Graduation Report: Federica Sanchez

Healing Landscapes

A laboratory of well-being in an ex-psychiatric Hospital in Florence

Flowscapes Graduation Studio

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Abstract

The starting point of this research is the recognition that the space in its broad meaning, meaning where we as humankinds are constantly immersed, affects our body and state of mind, for the fact that we always experience and process it through the stimuli translated by our perception. With this in mind, and looking at the environment where the majority of the population lives nowadays, the city, it is possible to understand that the built environment not always is beneficial for people's mental well-being.
The location chosen to investigate in this theme, is an abandoned area in the city of Florence (Italy), the ex-psychiatric hospital San Salvi, closed 40 years ago and left vacant for most of the time since then. It is the theater of the experiment conducted here, which aims to examine the possibility of making a derelict area attractive and aware about the spatial features humans unconsciously need to decrease the stress level and facilitate interior balance. Since we are all different and therefore these needs vary among all individuals, the method used here contemplates the fields of environmental psychology, neurology and immunology to allow first an analysis and understanding of the aesthetical preferences and physiological needs, and afterwards a translation into design principles.
The result is a project that focuses on the regeneration of the area of San Salvi, aiming to its integration in the urban flows and urban consciousness, through the planning of new functions and the design of outdoor spaces, rooted in the findings from the literature study about human's response to the built environment.

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// Introduction

1. Fascination

What more can architecture do?

"Architecture is never neutral. It either heals or hurts. Our mission is to research, build and advocate for architecture that promotes justice and human dignity."

Michael Murphy, MASS Design Group

When I started my studies in Architecture I was naively attracted by the beauty of ancient renaissance buildings in my native city, Florence. After three years of it though, I felt the need to move to a larger scale, for the importance of the impact that design interventions have on the surrounding, ecologically, socially and spatially speaking. Through my parents' practice in medicine, even though I never had academic experiences in the field, I have always been indirectly influenced by it, so much that now, at the culmination of my studies, I am going to develop my own research about the mixture between the two disciplines, Landscape Architecture and Health.
It is already well known that every built environment has an effect on our health, and also that contact with nature promotes relaxation. Not all the designers though are conscious about the importance that our work can have in the healing processes of people or just in the conservation of humans' physical and mental well-being.
It represents an urgency also for the condition of architecture today.
In an age where the aim of the major architects is to show the greatness of their technique, I feel the necessity to find a new meaning for the discipline of creating environments, where to put our energies and skills for a beneficial role. The first example that pops up in our minds when we think about "places that heal" applied to the spatial scale of landscapes, we think about healing gardens or therapeutic parks; but besides these direct translations of the connection between the two worlds, I believe in the necessity to experiment on a larger scale, meaning through invisible connections or ephemeral visualizations, if it is possible to intervene as landscape architect in order to endorse welfare, and in a successful scenario, to heal.
With this research I would like to investigate in the possibilities we have as designers, to imagine healthier landscapes, and to promote the importance this way of thinking about design should have.



1. "The Cooling Tower" by artists Madlove.

2. Problem Statement

Today the majority of the world population lives in dense urban environments that do not allow the presence of spaces to get in direct contact with nature, to promote **stress relief**. One of the problems that provokes diseases nowadays, is the accumulation of nervous tension. It can become the cause of really serious health conditions as mental disorders and cancer. The **environment** in which we are immersed plays a fundamental role for our psychological health, but the design process we as designers know nowadays, first considers the project itself, and the analysis of the human response is done only afterwards, through philosophical and psychological research. Moreover, when 'health' and 'landscape as outdoor space' are objects of design, the first spatial translation are parks where to work out and practice sports. Yet the term 'health' is quite broad, and the common usage of it refers to diseases that affect the body, but we also don't call someone that feels overwhelmed or stressed out, in good health. Thus the term 'healing' in this research refers to "a beneficial process that promotes overall well-being" (Chauhan R. & Moulik A., 2014, p.13). Nowadays the only interpretation for a mental healing kind of process, are '**healing gardens**', which are though hardly site-specific and don't have effects on the flows in the larger scale around them.
Nowadays gardens designed to enhance psychological well-being are mostly spread in healthcare facilities, i.e. therapeutic gardens for the disabled, healing gardens for Alzheimer and other dementias, etc. What is not common to see instead, are places designed to enhance our mental balance and sense of relaxation from everyday life.
The awareness of the importance of the built environment for humans' psychological health, and the consequent attention for its design is relatively new, a matter that wasn't part of the project and existence of the psychiatric hospital **San Salvi** (1891-1998), located in Florence. The knowledge of the time could only allow treatment of mental illness through physical mistreatment. Thanks to scientific studies and discoveries of last century, the healing processes adopted mainly the use of psychiatric drugs, leading to the closure of the asylums around the whole country. Today the complex of San Salvi, after 20 years from its closure, hasn't achieved any new identity, and the well-maintained buildings and green areas stand paradoxically next to decrepit and overgrown zones, where architecture and vegetation fight in disharmony.
The area of the old hospital is still a weak and invisible presence in the urban flows, and for the overall **abandonment** represents a problem for the architectural heritage and for the safety of the neighborhoods. The physical dereliction goes hand in hand with the cultural carelessness: all the socio-historical importance of the events that took place between those walls, is neglected because of the general disengagement and unawareness. Therefore, besides the urgency of a new planning and renovation for the whole area, the memory of the past has to come into play, in order to not forget what man is capable of when he is assailed by ignorance.



3. Research question

Considering San Salvi as the case study of this research, what are spatial design principles that can be translated in a place designed to heal? And as central core of this research, what is the capability of landscape architecture in urban environments to contribute to people's mental well-being?
More specifically, considering the reality of the San Salvi complex, the users would be put in contact with an environment that is not only composed by natural settings, but where these coexist with architecture, so what is the role of the experience of nature and the experience of architecture for mental well-being?

But first of all, what does "healing landscape" mean? Which characteristics define it? It comes also the necessity for a definition of the concept of landscape, in order to understand the difference between 'healing gardens' and the healing landscape that will be designed in San Salvi. It is important to define it also to conclude the impact it would have on the urban context and the possibility of the integration of a healing landscape in the flows of the city.

These questions are crucial for the definition of the site-specificity of the design. How does the concept of healing place coexist with the biography of San Salvi? Two are the layers put into play in this research, the one of design to enhance well-being and stress relief from everyday life, and the one of the renovation of an abandoned area with a specific history that needs to be known; so how do these layers blend in one project?
Does the re-use of an ex-psychiatric hospital mean site specificity for the purpose of this project?
If so, does it mean that the new healing landscapes can be designed only in this type of location?

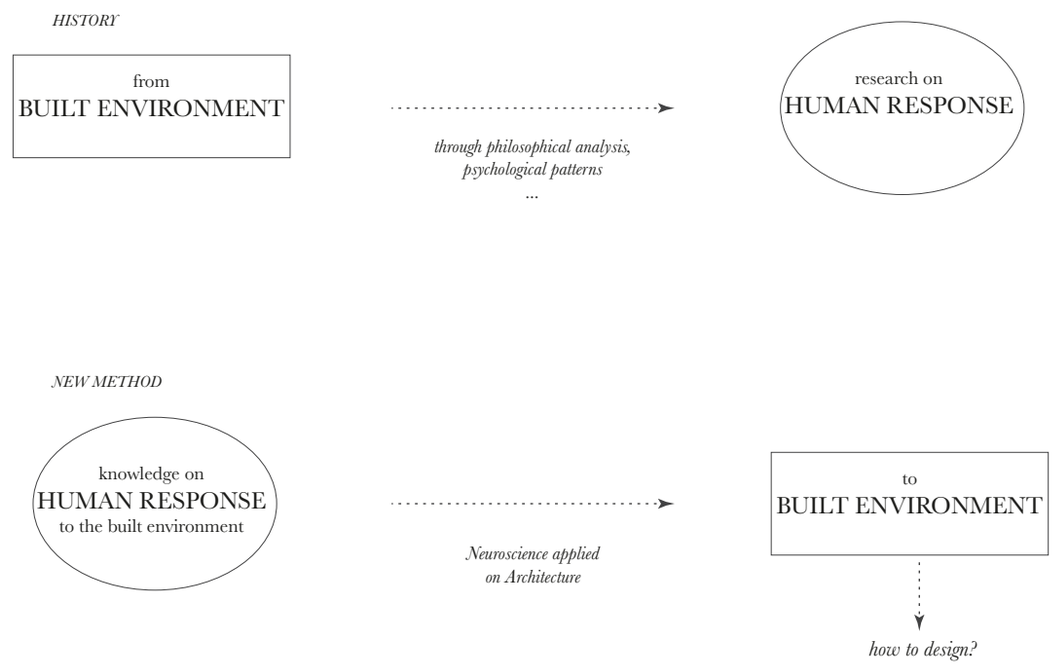
Considering the image that the population of Florence has of the ex-asylum nowadays, how can it be transformed into an attractive contemporary environment for mental well-being? What balance is needed between small-scale interventions and overall planning? For example, which programmatic changes are needed to support the new role of healing landscape? The spatial structure is a physical and abstract crucial aspect of the location, like the fact that it is enclosed by a 3 m high wall, which makes it detached from the surrounding; should that change? And how? The history of the area heavily affected the image the residents of Florence have of it, thus in order to be beneficial for them, the site needs to become a part of the urban fabric and the urban consciousness. How can that happen?

The intent of this research is to investigate in the relation between humans and the environment in which they are constantly immersed, in order to discover how to design the latter for a beneficial role, to increase their well-being. If that works, to which extent can the findings of the experiment of San Salvi site be applied to other places and finally to the whole city?

4. Methodology

Creating a theoretical background

"In order to understand what landscape is and how it affects our health, we have to address biological and ecological theories of perception of the environment. The perception of landscape is a complex scheme insofar as we participate in the construction of our environment" (Menatti, L. & Casado da Rocha, A., 2016, p.2).
Therefore, to get to useful principles for the design of spaces that can relax our mental activity, in this research the findings from Environmental Psychology and Landscape Architecture are merged, with a study of the literature to form a background knowledge for the principles of the design.
Environmental Psychology is needed because, in order to create "healing landscapes" we first have to understand how biologically our surrounding affects us, starting from the reactions that happen in our bodies with environmental changes. Because usually we as designers, design buildings or spaces, and only afterwards the reactions of the people are studied through psychological patterns and philosophy. In this research the approach is reversed, starting from the studies conducted on our response to the built environment as base of the design.



More specifically, studies from the field of medicine about the effect that the environment has on individuals and how it works are summarized, followed by an investigation on the theory of **evidence-based design**, which provides specific guidelines nowadays used in the design of therapeutic gardens or healthcare facilities, for various categories of patients (i.e. Marcus, C. & Sachs, N., 2013, Therapeutic landscapes: an evidence-based approach to designing healing gardens and restorative outdoor spaces). From this literature, a tool box of design principles is concluded. The results are abstracted in order to translate them in the design.

The conclusion of the thesis argues on the possibility of the adaptation of the principles found and elaborated in the design process for the composition of larger scales in the urban environment, to offer healthier landscapes for people's everyday life. This is done starting from the theoretical framework, that is applied to the design of the site, with successive adjustments of the principles, in a process of research by design using San Salvi as a small scale experiment.

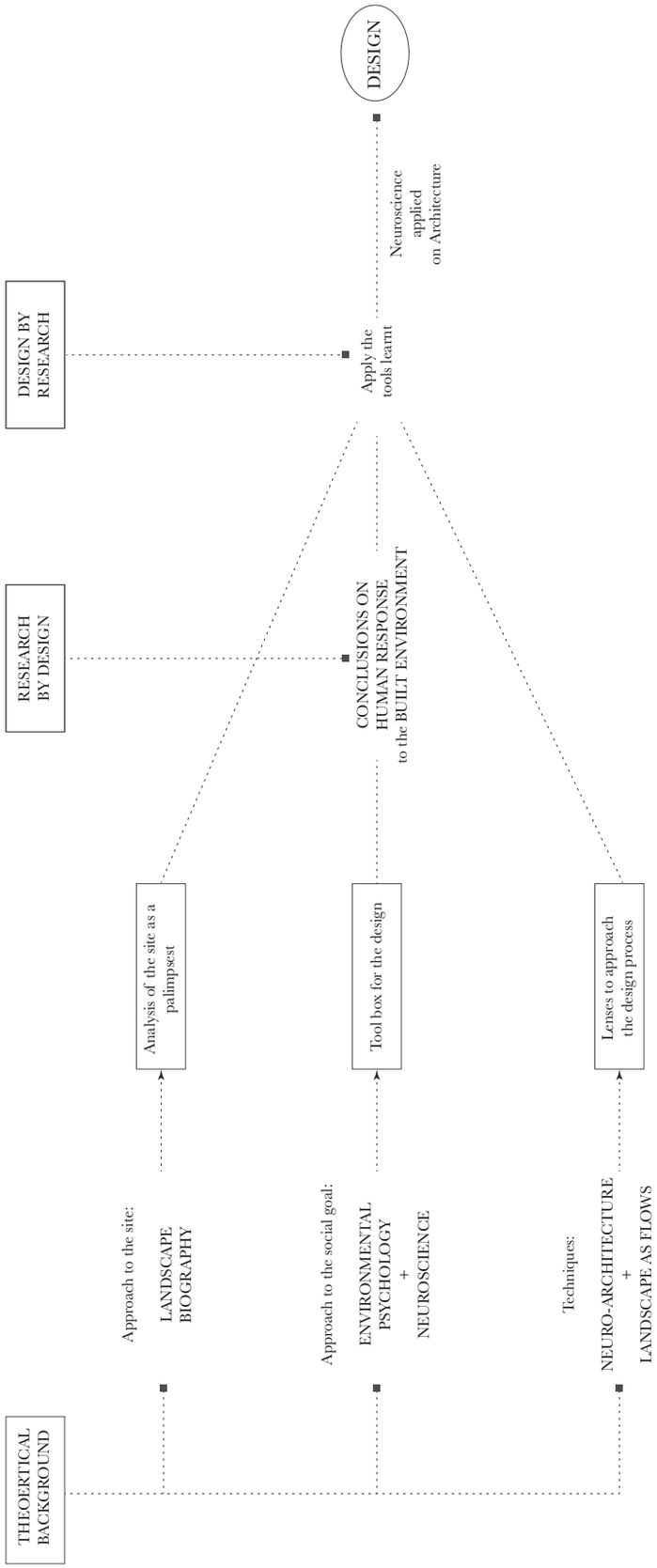
Understanding the essence of San Salvi

The location of the project has a particular and diverse past, so the analysis is done looking at it from four different points of view: landscape as a palimpsest, as a process, as scale continuum, and three-dimensional space (Nijhuis, S., 2013).
For the history of the location, the theory of landscape seen as a **palimpsest** is adopted to enhance site-specificity. San Salvi used to be a psychiatric hospital which after its closure saw many unplanned changings in the functions and an overall abandonment in the majority of the buildings and of the green spaces. This aspect is also analyzed as a **process** seen as process of transformations subject to "ruinosity" (the decaying process of landscape), which in San Salvi resulted in a paradoxical co-existence of used and well-maintained areas and totally neglected and decaying ones.
The reality of old asylum is what it is today, also as a result of its relation to the bigger scale, the city of Florence. The principle of **scale-continuum** connects the two scales to understand the role today San Salvi plays in the urban realm and the reasons why it is felt as detached from the rest of the city. This is done through cross-reference maps on the urban scale, portraying the function and the level of involvement of the complex in the city flows, taking into account the evolution and changes of the urban pattern around the location throughout last century.
At the neighborhood scale, the main public buildings, the green, blue and transport infrastructure, and the historical landmarks are shown to illustrate the potentiality of a redevelopment of the area. More closely, the site is analyzed as **three-dimensional space**: the complex is discovered through experiential sequences of perception identified standing and walking around the location. The particular spatial configuration and shape of the buildings, create many enclosed green spaces that are used for the design for the various atmospheres they offer.

The bridge from theory to design

The theoretical background together with the analysis of San Salvi, are the starting point of the design. A useful tool to get into the design flow was the making of a series of experimental **collages**, as a process of research by design. Starting from a reference project and implementing it with analogies of the location, the reshuffle of the composing elements gave a deeper understanding of how spatial changes and compositions would affect the area of San Salvi.

The bridging framework that allowed the passage from the first section of research to the second one of project, was the conceptualization of the old division of patients in the pavilions of the asylum, used as one of the layers that structure the intervention. On top of it other layers overlapped, based on the past of the location, together with the design principles to enhance well-being obtained from the study of the literature, and in particular the Reasonable Person Model (RPM, by Kaplan & Kaplan, 2005). The combination of the layers produces a gradient in the experience of the design that moves from the urban reality, outside of the walls, to the inner spaces.
Together with the design of the experience, the regeneration process of the forgotten area starts with the re-plan of the functions inside the buildings, thought in relation to the outdoor spaces next to them.



Methodical Structure

5. Reading itinerary

The first section (Introduction) of the thesis deals with the importance of an approach to design that aims to create environments that can help people's mental health. The successive chapters (Research, 1) deals with the explanation of what Healing Landscapes are, and where and how the already existed.

To complete the theoretical background, an investigation in theories of medicine, Environmental Psychology and the Neuroscience was conducted (Research, 2). A crucial moment in the process of the thesis was the location choice: an old psychiatric hospital with a rough history, which after its closure saw a constant and unplanned overlapping of functions that didn't give it any relevance in the flows of the city, besides a general state of physical abandonment, as shown in chapter 3, Research. In the following chapter (5, Research), a more zoomed in analysis is given, based on the sensory component, useful to define the green spaces where the "healing gardens" are designed.

The third section (Design Principles) highlights projects that are based on similar features to come up, in combination with the theoretical conclusions, with a tool box essential for the design.
In parallel to this (Experiments), some experimental collages are shown, which helped to try out various combinations of spatial translations taken from reference projects.
With the design principles and the conclusions from the experiments, the design is made, starting from the concept to materialization, plan of new functions and construction of a new perceptional experience (Design).
The design stage is followed by conclusions and reflection.

1. Healing Landscapes: an overview

1.1 What "Heal" means, and its application on "Spaces"

To Heal.

Since 500 B.C. the ancient Greeks constructed the asklepieia, sanctuaries for the recovery of the sick, dedicated to the God of healing arts Asklepios. In the cult of Asklepios, happiness, well-being and health were considered inseparable (De Wit, 2014), which is a more holistic view of what 'health' means in our contemporary society. "Traditionally, discussion of health has focused on disease" (Kaplan R. & Kaplan S., 2005: 273), but we don't even call one healthy if he/she is always irritable or feels particularly stressed or overwhelmed, which means that good health doesn't mean only lack of illness. Therefore, "good health means feeling effective, being clear-headed and resilient." (ivi)

As Ester Sternberg describes, while 'illness' and 'health' are nouns, healing is a verb. It indicates a movement in a certain direction, that leads from being sick to be healthy. "There are as many kinds of healing as there are cells and organs in the body and diseases that can affect them, but what they have in common is that they all involve restoring the body to a state of balance." (Sternberg, 2009: 34) If we think this way, we would understand that healing is a constantly going on process: since we are living, with every action we take we are also buffeted, affected in different ways, both physically and mentally.



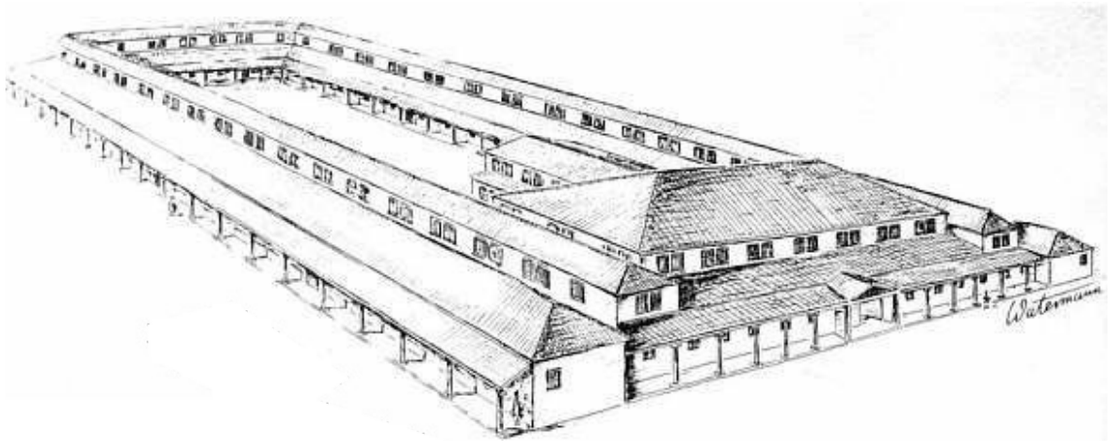
If the healing process afterwards every hit fails, it will lead in the worst case to death. "It's like walking up a down escalator. You must keep taking a step up in order to remain in the same spot. Health is that spot and healing is the perpetual march you must make to stay there." (Sternberg, 2009: 15)

2. Warrior and Family Support Center Therapeutic Garden, Washington D.C.

most known healing landscape is open nature: it is well known that what promotes relaxation and stress relief is the contact with nature, indeed what we today call 'Restorative Gardens' were already existing at the time of the ancient Romans, as central feature of the hospitals, to allow a faster recovery process.

Today more than ever, because of the stressful ways of working and living in the urban environments people would need that contact with nature to simply support our mental balance.

But what if we apply the same principles of the Snoezelen room to the big scale of the urban landscape? Those are designed for disabled people, but what if we change the goal to the decrease of mental fatigue?



4. Roman 'valetudinarium'.

1.2 History of outdoor spaces in healthcare facilities

In order to clarify the direction of the project it is necessary to go through the connection between health and landscape meant as outdoor space in the past, to investigate on how they have been thought to be related and how this relation changed throughout history.
The landscape had an important role for the healthcare institutions since the ancient Greeks, who included in the realm of gods, Asklepios, as the God of healing arts. In the cult of Asklepios, well-being, health and happiness were deeply bounded. As for the other Gods, the Greeks had temples consecrated to him, called "asklepieia", which were constructed open to the sun facing an enclosed courtyard.
Another development of this category of outdoor spaces were the Islamic Paradise Gardens, "chahar bagh". Designed in Persia, they were conceived as oasis of rejuvenation in a hostile environment, suggesting the idea of paradise described in the Koran. The gardens were divided in parts by walkable paths and water streams, to allow a mental and physical restoration through the induction of contemplative states of mind. (De Wit S., 2014)

During the Middle Ages in the area of Europe, restorative gardens were realized in hospitals and monasteries, represented as arcaded courtyards, where the patients (sick, insane and infirm were often hospitalized together) could enjoy the sun or the shade or find a shelter in an enclosed setting.
In the XIV and XI centuries, socio-economic circumstances such as the lethal spread of the plague epidemics, crop failures and heavy migration flows towards the cities, overwhelmed the existing facilities. The consequence of these events was a decline in the medical provision given by monasteries, which was followed by a regression of the importance of the restorative gardens. From that time the study of medicine achieved constantly new improvements, but with a step backward in terms of the environment dedicated to patients and staff.

With the rise of Romanticism and the gradual progression of scientific medicine, during the XVII and XVIII centuries, the whole idea that the outdoor environment had a beneficial impact on sick bodies started to be considered again. The knowledge that infections spread more easily with noxious vapors and lack of hygiene, brought e new type of buildings composition, the so called pavilion hospitals: they were organized so that the outdoor spaces could be incorporated in the wards, allowing cross-ventilation and fresh air inside the complexes. An example



5. The courtyard of Ospedale Maggiore (1458), today State University in Milan, Italy.



The terraces of Banti sanatorium in Florence, Italy. Photo by the author, October 28 2017.

was the treatment of tuberculosis: the key was the location and orientation of the sanatorium, since it was thought that fresh and clean air, and sunlight were essentials for the healing process (i.e. Banti sanatorium, 1939, see image X).

During the late XVIII and early XIX centuries we see a radical change also in the treatment of mentally ill patients, with the rise of psychiatric hospitals. It was the starting of a two hundred years process towards the replacement of physical punishment as the core of the treatment, in favor of psychological support (more in the next chapter).
Especially for this typology of hospital the landscape was an important element: vistas were set to provide therapeutic experiences. The asylums were often located in peripheral areas, distant from curious looks and even more separated by planting and high vegetation. Land maintenance, gardening and farming became a constant component of the therapeutic procedures.
After the first World War, gardening was a usual rehabilitative activity in all the hospitals, and after the second World War, "special-purpose garden facilities" with horticultural programs were designed for veterans, elderly, and the mentally ill. Some facilities began to recognize the importance of outdoor spaces in the recovery process of patients.

The twentieth century though, is the most intense in terms of social changes, and the rapid development in technologies, transportation and communication implicated a fast-moving society. In terms of urbanization and architecture, the cities became more and more populated, and the demand of efficiency led to the replacement of low-rise pavilion hospitals with medical complexes, with a consequent loss of the garden. The hospitals were pushed by the insurance companies to induce shorter recovery periods, which worked against the presence of gardens in the complexes.
Therefore in the late XX century, the hospital garden became an ignored amenity, together with the awareness of its possible restorative benefits for a world of "high-tech machines, expensive drugs, and increased medical specialization" (Marcus, C. & Barnes, M. ,1999:15).
The feeble presence of gardens in hospitals today is sign of the loss of the idea of connection between mind and body in illness treatment, in strong opposition with what the cult of Asklepios was based on. The value that a garden can have in the rehabilitation of the psyche together with the body is difficult to quantify and to prove, but latest researches started to examine again this connection, elevating the importance of indoor and outdoor spaces in the maintenance of well-being. (Marcus C. and Barnes M., 1999, p.10-17)

1.3 Types of Healing Outdoor Spaces

As explained in the previous subchapter, it is clear that the garden has always been part of healthcare facilities. Still it is possible to abstract the garden from the limit of the hospital and consider it as a public space. Then even though everyone perceives the space differently, it can be categorized depending on the use people do of it, basing on two different and coexisting layers: one is the degree of action or non-action that is conducted (de Wit S., 2014), and another one is based on the kind of emotions and feelings that are sought through the design (Chauhan R. and Moulik A., 2014).

The first group is composed by three different typologies of use: **active**, **social**, and **passive**. In order to illustrate their characteristics and dissimilarities, these three typologies are linked to the medieval gardens.

1) The ***active gardens*** are places that encourage active movement, and are expressed by the Hortus Catalogi. The space follows a coherent hierarchical organization, and the plants are the core of the composition: they are placed in separated beds according to similarity.
The clear precise organization reflects the psychological need that has always been present in the man to understand what is happening and the composition of the world that is surrounding him. This aspect was as important as the one of productivity: in the Middle Ages there was the belief that active manual work of gardening could guarantee a place in paradise; later in the centuries, it was proved that this kind of action is commonly beneficial to the feeling of self-esteem and satisfaction. ([Kaplan, Kaplan, 1995] more explained in the chapter about Environmental Psychology and RPM).
Today in these gardens, the function is an important starting point for the design, and especially in healthcare gardens, they can vary for the physical limitation of the users, for example the one for blind people will have different features from the one for people in wheelchairs.



6. Cistercians working in the field, by Jörg Breu, 1500.

2) The ***social gardens*** can be expressed by the Hortus ludi, which means 'garden for play'. It was a place where visitors could dance, discourse, bath, play, enjoying the qualities of being outside with the safety of the home, spending in an enclosed space, which could give the feeling of being detached from the surrounding world. It was experienced as a place of delectation, in which smells, sounds, taste and touch played a role side by side with the visual aspect, for the presence of colorful vegetation, scented flowers, water, fruit trees.



7. The little garden of Paradise by Upper Rhenish Master, ca. 1410–20.

3) The ***passive gardens*** are linked to the Hortus contemplationis. This garden was developed in monasteries, hearts of culture and erudition. Since these complexes were self-providing, the walls surrounded many gardens with different functions: vegetable, herbs gardens, orchards, etc.; but at the center was located the hortus contemplationis, a garden with no specific function, that was seen as an oasis, detached from the busy monastic life. "The miniature world of the garden is a reflection of the spiritual harmonious world, as well as a sublimation of the earthly landscape, and stimulates thought about human existence." (de Wit S., 2014, p.3) In this case, not the experience of the space but the associations that the garden itself evokes, are the key of the design. Therefore, it is used for example in healthcare facilities that treat dementia, for their capacity to evoke memories and experiences from the past, and constant sensorial stimuli in the present.



8. Giovanni Boccaccio, ca. 1468. Emilia in her garden, Plate 22, from 'La Teseida'

Another categorization can be done looking at the **purpose** these 'Healing outdoor spaces' have. Therefore the second layer includes the Restorative Gardens, Healing Gardens and Therapeutic Gardens (Chauhan R. and Moulik A., 2014).

1) ***Restorative Gardens***. In "Restorative Gardens", Nancy Gerlach-Spriggs, describes the restorative garden as a place meant for the healthy as well as the sick. "For the healthy, such gardens encourage sociability among companions, promote relaxation and contemplation for the solitary visitor, or create a sense of community among residents who live in quarters around the garden. For the sick of body or troubled in spirit, the same garden relaxes and soothes and thereby encourages the body and the mind to restore themselves" (Gerlach-Spriggs ,1998).

2) ***Healing gardens***. According to Roger S. Ulrich, "a healing garden refers to a variety of garden features that have in common a consistent tendency to foster restoration from stress and have other positive influences on patients, visitors, and staff or caregivers" (Marcus, C., & Barnes, M., 1995).
More specifically, regarding the term *healing*, Marcus and Barnes stated in "Healing Gardens" (1999, p.3), that "is quite broad and generally refers to a beneficial process that promotes overall well-being." This hue of the meaning of the verb 'to heal' is central in this research, and is the aim sought in the design.

3) ***Therapeutic gardens***. These gardens are often used in healthcare facilities, and are specially designed for the disease that affects the patients. They would indeed, depending on their illness, have the opportunity to work in the garden to reduce stress and to help the recovery process. For example, vegetable gardens are useful for those patients who need to improve their motor skills. Thus "therapeutic" suggests that the garden stimulates the user to work to achieve a goal.

3. The analysis of the Ex-psychiatric hospital San Salvi in Florence

The ex-psychiatric hospital of San Salvi is located in the city of Florence, and it is one of the most impressive examples of healthcare planning of the XX century in Italy. It is a complex that occupies 175.000 m2 of the dense pattern of the city, and it is composed of 32 buildings, where the inner ones are organized with a symmetrical order. The whole is enclosed by physical boundaries, varying in intensity from high walls to lower fences, which enclose and separate San Salvi from the rest of the city. The asylum was designed in 1890 by the architect Giacomo Roster, and it was inhabited by more than 3. 000 patients in the 108 years of its existence. After its closing, the whole area was left in a state of abandonment, witnessing soon an inescapable process of decay.
To grasp the identity of the location from its past to its condition in the present days, the analysis through the four principles of landscape architecture (Nijhuis, S., 2013) was conducted.

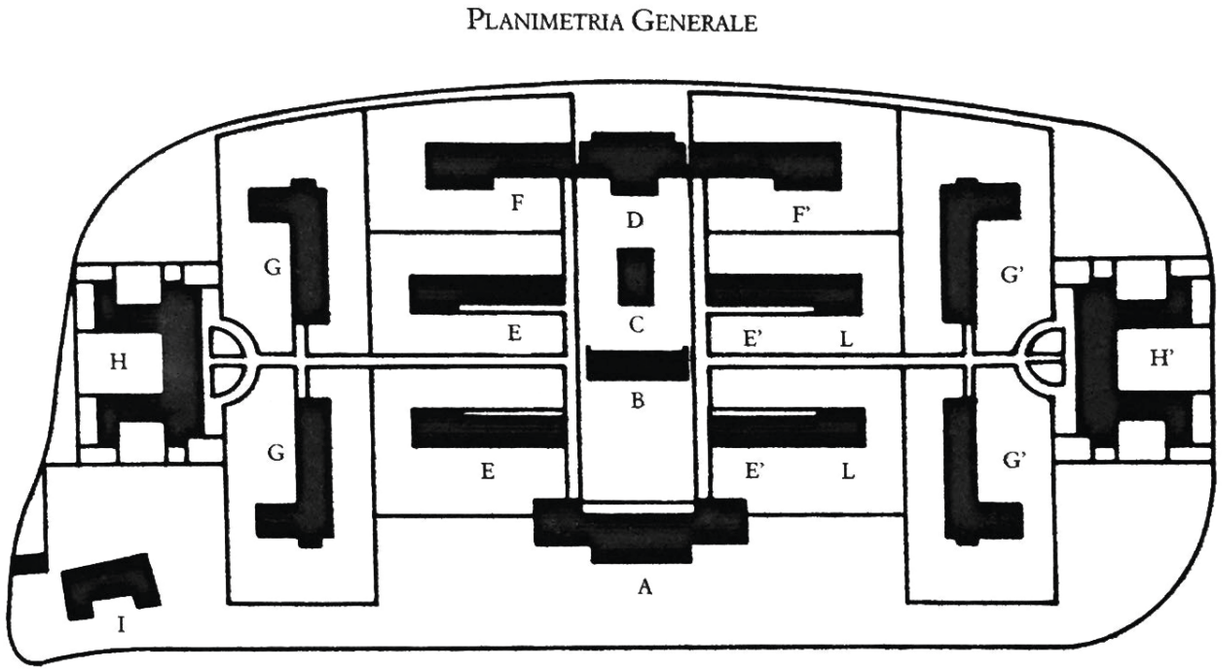
3.1 Landscape as a palimpsest: history of the location

The establishment of a psychiatric hospital in Florence in 1890 has been an event of both historical and social importance. It was a project of an ultra modern facility all dedicated to the treatment of madness.

"*Anche la colta e gentile capitale della Toscana ha un nuovo e grandioso manicomio...*" "Now also the cultured and gentle capital of Tuscany has a new and grand asylum…", wrote Dr. Algeri in a magazine specialized in nervous diseases.
For the choice of the location, at that time, as already mentioned in the previous chapter, the psychiatric hospitals were always placed far from the center of the city, therefore the area called San Salvi was suitable for the construction since it was "not too far from the city and the ground is healthy and dry, reach of potable water…" (Tamburini, 1885).
San Salvi, name that is still popular in the city, was a French saint (VII century) to whom the monks consecrated their convent located next to San Michele's church, adjacent to the asylum. In 1924 it was named after Vincenzo Chiarugi, a doctor who wrote a famous treatise about madness. And in the new psychiatric hospital his theories were respected, in particular his idea that the insane should be inserted in an artificial facility, as much orderly and rigorous as possible, so that it could fight the mental illness seen as "chaos of passions". On the other hand, the psychiatric hospital was also a way to defend and protect the society.
This kind of approach was common in the structure of psychiatric hospitals. Historically indeed, the architecture of these facilities has always been bound to the rules of psychiatric patients' management, basing on the idea that the physical structure of the facility could have a specific therapeutic role: the asylum, born as the only solution to mental illness, had an important role for the knowledge, classification and management of the insane.
Every element inside the walls had to be designed on precise rules, organized on scientific principles which would respond to certain therapeutic conditions. In this context, the furniture, the buildings structure, the organization of the space and the distribution of the various activities had a high therapeutic value.



10. Map of the city of Florence and surroundings, the year before the construction of San Salvi



A. Management and Administration offices
B. Main building (general services, kitchen, etc.)
C. Steam generators
D. Church and Laundry

Male area:

E. Tranquil pavilions
F. Invalids and Paralytics pavilions
G. Semi-disturbed, Dirty, Epileptics pavilions
H. Disturbed pavilions
I. Care homes
L. Children Section

Female area:

E'. Tranquil pavilions.
F'. Invalids and Paralytics pavilions.
G'. Semi-disturbed, Dirty, Epileptics pavilions.
H'. Disturbed pavilions.
I'. Care homes.

11. Masterplan of the asylum of San Salvi, 1891.

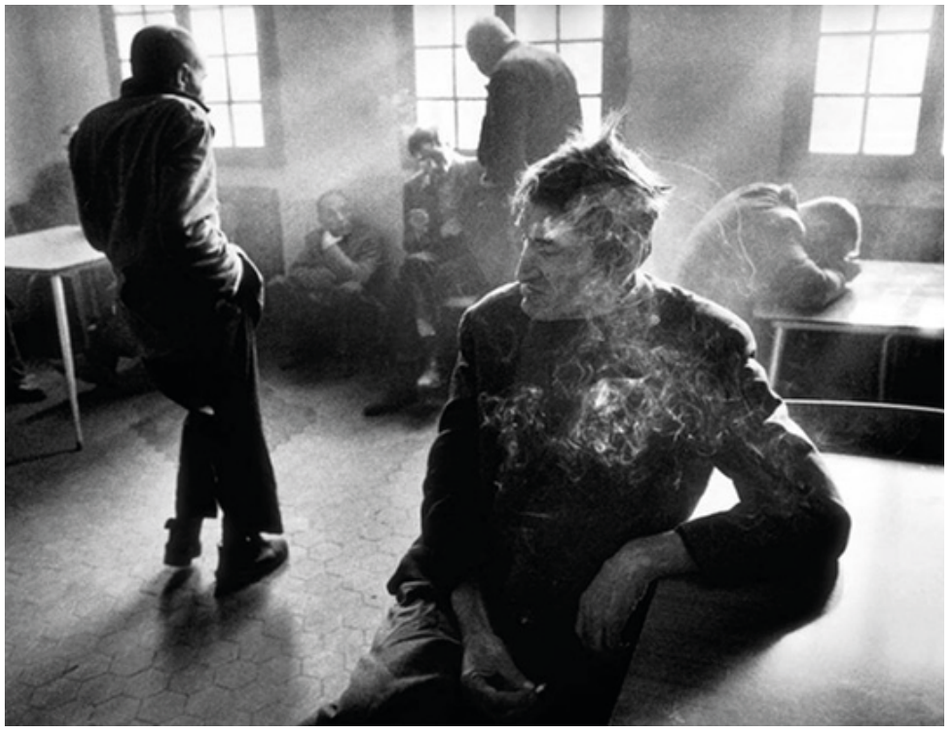
At the beginning, the premise to this action was the criteria of separation: the space was organized in order to guarantee **isolation and reclusion**, and therefore the patients were divided in two opposite areas, one for women and one for men. This practice though, showed its limitations soon, since it was proved that when patients afflicted with the same disease were living together, they could tend to heal.

So the previous gender division, was substituted with a behavioral division, between the 'Calm' (Tranquilli), 'Semi-disturbed' (Semi-agitati), 'Disturbed' (Agitati). Basing on this "principle of sociability" (principio di sociabilità), the asylum was built as a **miniature city**, and it physically had, in a small scale, certain structure as places to meet, walkable paths, dining halls, laboratories, farms.
The doctor together with the architect, would have the duty to choose the facility and the organization of the spaces; the optimal typologies of that time was considered to be the panoptic, and the pavilions complex, which could though be changed for a better solution.

In between the elliptical shaped walls, the buildings were enclosed, reflecting a rigid composition: the shorter axis of the ellipse is composed by directional and managerial buildings; this axis is connected to the six pavilions, three on the east side and three on the west side, symmetrically organized. In the focuses of the ellipse there are two units which follow a north-south direction, and which enclose a green space.Every pavilion was surrounded by small squares and walkable paths: a network of galleries and loggias connected the buildings of every section, giving access to the ground floor.
On the first floor, terraces run on the arcades and end up in every pavilion, except for the 'Disturbed' two, and it was used for the wardrobe and for the night monitoring(/surveillance?) by the psychiatrists and as access to dormitories for the doctors, directly from their residences in the main building.

From the basement of building B access was given to underground galleries, which connected again the whole complex and contained the steam pipes for heating and potable water.
The San Salvi complex was not subjected to big changes, just some addictions for different activities. Two wings have been later constructed in the 'Disturbed' pavilions (H-H'); a new kitchen was built in the back of the main building, two new care homes for 65 patients each.





12-13. Photographs by Raymond Depardon. The photographer was in contact with the psychiatrist Franco Basaglia, who asked him to take photos around the asylums of Italy, saying “if you don’t do it, they won’t believe it”.

Patients treatement

It is clear how cure and detention have fragile boundaries in this context. Enclosing a miniature city between those high walls, was synonymous of exclusion for the ones who were kept inside, who were also forced to obey to the internal rules. More specifically, even the institutional laws contributed to exonerate the patients from their own individuality: in 1904 indeed, the law on 'the insane asylum and mentally ill people Disposition' ('Disposizione dei manicomi e degli alienati mentali') deprived them of their civil rights. Madness was conceived at the time as contagious and obscure wickedness, which offended the societal morality, not available to understand its contradictions.

"Danger" and "scandal" were introduced in the admission rules, and it allowed to check in the hospital (which meant segregate) even those who were not suffering from mental diseases at all, but were just problematic for their families or outsiders of the society. Therefore, poor people, homosexuals, political dissidents, young mothers were all accepted in San Salvi. Written and oral testimonies tell about those traumatic experiences. For many years the patients have been living in big rooms with barricades and locked, they could stay outside for couple of hours in small fenced areas and supervised from the above of the terraces by the psychiatrists. Only the calmest could work, but still it was not conceived as a civil right, but as a cure praxis, called "ergotherapy" ("ergoterapia"). The patients capable of help, were employed by the nurses to carry out manual jobs inside and outside the wards. On the one hand it was mistreatment of patients with the excuse of helping them with ergotherapy, on the other the sick could move around and meet new people.

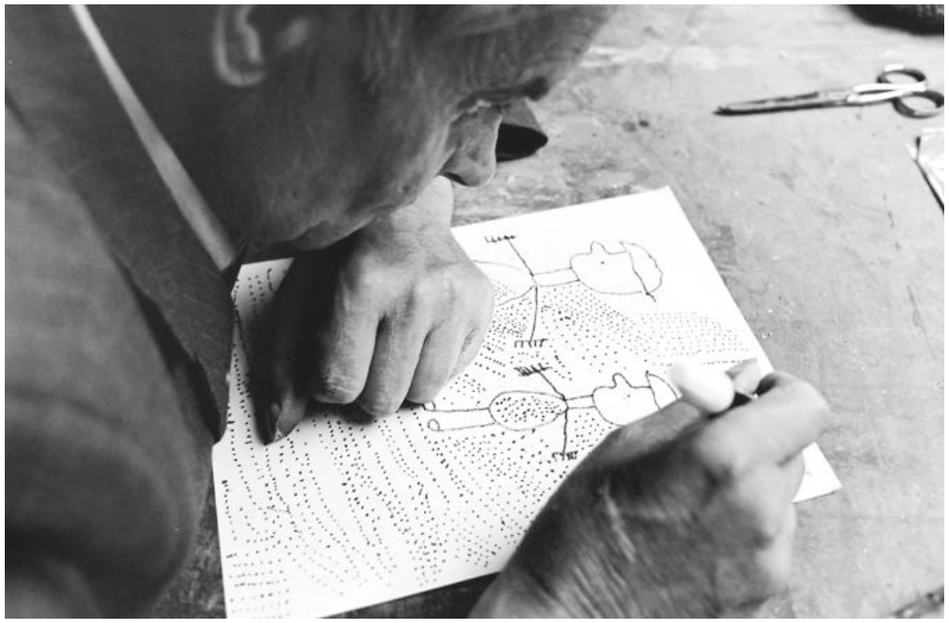
In the '50 of last century, the treatments consisted of torture. Electroshock, malaria therapy, insulin therapy, lobotomies, were examples of it. The revolutionary atmosphere that was raising in many parts of the world during the '60, as a socio-cultural phenomenon that involved mass movements of heterogeneous groups against socio-political prejudices, facilitated the closure of all the insane asylums in Italy (not in the rest of Europe).

The closure and the abandonment

In 1968, with the Mariotti Law ('Legge Mariotti'), mental illness was not considered as a crime anymore, and the admission in the hospital was only voluntary. Ten years later, in 1978, the Law 180, known as the Basaglia Law ('Legge Basaglia'), ordered the definitive shutdown of the asylums all around the country. Franco Basaglia (1924 – 1980) was a psychiatrist and neurologist that fought for the claim of the civil right for the insane, therefore providing for their liberation since the treatment in the asylums was similar to a prison.

Yet, many years passed in Florence and in the rest of the country, for a complete disposal: San Salvi was officially closed in 1998, when on the December 13, the last patient left the complex. In these last years the treatment were less violent and new therapies were introduced, such as gardening, painting and manufacturing. Nowadays these relics are still in the complex piled in the abandoned buildings. The sectioned were released in the city and some medical equips worked for the rehabilitation and adaptation to their life "outside": every sick person was reintegrated in his/her family, or in small apartments and in group homes. They could live there autonomously with the support of a medical equip.

The medical director of San Salvi at that time, was doctor Carmelo Pellicanò, whose dream was to first finally close the hospital, and then to "***let the city enter***" in between the walls. Therefore, he made an agreement with the theater company 'Chille de la balanza' (founded by Claudio Ascoli in 1973 in Naples, and moved to Florence in 1985), giving them the permission to settle their entire company in one of the pavilions, as long as the complex would become a cultural hub. Since then, the theater company has constantly been trying to involve students, artists, ex-patients, and more in general the citizens of Florence, in activities and performances aiming to keep the memory of the terrible past alive. When they moved in, there were only two offices established inside the walls, while the rest was abandoned. In the following years, different were the opinions in the municipality about the new functions of the buildings, and the leading idea was to make it a space for social use: a new campus for the university, a facility for the integration in the society of immigrants and the outsider of the society. These intentions gave rise to numerous speculative intents by large companies, which encountered a wide opposition made visible by Chille de la balanza: in 1999 they started what they called 'Passeggiata' (Stroll), a narration about real happenings in the psychiatric hospital that they performed in 17 ex-asylums around Italy[1]. What also helped was the coalition with the authority of the cultural and artistic heritage: in the last years of its existence, the asylum became also a place for artistic expression for the hands of the inmates, who mostly painted, drew, and made murals on the external walls of some buildings, which today are preserved as cultural goods.
These events made the popular conscience slightly more aware of the problem of



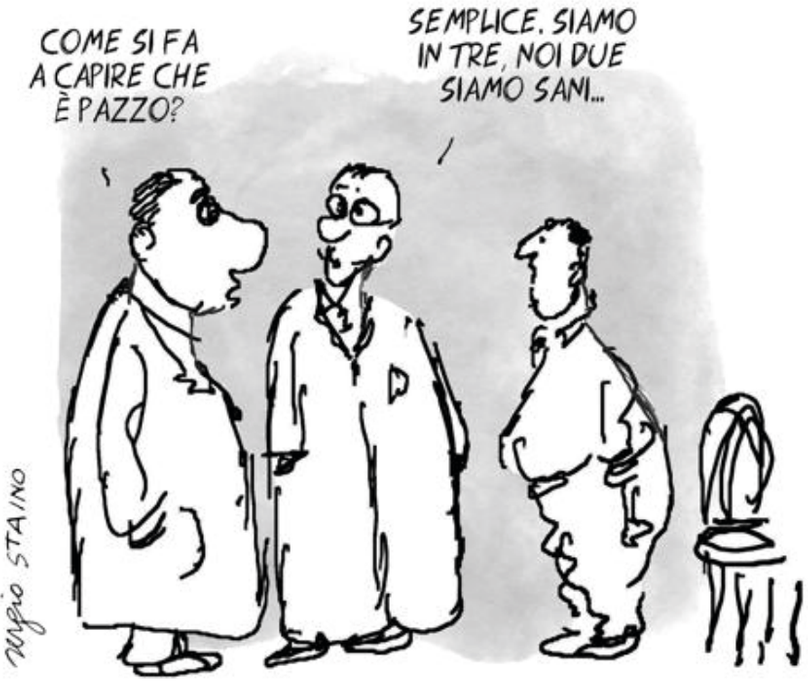


14-15. Photographs of San Salvi in its last years as asylum. On the right a patient drawing, on the left patients learning crafts.

San Salvi, engaging mostly the elderly; young people were less interested in the matter, or they trusted the municipality would have done the best thing. In the first decade of 2000 the intact buildings of San Salvi have been occupied mostly by the A.S.L., the health authority of Florence, with its offices and clinics, and by the police, for the training of policemen and drug dogs. A serious contradiction was invading the complex in an apparent moment of restart, since while the policemen were training dogs to recognize the smell of drugs, in the abandoned buildings in the area that confines with the Giardini del Mezzetta (Mezzetta Gardens), there was a big group of drug dealers who occupied the edifices, working on a drug business extended on international level. There were no captures until one of the delinquent shot a policeman; finally they were all incarcerated, and in order to avoid other groups of criminals or homeless to occupy the derelict edifices, the roofs were removed and the windows filled in with concrete, making them unlivable and inaccessible.

Nowadays the area San Salvi is still scarred with a character of marginality, not even scraped by the many renovation plans. It is a symbol of marginality caused by its past, but even more dramatized by the disadvantage of the mental illness.

[1] Interview to Ascoli, C. (leader of Chille de la balanza theatrical company), 22/03/2018. Interviewed by the author [in person].



"- How can we tell who is mad?
- Well, we are three, and the two of us is sane, so…"

16. Drawing by cartoonist Sergio Staino.

The Basaglia Law

With the 180 Law (Legge 180), known as Basaglia Law, on the 13th of May 1978, all the sectioned patients of the asylums in Italy were freed. A condition that gave them dignity, becoming citizens, part of a community. Although not all of them could still walk around the streets of their city: the ex-patients with more serious illnesses who could be dangerous for others, moved to psychiatric department of hospitals, not surrounded by walls, considered to give more freedom to the patients and where the treatment was less violent, substituted with psychiatric drugs. The others, with less severe sickness, were sent to communities where they could receive help by nurses and volunteers or in the best case, they could live with their family.

Unluckily, the law was not enough to accept the presence of people with mental disorders in the society by common citizens, and even by the families, who in many cases did not welcome their relative at home. That is also the reason why in all the facilities it took many years after the law, for all the patients to actually leave. Obviously the idea that they could be dangerous, act strange without reason, did not change from one day to another because of a law. A slow process of acceptance and integration started, that still today is not completely solved.

From the architectural heritage point of view, out of 45 old asylums around the country, today after 40 years from the le law, 13 are still partially abandoned and 5 completely derelict. The ones that saw a renovation are used for public functions, and mostly for healthcare. The difficulty in the restoration of these complexes, which have all the same features as San Salvi (surrounded by a wall, immersed in the green, with scattered pavilions), is that they were designed for specific functions and then emptied of that function for good, and most importantly because of an economical reason: in most cases they are wide areas with many buildings representing an exorbitant investment for the renovation and the maintenance that the municipality has to take care of. And that is what happened in San Salvi, the municipality never found investors willing to buy the whole area and therefore it focused only on some buildings necessary in a specific moment.



Abandoned old asylums in Italy.

The city's expansion

At the moment of its construction, San Salvi was located far distant from the walls of the city of the time, therefore from the inside it was felt as another reality, completely disconnected from the urban one. That is also the reason at the base of the subdivision of the pavilions with the most dangerous patients located at the edges of the circular complex. Logically, they should be put at the closer to the center so that they can be controlled more easily, but there was no reason for it because outside of the wall there was no place to go, and in that way they would face the wall, reducing the interaction with other humans, so that it was easier for the doctors to control them. As the years went on though, the city of Florence expanded out of its walls, building around the area of the asylum, that remained untouched, and integrating it in the urban pattern.

1923



1962



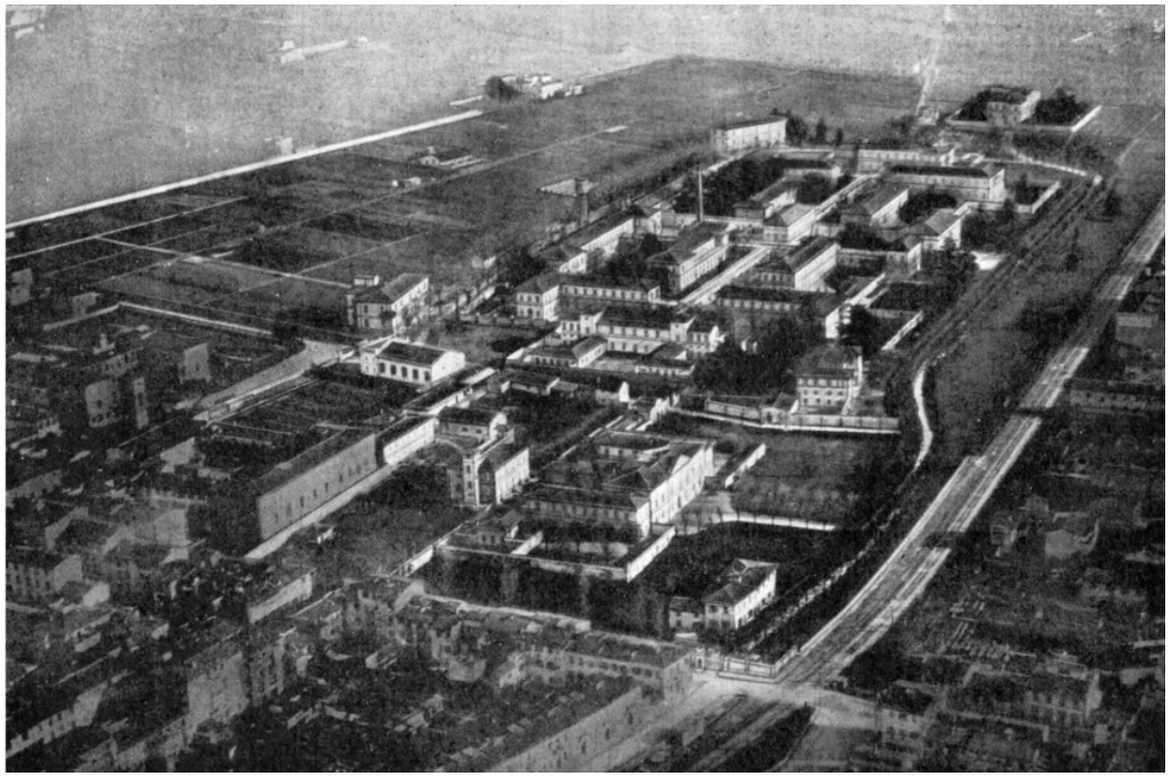
1955



1985



17. Expansion of the city of Florence.



18. Bird's eye view of San Salvi in 1934.

3.2 Landscape as a process: the use/abandonment and ruinosity in San Salvi



Used

Partially abandoned

Abandoned

Today the paradox of San Salvi is that in many areas used and well-maintained structures stand in front of decaying and precarious buildings, that make the whole atmosphere unpleasant for the people who currently work there, since the neglected zones are considered dangerous because of the events of the past.
The buildings that have a function are dedicated whether to healthcare or to education, placed in the complex by the municipality as a strategy to make it livelier and less threatening.

Map of the abandonment of the buildings in San Salvi.

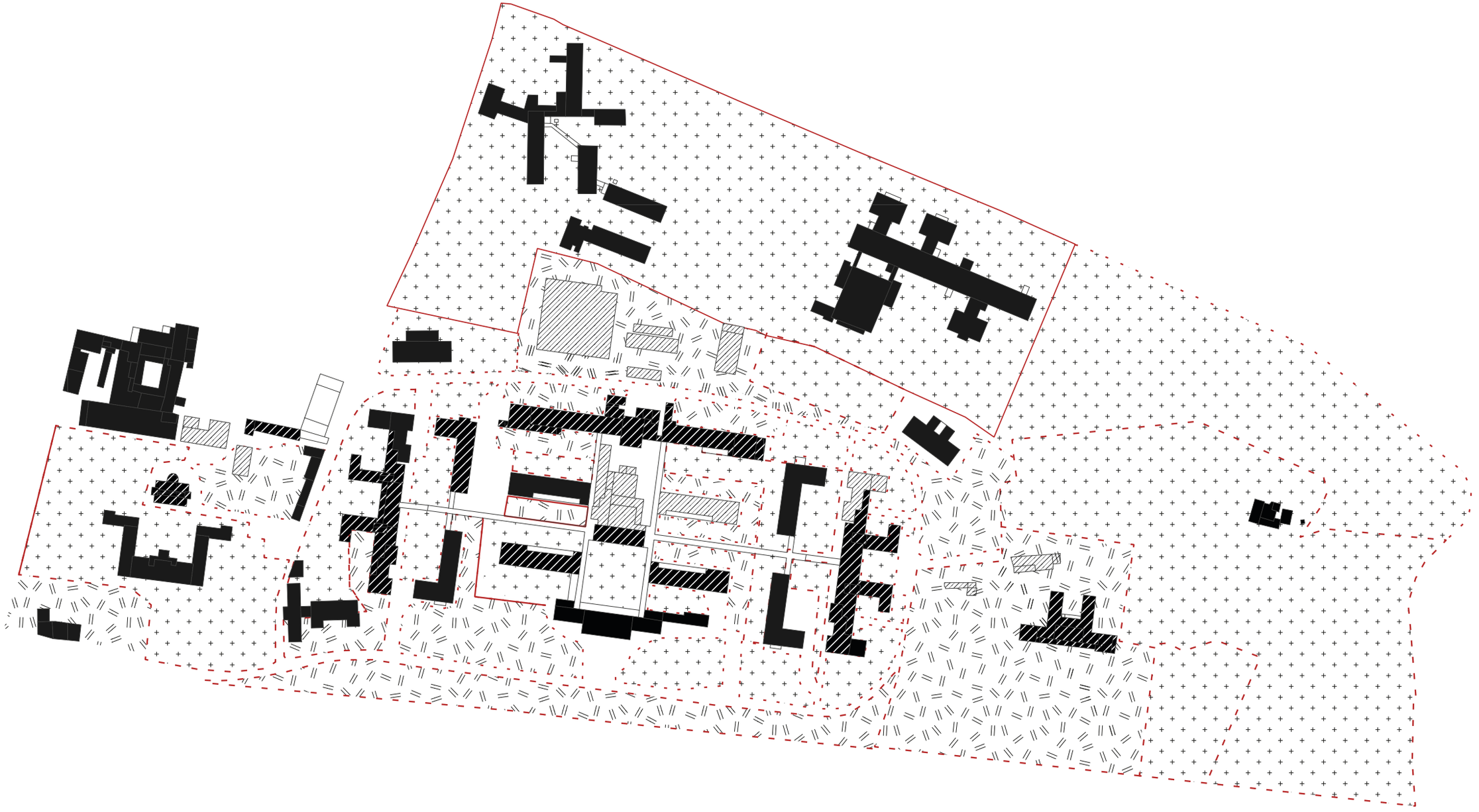


Map of uses in 2018.

This paradox of the alternation use/abandonment, maintenance/ dereliction is also reflected on the outdoor spaces of the complex that surround the buildings, which depends on the degree of use of the building next to it, even thou-gh they are all mixed together.



Map of the abandonment of the outdoor spaces.



Comparison of the abandonment of buildings and outdoor spaces.

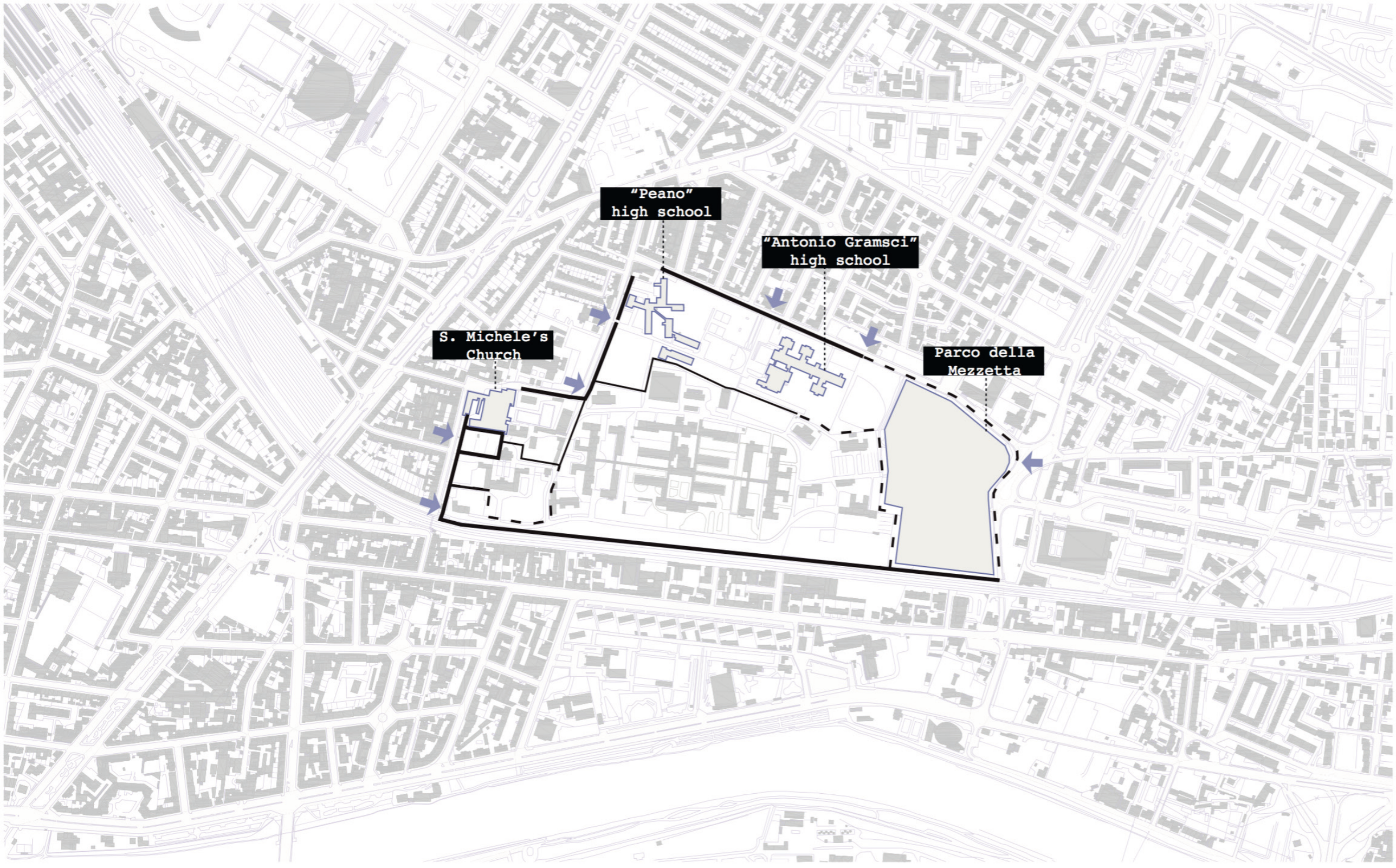
3.3 Landscape as a scale-continuum: the role of San Salvi in the urban flows

The complex of the ex-asylum occupies 175.000 m2 in the dense urban pattern of the city of Florence, but how can it coexist with the latter as reality so different and detached? Because of the criminality and worrisome events that took place after the closure of the hospital (and also because of the idea of the actual hospital), the whole area is lived almost exclusively by those citizens who work there, and some inhabitants of the neighborhood who walks around with their dog.

Nowadays the involvement of San Salvi in the urban flows is lacking: the primary cause of the scarce involvement lays in the spatial configuration of the entire complex. As already mentioned, when it was built it was conceived as a miniature city and it was completely enclosed by a wall. Today not completely, but the wall is still there, mostly in the west side of the area, while on the east side it is not there anymore but the presence of the "della Mezzatta" park impedes a direct connection with the rest of the city for its physical dimensions.

Moreover, the boundaries of the location do not border with the most public space, the street, but with public facilities: a church and a complex of high schools.




"Peano"
high school
"Antonio Gramsci"
high school
S. Michele's
Church
Parco della
Mezzetta
Entrances
Wall
Fence
See-through fence
500m

Zooming out, it is possible to understand better the function this area has in Florence today. It is located half-way between the center of the city and the more rural zone that still belongs to the municipality, but it feels disconnected from the center because of the presence of the big piece of infrastructure of the railway that runs right in between them impeding an easy connection with that part of the city.

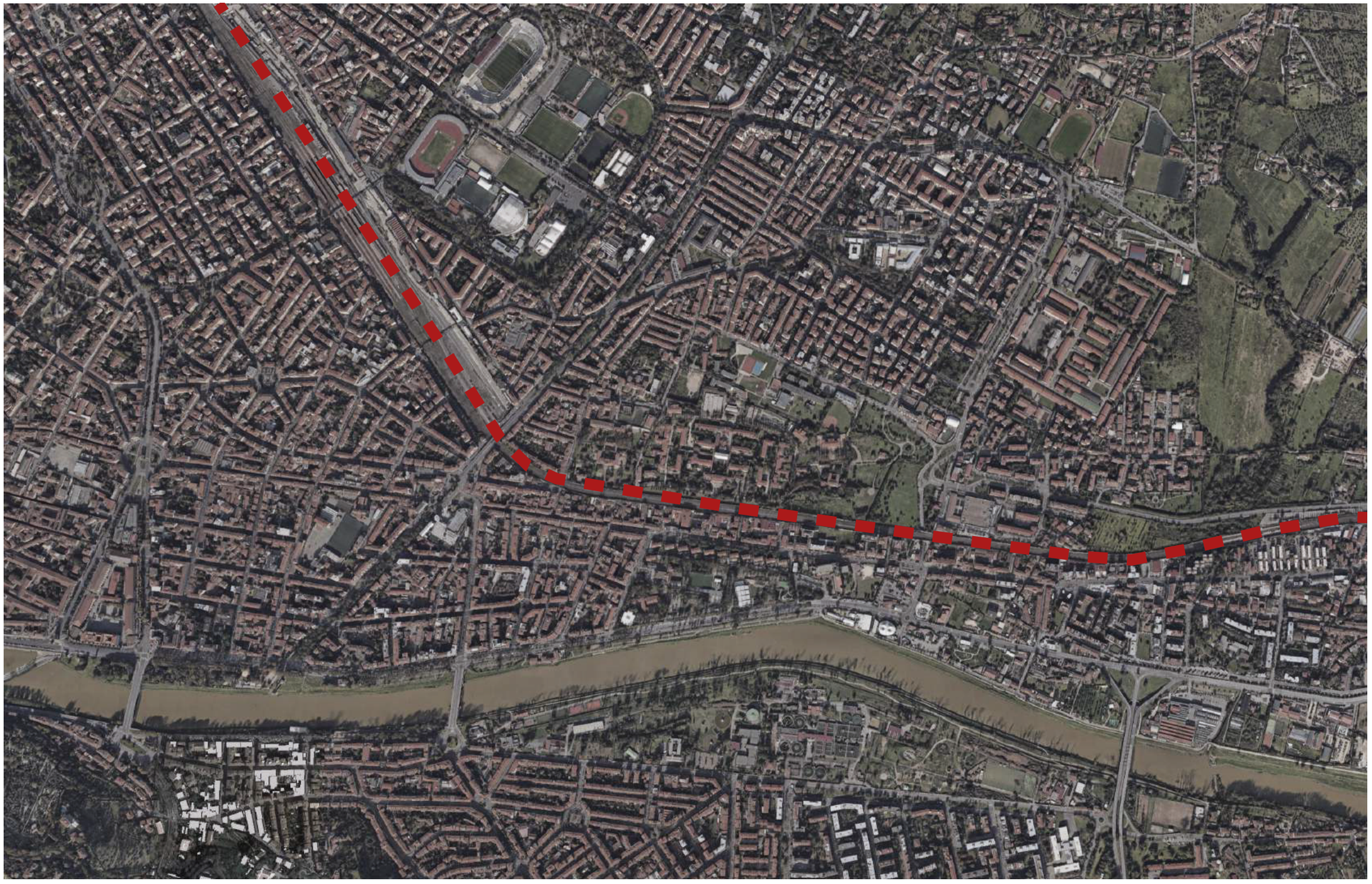
Edges of the municipality of Florence

Edges of the districts

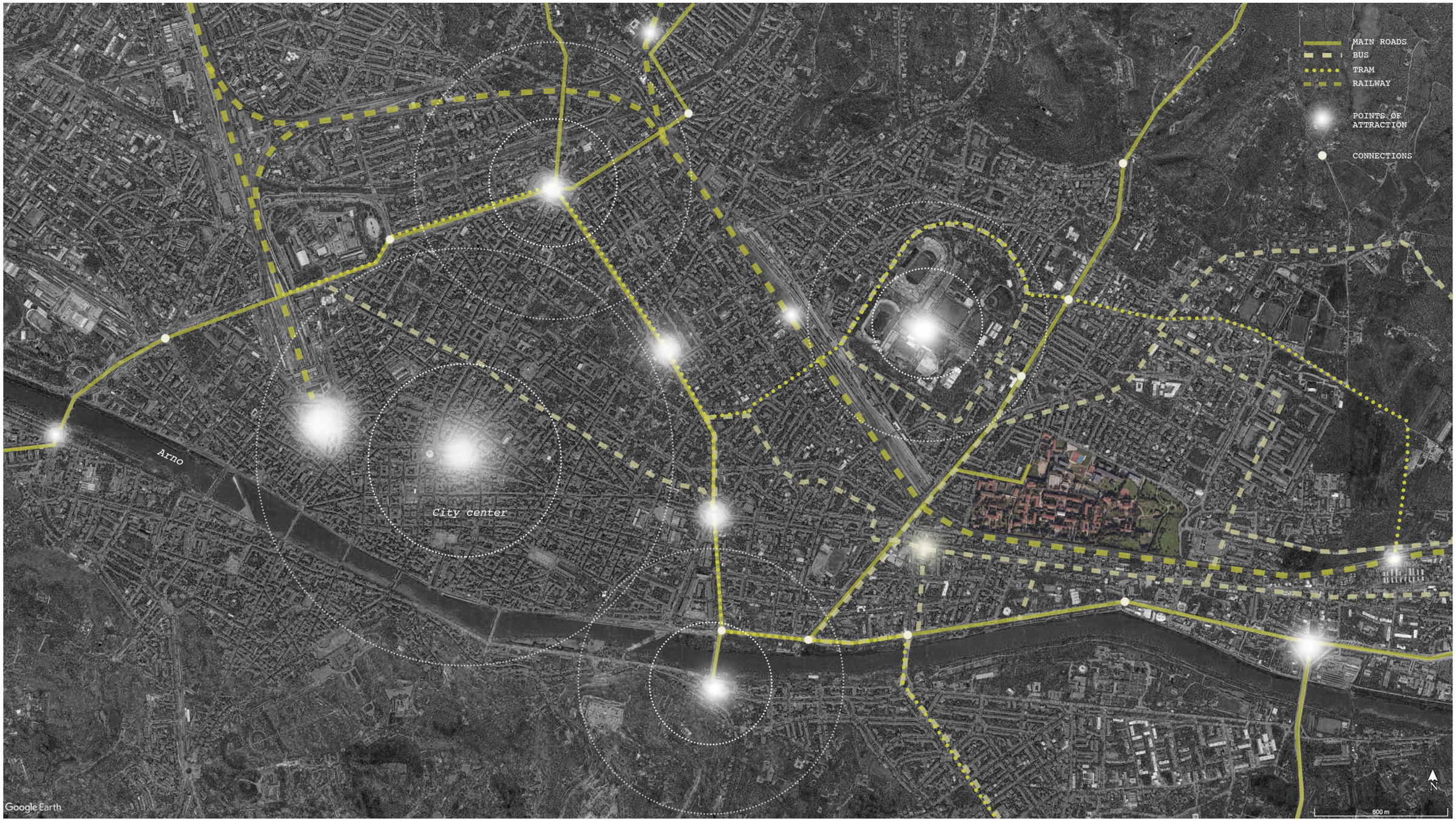
Edges of the built environment

Facilities for mental health care

San Salvi



Boundary of the railway



Position of San Salvi in the city and its involvement in the infrastructure framweork

Another characteristic, more caused by the city itself is the negligence: thousands of visitors from all around the world come here to admire the Renaissance monuments, but there is no memory or knowledge of the reality of San Salvi, even though it is so deeply absorbed and part of the urban pattern. It has indeed great social and cultural importance, since it is one of the few traces of the treatment of mental illness of last century in Italy, plus not only insane people were kept there but also outsiders of the society, as homosexuals, young unmarried mothers, political refugees. Therefore, it needs attention.

Abandoned historical buildings

Monuments

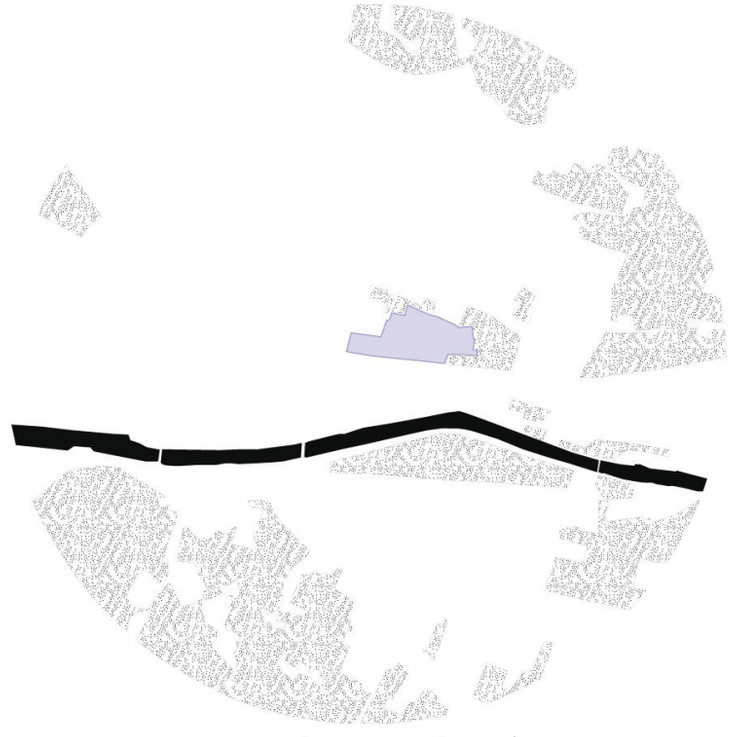
San Salvi

City center

Analyzing the **spatiality of the neighborhood** from different points of view, it came out, especially from the analysis of the public buildings and of the remarkable structures, that San Salvi is on the edge between the historical center and the suburban area, since the modern public buildings which attract citizens (as the stadium, sport centers, many malls, supermarkets) are all located on the east side, while the remarkable historical elements are mostly on the west side, approaching to the center.

The aim of the thesis therefore will be, to make San Salvi as attractive as the other public buildings around it, but also a destination since it should benefit of its historical importance as well like the monuments in the center.

The urban infrastructure network sees the location at the center of important points of connection and main roads that make it easily reachable.



Green and Blue infrastructures



Remarkable elements (squares, river, railway)



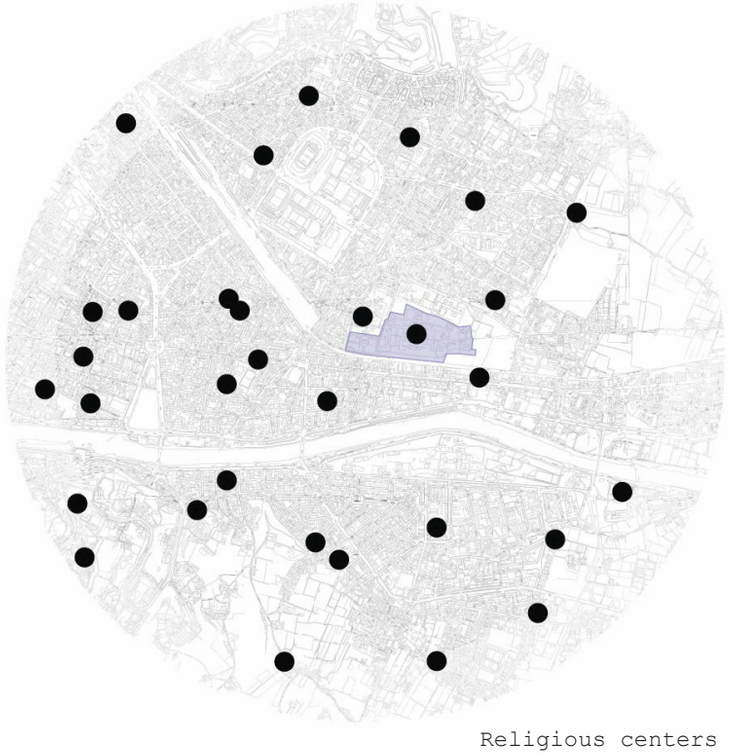
Public buildings (malls, museum, stadium, disco)



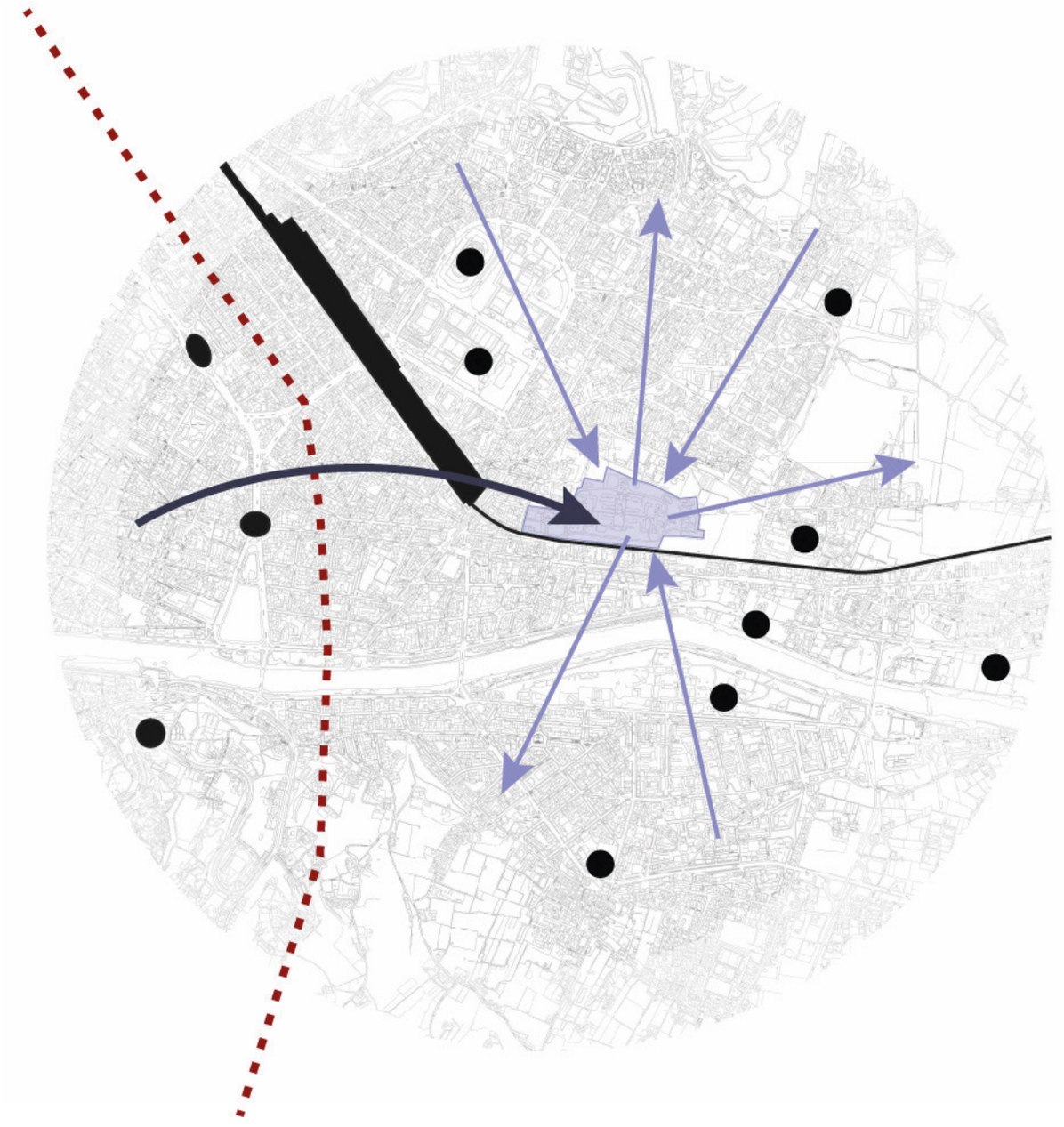
Public transport

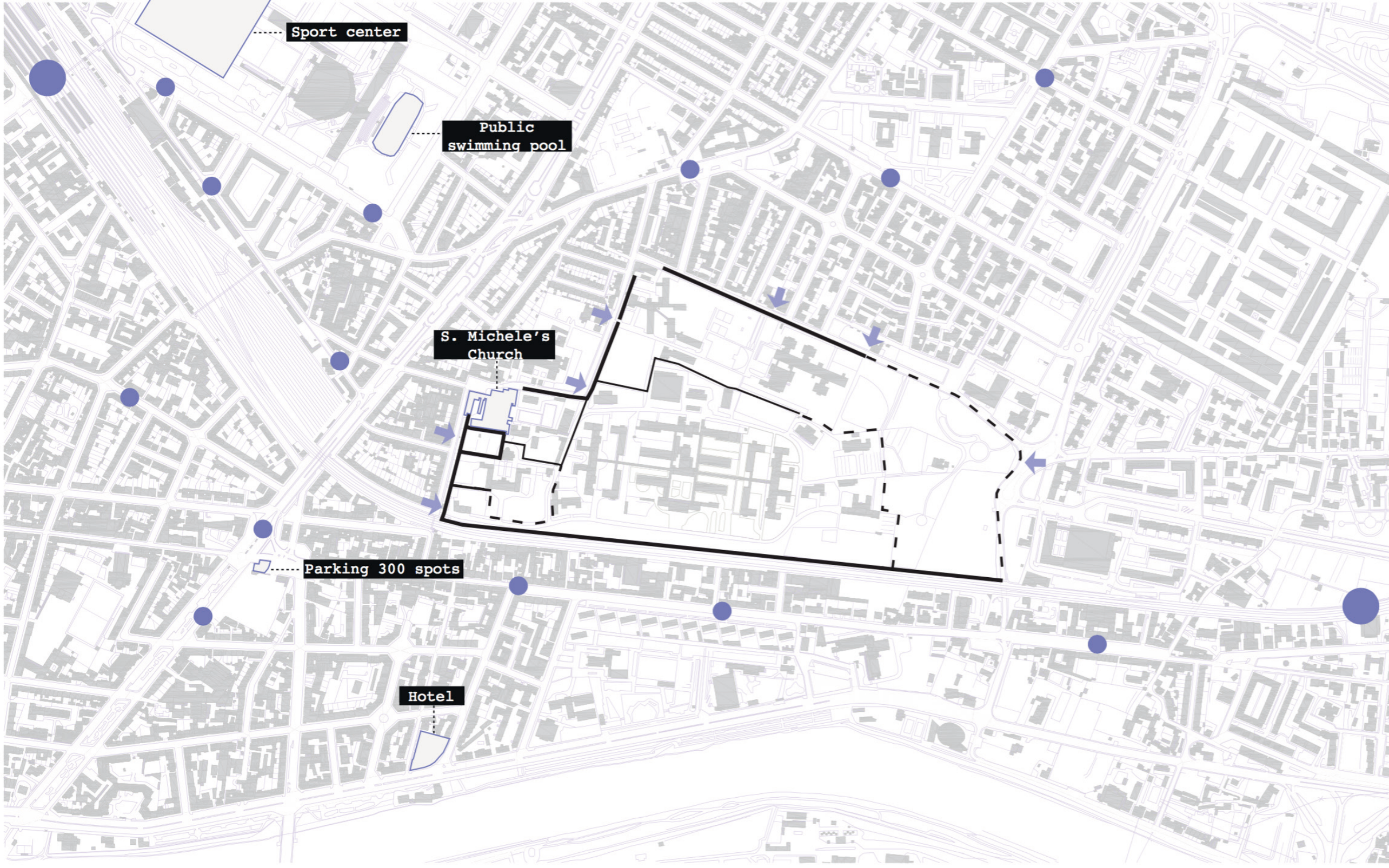


Schools and student houses



Religious centers




Sport center
Public swimming pool
S. Michele's Church
Parking 300 spots
Hotel
Train stops
Bus stops
Entrances
Wall
Fence
See-through fence
500m

3.4 Landscape as three-dimensional space: a phenomenological analysis of the site

The premise of this type of analysis, is that "the shape of space, plasticity and appearance of spatial elements in the landscape determine the relation between design and perception" (Nijhuis, S., 2013, p.55).

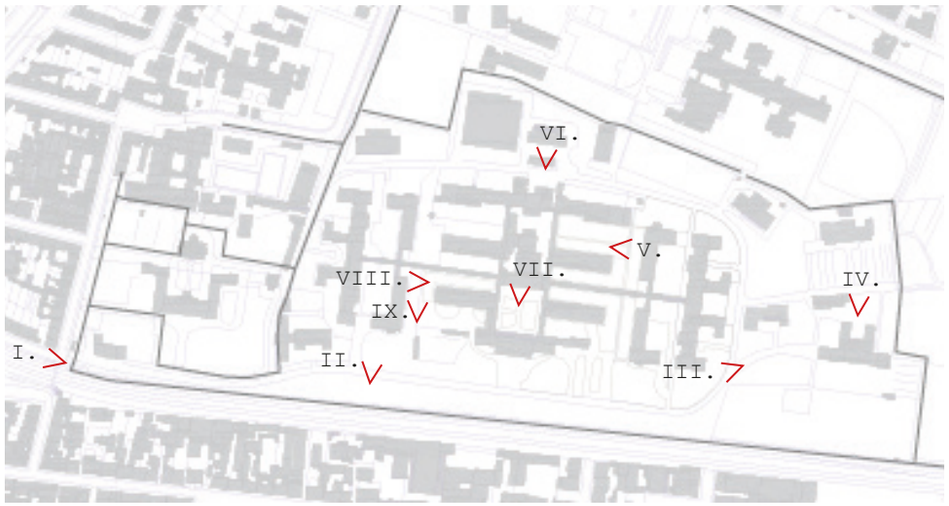
Walking around the buildings of San Salvi can be a really scary experience. As one enters the walls is like being absorbed in the ghostly miniature city that cannot be freed from its own painful past. The marble plate "Asylum of Florence" in front of the main entrance is still there from the time of the asylum (I). The absorption is strengthened by the sudden and progressive decrease of the noises from the city, being surrounded by a wall in an area where few cars and people pass by. All the noises of the city are silenced as one proceeds along the main route, except for the noise that comes from the railway on the other side of the fence when the train comes (II). It is like a remainder that time is passing.

The first boulevard is long, accompanied by rows of trees on the sides that incite the curiosity to see what is at the end before the curve (III): that is the scariest place of the whole complex. Three massive abandoned buildings stand on the side of the main path immersed in the overgrown vegetation that impedes a full overview on them. The windows are walled in, the walls are full of threatening writings, there is no one. All the spectral history of what happened in between those walls pops up to the mind like in a horror movie and the stride speeds up (IV). After the second curve, another long boulevard opens up. There is something weird here: on one side of the road there is a seemingly new field dedicated to the training of policemen, open and exposed to sun rises, but that looks desolated, and on the other side, decrepit buildings remind that the whole area is neglected. There is a small road that leads in the core of the complex, to a green area in between the pavillions. The vegetation grows wild, and the windows of the buildings are broken. Only some cats walk around here, someone must come to feed them (V).

Finally, a place with some people: an abandoned theatre being eaten by ivy, some derelict industrial buildings, but also the old water tower and a bar (VI). Going past the bar, the path penetrates through a gate that discloses an open space, full of construction sites that seem supporting the buildings from being taken apart by time. Proceeding, another gate, but this time a pleasant space opens up: the enclosure on the four sides, the palm trees, the tidy gravel on the ground and the wide and transpa-



rent entrance of the building of the university of psychology bring back the feelings of comfort and safety (VII). Going back on to the bar, the boulevard continues. On the way, some signs indicate the office of the theatrical company Chille de la Balanza in one of the pavilions, a reassuring presence in that place, but outside there is no one. The horizon of that open space is blocked by a clear pink wall that with the light of the sun and the red leaves of the ivy in autumn make a delightful play of colors. From there, sharp corners come in succession until the most ethereal place in the ex-asylum is revealed. The shadows projected by the buildings' walls and trees, the vegetation colored by autumn, and some paradoxical elements whose raison d'etre is unknown make the enclosed gardens a magical place (VIII-IX).
Here, finally, the engagement with the place is vivid, even strengthened by those feelings of mystery and fear that took to reach it.





I. Panoramic view of the entrance of the ex-psychiatric hospital



II. View from the main road of the wall between San Salvi and the railway



III. Main road leading to abandoned buildings



IV. Abandoned buildings



V. Enclosed outdoor space, abandoned, vegetation growing wild



VI. Old water tower and bar



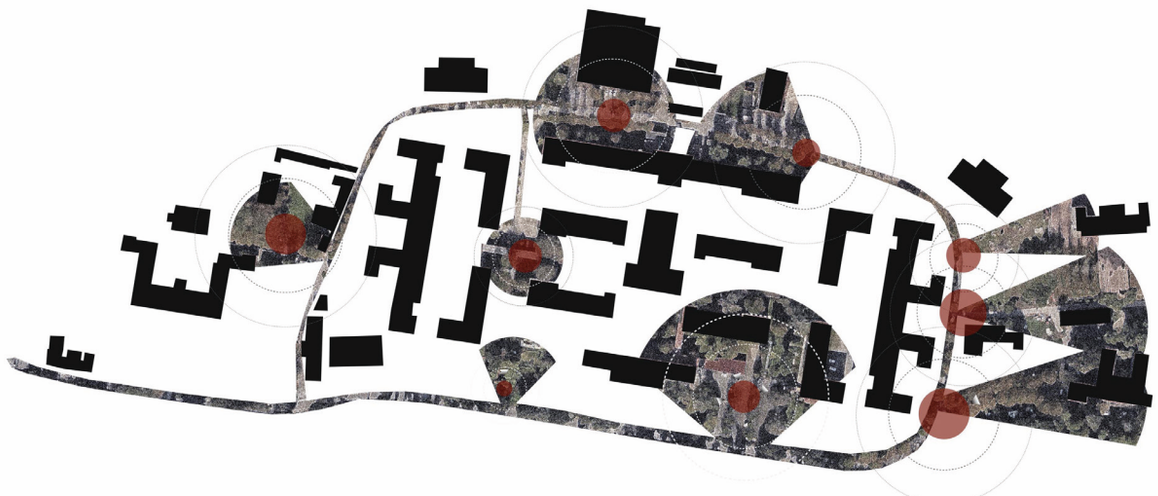
VII. Courtyard in front of the University of Psychology



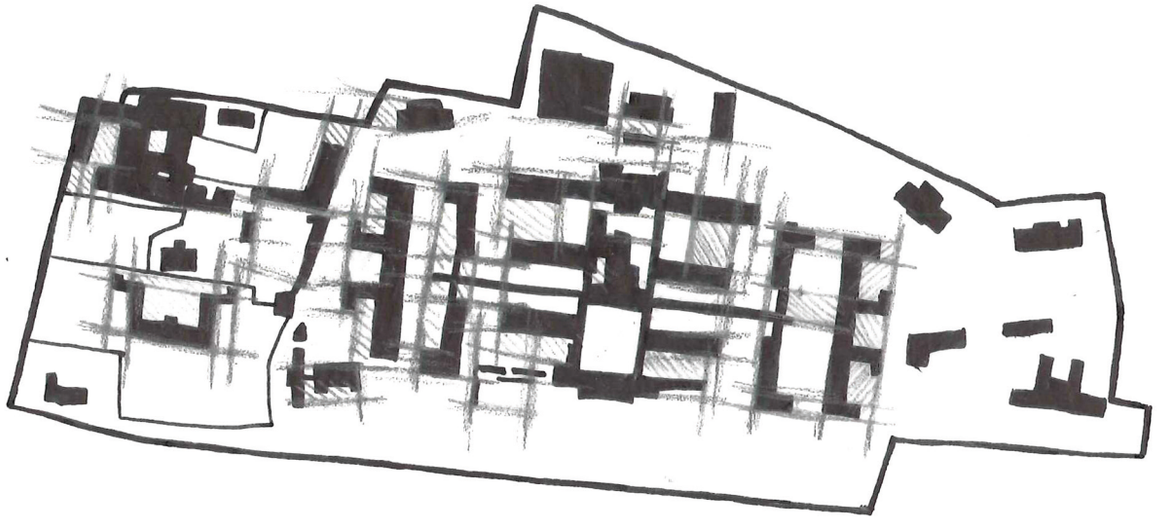
VIII. Enclosed space, maintained



IX. Enclosed space, maintained



Creepiness Map

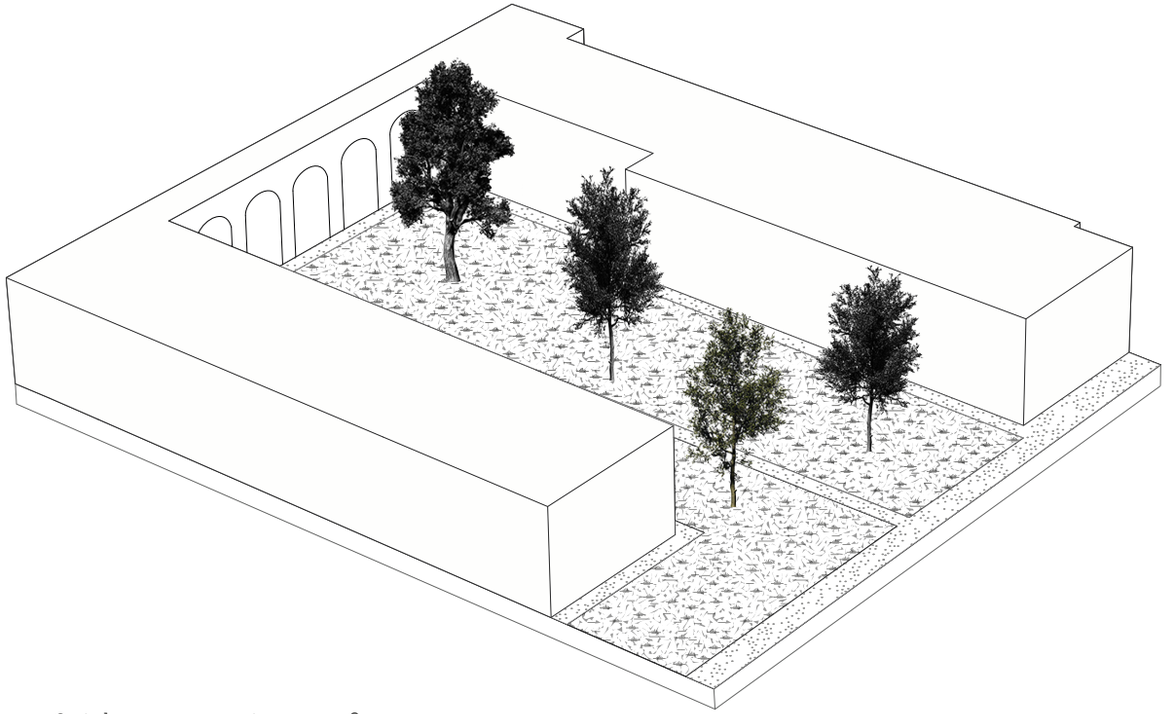


Map of enclosed outdoor spaces

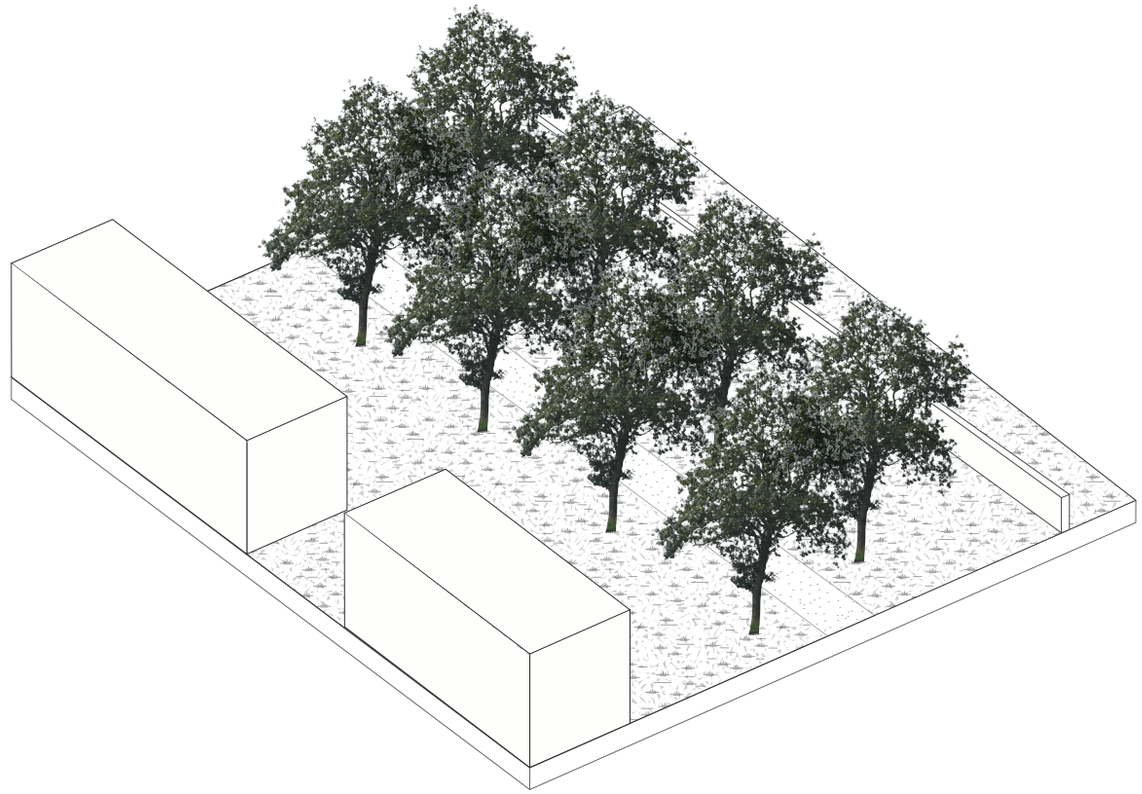
From the perceptional and physical experience of the location, what will become the core of the intervention is discovered: the spatial configuration of the pavilions symmetrically disposed in the landscape, create many enclosed spaces, all separated from each other, and where the level of maintenance, the vegetation, the colors, the play of light and shadow, make them all different from each other. The level of enclosure in these outdoor spaces varies depending on the number of the walls that enclose them.
This type of configuration is important and recognizable many times around the complex. It conveys in fact, the feeling of immersivity (meant as feeling embedded, absorbed and immersed in the landscape) and here it is seen as a sequence of thresholds that, the more one penetrates deeper into the landscape, the more he gets detached and further from the noisy and stressful urban environment, so that the experience is gradually immersive from the outer boundaries to the core.



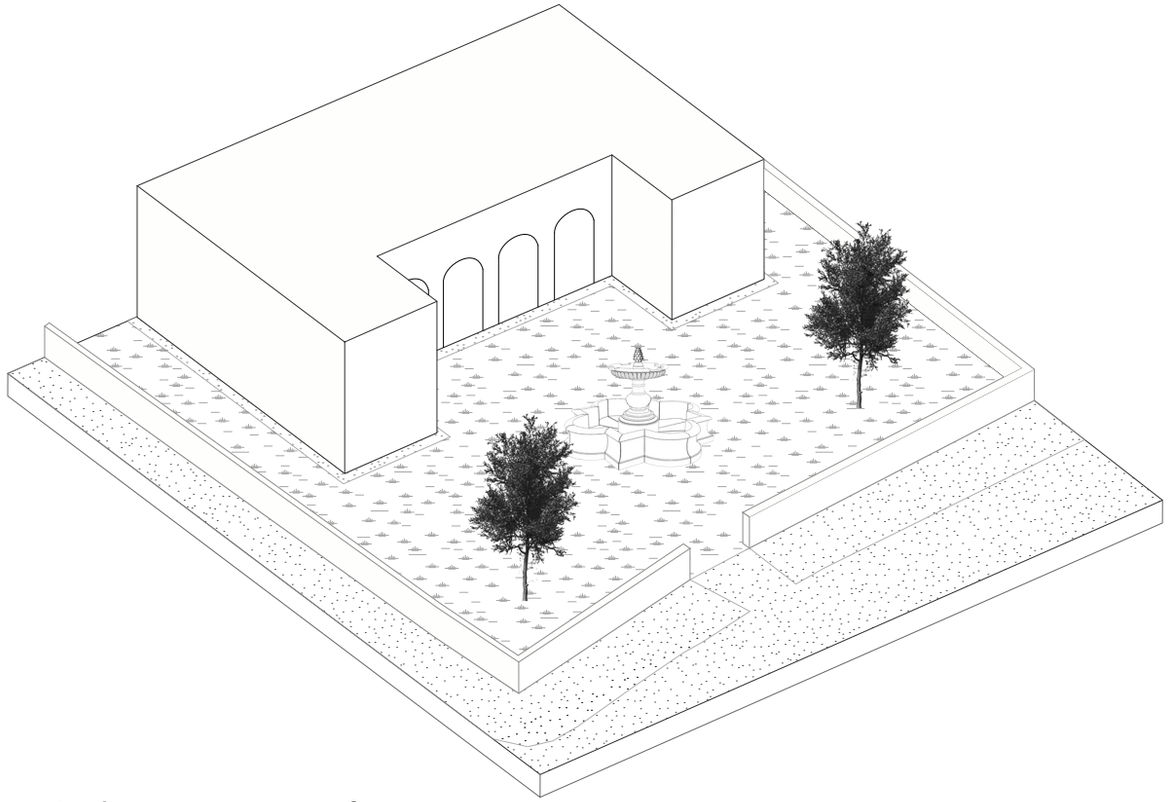
Outdoor space type n.1



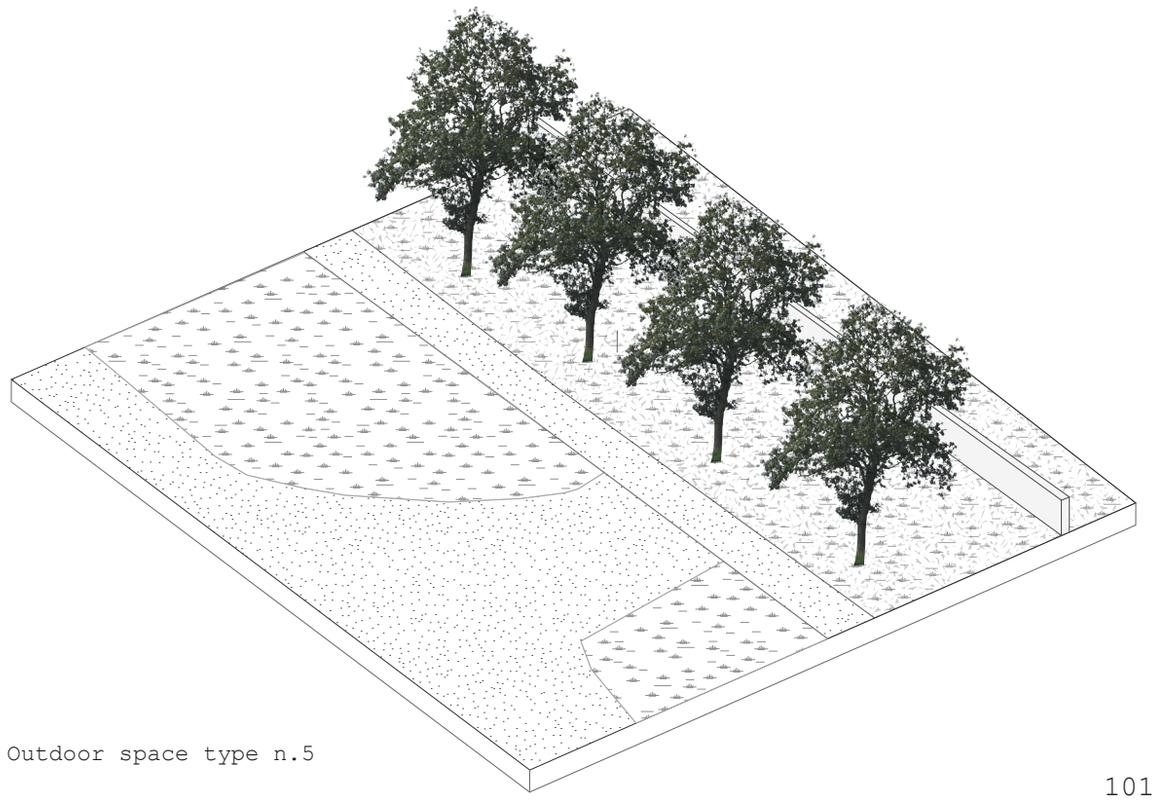
Outdoor space type n.2



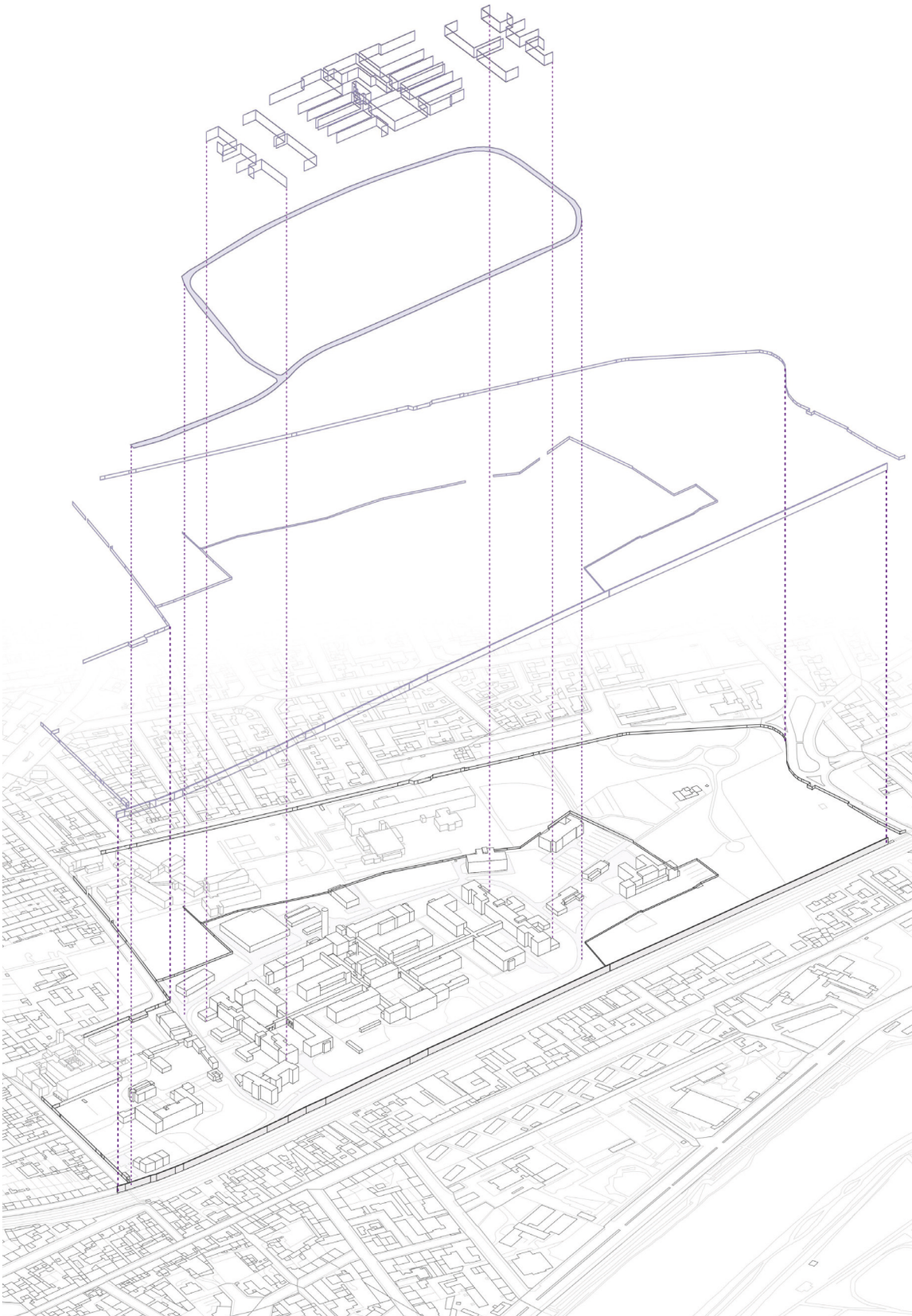
Outdoor space type n.4



Outdoor space type n.3



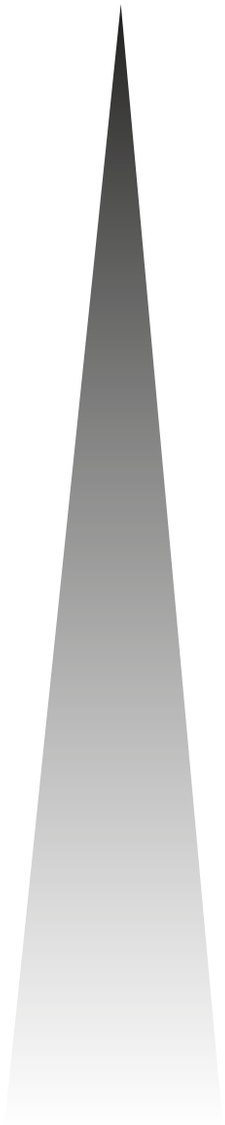
Outdoor space type n.5



III: outdoor spaces enclosed by the **buildings**

II: the **road** around the inner core

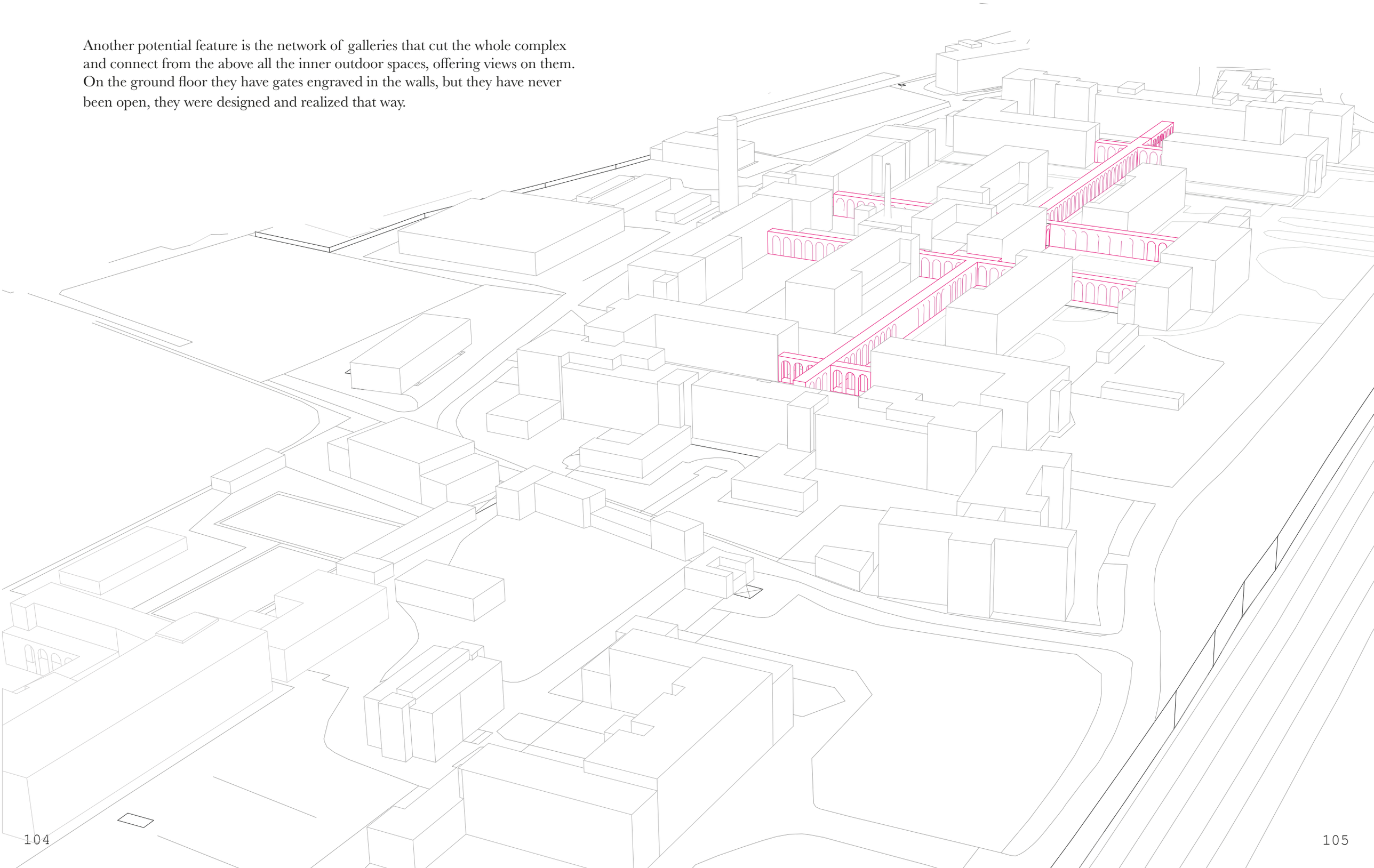
I: the main **wall**



THREE DEGREES OF ENCLOSURE

It can also be perceived as a gradual separation from the everyday life, and it is achieved through three layers: one is given by the surrounding wall, one is the main walkable route around the central core of the complex, and the third one is the physical enclosure of the gardens given by the buildings.

Another potential feature is the network of galleries that cut the whole complex and connect from the above all the inner outdoor spaces, offering views on them. On the ground floor they have gates engraved in the walls, but they have never been open, they were designed and realized that way.



1.2 The Salk Institute

The history of the Salk Institute for Biological Studies is one of the most prestigious scientific research institutions in the world, located in San Diego, California. Not everyone though knows the history that brought to its realization. In fact in the 1950s, Jonas Salk was working in his basement laboratory on the development of the vaccine for polio, but he was stuck in the research and could not find any solution. "Frustrated and demoralized, he decided to take a sabbatical, and stayed for a time in the Italian town of Assisi. So inspired was he by the light and beauty and spiritual aura of the place, that he hit upon the solution to his problem. He rushed back to his lab and created his vaccine, which has since saved millions of lives. […] Salk vowed that, in the spirit of Assisi, he would build the facility in a place suffused with light and surrounded by beautiful views – a place that would inspire imagination of other scientists just as Assisi inspired him." (Sternberg, 2009: 21-22)

To realize the research center he received the land of La Jolla, near San Diego as a gift from the San Diego City Council, and fundings from the March of Dimes. He worked together with the architect Louis Kahn who did not receive many instructions from the immunologist, as long as it would become a simple structure, but at the same time bright and inspiring. (Salk Institute for Biological Studies, n.d.)



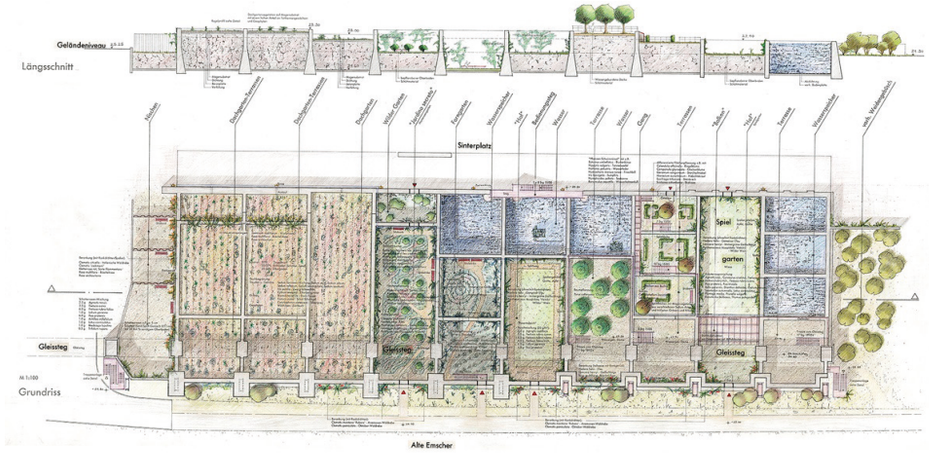
20. View on the axis of the Salk Institute.

1.3 Duisburg Nord Landscape Park

The Duisburg Nord Landscape Park is located in Duisburg-Meiderich, Germany, and is immersed in the old plant and steel production plant which was abandoned in 1985. In 1991 it was transformed into a park with the design of Latz + Partners. The design approach and the relation to the ruins that characterize this project, were important to the initial phase of the concept of regeneration of San Salvi. The old plant was left heavily contaminated and the massive buildings useful for manufacturing processes in growing deterioration. Nevertheless, the industrial past of this area is vivid in its renovation, indeed the aspect of memory is the guiding line of the project. The different zones of the old plant are connected by paths and stairs, giving the visitors the possibility to create their own experience. (Latz+Partners, 1991)

Particularly useful for the project of San Salvi was the Sinter Park: it is nowadays located in the former sintering plant which was heavily polluted and supposed to be dismantled. Today with a series of paths it moves through the bunker, offering views of the gardens, placed at various heights and depths.

"Once filled with ore, coal, lime and ashes, the walls now enclose old pollutants in sealed containers, excavated materials, water or gardens - horti conclusi of great variety and abundance. They are places of retreat and contemplation that are so important in a large public park." (Latz+Partners, 1991, para. 2)



21. Plan of Sinter park.



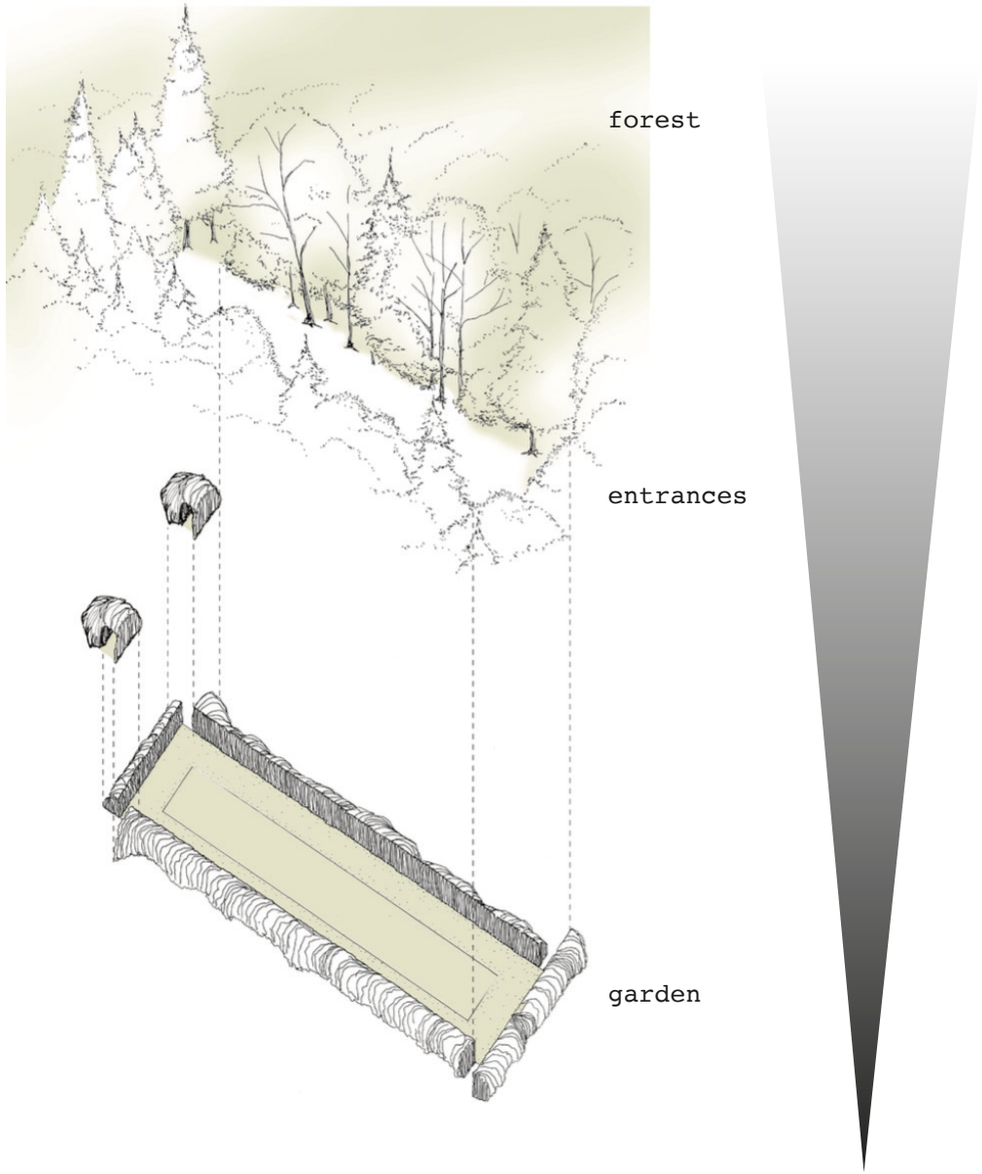
22. Photo of Sinter park.

1.4 The Reflection Garden

The Reflection Garden is located in the Bloedel Estate, and it was designed by Richard Haag in 1970s. What is inspiring for the project is the concept of the sequence on two different layers: one is the alternation of open and closed spaces given by the different designs of the other gardens (the Garden of the Planes and the Moss Garden), and the other one can be perceived during the experience of the spatial sequence, since the contrasts between the various gardens increase while progressing, which (the sequence) supports the suggestion of penetrating ever deeper into the core of the landscape.
The architectural enclosure in the Reflection Garden creates a theatrical climax, confirming one has arrived. The climax is achieved also by the narrow paths, and the dark, tunnel-like entrance to the garden, dramatizing the dark and labyrinthine forest. This entrance creates a threshold, a contrast with the light space of the garden, open to the sky. This sequence of thresholds strengthens the engagement of the visitor with the place itself, isolating him for the outside world. So, the increasing detachment, the forest that encloses the garden like a wall, in combination with the abstract geometry of the garden, make it a wild, as well as a distinct place: what ancient Greek would call a *temenos*. The garden acts both as a place for recreation and as sacred space. The restrained image of classical Arcadia contrasts with the sublime image of dramatic indigenous wilderness, and at the same time it is essentially an 'other space', contrary to its surroundings. (de Wit, 2014: 251-265)

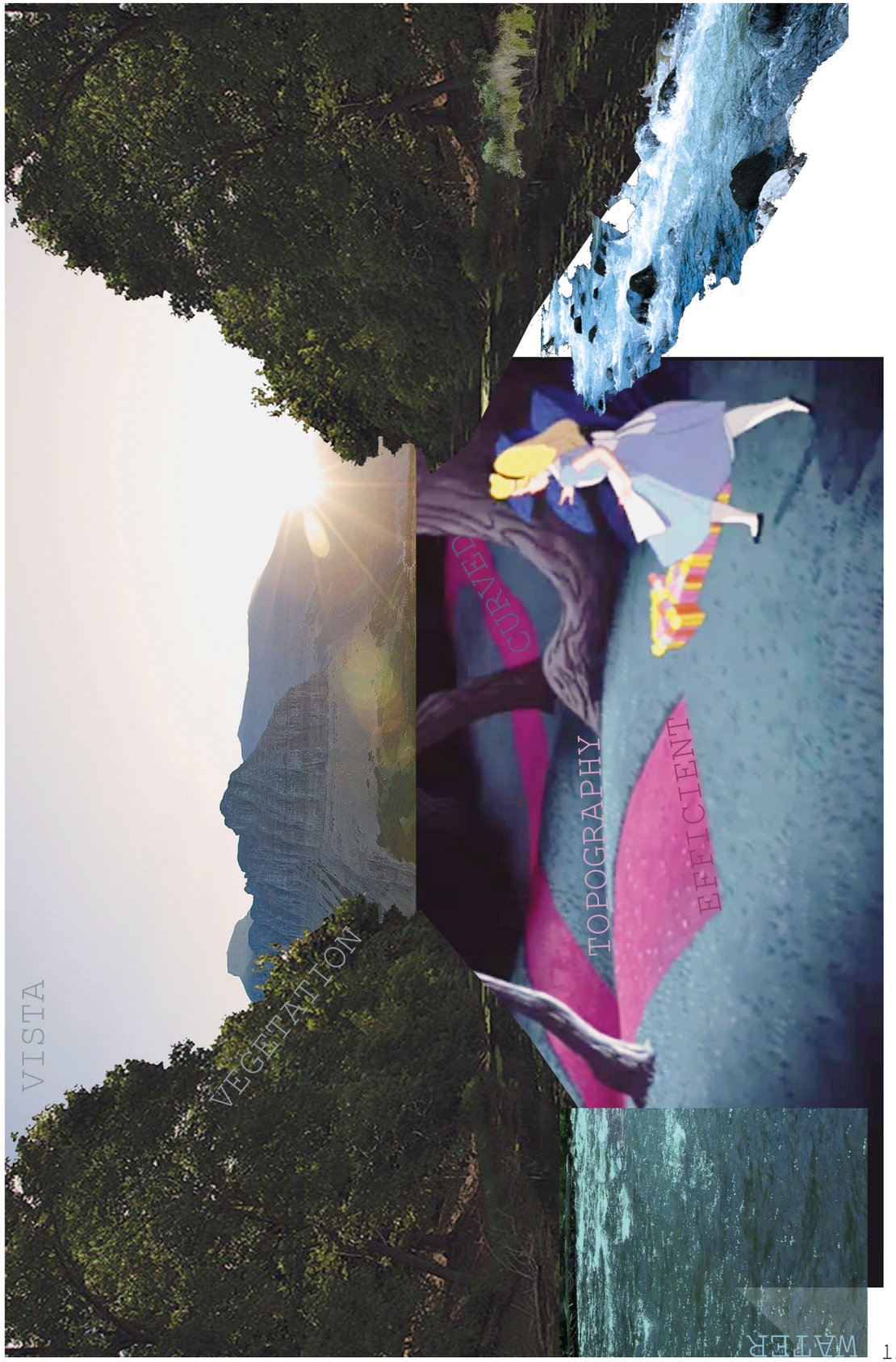


23. Paths that lead to the Reflection Garden.



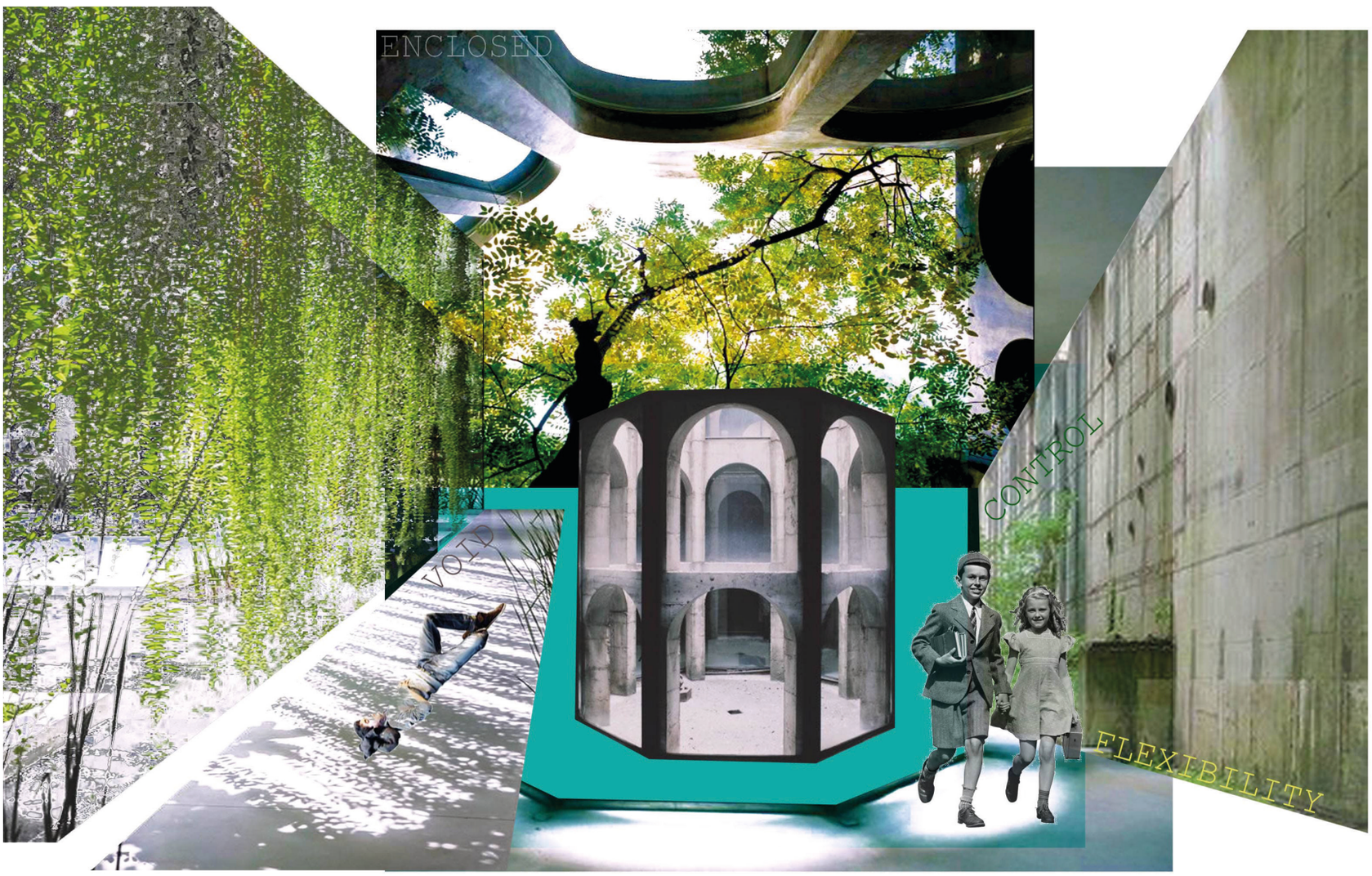
24. Spatial sequence and gradient of immersivity.

ABSTRACTIONS



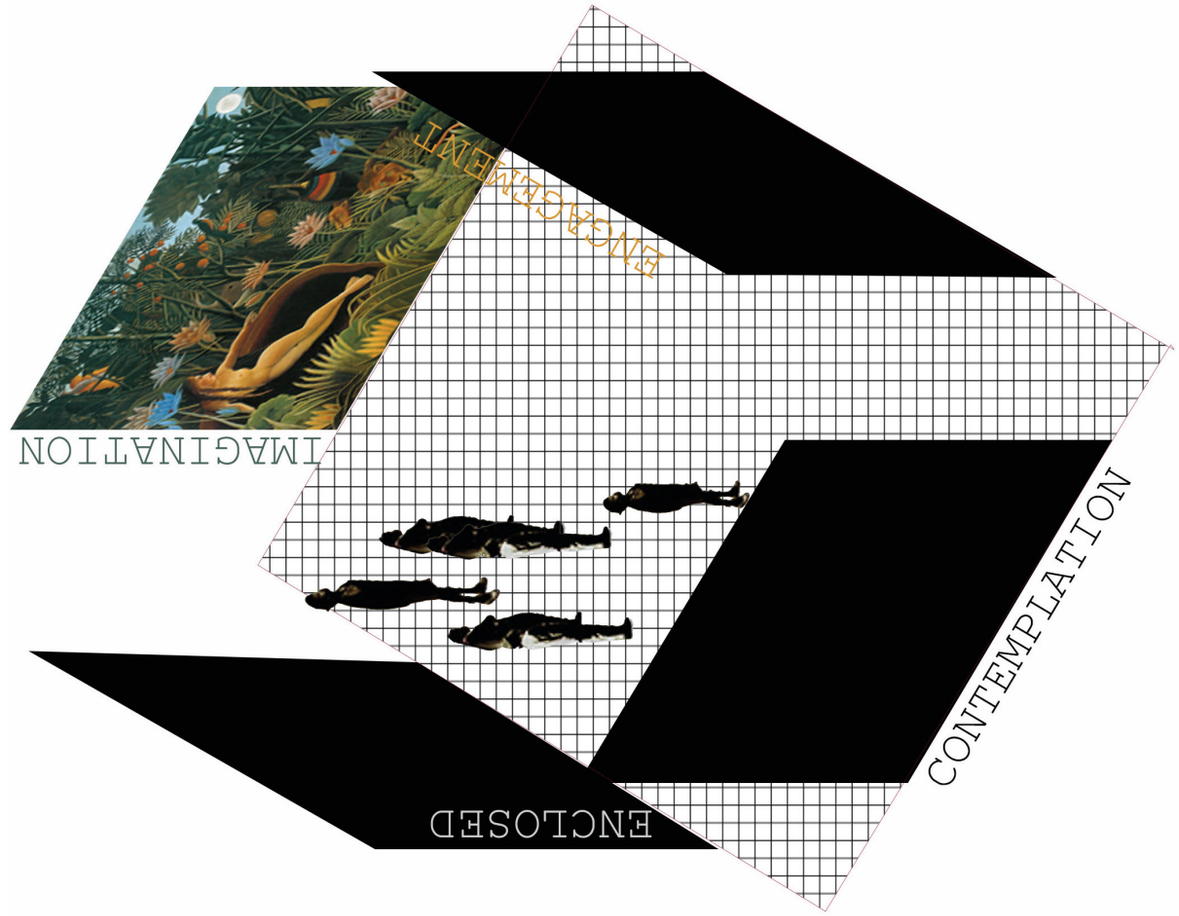

SOCIALIZING
SATISFACTION
MEANINGFUL ACTION
PRODUCE


SOCIALIZING
ENCLOSED
TIME FOR YOURSELF
PROTECTED


ENCLOSED
VOID
CONTROL
FLEXIBILITY


CONTEMPLATION
REFUGE
PRIVACY
SAFETY
ISOLATION
TRANSITION

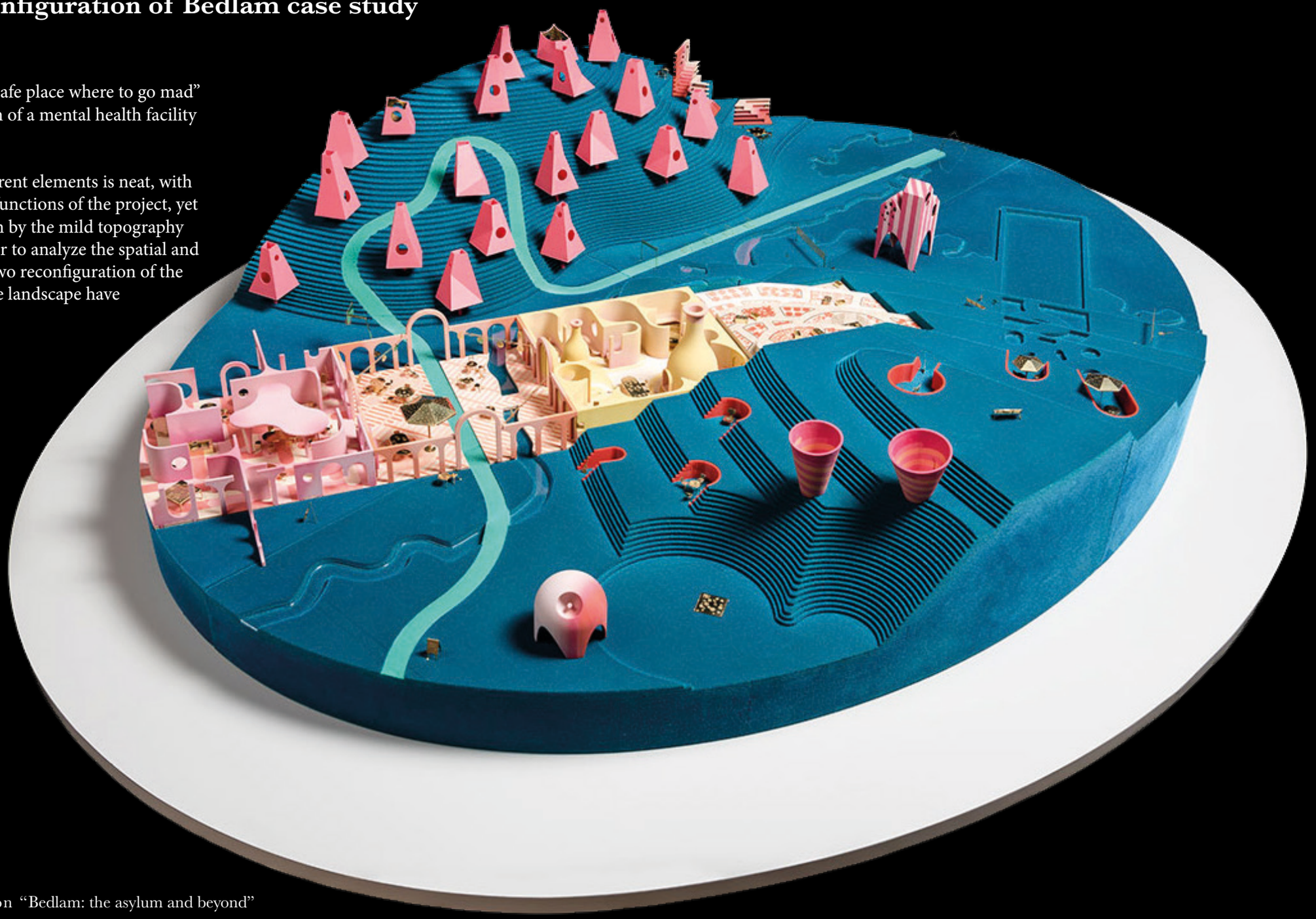

DIFFERENT SOIL
DIFFERENT TEXTURE


IMAGINATION
ENCLOSED
CONTEMPLATION

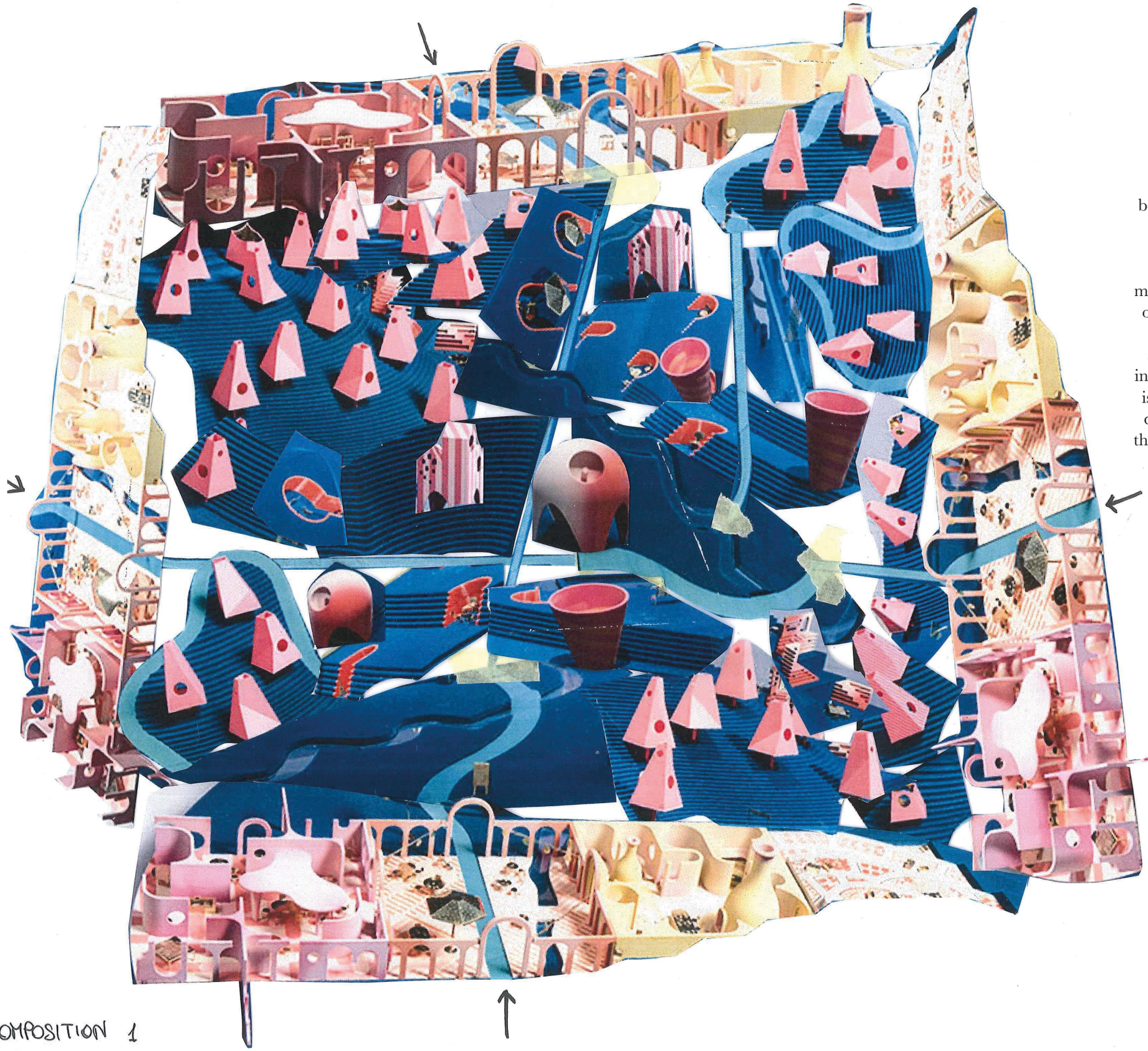
2. Collages: Reconfiguration of Bedlam case study

The installation “Bedlam: a safe place where to go mad” by Madlove is the translation of a mental health facility in the landscape.

The composition of the different elements is neat, with clear separation among the functions of the project, yet presenting a continuity given by the mild topography and the curved path. In order to analyze the spatial and experiential meaning of it, two reconfiguration of the ingredients that compose the landscape have been made.

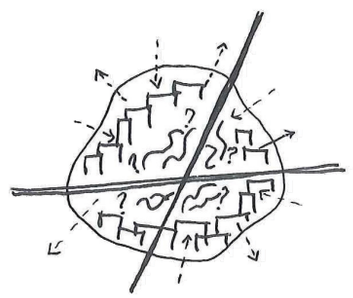


25. Model of the installation “Bedlam: the asylum and beyond”

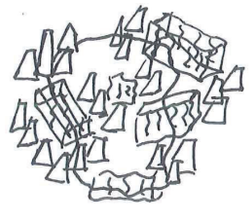


COMPOSITION 1

Composition 1.
The first experiment, portrays an analogy with the San Salvi complex, that is the existing boundary from the surrounding, in this case given by the repetition of the social hub in the installation, contributing to a more porous separation from the outside. Different paths connect the opposite sides of the inner space which is organized on an intimacy gradient: the social hub is the most public, then the residential ring that finally encloses the restorative elements gathered together.

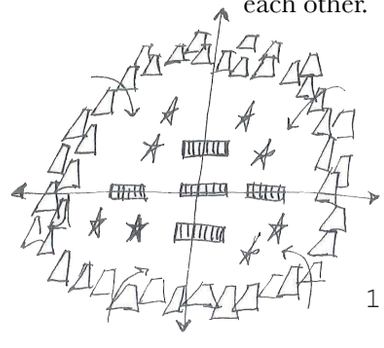


Composition 2.
In the second configuration, another characteristic of San Salvi is taken as starting concept: the spatial alternation of buildings and gardens, that are represented here by fragments of the social hub in Bedlam. In this collage though they are used as connectors between the scattered residential spots, but again they are all connected by the path. This structure could be useful to the project for the transitional character of the space that connects the buildings to the outside space, providing it with ephemeral enclosures.



Composition 3.
Here San Salvi is portrayed together with what surrounds the complex, to think about what it would be if the wall around was deleted, with a consequent continuity between the inside and the outside. The fragments of the social hub represent building facilities for the neighborhood and

are located in a more open space. Infiltrations connect opposite sides of the park and the buildings function as connectors of the open space. The restorative elements are scattered in it and are punctual interventions all separated from each other.



COMPOSITION 3

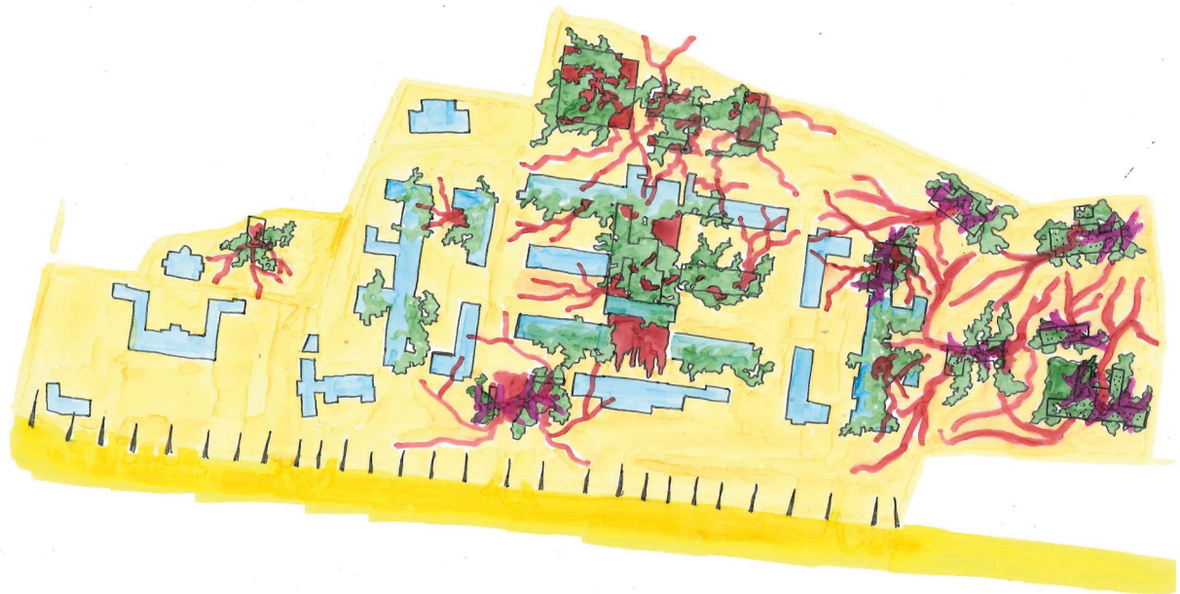
1. The Metamorphosis of San Salvi

1.1 Ruin as monument

Today San Salvi can be compared to what Ovidius in his Metamorphosis called 'locus terribilis' (horrible place). It is described as a fearful place inhabited by personifications of human emotions, where horrible things happen. The neglected areas with their overgrown vegetation stand like a trap next to the inhabited ones. The 'locus terribilis' is always associated and put as opposite to the 'locus amoenus' (pleasant place) that in literature is a place in some way similar to earthly Paradise and Eden: it is described by Petrarca in his poem Chiare, fresche e dolci acque (Clear, fresh, and dulcet streams, 1340 ca.) as a place immersed in nature, with plants and trees, located close to a stream, rich in shade and pleasing birds' songs.

The metamorphosis from 'locus terribilis' of San Salvi does not imply that all the mysterious areas like the ruins where vegetation is overgrowing has to be cut, but that it should be let take over architecture in harmony with it: they mix, they become one continuous form. What needs to happen first though, is a reversal in the image people have of those ruins, they need to be invested with value.
Not all of the monuments scattered around the world were built with the specific purpose of being a monument. Besides the statues erected to honor a hero or to remember an event, there are other unintentional monuments which started benefit of such a reputation only later. This testifies the power of a cultural process of adding value to things that were previously unwanted, and explains the mutable opinion that people have about whether ruins are valuable or not.
"The ruin and the ruinous, the process of change and decay, can be regarded as a modern aesthetic issue originating in its inherent dialectics of dissolution." (Braae, 2015: 179)

So, why aren't ruins good for our well-being from a general point of view? Why aren't they suitable for healing landscapes? We can answer this question considering their reality and the consequent effect they have on humans, and comparing them with the Reasonable Person Model made by Kaplan & Kaplan, that highlights our need of control, safety, and the possibility of meaningful actions (Kaplan & Kaplan, 2005). All requirements which are not identifiable in abandoned spaces, as for example the derelict buildings in the San Salvi complex. But there is



San Salvi as Locus Terribilis



San Salvi as Locus Amoenus



"Sensory ruin". Before and after



a possibility for them, they can still be good, if they become legible, give a general feeling of safety, and the possibility to be explored and understood, yet keeping their veil of mystery and abandonment. A work of art doesn't necessarily have to be as such only for its presence, but it can also depend on the processes and cycles it is part of.
Therefore, going back to the discourse about the 'making of' monuments explained at the beginning of this chapte, the duty in the location of San Salvi consists in putting value to what is considered and used as waste today (Benjamin). This process can be compared to the technique of détournement, developed in the 1950s by the Situationists movement and in particular Guy Debord, which consists in the breaking down of principles which constitute an element, and substitute them with others. Another expression of this procedure is recognizable in Duchamp's "Fountain" art piece.



26. Fountain, by Marcel Duchamp.

In the contemporary world of art, it is identifiable in what DJs do: they take various songs that belong to different genres of music and mix, cut, distort them to create a new melody. Today this process is called post-production and it is becoming a predominant form of artistic practice (Borriaud), and evolves directly from the détournement. It differs from the latter though because instead of braking down values, it is concerned with building up new ones. And this is what the project envisions for the ruins of San Salvi, a re-programme of pre-existing elements and incorporation of this in the new work (which is the first typology of post-production practice described by Borriaud).
The transformation of abandoned areas deals with changing and recycling something that already exists, with the aim of making something better in the end. As first step, it is necessary to provide access to areas that were previously inaccessible. These areas must be then empowered with new life. This new life often has to be reshaped so that the programme of the area suits the location in the urban flows.

Three subjects of transformation

The characteristics of an abandoned place which are subject to change can be synthesized in three main categories: materials, processes, and meanings (Braae 2015: 290 – 305).

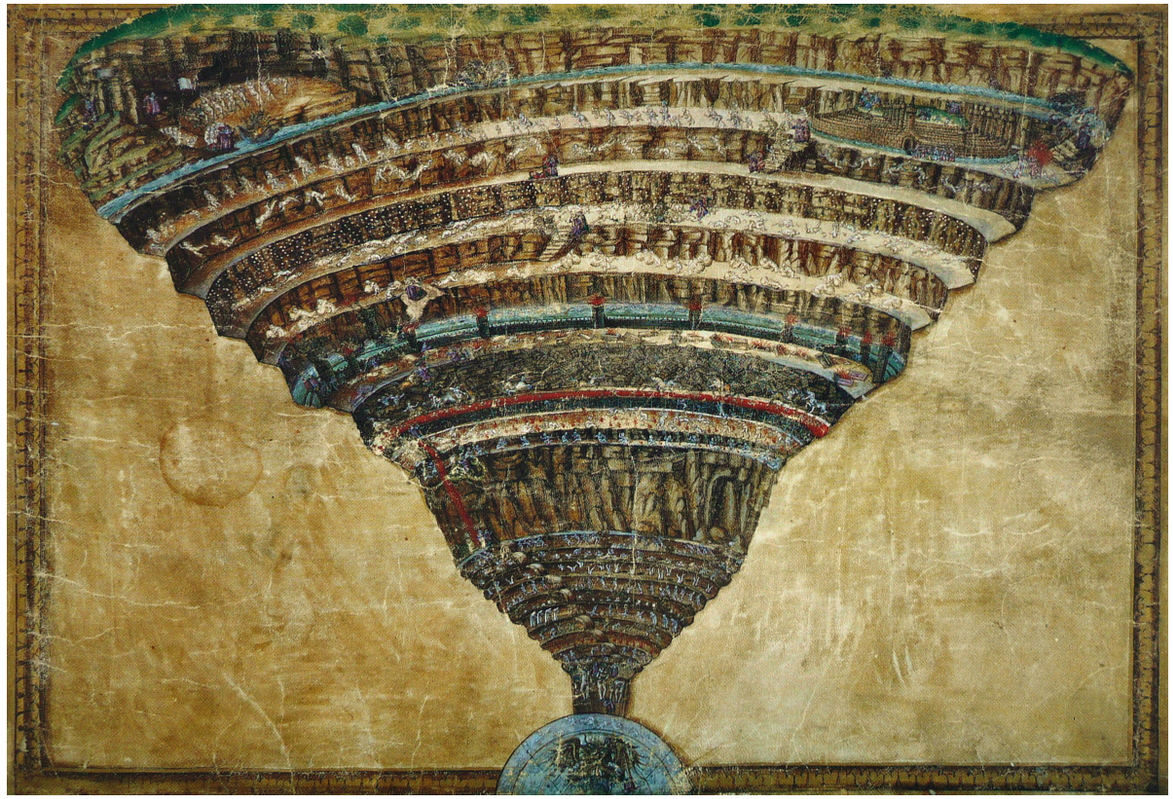
For the first two categories the choices that can be taken in the design phase don't vary that much among different projects: in the project of Duisburg-Nord the use of the old materials plays a crucial role in the outcome of the design. The processes instead, refer to an ecological dimension, where the main intention is to return the place into an ecological cycle.
For the third category, it is more complex to deal with what is immaterial but that has an impressive effect on the whole location; it is essential then, to decide where memory is the most leading layer. It is clear though that as in the example of Duisburg-Nord, when a place is appreciated for the atmosphere, it is possible to enhance its memory. Therefore, referring to San Salvi, it is important that the outside enclosed spaces engage the visitors with the surrounding as much as possible to recreate that atmosphere of an area surrounded by walls and distant from the urban reality.

1.2 Concept: the analogy with Dante's Divine Comedy

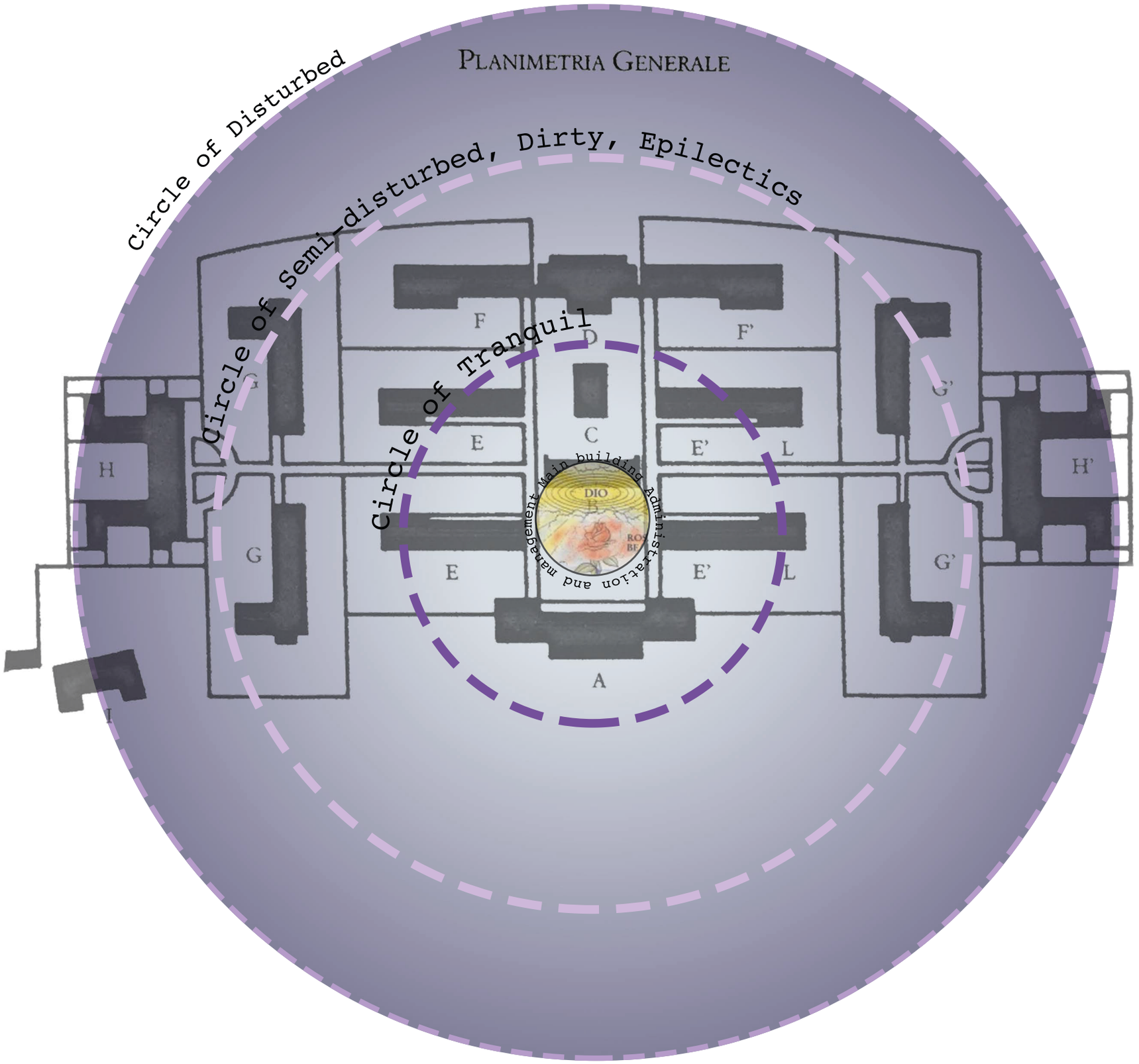
From the last composition of reconfiguration of the elements of the installation Bedlam, the decision of leaving the wall around the location is strong, perceived as a physical but also conceptual boundary between what happens inside and outside of it. It reflects the need of detachment from the everyday life, and also a visual boundary which covers the sight of the gardens: in this way everything on eye level is hidden, and moreover the residents inhabiting the buildings around it would not get used to that sight. The wall enhances the hint of mystery and the idea of a big Giardino Segreto, a place of re-creation, meant as recuperation of the soul, as described in the Decameron by Giovanni Boccaccio (de Wit, S. 1999).

The wall is an important presence for the design of San Salvi because it is a relic of the past that still will enclose a heterotopian place, place of otherness, different from what happens outside.
Another peculiarity from the past, of the spatial shape of the complex is its symmetrical composition: it was the expression of the division between buildings for men and buildings for women, and of the intensity of the illness. This feature is abstracted and imaginarily perceived as similar to the 'circles' described by Dante in the Divine Comedy (1321). In the imaginary Dantesque afterlife, Hell is organized on concentric circles, where each of them is dedicated to those souls that during their lives committed specific sins, following a gradient of gravity.
This organization is recognizable in the ex-asylum in reversed order: from the less severe patients, to the most dangerous.

Comparing the Dantesque order to the location, and with the necessity of making it a place detached from the everyday life, it is clear that the order needs to be reversed from the historical arrangement: the 'Tanquil' circle, less engaging with the site, will be the external one, closer to the urban realm, and the most serious and intense one, the circle of 'Disturbed', the most intense and immersive, will be put in the inner one. The reason of this is that with the urban expansion, the complex became, from being located in the fields, totally out of the city, to being part of it, even physically close to the center.
With this reversed configuration, the more one explores inside the area, the more he will get detached and further from the noisy and stressful urban environment, so that the experience is progressively immersive from the outer boundaries to the core.



27. *La voragine infernale* (Map of Hell) , by Sandro Botticelli (ca. 1480–1495).


Circle of Disturbed
Circle of Semi-disturbed, Dirty, Epilectics
Circle of Tranquil
PLANIMETRIA GENERALE
Main building Administration and management
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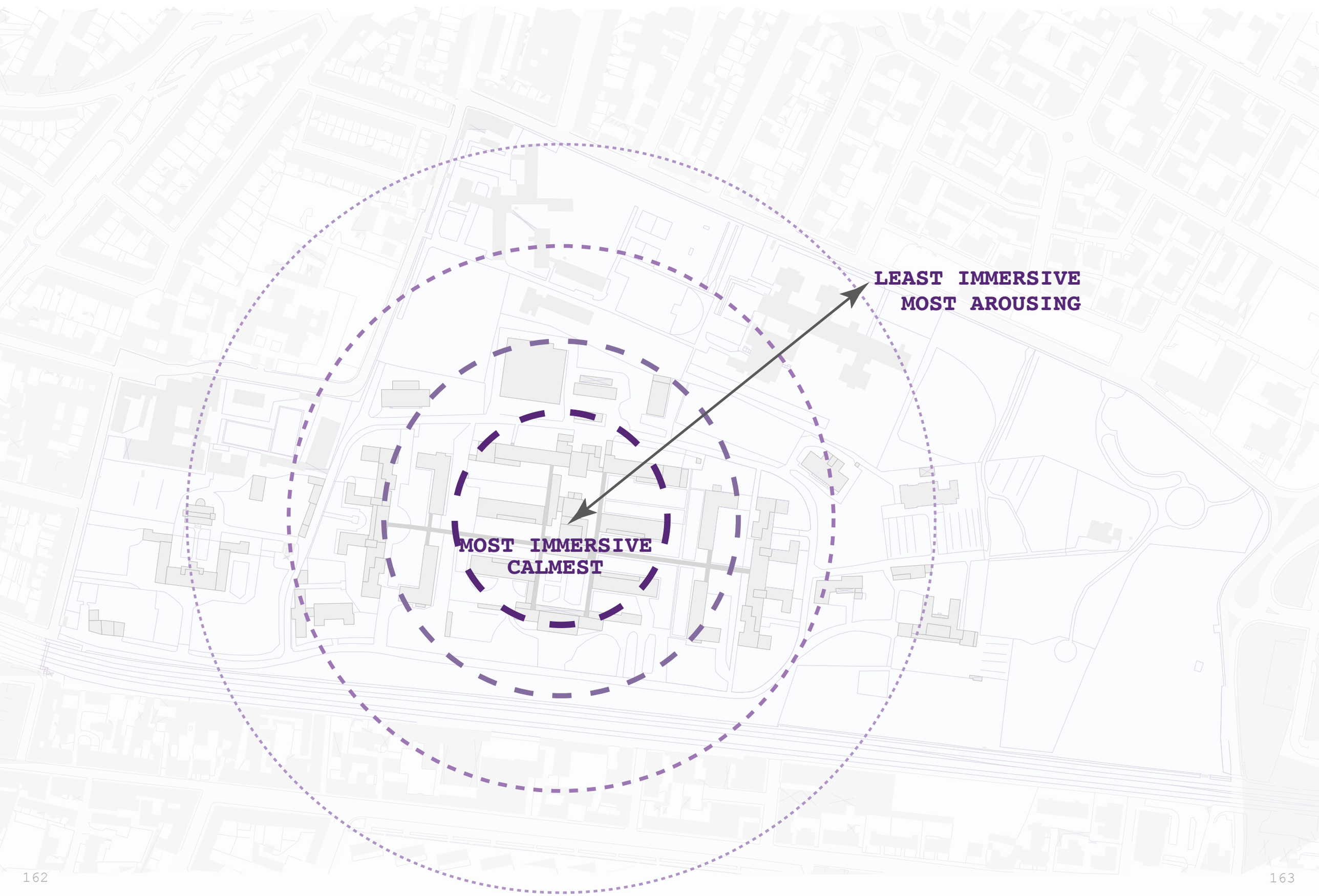
LEAST IMMERSIVE
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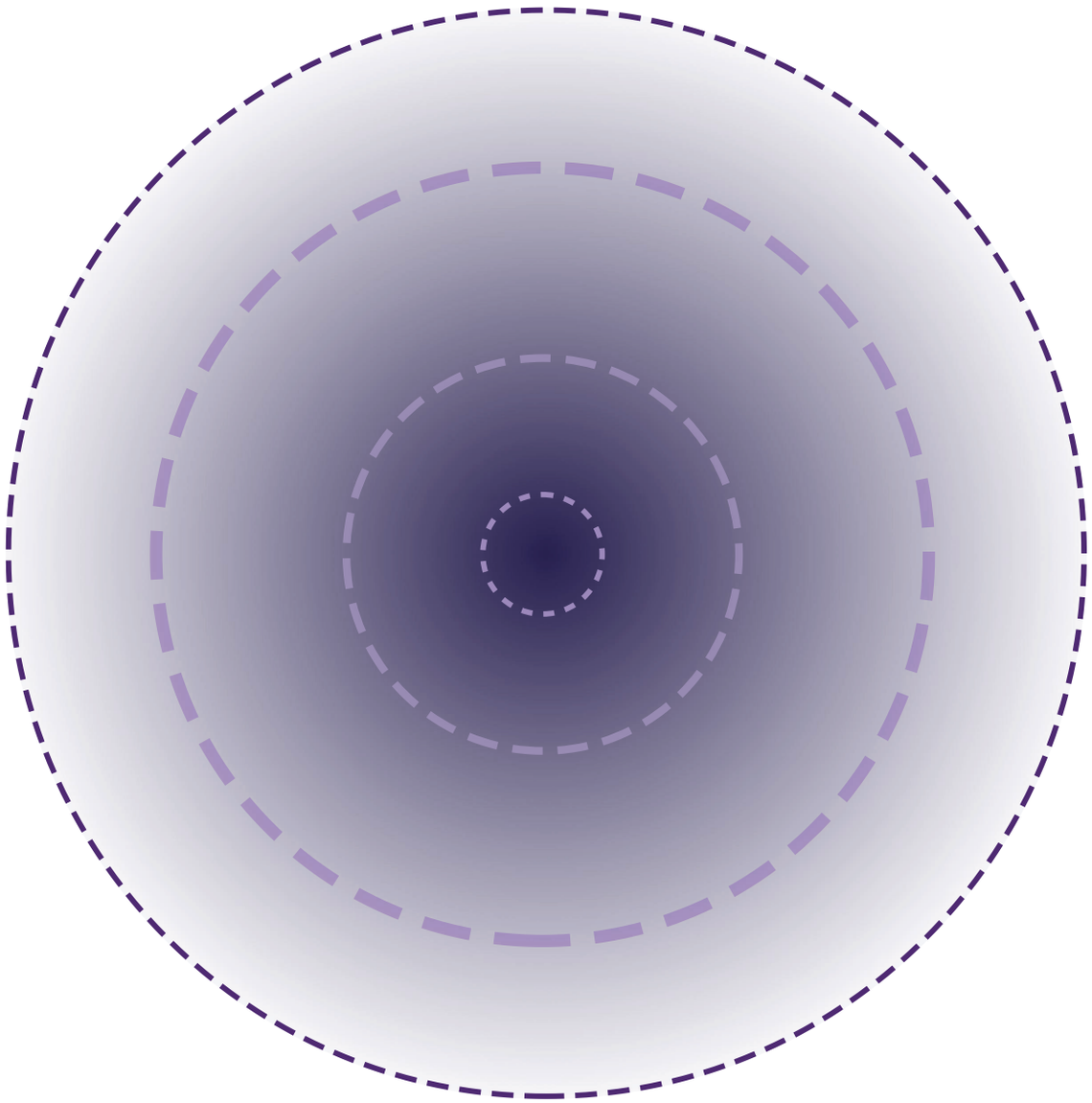
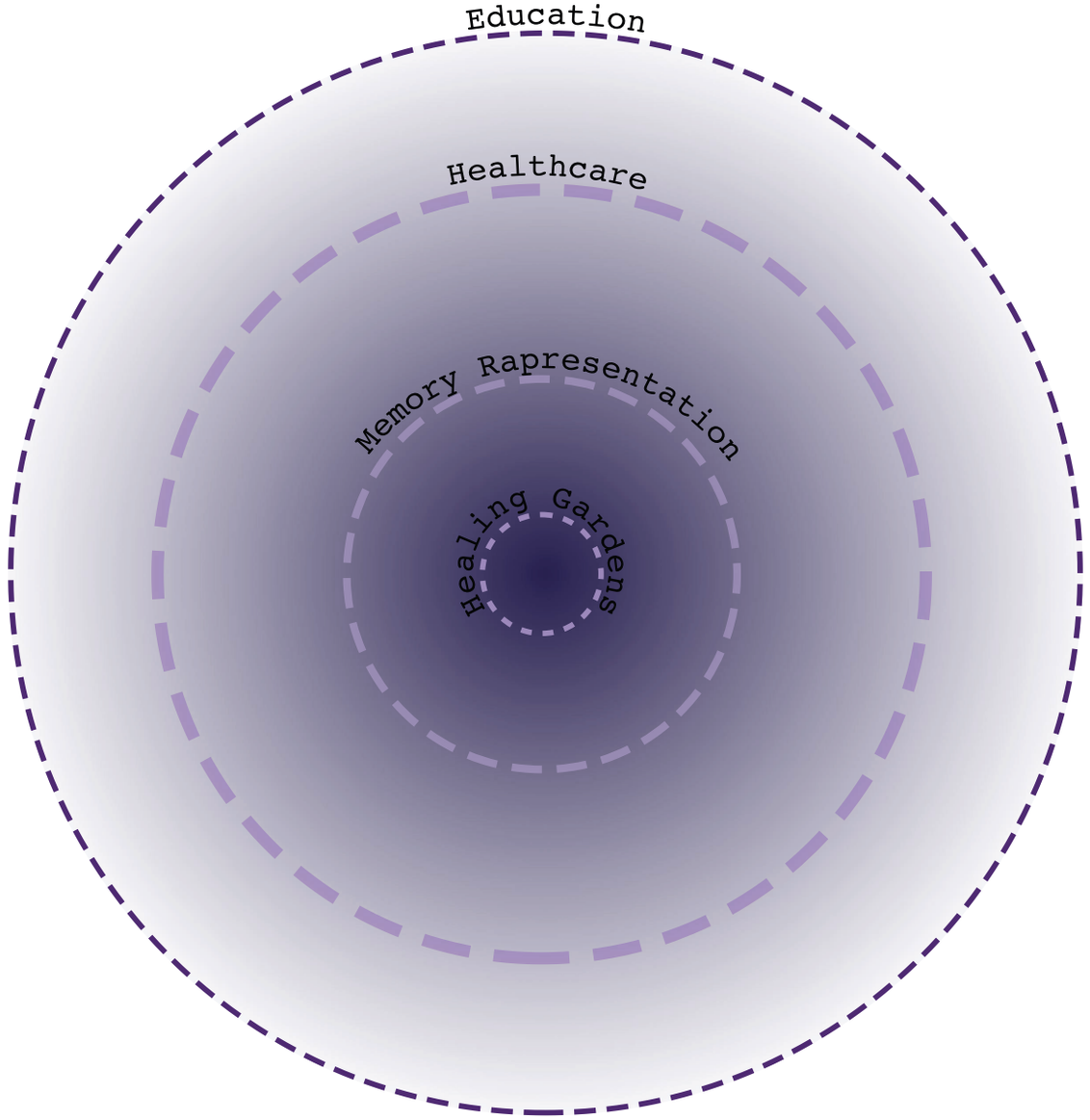
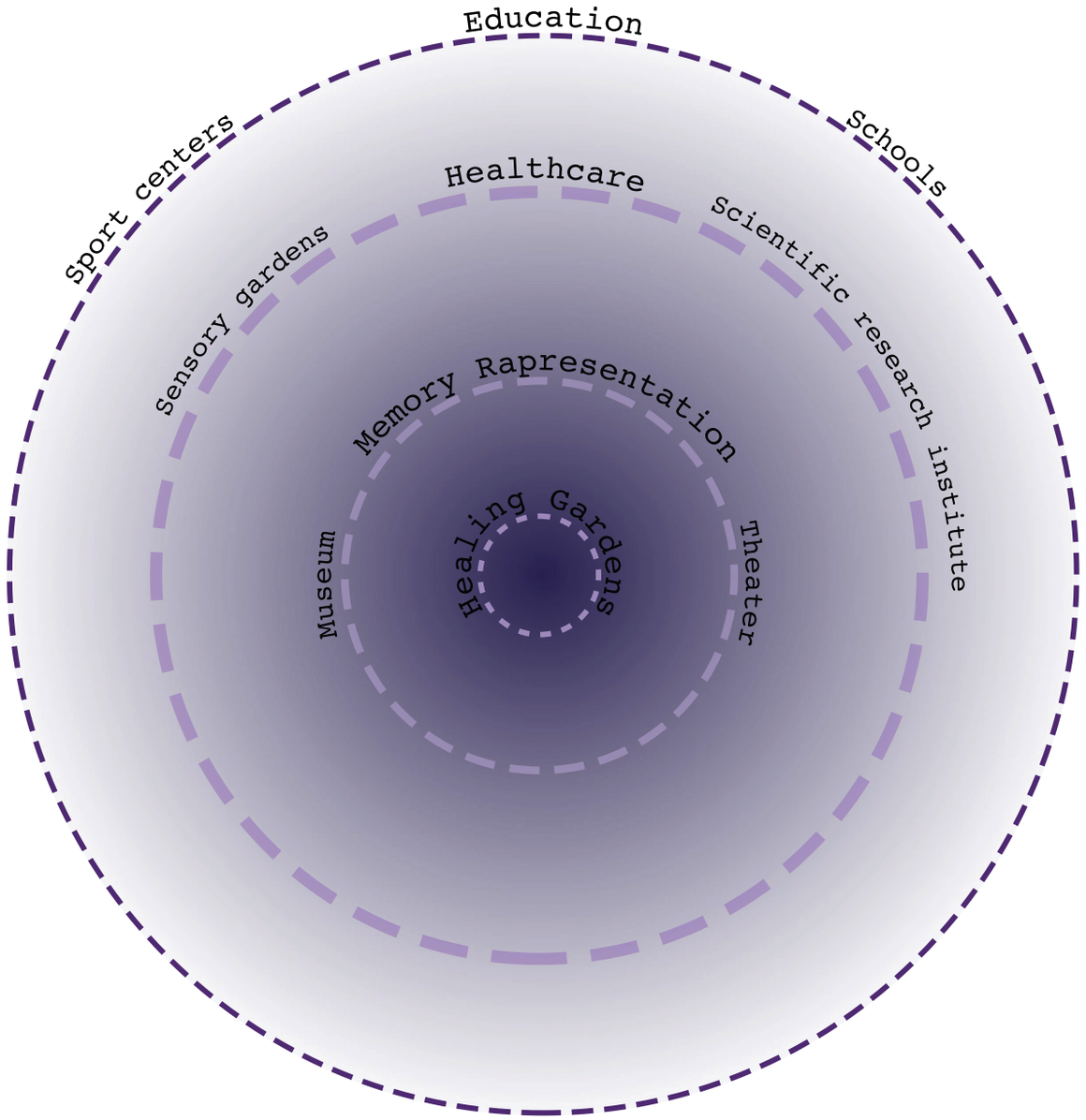



Education
Healthcare
Memory Rapresentation
Healing Gardens


Education
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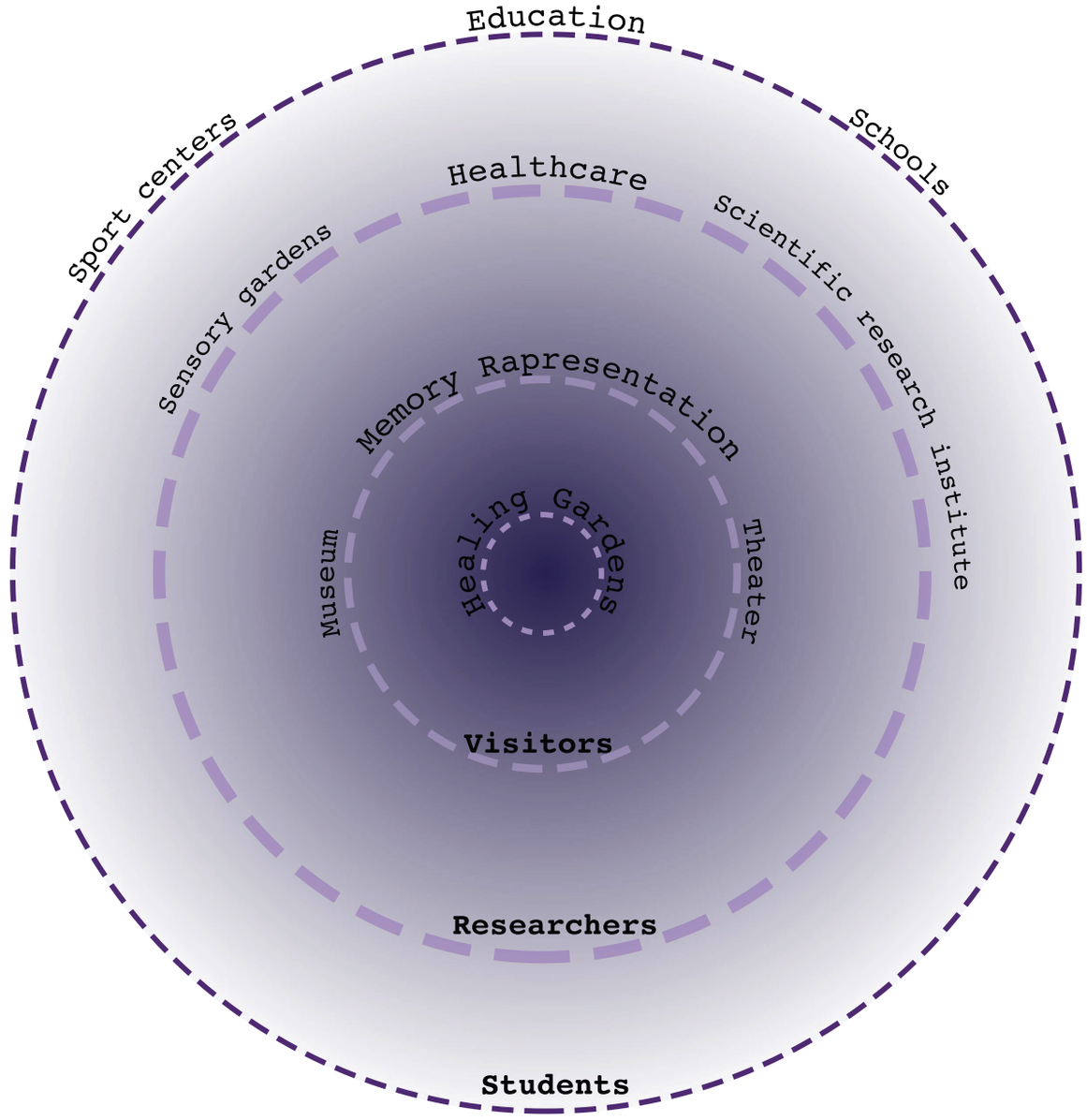
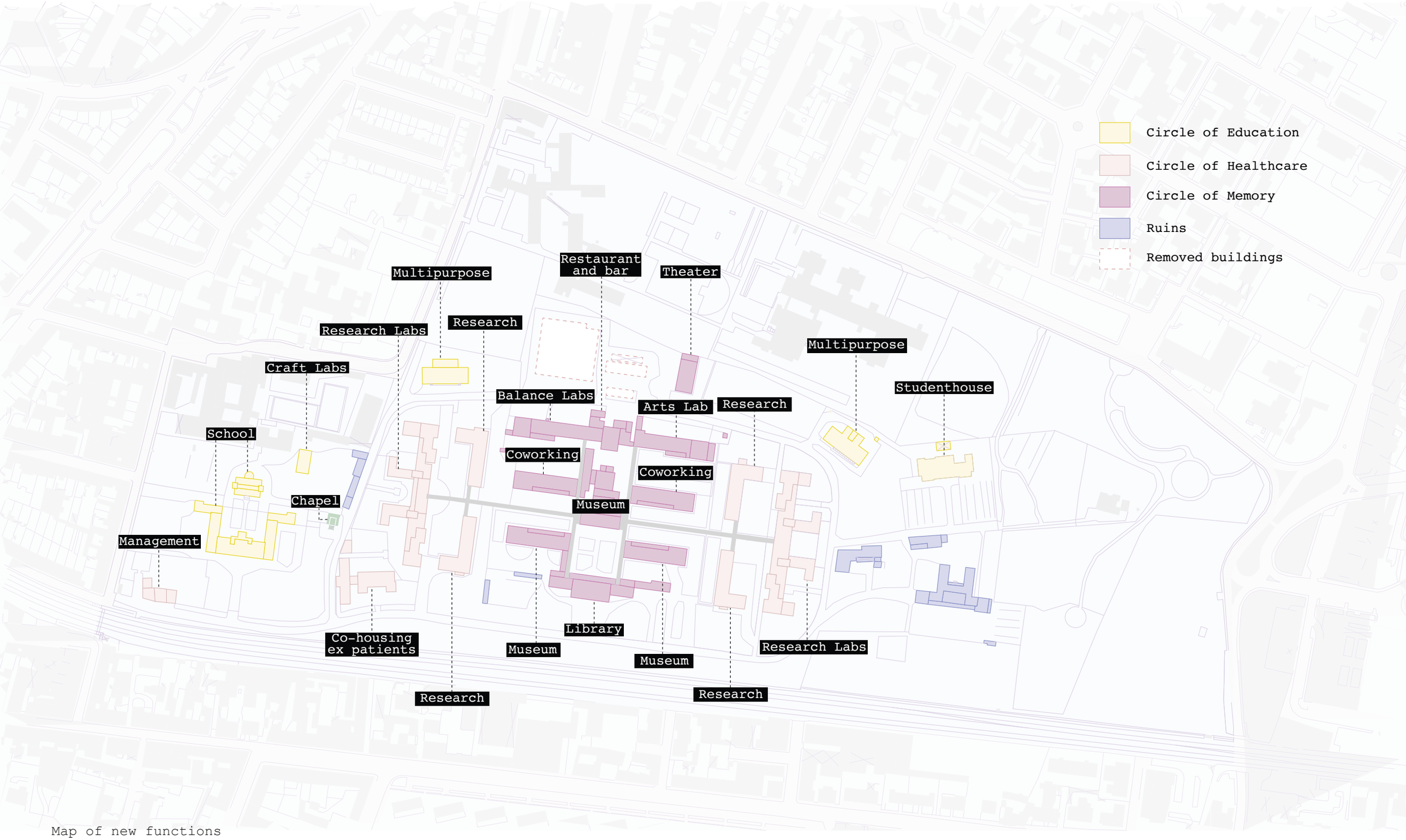
Schools
Healthcare
Sensory gardens
Scientific research institute
Memory Rapresentation
Museum
Healing Gardens
Theater


Education
Sport centers
Schools
Healthcare
Sensory gardens
Scientific research institute
Memory Rapresentation
Museum
Healing Gardens
Theater
Visitors
Researchers
Students

1.3 Functions: the regeneration of San Salvi

For the renovation of the old asylum, the users present in the area are mainly students of high schools and primary school, researchers and visitors.
The students because the complex can become an inspiring place good for their growth; the researchers for biological and neurological studies to enrich the exploration in the field of Neuro-Architecture, still lacking in Italy; the visitors to spread the historical knowledge among ordinary people and to involve them in activities dedicated to the balance of mind and body well-being and expressive arts.

Moreover, two buildings have residential function: one dedicated to university students, which nowadays is already used by them with 82 bedrooms, but almost empty because of the criminality. The second one is thought for those ex-patients of the psychiatric hospital who were born there and since the closure they often meander between the walls sleeping in cars or on benches.



Map of new functions

1.4 The (re)born of an experimental village of diversity

With the design people live, work, and are entertained between the walls of San Salvi, that in this way becomes an experimental village of diversity, where the presence of the past is still kept vivid but unthreatening.

To be accepted and embraced by the citizens of the neighborhood and of the city it needs to be bewitching and promising so that they would be willing to change their mind and invest in it. The strategy adopted here is to provide the area of a water collector and solar panels to be partly autonomous from the urban's energy. The solar panels are located on the fence that separates the complex and the railway, and together with the slope underneath it creates a round space that reinforces the idea of enclosure, using an element of the infrastructure.
The water reservoir collects the rainwater coming from the gutters of the buildings. They are at first connected to a gully that carries the water into underground pipes, which direct the flow towards the main collector.

2.2 Masterplan of San Salvi

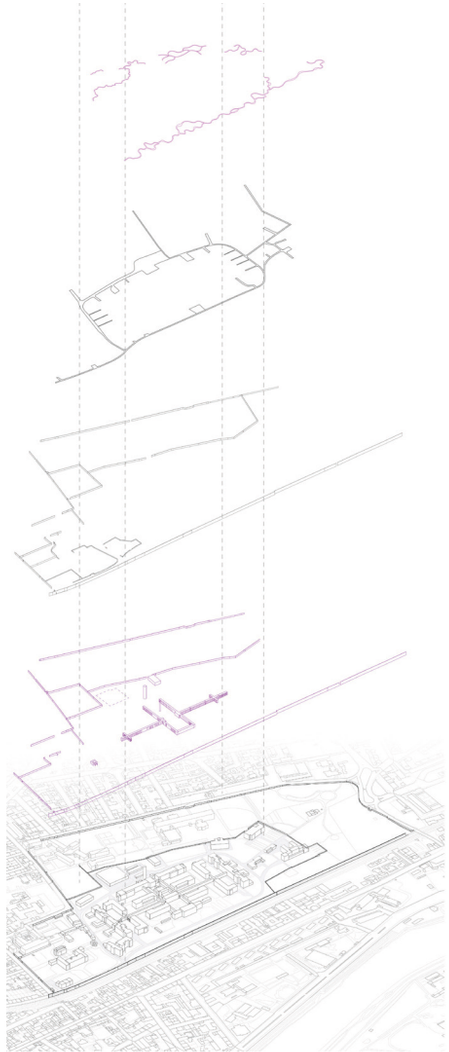


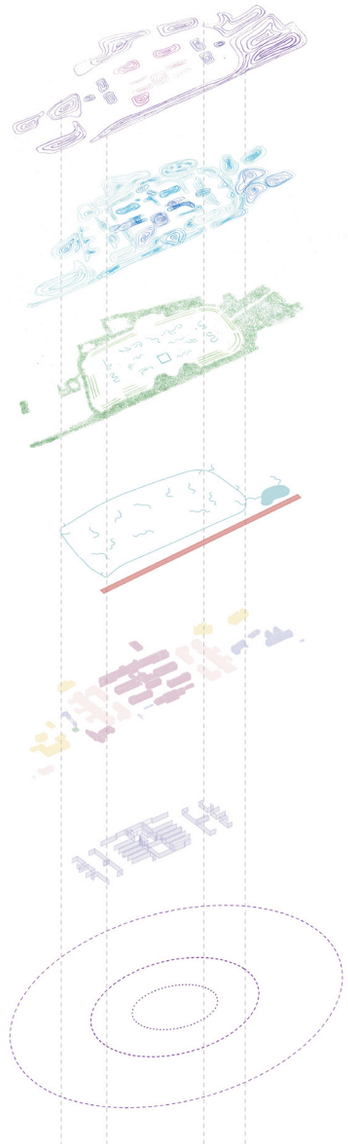
2.3 Application of the tool box



Application on the big scale

3. Layers of rings

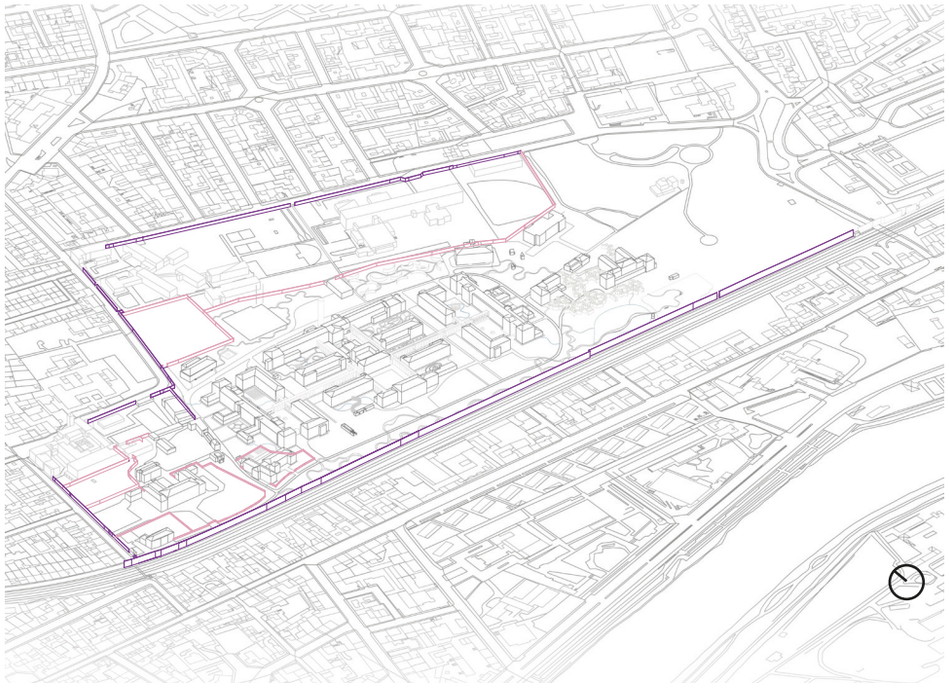




The concept inspired by the Dantesque circles is the main spatial framework that gave a structure to the design. The area of San Salvi is divided into three main rings, each one characterized by specific boundaries, routing, programme, landscape type, level of enclosure and detachment from the outside world.

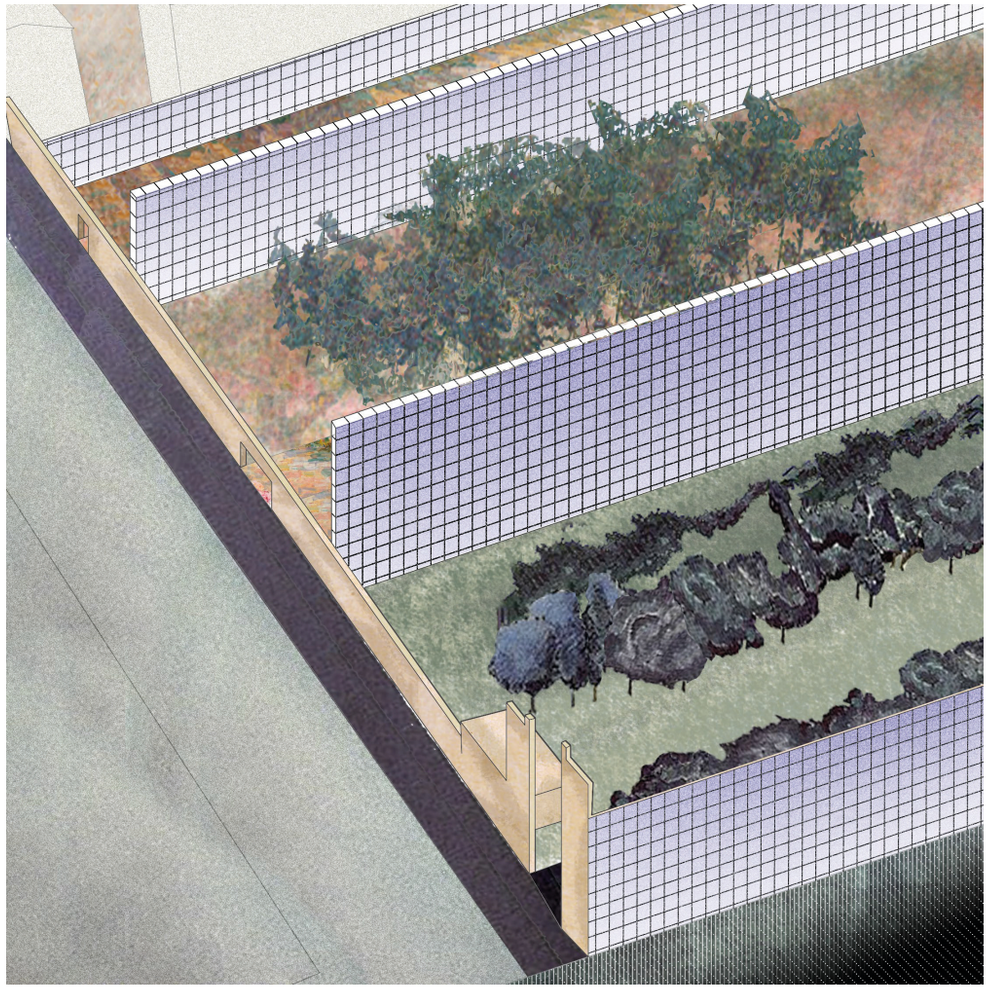
3.1 The wall

As already mentioned, the wall is a fundamental entity in the project, since it conveys a sense of mystery from the outside, and a sense of enclosure and safety from the inside. Nevertheless, seen the spatial composition around the complex on the northern and the eastern side, the original wall 7m high, is not always required. In fact, on the northern side, the presence of school complexes allows a sufficient division from the city. Moreover, in order to make San Salvi part of the city's fabric, the fence on the east side that now divides it from the park is removed, and the latter becomes part of the complex. The existing park, because of its dimensions, is an element that contributes to a sense of unknown for the observer from the street, and makes, in this case, the presence of a wall useless. When San Salvi borders directly with the streets instead (west and south), the wall is made of bircks and 4 m high.



Main wall - 4 to 7m high

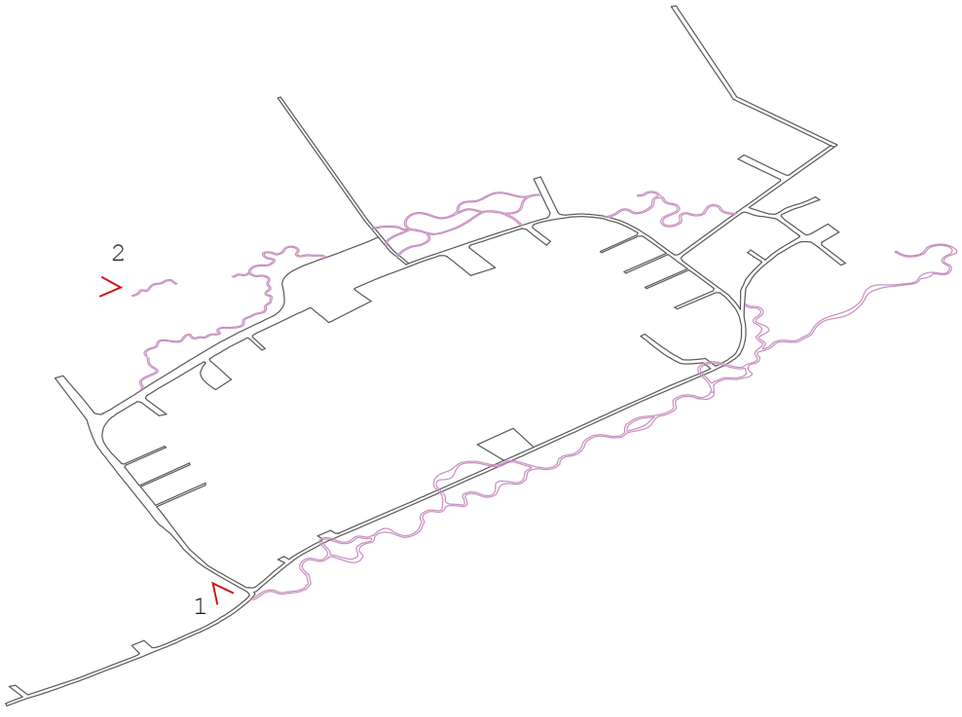
Low wall - 1,20m high



Perspective view of the main entrance to San Salvi from the south-west corner

3.2 The routing

The route as well represents a boundary that separates the first ring from the inner one. The separation is visible in the change of function of the buildings, from education to research, and in the type of landscape, from dense forest to meadow. The route has also a double quality: the old one is kept as direct and straight connection with all the parts of the area, and an additional one is dedicated to the action of meandering and exploring the site.



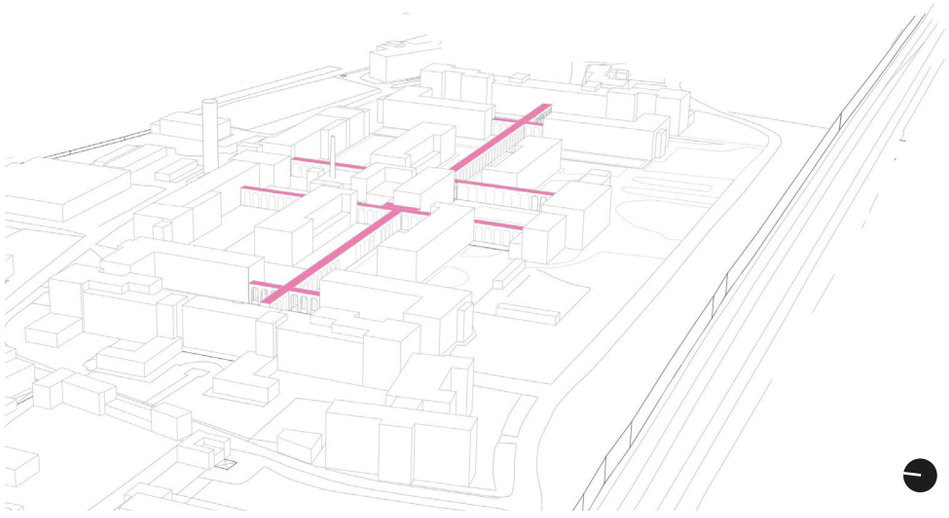


1



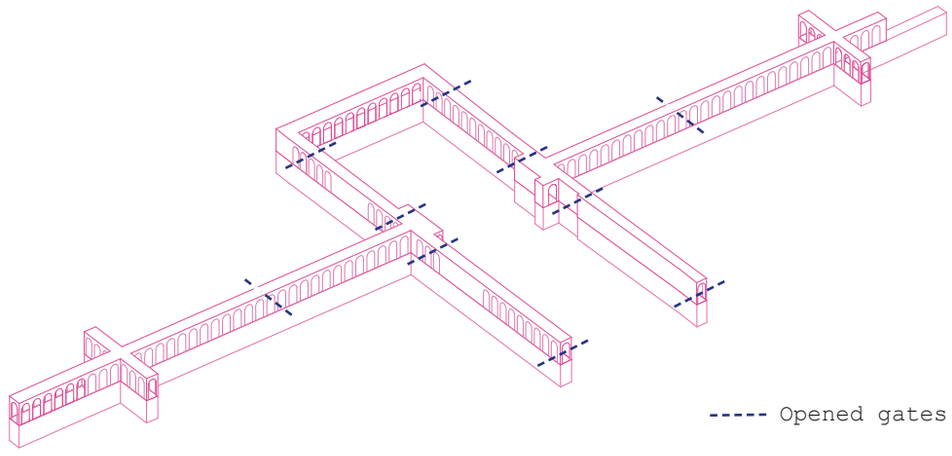
2 Different atmospheres walking along the old route and the new path

Part of route is also the elevated pathway that runs as backbone of the complex and splits it symmetrically. As mentioned before nowadays it is not accessible, but at the time of the asylum they were used by the doctors to monitor the behavior of the patients while they were outside. The whole structure is accessible only on the top, while on the ground floor there are arches are engraved in the stones; only at the extremities they allow passages. In the design, 10 openings are made, to connect the gardens. The elevated floor is also used again, and can be reached by stairs.





28. View from the elevated path, 1970s. Photo by R. Bartolozzi, caretaker of the asylum at that time.



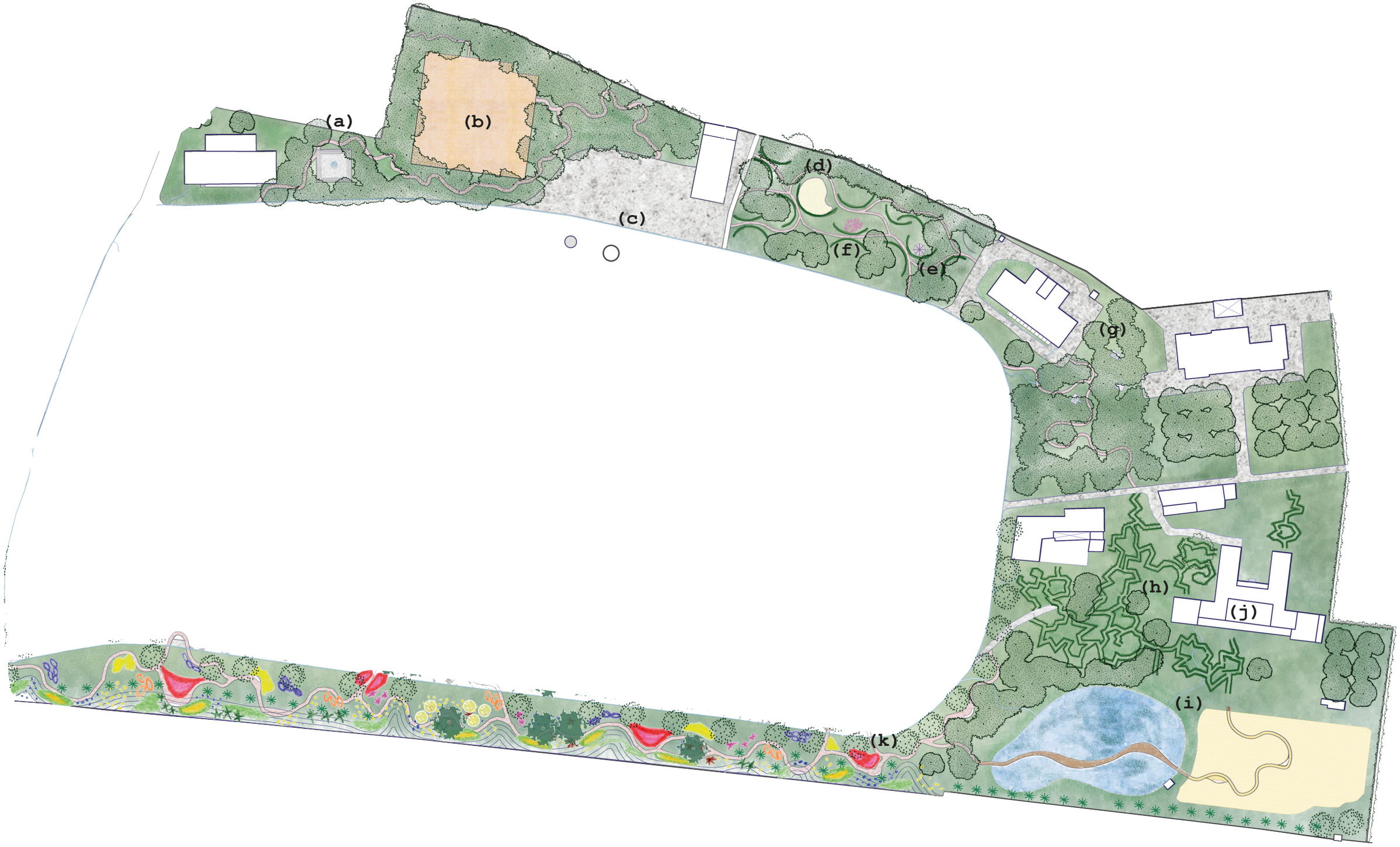
Skeleton of the axis of San Salvi with elevated path on the first floor. New openings connect outdoor spaces.



View from underneath the elevated path. Now there are no openings.



In the design they area made, offering a connection to the gardens of the core of the complex.



Exploration and Understanding ring



Plan of the “Playground of Hedges” (d-e-f)



Plan of the “Primitive area” and “Maze” (h-i-j)

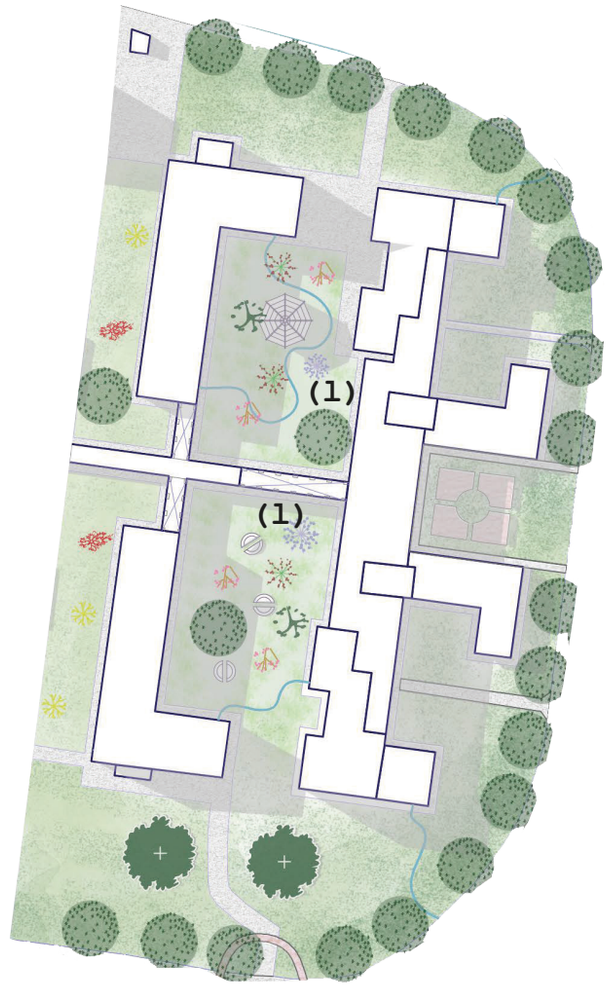


“Playground of hedges” (d,f)



“Primitive area” (i)





Meaningful action ring



Restoration ring

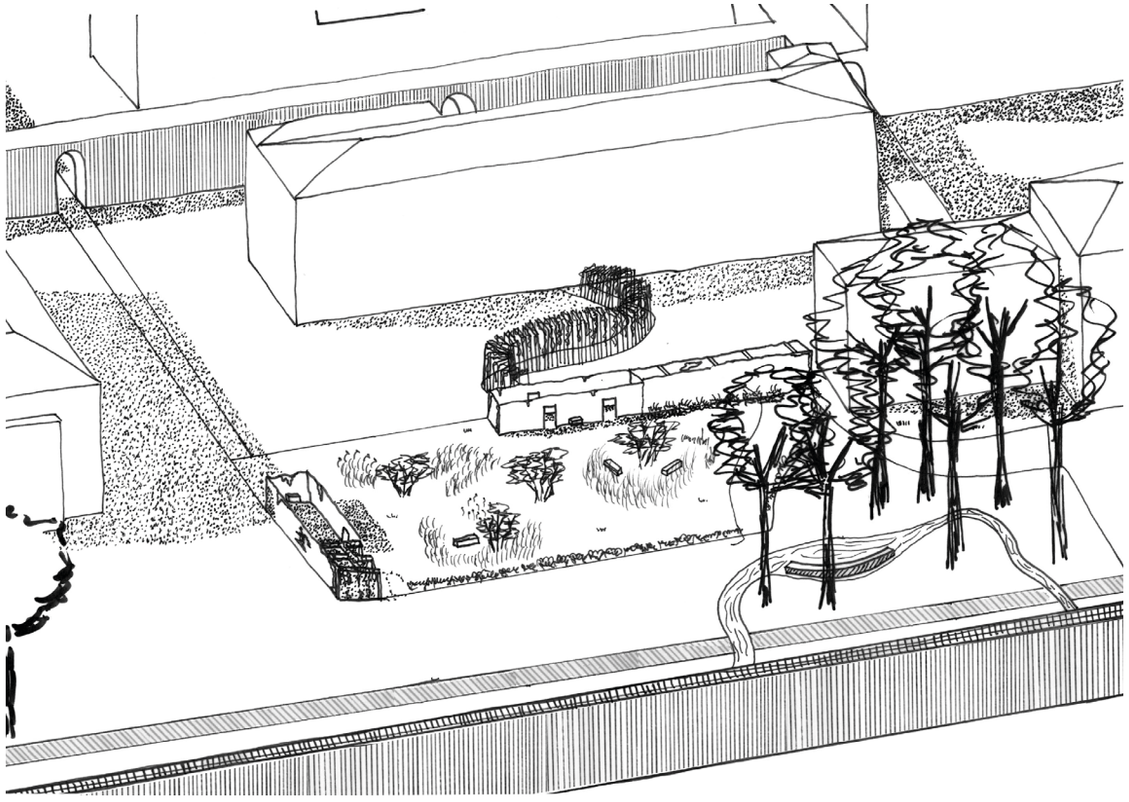
it works as a transition from the area of contemplation and the one of exploration (k).
The last garden (x) is the "Reflection Garden", the climax of the experience. Here the majority of the surface is occupied by water and it is only reachable through the gates or from the buildings around it. It is the end of the journey that culminates with few elements, where water is the element we universally like, and a space for reflection enclosed by the memory of the past of the location.



Transition from the Restorative gardens (q) to the Contemplative gardens (t).



Section “Garden os Islands” (o)



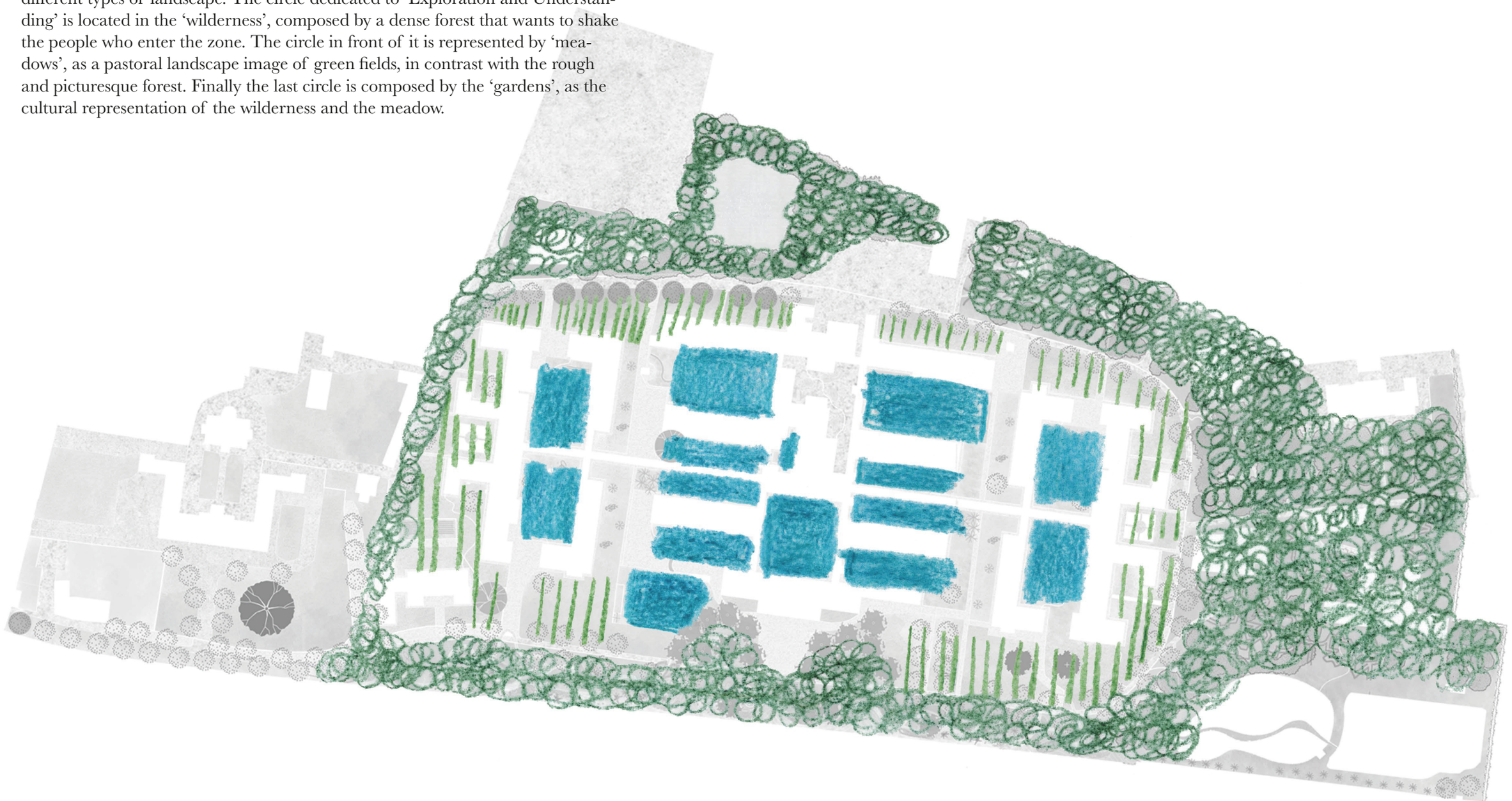
Perspective view on the “Sensory ruins” (w)



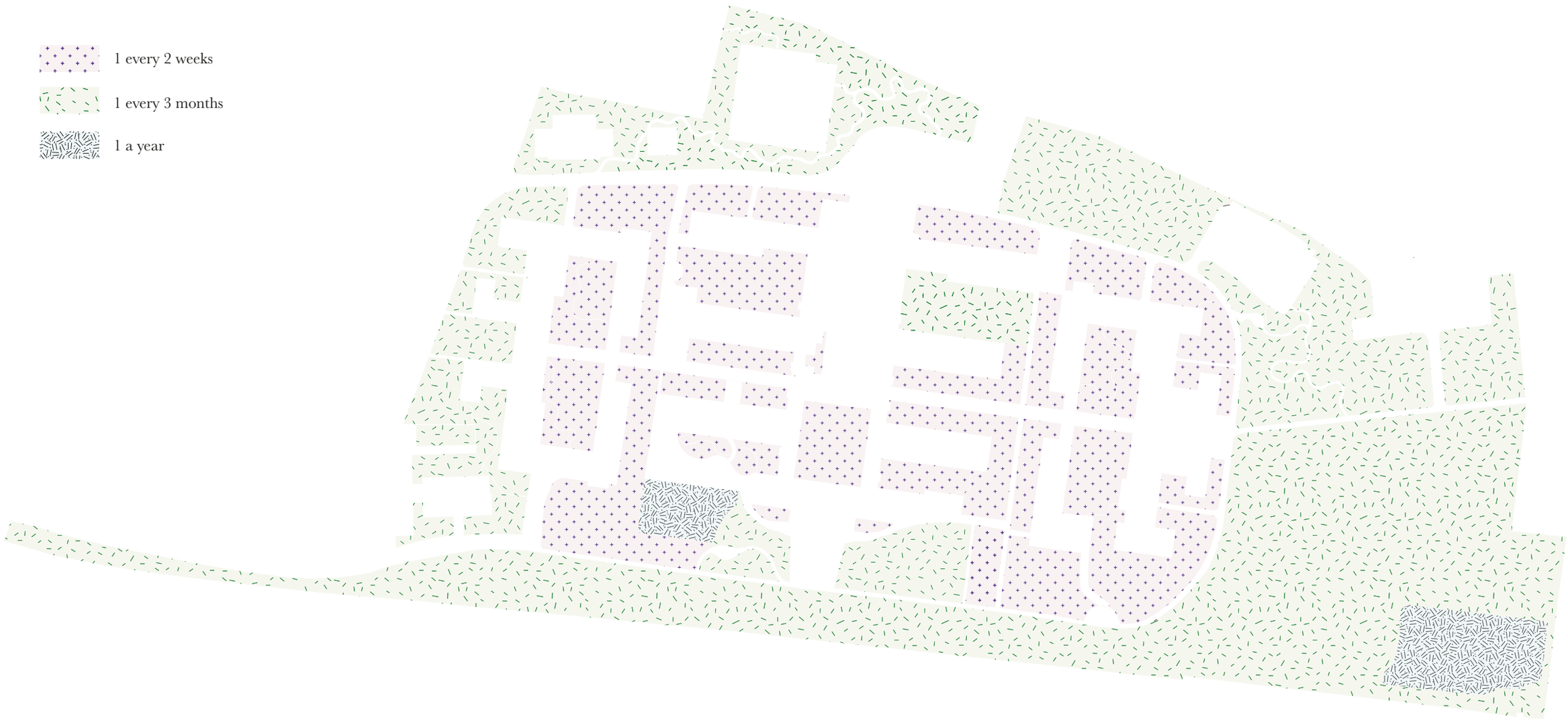
View from the gate to the “Reflection garden” (x)

3.4 Three natures

The difference between the rings is also strengthened by the sequence of the three different types of landscape. The circle dedicated to 'Exploration and Understanding' is located in the 'wilderness', composed by a dense forest that wants to shake the people who enter the zone. The circle in front of it is represented by 'meadows', as a pastoral landscape image of green fields, in contrast with the rough and picturesque forest. Finally the last circle is composed by the 'gardens', as the cultural representation of the wilderness and the meadow.



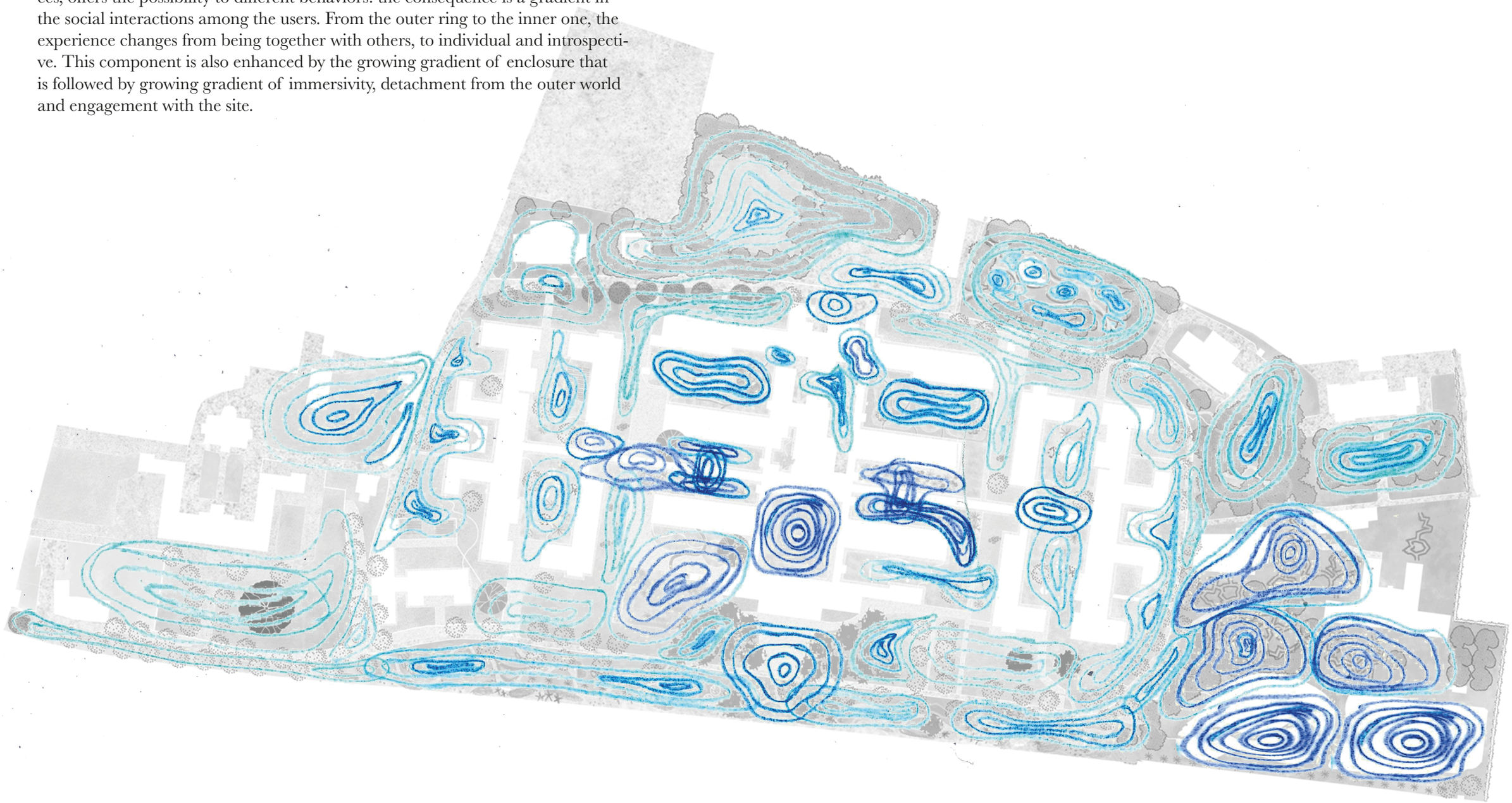
The separation between the three natures is enhanced by the different degree of maintenance of the green spaces. Therefore, the external ring of the forest is let grow wild and cleaned once every three months; the meadow and the gardens are instead mowed every two weeks. The area of the “Seonsory riuns” grows wild for the whole year, and the wheat is harvested in the month of July.



Maintenance Map

3.5 The sociability

The combination of the type of setting, with the programme of the outdoor spaces, offers the possibility to different behaviors: the consequence is a gradient in the social interactions among the users. From the outer ring to the inner one, the experience changes from being together with others, to individual and introspective. This component is also enhanced by the growing gradient of enclosure that is followed by growing gradient of immersivity, detachment from the outer world and engagement with the site.

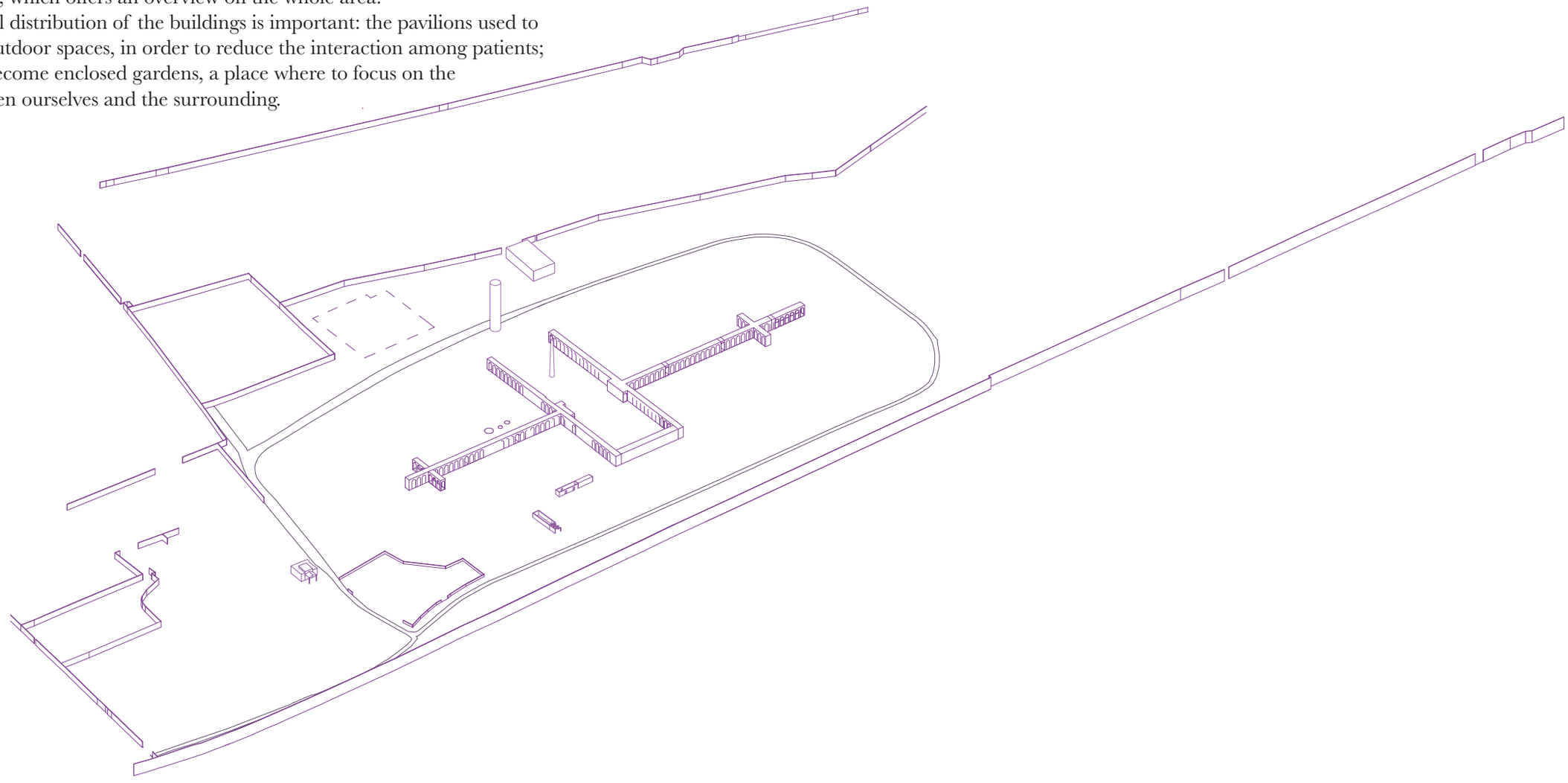


3.6 The relics

The regeneration of the San Salvi complex starts from what today is already (or still) there, with the aim of keeping the essence of its past vivid for the new visitors, expressing also the new knowledge about mental health, in contrast with the therapies used in the asylum. Yet, some elements which before were symbol of segregation and control, are kept filled with a different meaning. An example of this is the long wall around the whole complex: it used to be the physical boundary that divided the sectioned from the real world; in the design, it is a boundary from the real world again, but that encloses a refuge from the ordinary. Another feature is the elevated path that splits the buildings block symmetrically: once used by the doctors to control the movement of the patients, in the project is a connector for all the gardens, which offers an overview on the whole area.
Also the spatial distribution of the buildings is important: the pavilions used to separate the outdoor spaces, in order to reduce the interaction among patients; these spaces become enclosed gardens, a place where to focus on the relation between ourselves and the surrounding.

Finally, the main road that runs around the core of the asylum, is shrunk, but the boundary is marked by a new water stream that encloses the zone, making it in fact an island.

Other elements are left there in the stage they reached throughout time, witnessing the abandonment after the closure of the asylum: the mysterious atmosphere of the area of the ruins is enriched by the presence of the maze; the old water tower becomes the obelisk of the new square; and the traces of the old vegetable gardens used by the patients lends the shape to the new ones.

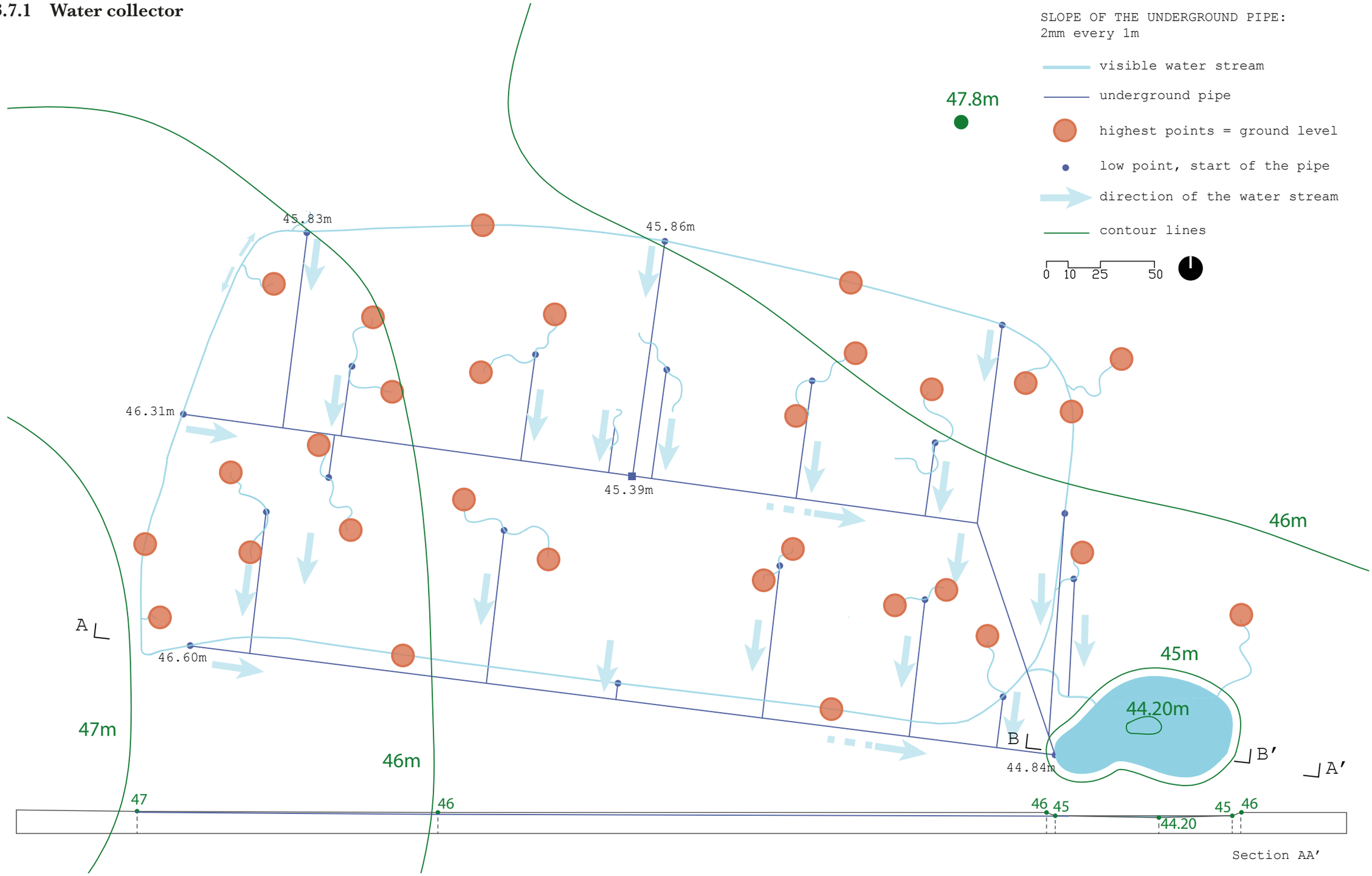




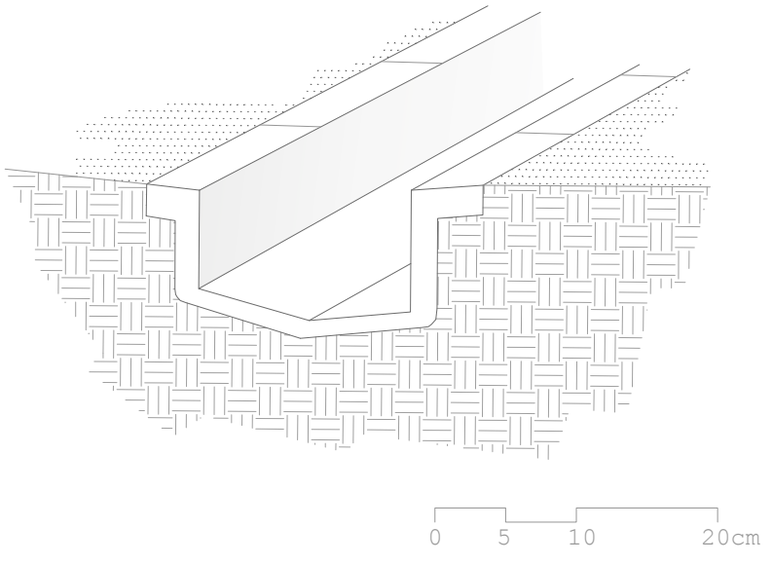
Traces of the old vegetable gardens used by the patients as therapy in an enclosed garden. Photo by the author, January 8 2018.

3.7 Sustainability

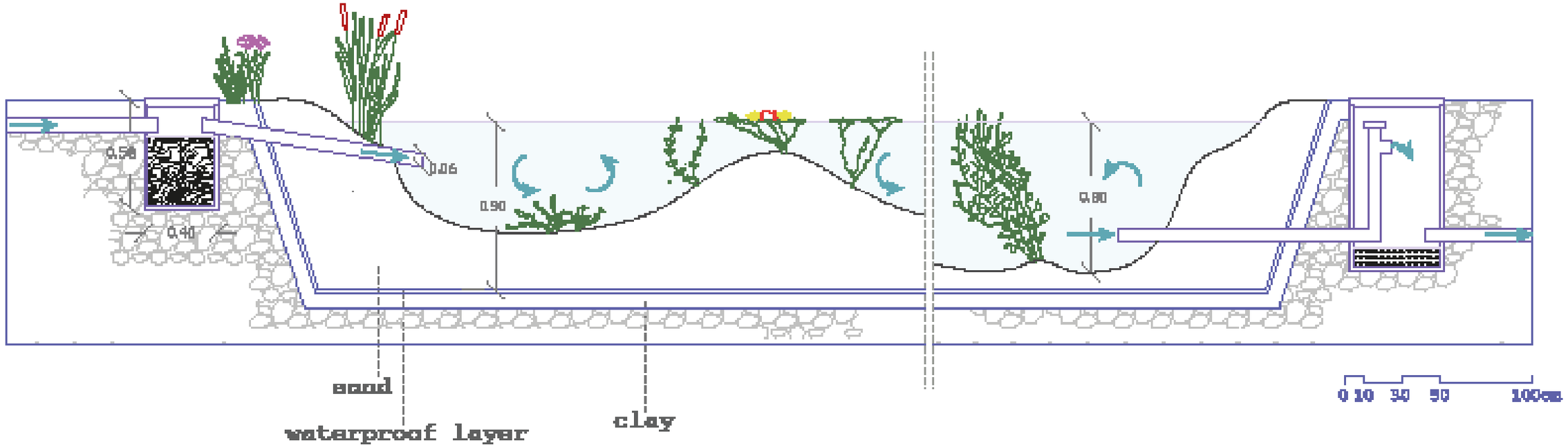
3.7.1 Water collector



The inner core of the complex of San Salvi is enclosed by a road. Along this road there is a cut that receives rain water from all the gutters present on the roofs of the buildings inside this area. The streams are then connected through underground pipes to a reservoir (2.764,9 m2) where the water is purified through phytoremediation. The big cut is also a way to highlight the detachment of the inner area from the rest of the complex, since it traces the original boundaries of the asylum.
For the actual topography of the site (+46m), in the area where the collector is located 1,8m of ground is dug out: 1m to allow the underground pipe to reach it (=> +45m), and 0,8m (=> +44,2m) for the water.



Detail of the cut in the asphalt where the rain water flows.



Section BB'

3.7.2 Solar panels

The photovoltaic solar panels are located on top of the border that divides the complex from the railway, and it extends along the whole area of San Salvi (780m). The energy generated is enough for the block of the 'representation of memory' (museum and other activities) to be autonomous from the city of Florence.



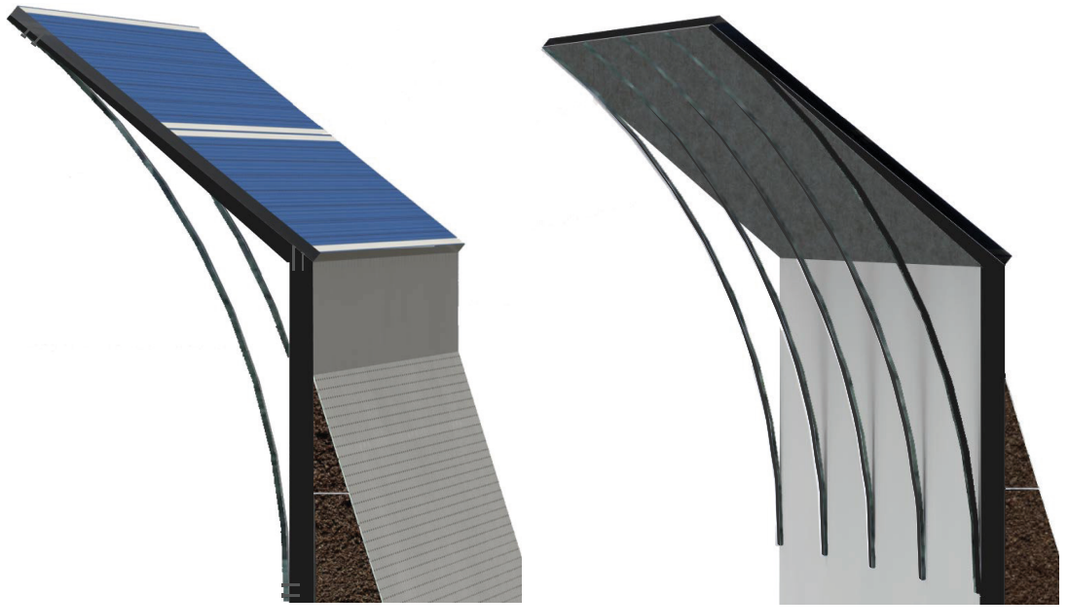
Calculations:

The dimensions of these panels are 0.8 by 1.5 meters. Along the wall the panels are placed with the longest side parallel to this wall, which results in 2 rows of 257 panels. The final panel area is consequently 1233.6 square meters. One solar panel produces 1000 Watts per hour with an efficiency of 20% (Source 1), so effectively 200 Watts per hour. The summed production of all the panels equals 246720 Watts per hour. The amount of energy producing hours per day, also called sun hours, is assumed to be 12 hours per day. This means, the solar panels are producing energy on average 4380 hours per year. Ultimately, a production of 1.08 GWh per year is realised.

Buildings block:
To calculate the energy use of the museum, an average consumption of 120 kWh per square meter on annual base is assumed accordingly to the Energy Consumption Guide (Source 2). This includes: heating and hot water, cooling, pumps and controls, humidification and lightning. Since the museum covers an area of 8211 square meters, this results in an annual consumption of 0.985 GWh.
In conclusion, the solar panels produce sufficient energy to sustain the museum throughout the year.

Source 1: The Eco experts (2018), How Much Electricity Can I Generate with Solar Panels. Retrieved from https://www.theecoexperts.co.uk/solar-panels/how-much-electricity

Source 2: (CIBSE) Chartered Institution of Building Services Engineers, (2003), Energy use in offices. Retrieved from http://www.cibse.org/getmedia/7fb5616f-1ed7-4854-bf72-2dae-1d8bde62/ECG19-Energy-Use-in-Offices-(formerly-ECON19

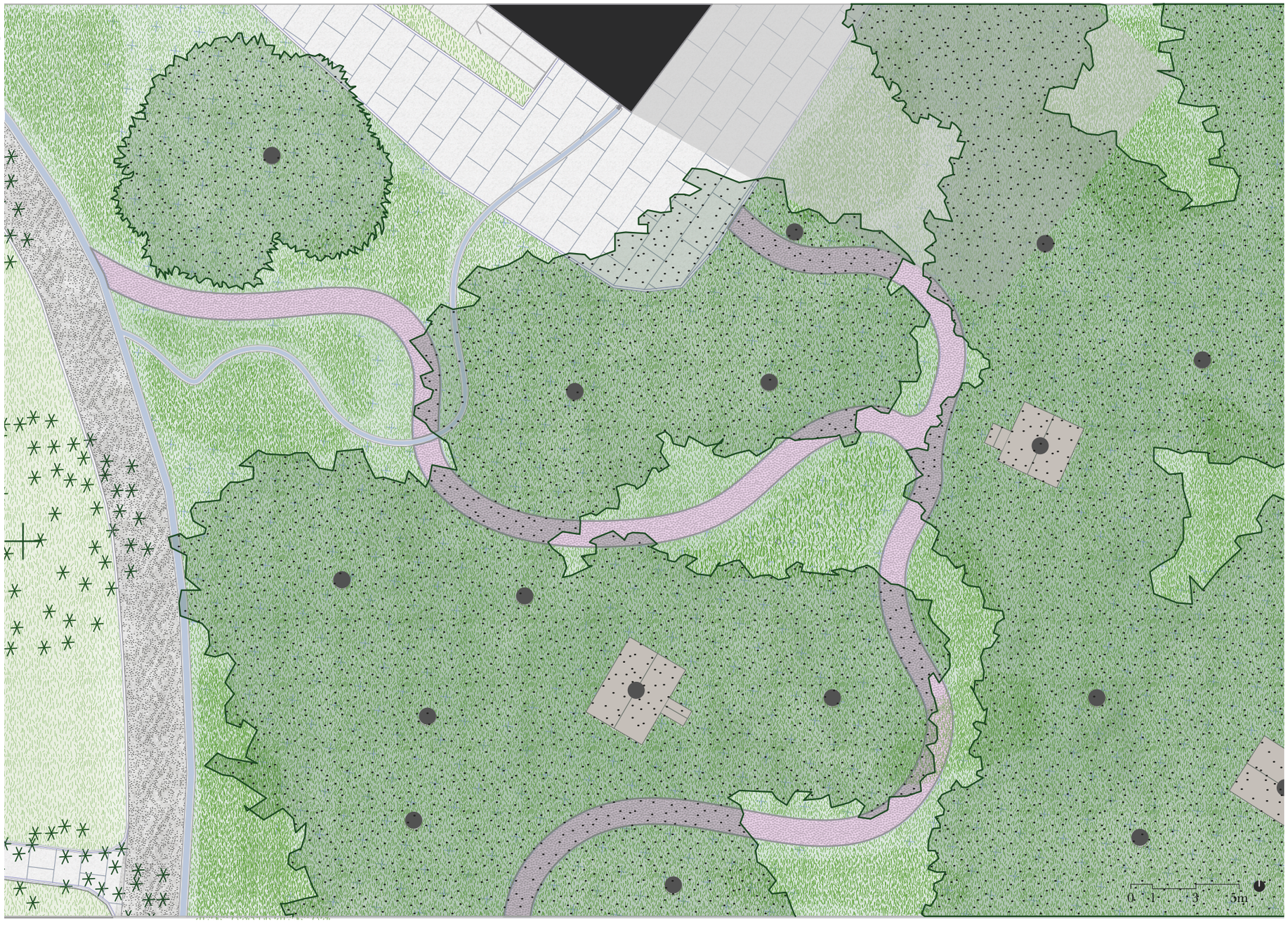


Installation on the wall.

4. Detailed design of four areas

4.1 From the forest: tree houses





4.2 From the forest: Hill





Tilia tomentosa



Quercus ilex



Pseudolarix amabilis



Cupressus sempervirens



Chamomile



Ruscus aculeatus



Arctium lappa



Rosa canina



Syzygium aromaticum

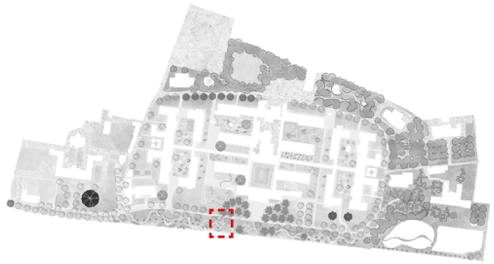


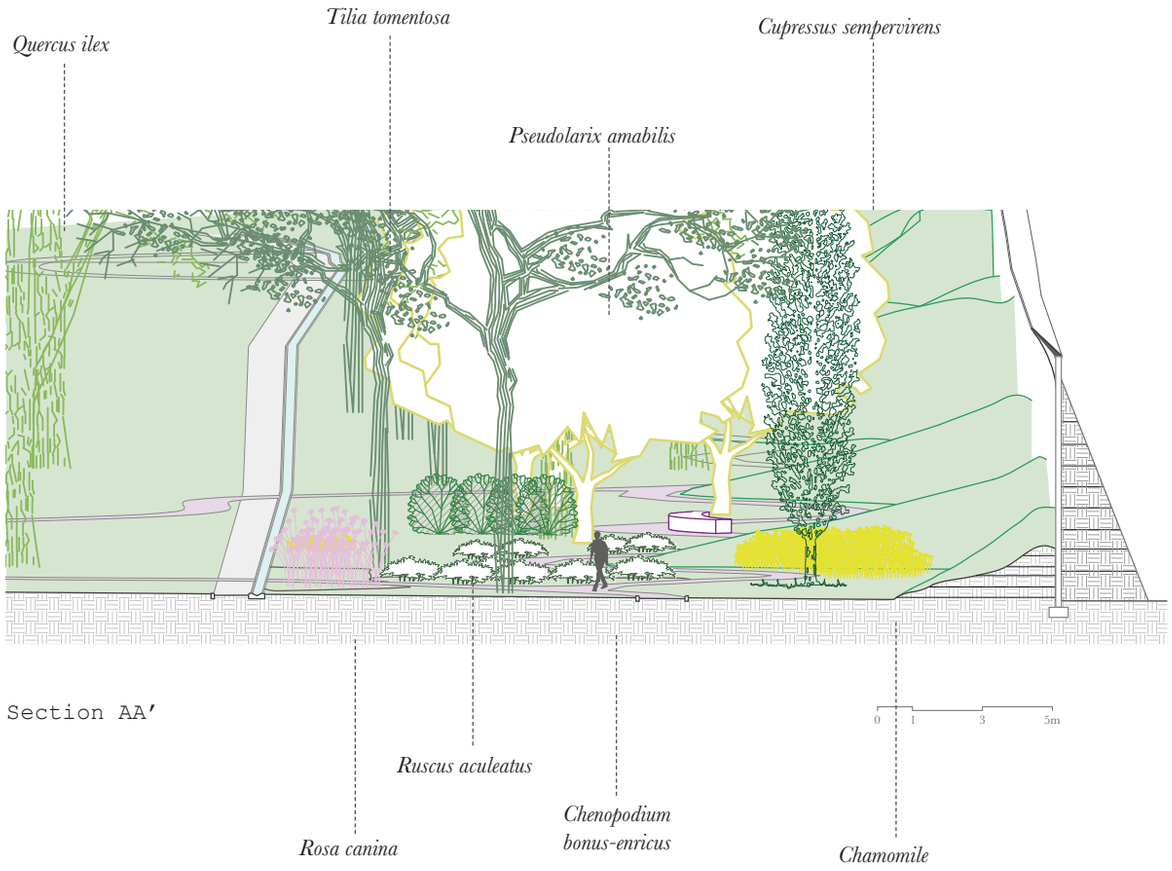
Pimpinella anisum



Chenopodium bonus-henricus

N 1:200

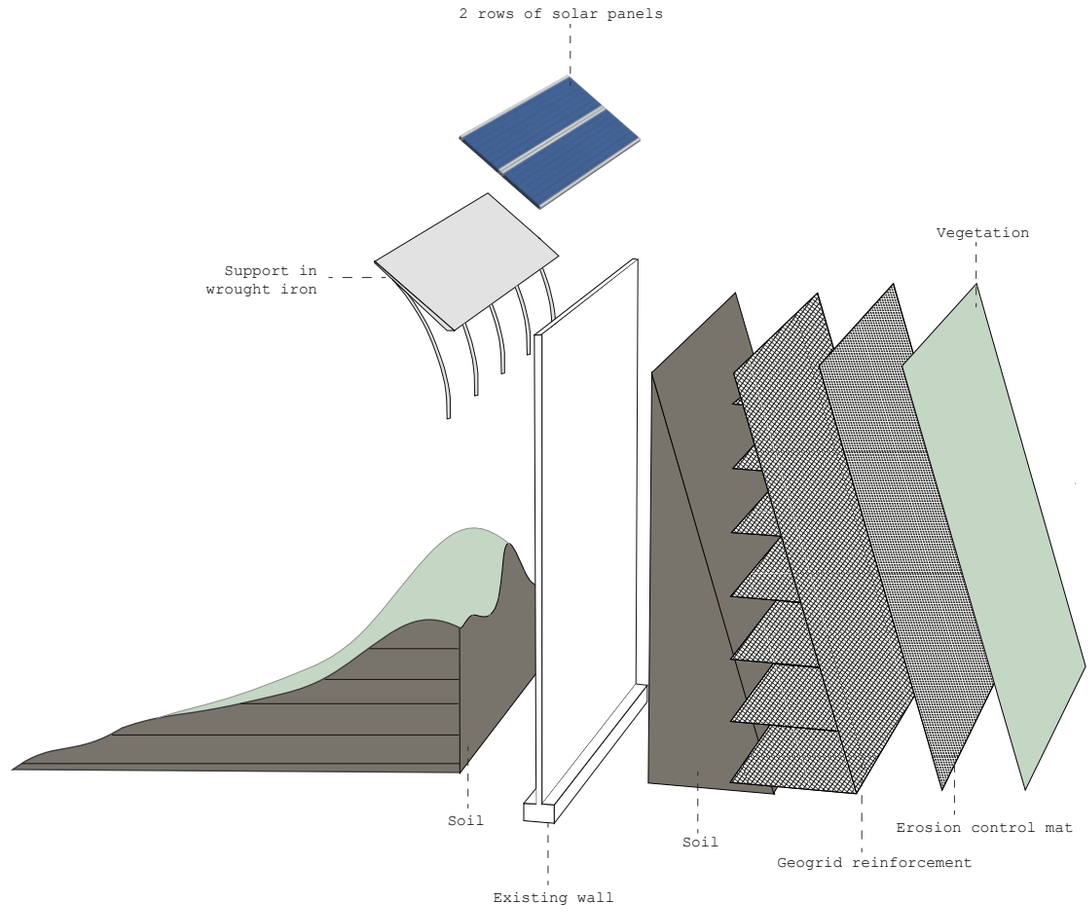




Section AA′

The wall on the southern side of San Salvi divides the location from the railway, and the trains passing make loud noise. The hill with different heights on the side of the complex creates an adventurous space, but it also contributes to the absorption of the sound coming from the railway. In order to support its weight, the wall needs to be reinforced, therefore the solution is a reinforced steep slope, that contrasts the weight of the hill, but also works as green sound-absorbent barrier.
Sources: 1) https://www.stradeeautostrade.it/ambiente-e-territorio/barriere-a-verde-verticale-fonoisolanti-e-fonoassorbenti/
2) https://www.geogrid.com/en-us/applications/reinforced-steep-slopes

Moreover, a wrought iron plate is installed on top of the wall, supported by arcs, that together form a platform where the solar panels lay (detail of the connection solar panel-wall p.231).
The wrought iron is also used in the meandering path next to the hill as border of the flower and bushes beds.



Exploded view of sound-absorbent green barrier applied on existing wall

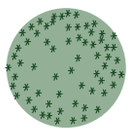


4.2.1 Plants Atlas: species in the Exploration and Understanding layer

This atlas offers an overview of the species of plants chosen, and of those already existing in the complex of San Salvi that are left in the project. In the descriptions, the reasons they were selected for are explained, always through the lens of the effect that they might have on the visitors of the area, their possible use, and the spatial characters.



1) *Populus Alba – White Poplar*

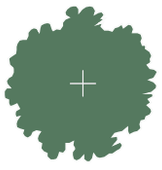


2) *Tilia tomentosa – Linden*

3) *Pseudolarix amabilis - Golden Larch*



4) *Quercus Ilex – Holm*



5) *Fagus Sylvatica - Beech*



6) *Cupressus sempervirens – Cypress*



7) *Hedges*

8) *Medicinal plants*



8.1) *Syzygium aromaticum – Clove*



8.2) *Ruscus aculeatus – Holly*



8.3) *Pimpinella anisum – Pimpinella*



8.4) *Asperula odorata – Asperula*



8.5) *Chamomile – Chamomile*



8.6) *Ribes nigrum – Blackcurrant*



8.7) *Chenopodium bonus-henricus - Perennial Goosefoot*



8.8) *Rosa canina – Dog rose*



8.9) *Physalis Alkekengi - Cape gooseberry*



8.10) *Arctium Lappa - Greater burdock*

8.11) *Anethum graveolens – Dill*



8.12) *Borago officinalis – Borage*

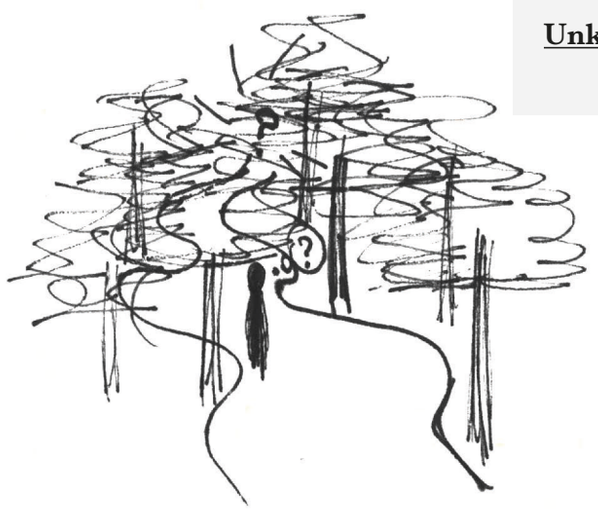


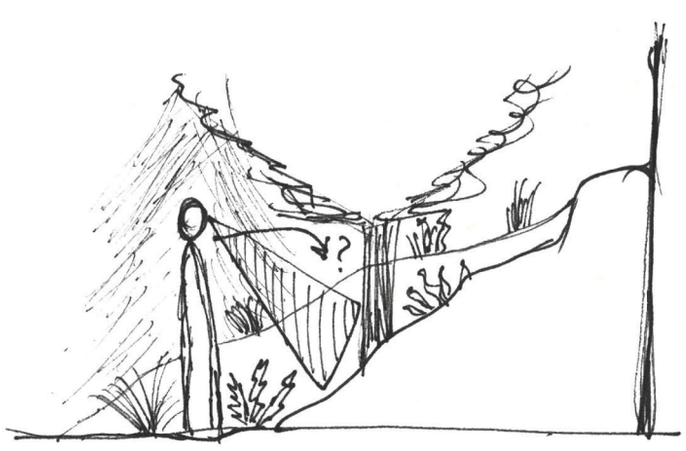
9) *Abies alba - Silver fir*

Characteristics: mulched path - varying topography - trees - lower vegetation with different heights and colors/textures/shapes/smells

Winding paths

Unknown spaces





Effects on the visitor: Engagement with the place - heightened curiosity - encouraged movement - cognitive restoration

1) *Populus Alba - White Poplar*



evergreen

height: 20-30 m

light canopy



colors



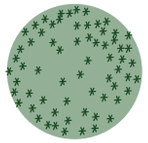






The Populus Alba trees are planted close to each other and form the “Forest of safety”. This tree is present in the external circle of the project and it is the first species visitors experience when they enter from the north and east entrances; it is chosen over colorful species because it represents a dense block that for its neutral colors and comfortable touch can lower the stress and anxiety level. The proximity of the contributes to an alternation of dark and light spots, contributing to an atmosphere of mystery but also of safety for the wide view underneath the canopies. The bark is comfortable to lean on.

2) *Tilia Tomentosa - Linden*



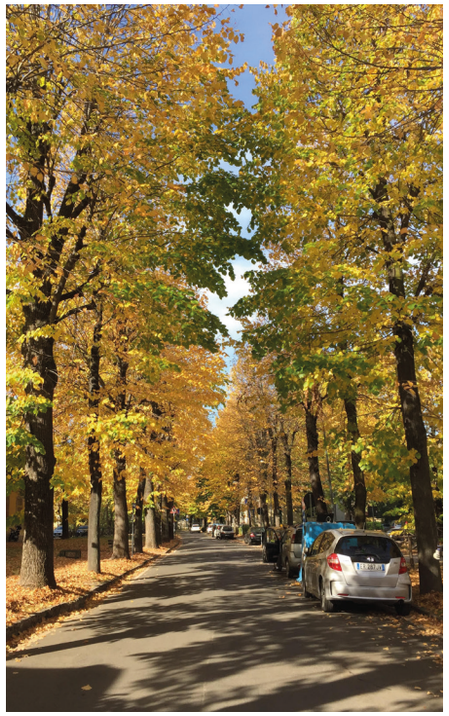
evergreen

height: 20-35 m

medium dense canopy



colors









This species is nowadays present in the complex of San Salvi and surrounds the inner core, being present on the sides of the main path. It helps the visitors to orientate and gives coherence to the enclosing path; therefore in the project it is left there, representing a known and recognizable tree, that has the same function as the *Populus Alba* (1) of introducing people in the area, calming nerves and lowering stress. The *Tilia* tree also has therapeutic properties: when the leaves are macerated indeed, the product can be used as cure for anxiety, insomnia an painkiller.

3) *Pseudolarix Amabilis - Golden Larch*

evergreen

height: 12-18 m

dense canopy



colors







This tree is easy to recognize and it is planted in a small group in the middle of the meandering path between the undergrowth, giving therefore the possibility to rest under its dense canopy. Seating under this tree gives a reassuring feeling, but since the crown starts from the lower part of the trunk, a full overview of what is around is not possible, but it is necessary to stand up. The *Golden Larch* trees appear only once and are visible from the beginning and the end of the path, representing a destination point during the walk, also for the bright yellow color of the needles in autumn.
Moreover, the needles are soft and malleable, so don't sting when touched.

4) *Quercus Ilex – Holm*



evergreen

height: 20-30 m

dense canopy



colors

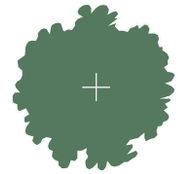






The Holm trees have very dense and round canopies that start from very low in the trunk. They are located along the main path the encloses the core of the complex in a composition that hides the sight of the building, giving the feeling of mystery and stimulating curiosity. The mysterious atmosphere is enhanced walking underneath the trees, because the thick canopies make the space dark.

5) *Fagus Sylvatica – Beech*



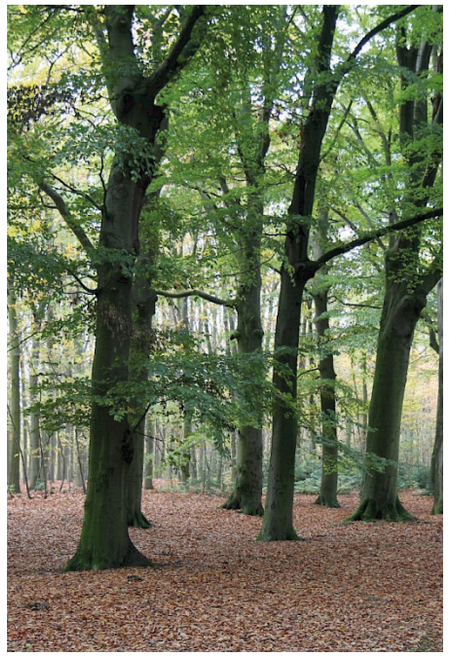
deciduous

height: 30-40 m

medium dense canopy



colors







This tree can grow up to 40m and its dense and wide canopy covers what is behind. Two Beech trees are located along the path that from the main one leads to the vegetable gardens of the “Meaningful action layer”. For their dimensions and the curvy shape of the path between them, the view of the garden is not clear, intriguing the curiosity of the visitor to see what is going on beyond the trees.

6) *Cupressus sempervirens - common cypress*



evergreen

height: 12-18 m

dense canopy



colors







Like the *Tilia tomentosa* (2), *Cupressus* trees are present today along the main path and the border of the railway. Their linear repetition gives a sense of continuity from the south west entrance and leads the visitor along the meandering path, full of diverse and colorful overgrowth.

7) *Hedges*



The hedges are thought to become sinuous walls which enclose in different ways the space of the 'Playground of Hedges' in the north side of the forest. They are made with different species of shrubs, therefore different textures, and different heights, contributing to a various experience.

7.1) *Prunus laurocerasus - Cherry laurel*



evergreen

height: 6-8 m



7.2) *Cupressus x leylandii - Leyland cypress*



evergreen

height: 12-18 m



7.3) *Ligustrum vulgare 'atrovirens'*



evergreen

height: 4-6 m



7.4) *Photinia x fraseri*



evergreen

height: 2-4 m

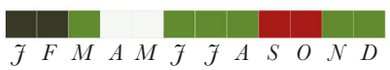


7.5) *Crataegus monogyna - Hawthorn*



deciduous

height: 6-8 m

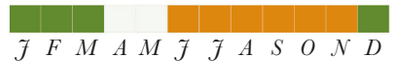


7.6) *Pyracantha 'orange glow' - Firethorn*



evergreen

height: 3-4 m



8) *Medicinal plants*

These plants are chosen to create a sensory space. Some of them indeed, are selected for their smell, others for their vivid and rich colors, and all of them to be touched, maintained from the people, and finally to be used. The different species can be used for cooking or for easy therapeutic purposes.



<u>Species suitable to grow in the shadow</u>

8.1) *Syzygium aromaticum - Clove*

evergreen

height: 5 m





The fruits of the clove can have therapeutic benefits. They can for example alleviate muscular pain, rheumatisms, and has anti-inflammatory properties. Besides this, they can also be used for cooking.

8.2) *Ruscus aculeatus – Holly*

evergreen

height: 80 cm





The holly is an evergreen shrubthat grows up to 80 cm. It is a natural vasoconstrictor and good for arthritis, kidney stones and rheumatisms. Between March and May on the plant produces blossoms that look like artichokes and can be eaten.

<u>Species suitable to grow in half-shadow areas</u>

8.3) *Pimpinella anisum – Pimpinella*

evergreen

height: 50 cm





Pimpinella plant is useful against nausea and it facilitates digestion. It also has antibacterial and antispasmodic properties. It can also be used for cooking.

8.4) *Asperula odorata – Asperula*

evergreen

height: 30 cm





The leaves of asperula can be used to make infusions that facilitate digestion and it is also good for inflamed skin.

8.5) *Chamomile – Chamomile*

evergreen

height: 30-40 cm





The plant of chamomile is famous for its calming properties, indeed its infusion is useful to alleviate anxiety and irritability. Besides this, it is good also for digestion, rheumatisms and muscular spasms. It is beneficial for the skin and for tired and reddened eyes.

8.6) *Ribes nigrum – Blackcurrant*

deciduous

height: 1 m





The plant of blackcurrant is known for its anti-inflammatory and antihistaminic properties, therefore it is good for conjunctivitis, allergies and tiredness. It is also a natural vasoconstrictor, so it benefits veins and capillaries.

8.7) *Chenopodium bonus-henricus - Perennial Goosefoot*

evergreen

height: 60 cm





The perennial goosefoot's leaves are covered of many thin hairs, which give a soft feeling when touched. It is widely used to cook, since it is similar to spinach, and its leaves are good for burns.

8.8) *Rosa canina – Dog rose*

evergreen

height: 1,5-2 m





The sprouts of the Rosa canina enhance the immune system and it is useful to oppose allergies such as asthma and conjunctivitis from pollen.

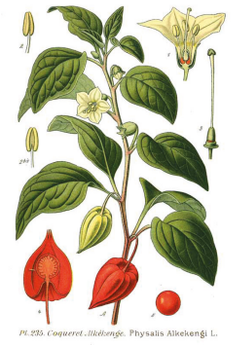
Species suitable to grow in sunny areas

8.9) *Physalis alkekengi - Cape gooseberry*

deciduous

height: 1 m





The tasty fruits of this plant when eaten provide vitamin C, and its roots and leaves can be left to dry and afterwards used to prepare infusions.

8.10) *Arctium lappa - Greater burdock*

deciduous

height: 1 m





The extracts of the Greater burdock are good for the skin, for example in the treatment of acne, dermatitis, eczema, psoriasis. It is also useful for the detox of toxins in the organism, so it is beneficial for intestine, kidneys and liver.

8.11) *Anethum graveolens – Dill*

deciduous

height: 60-100 cm





The dill is widely used for cooking, but it also has depurative and soothing qualities if assumed before going to sleep. For the presence of essential oils, it stimulates stomach acids, facilitating digestion.

8.12) *Borago officinalis – Borage*

deciduous

height: 80 m





The seeds of borage contain fat acids provided with anti-inflammatory properties and they also protect the cardiovascular system. From the seeds an oil can be extracted, good to take care of skin pathologies such as eczema, dermatosis and psoriasis.

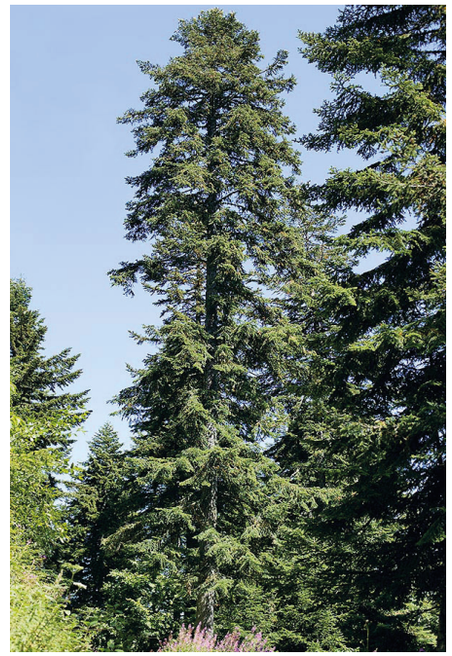
9) *Abies alba - Silver fir*

evergreen

height: 40-50 m

dense canopy

colors



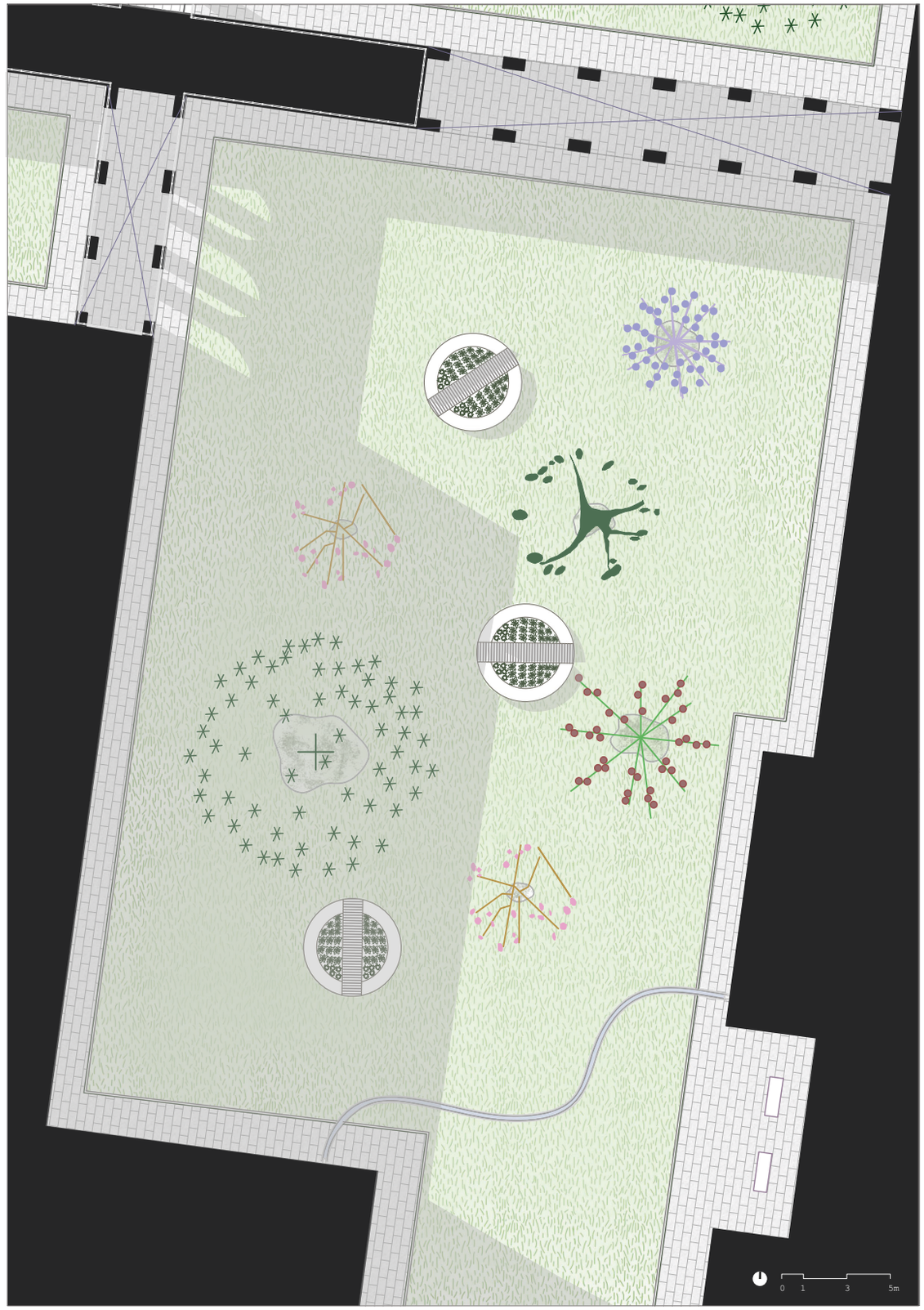




This species is already present in the complex of San Salvi, in particular there is one tree in the garden in front of the elementary school.

4.3 From the vegetable gardens







4.3.1 Plants Atlas: species in the Meaningful action layer



10) *Malus pumila - Apple tree*



11) *Prunus persica - Peach tree*



12) *Figus carica - Fig tree*

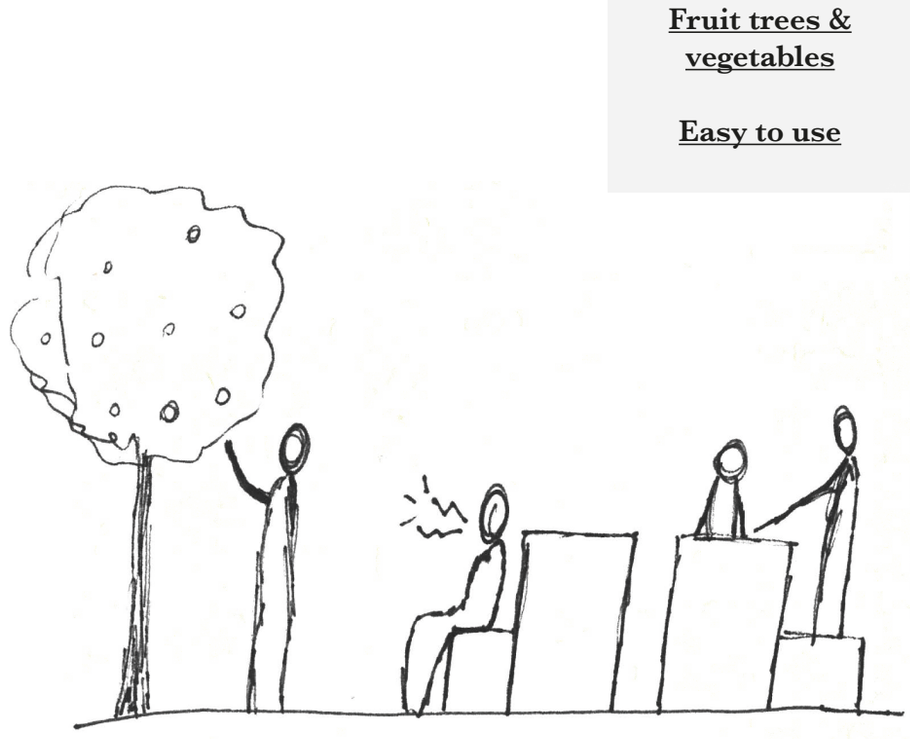


13) *Corylus avellana - Hazel tree*

In the "Meaningful action layer" the species chosen are fruit trees or vegetables. They are useful to give the people who work or visit the hub a purpose, a reason to go outside and be in contact with nature. Taking care of the vegetable gardens and trees give them a concrete responsibility, seeing the results of their efforts, and achieving a source of sustenance. From the social point of view, this responsibility also contributes to strengthen the sense of community.

Fruit trees & vegetables

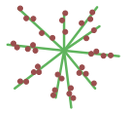
Easy to use



Characteristics: Production of fruits/vegetables throughout the whole year - easy to use and encourages sociability

Effects on the visitor: Resposability - focus on own skills - satisfaction - encouraged movement - enhanced sense of community

10) *Malus pumila - Apple tree*



deciduous

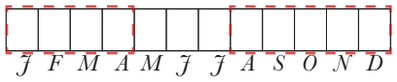
height: 5-12 m

light canopy













11) *Prunus persica - Peach*



deciduous

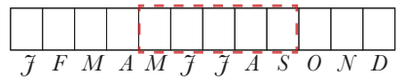
height: 6 m

medium dense canopy













12) *Ficus carica – Fig*

deciduous

height: 7-8 m

medium dense canopy





J F M A M J J A S O N D



13) *Corylus avellana – Hazel tree*

deciduous

height: 30-40 m

medium dense canopy



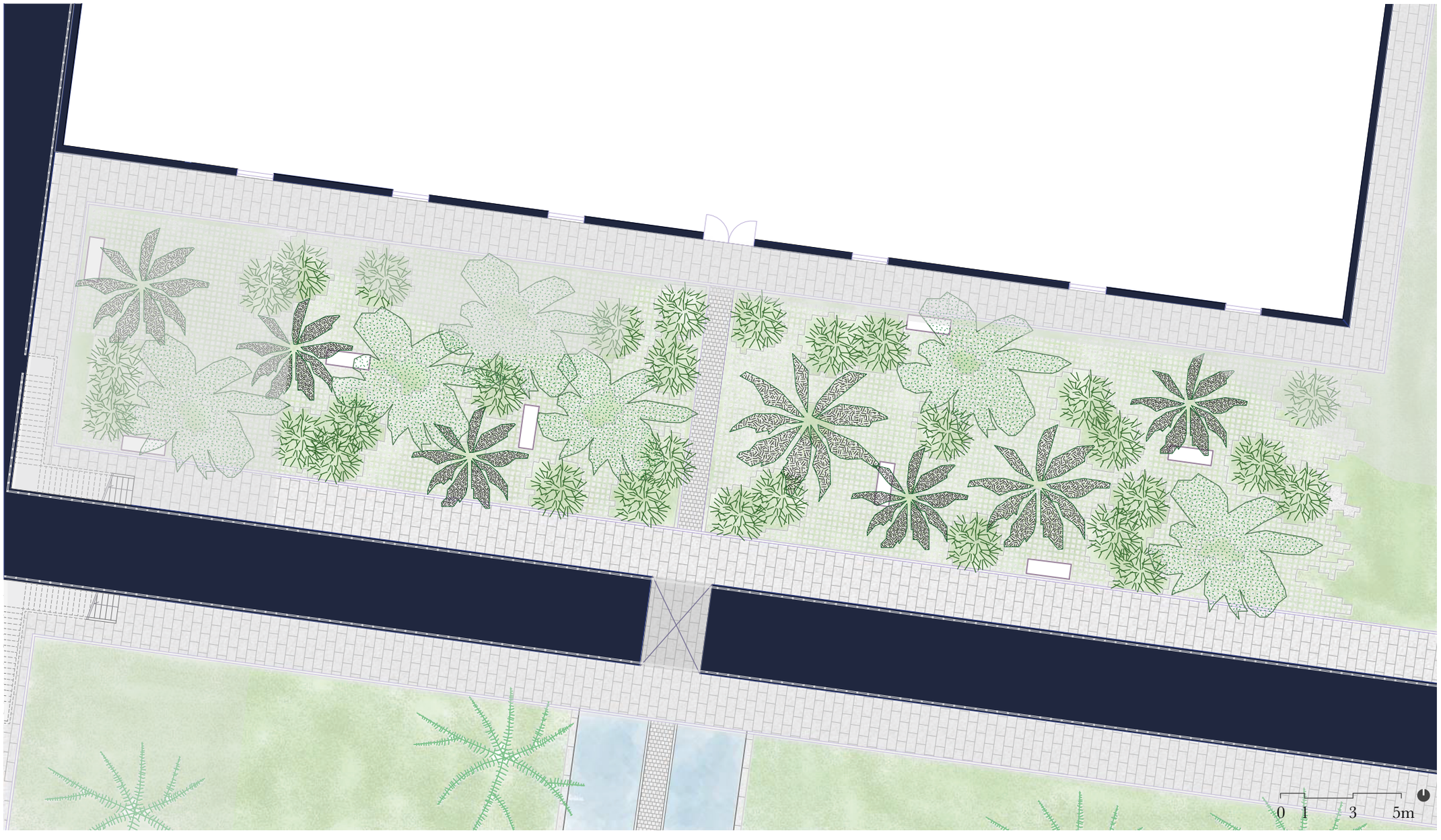


J F M A M J J A S O N D



4.4 From the restorative gardens: the “Palms garden”







4.4.1 Plants Atlas: species in the Restoration layer

Restorative gardens:

14) *Cinnamomum canfora – Camphor Tree*



15) *Schinus molle – Pepper tree*



16) *Platanus acerifolia – Platanus*

17) *Aracaceae – Palm trees*



17.1) *Chamaerops humilis - Mediterranean dwarf palm*



17.2) *Phoenix canariensis – Dates palm*



17.3) *Trachycarpus fortunei – China's palm*



18) *Magnolia liliflora – Magnolia*

Contemplative gardens:

19) *Betula pendula – Paper Birch*



20) *Wisteria sinensis – Wisteria*



21) *Acer palmatum - Palmate maple*



22) *Camellia japonica 'Kramer's Supreme' - Camellia*



23) *Ginkgo biloba*

The “Restoration layer” is composed by four gardens that are dedicated to the restorative function, and other four which are more for contemplation.

Restorative gardens:

Spaces for relaxation and privacy



Characteristics: Evergreen trees if they are used for shadow - furniture invites people to sit - clear view on the whole space - vegetation gives the feeling to be enclosed and safe

Effects on the visitor: Stress reduction - improved attention - reduced vulnerability - lowered heart rate

14) *Cinnamomum canfora – Camphor Tree*

evergreen

height: 20 m

medium dense canopy

colors







All the parts of the Camphor tree, originating from China and Japan where it is known as tree of life, emanate an intense and fresh smell of camphor. Its essential oil is useful against cough, cold and rheumatisms. This tree grows fast, and in Europe reaches 20m; its bark is smooth and furrowed; the leaves are green along the whole year, and the young ones are pink. The flowers in spring are yellow or white, that turn in purple or blue fruits. The essential oil extracted from the leaves is used in aromatherapy and is considered antiviral and immunostimulant.
The leaves at the end of the branches develop and group forming spherical and smooth shapes, promoting the relaxation of the observer. Its big and thick canopy starts low on the trunk, inviting the visitors to seat around it in the garden, giving the feeling of being protected and embraced by nature.

15) *Schinus molle – Pepper tree*

evergreen

height: 5-7 m

dense canopy



colors







This tree grows with one or multiple trunks, with a wide canopy slightly pendulous. In summer it produces white flowers that in autumn leave the space to fruits: small red berries, similar to pepper. Their aroma is similar to pepper but sweeter, and it used to be a substitute of pepper. All the parts of the tree contain a scented essential oil, used in herbal medicine. This species is hailing from South America and nowadays it is present in central and south Europe. It is decorative and doesn't need a lot of maintenance, since it loses few leaves and the fruits stay on the branches for long. It is chosen for one of the restorative gardens because of its dimensions (5-10m), it is evergreen, so through the whole year it can give shade and offer shelter underneath its canopy, and because of its scent.

16) *Platanus acerifolia – Platanus*

deciduous

height: 20-30 m

medium dense canopy



colors







This tree is already present in the location and it is used in one of the restorative gardens, from the theatrical company Chille de la Balanza for their performances, and they explicitly said they want it to stay. It grows up to 30m and the canopy lets the light pass through.

17) *Aracaceae – Palm trees*

The palm trees are implemented in one of the restorative gardens in order to achieve the feeling of "being away", useful to stop thinking about our routine for the time spent there. Moreover, the exotic atmosphere, similar to a jungle, makes our cognitive processes more active, leading the visitor to focus on that specific moment and experience.

17.1) *Chamaerops humilis - Mediterranean dwarf palm*

evergreen

height: 2 m

medium dense canopy



colors





17.2) *Phoenix canariensis – Dates palm*

evergreen

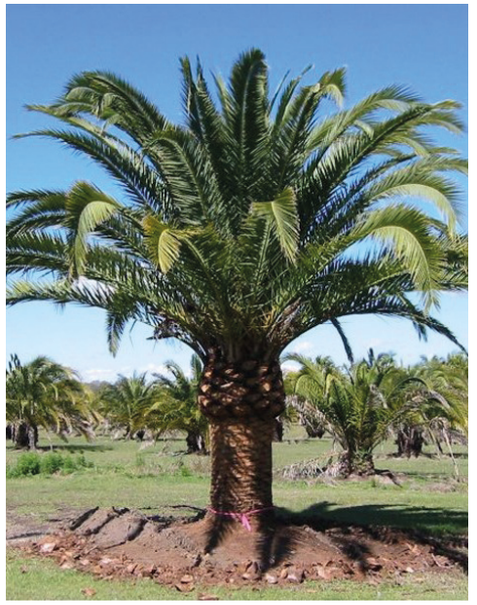
height: 20-40 m

medium dense canopy



colors





17.3) *Trachycarpus fortunei – China's palm*

evergreen

height: 20 m

medium dense canopy



colors





18) *Magnolia liliflora – Magnolia*

deciduous

height: 4 m

medium dense canopy



colors







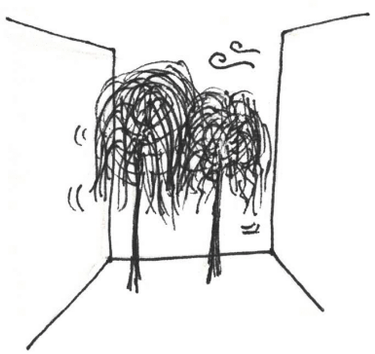


The Magnolia tree is known for its beauty, and in the design is implemented in a hidden garden, as element of surprise for the sight, providing a shelter under its canopy, being embedded by the light colors of the flowers.

Contemplative gardens:

In the contemplative gardens the presence of trees is lower than in the restorative ones, because the attention here is on the representation of the memory of the past of San Salvi. Therefore the gardens are thought as spaces where the visitors would go once visited the museum, and became conscious of the atrocities of the old hospital. Thus these spaces make the visitors reflect on what they just saw, in an atmosphere that focuses on one element, more desolated in comparison with the restorative gardens.

Characteristics: places to rest and think - simple layout - few species - vegetation that changes with time and weather





Non active space

Few elements

Effects on the visitor: Reduce fatigue - reduced irritation - lowered blood pressure - improved concentration

19) *Betula pendula – Paper Birch*

deciduous

height: 20-25 m

light canopy



colors









The Betula Pendula recalls the soft and light colors of the entrance of San Salvi (Populus Alba), and it is implemented in the transition from the restorative gardens to the contemplative ones in order to lower the level of arousal of the visitor. There are less bright colors, but when the hanging branches of these trees are moved by the wind, they evoke a relaxing atmosphere for the slow and rustling sound of the leaves.

20) *Wisteria sinensis – Wisteria*

deciduous

lenght: 20-30 m





This vine is known for its spectacular blooming, and is used in the project to create transitional spaces and to encourage the visitors to interact with it.

21) *Acer palmatum - Palmate maple*

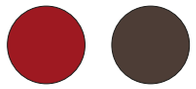
deciduous

height: 5-10 m

light canopy



colors









Trees of Acer palmatum are located in the ‘Sensory area’ of the project. They make the area dynamic for their irregular canopies and don’t allow a complete view on the surrounding for the branches and leaves start from under eye level, creating hidden spaces. Moreover, in autumn the leaves assume their known bright red color, and falling on the ground create a colorful carpet, in combination with the presence of lavender flowers.

22) *Camellia japonica 'Kramer's Supreme' - Camellia*

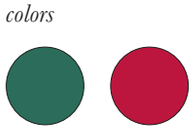
evergreen

height: 2,5-3 m

medium dense canopy



colors





This shrub is located in the design in interstitial open spaces between the buildings, and with its recognizable shape and colors, together with the trees of Ginkgo biloba, both the species give hint of the symmetrical disposition of the buildings and green spaces in the complex. Their presence also offers colorful pauses immersed in the layer of the meadow.

23) *Ginkgo biloba*

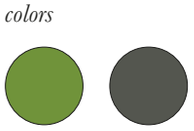
deciduous

height: 20-25 m

medium dense canopy



colors









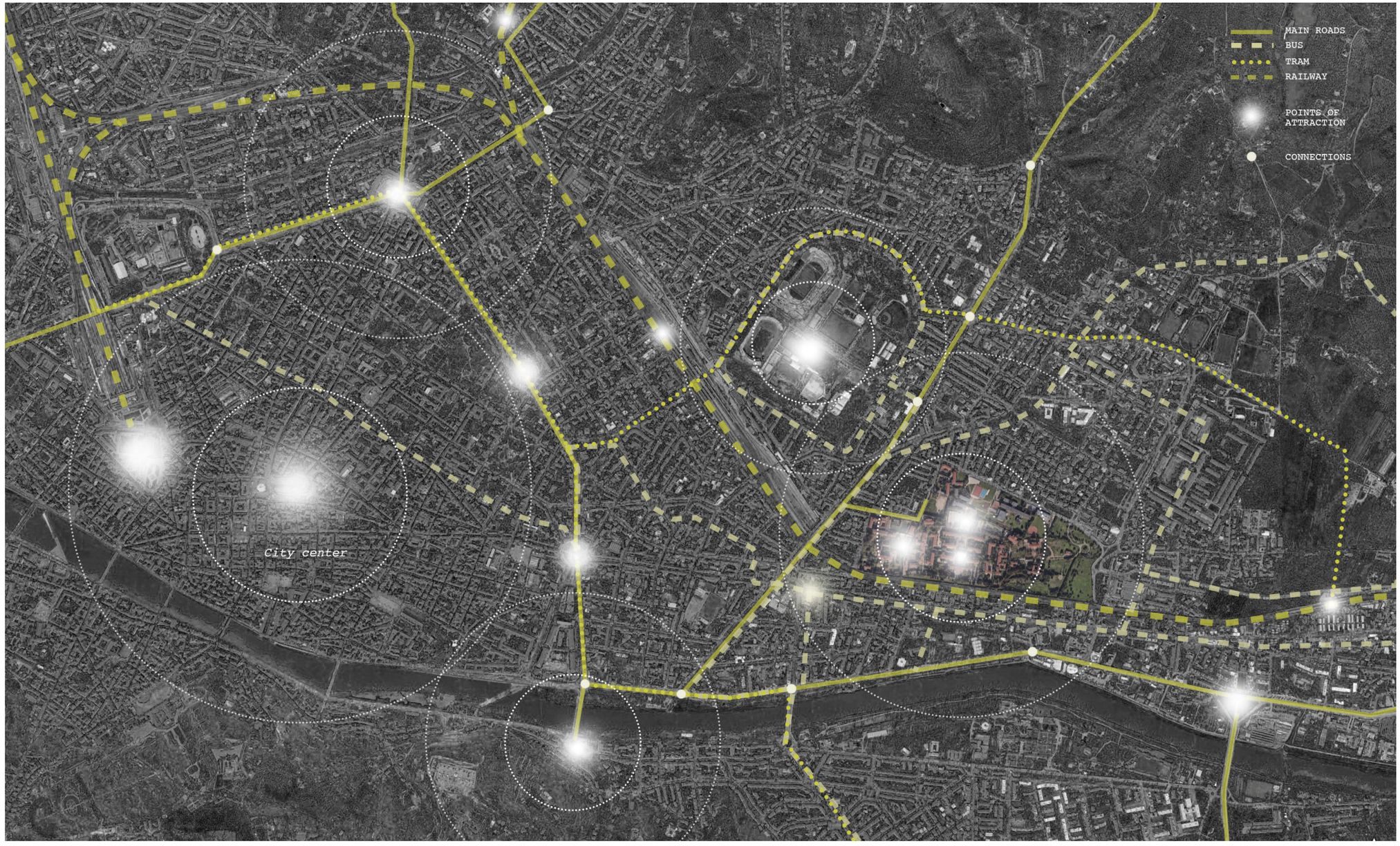
The trees of Ginkgo biloba are used in combination with the shrubs of Camellia (21) to offer recognizable species that help to understand the symmetrical disposition of the buildings and green spaces in the complex. The typical leaves make the species easy to recognize.

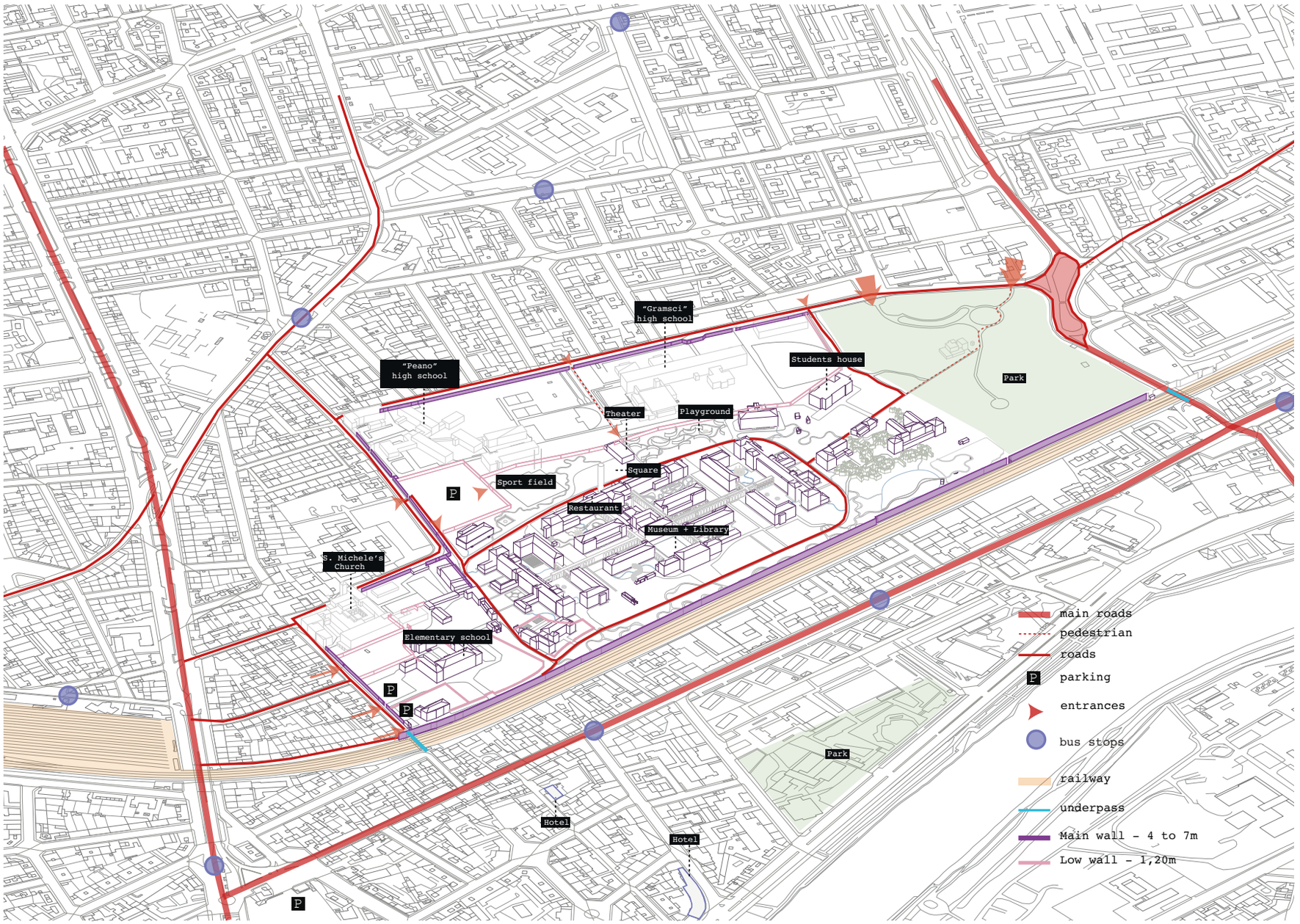
5. Consequences on the urban scale: a matter of change in the mentality

5.1 San Salvi as part of the city flows

The wall that used to enclose the psychiatric hospital, plays an important role in the new connection of San Salvi with the flows of the city. In fact, in the project it is partially kept, where the connection between location and the urban fabric is direct; in other parts it is removed, in order to connect it with the city and make it part of it. With the new configuration indeed, "Parco della Mezzetta", the park on the east side of the complex, becomes an extension of San Salvi, being connected to it without any border in between, contrary to how it is nowadays, for reasons of safety.

The aim of the thesis was to make San Salvi as attractive as other public buildings around it, but also a destination, as it should benefit of its historical importance like the monuments in the city center (*Landscape*





Map of infrastructure system and logistics

as a scale-continuum: the role of San Salvi in the urban flows, p.82; p.86). With the presence of the museum, the library, a new square, a theater and activities for the public, the complex attracts visitors and make its past tangible. At the same time, the massive presence of the railway still keeps it hidden from one side of the city; in this way though, San Salvi can be a hidden oasis also for the inhabitants of the neighborhood. It can be a shortcut that connects the station with the residential area of the east side, and place of recreation for the students of the schools in the surroundings.

Despite the presence of the railway, the location can be reached from the other side of the border through underpasses which lead directly to the entrances to the complex.

Inside the complex, only vehicles that replenish with supplies the restaurant and the museum have access, while the visitors who come by car can park in the close parking lots, mainly in the one on the northern side, obtained from moving the old sport field inside the walls of San Salvi.
Being part of the urban fabric, the complex doesn't close at night.

5.1 Timeline

Some projects of renovation of single zones of San Salvi have been presented to the municipality but no one was completed mainly for economic reasons, and because of a lack of involvement of the citizens. In order to regenerate the area of San Salvi, it is first of all considered as a whole in the project, and the economic issue doesn't involve the municipality's intervention.
The project can be financed by a joint venture: a temporary business agreement among corporations, who cooperate and work together for the realization of a project. In the case of San Salvi it will see the involvement of an investor, for example the Italian "cdp immobiliare", a subsidiary company that aims at the improvement of real estate property assets, and of a developer, for example the English "Aermont capital", an asset management company, who gives funds for investments in real estate. The joint venture constitutes a project management company which supervises the renovation, working together with the municipality and with a landscape architect to finalize the project. The developer company also gets the permission to settle in a building of the complex during the process to make sure that the project is realized in time and in the agreed way.

Therefore the investor and the municipality make the transaction of "sale and leaseback": an agreement through which the municipality (owner of the area of San Salvi at the moment) sells it to the investor company, who takes it for a set amount of years (in this case 20 years), working for its renovation and maintenance. When the time expires, the municipality pays the investor to lease it back, when the complex is renovated and working.
Practically, the joint venture (investor) provides funds at the beginning of the work of renovation, necessary to restore the abandoned buildings and for the transformation of the outdoor spaces. When the work is done, the project management company takes care of its maintenance, and gets money back from those activities

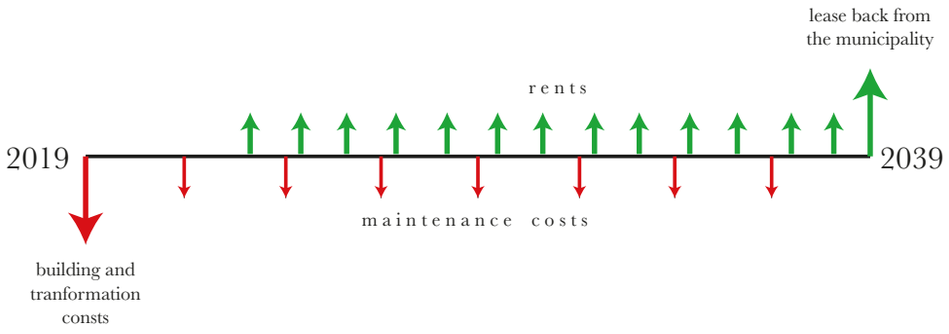


Diagram of sale and leaseback with losses and incomes from the investor's point of view

who rent the buildings. At the end of the 20 years then, the municipality leases it back, paying the investor, and the joint venture is released.

Nevertheless, the project can't be carried out all in once, but it is necessary to do it in steps. Besides this, the engagement of the citizens at the beginning of the process is important to make sure that the intervention is welcome.
In order to do that, the spread of culture could be the catalyst: the company Chille de la Balanza, at the moment the only active entity in the representation of the memory of San Salvi, could involve the inhabitants of the neighborhood to start community gardens where each person can own a piece of land where to grow medicinal plants, take care of them, and make use of their products. "Buying" a piece of land to grow edible products with a cheap price, creates a sense of community in the neighborhood, and makes the users feel responsible and involved in the future of transformation of the area. This is the start of a process of crowdfunding, which represents a low percentage of the whole fund necessary to the entire renovation, but is symbolic and important to show the inhabitants that the project needs their participation and involvement.
Next to that, the theater company can start to expose in their building part of the art pieces made by the old patients at the time of the asylum (clay vases, paintings and drawings, interviews from the patients, old photos) which are now accumulated and abandoned, to start the museum. This would have an important cultural impact and would attract citizens and people from professionals in the field of mental care to artists, to see unpublished pieces from that time.

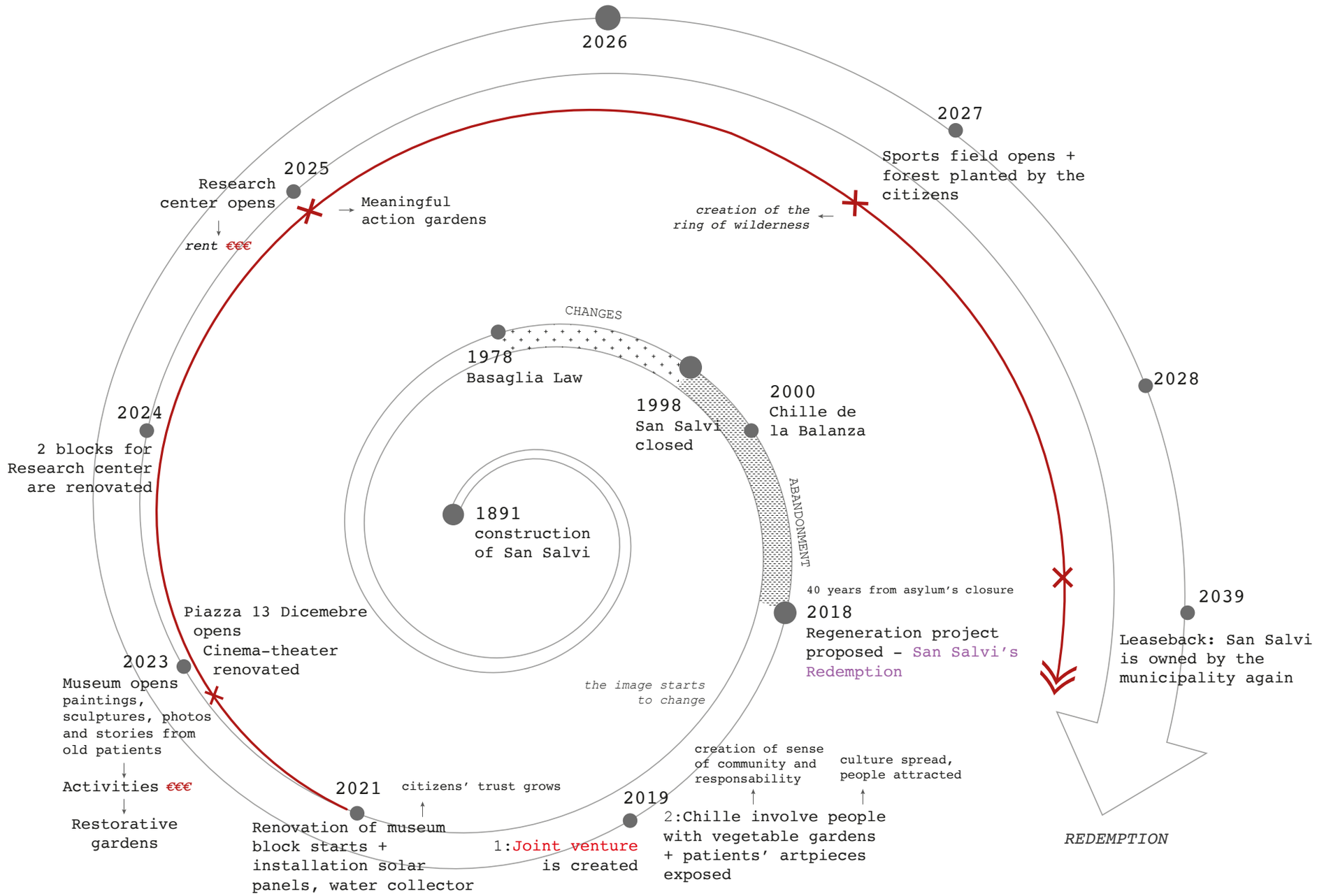
At the same time, the work of renovation starts guided by the joint venture, and it involves first the central block of pavilions dedicated to public activities and museum, and in the installation of solar panels and water collector. Next to that, the abandoned industrial buildings in the northern zone are demolished for the opening of Piazza 13 Dicembre: with the museum, theater, restaurant, bar, activities for the public such as art labs and yoga center, the opening of the square works as generator element, a new place to meet and connect in the heart of San Salvi. Then the intervention in the soil in the area of medicinal plants is made, the solar panels are installed on the wall that divides San Salvi from the railway, together with the water collector. The solar panels allow the whole block of the museum to run without need of paying taxes.

With these new activities the image that people from Florence have of San Salvi

changes, getting to know its past and feeling part of its future.

The new cultural and vibrant atmosphere born in the core of San Salvi, can attract other activities to have their office there: for example, a research institute for biological studies could be a coherent presence in the location, which could use some pavilions for their offices and labs, and others to engage the public, through workshops with students of the schools present right next to San Salvi. Another building can host the exposition of the outcomes of their researches and of the collaborations with students, to be in contact with the public and promote new discoveries.
The involvement of the public could be strengthened also with the maintenance of the vegetable gardens in between the buildings dedicated to the research institute, to create sense of community and responsibility.

For the outer ring of the forest, only two buildings need to be renovated (pp.62-63 "Map of uses in 2018"), and the buildings in decay only need to be secured and become accessible. For the creation of the forest, the public can be involved again: every person who wants can buy his own tree and plant it, giving birth to the forest.




2018


2019


2022


2023


2025


2028


2029


2029

// Conclusions

The spatial design principles that are used for the design of a place that heals descend from the connection of theoretical studies that merge landscape architecture and the field of medicine. More specifically, the analysis of the evolution and change of healing outdoor spaces throughout history was important to realize that the connection between health of the body and of the mind saw a separation due to societal changes. On the other hand, the field of medicine, and particularly neuroscience and immunology together with environmental psychology and evolutionary theories about humans' aesthetic preferences, revealed to be the main framework from where the specific spatial features came from and were translated in the project.

The application of these findings to the essence of the site, considering its past and present, contributed to the site-specificity of the project. In particular, the definition of a conceptual framework, the circles from Dante's Divine Comedy, deriving directly from the original composition of the hospital, was the input for the development of the design, constituted by the overlapping of different layers, which always recall the initial one and enrich the design, merging the urgency of the location with the intent of making a healing landscape. The rings connect functional zoning, spatial zoning, a sequence of landscape types, as well as the 3 types of restorative spaces: active (meaningful action), social (forest) and contemplative (gardens). They also establish the relation of San Salvi to the city, since the citizens become active part in the regeneration of it, both physically with the vegetable gardens and new uses, both mentally, for the change of image they have of it nowadays, from threatening, avoided and barely known, into attractive, integrated and beneficial.

The findings applied in the design are bounded with the genius loci of the site, which does not imply that they can only be applied in ex-psychiatric hospitals, but instead the same approach to the theoretical studies can be the starting point for an application in every part of the city. More specifically, the principles of the tool box derived from "Aesthetic preferences" (Research, 2.2), "Environmental psychology" (Design principles, 2.1) and "Neurological preferences" (ivi, 2.2), can be applied not only in the specific reality of San Salvi, but also in the design of streets, public spaces, parks, and private gardens. On the other hand, the principles derived from "Evidence-based design" (ivi, 2.3), are currently used in healing gardens of healthcare facilities, so in order to apply them in San Salvi they have been selected and abstracted to be suitable for the purpose of the location. Consequently, the preliminary tool box (pp.120-123) can still be useful for urban design, but a different interpretation and selection of them is necessary.

In the end, the San Salvi complex is transformed from an asylum scenario of the atrocities typical of psychiatric hospitals of that time, into an oasis in the city, place for regeneration of the mind, which is though also active and dynamic like the city itself, where people of different ages and interests come together. In this "sustainable village of diversity", the past is transformed into memory, and the abandoned zones are re-designed following the principles of Healing Landscapes, which involve nature in different gradients, from the wilderness of forests to the precision of the gardens.

Nevertheless it does not end here, new scientific discoveries that merge architecture and health will give ground to the future design of space, but these learnings can constitute a significant contribution to the presence of healthy landscapes in our cities, beneficial for managing of stress, but also as prevention, in order to keep our state of overall well-being. If the discipline of medicine, with fields such as PNEI, starts to take into account the environment as crucial determinant of health (World Health Organization, 2018), it is our duty as designers, to respond with the same holistic approach, to offer next generations healthier landscapes.

// Reflection

This project has a dual nature: on the one hand, it is a plan of urban regeneration for the ex-psychiatric hospital of San Salvi, an abandoned and both mentally and physically detached area located in the dense urban fabric of the city of Florence; on the other, it proposes a spatial translation of the theoretical studies about the psychological and physiological effects the space as built environment has on humans.
At first sight the two themes may look separated, like in a dichotomy: as if they are two parts of a whole; what belonged to one, did not reside in the other one, and together they would be complementary. What was missing during the process of recognition of them, was the whole they hypothetically belonged. After further reflections though, I realized that they are not a dichotomy, since they are actually connected and grounded on the nature of the location. The aim of the project is to create a healing landscape in the first place, and San Salvi is the location chosen because it used to be a psychiatric hospital, an example of what healing landscapes were during last century, and the fact that is abandoned is a consequence of social dynamics and historical events, and for the project it represents a case study.
The fact it is vacant then, offers the possibility for the experimentation of different spatial configurations to test the findings from the literature study. The design location serves as case study to investigate on the translation of spatial design principles into a place designed to heal contributing to the site-specificity of the design, but also is represents an example for the application of the same findings in other areas of the city.
What contributed to the design was an interdisciplinary approach that involved the fields of environmental psychology, neuroscience and immunology, which clarified the role of the landscape for interior well-being, starting from the definition of it to understand how it affects people; together with an overview of the use of outdoor space for restoration throughout history, important to understand the difference between a healing garden and the product of the design.

The relationship between research and design

The step between the literature study and the design was initially difficult because the method used was too systematic and limiting. The first attempt was indeed, the construction of a tool box of principles summarized from the literature about design of healing gardens in healthcare facilities. It was the expression of the desire to be as objective as possible, but it blocked the design process for the limitations it was imposing. What gave a turn was the zoom-out from the specific results of the tool box, focusing on the discovery of a main simple but guiding framework that could structure the design and allow more creativity. That was when the Reasonable Person Model by Kaplan & Kaplan (2005) came into play, which functioned as a framework that opened the possibility for a project that combines the design of healing landscapes with the essence of the specific location chosen as experiment.

The relationship between landscape architecture and the design

The role of the landscape architect is crucial for the goals of this research. With the skills acquired during the Master, it was possible to analyze and understand the complexity of the location, recognizing the connections between the spatial characteristics of it with its history, and the causes of the problems that affect it, which reside in social, economic, political, cultural and ecological aspects. The initial understanding and the theoretical background is processed and translated into design, with the aim of renovating the location into a place that heals. Necessary for the accomplishment of the design in the case of San Salvi is the consideration of the citizens. Because of the general lack of concern about the whole area, and from the municipality, and from the citizens, it is fundamental to propose how their idea and image of San Salvi could change and be finally accepted and integrated in the urban flows, again having an full overview of its complexity and potentials.

The relationship between the project and the wider social context

The urgency and relevance of the design, is reflected in the design location and in the theme of healing landscapes. The location represents a hole in the realm of the city that suffers from it because it has to hold it not to let it completely fall apart. Besides this more visible aspect, also the history of the place has to speak out loud among the inhabitants of the city: a painful and violent past that denied freedom and dignity to thousands of people has to be known and become part of the cultural background of the common conscience.
The design of healing landscapes then is an attempt to spread the awareness among architects about the effect that environmental and spatial characteristics have on the interior balance of people. It can be a guide in the design process and help to offer healthier environments for our everyday life.

What I learnt

At the beginning of the design, the aim of the project was the creation of ‘healing

landscape' through the analysis and the spatial translation of human needs, in order to decrease stress level and guarantee interior well-being. Going through the process of the project though, I understood that for the design of these landscapes, it is important to consider the spatial characteristics of the environment, analyzing the shapes of all the elements and the psychological effect they might have on people; but that is no enough. To create a healing Landscape, instead of a healing garden, it is necessary to connect those spatial features with the flows of the surrounding, and in the case of San Salvi, of the city. The flows include the historical aspect, crucial in the design location; the relation between the new functions of the pavilions and the outdoor space around and between them, still keeping vivid the memory of the previous functions. And on the bigger scale, the effect that the design has on the society, trying to imagine if it will be beneficial for it or stay uninteresting. So, a healing landscape to be site specific and connected to the larger urban fabric, it cannot be designed only following the theoretical guidelines about neurological preferences, but it has to consider those invisible fragments that make the place be what it is.

As regards as the tool box, in this project it appears quite defined and its translation direct. Nevertheless it could be applied also in other contexts, where the conditions and the functions are different. What is important, is to keep a variety in affordances, offering possibilities for different behaviors, which as studied in this research, are possibilities for Exploration and Understanding, Restoration and Meaningful action (Kaplan&Kaplan, 2005) to contribute to the maintenance of interior well-being. Therefore the Reasonable Person Model (ibidem) constitutes the backbone for the design of healing landscapes, and it is then enriched by other elements on different scales, from the type of setting, of nature, to the details of materials and shapes, on the one hand descending from studies of neurological and psychological theories, and on the other according to the characteristics of the location.
Consequently, in the project of renovation of San Salvi, in order to transform it into a healing landscape, what is crucial is the presence of nature, and the 3 different outdoor settings, for their functions and possibilities they offer to the users. What is open to interpretation instead, is the spatial translation of Aesthetic and Neurological preferences, and of the principles concluded from Evidence-based design.

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