOÃO GOMES DA SILVA/GLOBAL

ARCHITECTS

João Luís Carrilho da Graça
João Gomes da Silva/Global

CUSTOMER/PROMOTER

Lisbon Cruise Terminals
(APL)

TEAM

Luís Cordeiro, Nuno Pinho, Nuno Castro Caldas,
Pedro Ricciardi, Paulo Costa, Yutaka Shiki, Filipe
Homem, Charbbel Saad, Ana Bruto da Costa, Ana
Teresa Hagatong

PROJECT DATE

2010-2014

CONSTRUCTION DATE

2017-2018

LOCATION

Doca do Jardim do Tabaco,
Av. Infante Dom Henrique, Lisbon

SITE AREA

12440 m²

BUILDING AREA

8545 m²

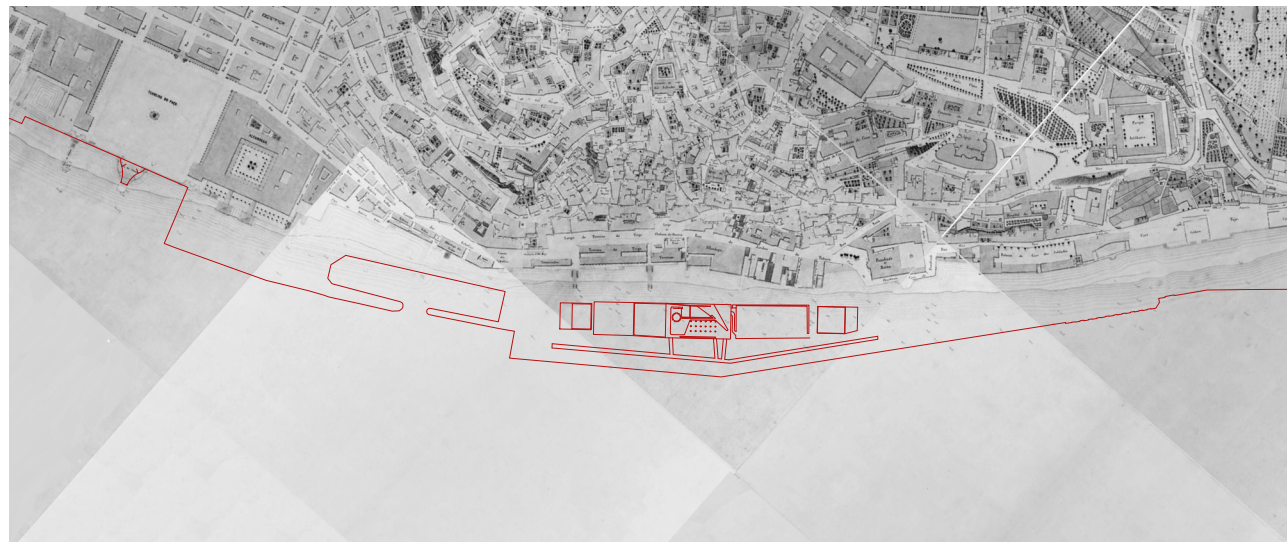
PUBLIC SPACE AREA

8545 m2

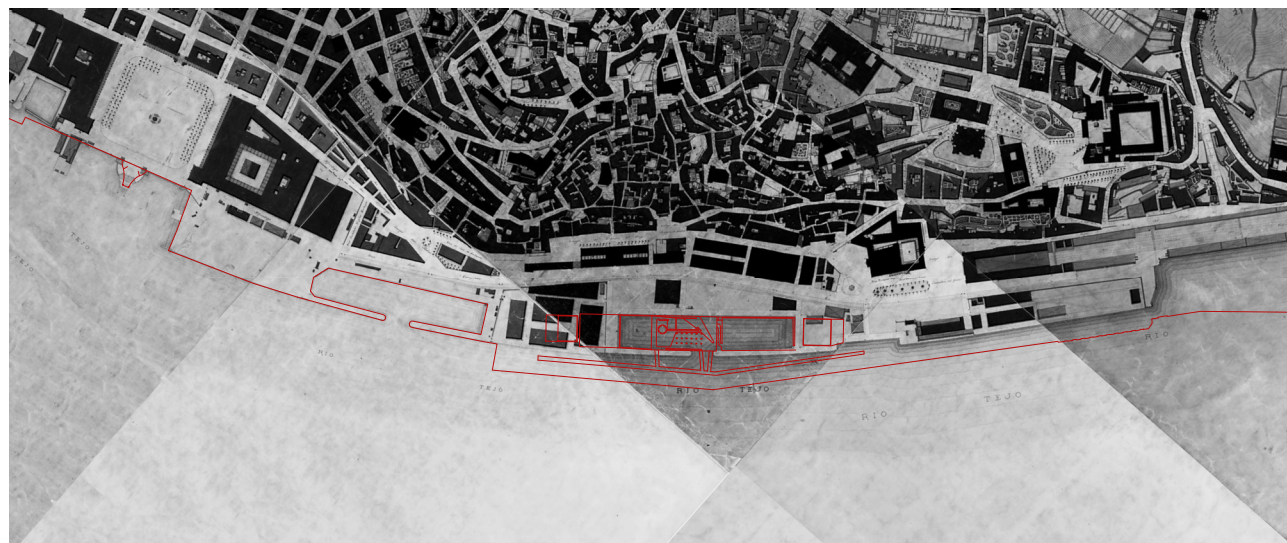
AWARDS

Valmor and Municipal Architecture Award (2017)
World Travel Awards Europe 2017 to 2019

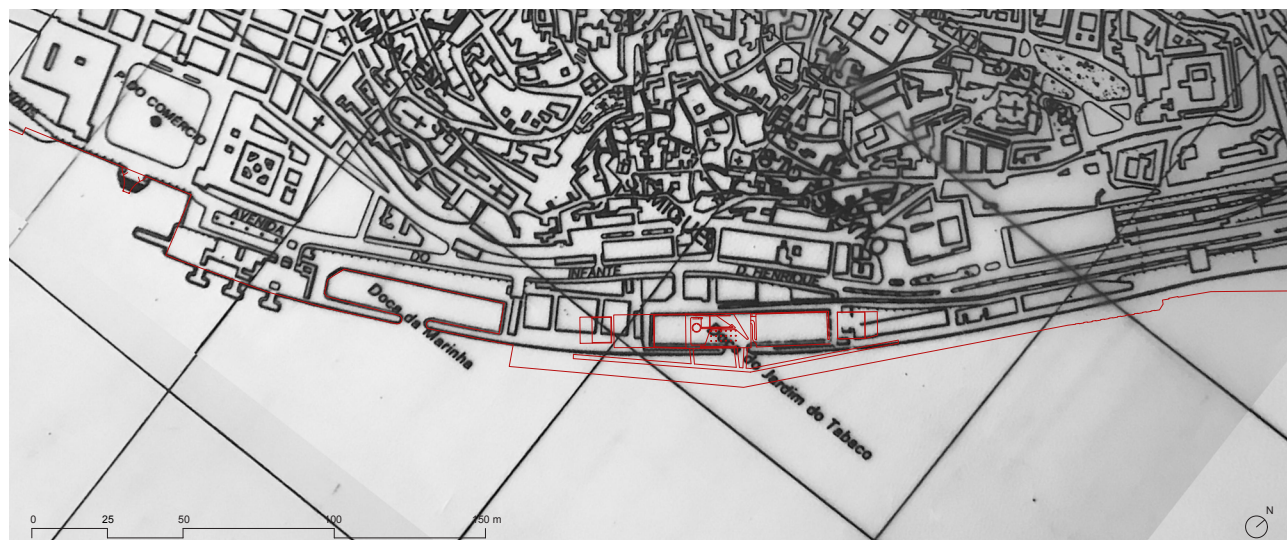




02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

"There is an aspect here that interests me a lot. The facades of the houses are the limit of the city in relation to the river, imagining that the embankment didn't exist yet: from here, there was the beach. Then the city starts to rise, and therefore the facades are at the point where the city becomes the big embankment" (Carrilho da Graça in Dias, 2016).

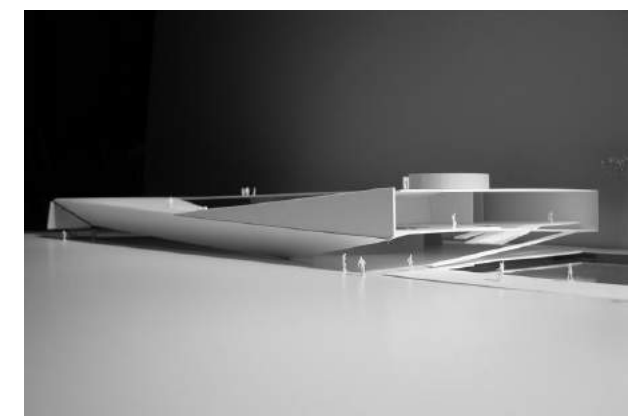
Since the middle of the XII century, the Alfama district, and especially the vast river-side pier, is described as open side to the city and to the river, which he calls The Adventurers' Pier, because it was from there that the expeditions left, marking well the character of the life of its population, mostly connected to maritime tasks (José Sarmento de Matos in Borges & Duarte, 2018). With a city linked to the transport of goods by sea the creation of fiscal buildings on the beach develops to the east around the XVIII century.

"This was the site where the goods of the heavy cabotage between Lisbon and the Ribatejo region were loaded and unloaded, especially grain from Alentejo, though not always in sufficient quantify for the city's growing bread needs as well as products from entire Tagus valley, with heavy incoming traffic from Abrantes, Santarém (the main warehouse) and Vila Franca, etc". (José Sarmento de Matos in Borges & Duarte, 2018).

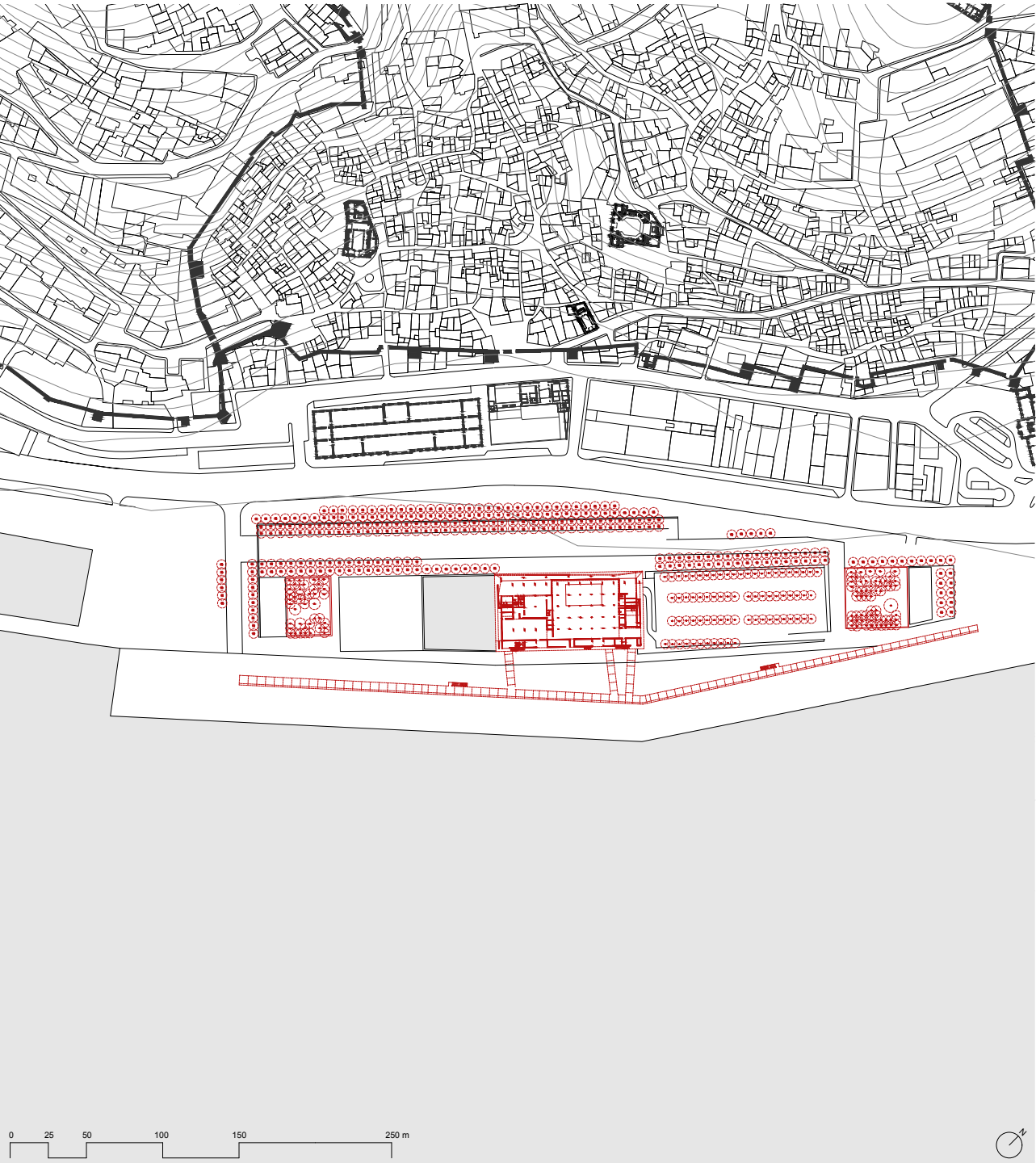
Between the end of the XIX century and the beginning of the XX century, the city's evolution was remarkable and based on the cartography, from "1904- 11. Silva Pinto's LisbonTopographic Map", we can perceive the creation of an embankment to satisfy the port needs. This advance of the city to before the river, allowed the creation of the Jardim do Tabaco Dock, so called because it served the Tabaco's warehouse, the area where the Cruise Terminal is currently located (CML, 1943). However the, development of large land based infrastructures in the mid-twentieth century made it possible to create other means of transporting goods and the large ports ended up leaving the city of Lisbon, moving to other peripheral cities. The embankments eventually lost their functionality creating a barrier between the city and the river.



05 Cruise Terminal's construction (António Júlio Duarte)



06 Project model (Unknown)



07 Site plan

The project is located within the walls of the old dock of Jardim do Tabaco, allowing an opportunity to rethink and question the relationship of urban living between the city and the Tagus River. In the late nineteenth century, the people who worked at the port, such as fish-mongers and laborers, who had a daily connection with the Tagus. However, this relationship of living the sea was lost through industrialization, but the architect Carrilho da Graça tries to restore a connection that allows people to re-enter the port space.

With a simple and compact volumetry, the building stands out from the others, due to its smaller built area, comparing to the other proposals presented in the competition. In this way, it allows to free the surrounding space, returning it for public use, giving the city and the Alfama a reference of green space, with the capacity to comprise different activities and assume a character of a large riverside park. The cruise terminal ends up allowing a connection with the urban surroundings, and thus creates a relationship with the city due to its distance from the other buildings, which allows a contemplation of the Alfama hillside, where it creates a kind of embasement above which one can then view the city and the various monuments such as the Castle, the churches, the Monasteries and the National Pantheon (Carrilho da Graça, 2020).

"Using the port platform as a space of public access allows us to take a step back from the city and see the same view as those who go by river " (Gomes da Silva in Borges & Duarte, 2018).

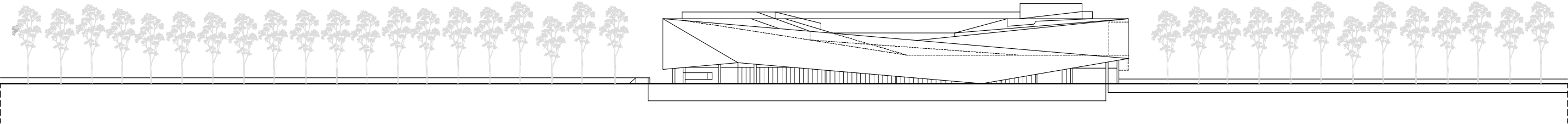
Thus, we can observe a harmonious connection with both Alfama and the Tagus, that is, the visual relationship between the city and the river.



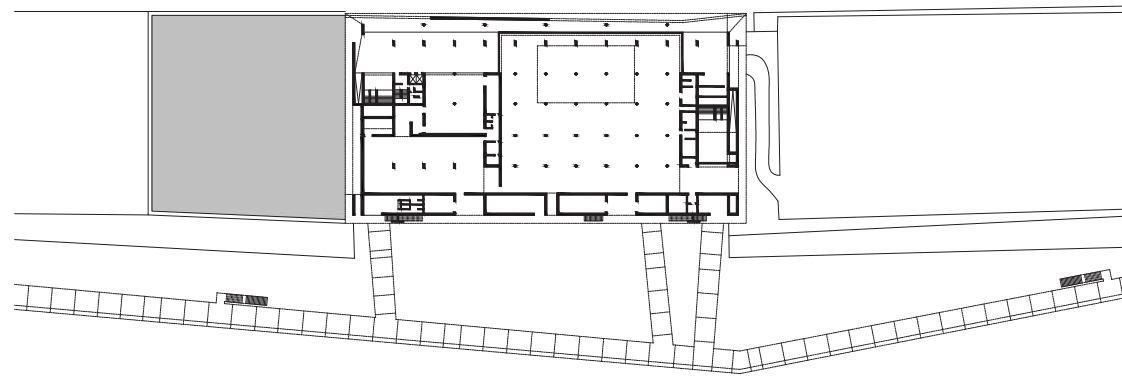
08 West Facade (FG+SG)



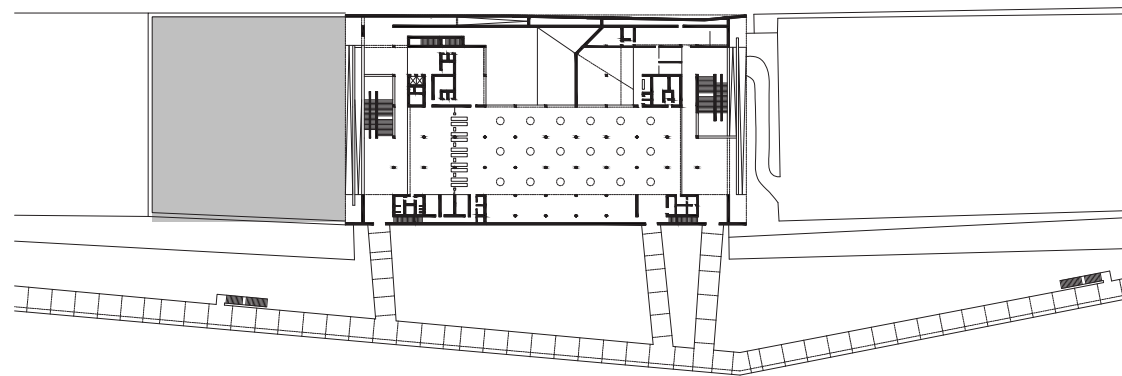
09 Cruise ship access (FG+SG)



10 West Elevation



11 Floor Plan 0



12 Floor Plan 1

"I like the idea of having a kind of covered area that has two floors with not very different functions: the lower floor is essentially for luggage and the upper floor for passengers. It must be said that this is full of nuances, which happen to be this way at the moment, but which could be altered at any point, without the fundamentals of the building being lost." (Carrilho da Graça in Borges & Duarte, 2018).

The building emerges as a programmatic and effective response to the ships, while the park responds to the city, mediating between the historic centre and the river, functioning simultaneously as the city's door. The solution found allows versatility, both inside and outside, to host events such as exhibitions, cocktail parties, fashion and cinema cycles, concerts, fairs, as

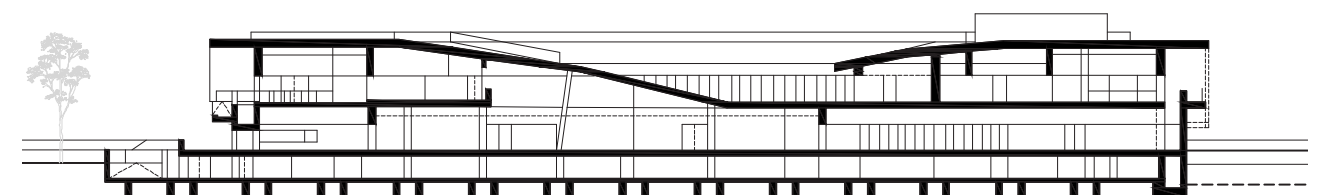
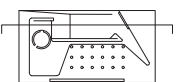
an alternative to the seasonal occupation of the cruise terminal (Ricardo Ferreira in Neves, 2019).

"The elevation facing the river is very simple, broken by gangways; on the other side, there is a kind of external amphitheatre, it holds the departure hall, and passengers can access the amphitheatre and the outside space from there, where they see the city" (Carrilho da Graça in Borges & Duarte, 2018).

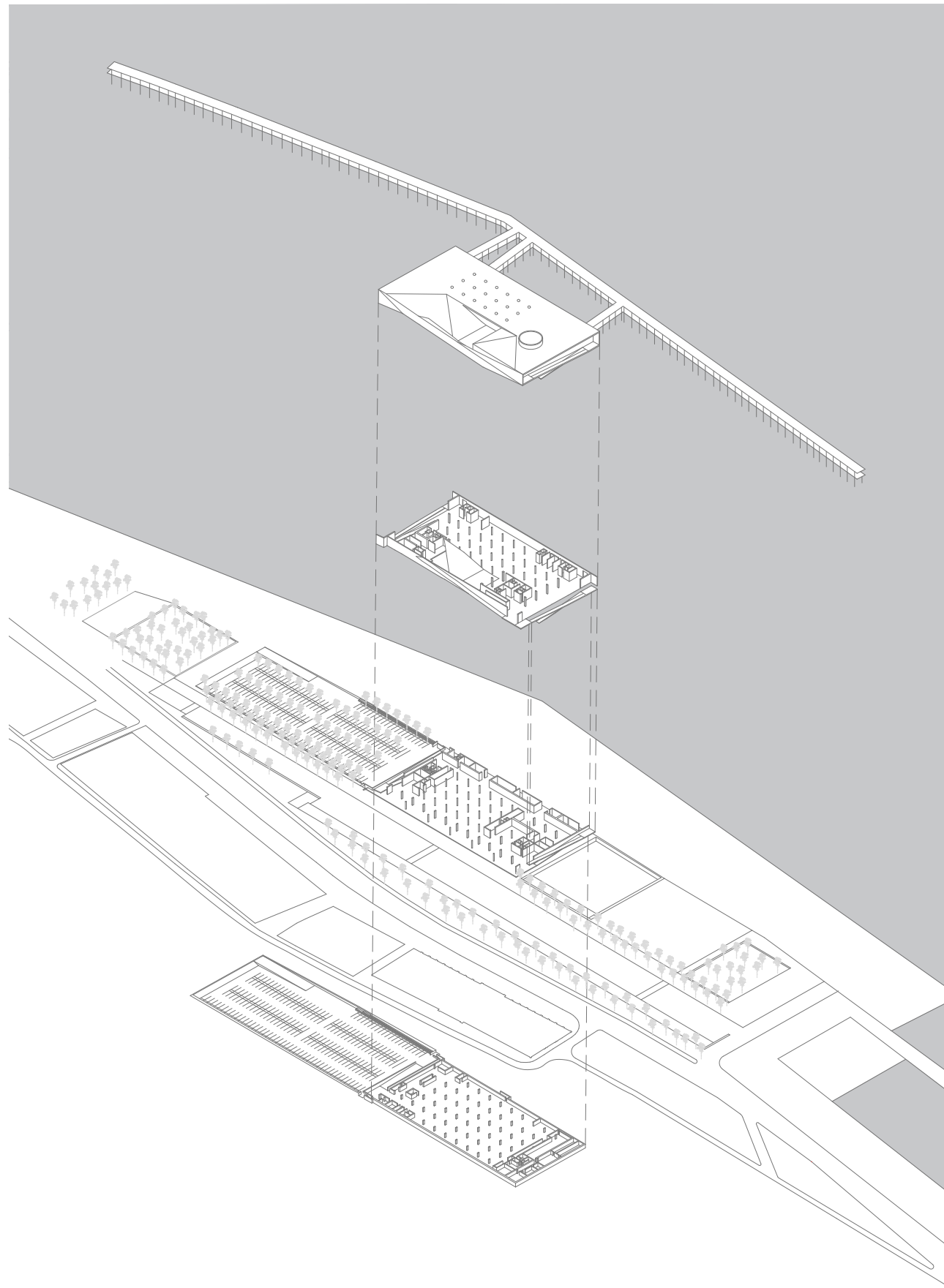
The elevations of the building, both on the city side and on the river side, have extraordinary views, although they don't reveal them immediately because they are almost blind. The idea allows a kind of staging of the relationship with the views: sometimes you see them and sometimes you don't; by that the building creates this kind of interaction between itself, through



13 Waiting room to access the cruises (FG+SG)



14 Cross Section



15 Axonometry

the observers and users, and the city and the river. These rips, give it a floating appearance, generating entry and exit areas allowing the creation of a path that surrounds the building, which gives a slow discovery of the surroundings, while traveling through the various elevations. It ends on its roof, which gains stage characteristics, relating to the river and the city without any kind of obstacles, like a raised plaza (Carrilho da Graça, 2018).

"It is very common, when it is necessary to fill an area in a construction site, to use concrete with cork because it is lighter and has resistance, but it is not exactly structural. But here it had to be structural" (Carrilho da Graça in Dias, 2016).

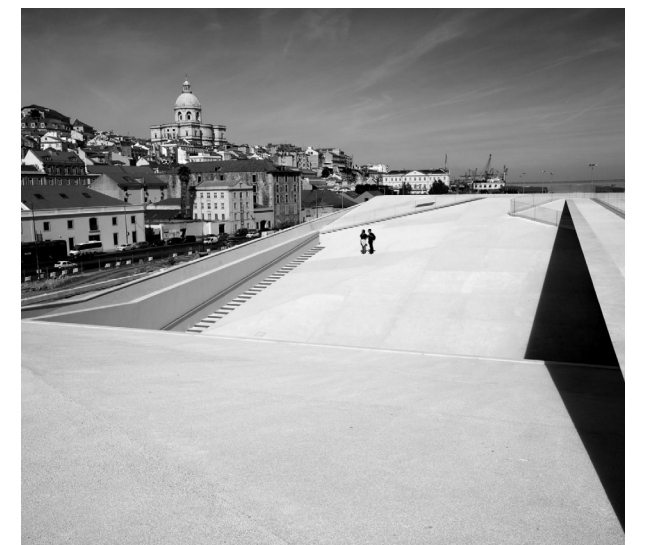
The building also presents the creation of a new construction process, with its facades built with white concrete where an agglomerated cork powder was inserted, which allowed to obtain new structural characteristics, namely more lighter and greater capacity for thermal insulation, but above all more resistance. The application of this new concrete arose from the need, detected by the engineers, to reduce the load capacity of the foundation pillars, as the material that had been thought of would overload the existing foundations. (Carrilho da Graça in Borges & Duarte, 2018). This type of innovative concrete was developed for Lisbon's Cruise Terminal, based on an idea by João Luís Carrilho da Graça and a partnership between cork companies Amorim and Secil and a laboratory at the University of Coimbra, inspired by an old challenge from Experimenta Design to develop new uses for cork in construction (Sequeira, M. Toussaint, M. Cera, N, 2018).

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16 Sketch project (João Luís Carrilho da Graça)



17 Viewpoint from the terminal roof (Daniel Rocha)

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- . DIAS, A. S. (2016, august 11). Carrilho da Graça. [Interview] Se a arquitetura é boa, pode mudar a vida das pessoas e da cidade. *Diário de Notícias*, p.7. <https://www.dn.pt/portugal/entrevista/carrilho-da-graca-se-a-arquitetura-e-boa-pode-mudar-a-vida-das-pessoas-e-da-cidade-5332855.html>
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“The most obvious form of the terminal would be that of an airport with large glazing. But the building proposes to interact with the city and the river in a not so evident and direct way.”

(Carrilho da Graça, 2018)



18 Bird's-eye view of Cruise terminal (FG+SG)

Integrated Master in Architecture, Iscte - University Institute of Lisbon.
Final Architecture Project 2020-2021. Lisbon and the River Laboratory.
Team: Coordination: Teresa Madeira da Silva. Supervisors: Teresa Madeira da Silva, Caterina Di Giovanni, Pedro Marques Alves.
Students: Bernardo Custódio, Carolina Alves da Silva, David Carvalho, Duarte Almeida, Francisco Quaresma, Joana Marques, Julia Shtefura, Luis Filipe Ribeiro, Mariana Rosa, Milton Perry, Nuno Almeida, Nuno Bernardes, Rodrigo Oliveira, Vilma Nico Ferreira.
Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

38°44'44.1"N, 9°05'53.0"W

11

PRATA RIVERSIDE VILLAGE RENZO PIANO BUILDING WORKSHOP

ARCHITECT

Renzo Piano

CLIENT/PROMOTER

Lisfundo, GEF, SGOIC

TEAM

Giorgio Grandi, Paolo Pelanda, Domenico Magnano in collaboration with CPU consultants (Lisbon)

PROJECT DATE

1999-2016

CONSTRUCTION DATE

In progress

LOCATION

Braço de Prata, Lisbon

SITE AREA

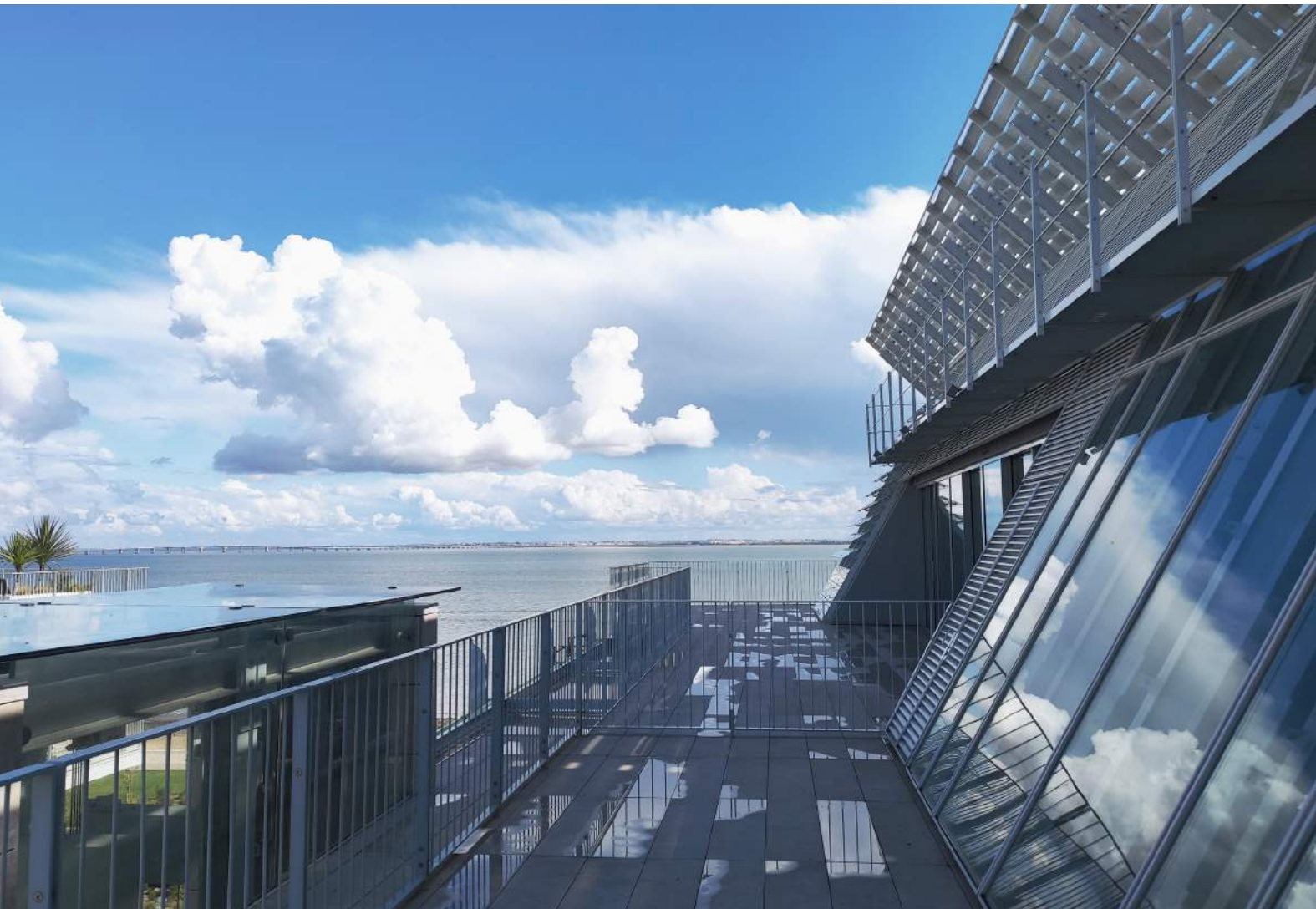
8 ha

GROSS AREA

128 500 m²

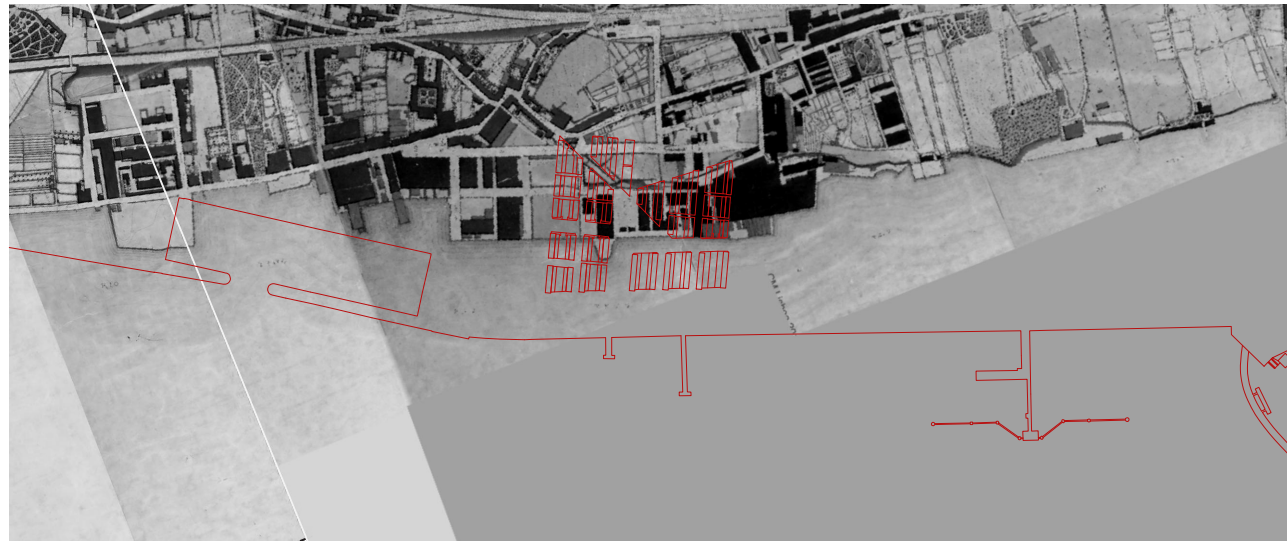
PUBLIC SPACE AREA

4,2 ha



01 Prata Riverside Village. View from a dwelling to the Tagus River (Joana Marques, 2020)





02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

At the beginning of the 20th century, Braço de Prata, as well as a large part of the Lisbon riverside area, suffered several changes to its coastline, which was more receded, so that Doca Poço do Bispo and much of the territory where today Prata Riverside Village is located did not exist yet. In the 1950s, the coastline was regularized, and new accesses were created (Lisbon Port Administration, 1987, pp. 138-139), such as the Cintura Porto Street. The shape, almost definitive, of the Doca Poço do Bispo was also already visible. Later, in the 80's, this part of the city was already more consolidated, and the coastline remained practically unchanged until today.

The site of the Renzo Piano's housing complex is located in Braço de Prata, an old industrial and manufacturing area, once bustling with workers arriving at the Braço de Prata train station to work at the Matinha gas factory and the A Tabaqueira tobacco factory in old Marvila. Today, the character of Braço de Prata is very different from what it was a few decades ago, since the factories have ceased their activity and the movement of workers no longer exists. Currently, this area is being consolidated and former factory buildings are being requalified, as is the case of the Braço de Prata factory, which now functions as a cultural space and music school; the Wine Society Abel Pereira da Fonseca, whose main building has been converted into offices and cowork spaces; and the former Railway and Logistics Warehouse of Marvila, which encompasses spaces with the most varied functions, from cowork to social events (Ramos, 2018, pp.57-64).

For the housing project of Braço de Brata, Renzo Piano was inspired by the identity of the place and the story that is, silently, told - *"The place where you make a story, already has a story (...) and you have to be able to listen"* (Piano, 2020). In this way, the project starts from two fundamental premises: the structural order, of factory, inherent to the identity of the



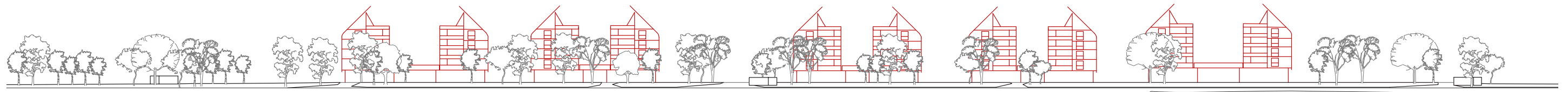
05 Bird's-eye view of Poço Bispo Docks, Matinha Pier and Olivais Dock (Unknown author, 1950. Retrieved from the Photographic Archive, CML)



06 Project model (Joana Marques, 2020)



07 Site plan



08 South Elevation

place, and the Tejo River, which has a fundamental role in the whole city of Lisbon and illuminates it with a beautiful light.

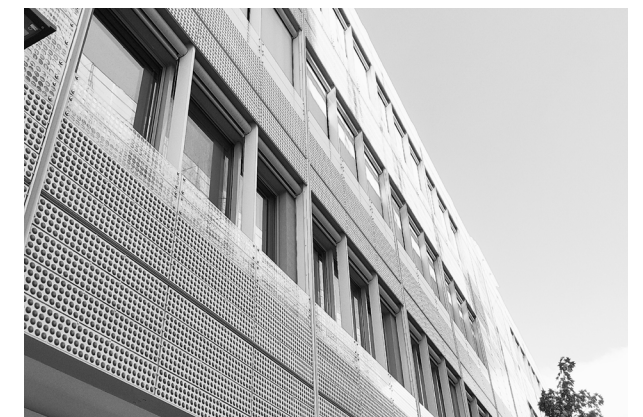
With this, the buildings were implanted according to the dense urban mesh, perpendicular to the Tejo River, that the old industrial buildings followed, occasionally interrupted by transversal streets, sometimes only pedestrian. As a central point is the new market of Braço de Prata - located in a square in the old Tabaqueira building - which will be conceptually similar to the Time Out Market in Cais do Sodré, thus becoming a core of convergence of the entire urban mesh of that area, but also of people who live and work there. Also, the sculpture by José Guimarães (Lisboa - Aos Construtores da Cidade, 1999) remained as a landmark of the place, being absorbed by the project and integrated in the green spaces of the Oriente Riverfront Park.

The buildings are inspired by traditional Lisbon buildings, namely by their simple façades and regular shapes, which conceal the presence of interior courtyards, in this case landscaped. Also, the ceramic coating of the façade, for its reflective effect, evokes the typical Portuguese tiles, something that fascinated Renzo Piano in his trips to Lisbon - *"One of the things that attracts you is the brilliance of the facades, the azulejos, the ceramics, so the light plays a little game (...) Lisbon is a beautiful place."* (Piano, 2020).

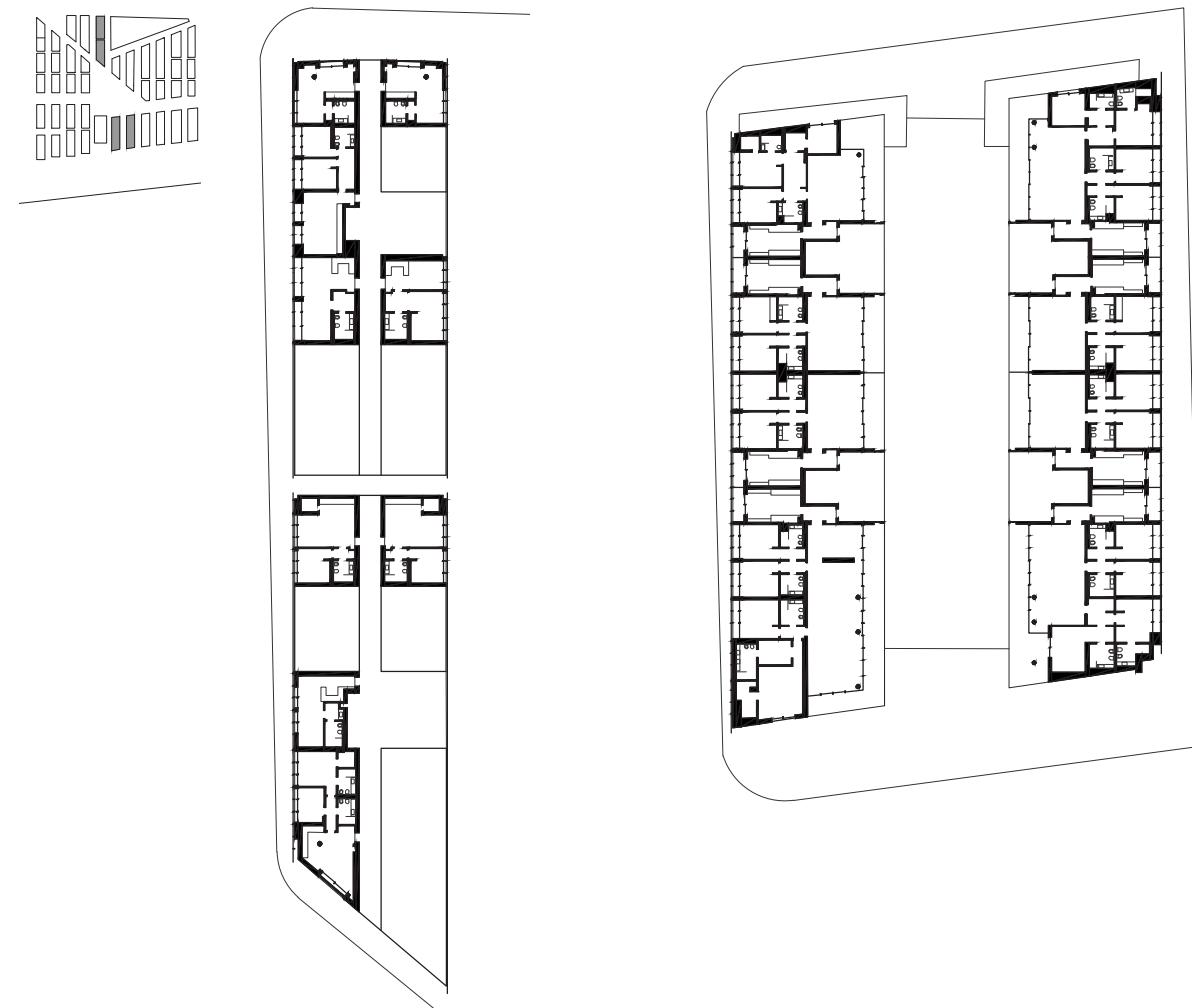
The typologies vary from T0 to T4 duplex, with areas between 50 m² and 250 m². Besides the incredible view that the apartments have to the river, the social areas are directed to the interior of the block, which is formally presented at a higher level than the ground level



09 Private patio (Joana Marques, 2020)



10 Detail of the façade (Joana Marques, 2020)



11 Model Plan (Adapted from Prata Riverside Village, 2020)

and has a considerable area of green spaces accessible only to residents.

Inside the apartments, the environment is light, welcoming, and very bright - the glass panels covering the façade in the open areas reflect sunlight into the interior. The duplexes are located at the top of the building, which is topped by a single-water roof and set back from the rest, thus benefiting the outdoor areas.

The access system is mostly left and right, however there are some exceptions where the elevators are placed in the central point

of the building accompanied by a longitudinal corridor that divides and distributes the accesses.

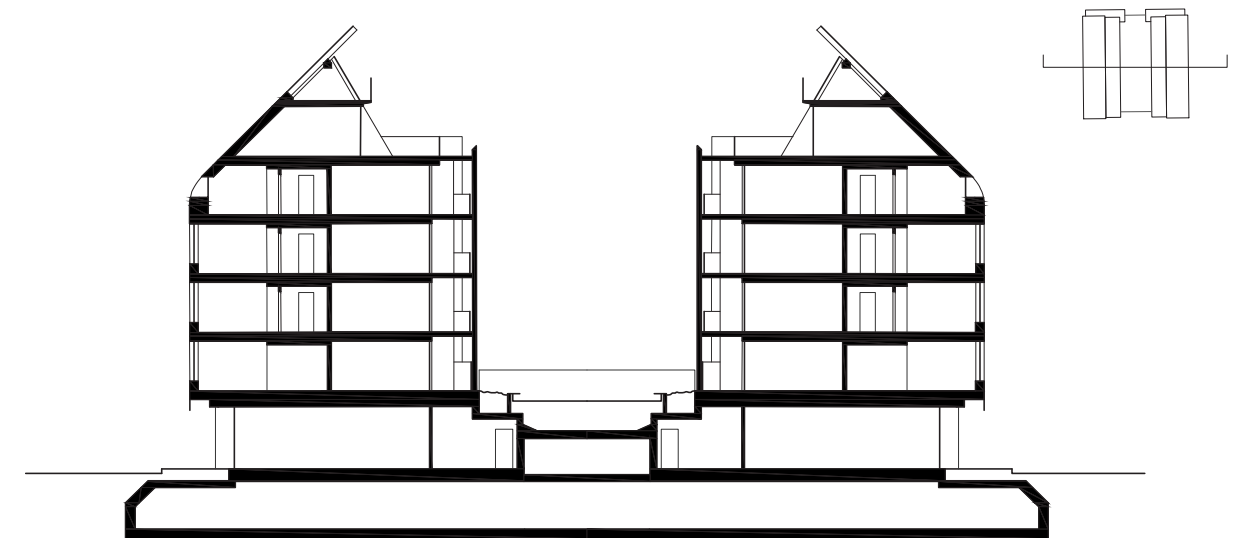
The glass-covered elevator shaft is located inside the building, in direct contact with the courtyard so that you can enjoy the view of the garden during circulation.

The first floor contains spaces associated with a wide variety of commercial areas. From restaurants, local commerce, workshops, green areas, a promenade by the riverside area, spaces allied to physical activity, a true ecosystem.

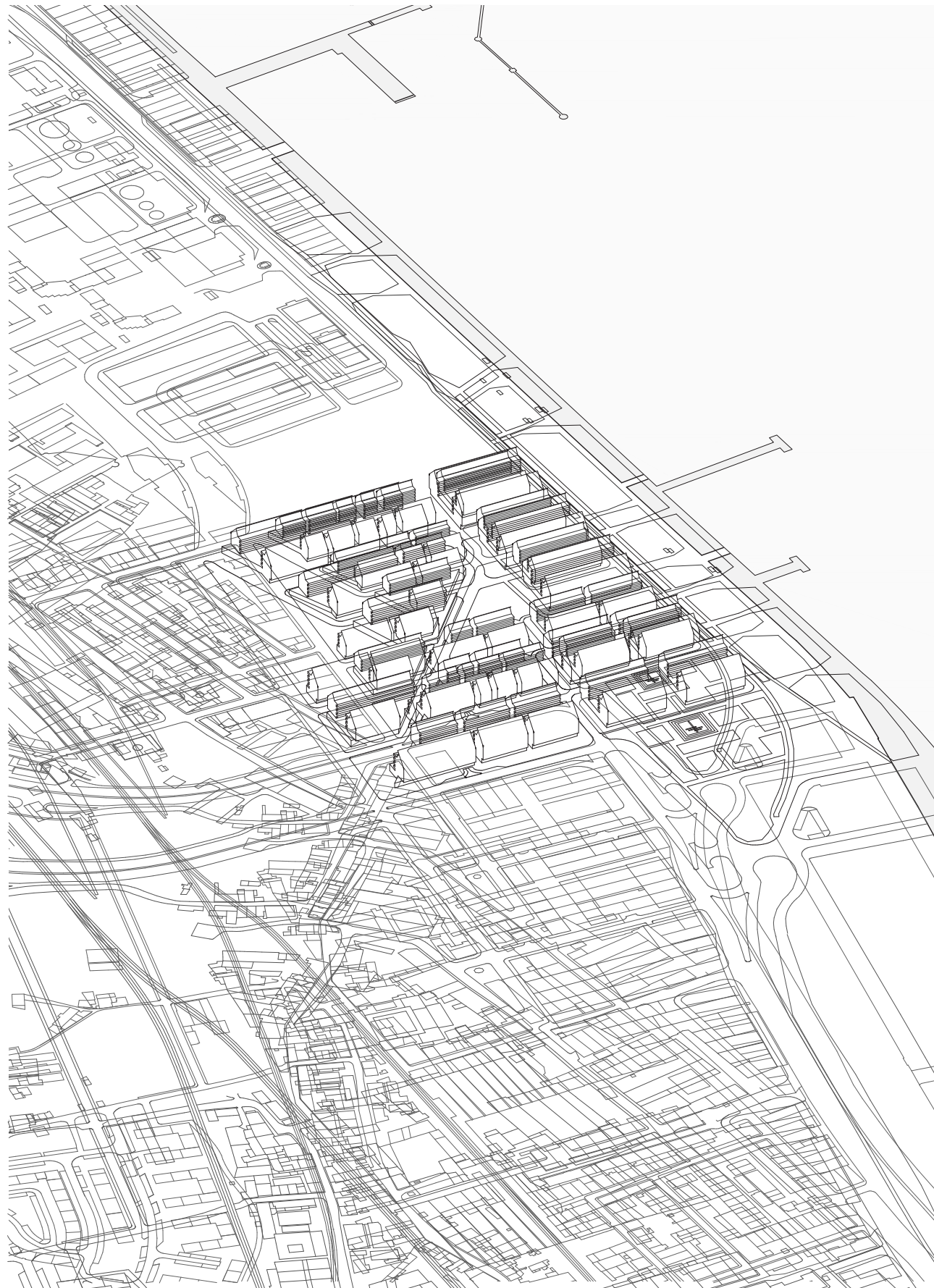
The project starts from a standard module, which is then developed and adapted as the project



12 Exterior facades of the building. (Renzo Piano Building Workshop, n.d.)



13 Cross section

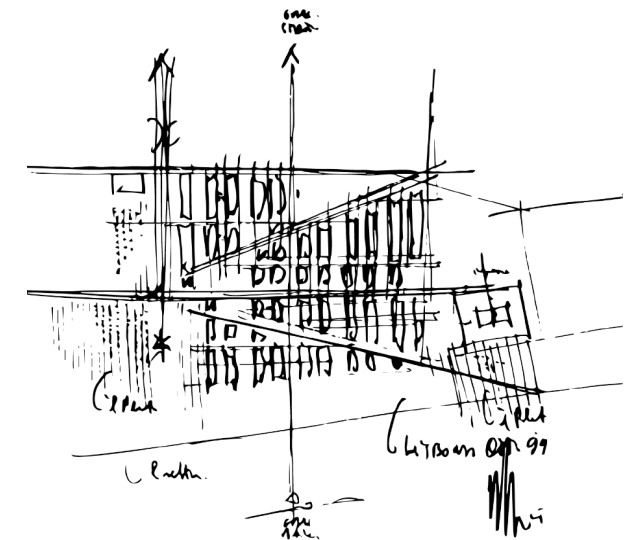


14 Axonometry

is also developed - “each building seems to be our prototype that can be developed with further phases” (Vic Properties, 2021).

Renzo Piano’s housing complex, despite its monumental scale and what is inherent to a project of this size, excels in detail, both outside and inside the dwellings, from the light that invades the spaces to the bluish details of the ceramic coating on the facade - “(...) it’s a big master plan that led us working on different scales, so we always jump from master plan to details” (Vic Properties, 2021).

The Prata Riverside Village project comes, in this way, to consolidate a long-forgotten area, giving back the movement and life that were so characteristic of Braço de Prata, thus becoming a point of interest for many, due to the quality, comfort and safety that it represents.



15 Project sketch (Piano, Renzo. n.d. Retrieved from Prata Riverside Village, 2020)

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16 Dwelling's balcony (Jorge Figueiras, 2020)

“The place where you make a project already tells a story, and you have to be able to listen.”

(Renzo Piano, 2020)



17 Project Buildings (Joana Marques, 2020)

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Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

12

ORIENTE RIVERFRONT PARK
FC ARQUITETURA PAISAGISTA



01 General view (Joana Marques, 2020)

38°44'45.8"N, 9°05'48.9"W

12

ORIENTE RIVERFRONT PARK FC LANDSCAPE ARCHITECTURE

ARCHITECTS

Filipa Cardoso de Menezes and
Catarina Assis Pacheco

CLIENT/PROMOTER

Lisfundo/Câmara Municipal de Lisboa

TEAM/ COLLABORATORS

Lisa Câmara Santos, Rita Rodrigues, Rodrigo
Coutinho Seixas, Luís Santos,
Guilherme Bivar, Tiago Monteiro-Henriques,
Natalia de Mello, Bárbara Assis Pacheco,
Carolina Cantante and Catarina Carreiras in
collaboration with Bak Gordon Arquitetos

PROJECT DATE

2017

CONSTRUCTION DATE

2018-2020

LOCATION

Rua Cintura do Porto, Braço de Prata, Lisbon

SITE AREA

4,2 ha

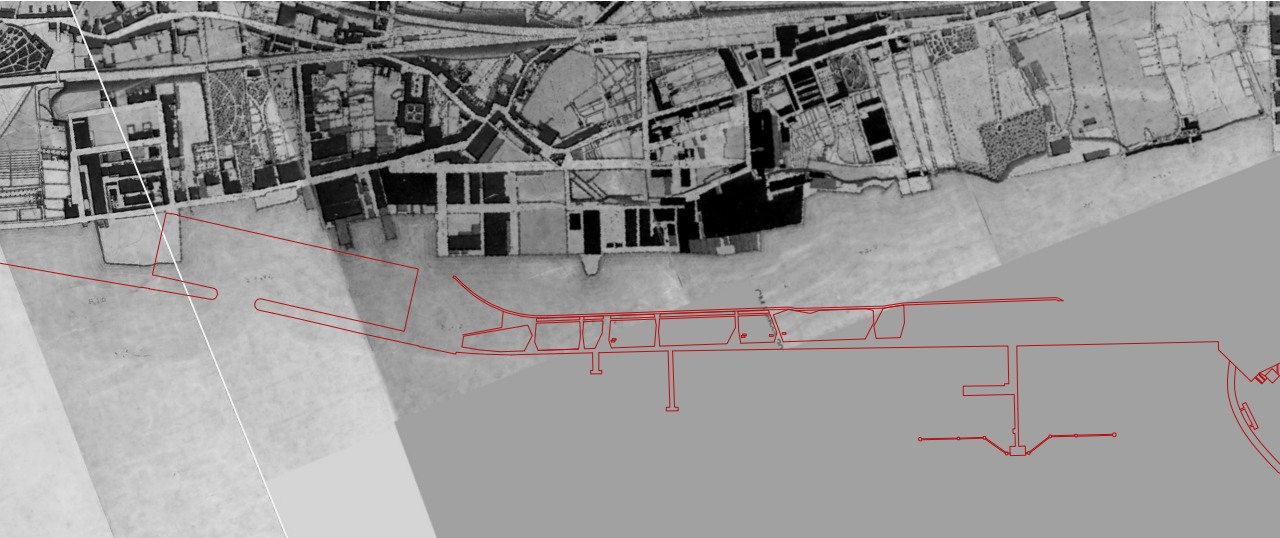
AWARDS

SIL - Public Spaces (2020)
Rosa Barba Award Finalist (2020-2021)

The Oriente Riverfront Park is located along 600 m on the Tejo riverbank, in the Braço de Prata zone, next to urban areas under requalification. The project is composed by two phases that occupy the riverfront area from Doca Poço do Bispo to the Parque das Nações marina, and that arise from the two subdivisions upstream: the housing complex of Braço de Prata, authored by the architect Renzo Piano, and the housing that appear in the Detailed Plan of Matinha, authored by the Risco studio (Unknown author, 2018). The first phase, corresponding to the territory between the Doca Poço do Bispo and the old A Tabaqueira factory building, was completed in 2020 and it is expected that in the second phase another 4 ha of garden area will be built, from A Tabaqueira to the Parque das Nações marina, totaling more than 8 ha of park (Assis Pacheco, 2021).

This new park is part of an area that underwent successive changes in the twentieth century, particularly from 1946, when the new Plan of Improvements of the riverside area of Lisbon was executed. In this sense, the Doca Poço do Bispo was built and the margin was regularized from Matinha Pier to Cabo Ruivo. Thus, new accesses were created, both terrestrial and naval, salubrious conditions were improved thanks to the





02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1904-1911. Adapted from Silva Pinto's Lisbon Topographic Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

embankment of muddy areas, and territory was conquered from the Tejo River in a considerable extension (Lisbon Port Administration, 1987, pp.138-139). Later, from the 80's on, there were no more significant changes in this area, and the coastline between Doca Poço do Bispo and Matinha Pier, remained practically unchanged until today.

The location of the Oriente Riverfront Park also corresponds to the old industrial and manufacturing area of Braço de Prata, where the movement of its train station flooded the place with life, due to the arrival of workers for the factories in this area and in old Marvila, such as the tobacco factory A Tabaqueira. Also, some workers from the Matinha gas plant had their residence at Vale Formoso de Baixo Street, and it is still possible to see some of the old houses. Currently, the area of Braço de Prata is almost devoid of the industrial character that once characterized it; however, we still see some movement due to the presence of the Higher School of Health Ribeiro Sanches, the School of Music of Braço de Prata Factory, several companies and services, and thanks to the requalification of several factory buildings and the construction of the urbanization Prata Riverside Village, designed by the Italian architect Renzo Piano.

The project started from the identity of the place, from the existing and what once existed, such as the more irregular coastline. In this sense, as stated by the architect Catarina Assis Pacheco, the layout of the Oriente Riverfront Park will *"(...) get a little bit of this layout that existed before the existence of this very defined line that accompanies the entire riverside margin of Lisbon"* (Assis Pacheco et al., 2021).

The project also uses native vegetation, which would be naturally present if the *perrê* was not present - an idea of renaturalization of the area -, and materials present on the site or that evoke its past. Still in this sense, in order to maintain the fishing identity of this area of Braço de Prata, supports to integrate the fishing rod were integrated in the sidewalk. (Assis Pacheco, 2021).



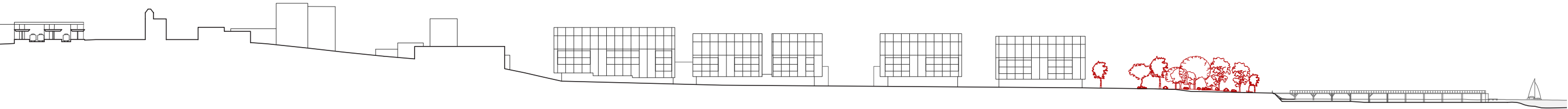
05 Poço do Bispo Dock (Goulart, Artur João, 1960. Retrieved from the Photographic Archive, CML)



06 Waterfront of Braço de Prata before Expo '98 (Homem à Máquina, 1993. Retrieved from the Photographic Archive, CML)



07 Site plan



08 Cross Section

Due to the implementation of the housing project of Braço de Prata at a higher elevation, it was necessary to landfill the intervention area and create 'pockets' at the *perre* elevation, a lower elevation, in order to protect visitors from the prevailing winds (Assis Pacheco et al., 2021).

The park consists of landscaped areas, in which there are about 360 trees, two pedestrian paths, one riverside and the other inside the green area (Lobo, 2021), bike paths, sun loungers and wooden benches reused from the site (Assis Pacheco, 2020).

A playground and support equipment are also present, consisting of the conversion of shipping containers, adapted by the architect Ricardo Bak Gordon, into two cafeterias, a bicycle rental space, public toilets, library and a support module for the park maintenance (Biennal Internacional de Paisatge Barcelona, 2020).

The playground in the park is, according to architect Catarina Assis Pacheco, *"(...) a very abstract structure, (...) a set of trunks that evoke the masts that used to be the scenery in our river"* (Assis Pacheco, 2020), thus appealing to the memory of the place.

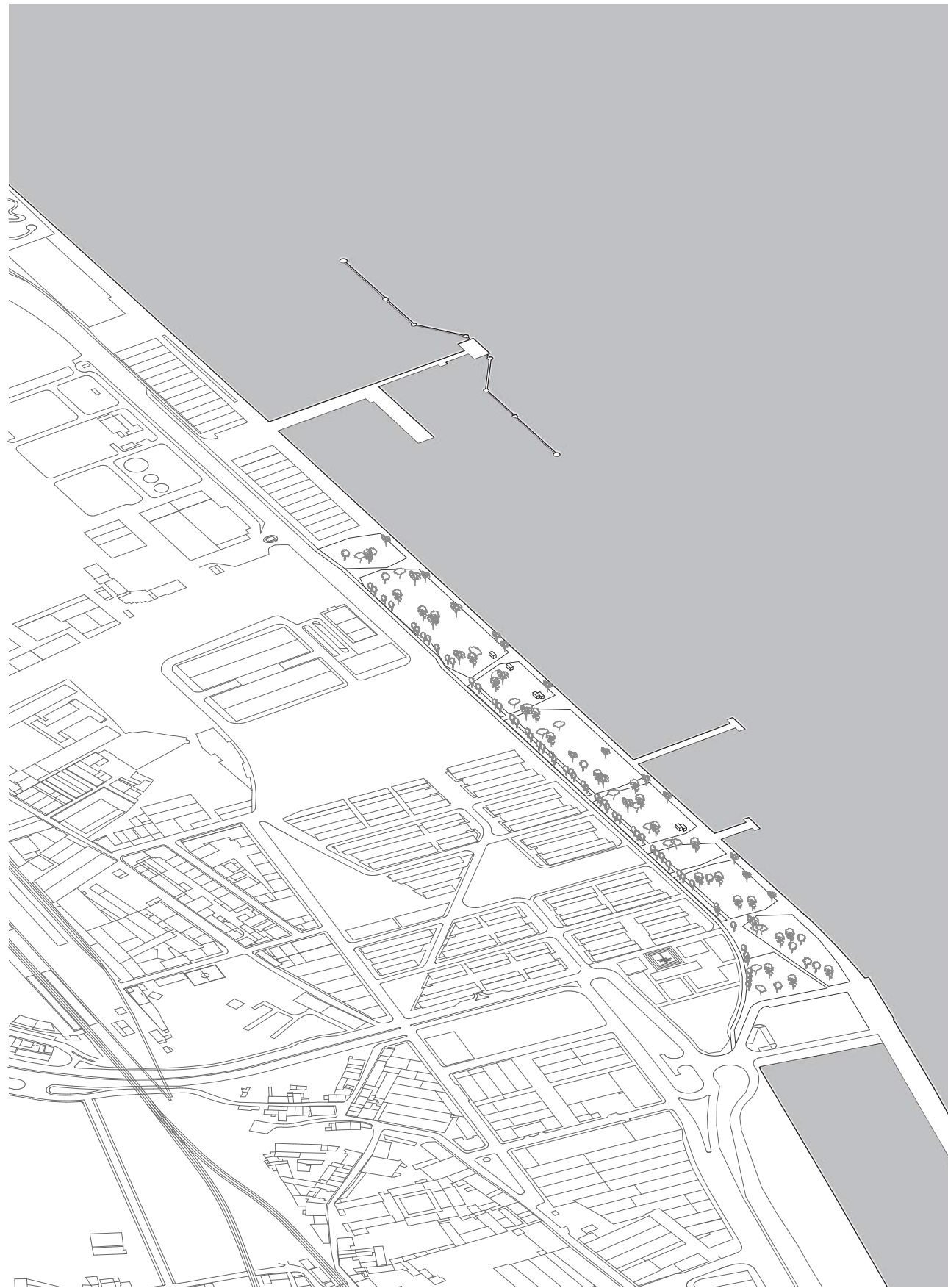
We can also find five solar sculptures, with various geometric shapes, which allow their users, mostly residents of Lisbon - a very luminous city -, a better understanding of how shadows move throughout the year (Assis Pacheco, 2020).



09 Riverside view (Unknown author, n.d. Retrieved from Lisboa Green Capital)



10 View from the Park to the river (Unkown Author, n.d. Retrieved from FIC Arquitetura Paisagista)



11 Axonometry

A pontoon is also present on the site, which is part of the project and whose goal was to be recovered, however, it is in the custody of the court, in litigation, and cannot be intervened (Assis Pacheco et al., 2020).

In the design of the park, there was a great concern with environmental and economic sustainability, and therefore, vegetation was planted with little need for maintenance, and where it is also possible to find habitats that promote climate regulation and function as refuges for biodiversity (Unknown author, 2020), including herons, cormorants and ducks (Assis Pacheco, 2020).

This green space thus provides this part of the city with moments of activity, rest and contemplation of the river and landscape, contributing to its revitalization and reinforcing its close connection with the Tejo River. On the other hand, the continuation of the paths parallel to the river also establishes a relationship with the riverside area of Parque das Nações and a continuity of the structuring green in the city.

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12 Riverside view (Unknown author, n.d. Retrieved from Lisboa Green Capital)



13 View from the Park to the river (Unknown Author, n.d. Retrieved from FJC Arquitetura Paisagista).

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“The memory of a past linked to port and industrial activity is crucial for the understanding of the park, whose colors, textures, pavements, and materials are among the elements of the pre-existing identity to be enhanced.”

(Catarina Assis Pacheco & Filipa Cardosos de Menezes, 2020)

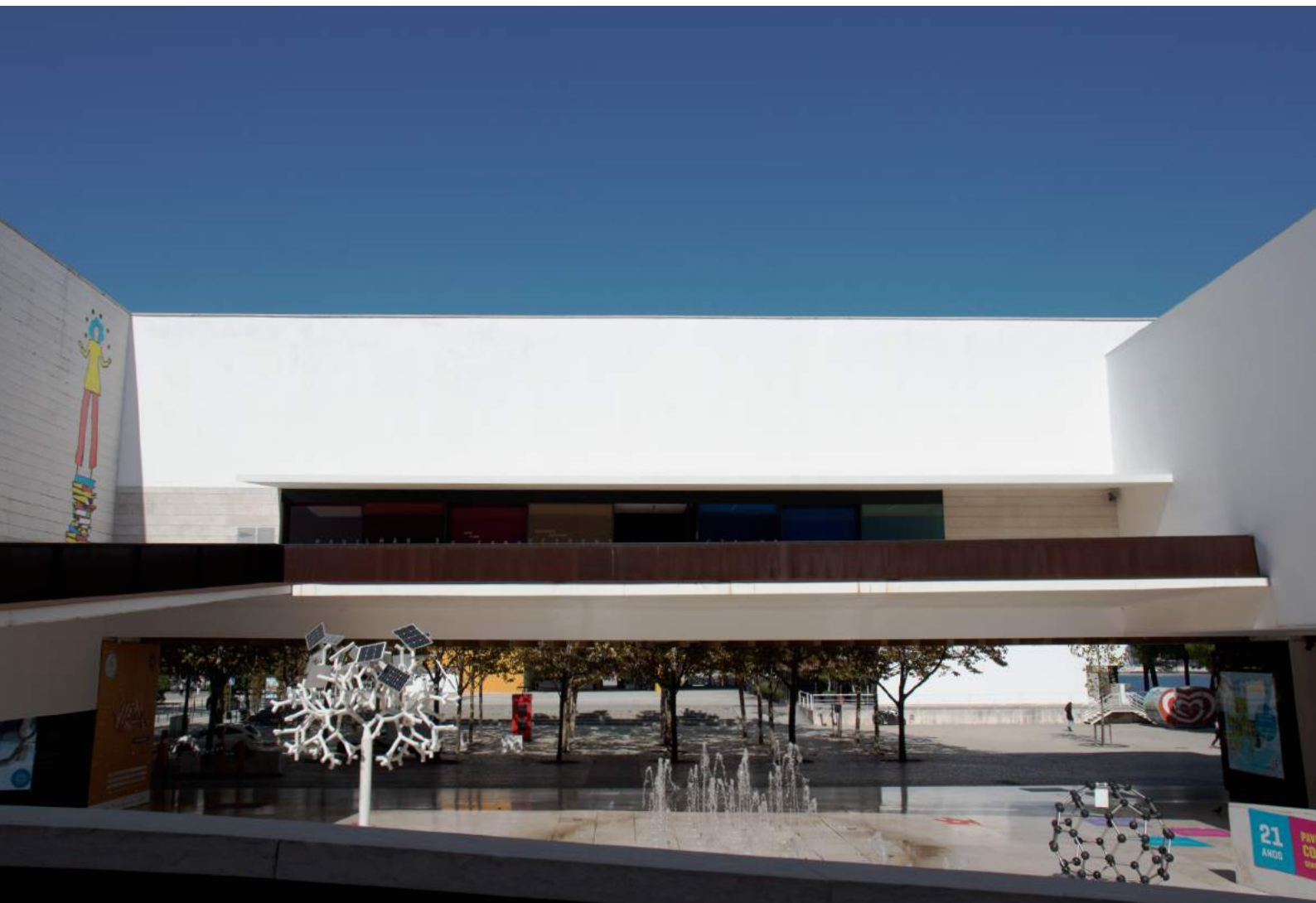


14 Details of the riverside walk (Mariana Rosa, 2020)

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Team: Coordination: Teresa Madeira da Silva. Supervisors: Teresa Madeira da Silva, Caterina Di Giovanni, Pedro Marques Alves.
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Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

13

KNOWLEDGE PAVILION
JOÃO LUÍS CARRILHO DA GRAÇA



01 Patio access to the entrance area (Joana Marques, 2020)

38°45'42.2"N, 9°05'44.2"W

In 1995, the architect João Luís Carrilho da Graça was invited by Parque Expo'98 to design the Knowledge of the Seas Pavilion, between Alameda dos Oceanos and Doca dos Olivais, which would integrate the 1998 World Exhibition in Lisbon. Despite housing an exhibition with a temporary character, it was known that the building was to remain, although its future use was unknown (Sequeira & Toussaint, 2019). The thematic exhibition, currently demolished, was designed by the ARX Portugal studio, analyzed the evolution of man's relationship with the ocean, and the complex development of highly sophisticated technologies, through a *"sequence of box-spaces, relatively neutral"*, in which the light can be regulated depending on the exhibition theme to which they are destined (ARX, 2020).

After the closure of the exhibition, the architect Carrilho da Graça was invited to adapt the Pavilion of Knowledge of the Seas into a space for permanent exhibitions related to science and technology, taking the name Pavilion of Knowledge - Living Science Center (Sequeira & Toussaint, 2019).

13

KNOWLEDGE PAVILION

JOÃO LUÍS CARRILHO DA GRAÇA

ARCHITECTS

João Luís Carrilho da Graça

CLIENT/PROMOTER

Parque Expo '98 S.A.

TEAM

Nuno Mateus and José Mateus

PROJECT DATE

1995

CONSTRUCTION DATE

1997-1998

LOCATION

Largo José Mariano Gago nº1, Parque das Nações, Lisbon

SITE AREA

6000 m²

GROSS AREA

13 150 m²

PUBLIC SPACE AREA

2600 m²

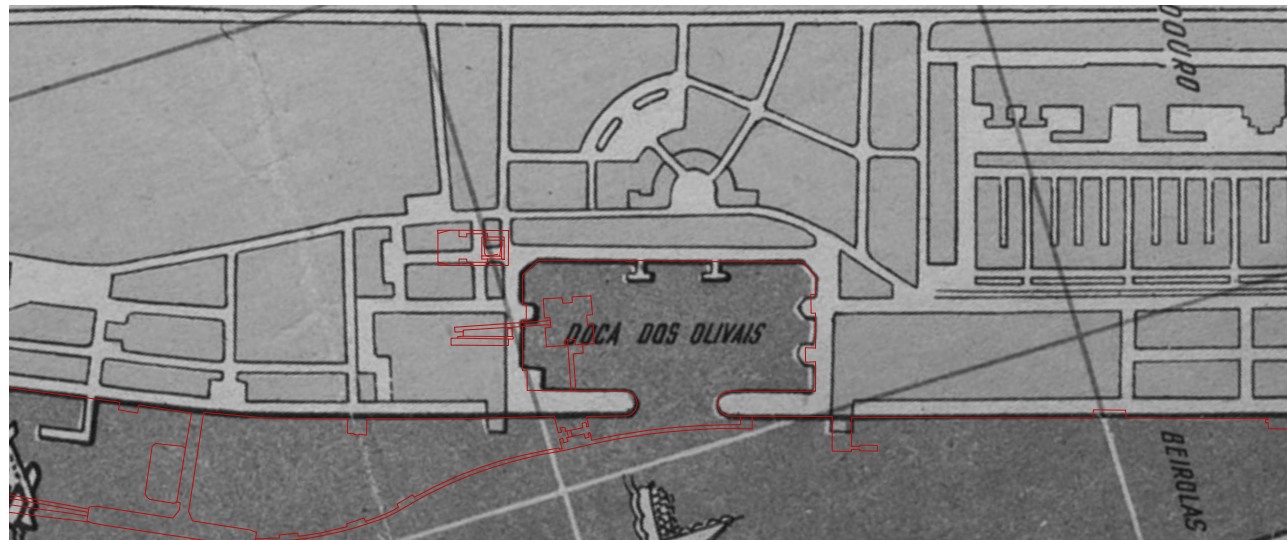
AWARDS

Valmor and Municipal Architecture Award (1998)
FAD (1999)

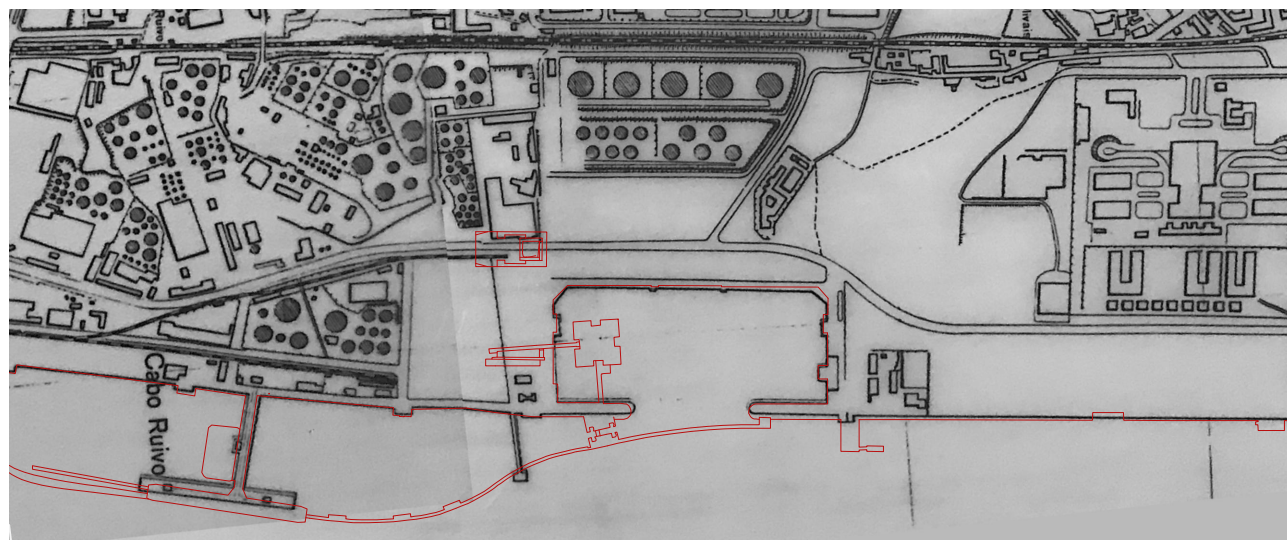




02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1956. Adapted from Lisbon City Map (2020)

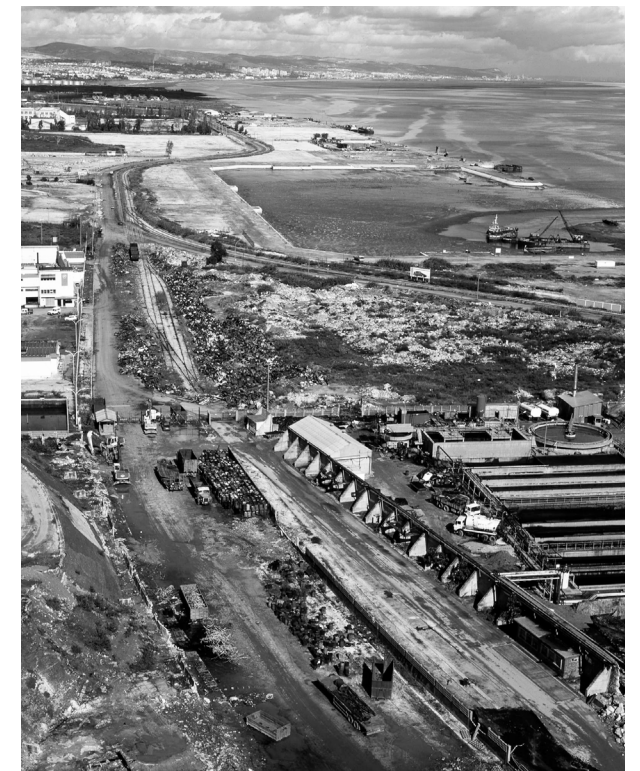


04 1980's. Adapted from Lisbon City Map (2020)

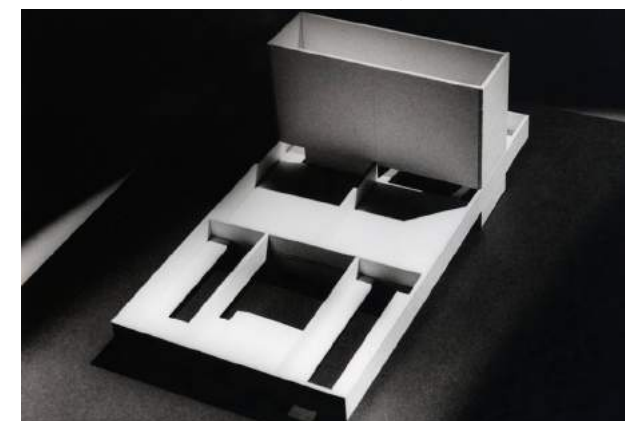
The building is located in an area of the city of Lisbon that has undergone profound changes, including successive landfills. At the beginning of the 20th century, the area where the Knowledge Pavilion was located had not yet been landfilled. Later, in the 1980s, the almost definitive shape of Doca dos Olivais can be seen, as well as the consolidation of the implantation area, and the alignment of what would become Alameda Central after the 1998 World Exposition can be seen.

In this area was the Olivais slaughterhouse, the SACOR refinery in Cabo Ruivo and tons of garbage by the river in an extension of several kilometers. Here was also located the Cabo Ruivo Maritime Airport, next to the Doca dos Olivais, developed by the American airline Pan-American, in order to serve as a base for transatlantic seaplane crossings (Unknown author, 2015). In this sense, the entire eastern area of Lisbon had to undergo an urban restructuring, which, according to architect João Luís Carrilho da Graça *"(...) was very well controlled and (...) made that area, climatically questionable, a huge success"* (Dias, 2016).

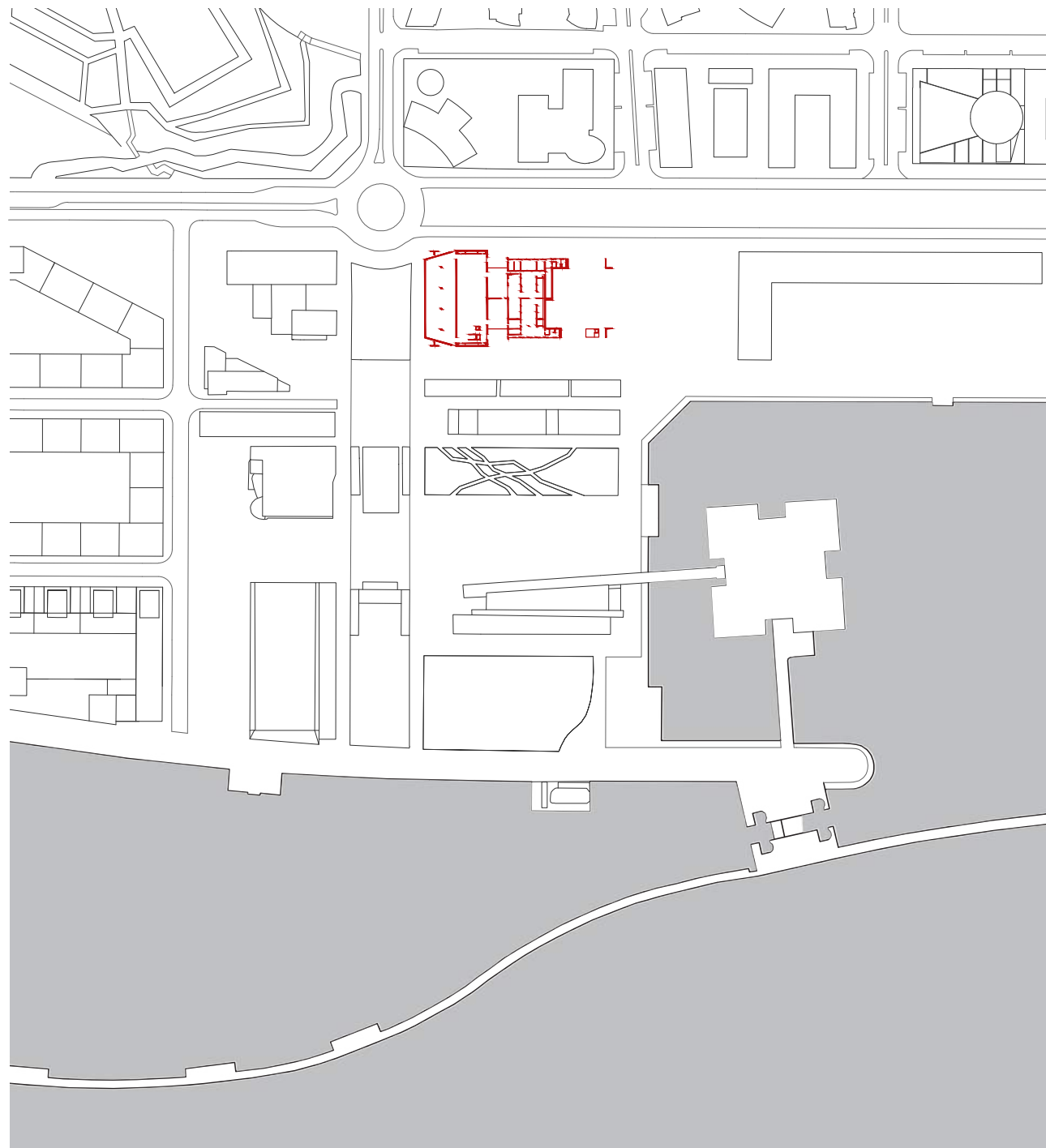
According to the architect João Luís Carrilho da Graça's perception of world exhibitions - *"(...) a kind of saturation of images and attempts to capture people's attention (...)"* (Carrilho da Graça in Pereira, 2018) -, the Knowledge Pavilion *"(...) emerges as a moment of stop and break between the confusion of the outside and what would happen inside"* (Carrilho da Graça, 2020). It appeared, thus, as a moment of pause in the eccentricity of Expo '98, as a building that allowed *"(...) to breathe between everything that was happening outside (...)"* (Carrilho da Graça in Pereira, 2018), and that excels in discretion, thanks to its expressive restraint.



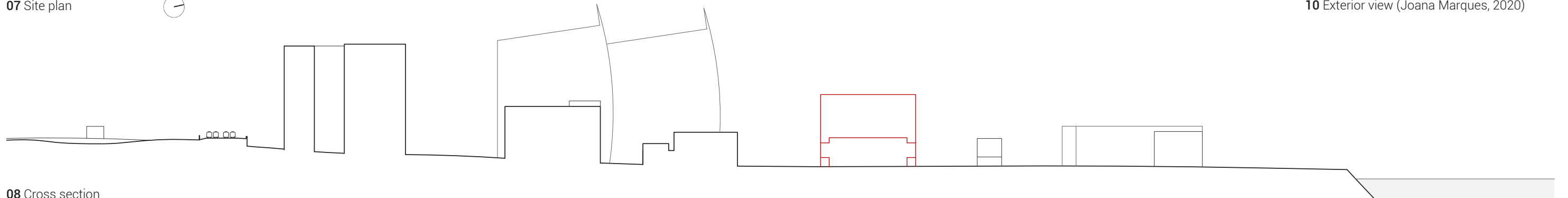
05 Olivais Dock before Expo '98 (Homem à Máquina, 1994. Retrieved from Photographic Archive, CML)



06 Project model (Unknown author, 1995. Retrieved from Photographic Archive, CML)



07 Site plan



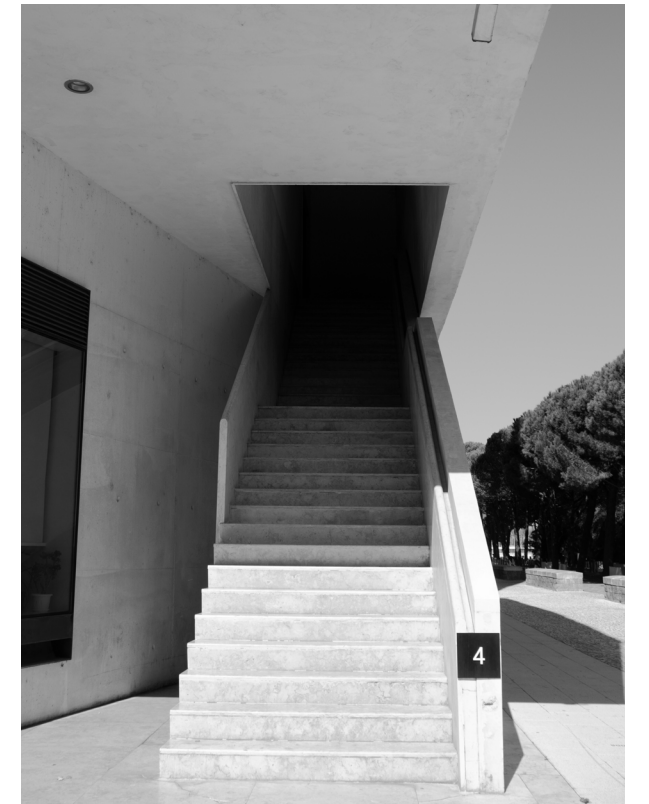
08 Cross section

Despite its proximity to the Tejo River, the building is closed in on itself, establishing only a tenuous relationship with the Doca dos Olivais through the pavilion's access courtyard.

When visiting the Knowledge Pavilion, its monumentality, horizontality and the strong *"volumetric and horizontal, megalithic counter position in concrete"* (Carrilho da Graça in Teles, 2015, p. 75) are undeniable. In its essence it consists of two volumes, which completely occupy a block: a vertical one - intended, at the time of the exhibition, to contain ships - and a horizontal one - intended for services and exhibition rooms. Unlike the vertical volume, which sits directly on the ground, the horizontal volume appears to be *"in magical suspension," as stated by the architect Carrilho da Graça* (Teles, 2015, p. 75).

The access courtyard, which pierces the horizontal volume establishes, according to Sequeira and Toussaint (2019, para.2), *"(...) a continuity between the boulevard and the dock"*. The access to the building is made through a route of ramps, which allows the contemplation of the sky and the architecture of the building and leads visitors to the interior spaces of different sizes and luminosity, according to function and need, and *"thought of from the beginning as empty stages"* (Carrilho da Graça in Sequeira & Toussaint, 2019, para.2).

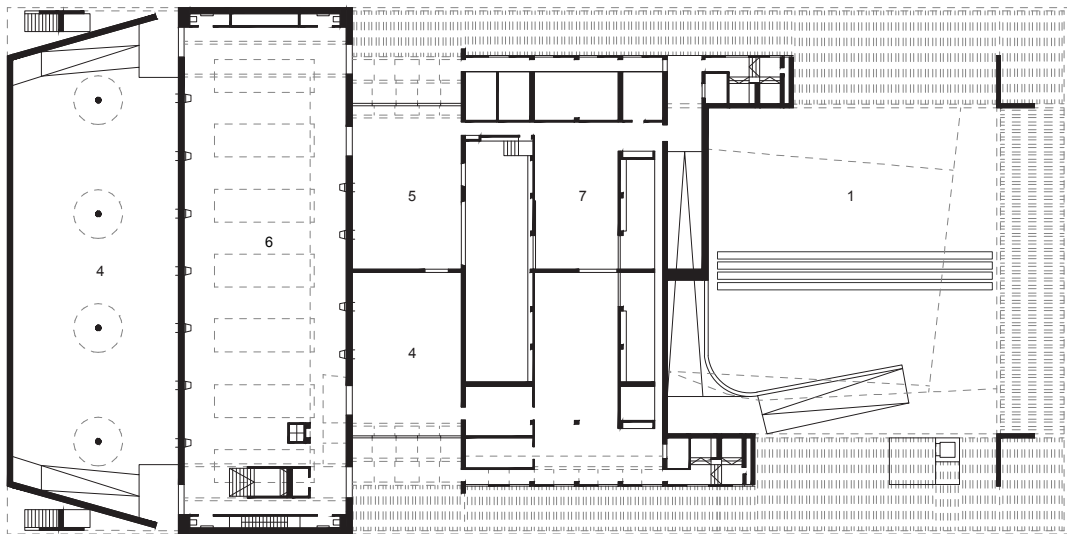
Carrilho da Graça's Knowledge Pavilion, designed mostly in white concrete, stands out for its innovation thanks to the use of this material in a large construction without expansion joints, unlike what had been seen until



09 Side access to the museum (Joana Marques, 2020)

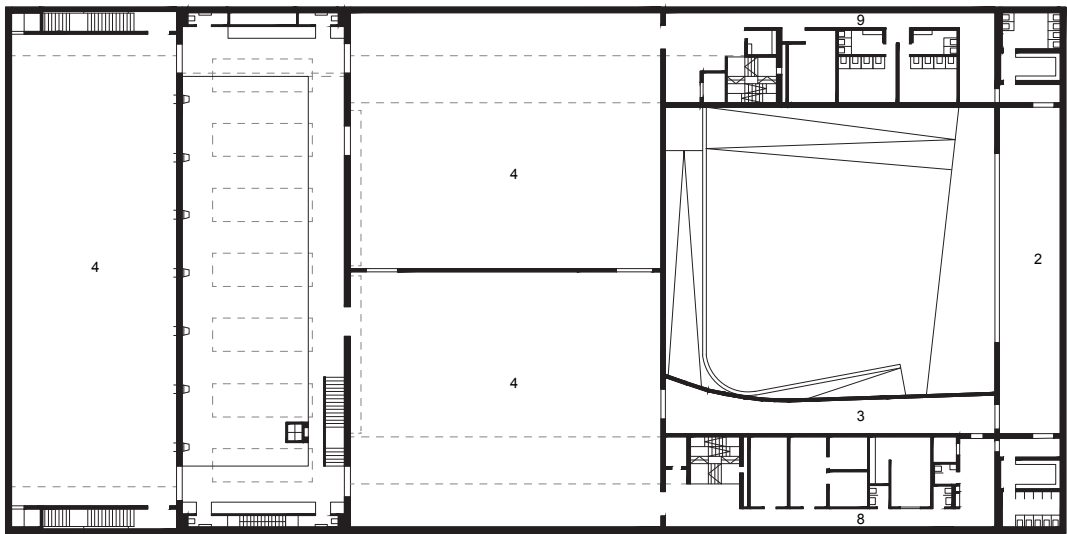


10 Exterior view (Joana Marques, 2020)



1 - Entrance hall | 4 - Exhibition area | 5 - Store | 6 - Nave | 7 - Technical area

11 Ground-floor plan

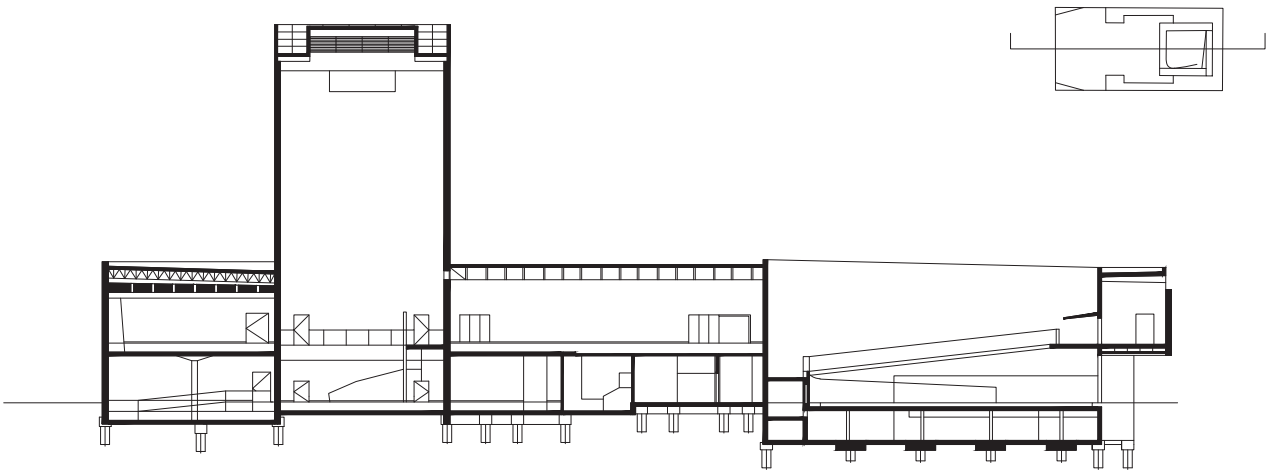


2 - Foyer | 3 - Entrance | 4 - Exhibition area | 8 - VIP area | 9 - Personal area

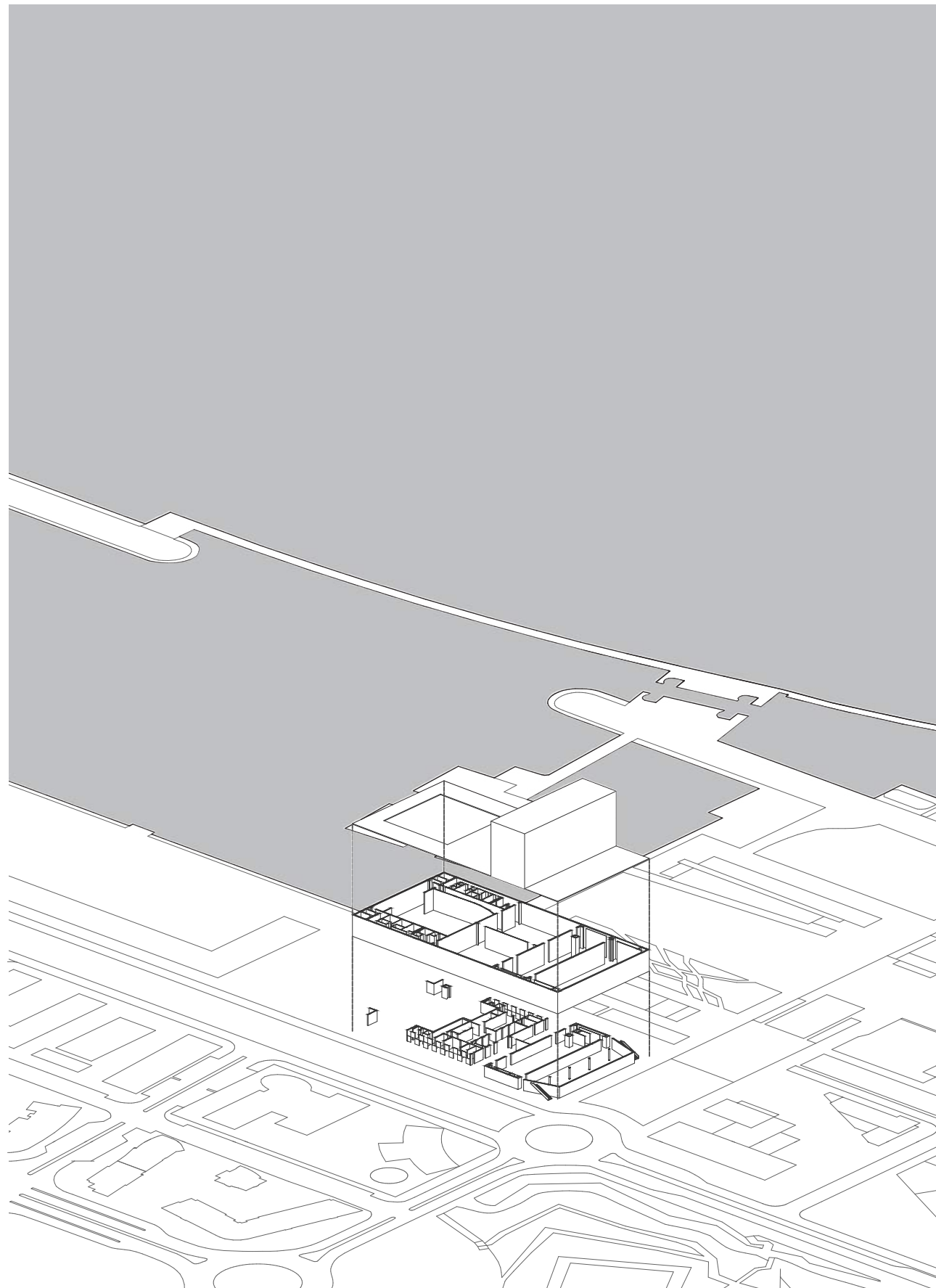
12 First floor plan



13 Entrance courtyard (Joana Marques, 2020)



14 Longitudinal Section



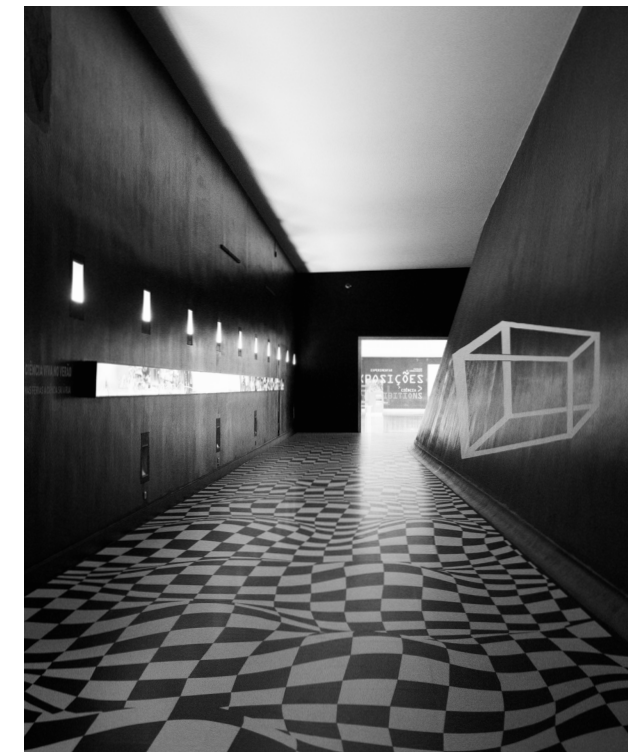
15 Axonometry

then in Portugal (Sequeira & Toussaint, 2019, para.3). Also, lioz stone - a limestone with marine fossils - is used in the building, thus evoking the Portuguese maritime past and the history of the seas.

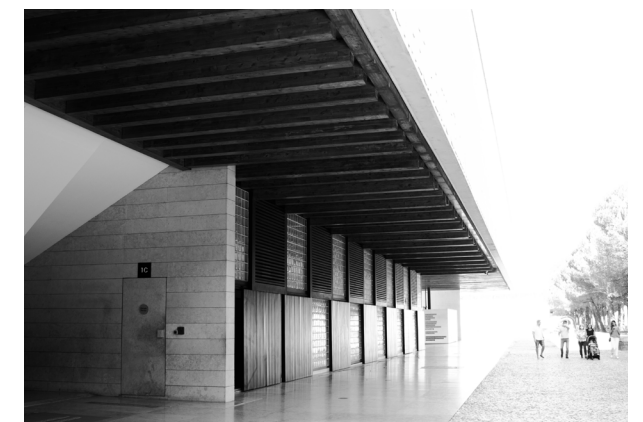
In 2010, a renovation of the pavilion's foyer, designed by architect João Luís Carrilho da Graça in collaboration with the P-06 studio, was carried out, winning the 2011 Society for Environmental Graphic Design (SEGD) Awards (Pavilhão do Conhecimento, 2020). This restructuring brought, to the multifunctional space of the entrance, a *"perforated texture"* that generates visual interest to the spaces it hides, such as offices and laboratories. This installation, together with acoustic absorbers, creates the acoustic environment suitable for performances and other activities (Gusmão & Anjos, 2012).

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16 Entrance space (Joana Marques, 2020)



17 Outdoor space and access to the store (Joana Marques, 2020)

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"What is wonderful about the city of Lisbon (...) is that there is always the attempt to build in a relatively simple way. But the complexity of the topography makes the city (...) full of details that build its charm and make the city interesting."

(João Luís Carrilho da Graça, 2017)



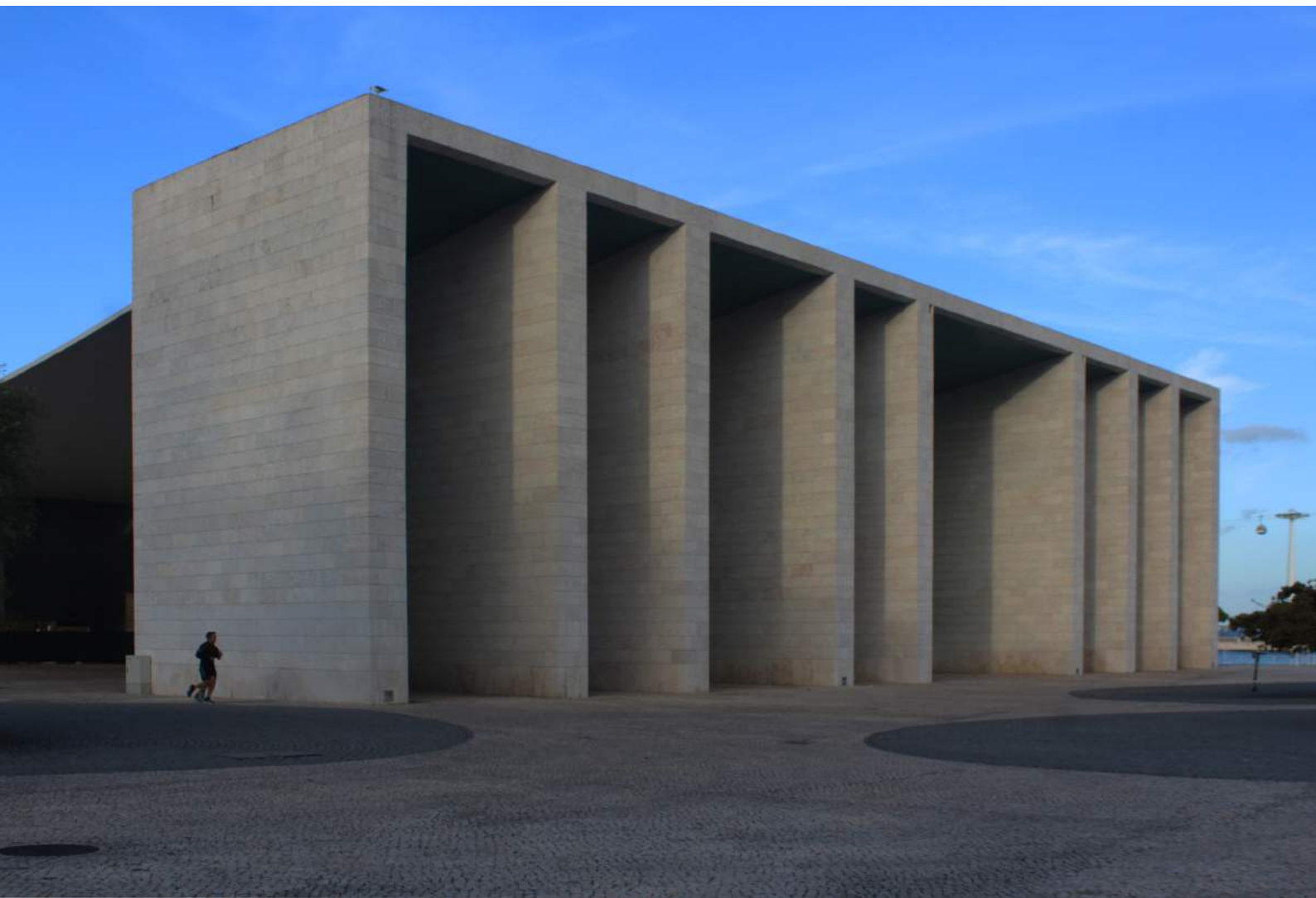
18 Access to the museum through the entrance courtyard (Joana Marques, 2020)

Integrated Master in Architecture, Iscte - University Institute of Lisbon.
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Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

14

PORTUGAL PAVILION
ÁLVARO SIZA VIEIRA

38°45'58.3"N, 9°05'44.6"W



01 South buttress of Portugal Pavilion (Luís Filipe Ribeiro, 2020)

14

PORTUGAL PAVILION ÁLVARO SIZA VIEIRA

ARCHITECT

Álvaro Siza Vieira

CLIENT/PROMOTER

Parque Expo 98' S.A.

TEAM

Arc. Álvaro Siza Vieira
Eng. António Segadães Tavares

PROJECT DATE

1995

CONSTRUCTION DATE

1997 - 1998

LOCATION

Alameda dos Oceanos,
Parque das Nações, Lisboa

SITE AREA

6 940 m2

GROSS AREA

7 840 m2

PUBLIC SPACE AREA

12 900 m2

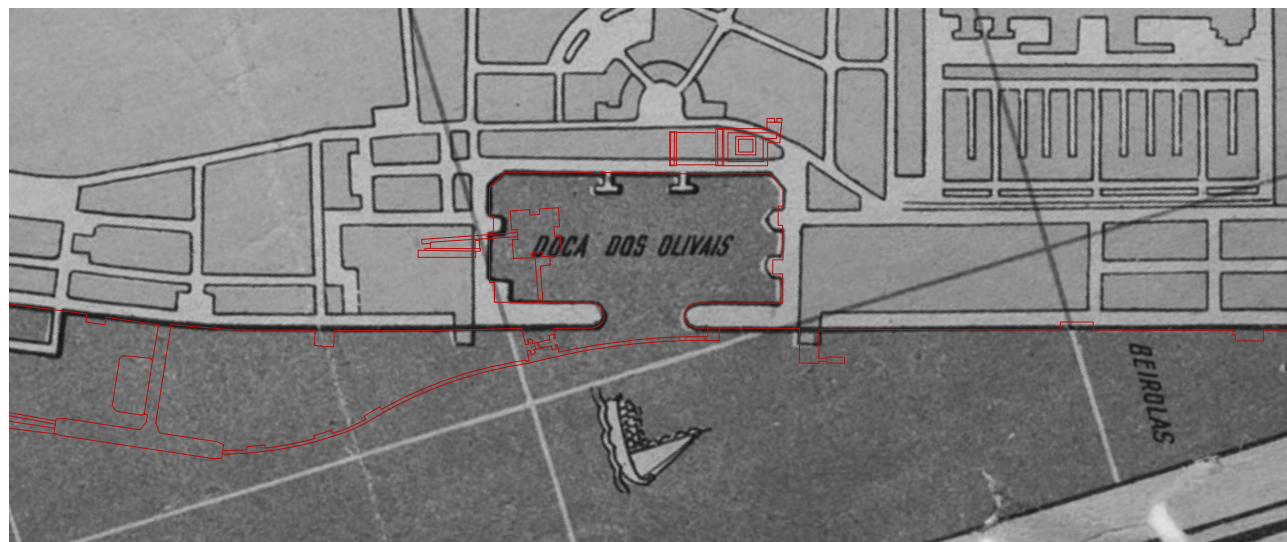
AWARDS

Valmor and Municipal Architecture Award (1998)
Public Interest Heritage Classification (2010)

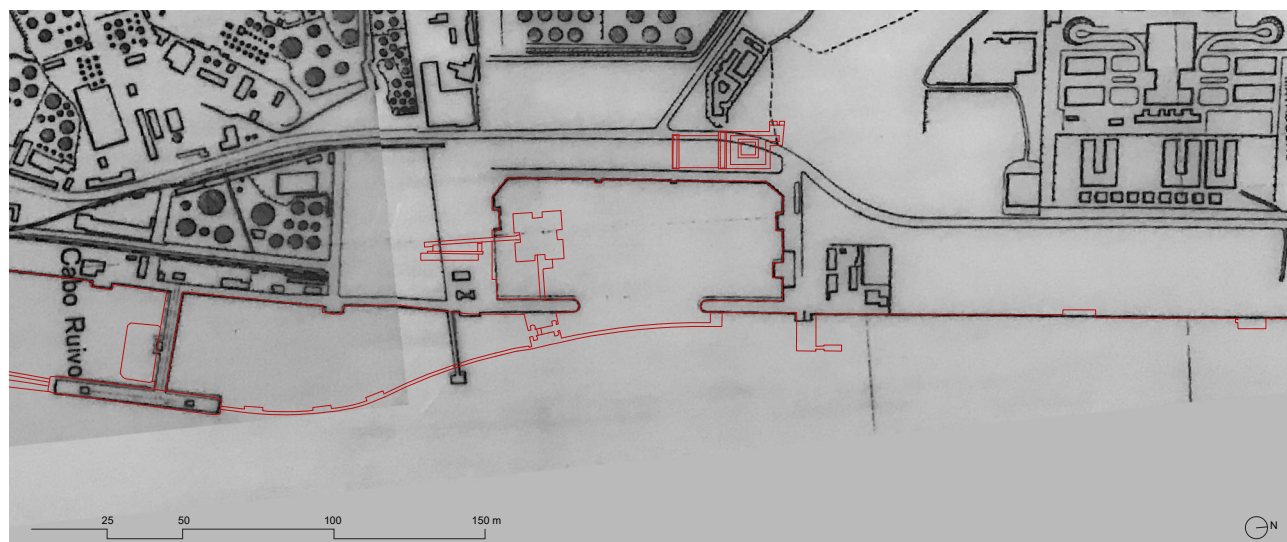




02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1956. Adapted from Lisbon City Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

The Portugal Pavilion was projected without direct references to surrounded buildings, since the construction of the Expo's buildings took place simultaneously. Here, by author, stands the major difficulty for the architect in the act of projecting (Siza Vieira, 1998). Choosing an horizontal volumetry and enhancing its position and relationship with Tejo river. The project contradicts in a certain way the most of proposals of the called upon architects for the great Expo's 98 work (Carvalho, 2006).

In his past, the old Olivais Dock, the Olivais Dock during brief space of time, had the purpose of being an airport of seaplanes. Posteriorly, here had been installing part of Lisbon's port activity. After the extinction of port activity, the oriental zone of the city used to be a waste deposit of Lisbon (Fernandes Sá, 2007).

The building is constituted by two blocks, the volumetry of the pavilion and the roof of the ceremonial square, separated by a "separation joint", being in the first, there are the exhibition spaces, restaurants, and annexes (Segadães Tavares in Fernandes Sá et al., 2007).



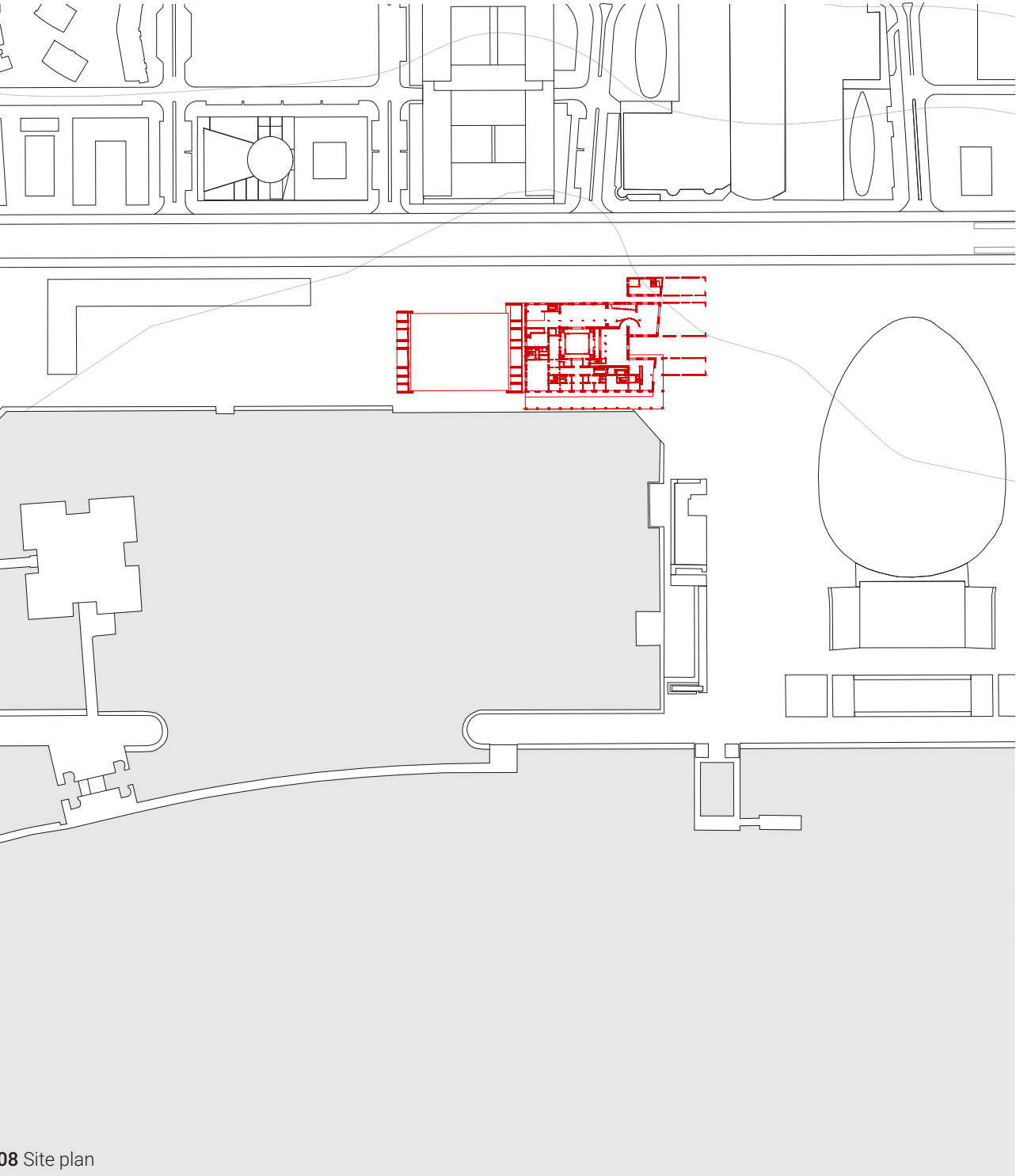
05 Lisbon's old seaplane port (Arquivo CML, Artur João Goulart, 195-?)



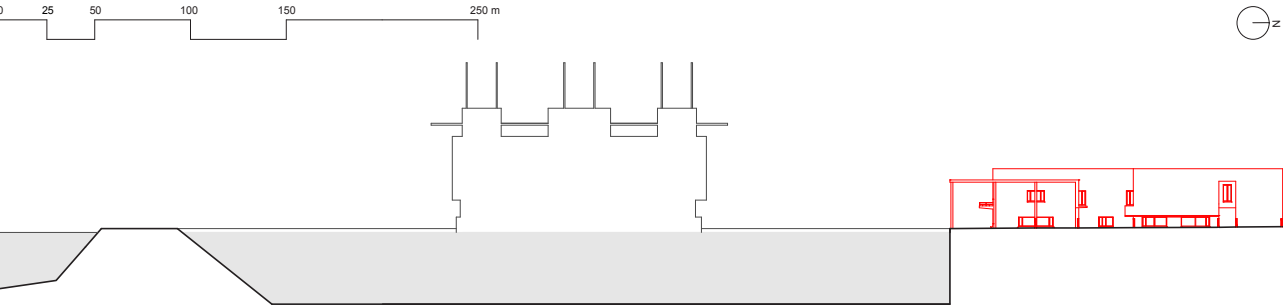
06 Lisbon's old port area (Arquivo CML, Homem à Máquina, 1994)



07 Pavilion's construction (Arquivo CML, (Homem à máquina, 1997)



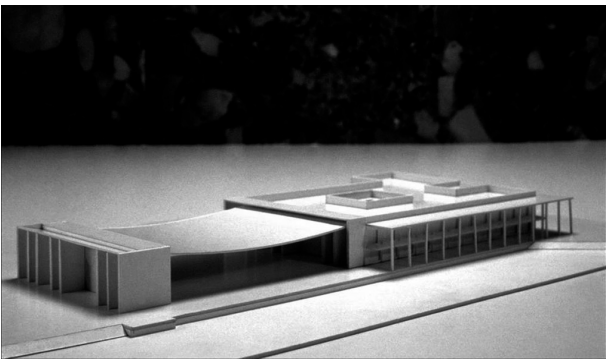
08 Site plan



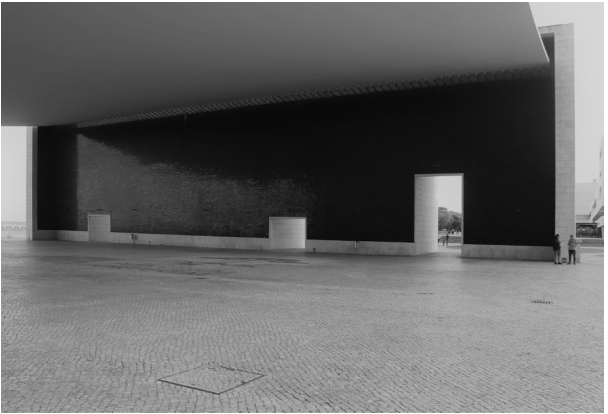
The square, under which a wide variety of public events take place, with approximate dimensions of 65x50m, is covered by a thin concrete shell, which the architect dared to call a sheet of paper resting on the two lateral volumes. This concrete cover, weighing approximately 1,500 tons, is supported by two buttresses, one at each end of the shell, pulled by steel cables, anchored to the aforementioned lateral porticos and then to the basement (Segadães Tavares, 2007).

The volumetry of the pavilion itself, with approximate dimensions of 90x60m, formed by two floors, overcomes the height of the buttresses in a sublime way, extending slightly over the body that sustains the canopy, creating a hierarchical differentiation in a subtle way between the two volumes. This volume is organized by a central courtyard that, in a way, refers to the cloisters of convents, in a very clear matrix of programmatic organization. The building also has an underground floor for car parking (Carvalho, 2006).

Structurally, the block of the pavilion rests on an underground floor in reinforced concrete, with a bottom slab in general softening and the top with foundation piles, due to the unstable terrain where it is located. The second floor is made of mixed structure, and the facades are made of high-strength concrete capable of resisting horizontal actions. The interior structure is composed of metallic beams and columns for resistance to vertical actions, which facilitated the organization of the exhibition inside the pavilion by Eduardo Souto de Moura for Expo '98 (Segadães Tavares, 2007).



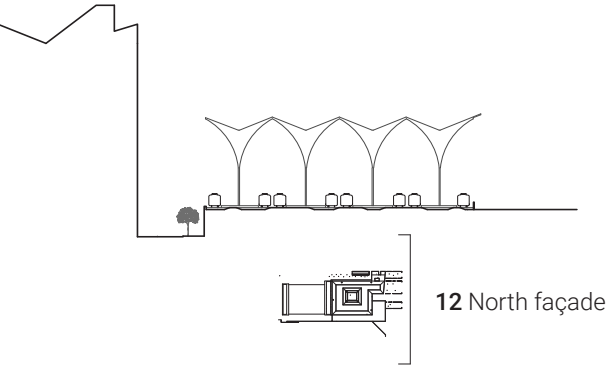
09 Project model
(Arquitecturas e Planos, Elza Rocha)



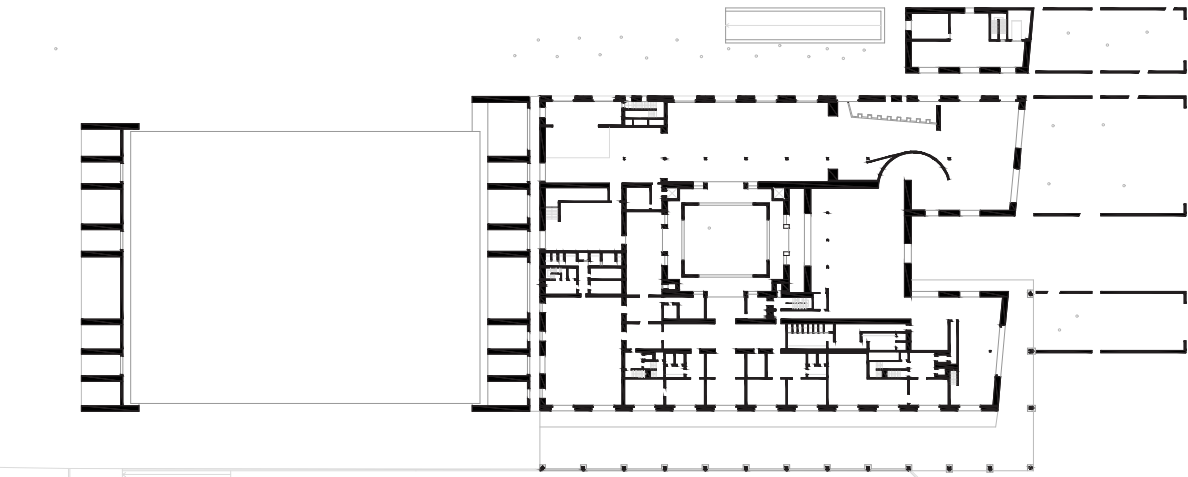
10 South buttress
(Luís Filipe Ribeiro, 2019)



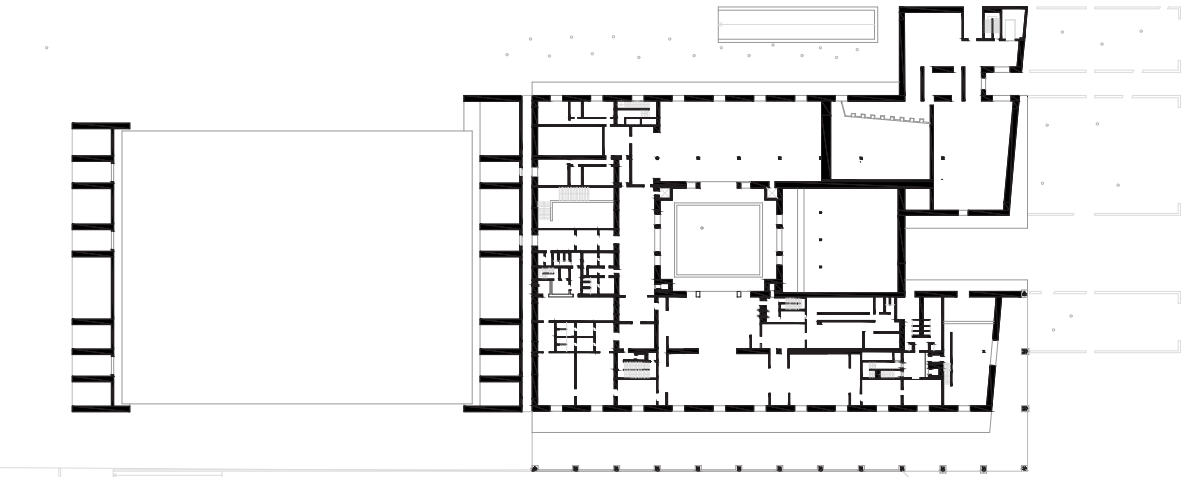
11 Gallery detail
(Luís Filipe Ribeiro, 2019)



12 North façade



13 Ground floor plan



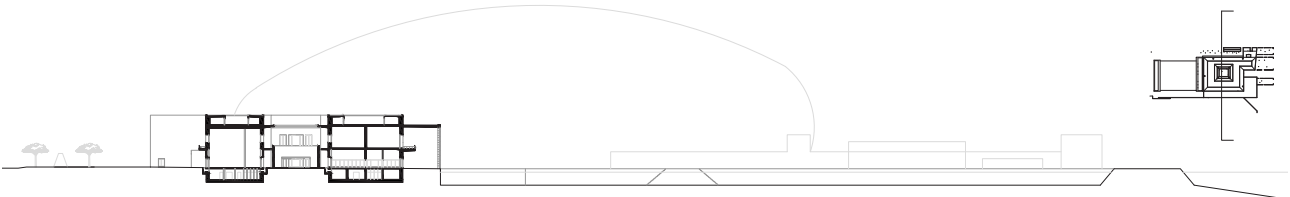
14 First floor plan



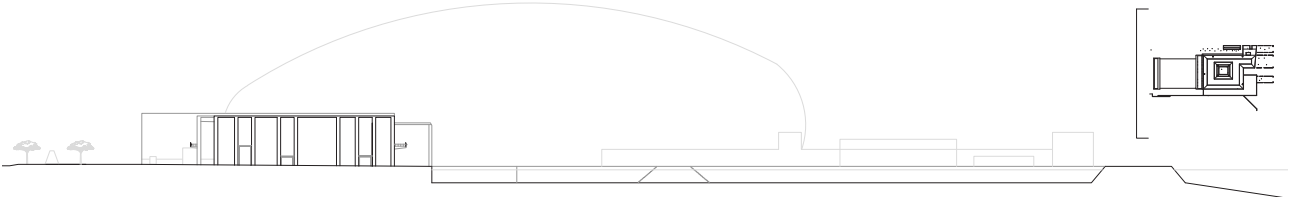
15 West facade

The path through the building begins at the entrance on the coverage, where there is a space that serves as an atrium which guides the visitor to the most relevant interior space in the complex. Going to the upper floor, by staircase, the visitor finds another courtyard, more reserved for those who want to enjoy the restaurant space through a balcony, which is part of a gallery system, together with a sequence of pillars that support another roof near the edge of the old Olivais Dock to contemplate the river. This system of gallery with pillars refers to a rationalist logic used, for example, in the “Palazzo Degli Uffici” in the Eur Eur area in Rome by Geatano Minnucci (1939).

The plan of the northern facade is defined by the orthogonal predominance of the entire building. If, on the one hand, it reinforces the axis between the Olivais Dock and the Intermodal East Station, on the other hand, the walls, which seem to recreate small boxwood gardens from the gardens of manors and palaces, end up contradicting that same gesture (Trigueiros et alt 1998). The north facade extends into a small semi-detached volume, reminiscent of the turrets of the Terreiro do Paço in Lisbon, through an underpass on the ground floor and gives access to the upper floor. The facade facing Alameda dos Oceanos, the simplest one, is marked by the rhythm of the windows revealing the more modest side of the whole pavilion.



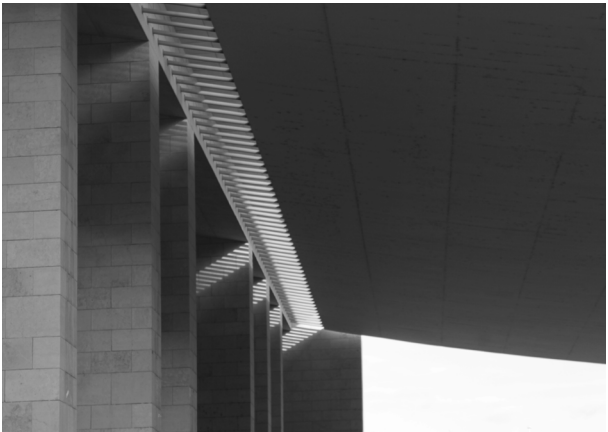
18 Transversal section



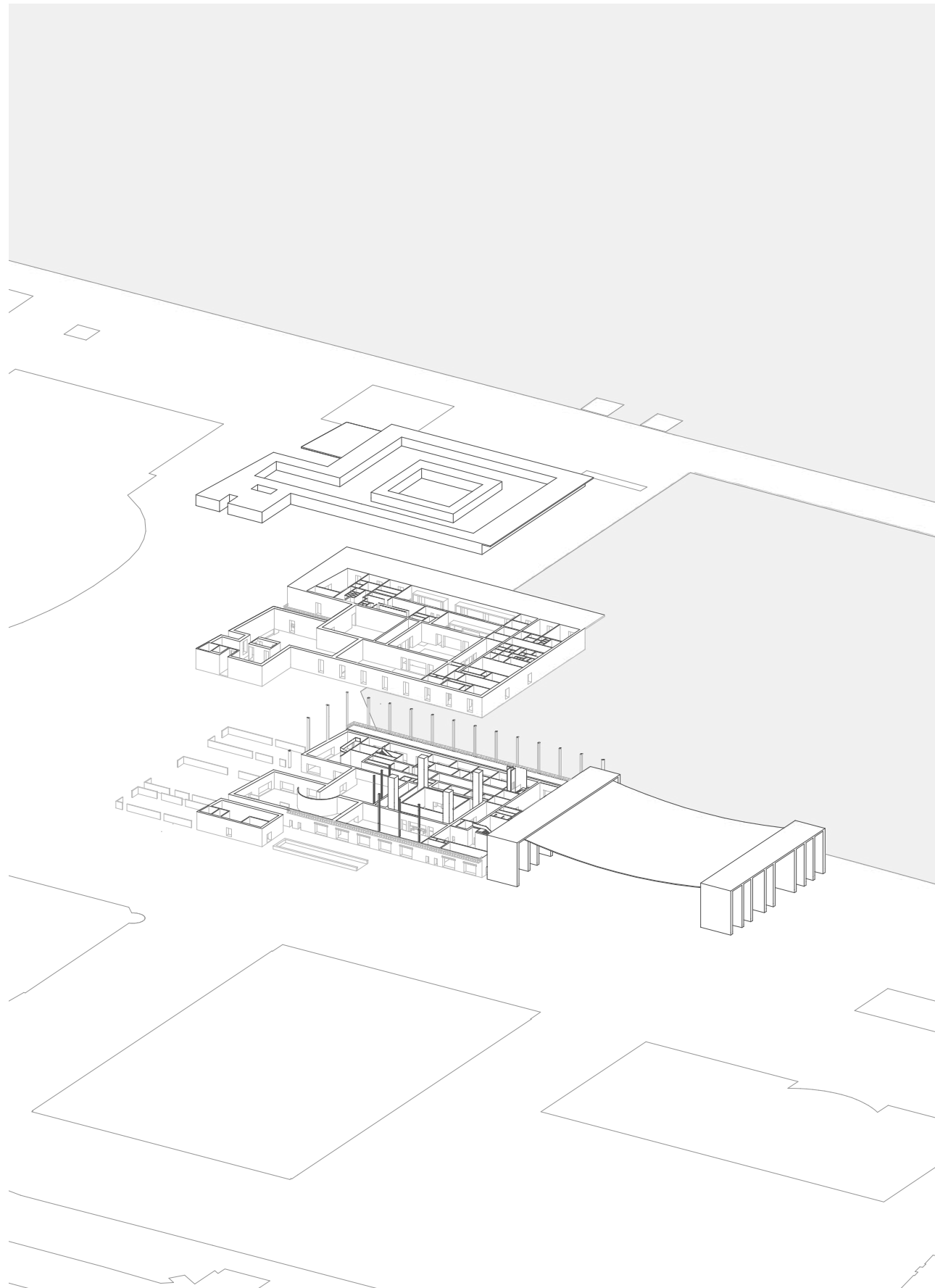
19 South facade



16 Covered square (Luís Filipe Ribeiro, 2020)



17 South buttress (Luís Filipe Ribeiro, 2020)



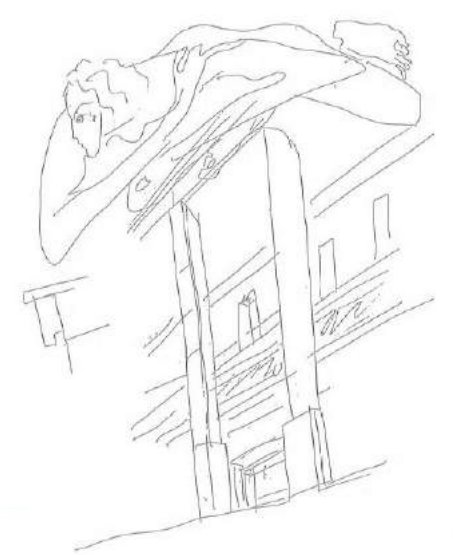
20 Axonometry

The building is characterized by its strong harmony between its proportions, a strongly marked rhythm by spans and pillars and by its materiality. This last one is characterized by the use of lioz stone and tiles manufactured by Viúva Lamego that reflect the light into the covered plaza. Although it is a work of contemporary architecture, the building presents a varied panoply of elements that refer to a more classical architectural culture, regarding the porticos and rhythms of the windows. Their internal organization around a kind of cloister reminds us of a conventual or traditional architecture, vernacular or even of popular character, which is present in the other works of the architect (Carvalho, 2006).

Kenneth Frampton, in a monography on the Portuguese architect, refers to the more monumental scale of the Portugal Pavilion, where, according to the author, Siza Vieira brought together two imperial and antithetical images. Lines like those of Le Corbusier, Oscar Neymayer, Giuseppe Terrani, or even the program of a new monumentality, are present in this work of Siza Vieira (Frampton, 2000).

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19 Architectural sketch
(in Álvaro Siza e Eduardo Souto de Moura, 1998)



20 Detail of the bench of the entrance to the Doca dos Olivais (Luís Filipe Ribeiro, 2020)

“I can’t say what the significance of the hedge is, it will have many, I don’t feel the need to justify its existence. Architecture is not like a pragmatic or explanatory text.”

(Álvaro Siza Vieira, 1998)



21 View of Olivais Dock (Luis Filipe Ribeiro, 2020)

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Students: Bernardo Custódio, Carolina Alves da Silva, David Carvalho, Duarte Almeida, Francisco Quaresma, Joana Marques, Julia Shtefura, Luis Filipe Ribeiro, Mariana Rosa, Milton Perry, Nuno Almeida, Nuno Bernardes, Rodrigo Oliveira, Vilma Nico Ferreira.
Department of Architecture and Urbanism, CRIA-Iscte, DINÂMIA'CET-Iscte.

15

GARCIA DE ORTA GARDEN
JOÃO GOMES DA SILVA/GLOBAL

38°46'19.13"N, 9°5'31.08"W

15

GARCIA DE ORTA GARDEN
JOÃO GOMES DA SILVA/GLOBAL

ARQUITETO
João Gomes da Silva/Global

CLIENT/PROMOTER
Parque Expo '98 S.A.

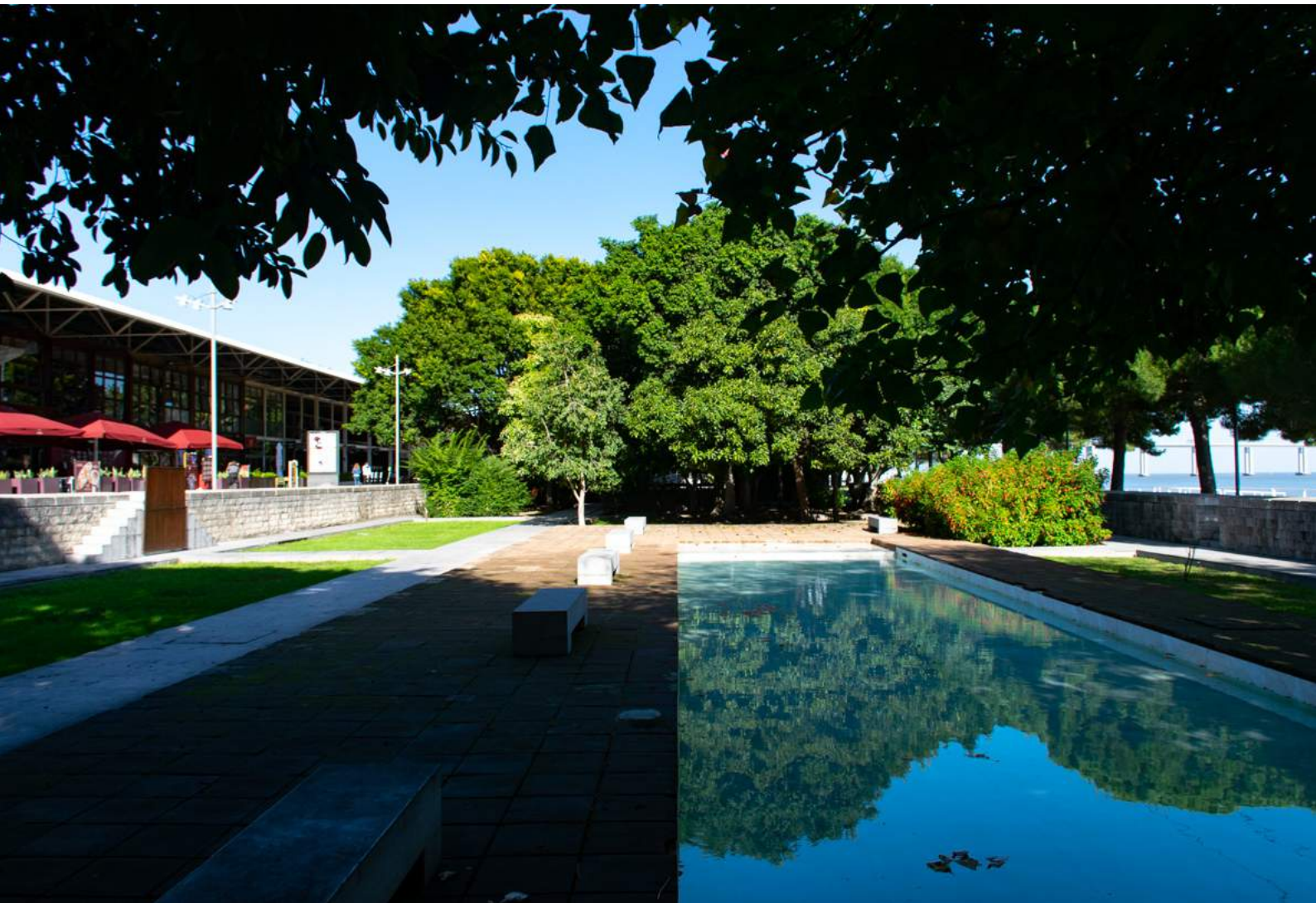
TEAM
João Gomes da Silva, Inês Norton, Rosário Salema, Leonor Cheis, José Adrião, Helena Pato e Silva, Sebastião Carmo Pereira, Pedro Tomé Cardoso, Carla Correia, Cristina Castelo Branco, Francisco Castro Rêgo.

PROJECT DATE
1994

CONSTRUCTION DATE
1998 (construction)
2016 (rehabilitation)

LOCATION
Rua da Pimenta, Expo98, Lisboa

AREA
14300m²



01 Goa garden in Garcia da Orta Garden (Milton Perry, 2020)

The Garcia de Orta Garden is in the Parque das Nações (former Expo 98) near Bojador Street, between the buildings of FIL (Lisbon International Fair), the Atlantic Pavilion (now Altice Arena), the Vasco da Gama tower and the Tejo river, and it has a direct relationship with the river, having it primarily as a background. Parallel to the garden, we find a set of small-scale buildings occupied during expo 98 by pavilions of the invited countries, and that currently operate as restaurants and cafes, constituting a point of attraction in this area of the city.

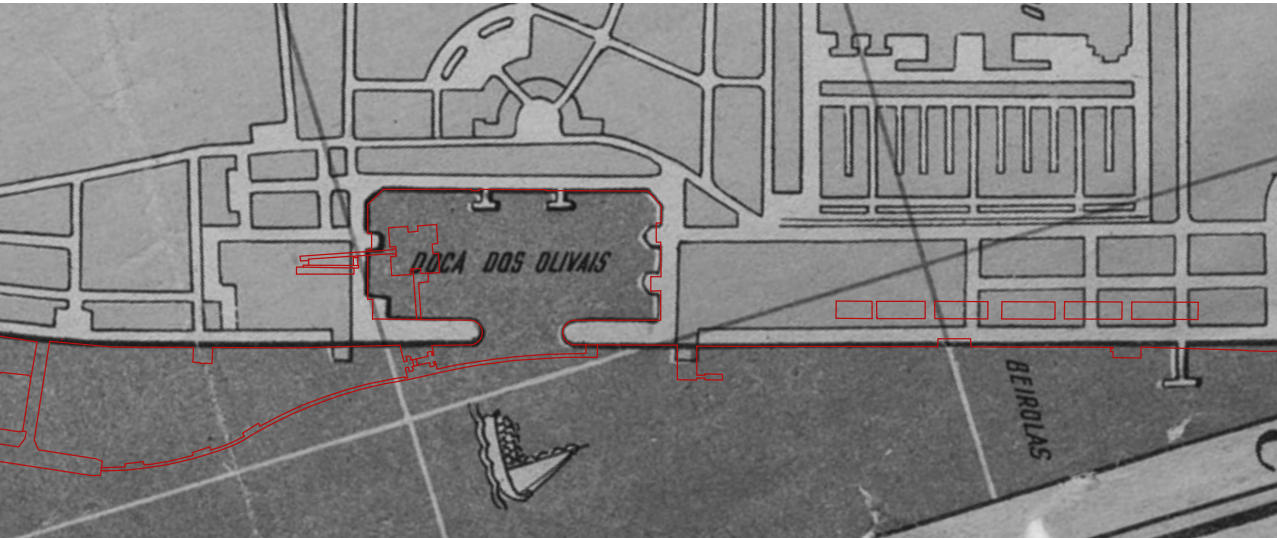
By the hand of many architects, Expo'98 offered Portugal several opportunities and the place that hosted it was undoubtedly the biggest beneficiary. From the Lisbon Oceanarium, designed by architect Peter Chermayeff, to the Portugal Pavilion by architect Álvaro Siza Vieira, the Parque das Nações was the place for an experimental era of architecture and the stage for various artistic manifestations and moments of cultural exchange.

The riverfront was not always part of the lifestyle of the people of Lisbon, but over the years and with the evolution of the relation between the city and the river, these spaces have been coming to life and gaining new occupants. The walks along the riverfront have grown and today are part of the favourite hobbies for those who have easy access to this part of the city.

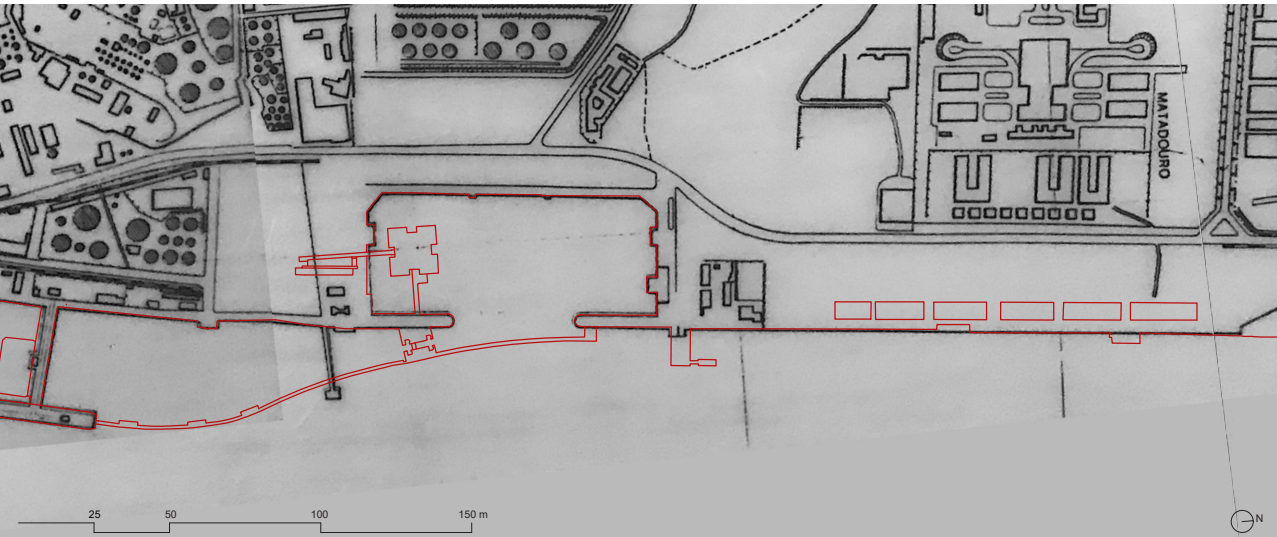




02 1856-1858. Adapted from Filipe Folque's Lisbon Topographic Map (2020)



03 1956. Adapted from Lisbon City Map (2020)



04 1980's. Adapted from Lisbon City Map (2020)

The Garcia da Orta Garden is composed of a set of six rectangular-shaped gardens, occupying a strip of about 400 m along the Tejo River and works as a 25m extension of the riverside, (acb landscape) The predominant horizontality in the design is combined with the presence of the river. These spaces are a tribute to the 16th century botanical scientist Garcia de Orta and represent various ecosystems related to extra-European regions such as: Macau, Goa, São Tomé, Madeira, the Azores, Cape Verde, the West African coast, the Southern African High Savannah and the Southern African desert. (Teacher's book) Thus, in a South-North orientation, the architect designed the various sections of the garden ordered in thematic sequence from those of greater need for moisture and regularity (Macau), near the dock of Olivais, to those of greater dryness and more irregularity (Africa) near the Vasco da Gama Tower.

In this way, each of the thematic gardens is elaborated with the presence of species specially selected for being, first, compatible with each other, but also for being allusive to the place they are representing, thus achieving a harmonious and cohesive design of what is currently one of the city's favourite places.

The Garcia de Orta Garden has developed over the past 25 years with the inauguration of Expo'98. From a lifeless space, on the outskirts of the capital and without much occupation, a new centrality was born because of this great event and with the homage to the sea. After the closing of the international exhibition in 1998, the eastern part of the city remained active and became one of the most interesting areas of the city. The attractiveness of this area of the city is due to several factors: the location of the headquarters of major companies, an upper-middle class residential area, large shopping malls, proximity to intermodal transport hubs, and the ease of access - from the Vasco da Gama bridge to the A1 and A8 highways. According to Bruno Portela, the photographer who graphically depicted the city before the change, he says that these lands were not visited by anyone and that this was the part of the capital that was not shown to visitors. A garbage dump, poor boats or even obsolete



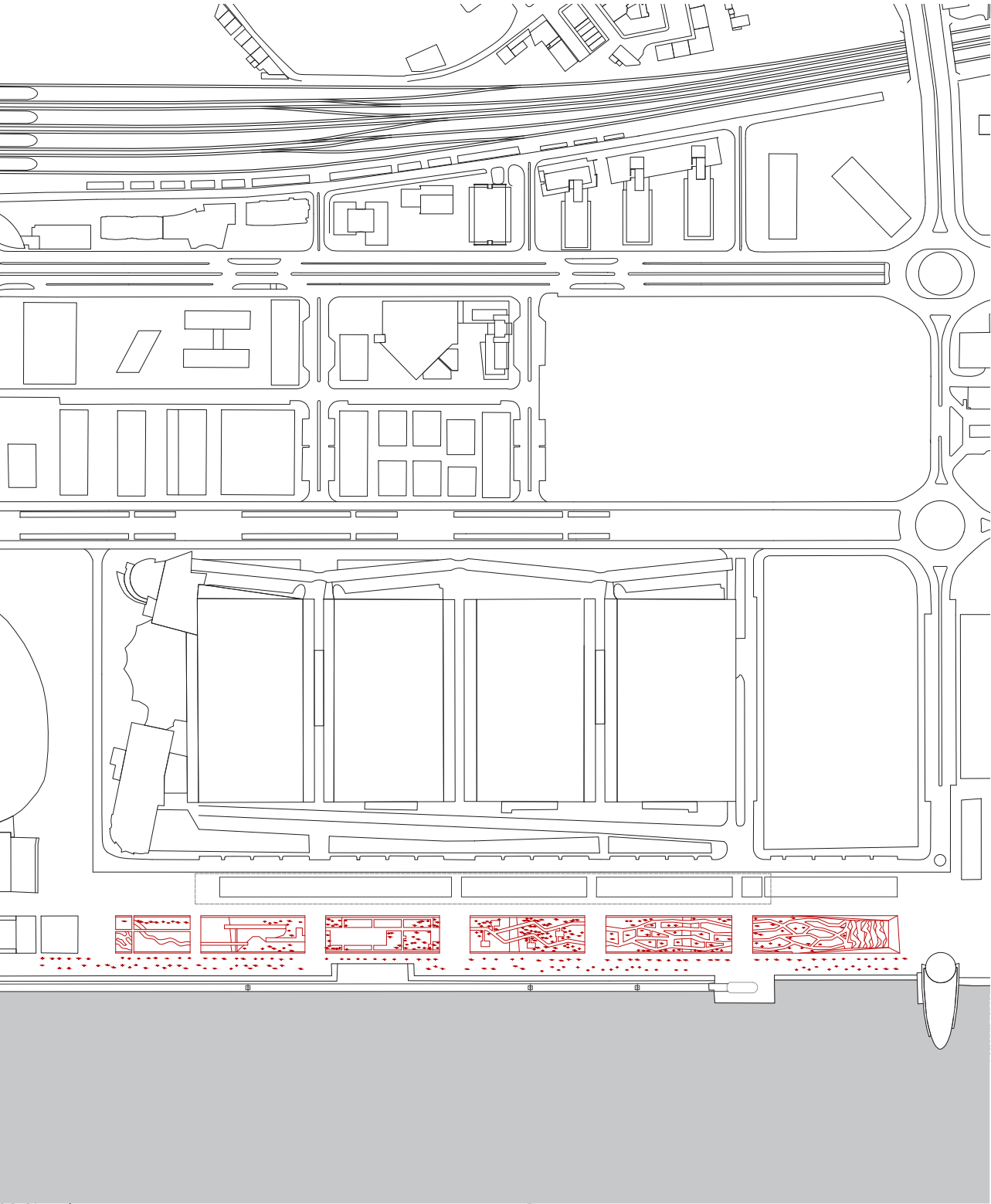
05 Expo 98's construction (Teixeira Duarte, n.d.)



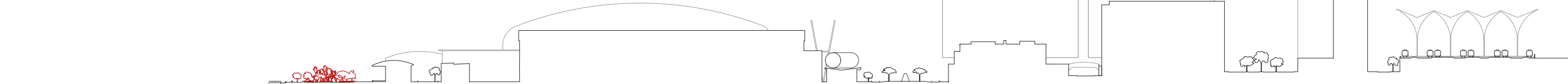
06 Bird's-eye view of the Gardens (José António Domingues/Global Imagens)



07 Bird's-eye view of the Gardens. (Fabiano de Vargas Scherer)



08 Site plan



11 West elevation

war material was what could be found on the banks of the Tejo in this now beloved part of the city. The transformation that Parque das Nações underwent, which allowed the social, economic, environmental, cultural and urban transformation of a totally degraded area, was an example and case study in other European cities.

The atmosphere experienced in the Garcia da Orta Garden is full of diverse colours and smells, and this is certainly one of the factors that leads to the uniqueness of the space: the smell of the plants originating from its own region that mixes with the smell of the tides; or the colours that are mirrored in the river Tejo reflecting the lights and nearby objects. The vegetation presents itself as a conductor of space and as a support. There are times when it is protection from the sun, others when it is shelter from the wind, creating dynamic and interactive paths: each route symbolizes a movement, an option. Thus, unique paths that twist are drawn, which remain parallel, cross or split, mix between still or moving water, and moments of open or sheltered sky. (Global, n.d.)

This feeling of strangeness and surprise, guaranteed by the opposition in the dynamics of the place that always suggests another place, happens in parallel to the Tejo. Therefore, this natural mirror expands the garden space and makes it an almost limitless space, like the natural places it represents and alludes to.



09 Inside the garden S'Tomé and Príncipe and Brazil (Milton Perry, 2020)



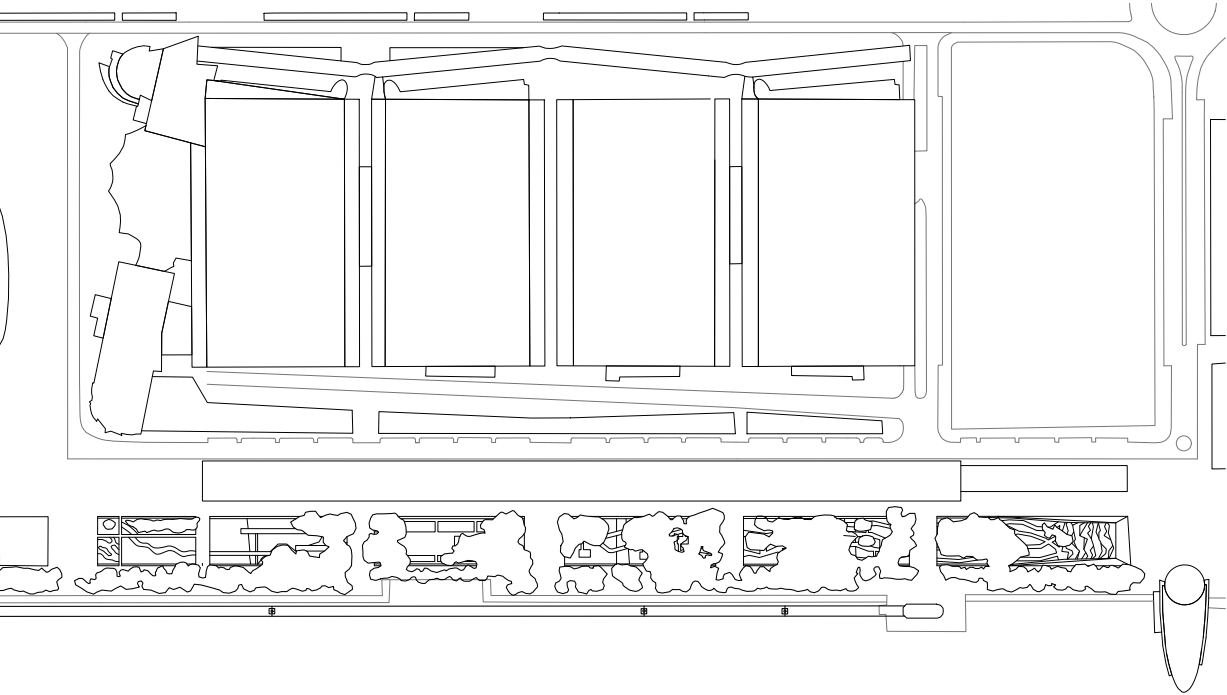
10 Covered garden area of Macaronesia and Cabo Verde (Milton Perry, 2020)



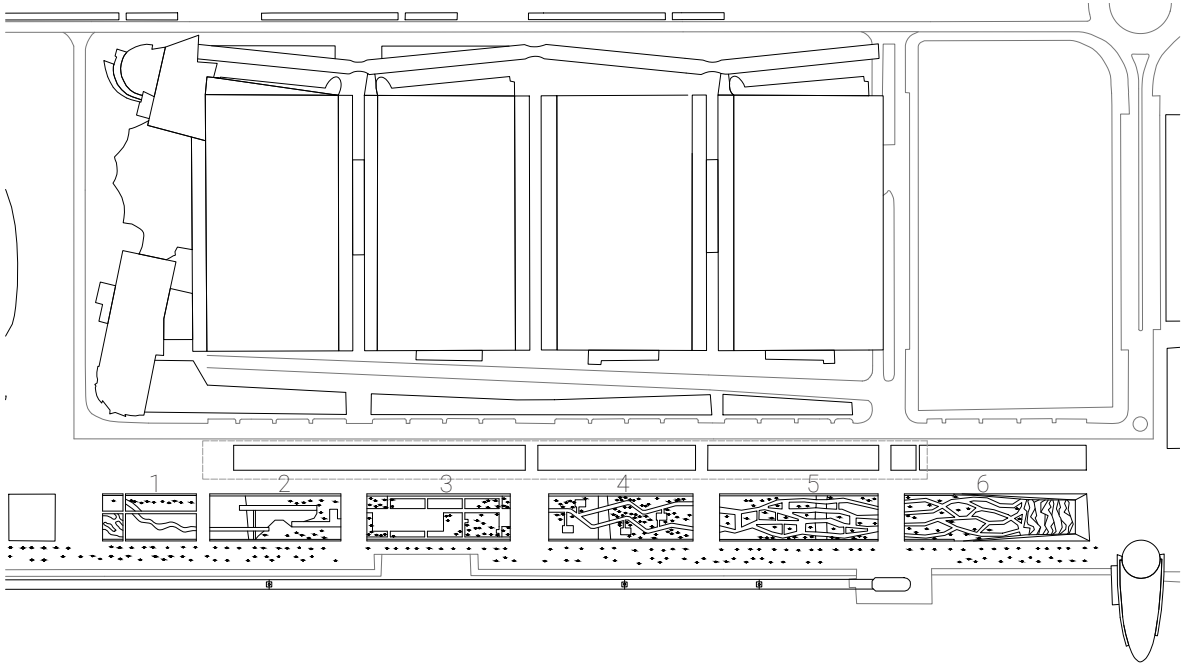
12 Interior of the Coloane Garden (Milton Perry, 2020)



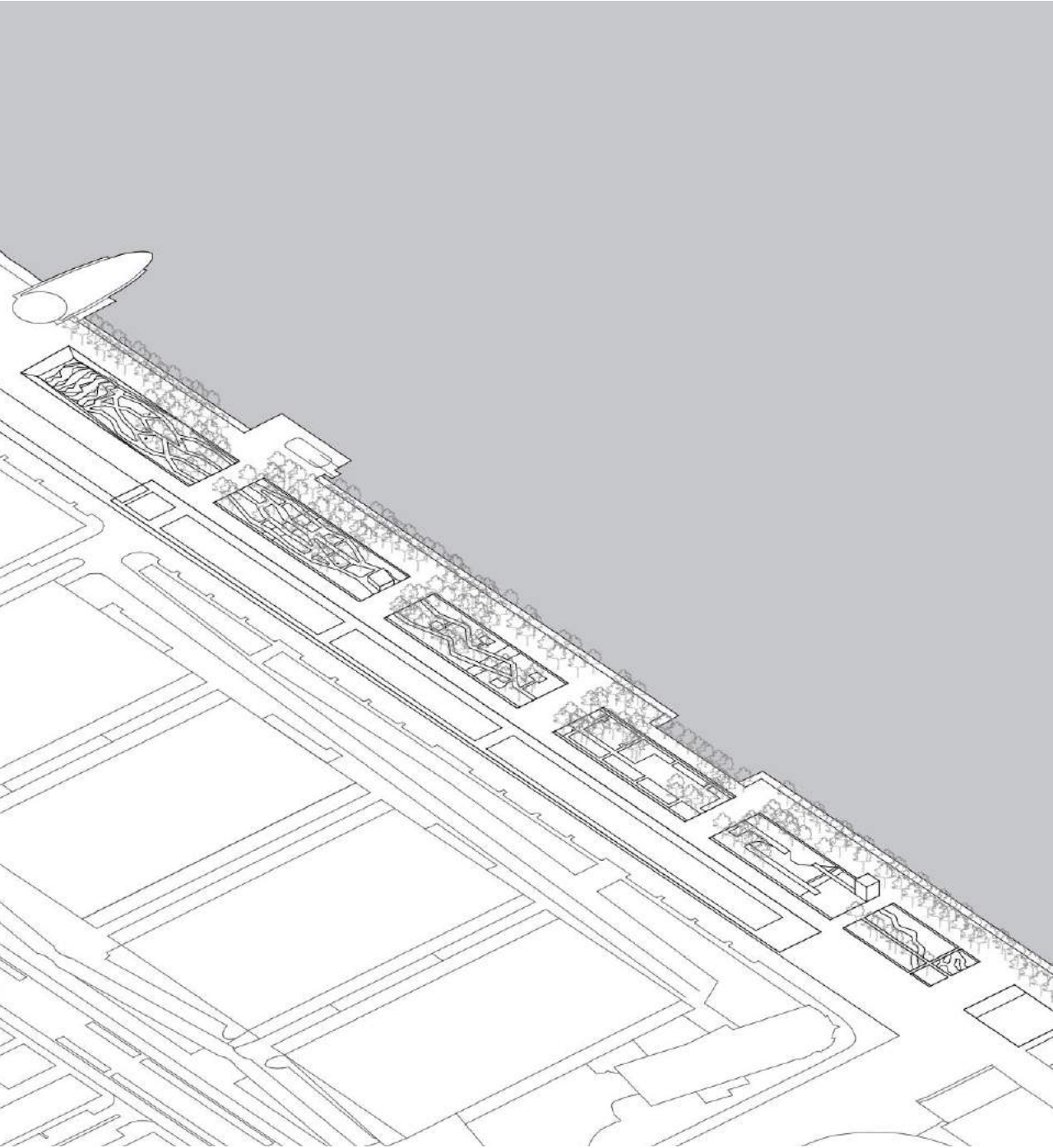
14 Path parallel to the garden by the river (Milton Perry, 2020)



13 Roof Floor Plan



15 Ground floor plan. 1- Timor garden, 2- Coloane garden, 3- Goa garden, 4- Sao Tome and Principe and Brazil garden, 5- Macaronesia and Cape Verde garden, 6- Africa garden



16 Axonometry

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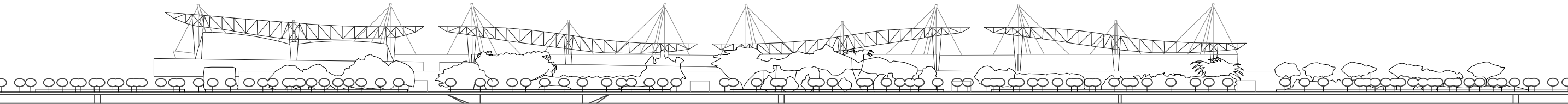
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17 Between Jardim de Goa and Jardim de S. Tomé e Príncipe and Brazil (Milton Perry, 2020)



18 View of the river from Goa garden (Milton Perry, 2020)



19 West section

“For Landscape Architecture, the context is the Landscape.
The Landscape is both container and content.”

(João Gomes da Silva in Estudio Prévio n. 11, 2017)



20 View over Africa garden to the river (Milton Perry, 2020)

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