

CELEBRATING THE WATER IN THE CITY.

LISBON MASTER THESIS.

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FOREWORD.

This Master Thesis began in Berlin, in March 2013, with a full month of meetings, presentations and discussions. This reflexion period was the first step of a long thinking process, following a two-year debate among us, colleagues of A.S.G Class 2, during our 8 cities' Master Program. This fulfilling journey made me thirsty for my home city, giving me the will to answer to Lisbon's present reality by addressing the problems considered and discussed throughout this program. The basic task given to us, Lisbon's cluster, was to develop a public swimming pool in the city's historic centre seconded by a theoretical study for a broader potential urban and architectural transformation. As there is a millennial connection between water and human settlement and as water is the primary element that shaped and ordered Lisbon, my investigation focused on water and its celebration. The river Tagus mouth was also Portugal's gateway to new lands, the launching ramp of an enterprise that expanded the old continent's worldview, but the presence of water in the city and Lisbon's relation to it changed throughout the centuries: it is still physically there but its visibility and experience suffered severe transformations. Dealing with the hard reality and the populations still dwindling at the heart of Lisbon among the new tourism that now occupies the city, this work tries to consider Lisbon's vanished water, using it as a key to a specific architectural interaction that dialogues the urban basic commandments, the sense of a public life. A balanced system that generates life in the city, for everyone.

00. INTRODUCTION.



001

CELEBRATING / CELEBRATE.

CE - LE - BRATE (sel - uh - breyt)verb, cel-e-brat-ed, cel-e-brat-ing.

- 1. To observe (a day) or commemorate (an event) with ceremonies or festivities.
- 2. To make known publicly; proclaim.
- 3. To praise widely or to present to widespread and favorable public notice, as through newspaper or novels.
- 4. To perform or act with appropriate rites and ceremonies.
- 5. To observe a day or commemorate an event with ceremonies and festivities.



002

WATER.

WA - TER (waw - ter, wow - ter) noun.

1. A transparent, odorless, tasteless liquid, a compound of hydrogen and oxygen, H_2O , freezing at 32°F or 0°C and boiling at 212°F or 100°C, that in a more or less impure state constitutes rain, oceans, lakes, rivers, etc.: it contains 11.188 percent hydrogen and 88.812 percent oxygen, by weight.
2. A special form or variety of this liquid, as rain.
3. Often, waters. this liquid in an impure state as obtained from a mineral spring: *Last year we went to Marienbad for the waters.*
4. The liquid content of a river, inlet, etc., with reference to its relative height, especially as dependent on tide: *a difference of 20 feet between high and low water.*
5. the surface of a stream, river, lake, ocean, etc.: *above, below, or on the water.*

Water was the determining factor for the settlement and organization of the first communities. People have pursued and gathered around its natural springs and rising points and used water, not only for sustenance, but also as a platform for commerce, passage or defence. A community's organization around a well, a fountain, a lake, a river or near the sea has always conveyed a group's social hierarchy. Water is associated with life, fertility, healing and purification and plays an essential part in all known religions; it is a millenary meeting point and a universal pretext for gathering moments: initiation rituals as well as daily rituals, such as collecting, drinking, washing, bathing, pleasure, luxury and contemplation. This investigation is divided in four main chapters (01. foundation, 02. infrastructure, 03. uses, 04. perception) in which the presence of water is addressed first in general and then related to the city of Lisbon.



003

01. FOUNDATION.

FOUN - DA - TION (foun - dey - shuh n) noun.

1. The basis or groundwork of anything: the moral foundation of both society and religion.
2. The natural or prepared ground or base on which some structure rests.
3. The lowest division of a building, wall, or the like, usually of masonry and partly or wholly below the surface of the ground.
4. The act of founding, setting up, establishing, etc.: a policy in effect since the foundation.
5. The state of being founded.



004. The Babel Tower.

The first records of a foundation or settlement (between the 3rd and 1st centuries B.C.) lead us to the Mesopotamia, a region in the eastern Mediterranean bounded by the Zagros Mountains and the Arabian Plateau. This fertile area, corresponding to today's Iraq and parts of Iran, Syria and Turkey, is considered the nest of all human settlements and organized communities. The nearness of water was vital, as water was still a largely uncontrolled source: the first urban events recorded occurred in areas close to rivers or river mouths. So, it can be said that water was the primary element of every foundation, defining the settlement, the lifestyle, the organization and the hierarchy of a community. Generally, the areas closer to a water source were occupied by the richest and more important: water was precious and was always treated both as an essential good and as

a rare element. It has been commemorated ever since. The Babylon gardens, in the south of what is now the city of Baghdad, are an example of the celebration of water as a sublime element, bringing exuberance, beauty and fertility to the land; Man's answer to God's creation and a display of richness, privilege and power.



005. Lisbon's metropolitan area. Orthophotomap.

Lisbon, the foundation of a city.

Lisbon is a city that is implanted in a place with a direct connection with the water. This connection is quite singular because the land is linked to a huge bay where the river makes stays before reaching the sea. The Tagus river designs the perfect protection point, a bay where the calm waters fill a safe place that is responsible for the creation of a settlement in these hills. A place that would be an object of desire by many Mediterranean civilizations, that would evolve always in the same line of principals that structured this system. It's a city conquered by water that discovered the world using the same platform.



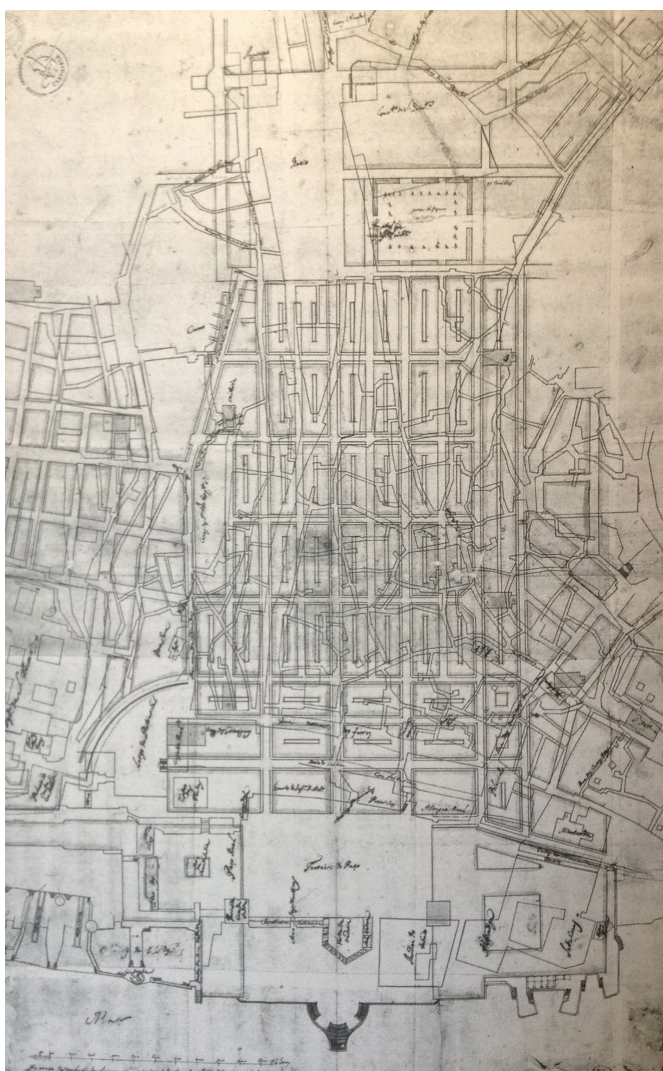
006. Lisbon's engraving from the 16th century.

The topography, the river front and the water platform.

The city of Lisbon is a place that, like many other cities, exists because of its direct relation with the river. The river was always used for commercial trades and transportation. It could be interpreted like a center, the link between the city facade and the water constitutes this concept. The images produced to show the city during the 16th century reveal an urban structure that is settled in the strong topography with the riverfront as its limit, a city facade that stands immediately in contact with the water, being the connector between the upper parts and the river, represented as a stage for events where thousands of boats are always present. This is the main definition for the foundation of the city of Lisbon. It was always a harbor, it has been connected to the outside by this structure. This city morphology shows the importance that the river has in the city life. The water was very

present, a fact that built this image of urbanity. The water is the foundation key for this specific place.

The city is as a great work, (...), but this work can be understood by its excerpts, by its different moments. (...)
The unity of this parts is given mainly by history, by the memory that the city has of itself. 1



007. The palimpsest plan for the city's reconstruction + the old urban area.

Rebuilding the city.

After the earthquake of 1755 Lisbon was destroyed. The decision to transform the medieval city centre instead of merely reconstructing it was a bold and polemic one. The plan approved by the end of the 18th century, designed by *Carlos Mardel* and *Eugénio dos Santos*, followed the latest illuminist urban and ideological rules. The plan offered a city for the future; a modern plan, yet driven and structured by the concept behind the city's foundation. The space was indeed to be transformed, but the projected changes respected, and even emphasised, the city's main gesture: the link between water and the urban space. Instead of planning new exceptional buildings, like single pieces, the project considered the intervention as a whole, with the public space for central element articulating the city and its events. A series of specific public spaces were then designed in the river-

front, strengthening and celebrating the ancient relation of Lisbon with its river. These spaces and their arrangement wrote the way the city should be read: an articulation of squares, streets, gardens and public facilities with the river as the starting point of a system connected to the specific points where the plan met resistant urban events, aiming at establish a relation with the old city.

*The territory, completely overwhelmed with traces and forced past readings, resembles a palimpsest.*²



008

Waterfront Transformation.

In the beginning of the 19th century, some specific parts of the water front represented a danger location for the city. The area of *Boavista* was always filled with dirty waters, developers of diseases. As a hygienic measure, some embankments were made to solve this problem. They were build in this water areas expanding the city towards the river. Some of the spaces that were built before, during the reconstruction of the city in the 18th century previously analysed, designed in an understanding and interesting relation with the water, were left in the back losing their essence and promising relationship. These spaces were thought as upshots of a complex system, built to perceive the river as an intrinsic element of the city. They were planned together with its urban surroundings, that suddenly made no sense anymore. This gesture can be read as a primary disconnection

between the city and the river. The physical experience that existed since the foundation of this place started to vanish and to change gradually.



009



010. Diagram showing the width of the harbor area.

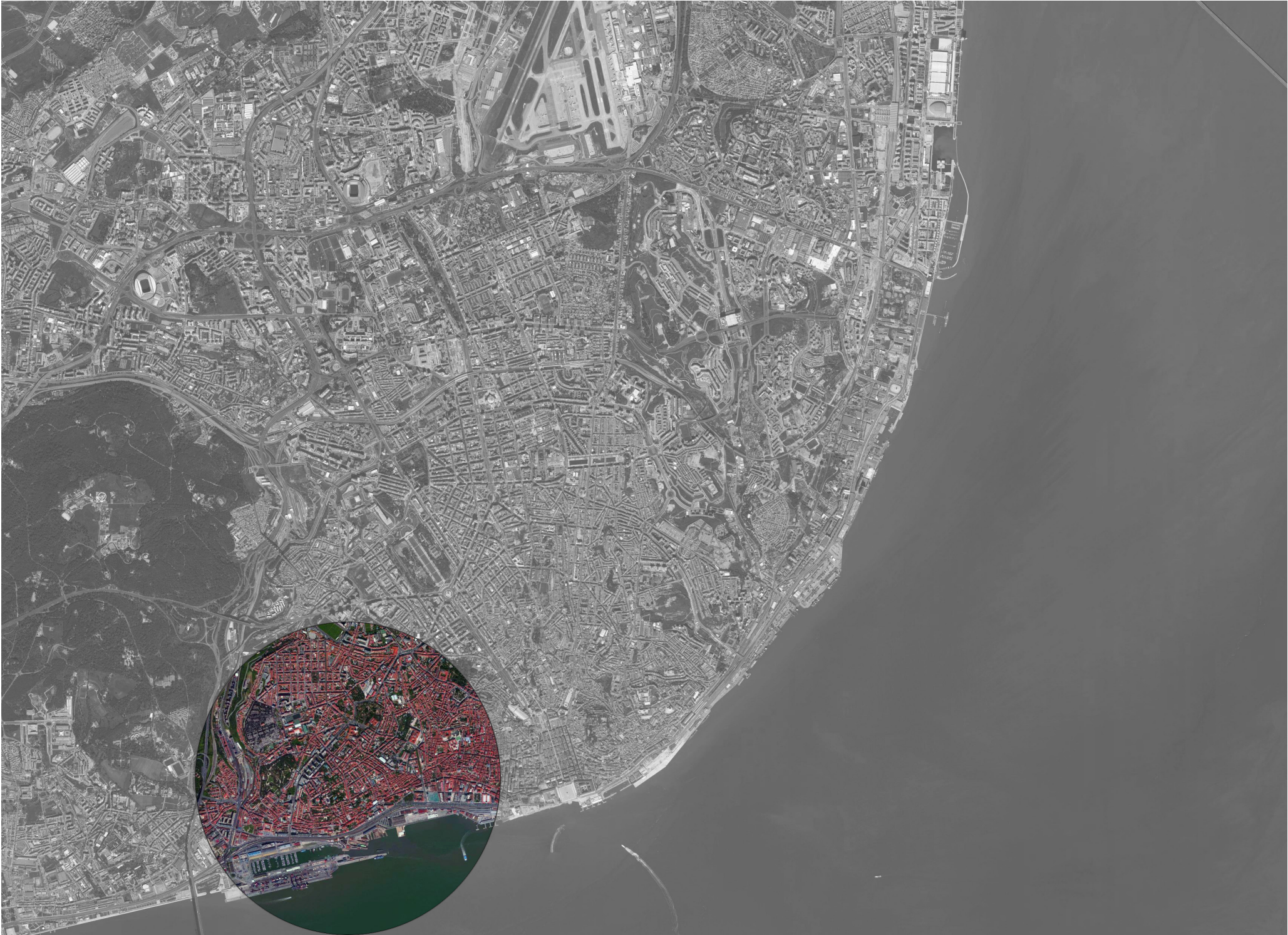
The Harbor development.

Lisbon was always thought and lived as a port, but the construction of the modern harbour formalized this foundational view in a larger city scale. Lisbon's harbour is a major public construction work started in 1887 and left unfinished. It is constantly changing and growing. It represents the strongest detachment between water and the urban space. It was build as a single strong piece of stone, divided in a puzzle of pre-fabricated blocks, embracing the all riverfront and redesigning the city's facade. It made the crossing of the city from East to West possible, a root formerly obstructed by Lisbon's topography, which directed the urban events towards the river. This new way to travel inside the city was significantly important to its development making it easier to understand the city as a whole. But the concept of harbour generates a space prone to change dramatically through

time. Lisbon had always been a harbour-city, where people took part and were welcomed in the port's activities and atmosphere, but the increment of security measures (post 9/11) changed the riverfront into an inaccessible space. The physical water experience, which was part of the daily life of the city's population, had already been lost and transferred to distant areas with the advent of the concept of beach, but Lisbon had now been completely detached from the river. Today, there are some efforts to revert this situation, attempts to regain Lisbon's foundational relation with its waterfront, nevertheless, the city has already been changed forever: the river has become a merely visual element.



Lisbon's ortophotomap.



Lisbon's ortophotomap with the study area highlighted.

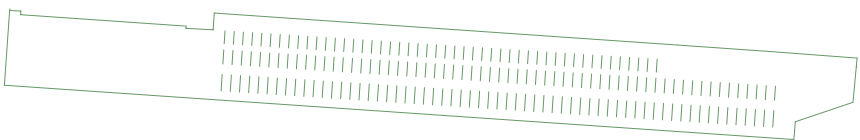
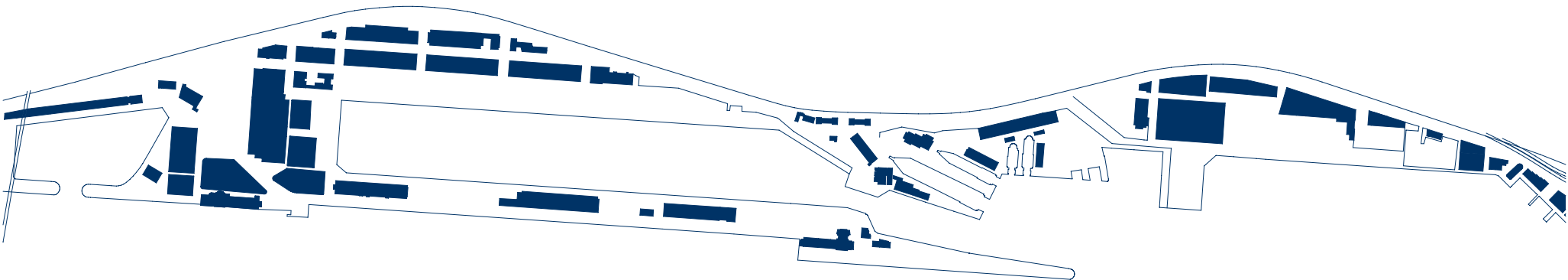


Diagram plan showing the riverfront's succession of events.

The plan focuses in the area of Alcântara, a part of the city where these changes, this sequence of modifications, are quite visible. In grey is the old part of the city, ending, on the southern side, directly in the river. The coloured areas represent the sequence of gestures that went on to conquer the river area. The first is an embankment built during the early 19th century, and the other two (in blue and green) are part of the major project of Lisbon's Harbour, set between the 19th and 20th century. Together they create a large ribbon accentuating the separation between city and river. Gradually this space got bigger and ever more controlled, radically transforming Lisbon's physical relation with the river and casting it out of the city's identity. And if the perception of the river is nowadays different for the better, it remains a mainly visual presence, a fact that contributes to accentuate the city's lack of water experience.

02. INFRASTRUCTURE.

IN - FA - STRU - CTURE (in - fruh - struhk - cher) noun.

- 1. The basic, underlying framework or features of a system or organization.
- 2. The fundamental facilities and systems serving a country, city, or area, as transportation and communication systems, power plants, and schools.
- 3. The military installations of a country.



011

Control = Development.

The infrastructure is always a topic of architecture because it is a permanent fixture in the territory's urbanization and, therefore, in the construction of cities. If the characteristics of the territory are decisive to found and enable the cities, the infrastructure is the element connector between the city and the territory because it allows to explore resources and natural ways to improve access purposes, defense and supply. 3

The foundation of settlements was directly connected to the natural existence of goods, and as water was the most precious of all goods, its nearness was essential. Technology changed this rule. When men gained control over water sources, new forms of water supply and of settlement emerged. The Qanat was probably the first

built infrastructure to regulate water, defining its course. These structures were originally built by the Persians in what is now Iran, during the early first millennium B.C. After detecting layers of groundwater, the Persians proceeded to dig huge holes, like wells, constructing a line that would channel the water to the chosen setting. The route that gave way to different processes of urbanization had been laid, but still the rule of settlement and occupation was established by water. The social hierarchy was defined by the proximity to the artificial source, since the houses built closer to the endings of the underground structures belonged to the more powerful and influent. These mega structures built to distribute water can still be seen and some even continue to serve small communities. They stand today as land art installations witnessing a ritual of celebration.



012

Water distribution in Lisbon.

Lisbon roots lie in the area between the Castle Hill and the river. The city's higher spot was the first to be occupied and developed. Its overall view allowed settlers to control the entire area, foreseeing and countering invasions from land or water. Lisbon first main neighbourhood was *Alfama*, in the Southern part of this hill. The first topographical record of the city conveys this urban moment. The castle possessed many sources of water, streams and creeks, connected to the water bay by way of gravity. These sources were controlled infra-structurally to allow their use for both domestic and commercial purposes, supplying the population and serving the ships in the riverfront. This infra-structural control gave way to fountains, spread in the urban factory, mostly in the lower city. The water was collected for different uses: drinking, cleaning, washing, cooking. All these small

structures created a series of events, rituals, gathering points. Water sources were always related to urban events and prone to be arranged by hierarchy. Lisbon public fountains had different water spouts according to sex or status. Following the Portuguese Discoveries, for instance, most spouts could be used by white man, leaving only one for white women and another one for slaves and emigrants. The flow of each of these spouts was also different, obeying these rules.



013

The *Águas Livres* project.

In the 18th century, Lisbon was already suffering from lack of water. Public fountains were becoming insufficient to the growing urban system. A long public discussion to solve the problem arose. Due to the hard topography and to the extension of the urban factory, water was no longer accessible to everyone. This implied a significant suffocation in terms of development and basic urban supplies. After many studies and debates, the project for a singular water infrastructure was launched under King *João V*, in 1731. It was meant to bring water from a far distance, *Belas* district, to a carefully chosen point at the entrance of the city. The project changed hands many times due to the King's obstinacy in designing all the integrated elements as grandiosely as possible and *Carlos Mardel*, an Hungarian engineer, ended up heading it. The major construction had two main pur-

poses: firstly, to be a technical and infrastructural work able to supply water to the city; and secondly, to be a celebration of a scarce element in the city, a grandiose work able to express beauty, strength and power. This last purpose was particularly important as designing singular pieces in the urban tissue would determine the city's future development.



014

The singularity of the pieces of this infrastructural work is still markedly present as an urban event in Lisbon. It is important to bear in mind that, more than supplying water to the city, the aqueduct, being a major work, decided its expansion by the way it entered and settled itself in the urban space. The work dictated a city growth into the western areas, a drift carefully thought up and planned by the project makers. The resulting buildings and pieces are a constant celebration of water. They are urban activators in many different ways. The arches of the main aqueduct that cross the valley form a very strong piece, designed to convey the power and the importance of the work. Some arches, already present at the city's entrances, can be read as welcoming gates for the people but also for the water. Other internal arcades of the structure, following the supplying rules for

the projected western growth of the city, went as far as determining the way new urban areas, like *Campo de Ourique*, would organize their basic drawing as extensions of the aqueducts axes. The two maps presented in the following pages show the tracing of the aqueduct that is now part of the city and was absorbed by it. But Lisbon grew respecting this piece and incorporating it in its new urban events.









Lisbon's plan with the aqueduct's tracing through the city.

But the eccentricity of the pieces involved in this process, like the tanks and urban fountains for distribution, are part of an expression that treats the water like gold. The *Mãe D'Água* tank (on the right), the main cistern of the project, is much more than a regular one, it is like a temple celebrating the water. It is made according to spatial rules that were followed to build churches in the 16th century, with a single nave. It is a monument that holds the water designing a building that is affirming itself towards a new city, looking at it. The public fountains are authentic urban events, in the way they solve some situations creating interesting and dynamic spaces for the city. In *Largo do Rato* the main fountain is located in the point where all the accesses join, defining an urban dynamism, like a baroque piece.



015



016



017



018



019



Suddenly the city was occupied by this macro infrastructural gesture that changed it and stayed forever. This last picture is taken from the terrace of the major water tank. Lisbon's western development raised in front of this pieces, absorbing the water net interacting with it. All these elements defined new urban spaces, places of a new city to stay and to meet around the water theme. The Fountain of *Largo do Rato* is also visible in this picture, on the corner of the street. Once it decided the urban organization of that square, marking it with its presence and importance. Nowadays the water became invisible, reaching everywhere in almost a secret way. All of these points that composed a global scenario are abandoned and dry. They were a constant presence of water while the river was being unreachable, but since they've been turned off all this atmosphere was vanished.

03. USES.

USES (yooz) verb use.

- 1. To employ for some purpose; put into service; make use of.
- 2. To avail oneself of; apply to one's own purposes.
- 3. To expend or consume in use.
- 4. To treat or behave toward.
- 5. To take unfair advantage of; exploit.



021

Roman Civilization. The maxium exploitation of water.

Roman civilization evolved into an empire in its post-republican period, spreading around the Mediterranean and winning large areas of Europe, Africa and Asia. The Romans had a severe impact in the conquered world, establishing new rules of social organization and urban development. Their new approach to water is made evident by the architectural and engineering improvements together with the drastic social changes they brought about. It was no longer a question of building around the water sources but of routing water to a chosen site. The aqueduct represents the main structure of this new urbanity, granting the distribution of water where it was scarce. Roman civilization brought a whole new way of living, where modern concepts such as hygiene and leisure became of capital importance. There were public baths in almost every roman city.



022. "The Caracalla Therms", Lawrence Alma-Tadema.

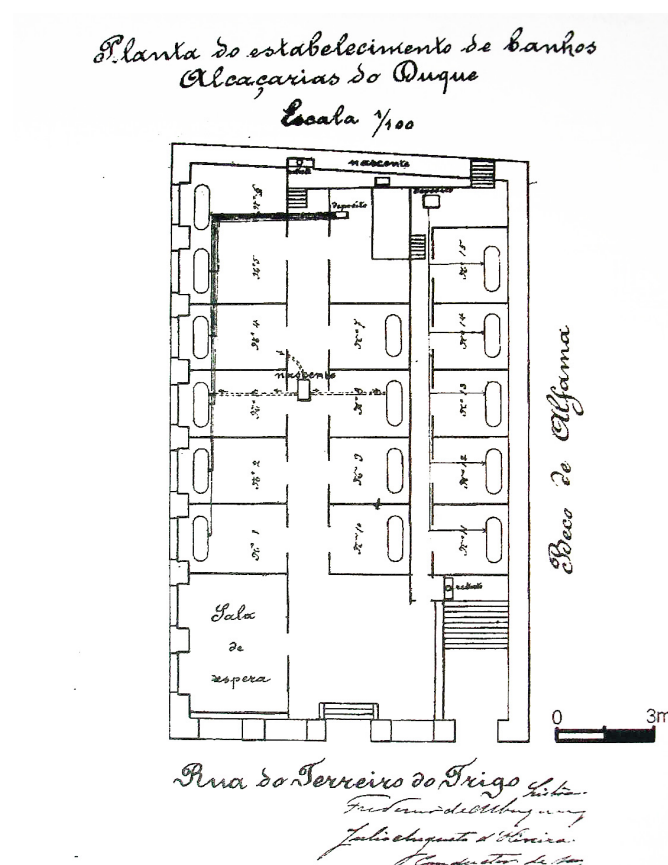
These structures unveiled the roman mind-set. The baths of *Caracalla* were a huge construction built exclusively for pleasure related to water, an innovative notion that explored seemingly superfluous ways of using this vital resource. Bathing had ceased to be exclusively connected to its primary hygienic function to become a pleasure, a community pleasure, where individual and collective enjoyment, gathering and contemplation were assembled. These public buildings were the most lucrative of all facilities for the municipalities, so their supply was carefully studied so as to assure a strong and even flow. The private dwellings of the poor had a weaker and more irregular flow of water. The painting above, made by Sir Lawrence Alma-Tadema, illustrates an episode on the *Caracalla* baths.



023

***Alfama* as a case study. Supply and leasure.**

Alfama, set in the southern side of the big slope that links the castle hill to the river, was until the 16th century the city centre and Lisbon's main facade. Here water was abundant: a cluster of public fountains provided by water collected in the slope's streams and creeks, served this highly populated area. Gathering water for home storage, washing clothes and filling the needs of the ships were daily activities and rituals. In the early 18th century, when water began to be more strongly associated with personal hygiene, healthcare and leisure, several public baths using thermal water were built. The old roman bathing practice reappeared in Lisbon, defining new urban spaces. The advent of a new water culture based on pleasure disclosed and revived the underlying physical relation between Lisbon's population and water.



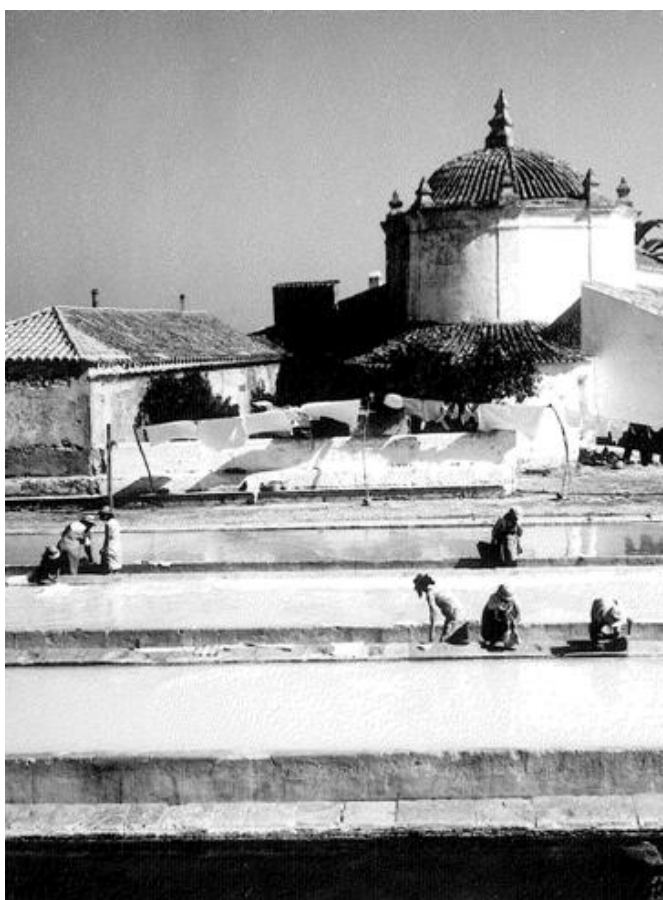
024. Plan for one of Lisbon's public baths.

Many structures were then built to answer this new concept. In 1716, the *Alcaçarias*, small public bath structures, sprang in the urban factory, occupying the ground-floor of many buildings around *Alfama* and creating a kind of health cluster. All these spaces respected a predefined hierarchy, as the buildings were inhabited and the baths visited according to social status. The discovery and use of these thermal sprouts in the city emphasised the relation between Lisbon and water. Their came about marked the moment in the city's history when the physical water experience, split in many events, was the strongest.



025

The picture above shows a building designed during the early 19th century to hold the public baths of *São Paulo*. As there was no thermal water source close by, a 1km underground system was built to “deluge” the building. The *São Paulo* baths exemplify the impact this program had in the city's history and in the daily life of its population. The public investment in the baths was made when the river was being driven away from the population, perhaps as an answer to this parting. Many thermal springs were found around the castle area, *Alfama* and the *Santana* Hill, but some were never to be explored, and the physical contact with water, this dive experienced at the heart of the city, was gradually cast away to Lisbon's suburban areas.



026

An activator of social and daily rituals.

Water was the main defining factor of social life and a central element in the individual and collective life of Lisbon's citizens. It was a precious resource only to be collected in designated places. Being a public and social activity, water recollection and use were assembling and ritual events. People would meet while collecting water for private use or while washing clothes in public tanks. Lisbon's many water tanks were ceremonial spots, meeting points where private life was exposed to the community, as the clothes were washed publicly and then carried along the city up to the windows, where they would be hanged, redecorating the streets' façades. Part of these rites and gestures are still present in Lisbon's daily life, be it in traditional neighbourhoods or in more modern ones, connecting neighbourhood to neighbourhood, present to past, in a constant celebration

of the city's history with water. Water never ceased to be a determining element, a generator of meeting points. The photographs that follow illustrate this strong and persistent bond.



027







030

04. PERCEPTION.

- PER - CEP - TION (per - sep - shuh - n) noun.
- 1. The act or faculty of perceiving, or apprehending by means of the senses or of the mind; cognition; understanding.
 - 2. Immediate or intuitive recognition or appreciation, as of moral, psychological, or aesthetic qualities; insight; intuition; discernment: *an artist of rare perception.*
 - 3. The result or product of perceiving, as distinguished from the act of perceiving; percept.
 - 4. Psychology . a single unified awareness derived from sensory processes while a stimulus is present.



031

The water itself, the aqueous strength, the viscous and bright element, I can't say it is in space; it is not somewhere, but it is not in the pool also. It inhabits the pool, it materializes there, but it is not contained there. And if I raise my eyes towards the group of cypresses, where the reflexes are playing, I can not contest that the water visits it also, or at least it sends there its active and expressive essence.³

Perception is the interpretation of a certain sensory information towards an understanding process of the environment. It is known that half of the human brain is fully dedicated to the work of handling sensory information. A common human being uses the 5 senses to perceive and understand a space. This procedure is somehow unique, if we compare a certain attempt of an animal that tries to understand a space, it will use its best sense to explore its surrounding. Our sight is our primary tool to explore something, a room for example. If this room is in blackout conditions, or if we don't have the ability to use this sense, we explore it in a very different way. We turn on the other senses and suddenly we perceive the space very carefully, paying attention to new details and information and trying to understand its physical limits without seeing it in an obvious way.

*The sight separates us from the world, while the rest of the senses joins him.*⁵

A certain building can use elements in its construction of space that may seem obvious at a first and naive observation. While the smell reminds us of the of the mental image of a space in the moment we enter it, the sound has the power to transport us to many different places, playing with our brain. The water is an element that has the ability to transform this perception because it really plays with all the senses. It can be used as architecture, in the sense that it is sometimes explored as a transformation element by dynamic or static situations, by conquering the sound or even interfering with the light.



032

The water in the Arabic culture. A constant celebration.

In the Arabic culture, the water as a source was not such a constant element in the common territory. It was even rare sometimes and elevated to idea of desire, transforming the way this people dealt with its presence. The private and public spaces designed by this culture always included the water as a central and essential element in the spatial atmosphere. It is present in the courtyards, used as a method to refresh the rest of the spaces built around it, as an organizer of a place being the promoter of axes that draw the space, and it also used as a symbol of life which is crucial for the culture. It is an architectural element to build the space, changing our perception towards it completely. These moments elevate the water into something quite poetic, related to contemplation, transforming it into architecture. It is more than an aesthetic concern, it is a key element for a full interaction between space and the human body.



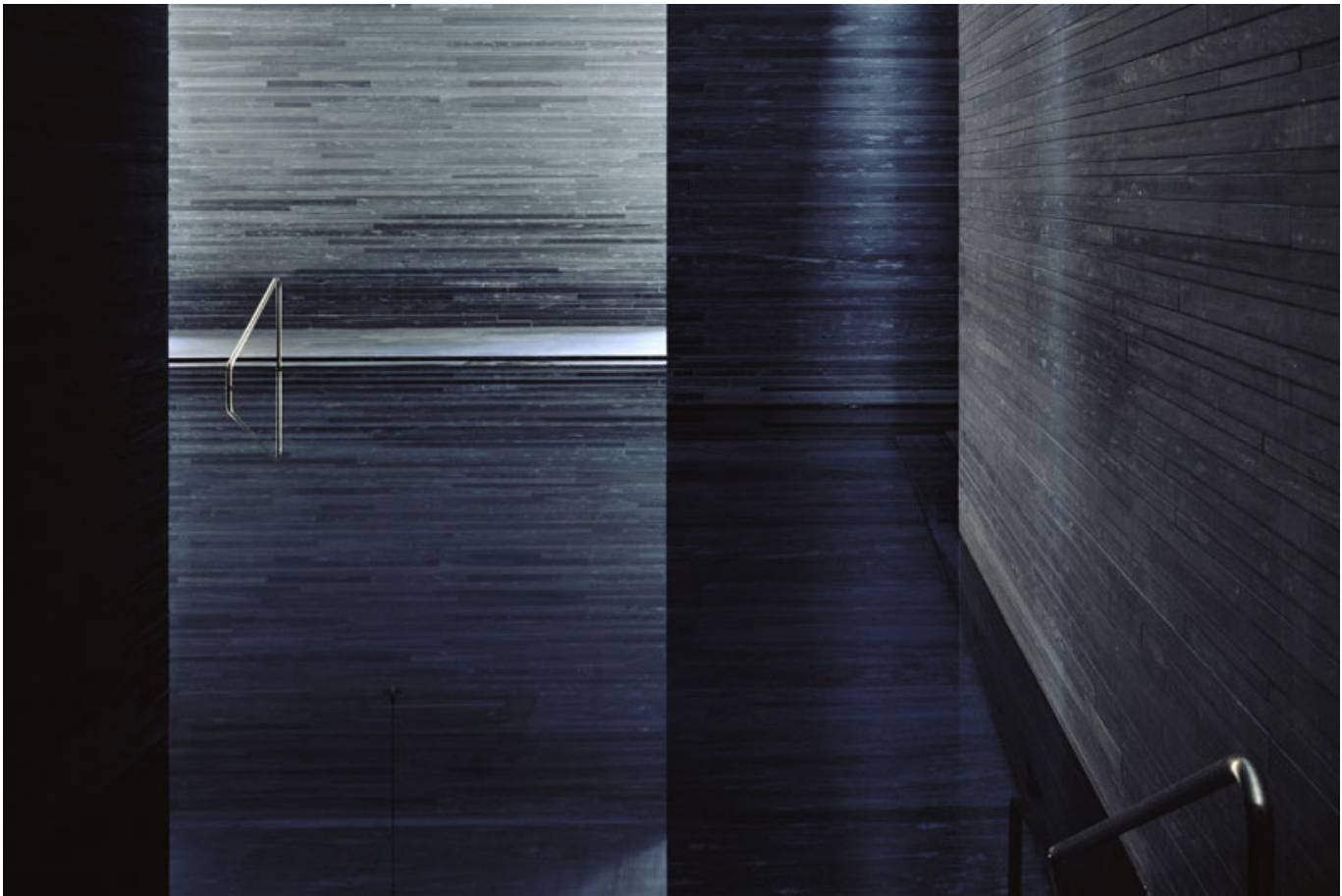
033

Mountain, stone and water.

The culture of bathing had a strong and radical evolution. The functional concept of cleaning our body changed a lot through time. There are many rituals related to bathing, purification, leisure and pleasure that have the water as a main element. This led to an interpretation of space that is very singular and experimental. The contemporary architecture is able to fully understand this evolution and to propose spaces that explore new methods of experience by perception. The Therms in Vals by Peter Zumthor is a proper answer to this. A new physical experience that fills the reshaped mountain with water, this invader with the power to interact with the stone and with people. It is much more than the simple physical experience of taking a bath. The combination between place, view, situation, that uses light and water to give life to a stone environment is just successful.

It is indeed a celebration of water.

(...)while the tactile space separates the observer from the objects, the visual space separates the objects from each other (...) the perceptual world is guided by the touch, being more immediate and welcoming than the world guided by sight.⁶



034



035



036



037

Colour and light.

Luis Barragán was a Mexican architect responsible for creating an architectural language associated to the context of his country's modernity. Barragán was responsible for some excellent pieces of architecture always related to beauty in many different ways. There is one particular project that explores a singular space for a unique program. The *Quadra San Cristobal* is a complex built in 1969 which was thought and designed to be experienced by a community of horseman. It is a composition of 4 elements: walls and texture, colour, water and sky, where the horseman (being an external element) is invited to participate. The entire space is design as an invitation, as a meeting point that also persuades to a insight experience. The water transforms this space programmatic and atmospherically, it joins the space together.



038

Spatial Re-definition.

The Tara House, by Studio Mumbai, is one of the housing projects made by this Architectural office. It is located in the West coast of India (South of Mumbai), surrounded by many different tropical plants. The project concept was to create a house that beleaguers a piece of this forest, defining a tropical garden. The entire space is defined by distinct layers of privacy, leaving the center as the common space, the gathering point. This garden contains a secret space under it. A water tank that serves the purpose of supply being also a swimming pool, a fresh space protected from the hot Indian sun. The path defined to reach the space is made to celebrate it, we are invited to a dark space guided by the sound of water that fills it. It is a practicable cistern carved in the mass, inviting to a singular experience.

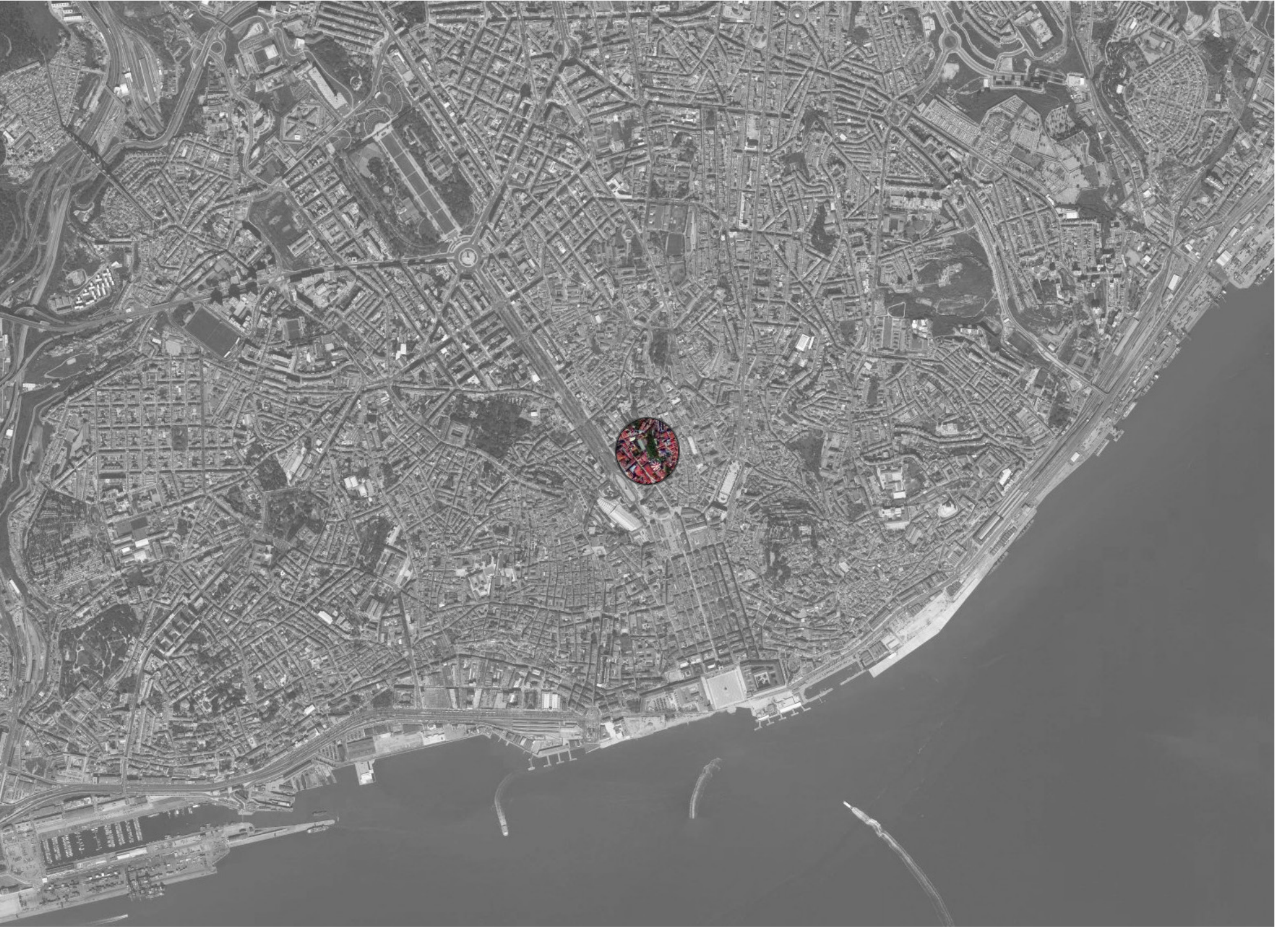


039

The relation between Lisbon and the river that stands in front of it changed through time. As studied before, the water is solvent for the foundation of this space and for its main activities that were responsible to build a country and its world exploration. But the physical gesture, the experience responsible to link these two moments, was slowly vanishing, carrying the presence of water inside the city as well. This transformed our perception towards the river. It became a visual element very present almost everywhere. But is it enough? Is it positive to the city to assume that a physical experience with water was simply moved to someplace else?

05. SITE.

ATENEU COMERCIAL DE LISBOA - LISBON, HISTORICAL CITY CENTER - PORTUGAL.



Lisbon's orthophotomap with the location of the site.

The orthophotomap shows the site enhanced in the middle of the city of Lisbon. The place to develop the task has to deal with the responsibility of adding something to the core of geographical city.



Lisbon's ortophotomap with the location of the study area.

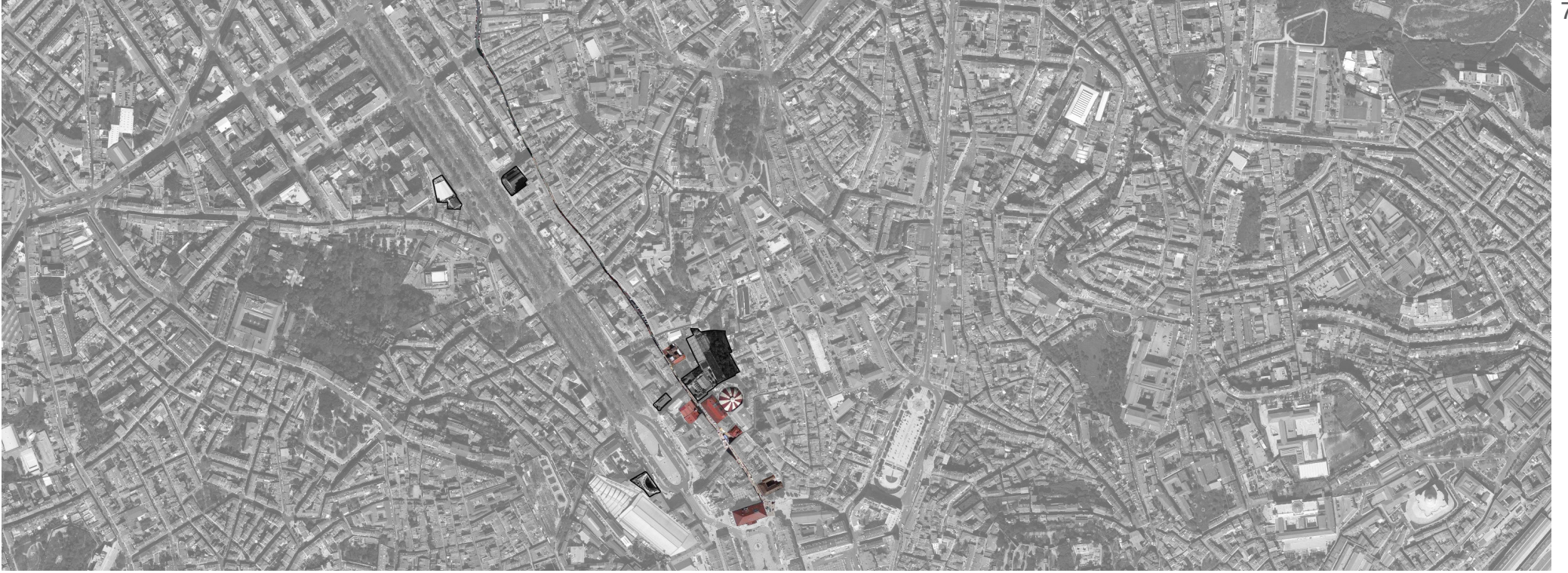
But to develop a positive interaction towards the city, the study has to be much bigger, covering all the relevant urban events that surrounds the plot and are connected by it.



Birdseye view with the intervention area highlighted.

The proposed site is located in the heart of the city. It is a place that deals with different moments in the urban development, different cultures, different occupations and off course different neighborhoods. It consists in a place which makes a link between this contrasting systems. The site includes an 18th century palace, which is more or less abandoned, and the space behind it that is made by two platforms that try to settle a gesture in the strong topographical site and closed and an savage garden. This place is connected to one of oldest and most important streets of the city, *Rua das Portas de Santo Antônio*, that changed its character radically in the last decades. It was a street present in the medieval times that was working as a link between the old city center and the places surrounding the city, and old gate for commerce and trading purposes. During the 20th century it was transformed into a place for theaters

and cinemas for the modern city, a gesture that changed the occupation dramatically. But in recent times it fell in the hands of tourists, it's now a place for crossing, to local people, and a street with touristic restaurants that walk around in a very superficial way, without understanding the system, with a lack of curiosity about where the small streets that go up lead to. The topographical situation is dividing the city in very different urban events, sometimes they are isolated and disconnected from the rest, like fragments of city, like islands. The site is a closed moment set in precisely one of this situations.

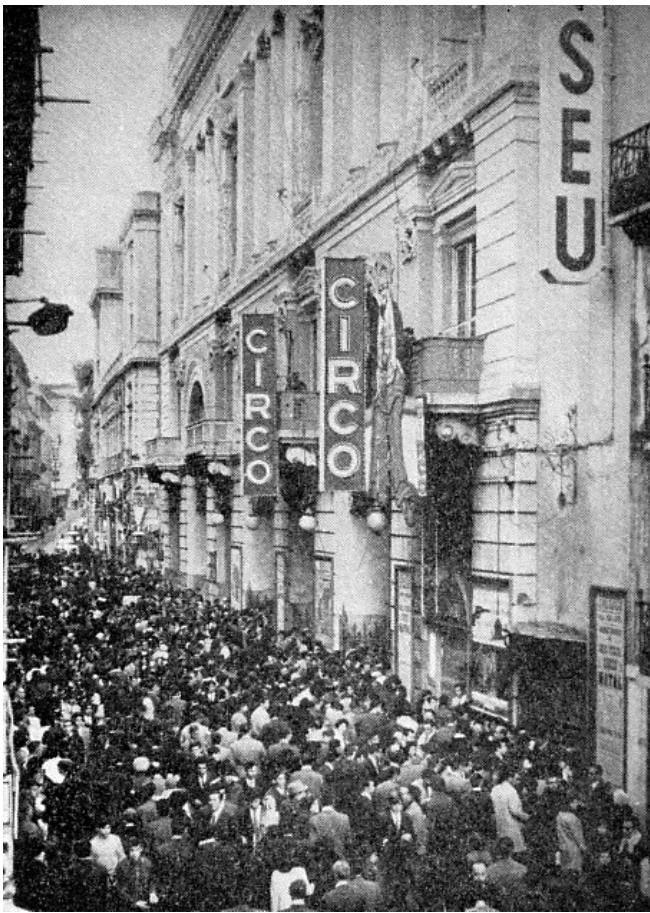


Ortophotomap with the study street highlited.

The old Street's system.



The street in questions has its origins in ancient times, it is right to say that it is one of the oldest urban spaces that remain intact, morphologically. It was a route to follow while entering or leaving the city, a gateway filled with merchants that would distribute all kinds of goods to the farms around Lisbon. During the 19th century a major urban expansion occurred leading the city to its new expansion on the northern areas. The project has its impulse on the *Av. da Liberdade*, the main Avenue of Lisbon which is a redesign of the old public walk. It has the same direction of the old street concerned, leaving it untouched. These two systems were occupied by theaters and cinemas, creating some kind of Broadway in Lisbon. Today they're crossed by visitors that feed the repetitive restaurants without noticing the richness of this system, like the presence of numerous palaces that fill the street from one point to the other.



040



041



Lisbon's Ortophotomap with the study highlighted.

The *Santana* Hill

The second area of study is composed by the *Santana* Hill. As stated before, this city piece was occupied in the end of the 17th century by many monasteries that wanted to take advantage of the pure air of this hill and its isolation as well. The area of 183 hectares survived all the city's transformations. It was not damaged during the earthquake and it was untouched during the expansion plan for Lisbon, mainly because it was too hard to intervene. The Hill is located between the *Portas de Santo Antão* Street, on the West, and one main avenue that closes it on the East side.



Lisbon's Ortophotomap with the palaces and green areas highlighted.



042

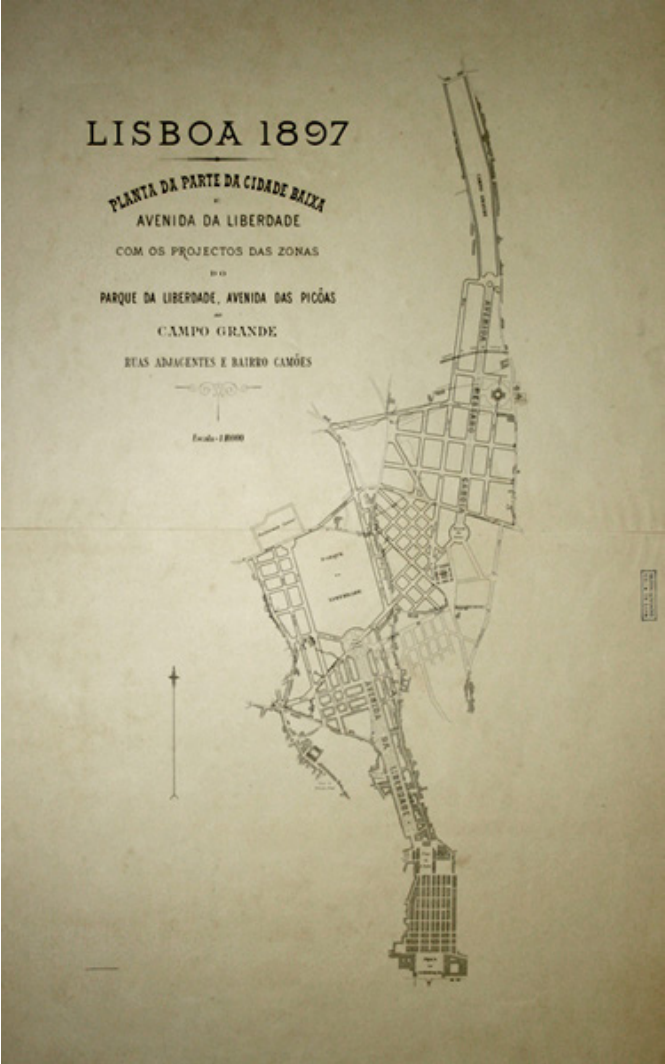


043



044

The *Santana* Hill was always a different part, it is probably the city's segment that is less visited by its people, and it is right in the middle of it. It has a very strong feature which is being constantly looking at its surroundings, the buildings and public spaces are sitting on the hill watching Lisbon. These spaces have another morphology from the other hills/viewpoints in this sense because they're on the top of the main avenues, creating a sensation of unknowledge towards the city. It becomes a facade of it, like a huge moving scenario that stands there. The plot is settled in a place where it can see the city but it is also watched by it, in some of the other viewpoints.



045. Plan for Lisbon's expansion during the 19th century.



Palace highlighted.

The Palace.

The 18th century palace is the main structure for the “Ateneu”, it is the piece that had the room for all the many activities and classes and the one opened to the platforms and all the space behind it. Containing beautiful spaces, the palace has many empty rooms nowadays, and its actual state is very underprivileged. It has many additions made in posterior times that changed the perception of a unique piece, extensions that should be considered and demolition. It can be related with the other palaces present in the same street, together they form a system, a continuous line of significant buildings. For more than 125 years the palace was occupied by this commercial school, the *Ateneu*, a very positive public program for the city that provided dancing and music classes, exhibitions, sports, art school and many other events. It is odd to imagine a noble building being filled like this, but the result was so singular and powerful that it lasted until today.



046

The building is imposing itself on the street, but with the open doors inviting to enter. It provided a great service for the city because it was located in the middle of it, being the only one. This historical center, like many others, was a victim of an economical pressure that started to occupy many structures privatizing this space. This episode, associated with other factors had consequences on the *Ate-neu*. It started to lose importance and occupation simply because there are less and less people living here, taking advantage of a city core which is now lived by tourists and all the structures that follows them. Added to all the spatial transformations made on the palace is also its actual state. The constant damage of time and the lack of occupation.



047



048



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Platform 1 highlighted.

The Platforms.

The concrete platforms are settled behind the palace. Together they form a space that can be read as the backyard of the main structure. The first one is connected with the third floor of the palace, it starts the gesture of climbing the hill, it can be perceived as a huge and out of scale stair that tries to reach and connect the palace to the upper part. The first platform is a bit lower than the roof of the buildings in front of it, creating an atmosphere of a patio. It lives of this moment which a feature that can be find around the city, spreaded on the hills. These areas are constantly interacting with the neighbor patios, houses and gardens, thinning the limits between properties.



057



058





Platform 2 highlighted.

The upper platform as a completely different relation with the surrounding city, it is built 6 meters higher creating a balcony to see Lisbon. It is also a rectangular space that holds a small sports field on one of the tops, before finding its dead end when closed by some minor abandoned buildings, also part of the property. On one side the city is the facade, the continuous scenario that follows the entire platform. On the other the space is closed by wall that is containing a garden (visible on next page). The garden is final element, it is the closing moment of the plot. And because it is planted on a very steep slope. it can be perceived as vertical one, inaccessible, mainly visual.



060





06. PROJECT / INTERACTION.

ATENEU COMERCIAL DE LISBOA - LISBON, HISTORICAL CITY CENTER - PORTUGAL.





Lisbon Downtown. Present Context.

Lisbon Downtown, together with neighbor urban events, can be considered as the city's heart. The *Baixa*, the Portuguese name, is this lower area that links the river to North and sews the two main hills present on both sides. It was the most damaged place of the city after the 18th century earthquake, the center that was built from scratch respecting a precise and stringent plan made to last. Together with the *Liberdade* Avenue (the colour area on both maps) it forms a core, a center that was always occupied in different ways. It was a residential + commercial area, a business center and the hot-spot to be lived by locals. But the suburbs growth, together with the area's rising prices, transformed the neighborhood into an empty space, the population abandoned it leaving it mainly to the tourists and visitors. These are the ones that now invaded this area, "feeding" the hotels and leaving the investors with thirsty for more. The area is in risk

of becoming a "fake center", transformed into a night stay point for tourists that come and go privatizing this space. All the present buildings, that are now damaged and unoccupied, can fall in this net because they're expensive and this is the most profitable way to transform them. But where are the real people? Where are the locals? It is urgently necessary to think about city in all its conditions, in a combination between these distinct realities that enriches it. There is the need to recreate a public space in this core, a strong piece to balance this occupation attracting the city itself to its center.



062



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067



068

Water as an invisible layer.

This Master Thesis investigation revealed, on one side, the city of Lisbon in its present state (framing the conditions to interact in its center), and a deep theory about the importance of water related to urban creations, growth, rituals and uses that used it regularly as a constant visual and physical element to be experienced. Its presence in the city of Lisbon was needed until the modern times, when it became common in every building, channeled. This process happened in a gradual way but suddenly Lisbon was dry, while all the water points stopped being supplied and the river was far away from the urban life. In Rome the water continues to design the city's spaces, enhancing its theatricality aspects while refreshing many areas. This feeling about Lisbon is constant, the water is scarce in terms of presence while the city screams for it.



069



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**LISBON - 23° AVERAGE TEMPERATURE - 17 KMS AWAY FROM A
PHYSICAL WATER EXPERIENCE.**



076

Program / Task.

As analysed before, the *Ateneu Comercial* offered to the city a community space that provided many activities for gathering and entertainment, booster of a public life (like this dance class on the previous page). One of the existing activities took place on the platforms, a public swimming pool was built in the 1960's creating the only practicable water tank in open air in the city. The experience attracted many people for years, before being closed by a post modern structure that changed the space radically, condemning it to fail. As a starting point we were provoked to think about an interaction with this program as the main gesture. Probably this was the best swimming pool in Lisbon, in the way it could interpret and understand the city, dealing with topography, inner space and being open, to both people and sky.



077



078



079 - The Astoria Swimming Pool, NYC.



080 - Sports Complex, Barcelona,

Program / Task.

01. Designing an **open air public swimming pool** for the city, taking advantage of both climatic and site conditions. It intends to show the importance of the water, an element that lost importance through time and is forgotten nowadays, transformed into an invisible layer. The swimming pool as the central piece of the intervention, a meeting point for the locals and the visitors that will take advantage of the topographical situation of the site and use the city as a facade. A huge balcony towards the city.

02. The buildings holds the open swimming pool on the top that covers the circulation and facilities areas under it. These spaces support the **covered swimming pool**, a closed space that opens itself to the neighbors garden, at the water tank's level. The existing tree's canopies are set at this height, creating a relation with the inside. This way it's possible to have an experience during the entire year, both work together in this sense but they're separate structures, independent.



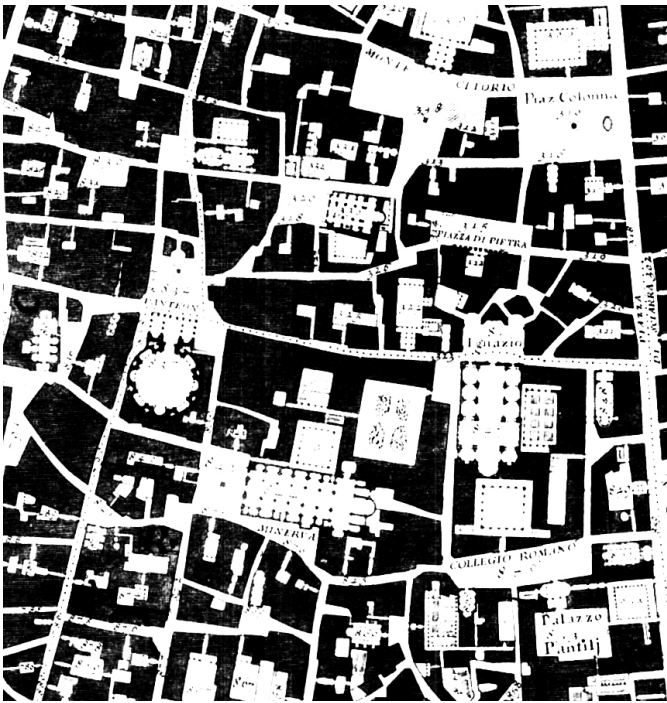
081 - The Rudas Baths, Budapest.

03. The water complex is not concluded with both swimming pool's presence. Since the new building is attached to the topography on its back, it takes advantage of the high wall on the inner side to conceive a distinct experience, the **public baths/therms**. This program, separated in different rooms creating particular conditions of height, depth and scale, has a more introspective relation with space. It invites to bathing experience in a dark atmosphere that only receives light from the top.



082 - SESC Pompeia, São Paulo.

04. The Palace, in addition to being the key structure that connects the main street and the backside intervention, will be filled with a reprogramming exercise. A **communitarian center** that will provide many activities, now of difficult access in this city core. The Ateneu had numerous interventions and alterations. This one tries to clear all these additions, leading the Palace to his raw state. This way it's possible to have an occupied place, filled with movement and activities, that is also flexible to change to new needs, solutions or temporary programs.



083 - The 1784 Nolli map for Rome.



084 - The Covilhã Bridge.



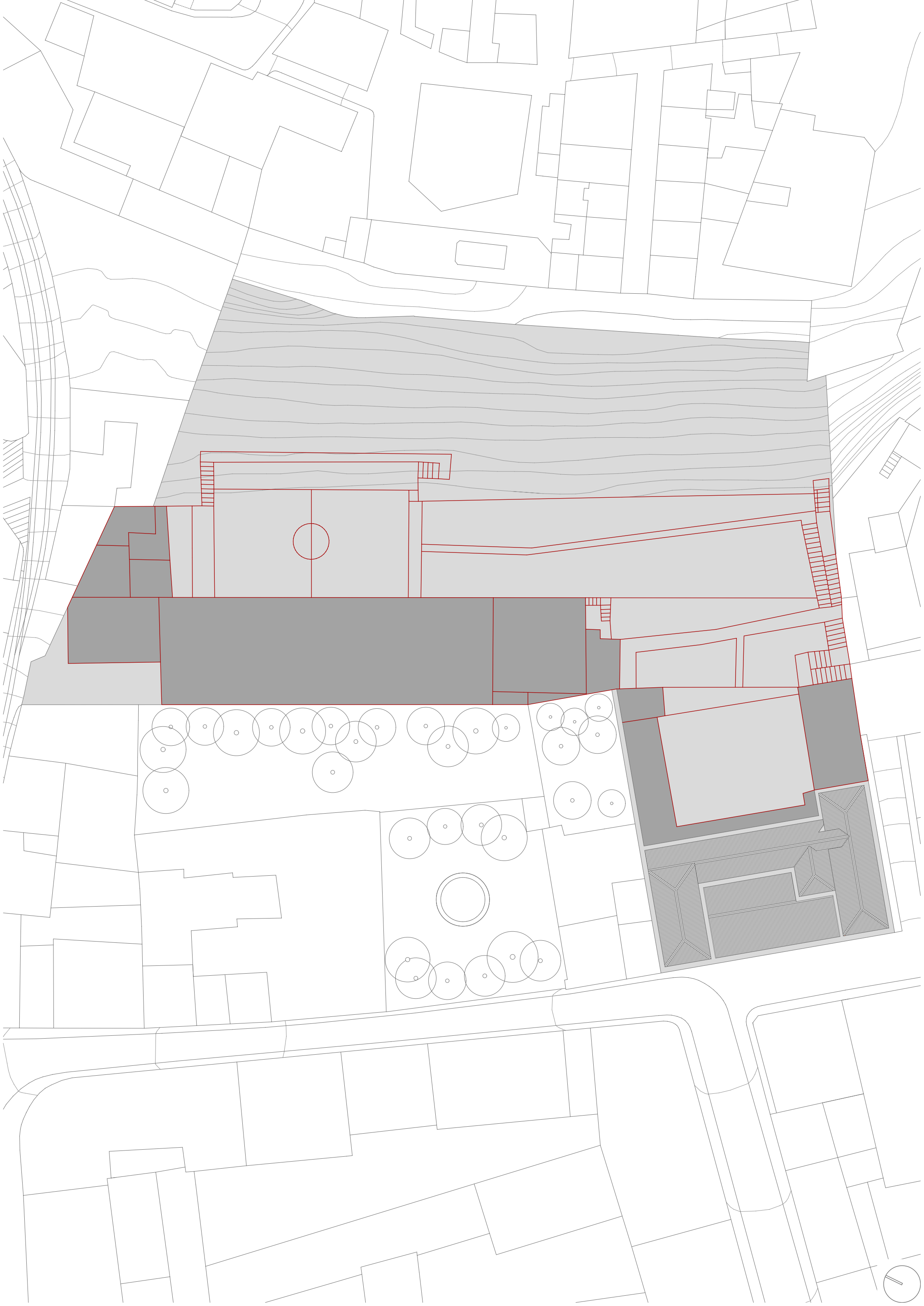
085 - The view from the *Torel* garden, on the *Santana* Hill.



086 - One of many inner spaces present on the *Santana* Hill.

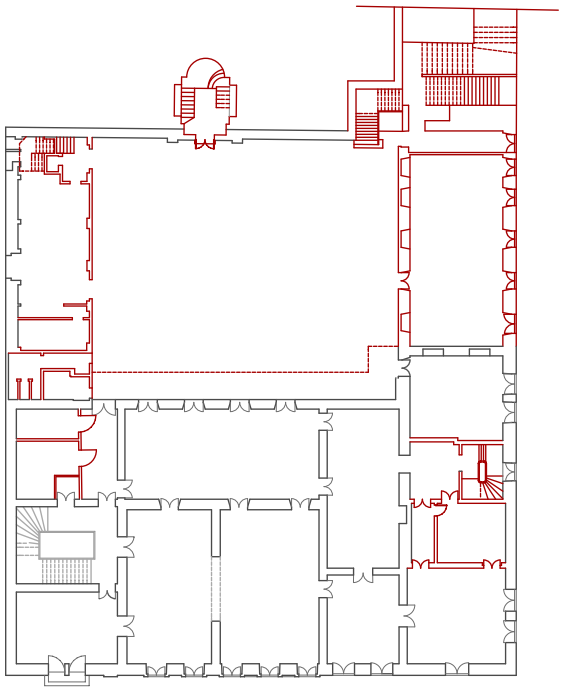
Urban Concept.

The project for the rehabilitation of the palace and the construction of the water complex, follows a combination of concepts that explore the place in a specific way. Some are present on the surrounding area, worked to be potentated and translated into an architectural project, and others are urban events that can be positive gestures towards the site. The Palace is directly connected to the street while the platforms, the space behind it, is completely detached from the public and the public space. To use these platforms as a base for a new building, the basic gesture is to open the space, to make it accessible and connected, like one more street, one of the white public spaces of Nolli's map for Rome. The project as to consider the topographical conditions of the site, constructing a building that contains the means to overlap this shortcoming in terms of connections. This topic is a priority that defines the way the spaces are thought, the way the distinct elements (palace, courtyard and platforms) interact with each other. The *Santa-na* Hill is a quite singular space of Lisbon city because of many features already analysed. Some of them build the conditions of this site and were considered in the way they can design this urban transformation. The *Torre*/garden is one the many viewpoints of Lisbon, one of this pieces that take advantage of its conditions observing the city and creating rich public spaces. This specific one is settled almost above the city, it has the city as a facade, as a constant changing scenario that can be translated to a project feature. There are also many courtyards and spaces that stand in lower areas, enclosed moments that provide shelter for different activities. This is a quite rich quality because it constitutes a space which is protected and in constant dialogue with neighbor events such as gardens, terraces and rooftops.

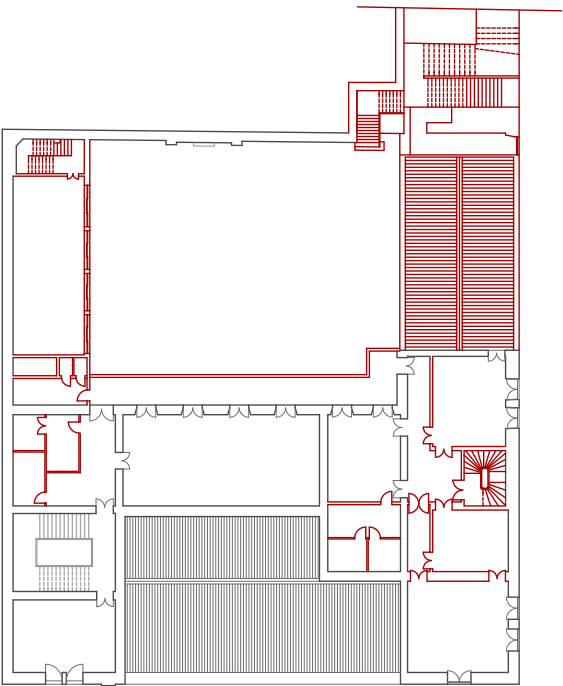


Demolition.

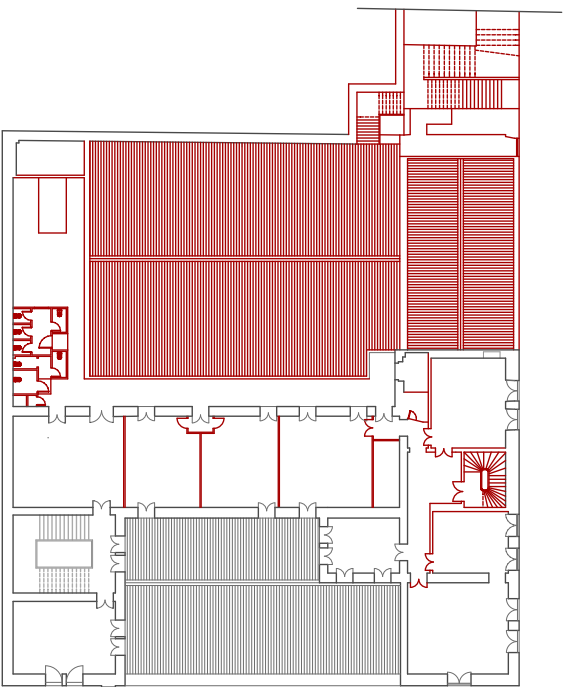
For many years the palace and all the area that belongs to it where victims of many transformations and additions made to adapt it to all the different activities that the *Ateneu* received. The platforms were build to accommodate sports fields and the first open air swimming pool, that during the 90's was covered with a new structure which later condemn it. The first platform was occupied by other different structures while additions from distinct periods were implemented to the palace, transforming the way we would perceive it. The basic demolition gesture erases this "parasites" leaving the palace as a single piece and while vacating the platforms for a new transformation that tries to consider this gesture as a unique one.



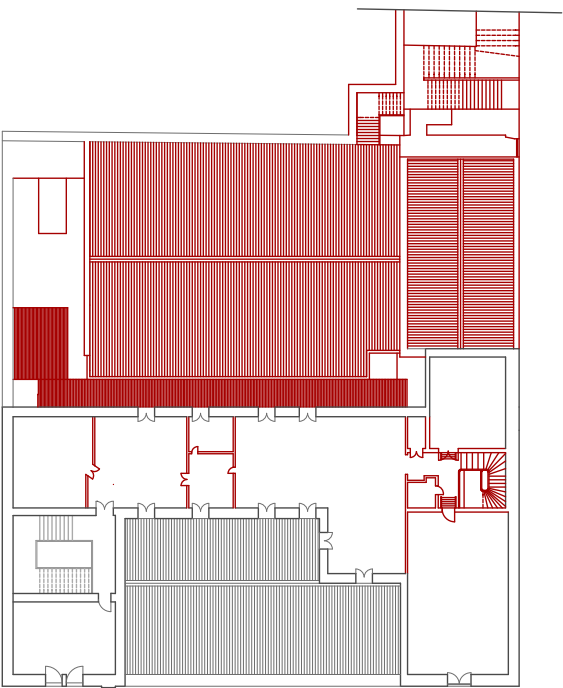
1st Floor, demolition plan.



2nd Floor, demolition plan.



3rd Floor, demolition plan.



4th Floor, demolition plan.

All these transformations were not only made as additions, all the palace's floors were radically changed through time to prepare it for a certain activity. This strategy of compartmentalisation blocked the original spatial intentions of the palace, reaching a point where it was quite difficult to read it. Every new program demanded a new space and services that would be constructed with almost no rules, in terms of dialogue with the main structure. This process happened a lot of times leaving many traces expressed in all kinds of rooms, areas that should be flexible in terms of space so the palace can answer to an indefinite number of programs. The demolition plan for the inside of the palace exposes the original structure with all its qualities (high ceilings, noble areas) giving space for a new intervention that can see it as a whole piece.



087

Palace intervention.

The *Ateneu* is a prototype of a public facility that worked on many different areas. It was a shelter for sports, arts, school, dances and meetings that ended cornered in its own space, at a certain time it was impossible to see the original spaces and to use them because of all the modifications made for a certain purpose. The image shows a structure designed by *Carrilho da Graça* for the *São Jorge's* castle. It consist in a service box that works as an educational path to understand the roman ruins below it. It doesn't touch the ruins, distinguishing the two architectural moments and assuming its humility, a structure which is serving for the needed time that can change and even disappear leaving no traces of existence. This is the definition of flexibility and the palace, trying always to answer to new programs, should work in these parameters.



Palace Ground floor plan. 13m section.



Palace First Floor. 19m section.

PALACE - ENTRANCE FLOOR

- 1 - Palace entrance.
- 2 - New Elevator.
- 3 - Existing restaurant.

Ground floor

The ground floor of the palace is the link between the inner space and the street. When it was a closed house, like all the others present in the same street, the ground floor would work as a filter between realities, public and private space. But the space is occupied for more than 125 years by this public structure, which diluted this transition transforming the palace into an extension of the streets life. The ground floor includes the entrance, on the left, and a restaurant design during the 1960's that occupies the biggest area. The intervention simply assumes this interesting state, only proposing an elevator that allows a more viable circulation inside the palace.

PALACE - RECEPTION FLOOR

- 1 - Palace staircase.
- 2 - Services (palace elevator and toilet).
- 3 - Exhibition areas and flexible spaces.
- 4 - Auditorium foyer.
- 5 - Auditorium.
- 6 - Services (reception and toilets).
- 7 - Administration areas.
- 8 - Courtyard with water mirror.
- 9 - Second staircase to access the platforms area.
- 10 - Second elevator for the platforms area.

1st Floor

The first and noble floor is the point where all the circulation gestures meet. It gathers the main elevator, the connection between the courtyard and the small street and it proposes a new circulation wing that links the palace to the platforms. This wing includes a new staircase and an elevator that makes a direct access to the water complex (on a higher level). This floor as the higher ceilings and the biggest rooms, so the transformation considers these features and proposes a series of empty spaces that can be filled with exhibitions, meetings, conferences, and so on. In one of the rooms is placed an auditorium that intensifies these wishes, it can be used also for internal meetings since this space never existed. Everything is organized by the first service box that contains the reception counter, a small store room and the toilets. The inner facade is permeable to what is now the open courtyard, a three side space that joins all the physical connections around a water mirror. It's the first moment of water presence that reflects both moments, palace and platform's containing wall, and invites to a fresh public space.



Palace Second Floor. 24m section.



PALACE - SENIOR UNIVERSITY FLOOR

- 1 - Palace staircase.
- 2 - Services (palace elevator and toilet).
- 3 - Professors room
- 4 - Classroom number 1
- 5 - toilets and staying area.
- 6 - Classroom number 2
- 7 - Classroom number 3
- 8 - Second staircase to access the platforms area.

2nd Floor

Baixa is part of the core of the historical center of Lisbon. Together with the *Liberdade* Avenue they represent the most damaged area in terms of image and occupation due to violent tourism. The population who still lives in this areas, and in the *Santana* Hill, is mainly old and work-shy. The *Ateneu* always welcomed them to participate and to integrate them in the public life. So the second floor is dedicated to the only existing program that still lasts in the actual conditions, the senior university. Three classrooms and services create the conditions for this school. The rooms are flexible and they can be something else in an early future easily, this is the principle of the intervention. The participants can use the rest of the facilities as complements of this senior university, all the programs link with the others to create a unit.



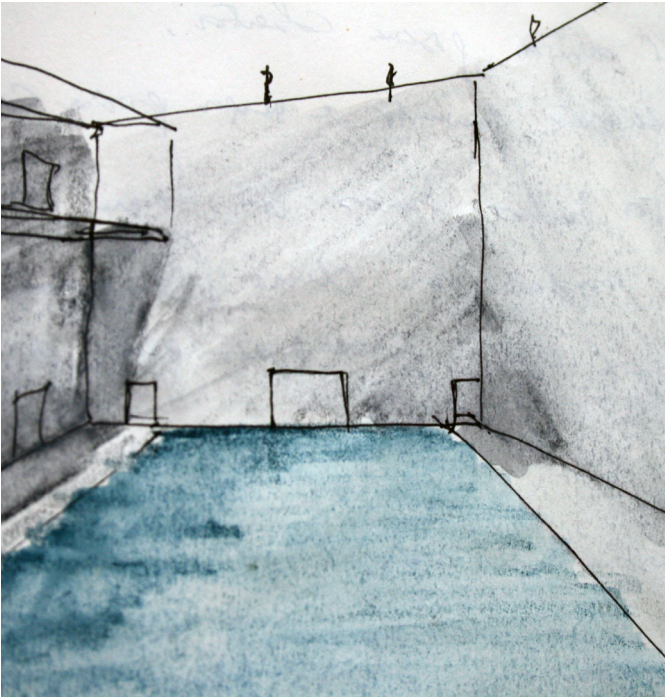
088

Spatial Concept.

The aqueduct was studied in detail in this thesis. Its importance for Lisbon is undeniable, it reshaped the urban fabric and decided the orientation of its growth, design new urban spaces directly related to water where people would meet not only for supply reasons. Even now, that it's no longer needed in terms of function, the infrastructure remains visible as a landmark, as part of the city. All its features were studied and presented, but there's one that is invisible to most people. The space inside the aqueduct remains a secret, a corridor linking the source and fountain made by water and a rhythm of light. This picture gave birth to a spatial concept that decided the way the intervention on the platforms, to build the water complex, would happen. A long corridor living between light and dark that in the illuminated areas announces entrances for the diversity of water spaces.



Entrance for the water complex.



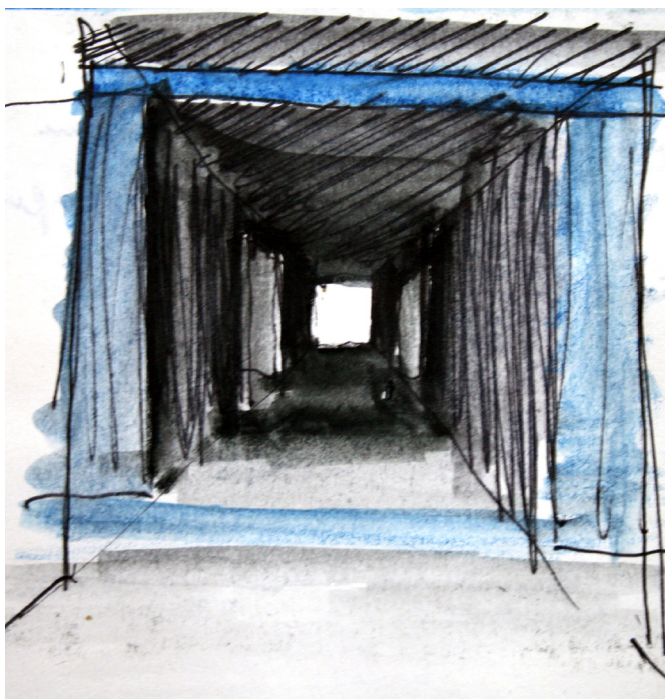
The Courtyard between the palace and the new building.



The covered swimming pool.

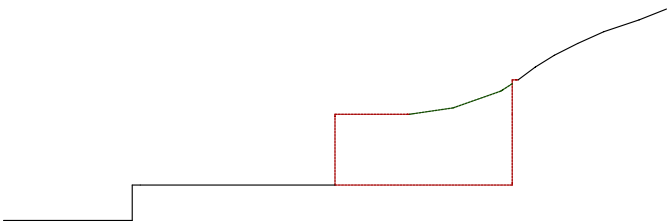


One of the spaces for the baths.

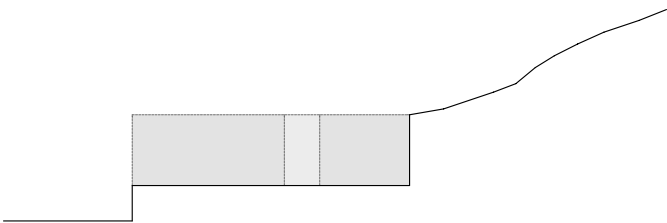


The corridor space.

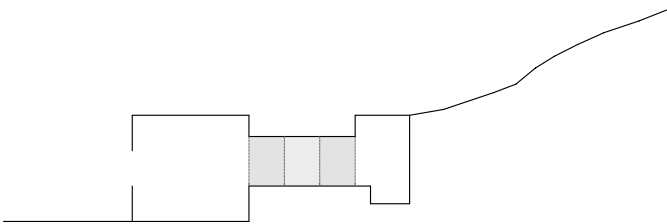
The water guided this intervention on the platforms. As a hidden element in the city, no longer present, and a physical experience transported to far away, the project considers these two realities and builds a space where these two concepts match: the constant presence in many ways, working with space, transition and light, and the regeneration of diving and swimming inside the city, for everyone. All the spaces follow these parameters, all of them are a constant celebration of this element. The watercolors present in these pages show a series of spatial concepts that were developed inside these principles, like the corridor as the heart of the space where light crosses the swimming pool above it to illuminate the dark space, inviting to cross to both sides to explore the building and experience the water spaces.



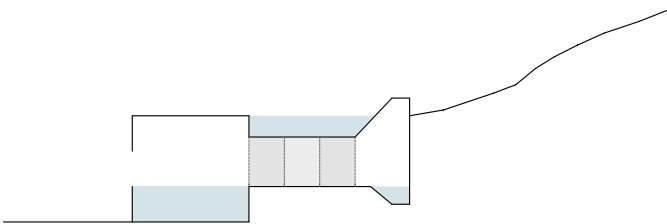
Step 1. Demolishing the second platform.



Step 2. Building a volume to fill the entire space.

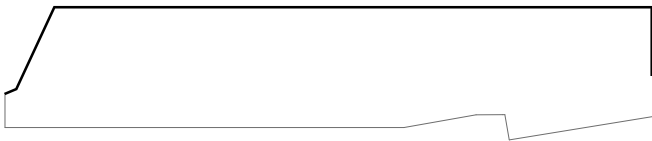


Step 3. Shaping the slabs, adapt the building to the diferent programs.

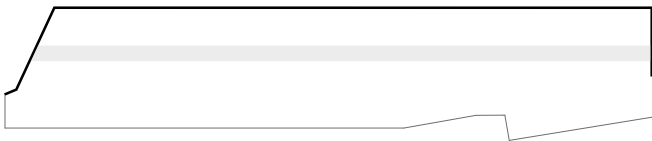


Step 4. Filling the space with water.

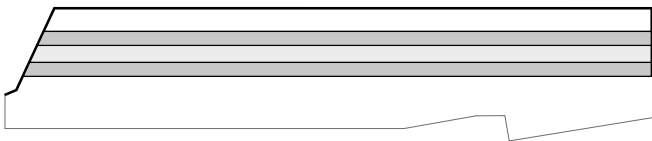
There are two existing concrete platforms that fill the space, the first one is leveled with the third floor of the palace while the second is 6 meters higher. Step 1 is to erase the second platform in order to have a free space for the intervention. The new building is 6 meters high and it fills the entire space, this step 2 consists in formalizing this space, the corridor between the two sides where the water programs will take place. The third step finds the space for the different water tanks (cover and open air swimming pool, baths, etc.) and creates filter spaces, like the lockers, showers and changing rooms, that work like filters between the corridor and the water. This space constituted by the corridor and these service wings holds the uncovered swimming pool above it, with the same dimensions. The 4th and last step is to fill these tanks with water and to reshape them considering its experiences and spatial desires.



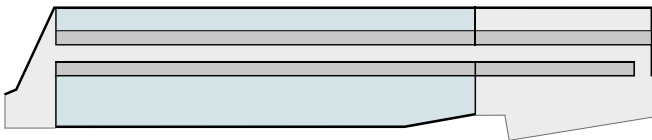
Step 1.



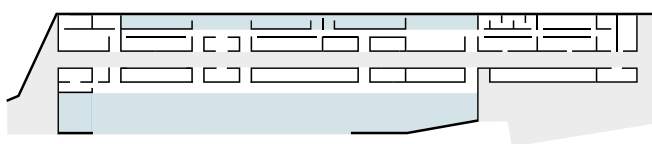
Step 2.



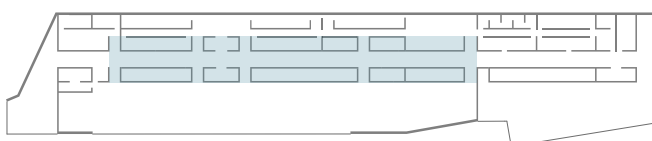
Step 3.



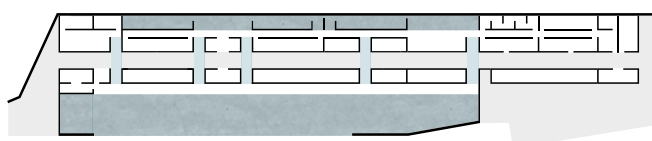
Step 4.



Step 5.

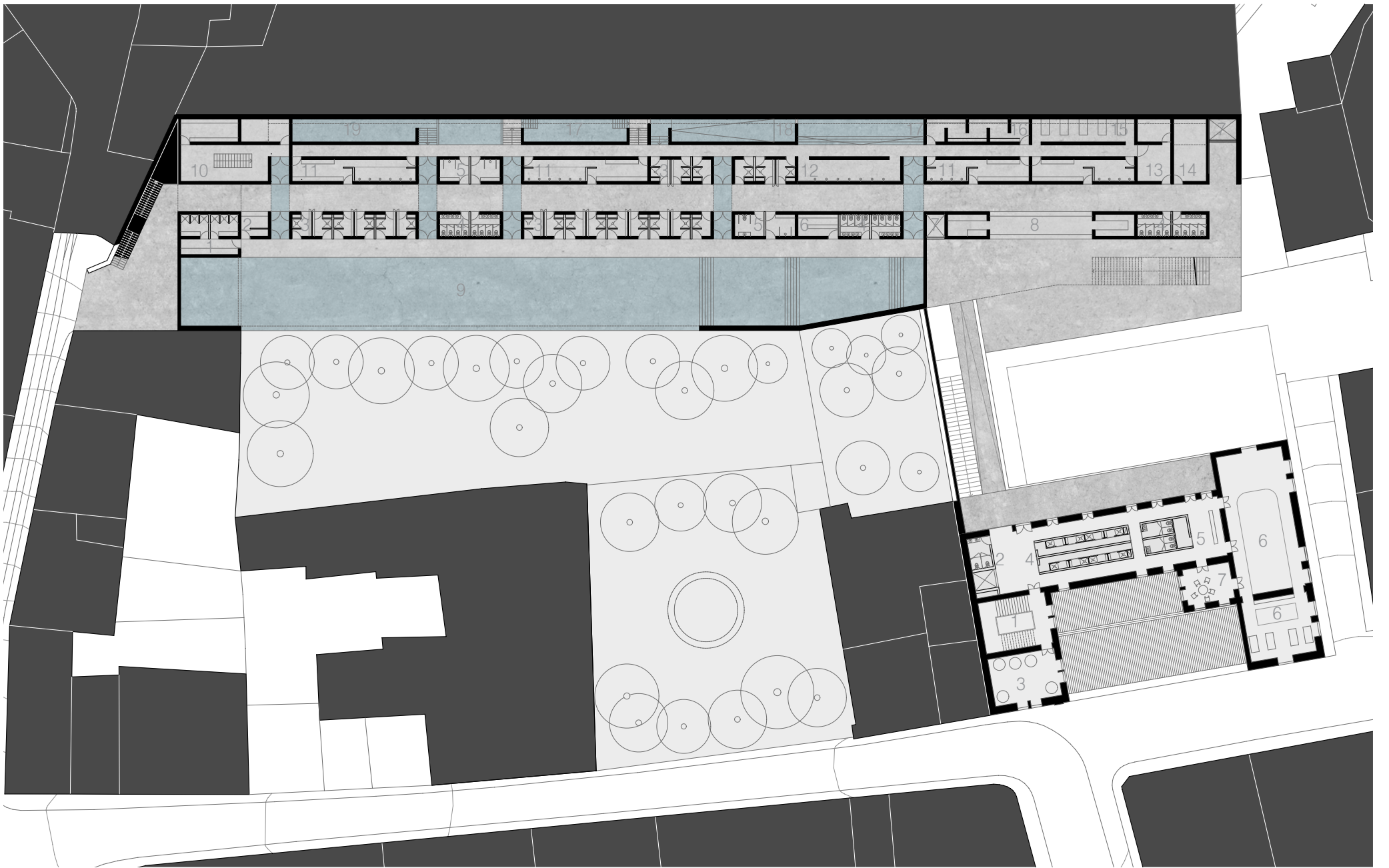


Step 6.

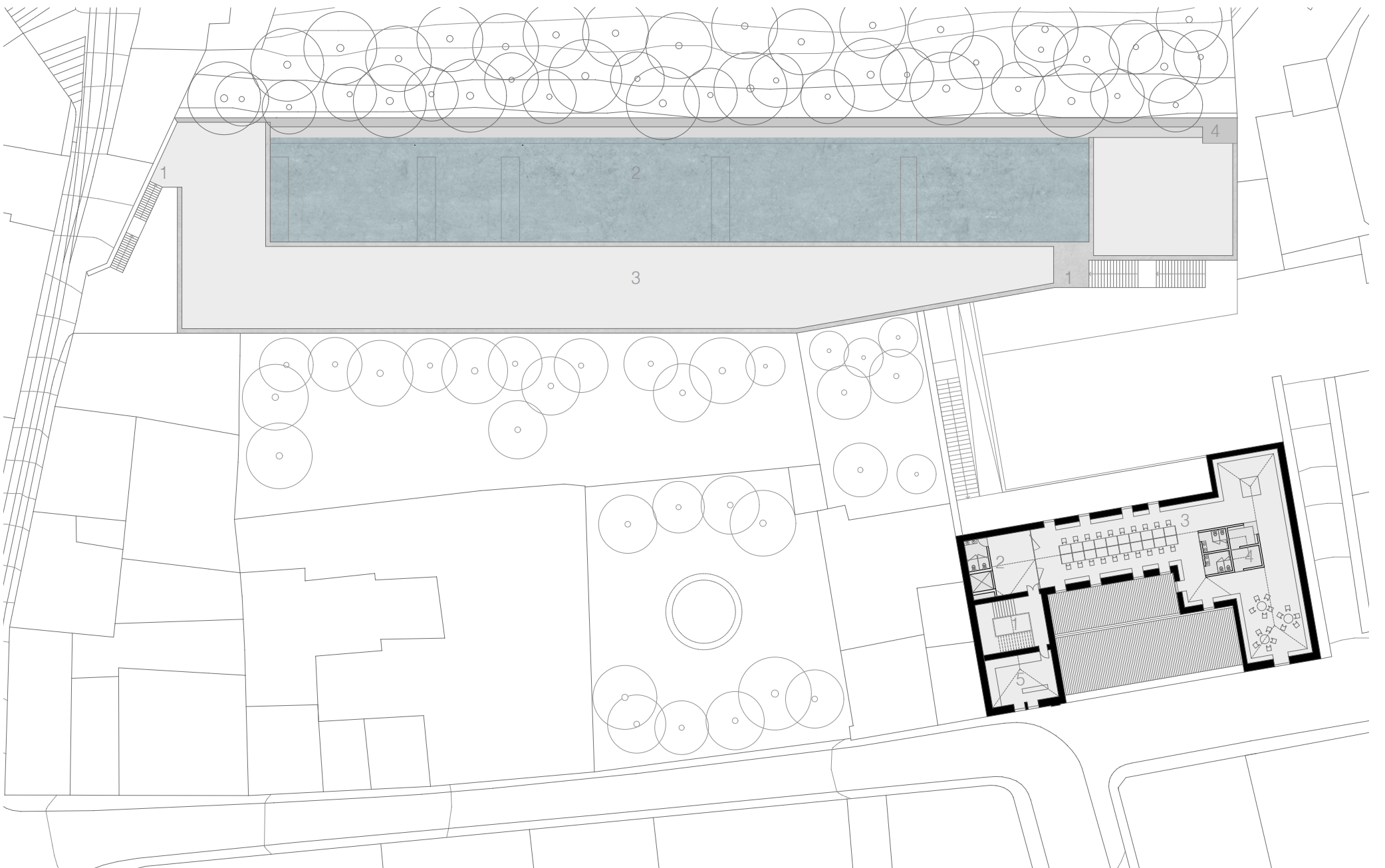


Step 7.

The same process can be explained in plan diagrams, where firstly the empty space is considered (step 1), giving space for the corridor that makes the entire longitudinal circulation (step 2). The service bands appear on both sides of the corridor defining also the main structure, also longitudinal walls that hold the second platform (step 3). After this, the spaces are filled with water to answer to the programmatic needs (step 4), while the inside of the service bands and the water tanks are compartmentalised to receive their functions (step 5). The location of the open air swimming pool is decided by creating space around it to stay, on the second platform, and by following the axes of the corridor and service bands where it will interact with these spaces, transporting light to the interior of the building (steps 6 and 7).



Palace Third Floor + Platform 1. 29m section.



Palace Forth Floor + Platform 2. 35m section.



PALACE - SPORTS FLOOR

- 1 - Palace staircase.
- 2 - Services (palace elevator and toilet).
- 3 - Yoga room.
- 4 - Showers.
- 5 - Toilets.
- 6 - Gyms 1 and 2.
- 9 - Professors room.

PLATFORM 1

- 1-Staff's showers and locker room.
- 2-Reception.
- 3-Individual shower cabin.
- 4-Toilets.
- 5-Handicapped toilets and showers.
- 6-Swimming pool's store room.
- 7-Elevator.
- 8-Canteen.
- 9-Covered swimming pool.
- 10-Staff's Changing room and access for the technical floor.
- 11-Collective showers.
- 12-Bath's showers (between diferent water tanks)
- 13-Staff's room with access to therapy beds.
- 14-Store room.
- 15-Therapy beds.
- 16-Turkish bath.
- 17-Tepid water tank.
- 18-Hot water tank.
- 19-Cold water tank.

PALACE - LIBRARY FLOOR

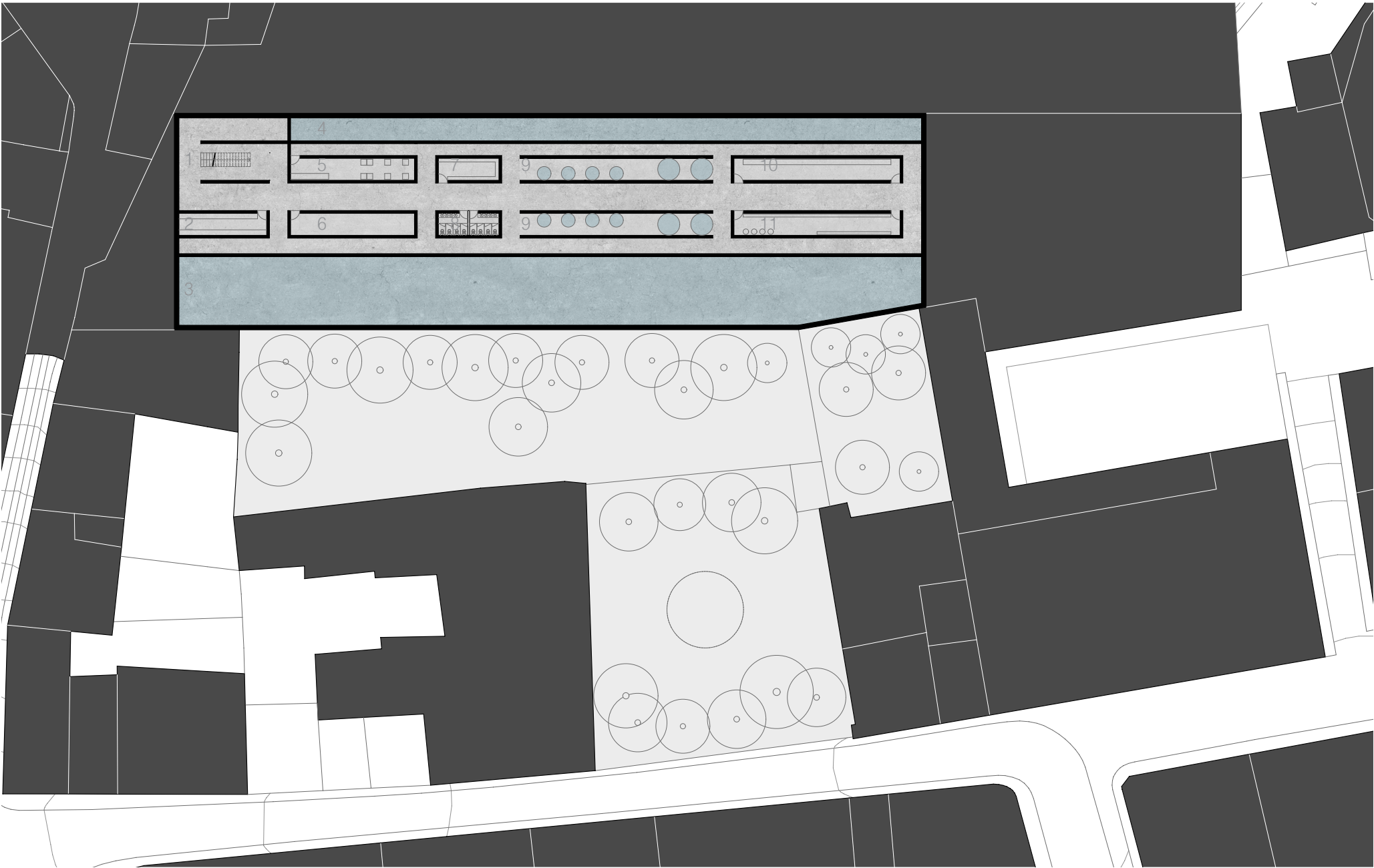
- 1-Palace staircase
 - 2-Services (palace elevator and toilet).
 - 3-Library with study individual tables.
 - 4-Services (toilets, store room and library counter).
 - 5-Copy room.
- PLATFORM 2.
- 1-Platform access (staircase).
 - 2-Open air swimming pool.
 - 3-Free space.
 - 4-Platform access (elevator).

3rd Floor and Platform 1

The main gesture of the new building is readable by the way the space ir constructed and organized. The main cor-ridor follows the platform direction, connecting the palace areas to the street present on the north side, while being broken by holes of light that signalize the entry points on both side. The service bands follow this space and work like transversal filter to build the process of bathing or di-ving, enter to change clothes to then find the water tank, the covered swimming pool on the South side or the therms, Turkish baths and therapy room on the North one. While the first one lives with more light, because of a big opening that finds the trees of the neighbor garden, the second space less wide and stuck to containing wall. Because of this, and to create different tanks for the baths, it looks for a much more vertical space, a higher ceiling built with a single volu-me that brings a slighter light to the therm experience. This platform has its vertical connections to the upper level on both extremities and its connected to the palace's 3rd floor on the southern one. The program that occupies the space of this floor follows the project strategy of the others and offers a sports area, directly connected in this sense with the water complex. There is a yoga room, the needed ser-vices (showers, changing space and toilets) and two gyms, mainly flexible spaces that can also offer dance classes or something completely diferent.

4th Floor and Platform 2

The 4th floor of the palace is the quietest one because of its distance from the street. A library will engross this spa-ce because of these exceptional conditions a because it is a missing program on the historical city center of Lisbon. It works for the external public and for the inside as well, supporting the senior university. The coverage of the new building holds the open air swimming pool, a huge water tank that lies between the city views and the garden behind it. The garden becomes impractical because of the steep land where it's standing. It is like a vertical garden, a green presence that closes the system. It is blocked by the big volume designed for this purpose and to bring light to the interior of the baths area. The southern side is the city, the city as a big facade of this terrace. A place that contains a swimming pool facing the other hills, a balcony that can be used for temporary activities while the pool is closed. In this way it is important highlight that these 3 different moments that build the project are connected but they can work in separate if some of the parts is closed, without violating the rest of the space.



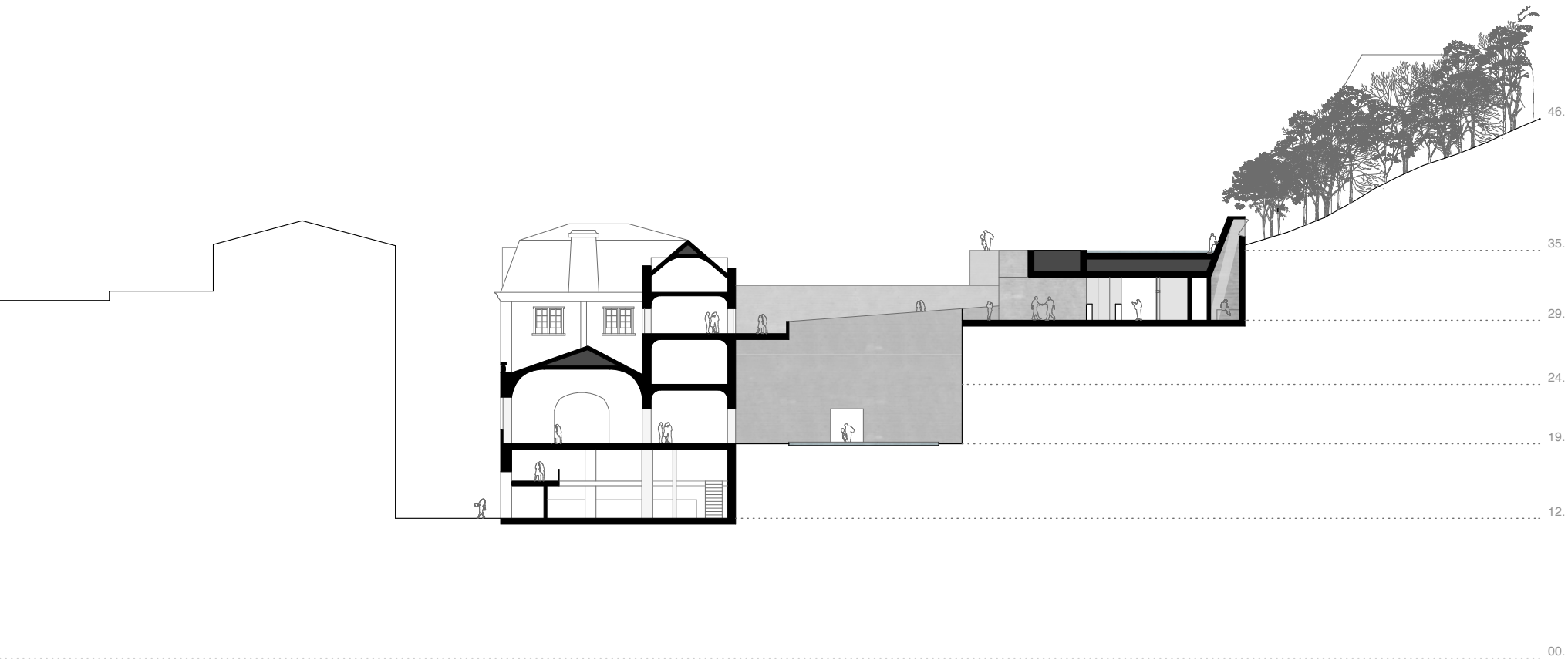
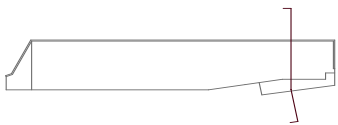
Technical Floor. 26m section.



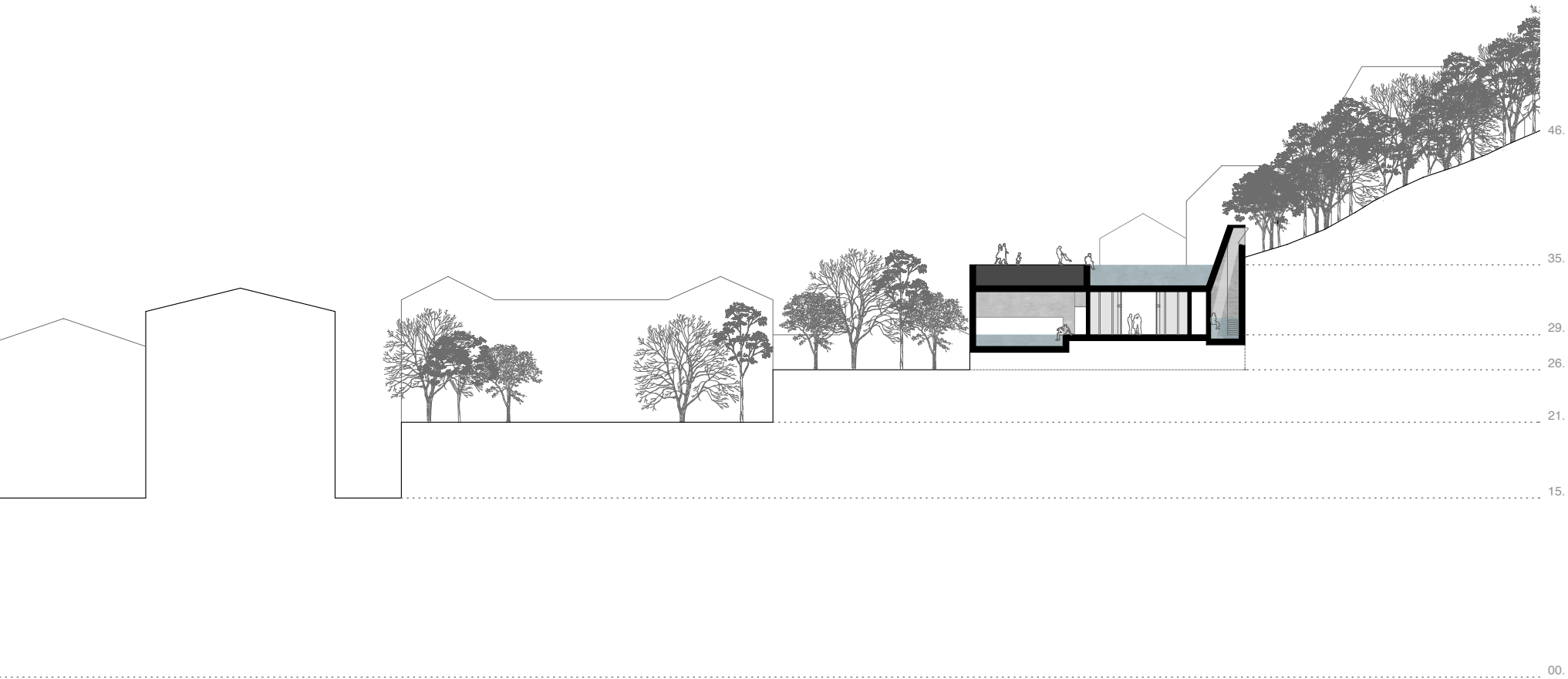
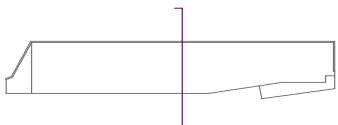
- TECHNICAL FLOOR.
- 1-Floor access (staircase).
 - 2-Laundry store room.
 - 3-Fresh water tank.
 - 4-Waste water tank.
 - 5-Chemicals room.
 - 6-Electricity plant
 - 7-Cleaner's store room.
 - 8-Toilets
 - 9-Water treatment rooms
 - 10-Air conditioning plant
 - 11-Ozone treatment room.

Technical floor.

All the technical means are placed on the underground floor to make the water complex as fluid as possible. This space follows the same structure present on the first platform creating facility boxes around on both sides of the main corridor. The water is stored and treated in this spaces to serve all the programs of the upper levels.



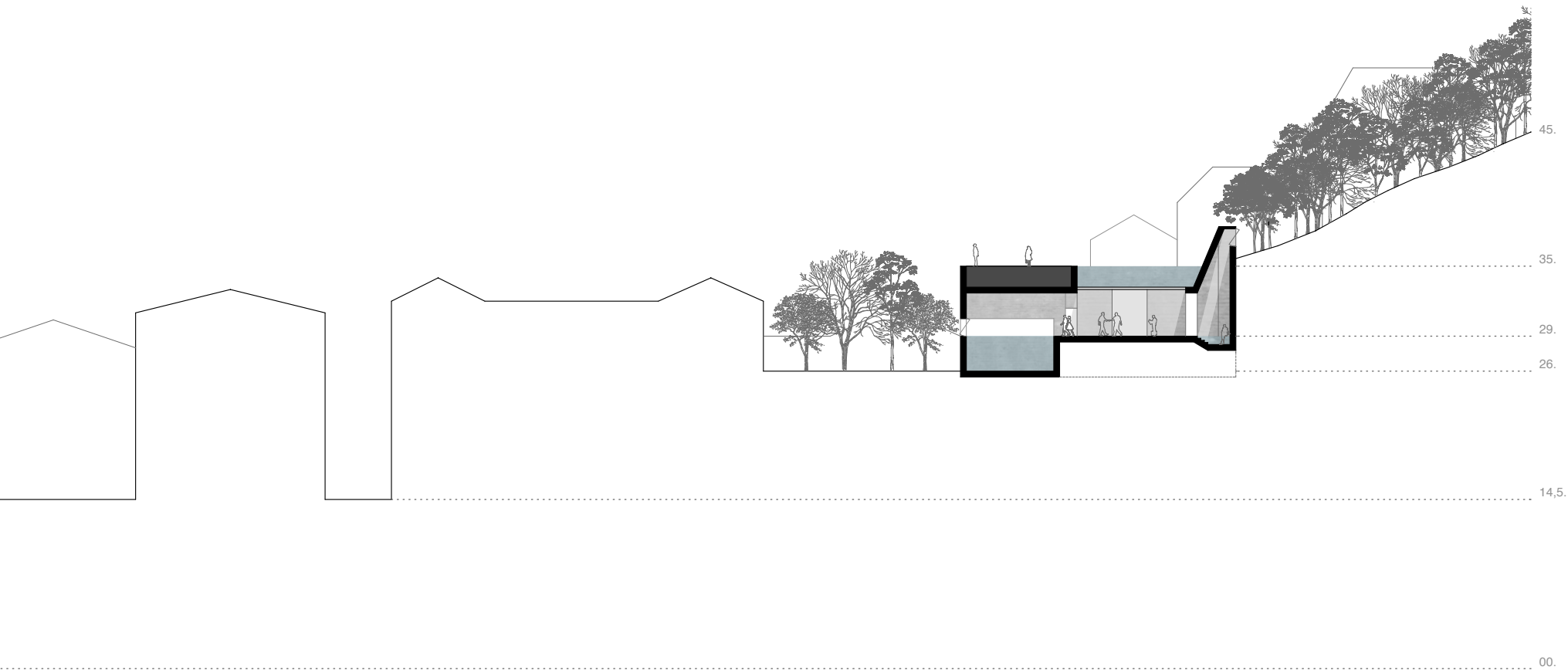
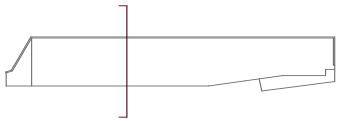
Transversal Section 1 through the palace, the courtyard and the swimming pool building.



Transversal Section 2 through the neighbor's gardens and the swimming pool complex.

This first transversal section crosses the entire project: the water complex on the top (built by the two platforms), the open air courtyard with the water mirror in the middle and the palace on the other extremity. The gesture of connection is noticeable, the courtyard makes the visual and physical link between the palace and the platforms, containing the circulation wing with the ramp on top of it, making the bridge between the third floor and the level 0 of the new building.

The permeability between the corridor space and the water areas is visible in this section. It links these two moments using the filter areas, the individual showers in this case. The higher volume closes the garden and bring light to the interior of the therms, building a more intimate and introspective space. The terrace works like a balcony, observing the city with the water and the green space on its back.



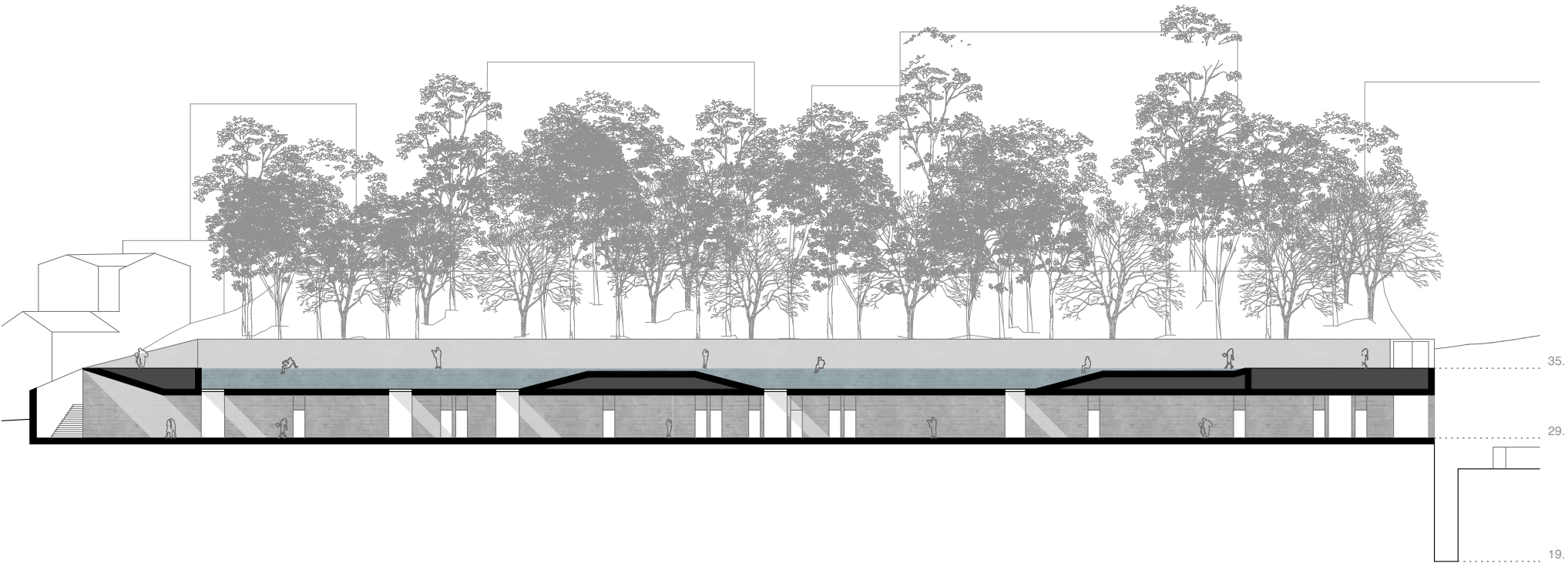
Transversal Section 3 through the neighbor's gardens and the swimming pool complex.



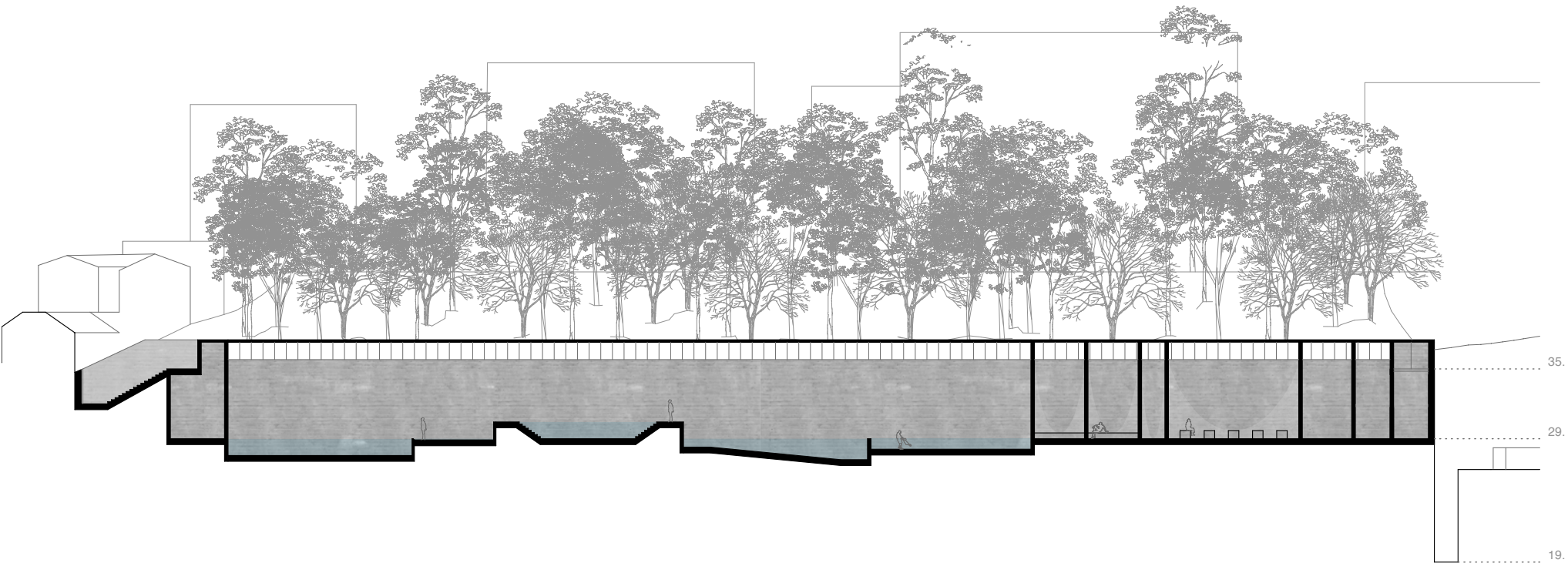
Longitudinal Section 1 through the covered swimming pool.

The light crossing the water and invading the corridor is a gesture represented in this third section. This spatial moment changes the atmosphere inside and states distinct events to both sides. The water level of inner swimming pool stands at the height of the the first level. The big window that follows the swimming pool direction opens it to the neighbors garden. The water and the opening are also leveled with the treetops, letting the light enter inside the space, filtered by the green block and changing the atmosphere inside.

The section through the covered swimming pool shows the water leveled with the first platform but reveals the different heights inside the water tank, creating a singular experience of swimming. The first distinction is between the kids swimming pool (on the right), and the regular one that fills the rest of the space. Although there's a difference of place, the water is joining everything together to create the idea of a constant element that fills the space. The pool ends, on the other top, with a room where the light slightly comes in.



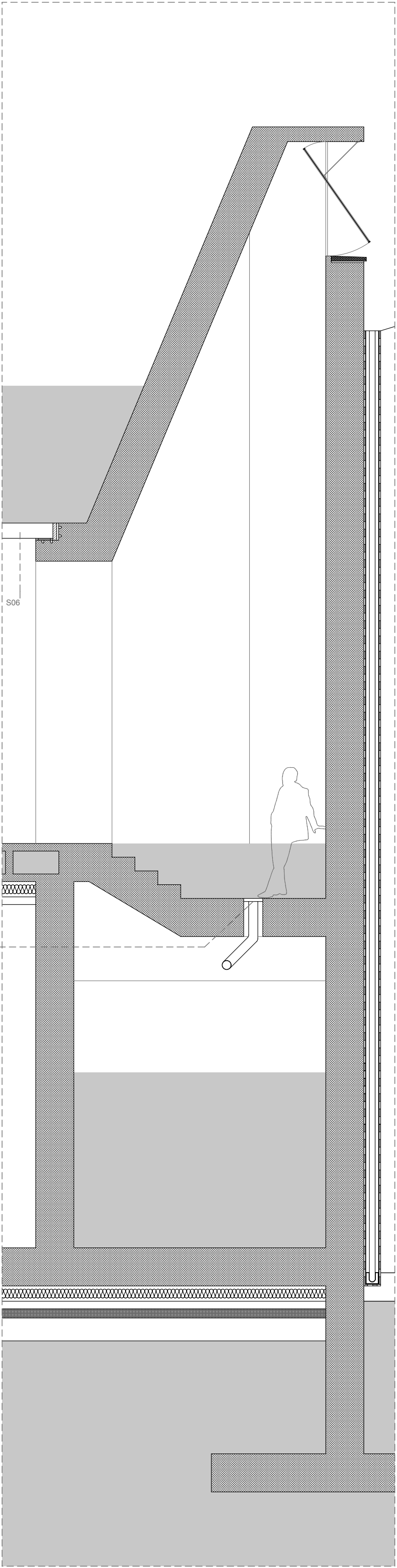
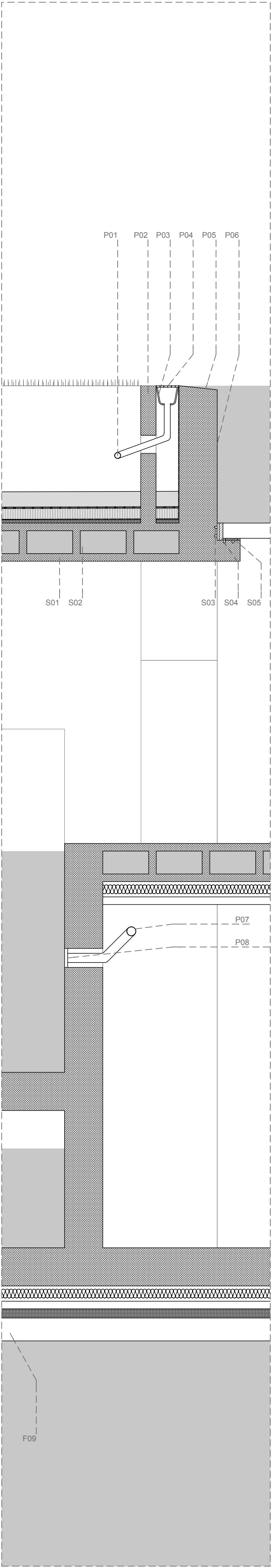
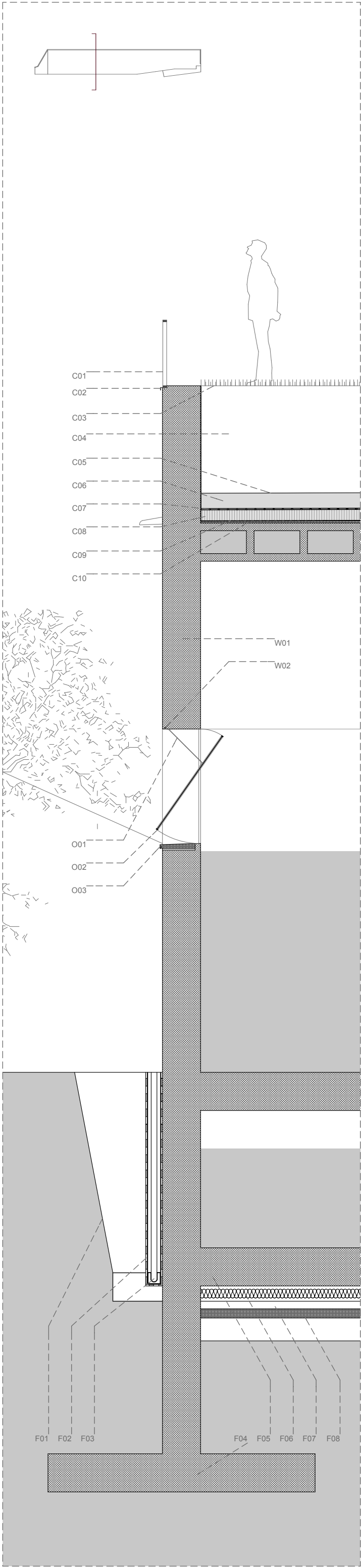
Longitudinal Section 2 through the upper swimming pool and the corridor.



Longitudinal Section 3 through the baths area.

The corridor's gesture is explained in this section. This space works like an aqueduct, holding the water above it, in this longitudinal gesture. The upper pool's slab brakes to let the light go in, matching with the big transversal openings. The concept for the upper swimming pool is the same expressed on the covered one, the constant water level that under it has different heights and ramps to distinguish moments.

The last section shows the place for the therms, Turkish baths and therapy room, the entire space that leaning against the containing wall, underneath the vertical volume. There are different water tanks depending on the temperature and they're different from each other also because of their basic height and the way they invite to enter. For example, the hot water tank is lower and deeper, while the tepid one is settled higher than all the others. The transversal walls that divide the spaces don't touch containing wall, leaving a space of 0.5 meters that links all this compartments visually.



P - POOL

P01 - Tube with drainage - 10cm diameter.

P02 - Gutter's concrete supporting wall - 20cm thickness.

P03 - Gutter box - 30cm.

P04 - Gutter's metal grid - 2cm thickness.

P05 - Concrete wall in "beach section" finish.

P06 - Concrete's spray coating - Radcon #7 (applied on all surfaces in contact with water).

P07 - Tube with drainage - 12cm diameter.

P08 - Swimming pool's water injectors.

C - COVERAGE

C01 - Metal profile's guard 5x1cm, spaced in 10cm points and bolted to the concrete beam.

C02 - Anodized aluminium plate - 0,3cm.

C03 - Top grass.

C04 - Vegetation layer - 138cm.

C05 - Filter fleece.

C06 - Gravel - 20cm.

C07 - Enkadrain - 2cm.

C08 - Styrofoam - 14cm.

C09 - Sealing liquid film - 0,3cm.

C10 - Floor screed stroked with armor - 6/3 cm.

S - SLAB

S01 - Structure of armed concrete lighter slab - 10cm.

S02 - Alveoli filled with expanded polystyrene - 60x30cm.

S03 - Bentonite cord - fixation.

S04 - Silicone sealing.

S05 - Neoprene layer - 2,5cm.

S06 - Translucent PVC plate - 950x200cm - 20cm thickness.

W - WALL

W01 - Coffered reinforced concrete structure on both surfaces - 50cm.

W02 - Concrete's anti dripping strip.

O -OPENING

O01 - Window's folding arm in steel profile.

O02 - Anodized frame windows 150x100cm with single "Saint Gobain" glass SGG CLIMAPLUS BIOCLEAN- Specifically design.

O03 - Dripping angles concrete piece - spray coating - Radcon #7.

F -FOUNDATIONS

F01 - Slope to side of excavation.

F02 - Geotextile mat fleece - 0,3cm.

F03 - Drainage, perforated/porous pipe - 7,5cm diameter.

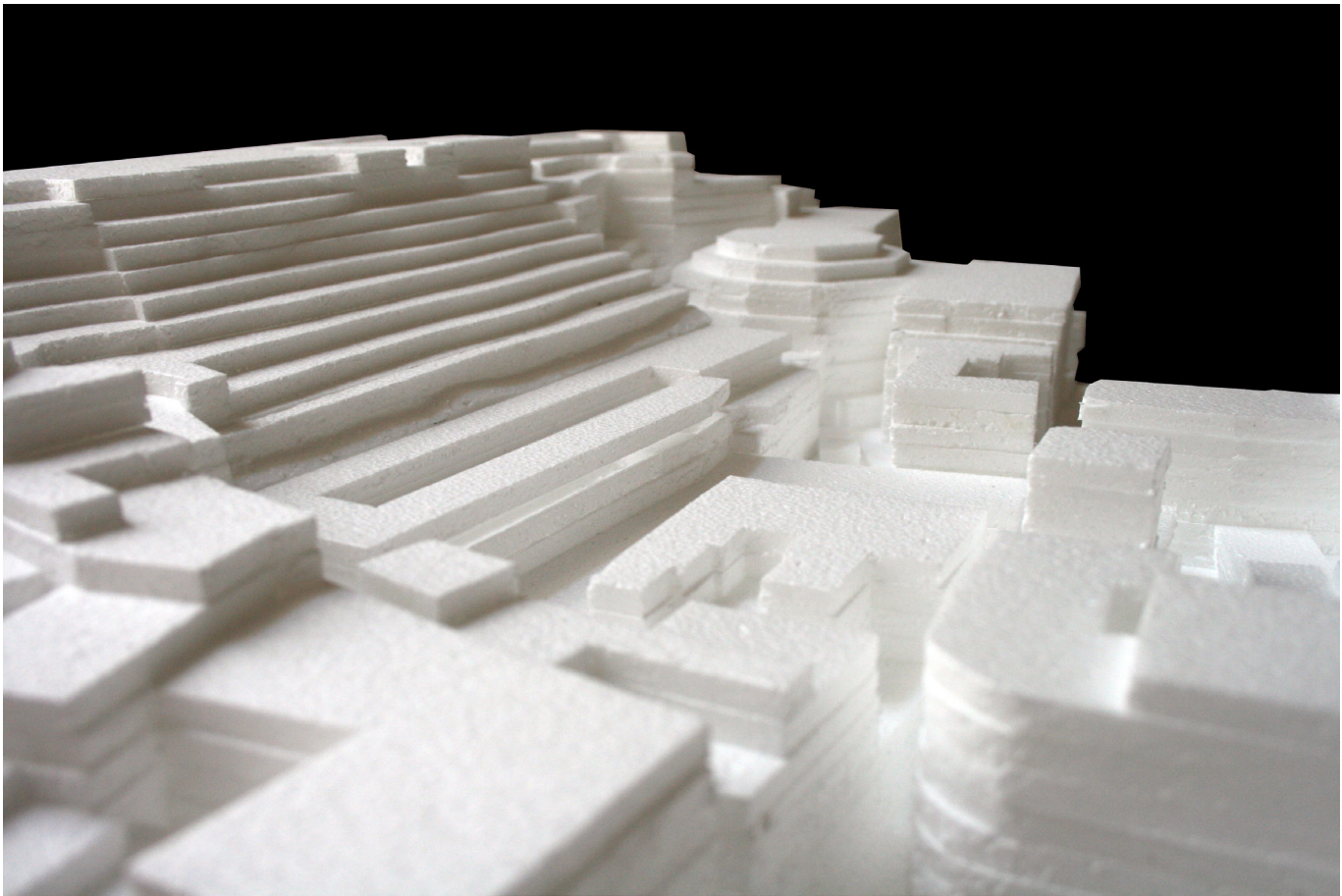
F05 - Coffered reinforced concrete structure on top surface - 50cm.

F06 - Insulation in spray polyurethan foam - 20 cm.

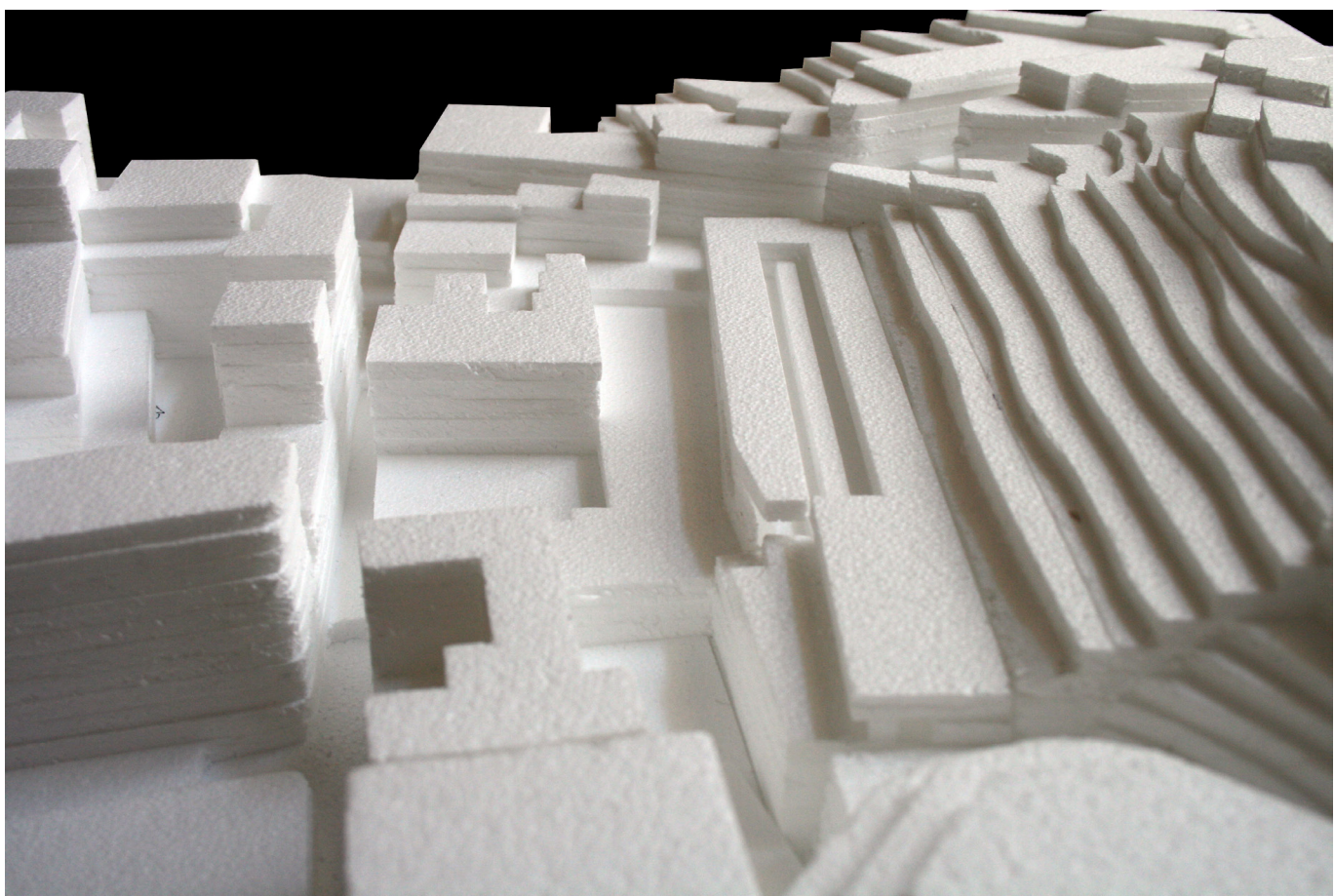
F07 - Rigging armed layer - 10cm.

F08 - Lean cleaning concrete layer - 12 cm.

F09 - "Tout venant" layer - 30cm over land.



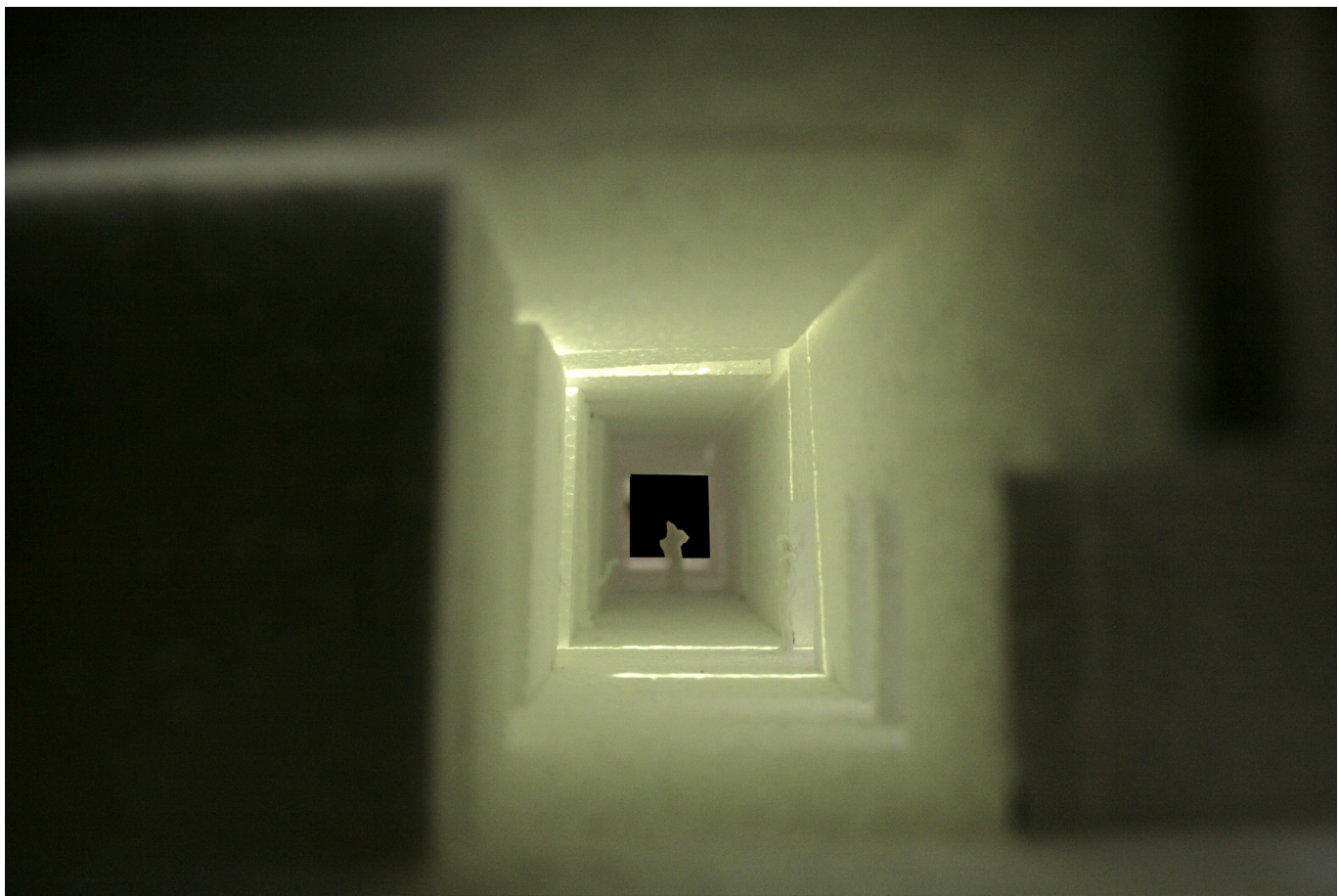
Study model. Urban concept. Scale 1:500.



Study model. Urban concept. Scale 1:500.



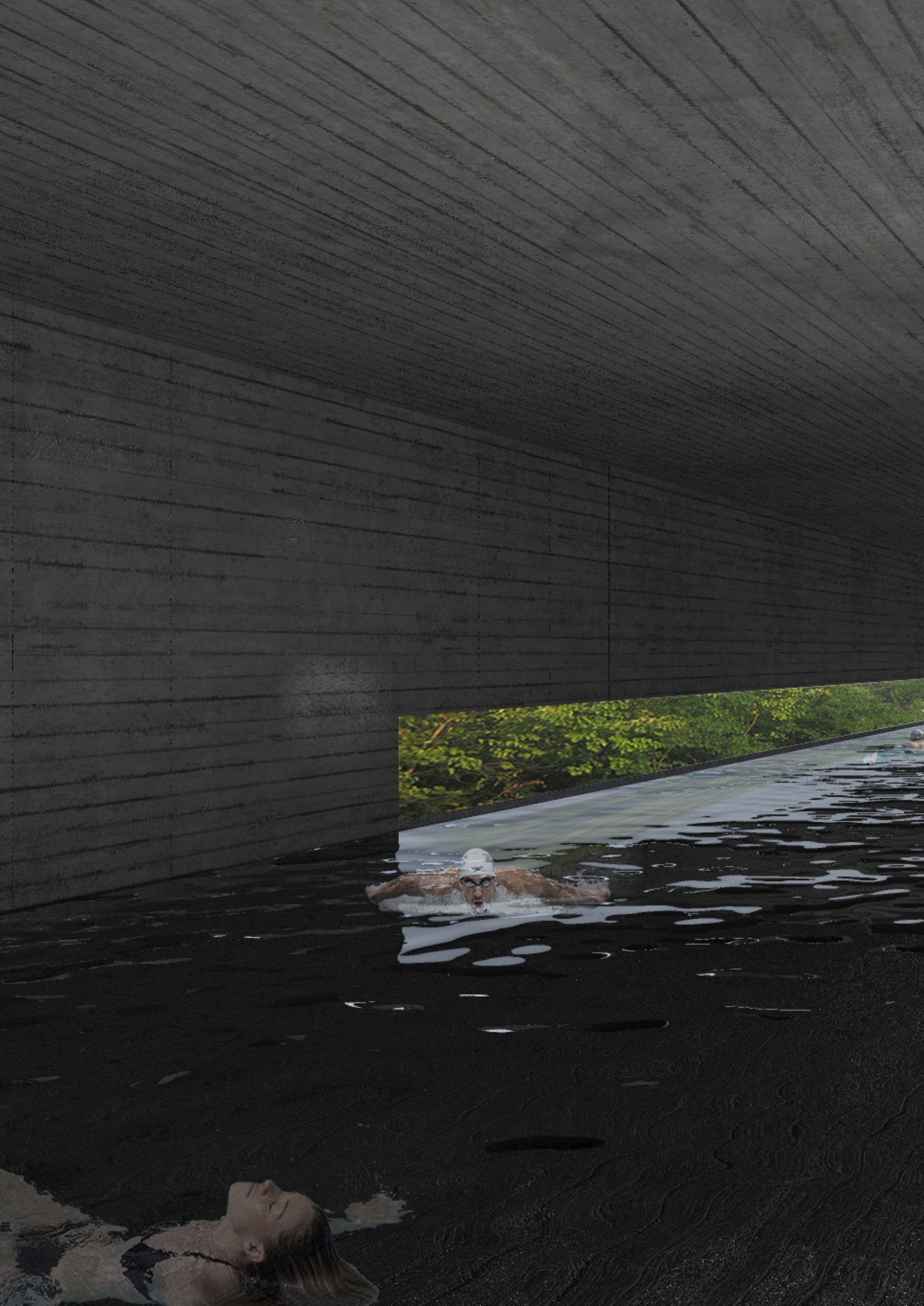
Study model. Spatial Concept. Scale 1:100.

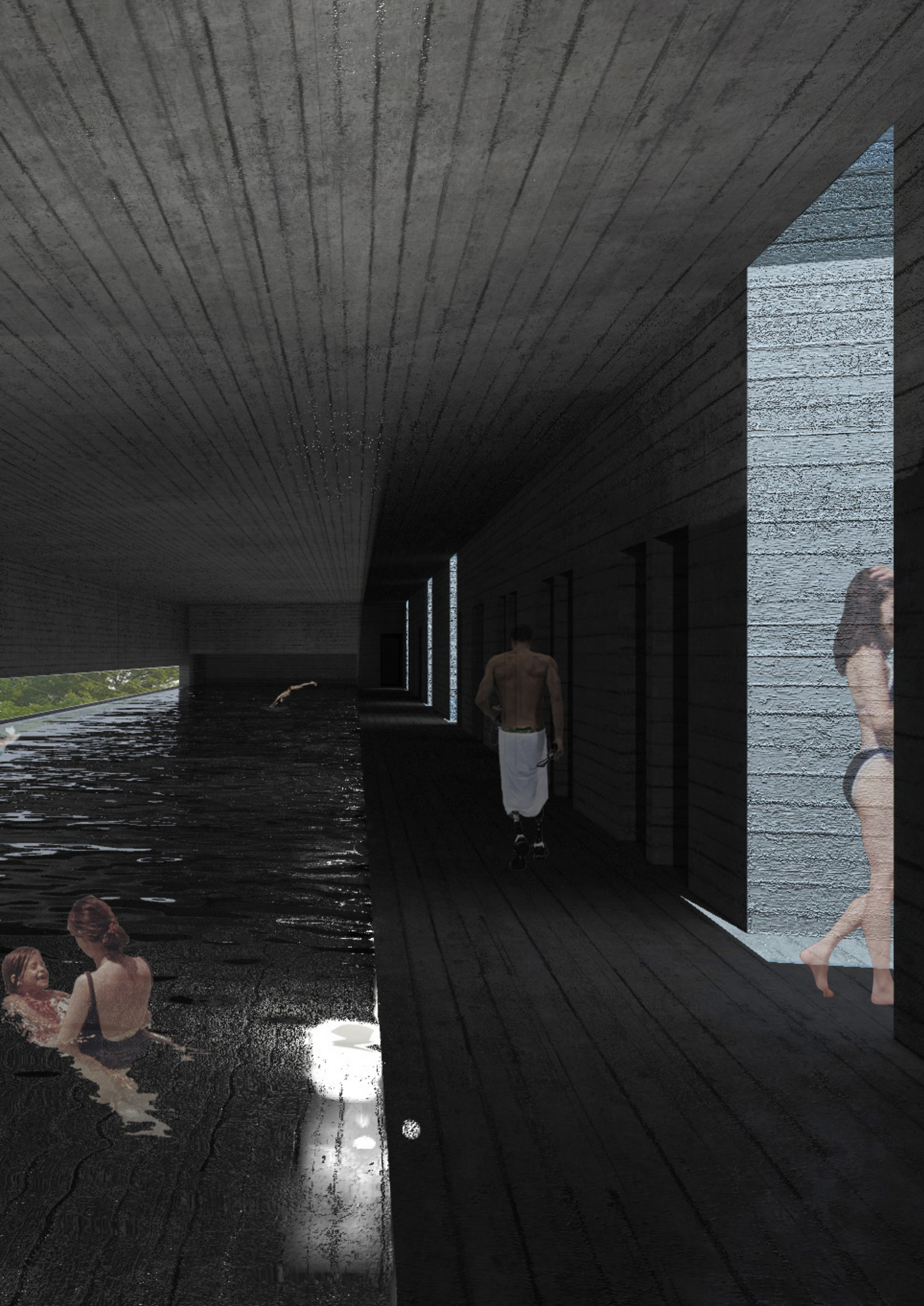


Study model. Spatial Concept. Scale 1:100.





















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NOTES.

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