

A.Y. 2022-2023

# EPHEMERAL DIALOGUES

the encounter of human and natural  
temporalities through the misty landscape  
of Fanal Forest

Lucia Beatrice Abbiati

*a questa meravigliosa vita,*

*perché mi ha fatto crescere in una famiglia unita,  
mi ha regalato Anna come sorella, Davide come metà  
e tanti amici con cui condividere i momenti più belli.*

*Insieme mi fanno venire voglia di essere una persona migliore*

POLITECNICO DI MILANO  
School of Design  
Master degree in Interior and Spatial Design  
A.Y. 2022-2023

EPHEMERAL DIALOGUES:  
the encounter of human and natural  
temporalities through the misty landscape  
of Fanal Forest

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# abstract

summary of the thesis which is intended to provide a brief understanding of the topic and the main points of the book

*Uomo e natura possono vivere lo stesso Tempo? Il testo si propone di immaginare un'architettura che crei un dialogo tra queste due entità, indagando i principi spaziali secondo i quali è possibile vivere degli istanti di simultaneità. L'isola di Madeira ed in particolare la foresta di Fanal diventano lo scenario ideale per il progetto, in una ricerca che si focalizza sul Genius Loci del luogo: la nebbia. E' quest'ultima a diventare il vero e proprio protagonista dello spazio creando atmosfere uniche e suggestive in base alle condizioni climatiche e ai ritmi naturali. La struttura è il teatro dell'incontro tra l'essere umano e la nebbia, in una riflessione sui limiti e le possibilità dell'uomo e del paesaggio e sulle loro differenze e punti d'incontro. Uomo e natura possono quindi vivere lo stesso Tempo? La tesi non dà una risposta precisa e univoca, ma resta un lavoro aperto, che celebra la perfezione e l'esattezza di un istante, così come il continuo cambiamento e lento fluire del tempo.*

Can human and nature live the same Time? The text aims to imagine an architecture that creates a dialogue between these entities, investigating the spatial principles according to which it is possible to experience instants of simultaneity. Madeira Island and in particular the Fanal forest become the ideal setting for the project, in a research that focuses on the Genius Loci of the place: mist. Mist becomes the real protagonist, creating unique and evocative atmospheres based on natural rhythms. The structure is the theatre of the encounter between the human being and the fog, in a reflection on the limits and possibilities of humans and landscape. Can human and nature live the same Time? The thesis does not give an answer, but remains an open work, celebrating the perfection of an instant, as well as the endless change and flow of time.

what is the project  
thesis about?

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# context frame

the set of motivations and considerations that led to the choice of a particular location, function and concept

The choice of the project location was particularly difficult, as the only basic constraint for the site was to be immersed in nature, to have a special relationship with the concept of 'natural time'. The choice was therefore initially made by looking for different locations that had a strong connection with the environment, such as parks, forests, beaches or mountains. Each location had to possess unique natural characteristics that could tie in with the thesis. Secondly, personal interest was taken into account. The location had to have a strong connection not only to the topic, but also to the subject's interests, personal experiences and desires. Finally, accessibility: the place had to be accessible, but not too easily. In order to regain a true contact with nature and with oneself, it was also necessary, in my opinion, for there to be some sort of obstacle to reach the place, representing man's difficulty in "staying in time".

what are  
the main features  
of the project site  
and concept?

# 1.1 location

The chosen location is on the Island of Madeira, Portugal. This place is part of an archipelago of islands of volcanic origin, situated in the middle of the Atlantic. Madeira is the largest of these islands. The climate and nature here are truly unique because the island has a variety of incredible landscapes: from beaches to sheer cliffs, from parks and exotic flower gardens to large laurel forests. The island's climate is mild, characterised by hot, dry summers and rainy winters determined by the warm ocean currents surrounding the island. Due to Madeira's mountainous conformation, however, a number of microclimates form on the island, which differ from area to area. The decision to use this place as a project site also stems from a strong personal interest. I

have always wanted to visit this island, so rich in myths, legends and fascination, especially for its natural environments and vegetation, which in some places remains completely untouched. The origin of the island, which dates back some 5 million years ago when volcanic explosions occurred in the western part of the Atlantic Ocean, is itself interesting in the relationship between order and chaos. It was only after a series of eruptions that deposited lava layers, ash and rocks that the island emerged. The island lies beyond the borders of the ancient world, the Pillars of Hercules, and thus becomes the symbol of a journey beyond the known, beyond the limits of human nature in a certain sense, which is the aim of the thesis. With its variety of landscapes, it also lends itself well to the theme of the man-nature relationship, where man can immerse himself completely by rediscovering the theme of time.

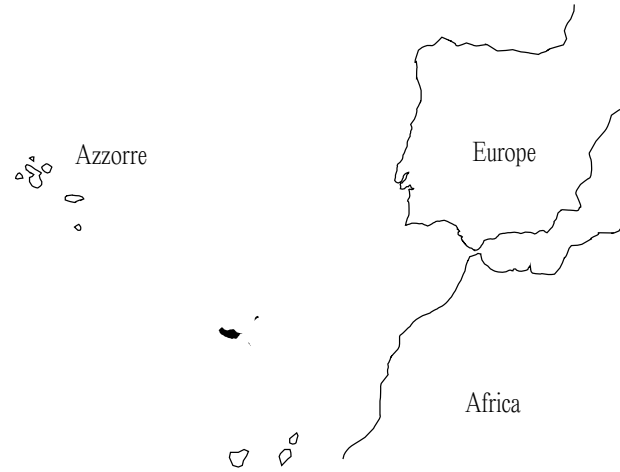
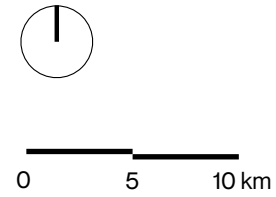


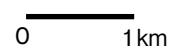
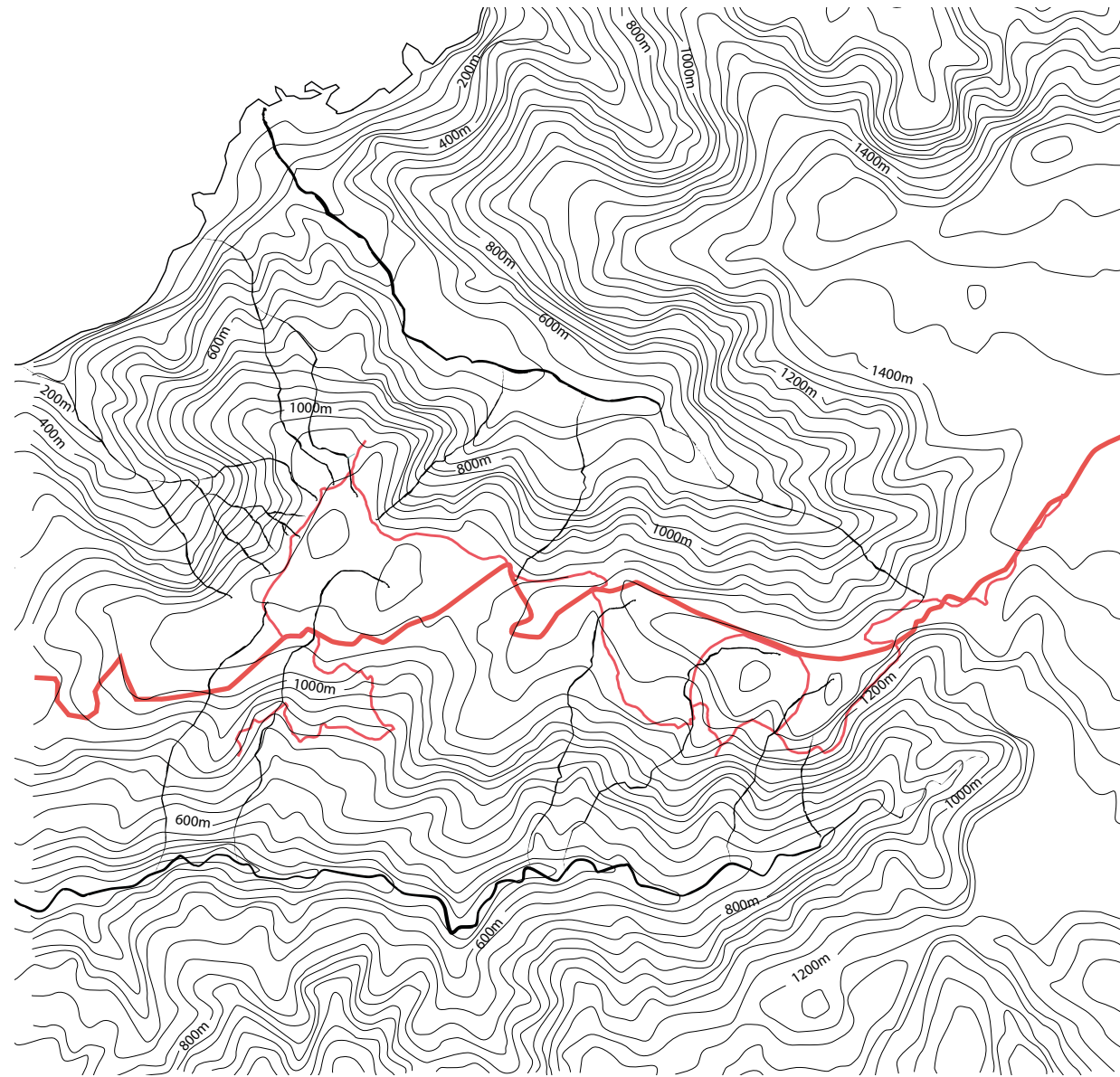
figure 1  
key map  
of Madeira

figure 2  
map of the island



- Legend:
- forest area ●
  - water bodies ●
  - main town ▲
  - project location ▼

The location chosen for the project is Fanal Forest. It is a laurel forest located in the north-west of the island.



Legend:

- main road
- pedestrian road
- A | viewpoint (valley and ocean)
- B | Fanal Pond
- C | laurel and cedar forest
- D | waterfall

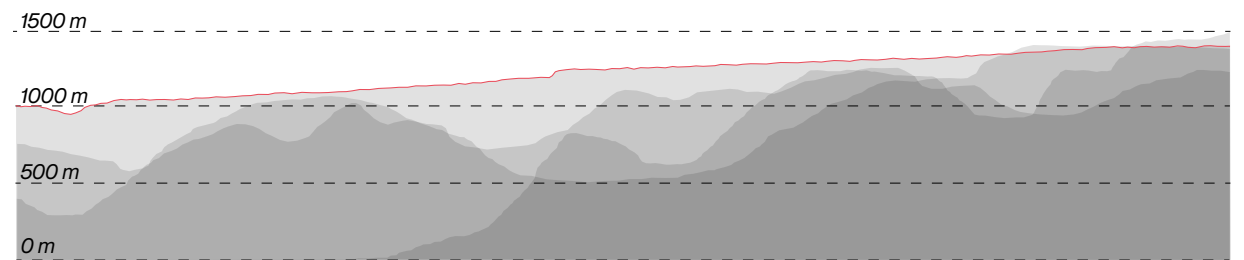
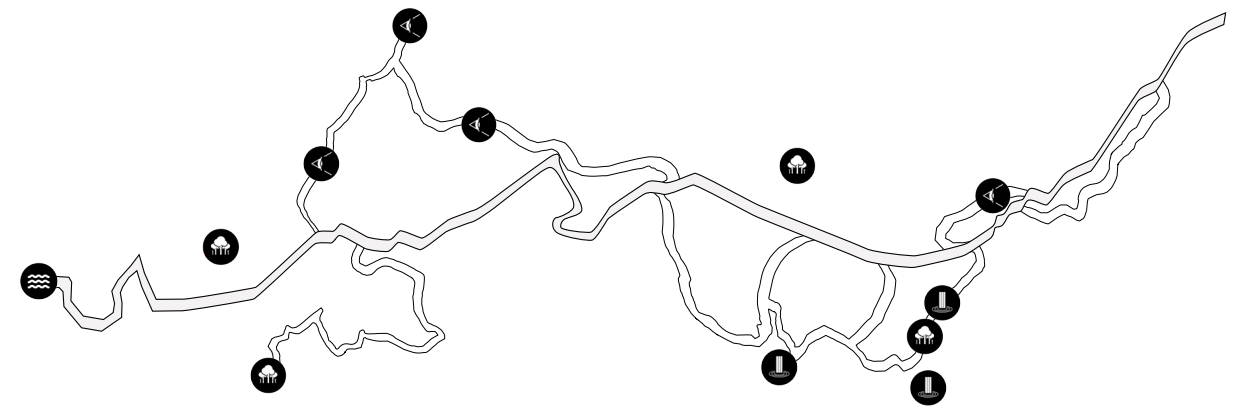
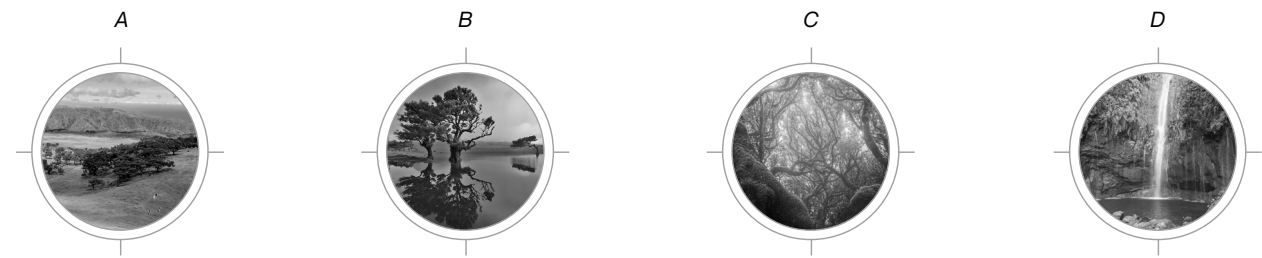


figure 3  
top view and  
elevation of  
the project site



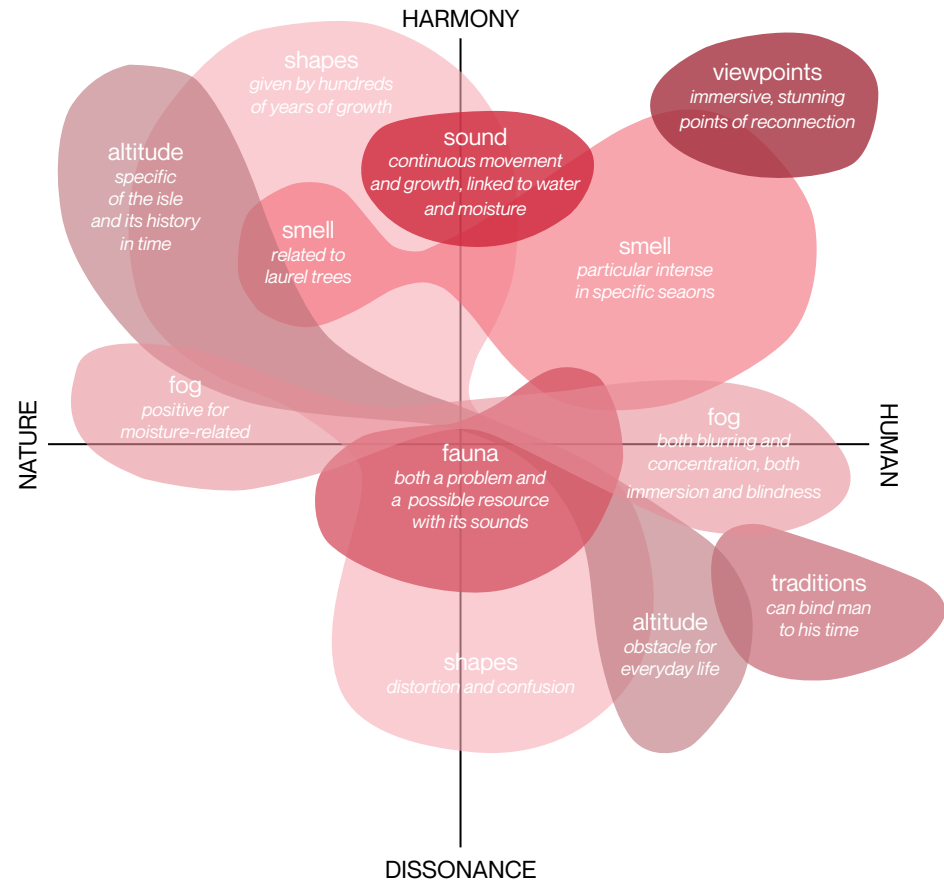


figure 4 4-axis diagram describing the location and its connection with the topic



figure 5 Vereda do Fanal collage showing the atmosphere of the location

### 1.1.1 space reading

The island is full of wonderful landscapes and places, but the most amazing one, concealed for the project location, is the Fanal Forest. Located in the north-western part of Madeira Island, in the hinterland of Ribeira da Janela, the forest is characterised by centuries-old laurel trees. The place has both spots of thicker vegetation and others where the trees are more sparse, with beautiful viewpoints over the Rabacal Valley. The atmosphere of the place is mystical and surreal. The area ranges in altitude from 950 to 1150 metres and

is particularly humid. As a result, the landscape is shrouded in mist, especially in the winter and autumn seasons. All around, the world seems to begin and end at the same time, depending on whether the sun affords a view of the valley, the sea or the clear blue sky, or whether the fog completely obscures the panorama. For all these reasons, the location is particularly suitable to represent the theme addressed by the thesis. A landscape that is constantly changing and at the same time always the same, capable of offering infinite nuances in which man can lose himself and find himself again.

Madeira laurel

features: yellow flowers  
height: 10-35 m



Canary laurel

features: creamy-white flowers and olives  
height: 3-20 m



Mandrone

features: 2y lasting leaves, flowers, berries  
height: 15-20 m



Ocotea Foetens

features: greenish flowers, brown fruit  
height: 20-30m



### 1.1.2 site analysis

The Fanal Forest presents a unique fauna and flora that are native to the island. The most important and peculiar vegetation typology present is for sure the Laurel tree. The most common endemic species are: the Madeira Laurel, the Canary Laurel, the Madrone and most importantly the notorious *Ocotea foetens*. All these trees have a history of over a hundred years. Some were probably already present when the island of Madeira was discovered in the 15th century. The laurisilva is indeed a natural relic inherited from the Tertiary period. Due to the climate, the lay of the land and the successive years of trunk development, the trees take on very distin-

ctive, distorted, curved and intricate shapes. However, laurel trees are not the only species present in the forest. Also the Cedar Tree, an evergreen tree covers much of this green area. Finally, there are epiphytic mosses and lichens covering the trunks of the trees. Especially in the more pristine areas of the forest, ferns and thick tree heathers shroud the forest road on the ground. These plant species create a humid environment, allowing another plant species, endemic to the

figure 6  
main typologies  
of laurel tree

figure 7  
Cedar tree of  
Fanal Forest



Cedar tree

features: evergreen  
height: 10-20m

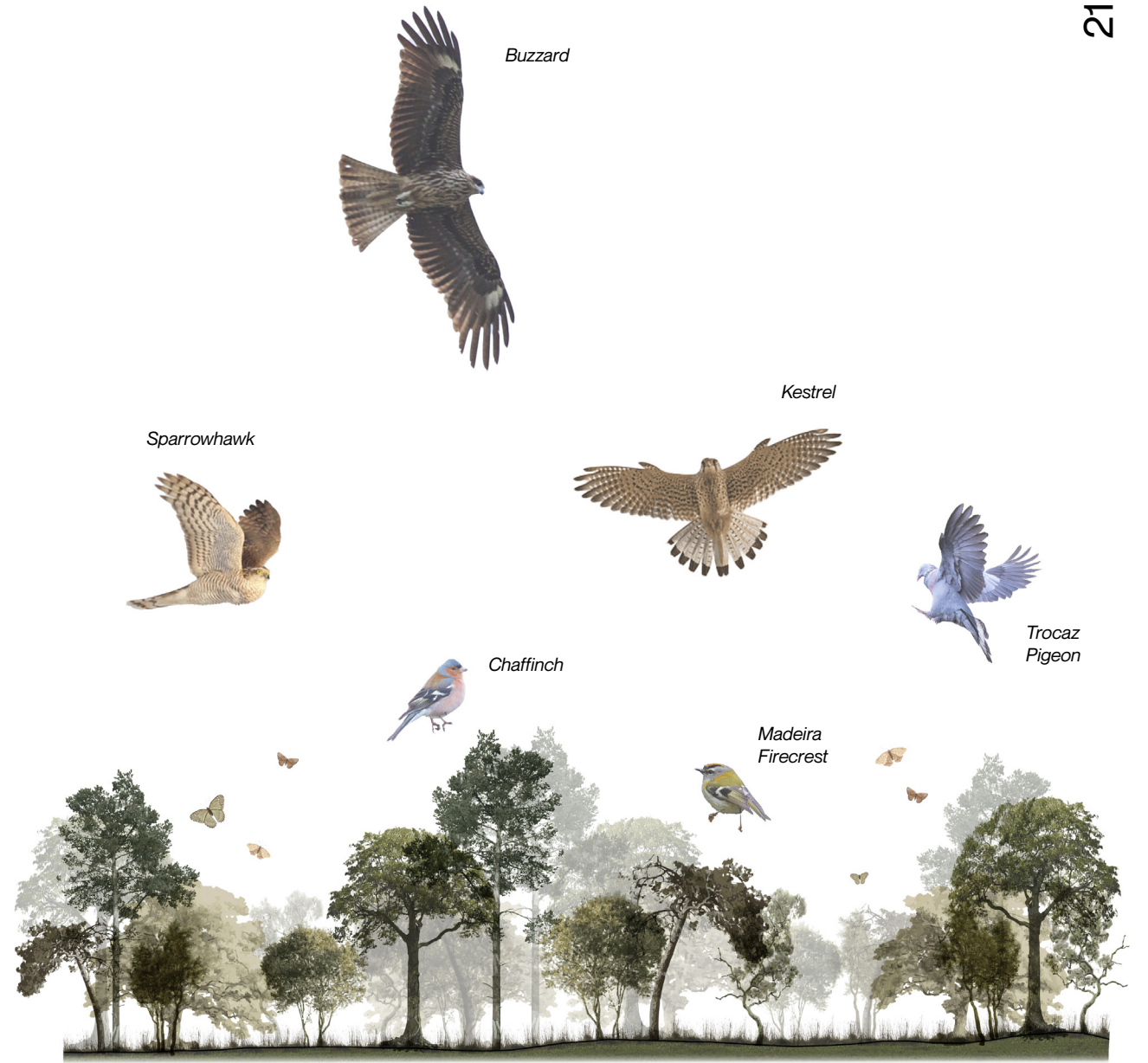


island, to flourish. The madre louro mushroom is a parasitic fungus that grows along the laurel trees. It is rare to see it but its presence is a proof of the ecosystem's good health. The relationship with water and sound is also a key feature of the area. In addition to the sound of the wind and the birds that inhabit the forest, there are streams, ponds, waterfalls and canals. The latter, called levadas, were built by man before the 16th century to carry water from the northern slopes, which

receive more water, to the drier southern part of the island. These canals are also fed by a stream of water running down plant walls covered with green moss. This shower of water droplets creates a continuous gushing sound through the forest. The forest is also home to a diverse and rich range of fauna, including several vulnerable species, making it an important conservation site. The Laurel forest provides a perfect habitat for numerous bird species, such as the endemic Madeira



figure 8  
from left to right:  
endemic fern,  
madre louro  
mushroom  
and mosses



Madeira  
wall lizard

figure 9  
fauna of  
Fanal Forest

Firecrest, the Trocaz Pigeon, and the Chaffinch. The first two species are typical of laurel forests: firecrest stays high in the canopy, giving high-pitched lisping vocalizations; pigeons' song is instead a series of very low, groaning coos. The forest is a good place to spot raptors such as the Buzzard, the Sparrowhawk, and the Kestrel. Reptiles and amphibians are also present, including the Madeira wall lizard and the common toad. The Fanal Forest is also home to a variety of insect species, including butterflies and beetles. The analysis continues with a study about the weather of the chosen area. This is important both because of the thesis of the project, both because the concept of time-based design is related to a space able to transform over

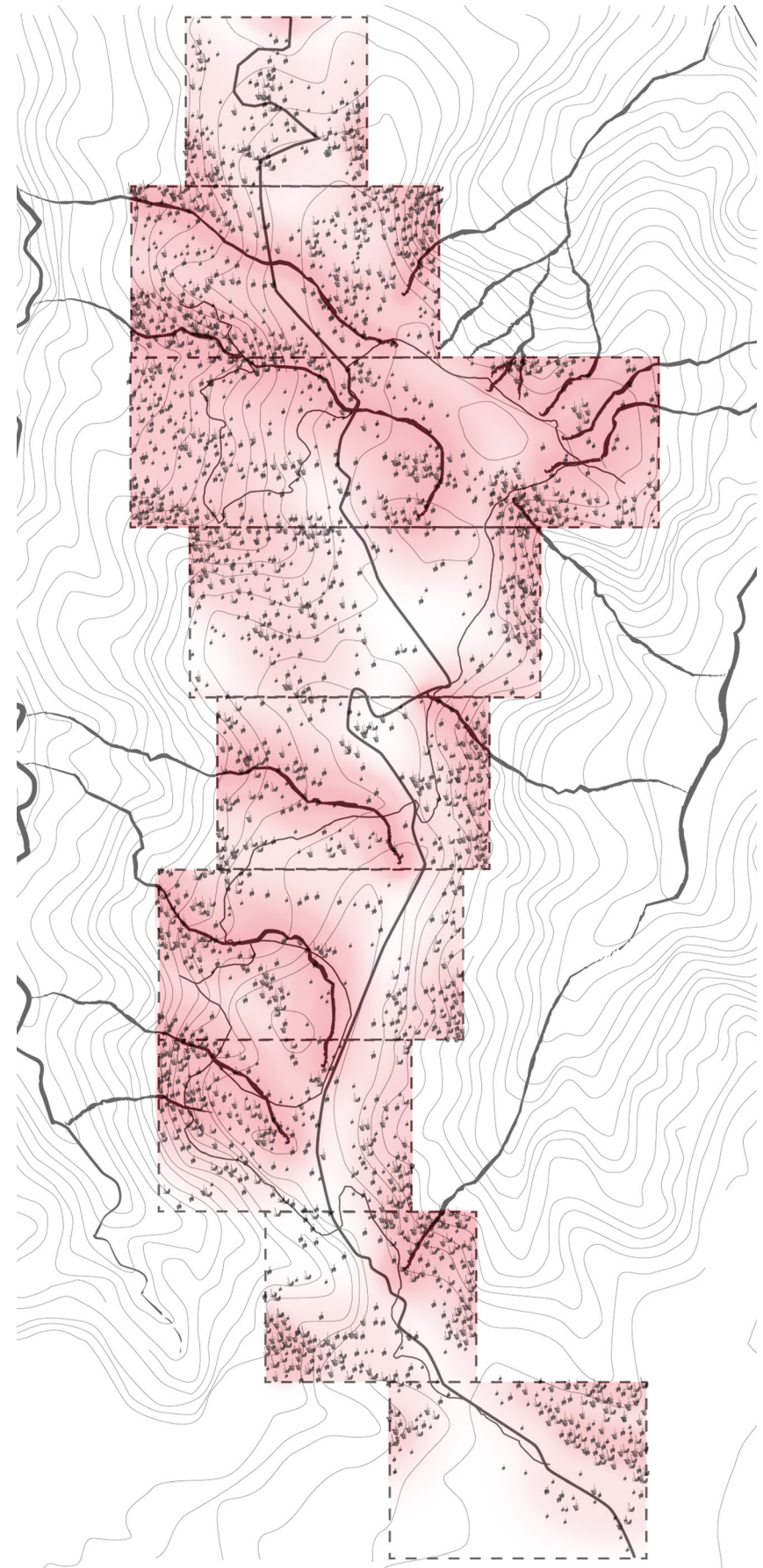
time, also connected with the surrounding landscape. Since the main feature of the project site is the presence of the fog, the study is focused on the main characteristics that can influence this peculiar aspect. Diagrams about natural light, humidity, wind and precipitation were done to understand the changing of the weather through the different months of the year. The climate on Madeira Island is characterised by hot, dry summers and mild, rainy winters. Due to the mountainous conformation of the island, a number of microclimates form on the island, such as in the Fanal forest area, which is wetter and colder, due to winds blowing from the north-east. The analysis also focuses on studying the number of sunny, cloudy and rainy days during an entire year to give a comprehensive view of the climate. Finally, a diagram was produced summarising the entire analysis of the area, correlating the different features to the main route within the forest.

figure 10  
map of the forest  
showing the trees  
and humidity  
concentration

Legend:



0 1km



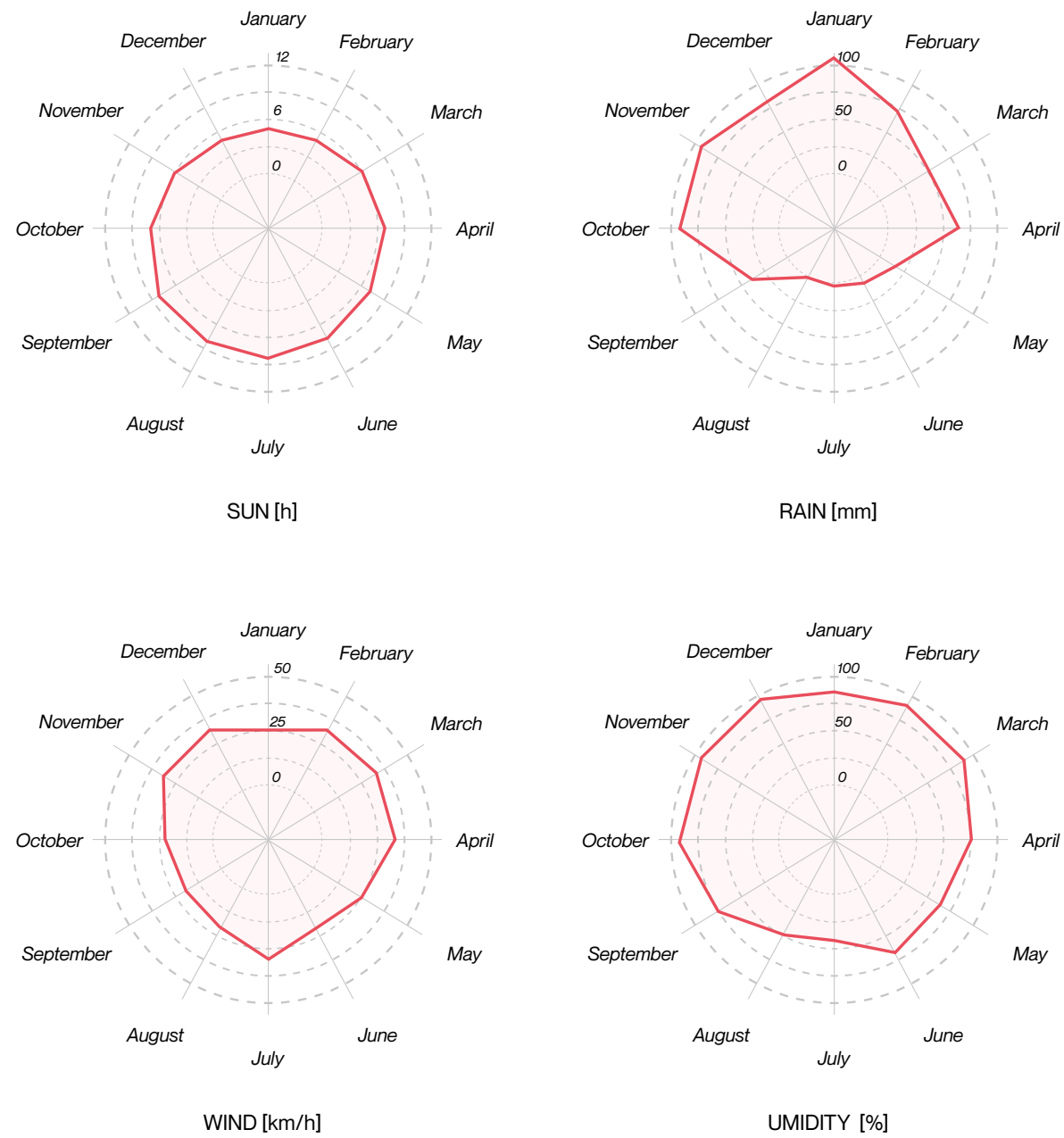


figure 11-12-13-14 series of diagrams about different weather characteristics during the year

Legend:

- sunny days
- partially cloudy days
- cloudy days
- rainy days

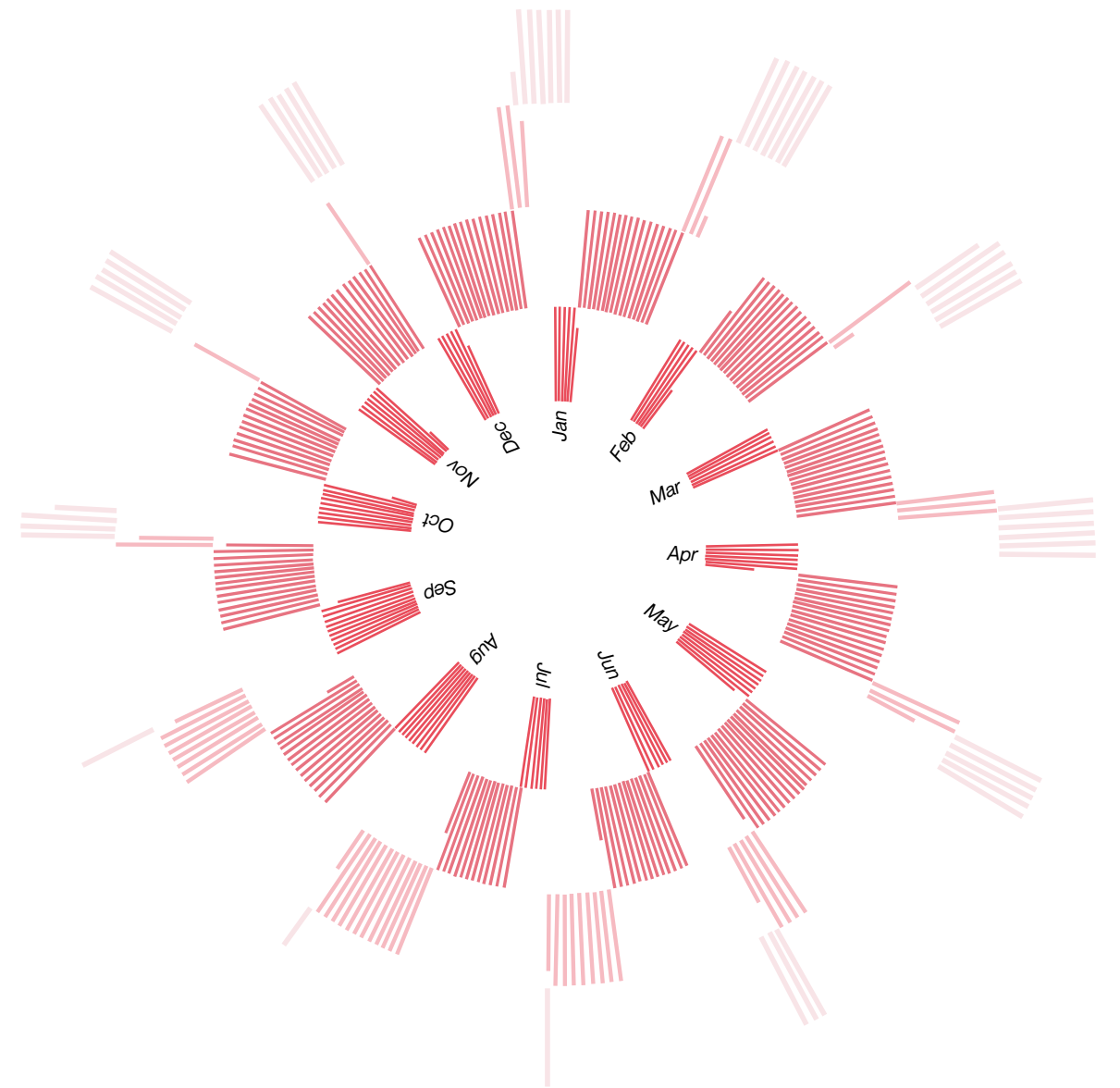


figure 15 weather diagram

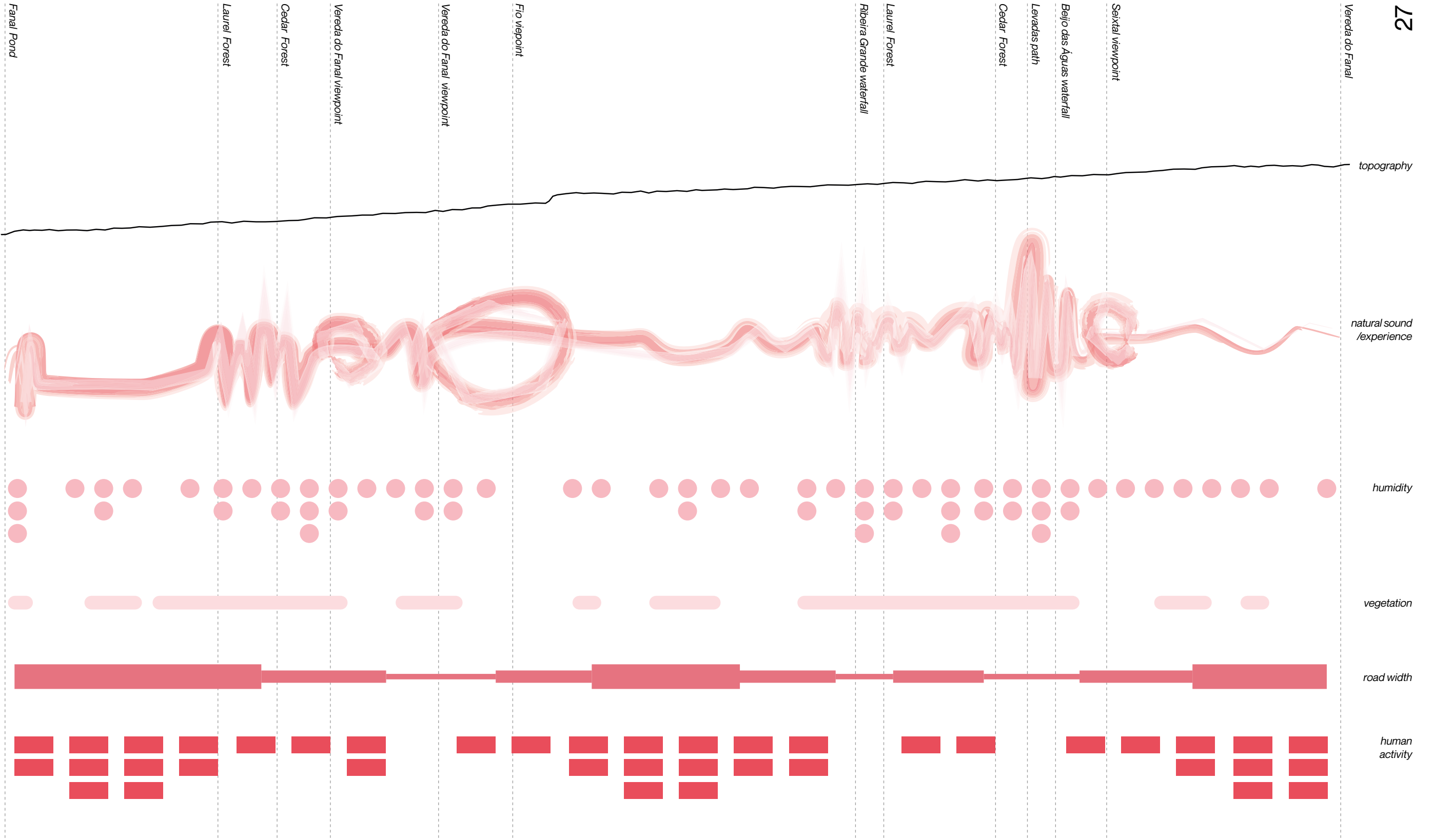


figure 16  
Fanal Forest  
horizontal lecture



*The collage express the idea of the home as a manifestation of the human existence.*

## 1.2 towards the concept

The chapter describes the initial stages of design, the first ideas about the construction of a place and its relationship to human and the environment. The study begins with a series of questions: what is the plastic form that can best describe human existence? What place describes us as human beings? What is human made of? These questions arise from the desire to give a name to the planned place and to attribute functions and characteristics to it that can represent the dissonance and harmony of human beings over time. The answer stems from various insights and reflections around the concept of living and inhabiting a space. Living is here considered as the manifestation of the human being as well as the home is the plastic form of our characteristics and identity. The chapter concludes with the first sketches and diagrams on a possible living solution that succeeds in expressing the concept of time described so far.

*figure 17  
collage*

### 1.2.1 living as being

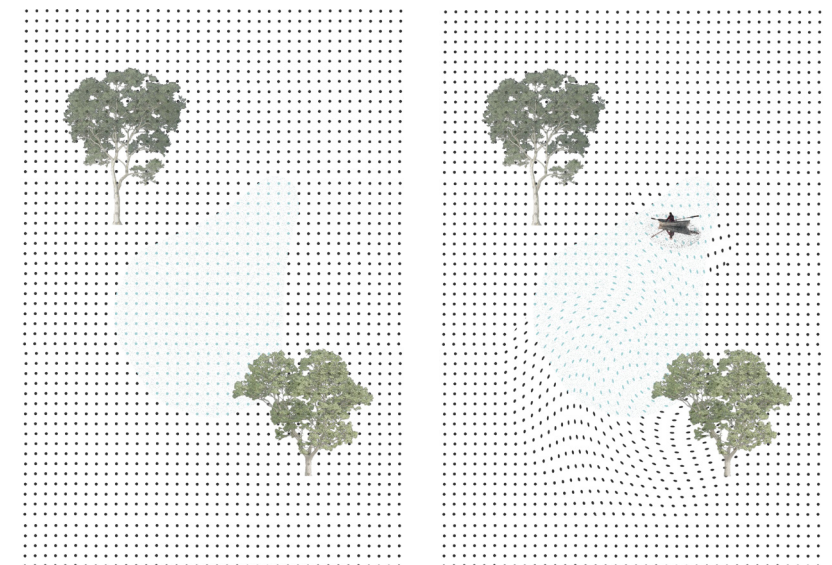
The idea of designing a space for living stems from a reflection on how to represent time in human life, on how to give form to being 'out of time'. The house is first of all the place where human lives his daily routine. It's the place that best represents human nature: it is the mirror of individuality and the frame of lived time, it is the first space that describes the identity and characteristics of the human being as such. The German philosopher Heidegger distinguishes subsisting from existing, marking a clear boundary between man, the only being that 'exists', and everything else that simply 'subsists'. In German, the verse 'to be' derives from the ancient word 'bauen' and means to dwell, to live. For

Heidegger, existing as humans therefore has the meaning of 'inhabiting', of being on earth as mortal. In this perspective, where only man, unlike everything else, dwells, the domestic dimension and the term 'home' take on a new value, as they are not just a part of human existence, but the forms and manifestations of being. It is human presence and actions that modify the conditions of a space, that transform it into a place. Inevitably, living means modifying a space, 'curving it' (quoting Silvano Petrosino) through one's own essence. The home is the place that represents a certain way of being, a certain way of living: it is a reflection of the individual. The idea of designing a place for living is also linked to a strong personal interest. It is the choice to conclude a course of study by tackling the same theme with which it began. It is the choice to put oneself to the test with a new project, in a more mature and conscious way.

*Un 'luogo' si configura come effetto della curvatura dello 'spazio' prodotta in esso dall'esistenza di qualcosa o di qualcuno di determinato*

*from the book Lo spirito della casa, by Silvano Petrosino*

*figure 18  
grid distortion:  
from space  
to place*



*The images want to represent the transformation from a space to a place by human presence and action.*



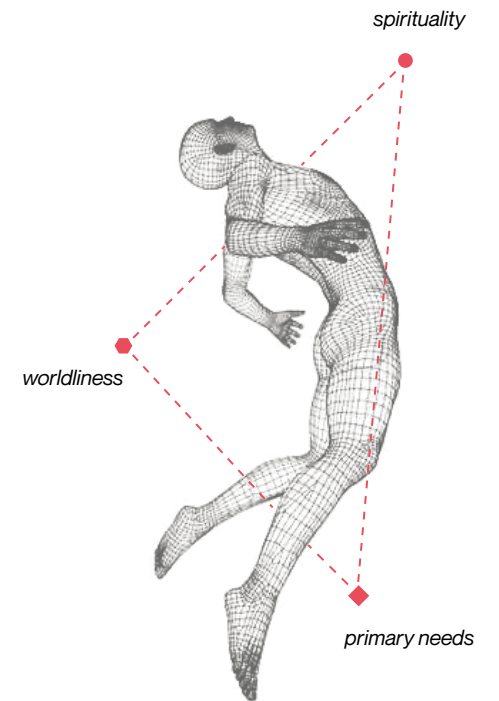
### 1.2.2 about being human

To design a house it is first necessary to understand the characteristics that define it. If the house is the plastic form of living and therefore of being human, then what is man? What are the aspects that define his identity? And which ones define the home? The analysis asks these questions in order to understand what functions are needed within a domestic space and how these can be innovated and improved in order to represent the proposed thesis. Human primarily possesses basic needs, useful for his survival, such as those of eating, sleeping, breathing and protecting himself. These needs are reflected inside the house in the presence of openings and closures with the out-

side. There is no home without windows that allow air and light in, just as there is no home without a roof or a door, which allow shelter from the weather and a sense of protection from the outside. But the home is not just a shelter. Human does not only possess primary biological functions; man is not only body, but also emotionality, worldliness. Humans are social animals, not capable of living alone. Hence the home acquires additional characteristics and stands as a place somewhere between the private and public dimensions. The home must guarantee the privacy of the individual, but at the same time be welcoming and able to 'host', to open up to others. Finally, spirituality: human has a mind, a soul and tends to seek joy not only on the physical level and in the real world, but also in his subjective interiority and in the infinity of the ideal world. The home therefore also needs environments suitable for reflection on introspection, environments ready to welco-

me the subject in its entirety, shaping itself according to his or her needs and requirements. Can spirituality, emotionality and basic needs completely describe what being human is? The true characteristic of man is perhaps that of being in a condition of perennial and constant evolutionary tension. What really distinguishes us is the will to surpass ourselves, to seek something we do not yet have, to always be lacking something. And it is precisely this that makes us live out of time, always in the past or in the future, always trying to reach something else. The project wants to create a place that can represent this movement, this tension inherent in human beings. The home is intended to provide dynamic environments, capable of adapting to different needs and changing with natural time. Space is conceived as an organism, capable of relating man to the 'other', of creating a union with the natural world and with present time.

figure 19  
human kind's  
tension and his  
three entities



Legend:

- E Entities of humankind
- D spatial Dimension
- O connected Objects
- A Actions
- S Spaces (in domestic landscape)
- creative input of the project



figure 20  
diagram  
investating  
relations between  
space, functions  
and human kind

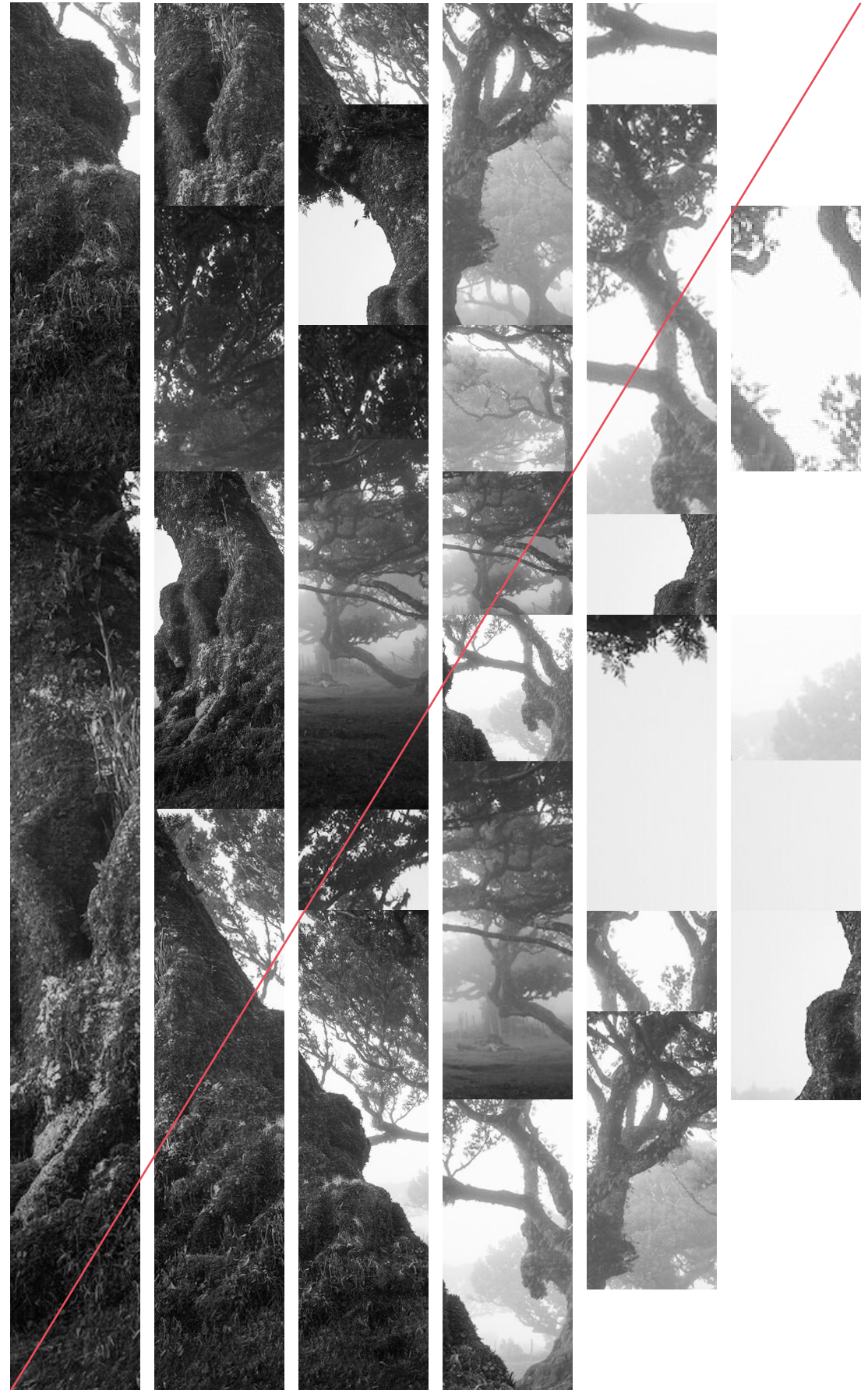
### 1.2.3 Genius Loci

Nature has a very important weight within the project as it is the starting point for the design. The space must create a bond with the surrounding landscape, fitting respectfully into it. Furthermore, the design must be a medium between nature and man, enhancing the characteristics and specific times and attitudes of each of them. For this reason, it was essential, after the analysis had been conducted, to focus on the special characteristics of the location, which make it unique and create an atmosphere capable of representing the project thesis. The Genius Loci of the Fanal Forest is identified in the mist. This is indeed the most special feature of the site, the prevailing character able to create an intense atmosphere. The mist represents a presence/absence for the place. It invades the land and hides the view, emphasising the shapes and textures of the laurel trees, which seem to sprout from a dense, yet intangible nothing-

ness. Or it suddenly disappears and leaves the observer free to wander with his gaze towards the coast, the mountains and the ocean. It is an evanescent element that changes the perception of place. It spreads slowly and envelops the landscape, creating a timeless atmosphere. It attenuates sounds, but at the same time gives a value, a special connotation to each one; it makes the observer lose himself and find himself again. With the fog everything appears more confused, more indefinite, without contours, but at the same time everything appears clearer. Mist is both a disturbing presence, which insinuates itself into human life, making some of its actions difficult, but also an element that can help man to isolate himself, to make him perceive the landscape and his own being in a different way. The Genius Loci of the forest thus seems to tie in perfectly with the project thesis: mist becomes an unpredictable, but at the same time usable tool in the design of the space.

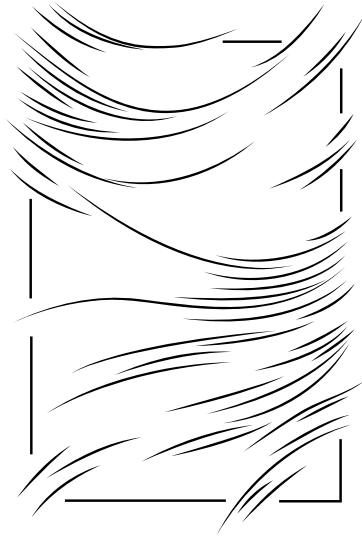
figure 21

*the essence of  
the project site*

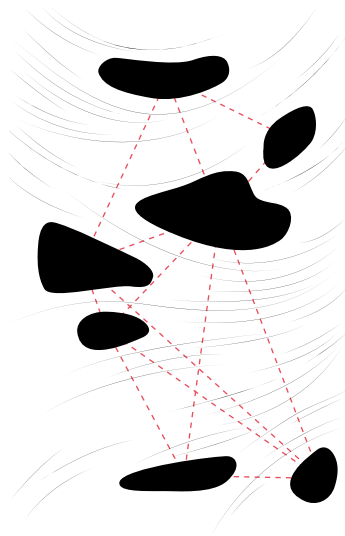




*rigid and compact  
composition:  
the volume*



*shapes are redefined  
by the fog presence  
invading the volume*



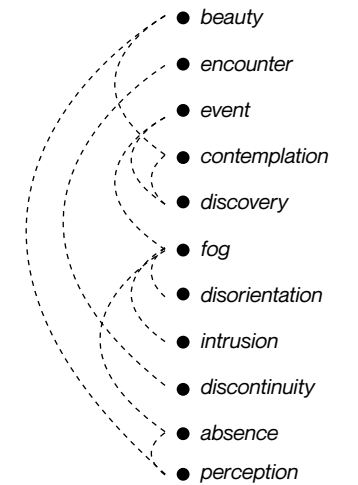
*diffused, permeable  
and articulated spaces  
connected visually to each other*

### 1.2.4 concept

The concept therefore exploits the Genius Loci of the project site to break the idea of 'home', creating instead a living space that link the landscape and the user. A simple volume with a rigid and compact structure is redefined and completely broken down into several fluid forms to suit the shape of the landscape and that of the mist. In fact, it is the latter that is the main element breaking up the volume and define its shape. The mist infiltrates, insinuates itself into the structure, reshaping it and creating a composition of diffuse, permeable and articulated spaces. The architecture becomes dynamic because depending on the climatic conditions, the perception of

the environment is always different. In addition, the user is always connected to nature through new paths that change according to needs and climate and views of the surrounding landscape. The concept of 'house' and its functions are reinterpreted; the position of volumes is managed through the study of nature, which becomes both an element of union between human's time and real time, and a dissonant element, intruding into the daily routine and its rhythms.

*figure 22  
concept scheme*



*figure 23  
connections*

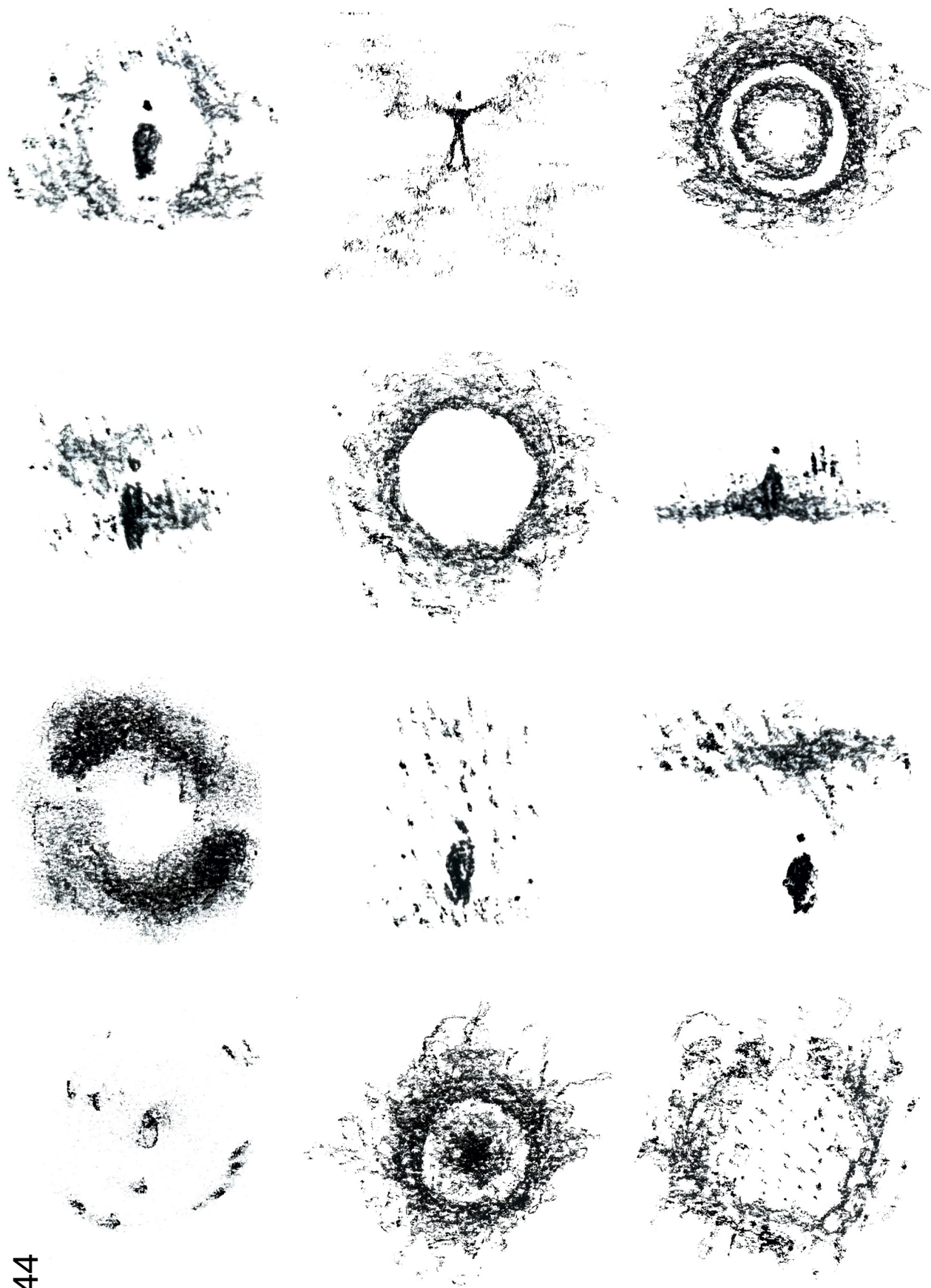


# project development

the story created around the project, the meanings and development of the different project phases, from macro to micro scale

The chapter begins by creating a narrative around the project, made up of characters, plot, space and feelings. The main character, of course, is mist. The mist becomes the main creative element, modifying spaces and building or dissolving volumes according to its specific characteristics and conditions. It is the mist that makes up the narrated story and the actions and feelings of the other characters inhabiting the project space. The chapter continues with a description of the different phases of the project, from macro to micro scale, highlighting how each design choice has a precise purpose and meaning within the project, in relation to the chosen topic.

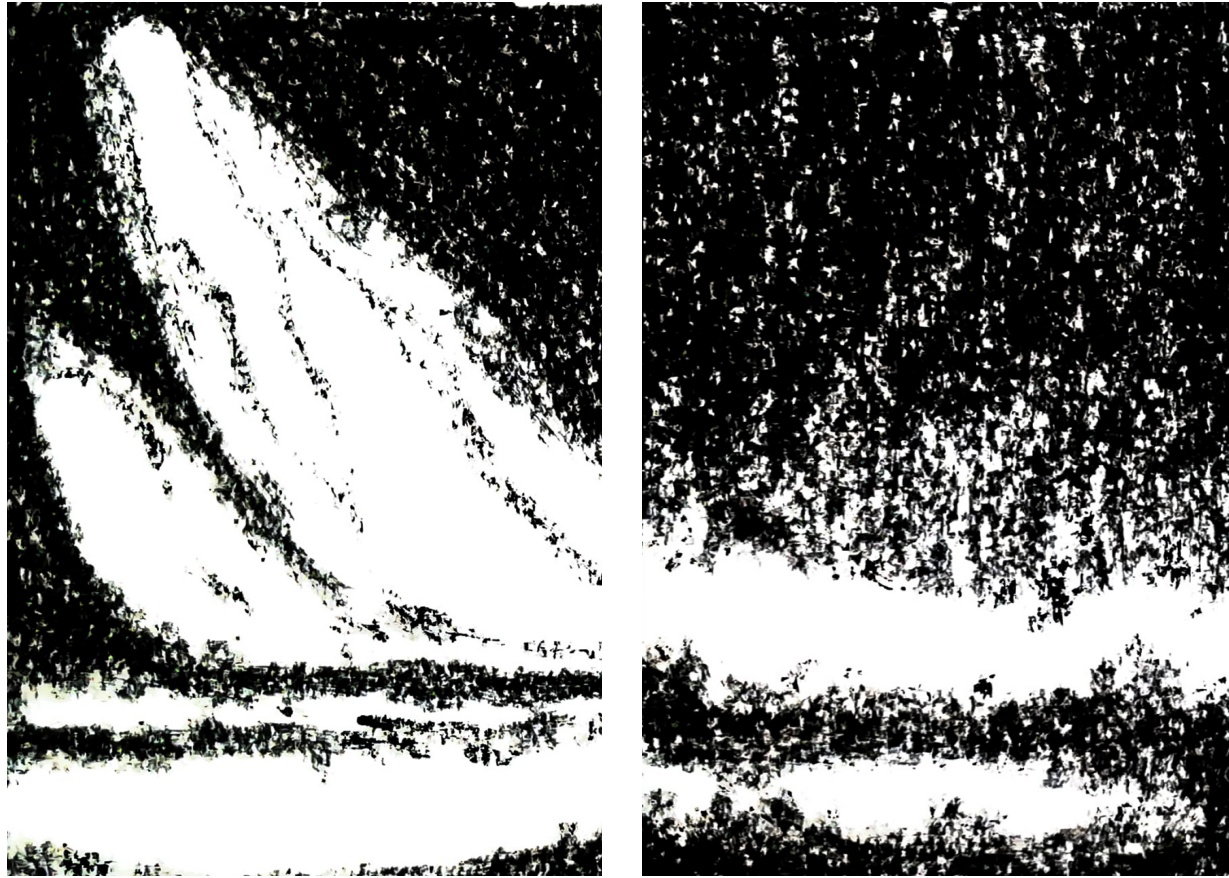
how the project  
is carried out?



## 2.1 narrative

Within the project, narrative plays a very important role as a connective element between the different design aspects. In fact, the project also develops through narration in order to express the different concepts and investigate the relationship between the user and the space. The narrative has both a cognitive and emotional value: its purpose is to give information, to articulate relationships, to express symbolic meanings. The narrative builds a plot, a story around the designed space and also becomes a tool for analysing the subject. Defining and describing a specific user as well as his beliefs, experiences and actions is useful as a guide during the design of the space. In this case, it serves to analyse a routine, a rhythm linked to a natural element, and then redefine it. It finally serves to create a new ritual, delineated as a series of gestures, actions and relationships that body establishes with environment.

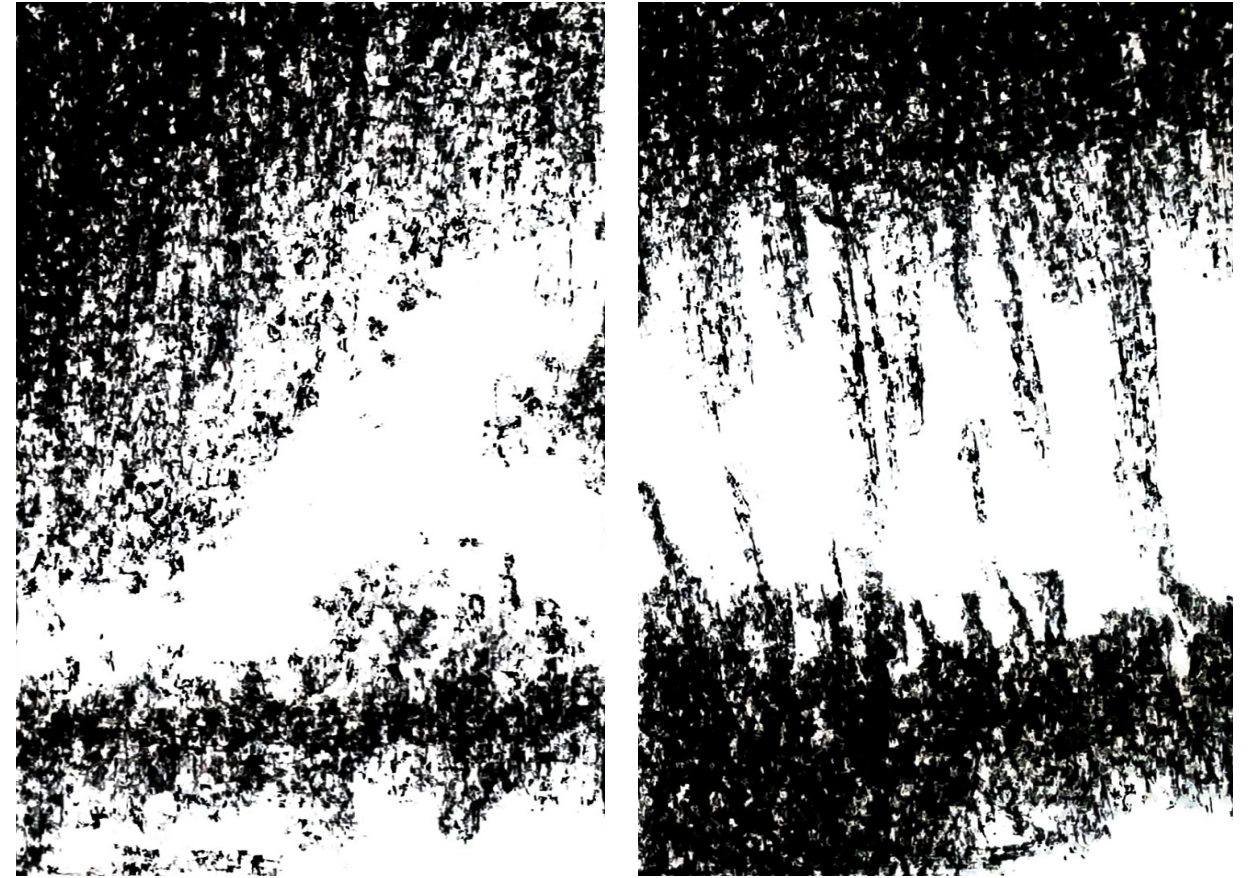
*figure 25  
sketches series  
investigating  
mist and its  
relationship  
with man*



### 2.1.1 mist encounter

The space narrates the encounter between human and mist, the Genius Loci of the place. Mist is the characterising element, the origin of the forms of the space. It is also the main

inhabitant of the space, able to transform its atmosphere and change the perception of it. The mist becomes a design element, understandable but sometimes unpredictable, linked to the rhythms and specific characteristics of nature, cli-



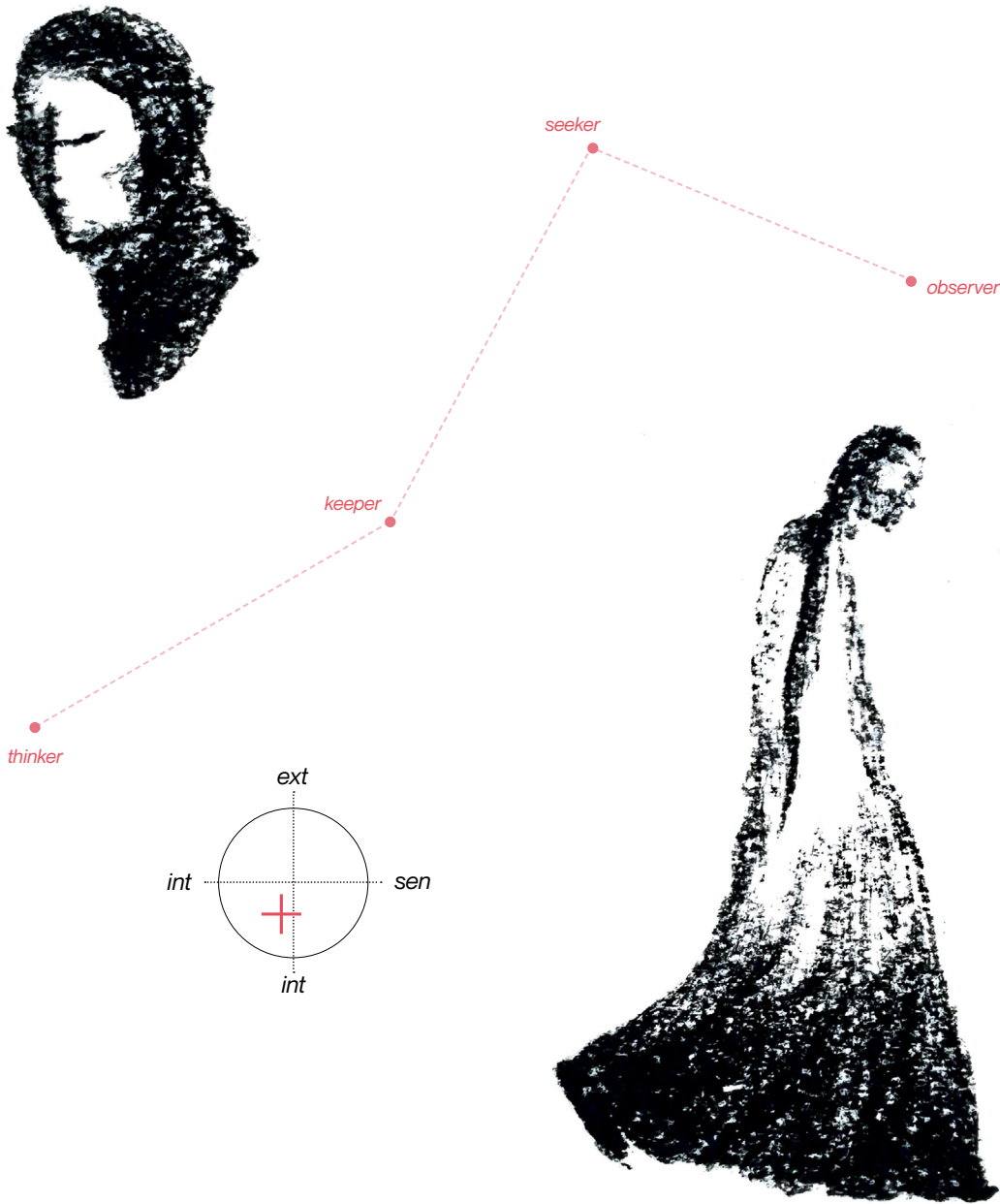
mate, humidity and wind. The series of drawings above tries to represent feelings and moods in relation to the density and presence of mist in its different states. At first it is the light and the wind that dominate the scene, then, slowly,

the contours become less and less clear and the fog invades the space, becoming so thick that it creates, in the last scene, a damp, rainy environment. Space is transformed and nature's time mixes with human's, influencing emotions.

figure 26  
series of sketches:  
the encounter  
with the mist,  
chalk on paper



The illustration tries to give a visual representation of the inhabitant of the space and his main traits



## 2.1.2 space inhabitant

The study continues with the description of the inhabitants of the space, in order to better define the actions and rhythms. There are two main inhabitants, humans and nature. First of all the mist. This natural element is the real protagonist. It creates atmospheres, insinuating itself through volumes and spaces, appearing and disappearing following the rhythms of the environment. The human figure is as abstract as the mist. It's the inhabitant of the forest and its keeper. Almost similar to a monkish figure, his life is in itself strongly linked to nature and to solitude and contemplation. It wanders around the

forest appearing and disappearing just like mist, adapting to the designed spaces. This is a real character, a sort of sacred person that takes care of the space and can share his knowledge and passion. As far as the main figure is concerned, it is possible to say that there are definitely two actions linked to his person: that of 'cultivating' and that of 'guarding'. The term 'cultivating' expresses an active trait, linked to building something new. It means establishing a relationship with the place, modifying it in order to live in communion with it and to find a sense of belonging. 'To guard', on the other hand, indicates a passive trait. It means maintaining the bond established with nature and protecting it.



figure 28  
the mist  
as inhabitant

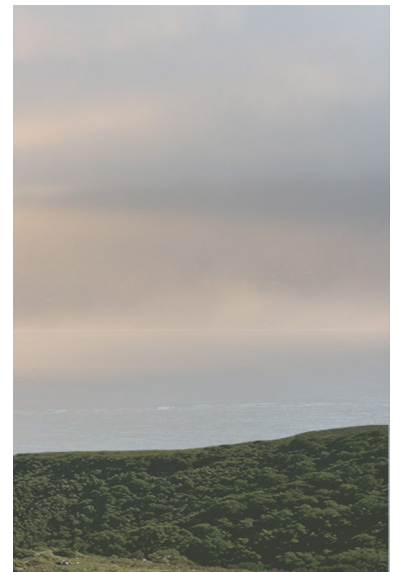
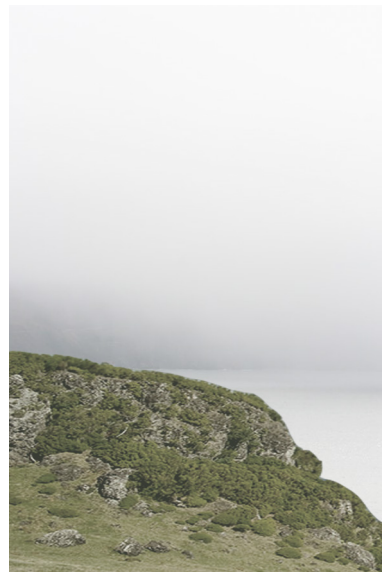
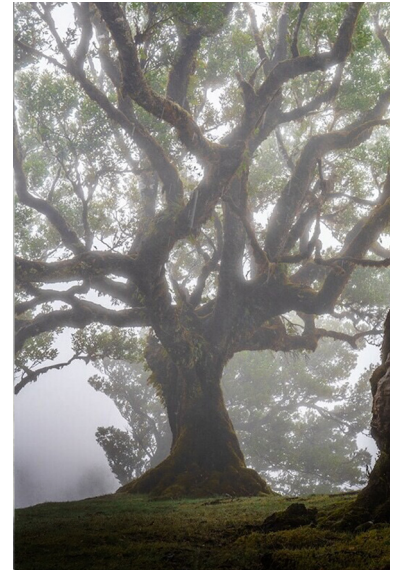
*One of the central human acts  
is the act of inhabiting, of connecting  
ourselves, however temporarily,  
with a place on the planet which  
belong to us, and to which we belong*

*from the book In Praise of Shadows, by Junichiro Tanizaki  
quotation from foreword part, by Charles Moore*

### 2.1.3 ritual

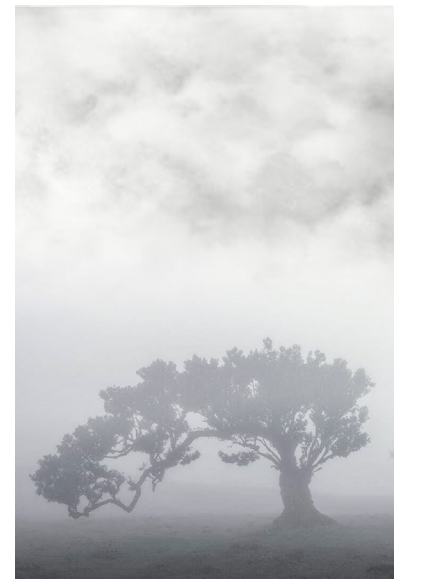
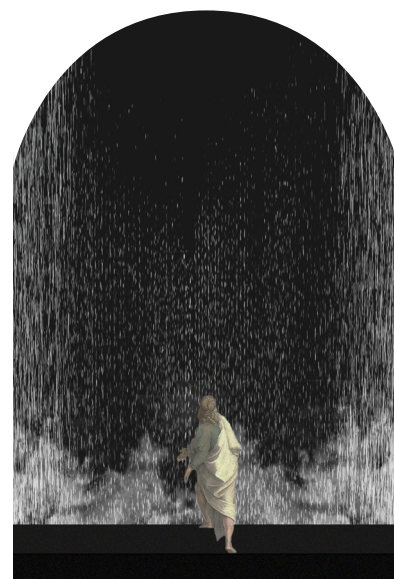
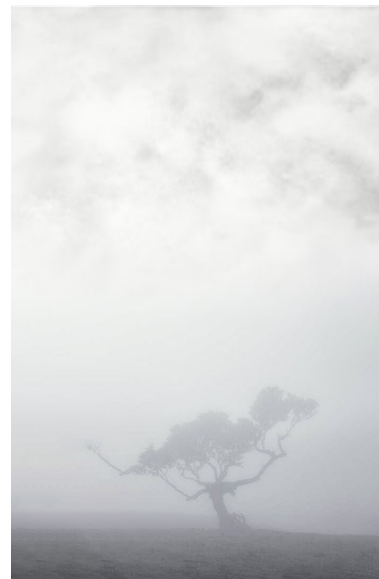
The relationships between the designed space, nature and the inhabitants create a ritual, a new way of experiencing the environment. Every element becomes a symbol, every symbol builds an atmosphere, every atmosphere becomes emotion, feeling. The ritual is represented here through a series of illustrations, just like in a narrative. The tale is composed of several events, several situations in which not only man is the protagonist. Vegetation and emptiness also become actors and build volumes and perspectives in different images, constructed in series. The film rouge is the mist that creeps into each frame with its presence, investing it with meaning and characterising it with dif-

ferent nuances each time. The ritual consists of five acts, five sequences inspired by the location and the project concept. Each act offers itself to the free interpretation of the observer: the illustrations are intended to suggest, refer back to, without any real declaration. Precisely for this reason, each one is given a title, but without a detailed description: a few words that suggest atmosphere, draw actions and reactions. The comparison between human's time and nature's time is always central. Proportions, positions, symmetries and contrasts are intended to investigate the two rhythmic times and the mutual influence of both.



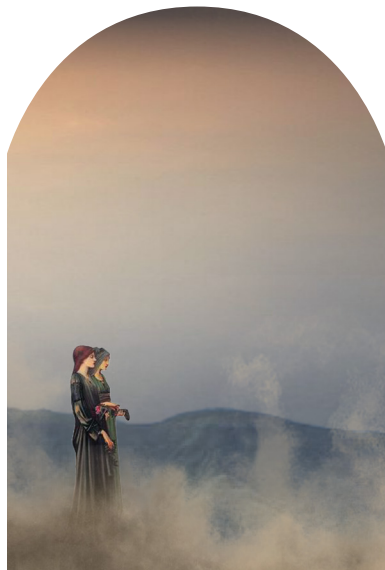
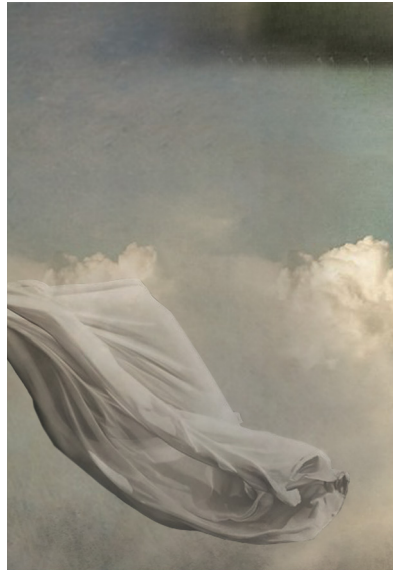
*act I*

*The inexhaustible variety of the thought*



*act II*  
*The blinded sight*

*act III*  
*The unveiling of the truth*

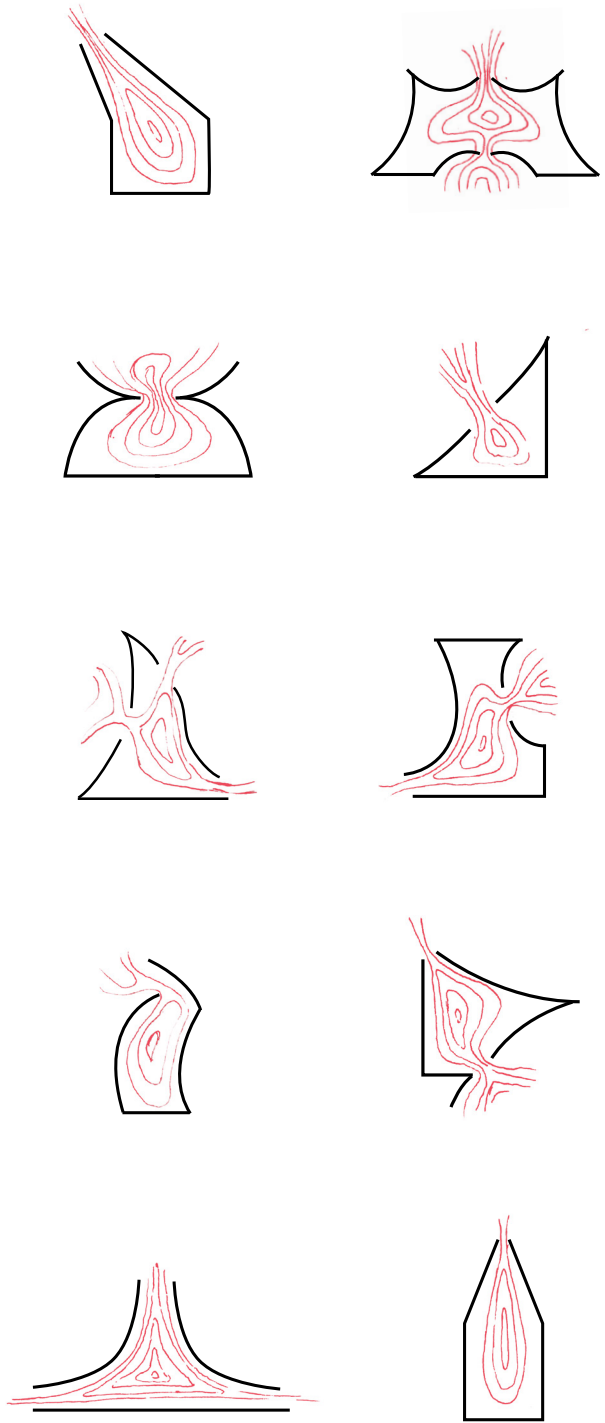


*act IV*

*The shining light of arising in the midst  
of darkness*

*act V*

*The mourning of the sunset*



The chapter focuses on the different stages of design. From the choice of the design and construction method to details on texture, atmosphere and light. The chapter begins with some drawings to study the diffusion of fog into space. Shapes that are more or less plastic or organic, closed or with one or more openings are compared with each other to understand how best to use the design space in relation to the concept. The importance of shape is crucial because the entire space will be constructed through the passage or presence of mist in relation with different environments. The chapter continues with initial design drawings through to technical drawings and views illustrating the route and the designed space.

figure 29  
shapes studies

## 2.2 focus on project

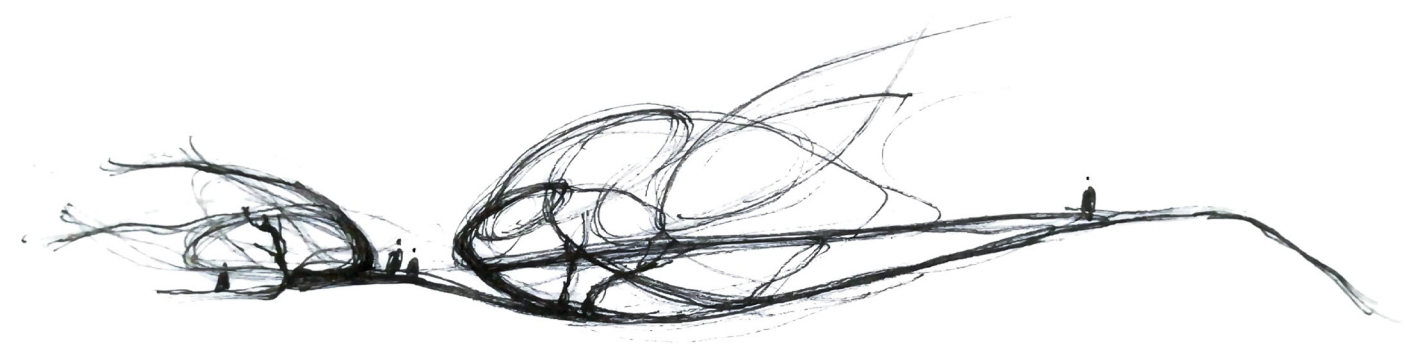


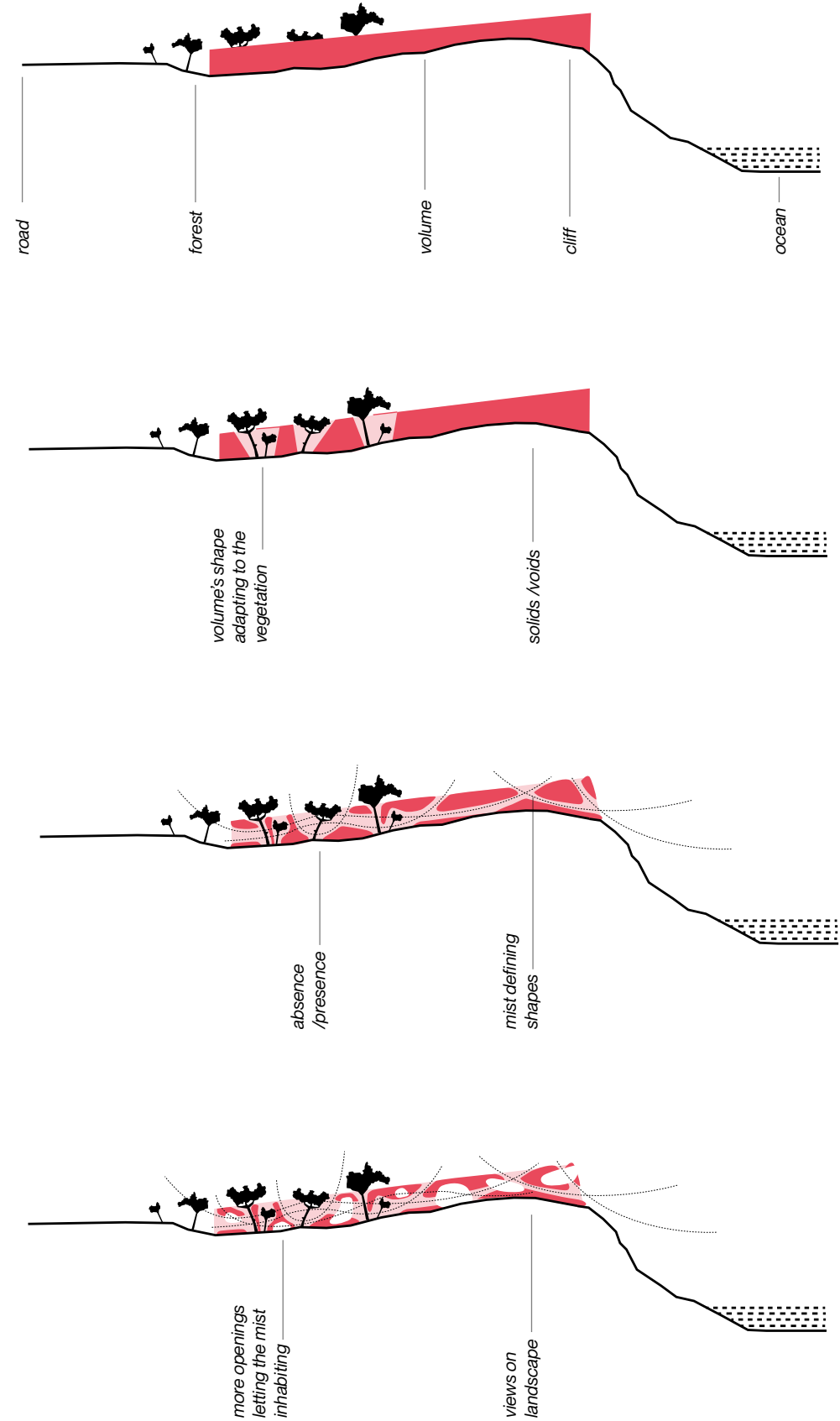
figure 30  
first sketch  
of the space

## 2.2.1 design process

The design process used is that of subtraction. All space becomes a matter of subtraction as environments are defined by emptiness, so that they can accommodate the vegetation of the place and especially the mist. Starting from the contours of the land and its characteristics, the volume takes a long shape that is intended to connect a more shady, tree-lined area with a higher, almost vegetation-free zone overlooking the Ocean. The volume has to adapt to the presence of trees and this is a first action of subtraction for the volume.

The process continues with the creation of particular environments and interior and exterior spaces given by the action of mist, conceived as an element that invades the space, creeping into openings and creating ever-changing and unique environments. In the diagram presented, it is clear how the subtractive process succeeds in constructing a volume that looks massive and yet simple, pure and touching. On the following pages are some initial drawings intended to play with shapes and the ambiguity between fullness and emptiness, presence and absence. In particular, the drawings are sections and perspectives that aim to render space three-dimensionally with mixed techniques.

figure 31  
outline of the  
design process



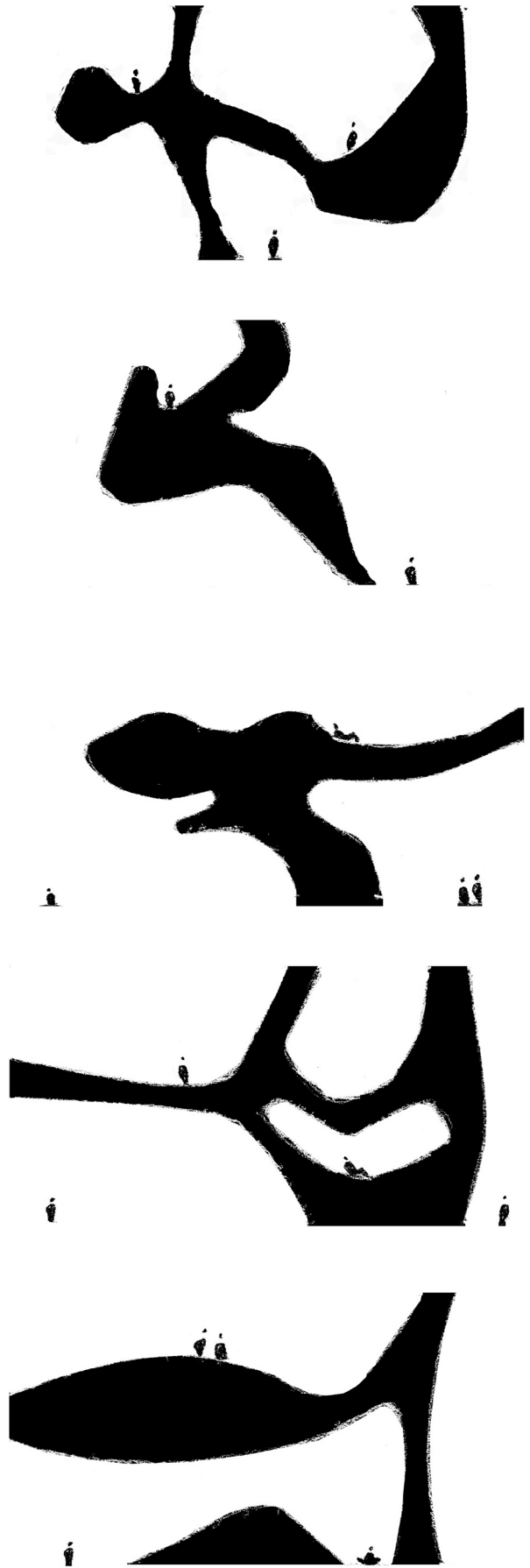
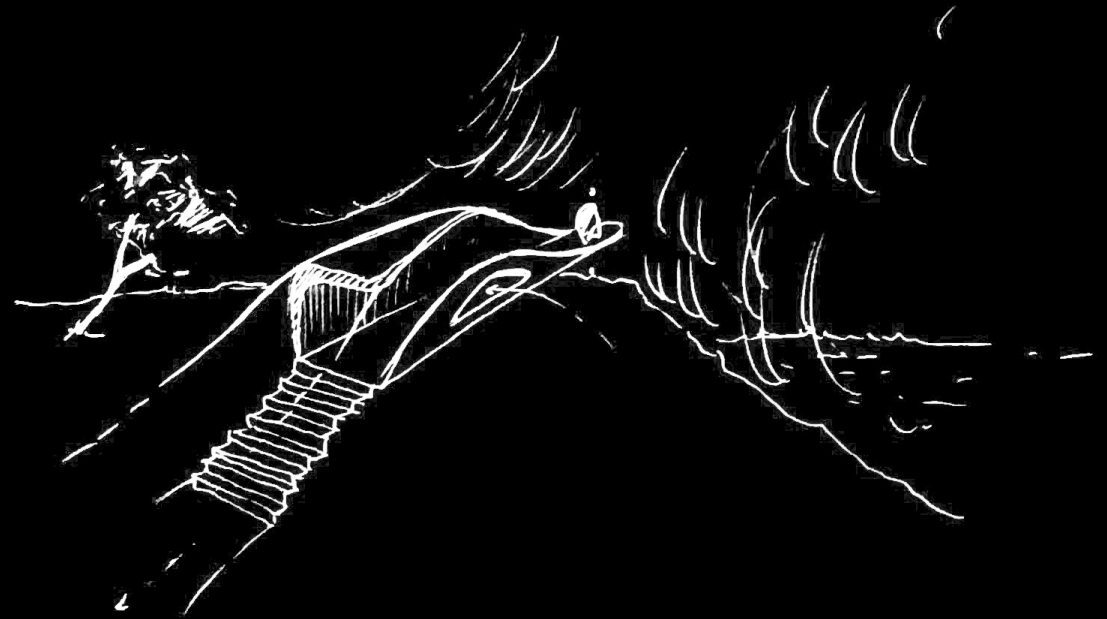
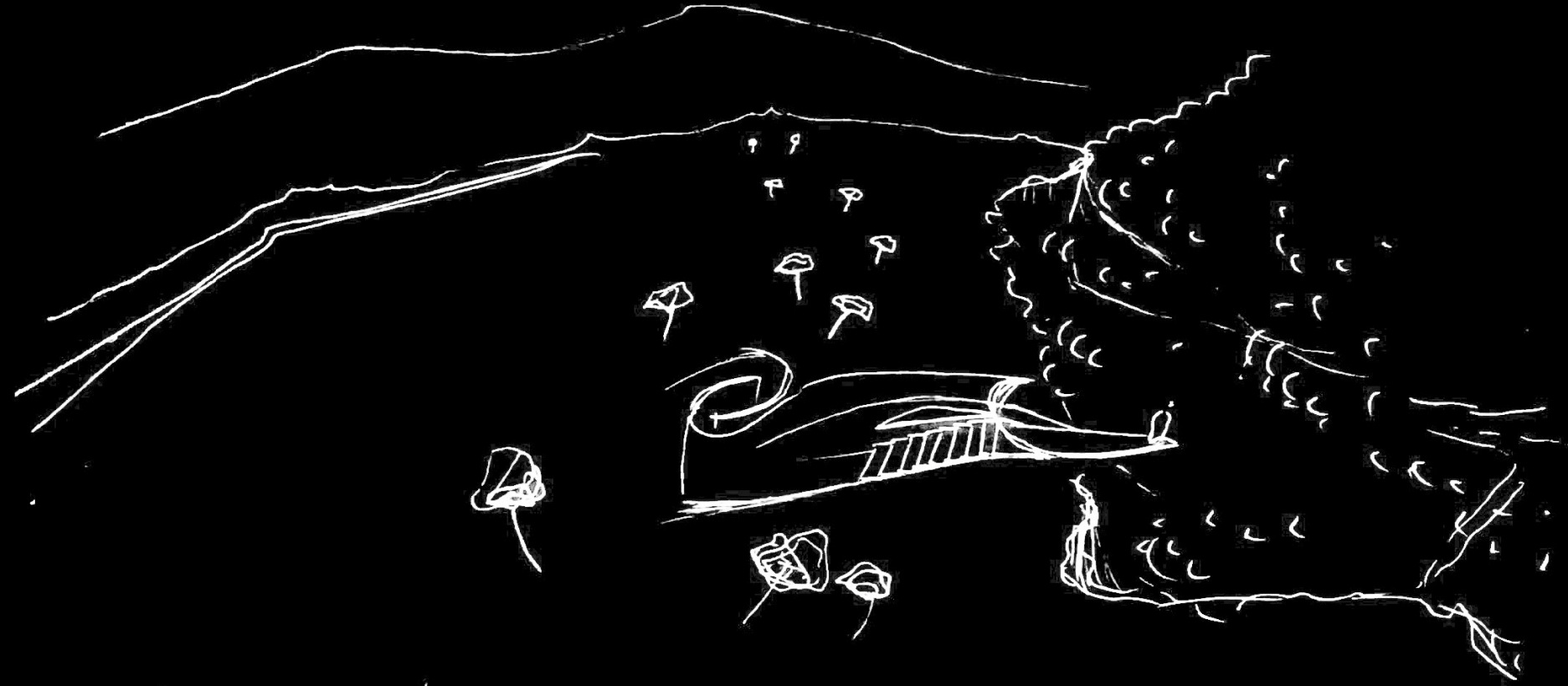
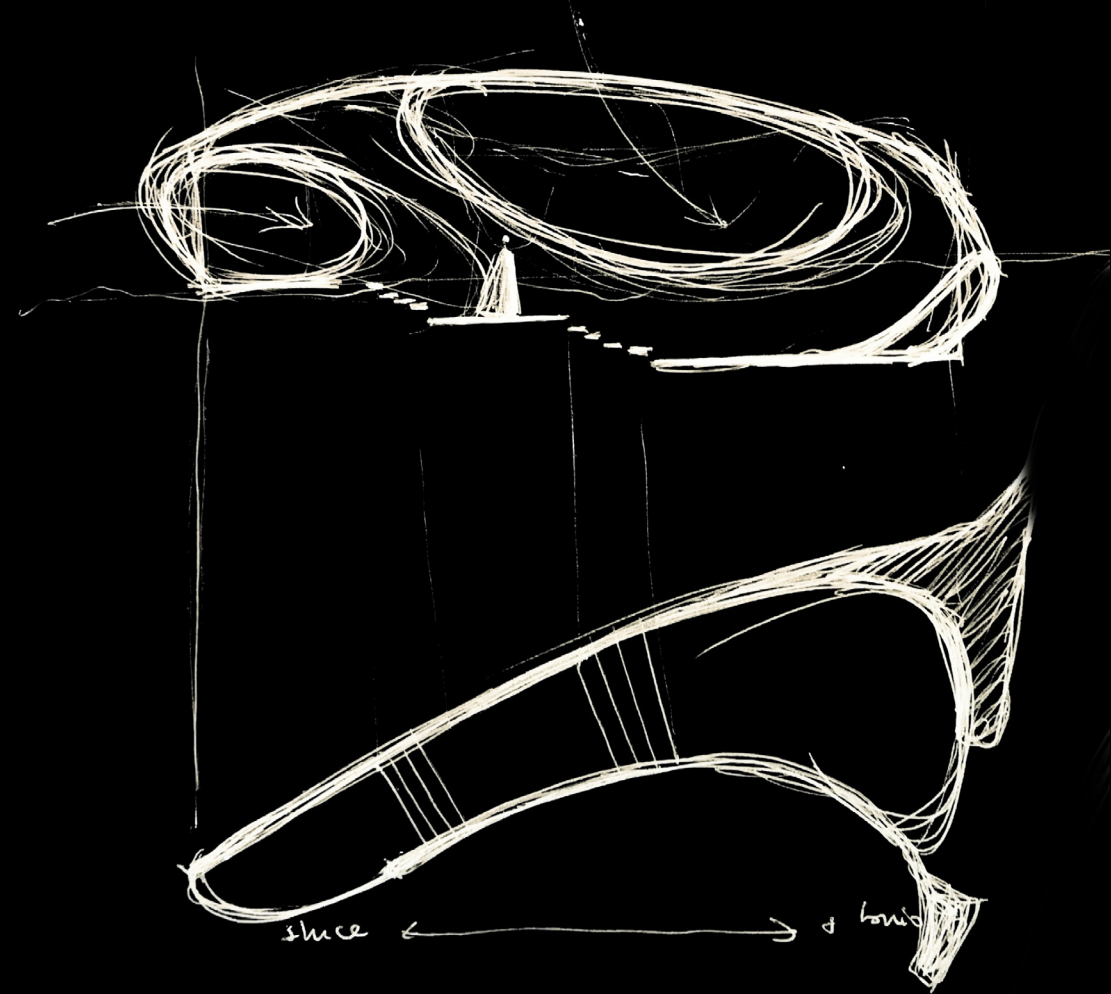


figure 32  
reverse drawings



figure 33  
reverse drawings





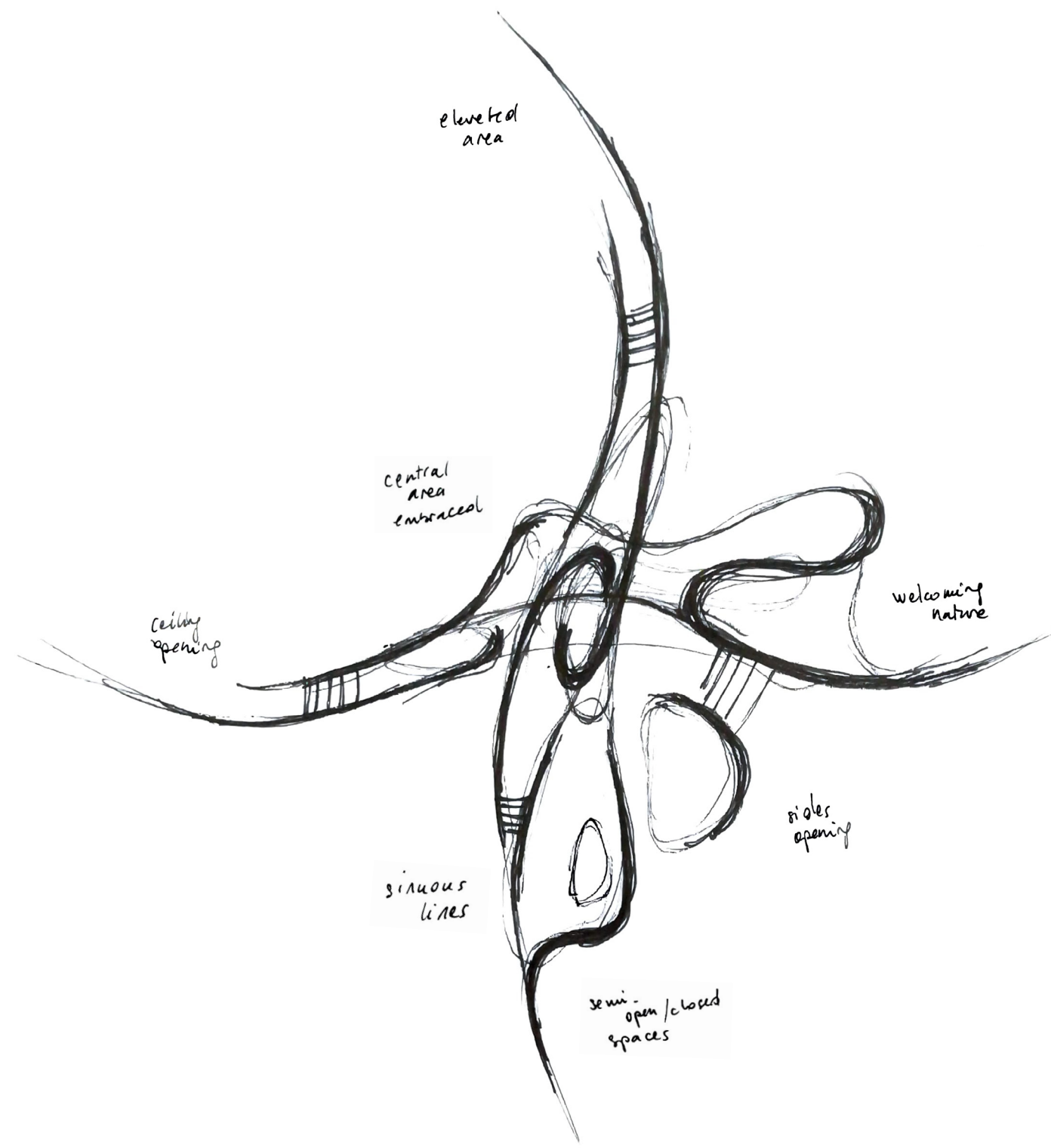
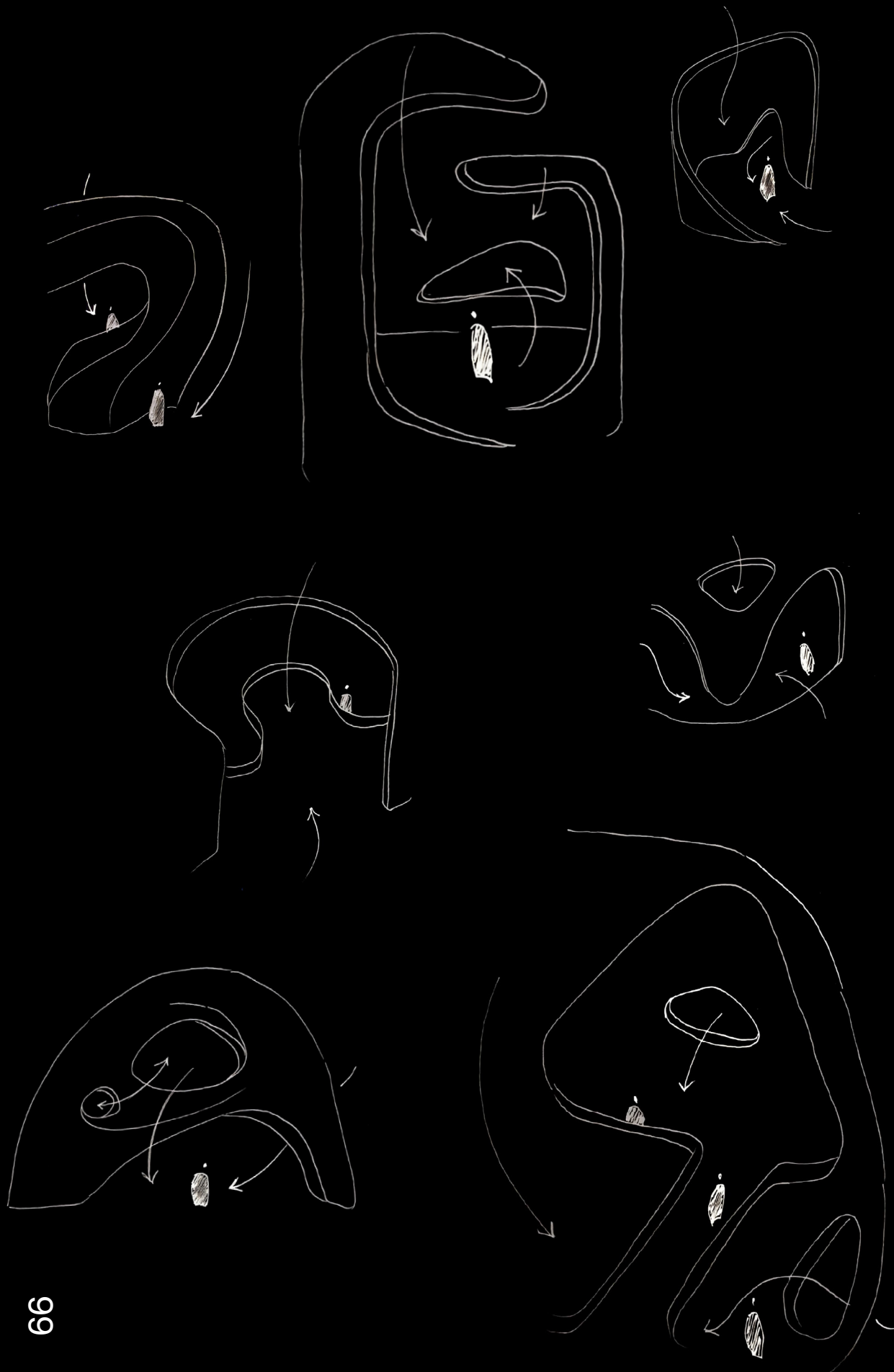


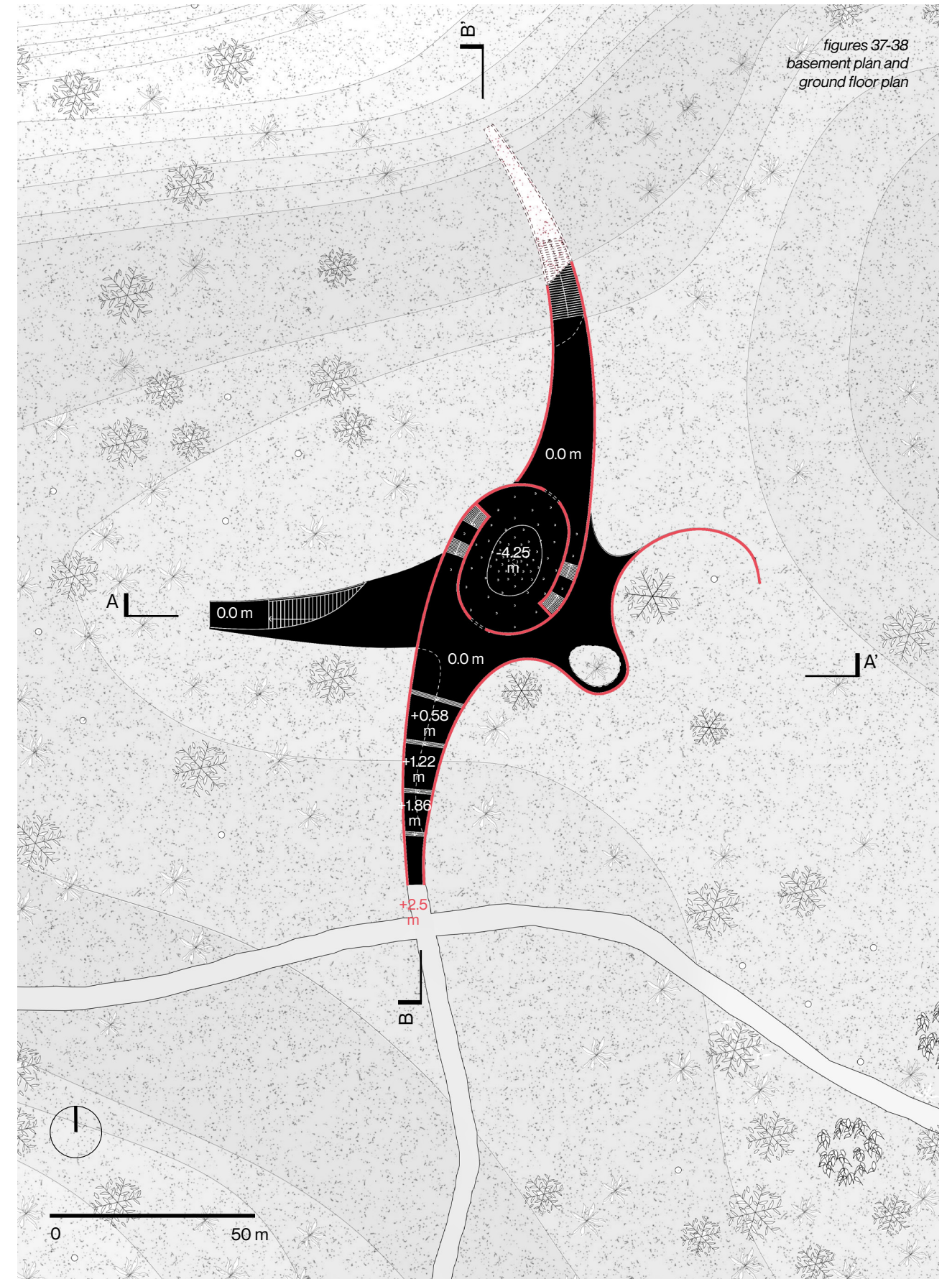
figure 35 zoning



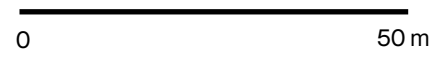
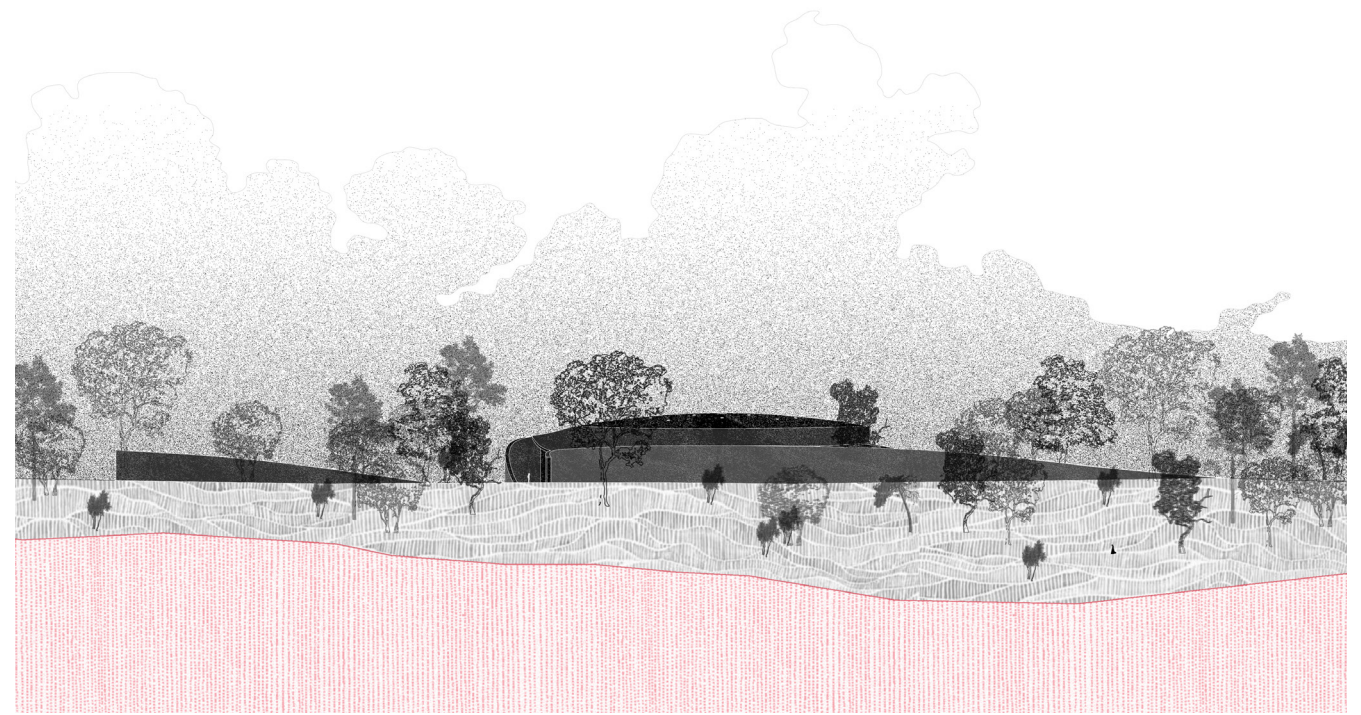
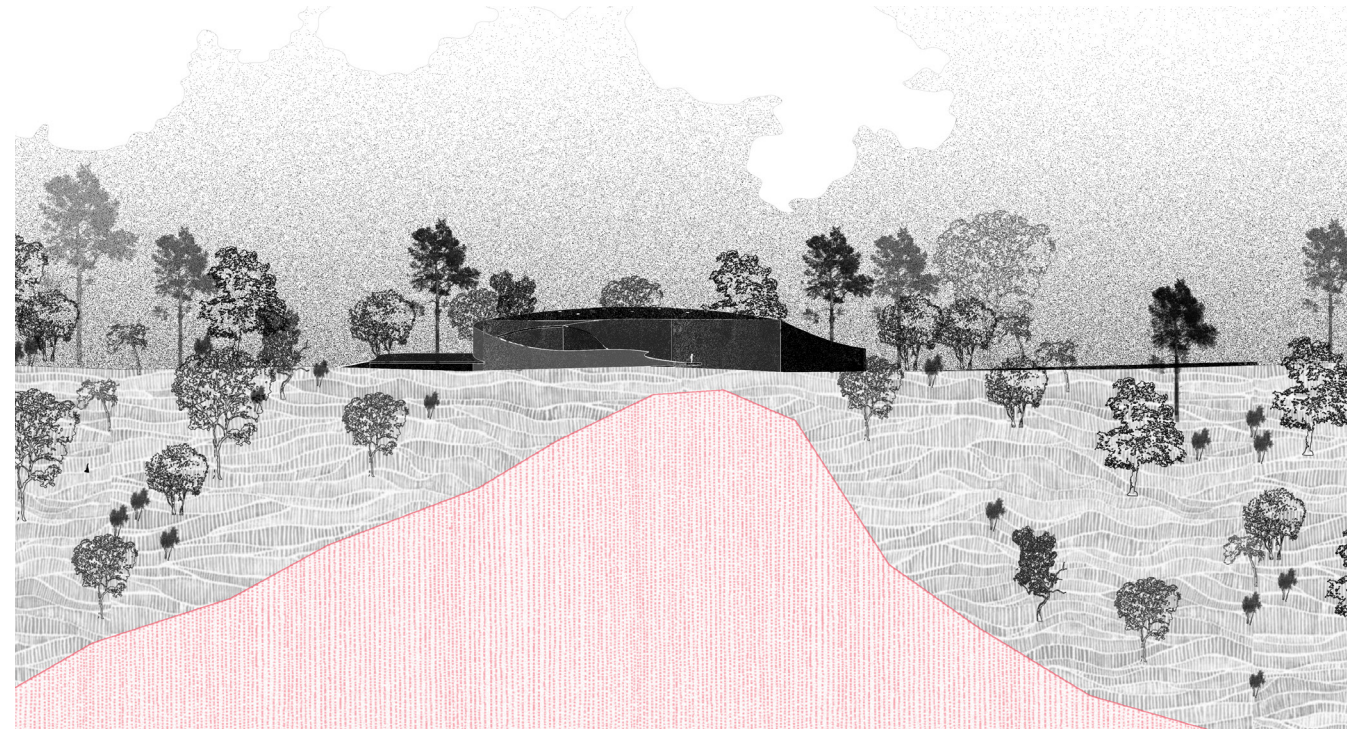
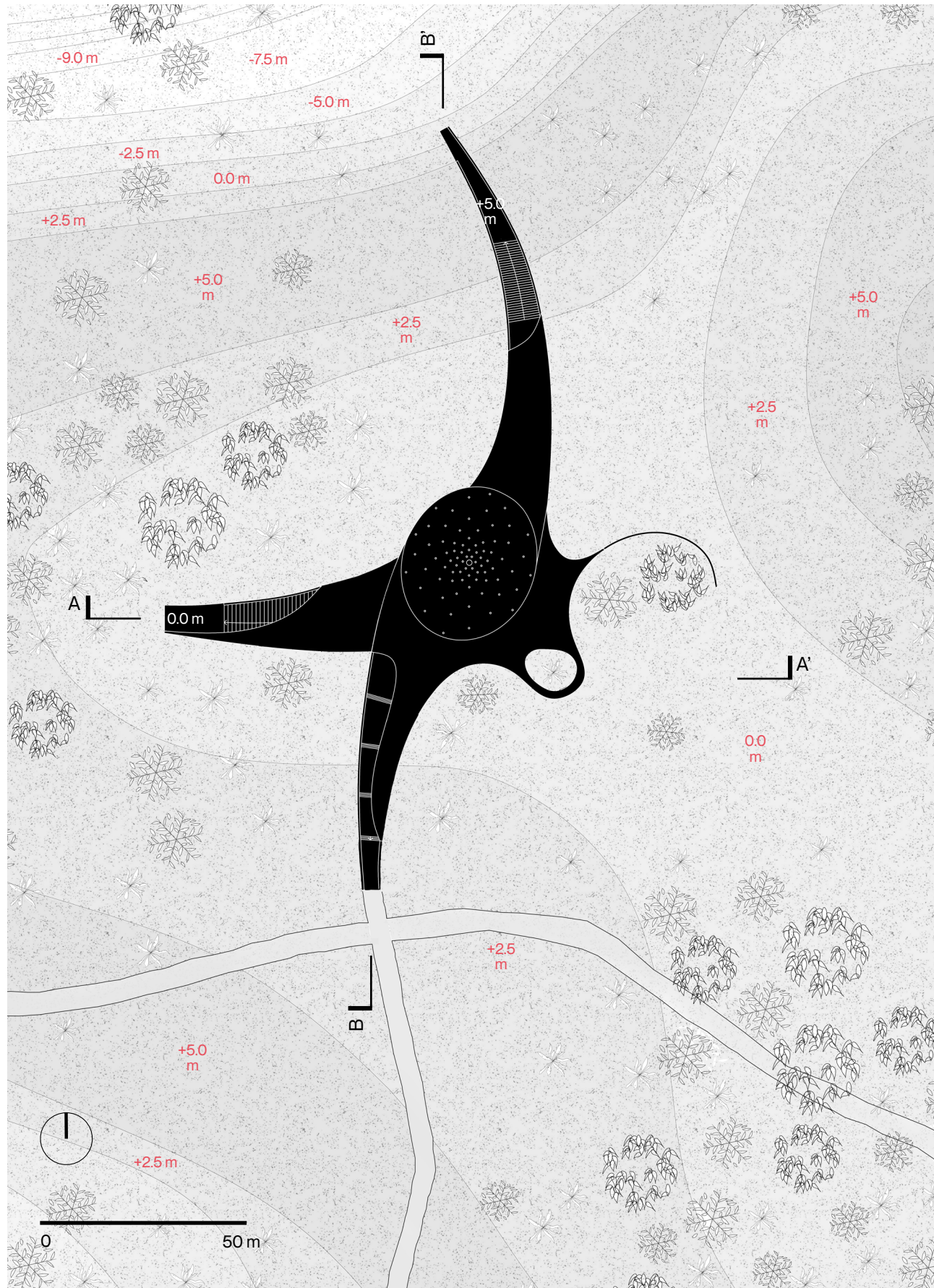
figure 36  
view of the  
designed space

## 2.2.2 spatial configuration

The designed structure takes advantage of the landscape features and slopes to create different areas on more than one level. The architecture is composed to let the mist inhabiting the space: each element is studied in dimension, height and shape to embrace the mist and lead it to the specific places. Overhanging platforms, underground interiors or elevated spaces follow one another in a play of empty and full spaces, openings and closures in order to obtain multiple views of the ocean and the forest. The openings are designed not only according to the view, but also and above all according to the climatic conditions, such as the direction of the wind in the different seasons, so that the space is inhabited and transformed by the fog. In fact, the structure appears out of scale with respect to the human dimension, despite being accessible.



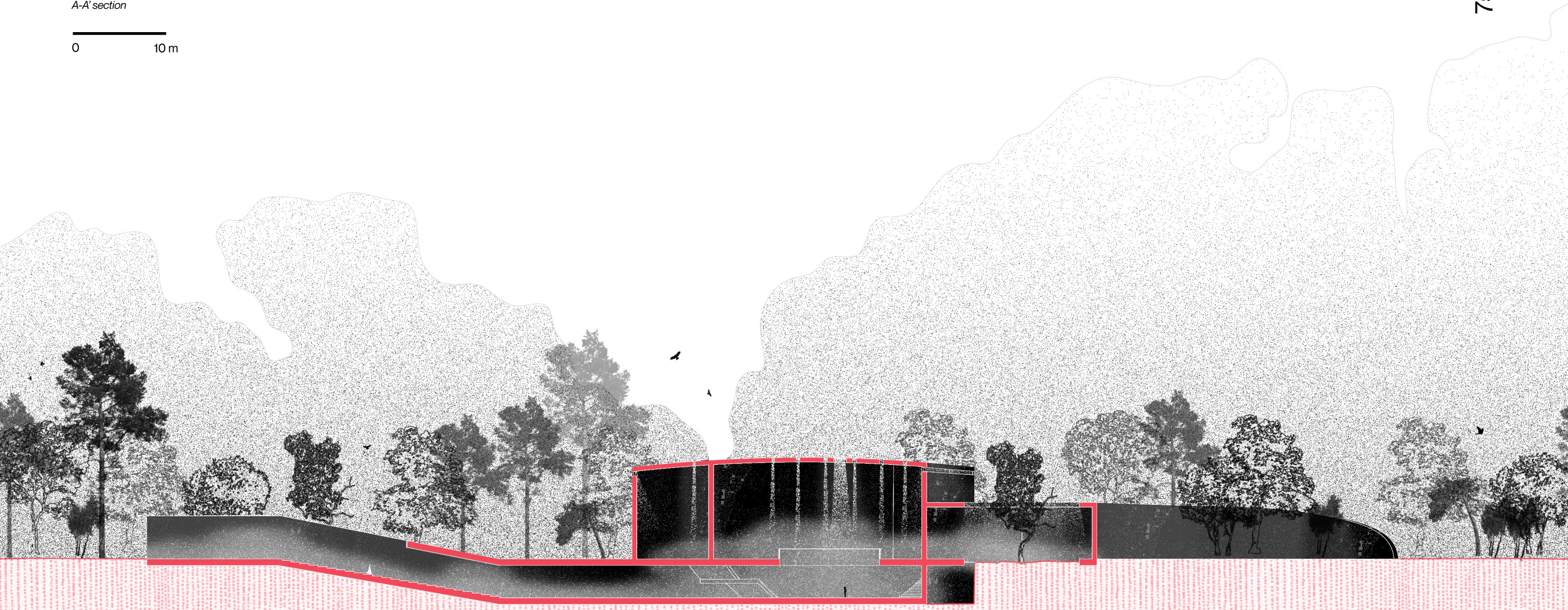
figures 37-38  
basement plan and  
ground floor plan

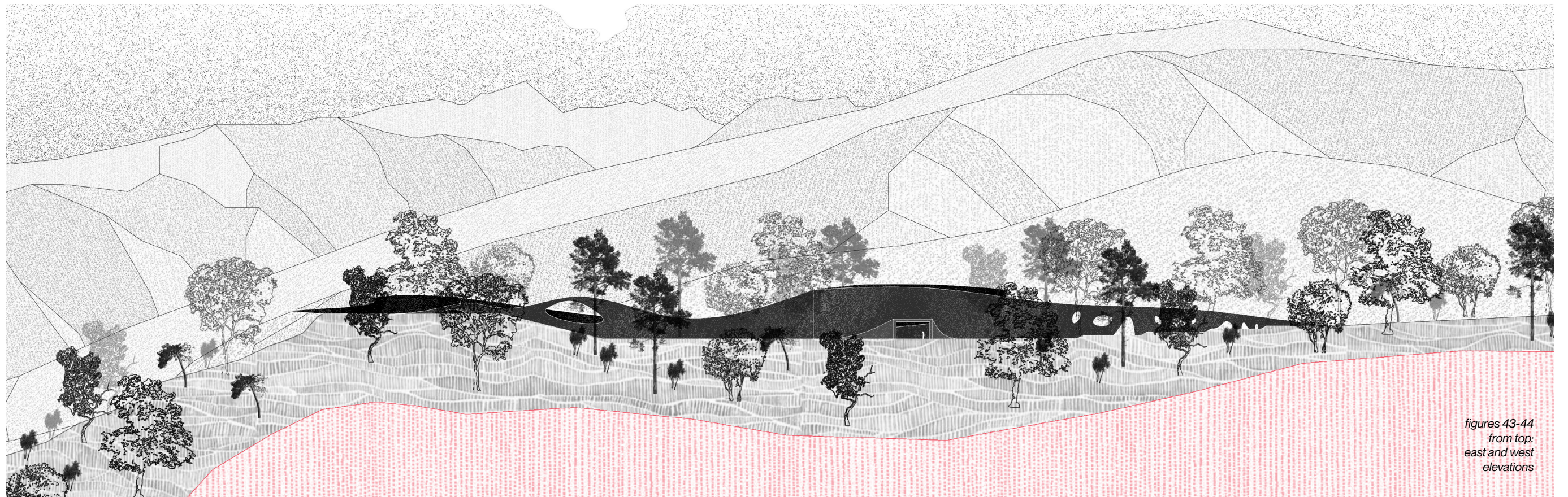
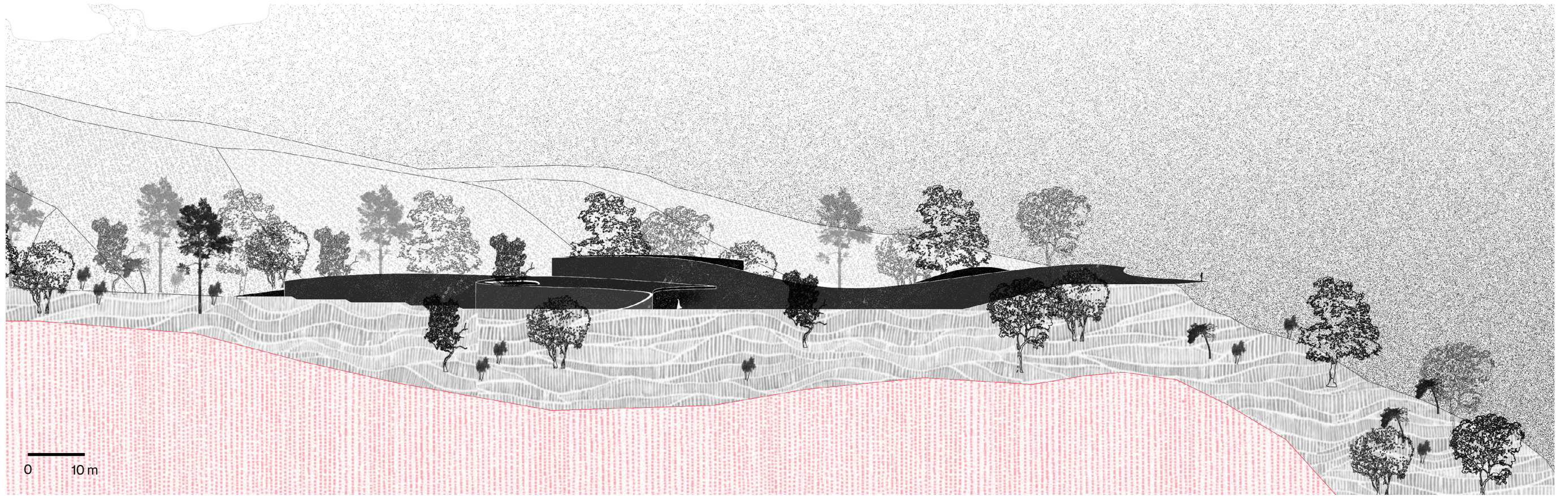


figures 39-40-41  
 in the other page:  
 roofing plan;  
 in this page, from  
 top: north and  
 south elevation

figure 42  
A-A' section

0 10m

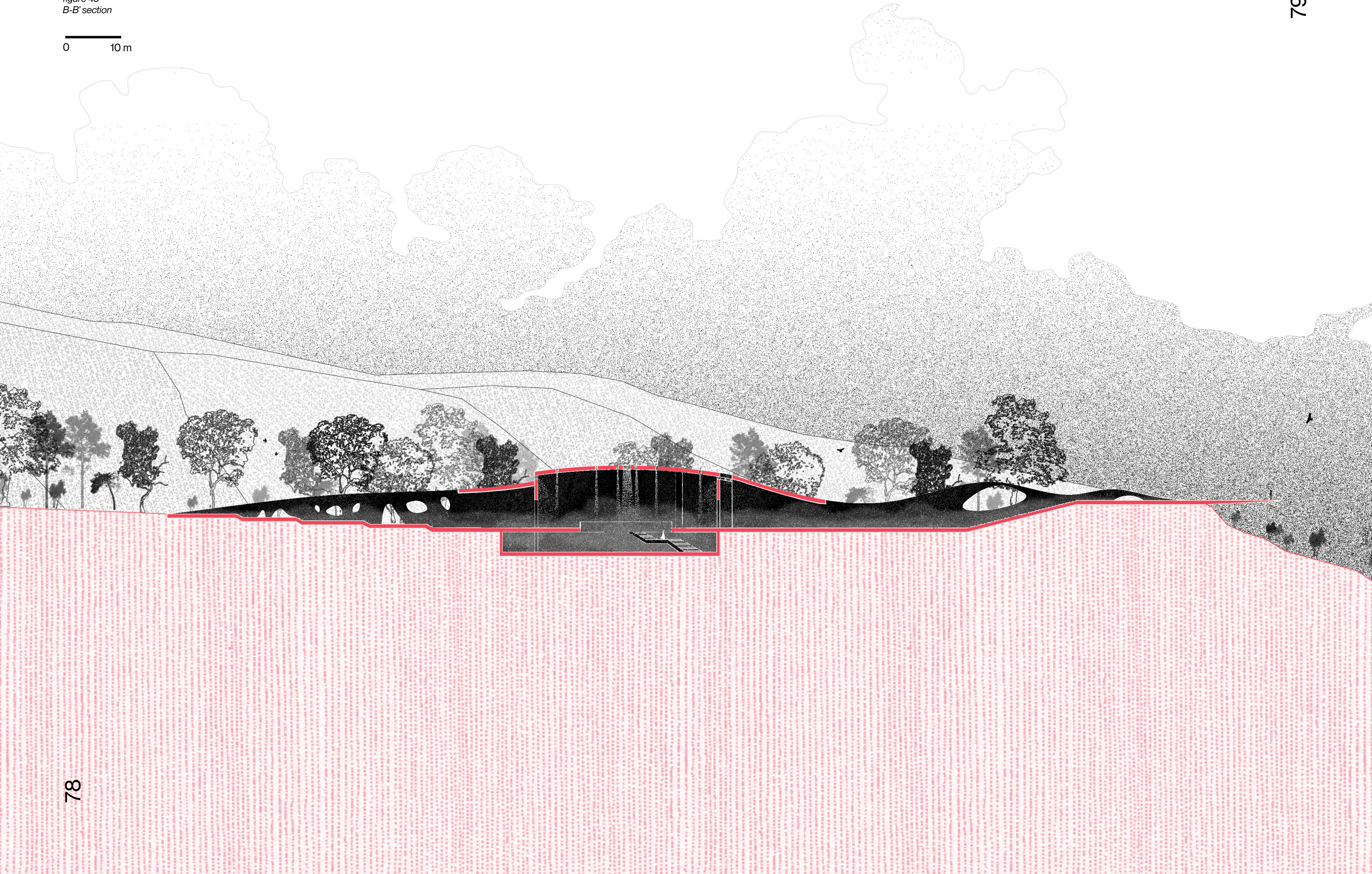




figures 43-44  
from top:  
east and west  
elevations

figure 45  
B-B' section

0 10 m





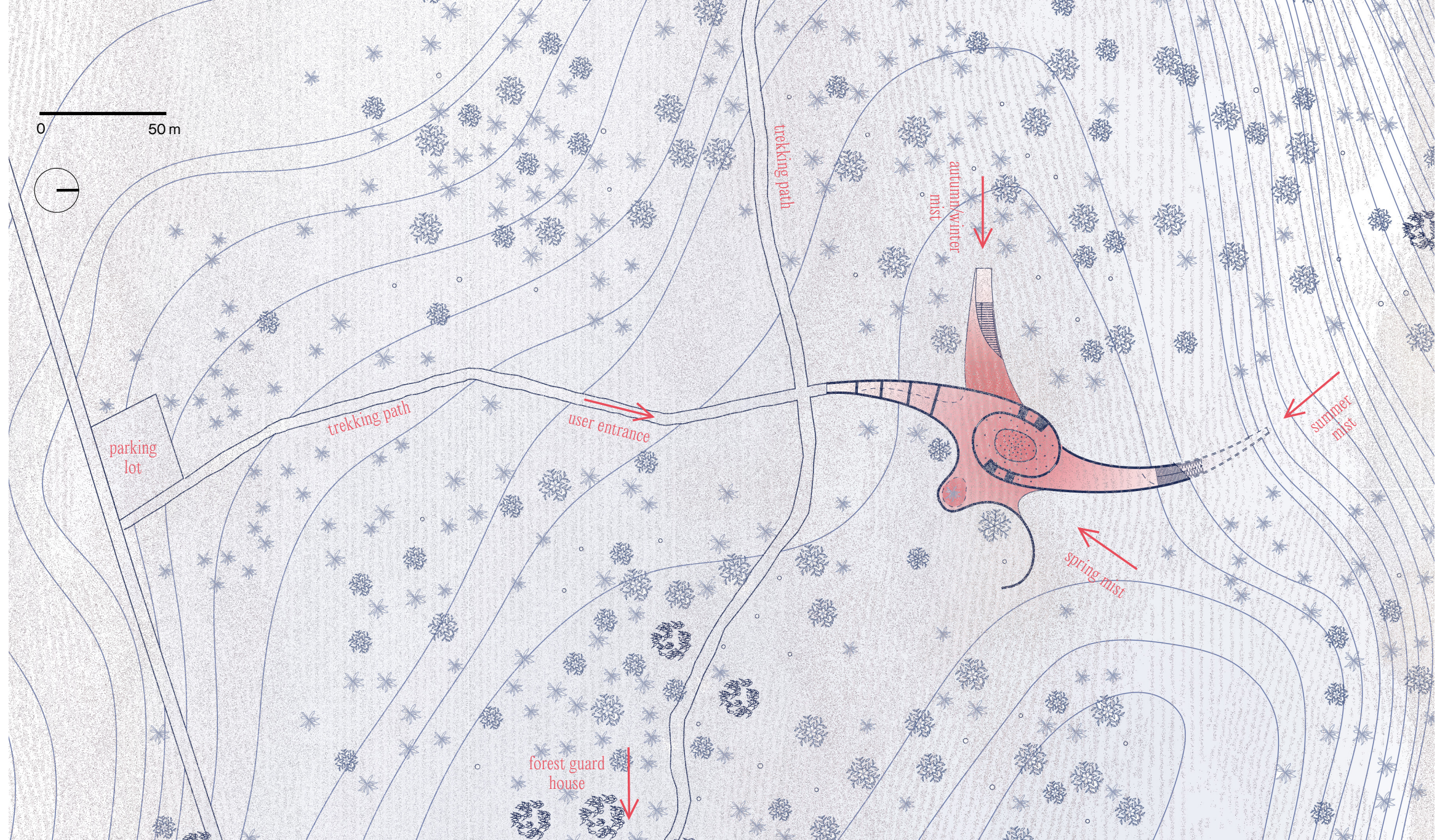


figure 46  
intervention plan

### 2.2.3 behind human design

The aim of the project is to enhance the time of encounter between human and nature. In this dialogue, each element has its own presence and character. The sneaky mist transforms architecture, invading its spaces. It is a subtle, ephemeral element, yet one with enormous weight. It favours the local fauna and flora, creating an ecosystem where humidity is essential. At the same time, it

continually modifies the shape of the forest and its trees, determining its intricate form, so peculiar. Architecture, a medium between nature and human, must therefore also have a presence. The structure, of imposing dimensions, has a massive nature and a sinuous shape. It integrates into the landscape by taking up its organic forms, but at the same time imposes itself on it, beco-

ming a landmark, a symbol of human presence. It makes space by accommodating the forest within it and it slowly tries to channel or collect moisture and water with its surfaces. The local vegetation and fauna can thus be observed and studied by humans while maintaining their important function as a source of water and soil conservation, helping to regulate the hydrological cycle and

prevent soil erosion. It is therefore a complex dialogue, where each part plays a key role in creating a unique temporal experience, in which human can take part. The project is a spatial attempt behind human design. Each component of the structure has a meaning and a purpose and creates a special and unique environment for the encounter between human and nature temporalities.



**The void**

a slow descent leads to an underground space, a refuge to watch the sky and hear the forest sounds



sky view



natural sounds



**The peak**

this is the highest point of the structure, a belvedere over the ocean that in summer turns into a completely isolated place surrounded by mist



summer mist



ocean view



raptors

**The nembus**

this is the heart of the entire structure where all moisture is collected to create an introspective space where mist becomes water



introspection area



humidity collector



**The endless circle**

a downhill path flanked by irregularly shaped openings that offer countless views of the forest and guide visitors from the trekking path



forest view



local fauna



**The serpentine**

a serpentine barrier between inside and outside, is welcoming trees and collecting spring's mist and wind



spring mist and wind



integrated vegetation

figure 47 axonometric view of the space with its different areas

2.2.4 maquette studies

The production of a study maquette was useful to understand the dimensions and relationships between the volumes of the structure. It consists of a base made of vegetal cardboard divided into nine parts showing the contour lines (for each 2.5m) and the architectural parts, made of black cardboard. The chosen scale (1:200) as well as the materials and the disassembly feature allow easy modification and transport of

the entire model. It was therefore possible to modify the project several times, understanding its limits and potential. The photos show the evolution and progress of the project as well as the importance of studying and verifying the two-dimensional drawings in the three-dimensionality of the space. The maquette was therefore not made to be attractive, but precisely as a tool for studying and analysing space.

figure 48  
photo of the first  
study model, made  
on a scale of 1:200

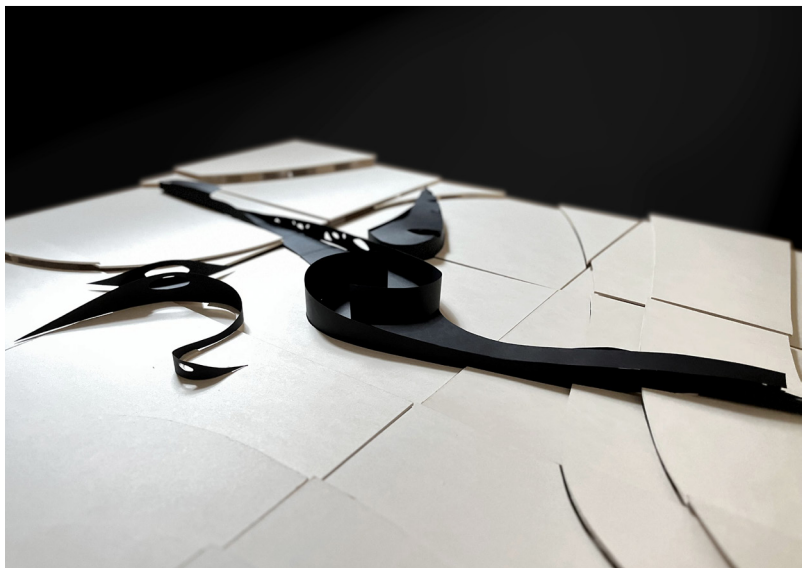
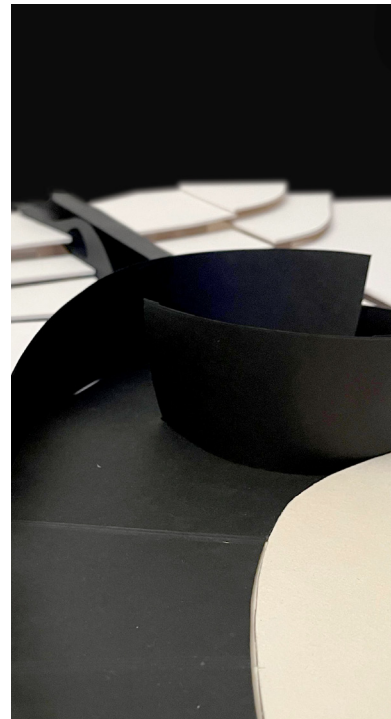


figure 49  
first study model,  
made of ivory  
vegetal and black  
cardboard



*figures 50-51  
different views  
of the model:  
the structure was  
initially composed  
by three different  
and separated  
volumes*



*figures 52-53-54  
views of the  
maquette  
from different  
perspectives*



figure 55  
top view  
of the second  
study maquette

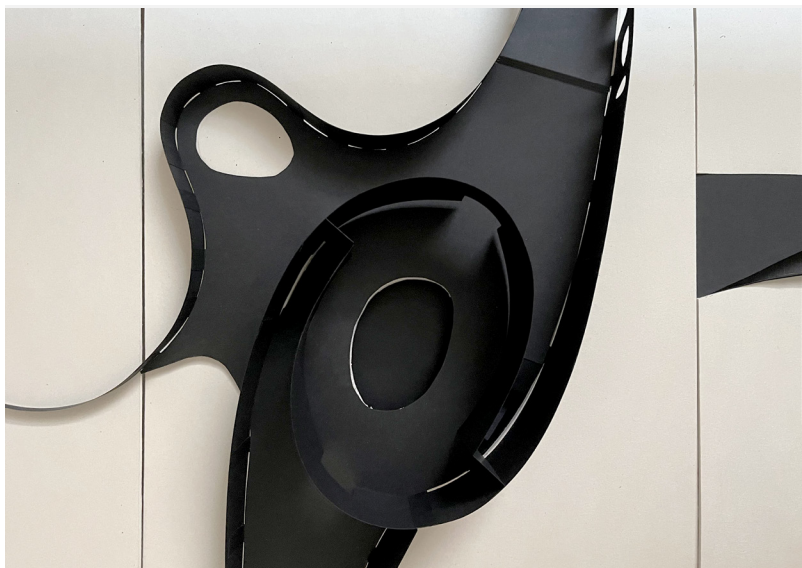
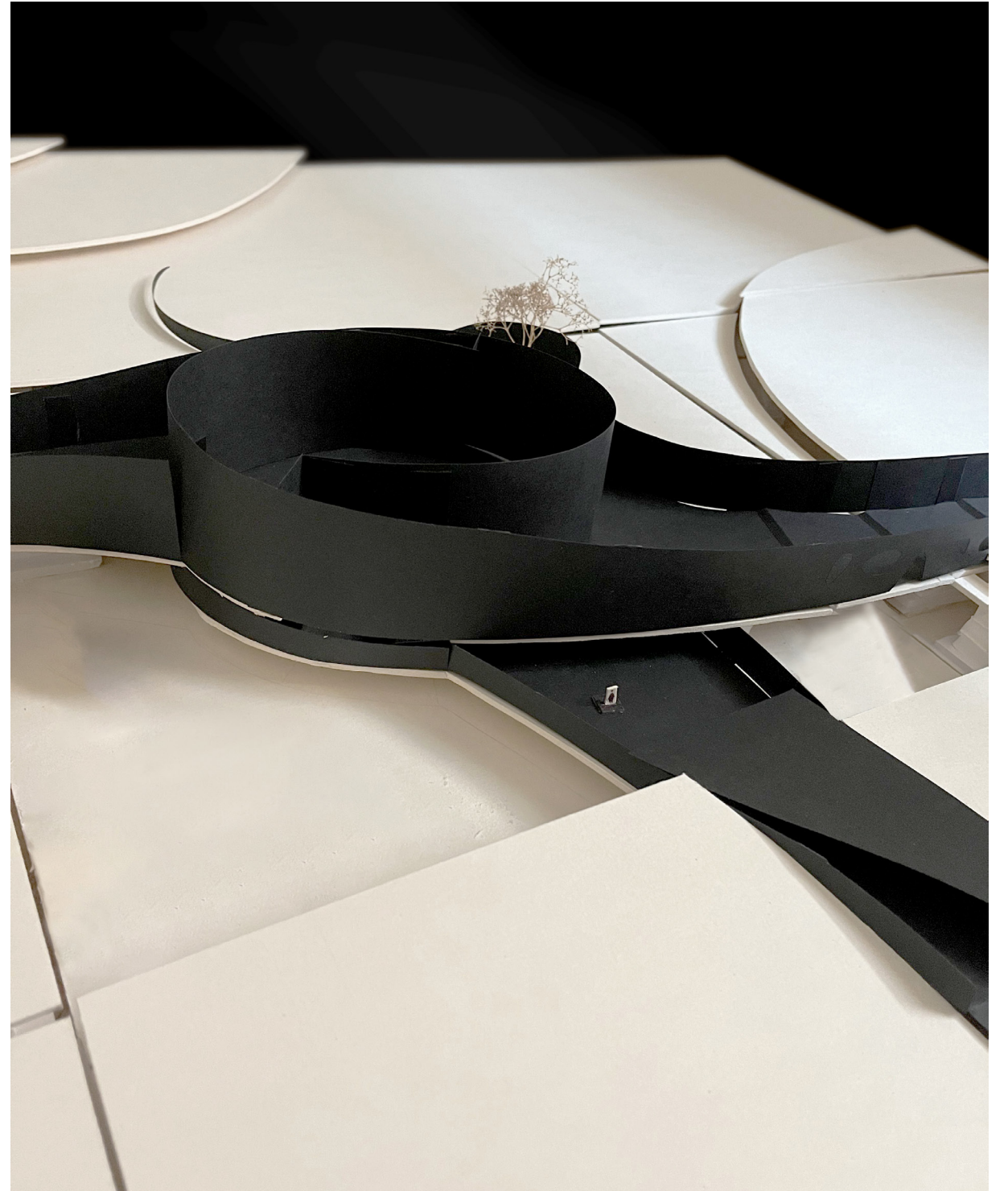


figure 56  
top view of  
the double-height  
space placed  
in the center  
of the structure

figure 57  
perspective view  
with dismantled  
maquette. All the  
areas are combined  
in a single volume



figures 58-59-60  
perspective views:  
the overhanging  
platform; irregular  
side openings on  
the entrance wall;  
perforated ceiling  
on the east side

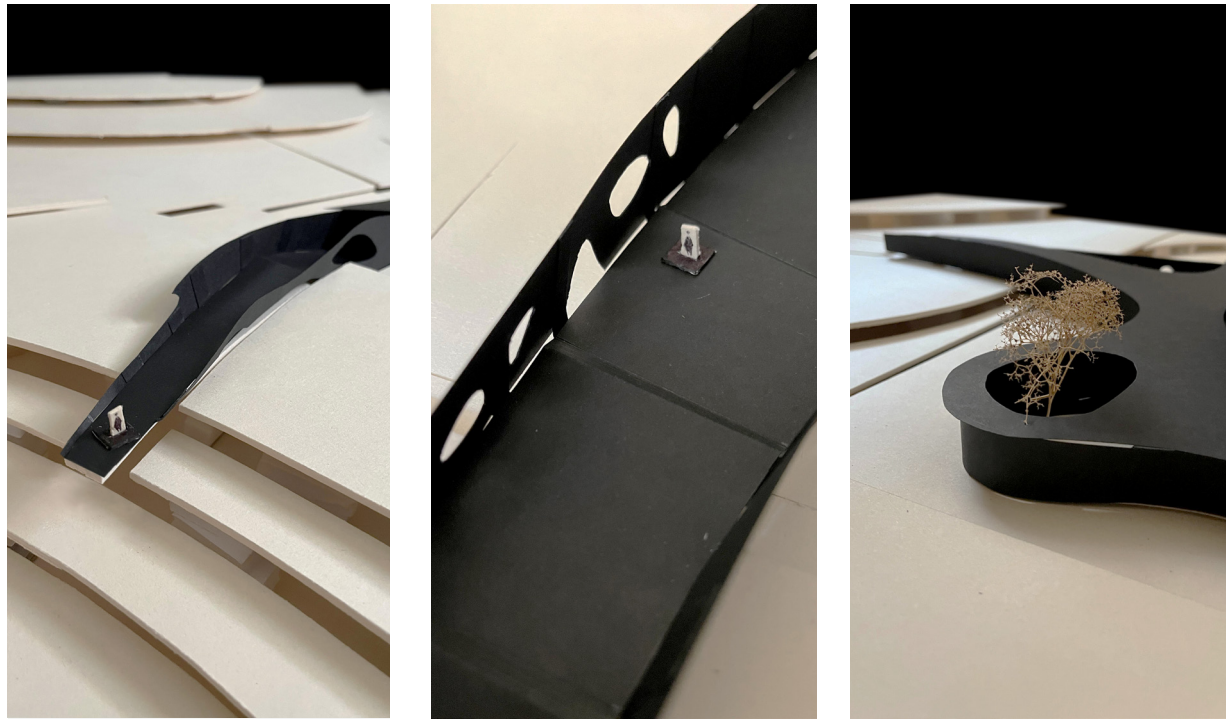


figure 61  
interior view  
of the double  
height space with  
perforated ceiling



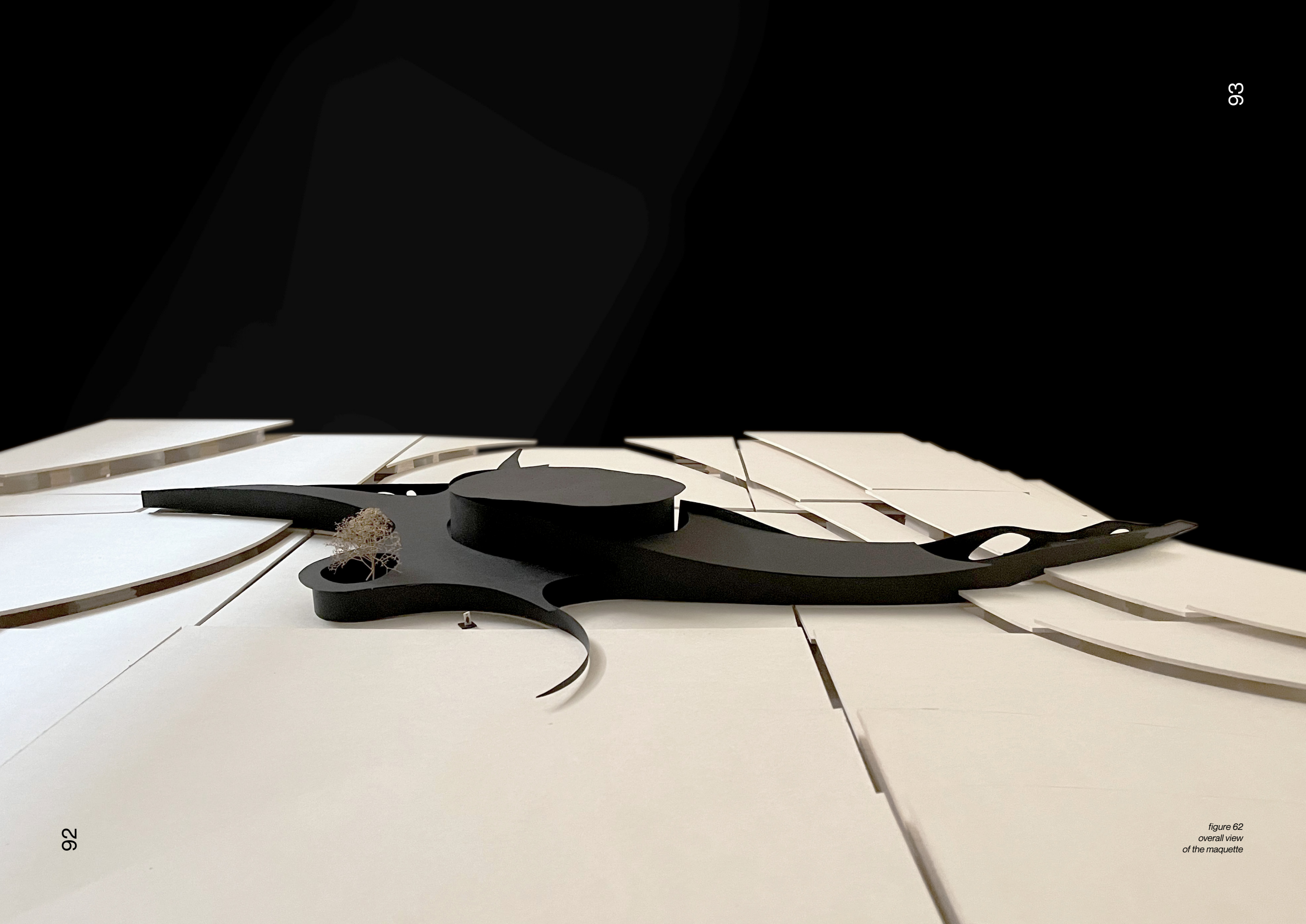
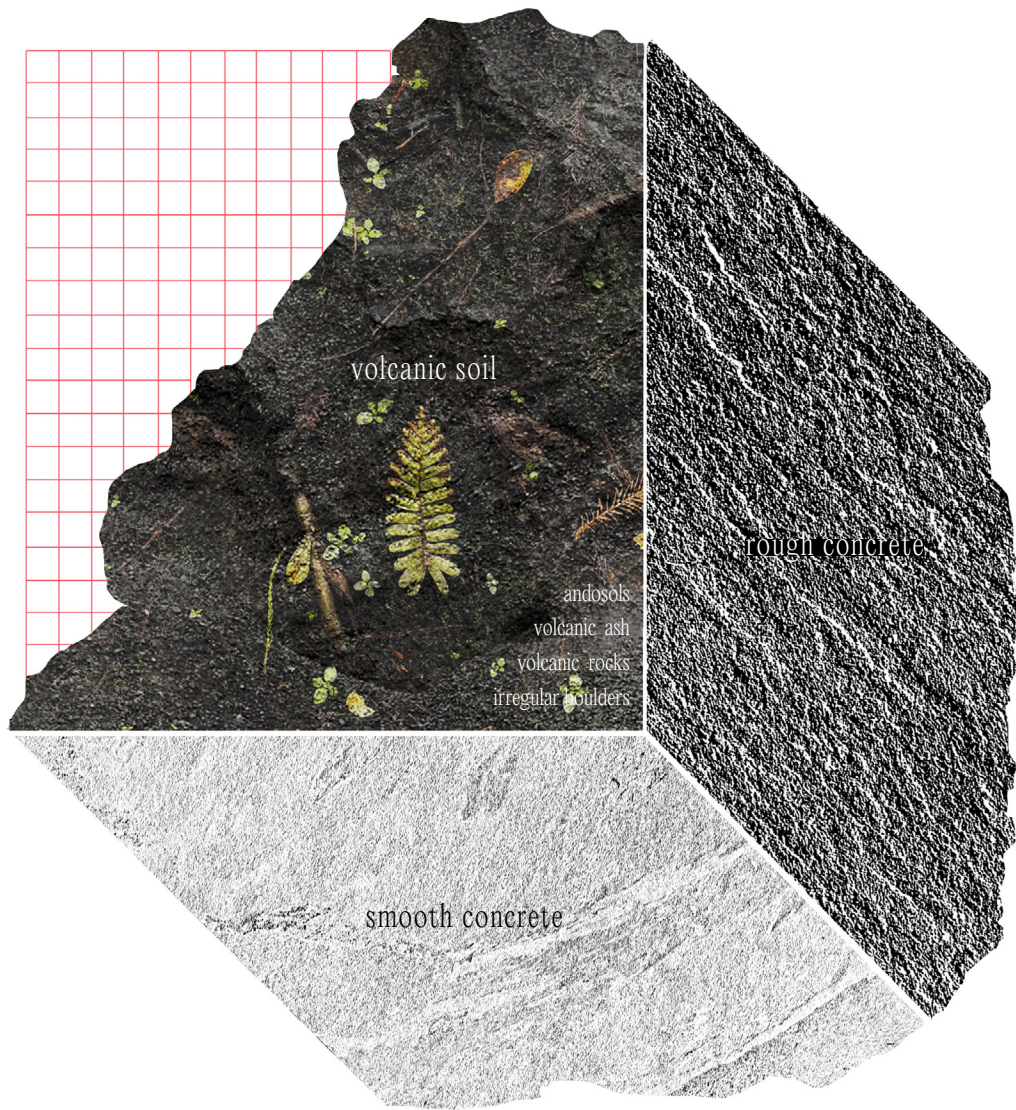


figure 62  
overall view  
of the maquette

figure 63  
about materials



## 2.2.5 project-zoom-in

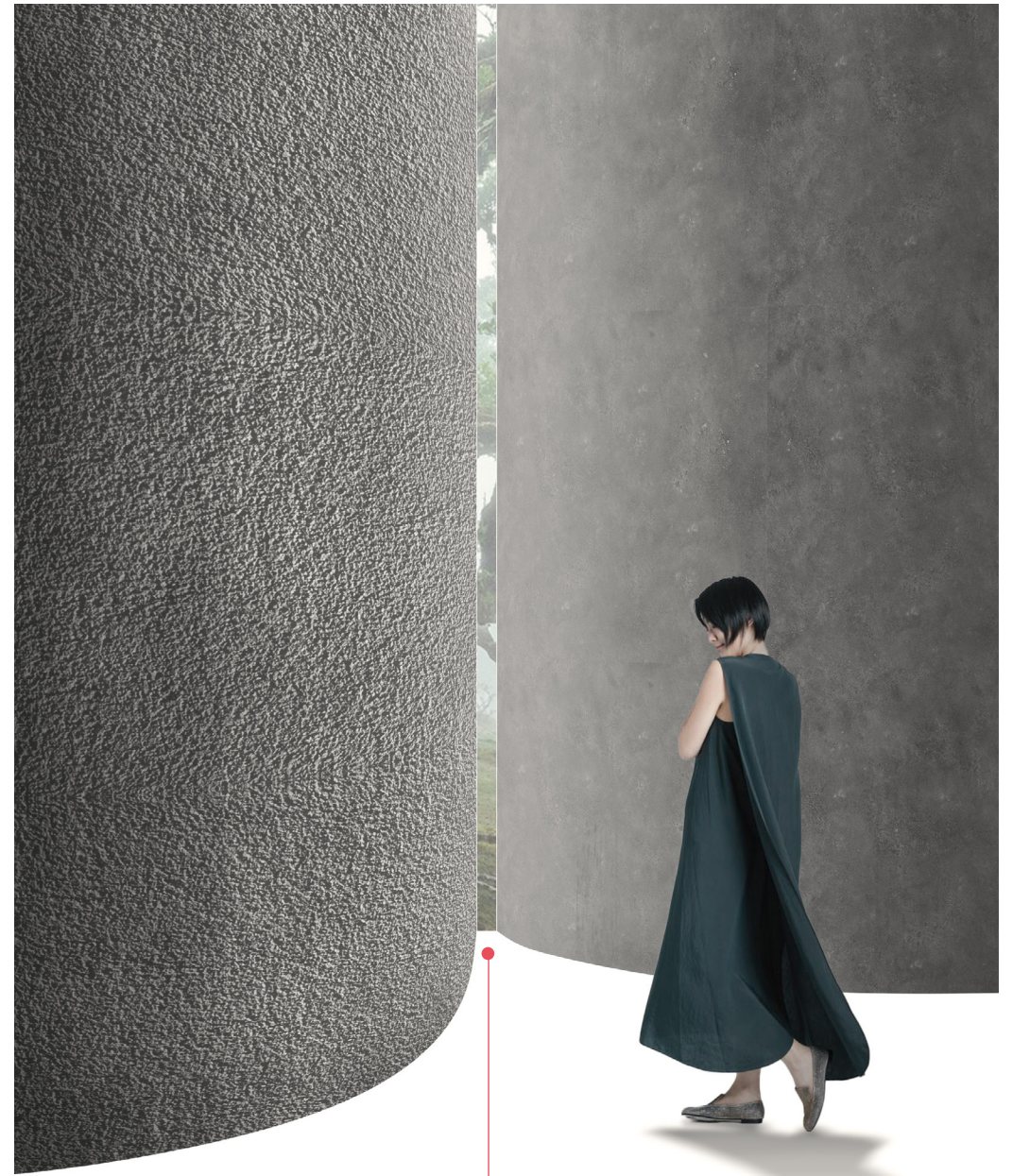
The soil of Fanal Forest, like much of Madeira, is primarily derived from volcanic rock and ash deposits. The predominant typology is Andosols, which are known for their fertility and ability to support lush vegetation. The soil plays in fact a crucial role in supporting the rich biodiversity and greenery. Andosols typically have a dark color and are rich in organic matter. This characteristic makes the terrain very fertile but also not suitable as a building material. While volcanic soils can retain moisture, they are also well-drained, which helps prevent waterlogging and root rot. Also volcanic rocks and boulders with an irregular shape can be found around the area. Based on the informa-

tion obtained from the research and other considerations, the material chosen for the construction of the structure is concrete. Concrete is indeed a massive material, but it is also very flexible and can be adapted to the most complex shapes. The aim is to create a structure in dialogue with the impressive natural landscape, while also feeling undeniably man-made. Concrete is therefore the perfect material: it has a presence and character of its own and is a durable material, therefore suitable to represent an architecture that creates an endless dialogue with the surrounding natural elements and becomes the symbol of human presence, in a relationship that is also in strong contrast with the landscape.



The material's flexibility gives it the ability to take any shape, even curved and complex ones, as in the project. The production process leaves room for creativity. The structure, built entirely from concrete, is enriched with surface details. From a smooth, pebble-like surface smoothed by wind and water, the walls become rougher and rougher, until the core of the cave-like structure. The walls let the moisture slide down and accompany it on its journey, or they seem to want to trap every drop of water, so as not to waste the collected moisture. The architecture thus dialogues with the landscape in an am-

bivalent way: on the one hand, it stands out from it and invades the space with its massive presence; on the other hand, it binds to it, taking up its forms and transforming the cliff into a structure itself. Architecture is therefore the designated place for the encounter between human and mist. In this dialogue, it is evident how mist takes on greater importance because it is the element by which space takes shape and life. Materials and surfaces adapt to it and not to human needs. The three-dimensional visualisations give an insight into the qualities that the material gives to the environments.

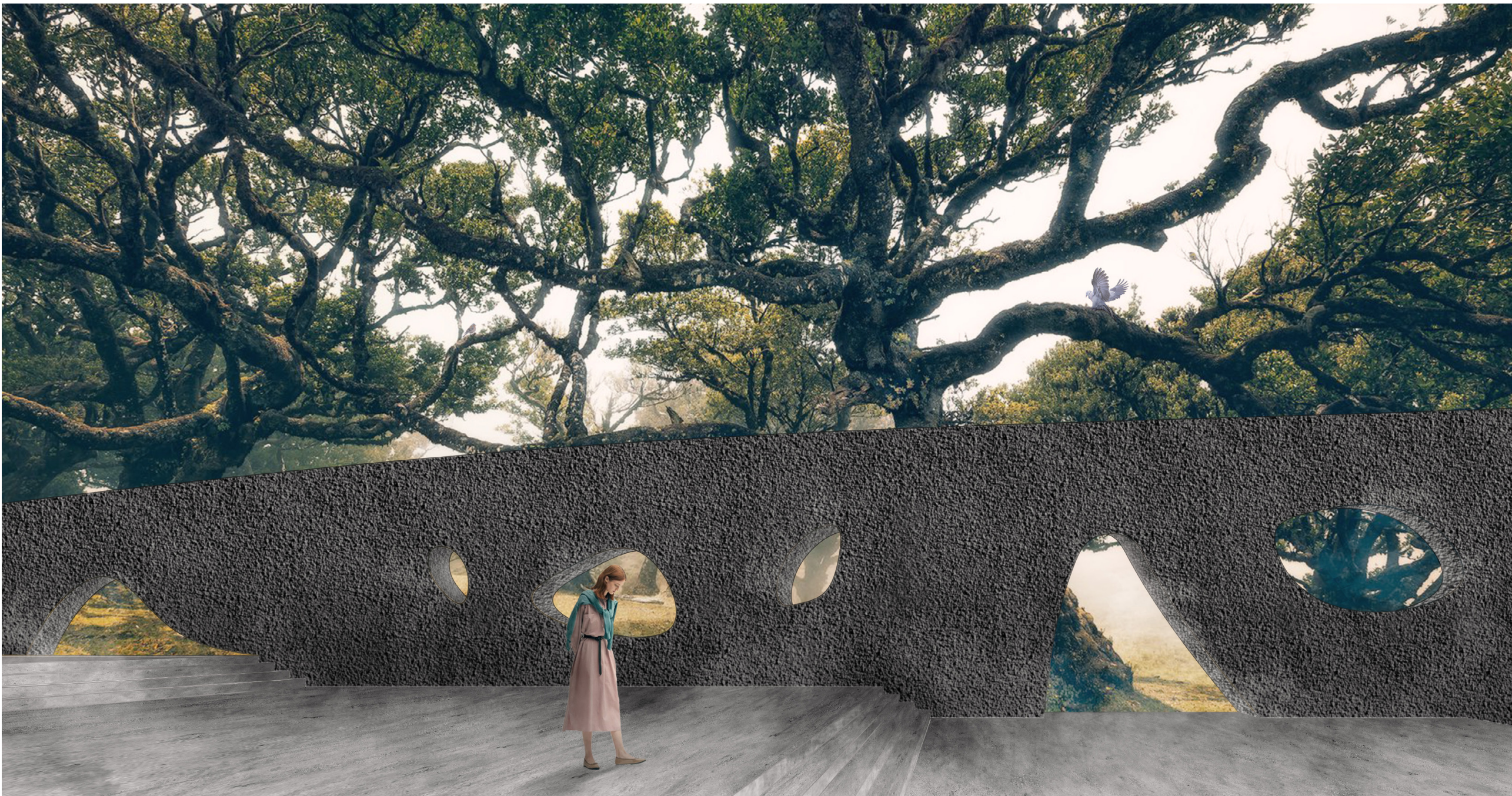


10 cm distance between the reinforced concrete wall with smooth formwork and that with a treated surface formwork

figures 64-65-66-67-68-69-70-71 technical details, perspective sections and renders of the different areas of the structure

surface details

The drawing shows how a space has been left between two different walls of the structure. The distance and surface's features emphasise the different function of the two walls: one is rough and embraces the central space; the other is smooth and accompanies the structure along its length.



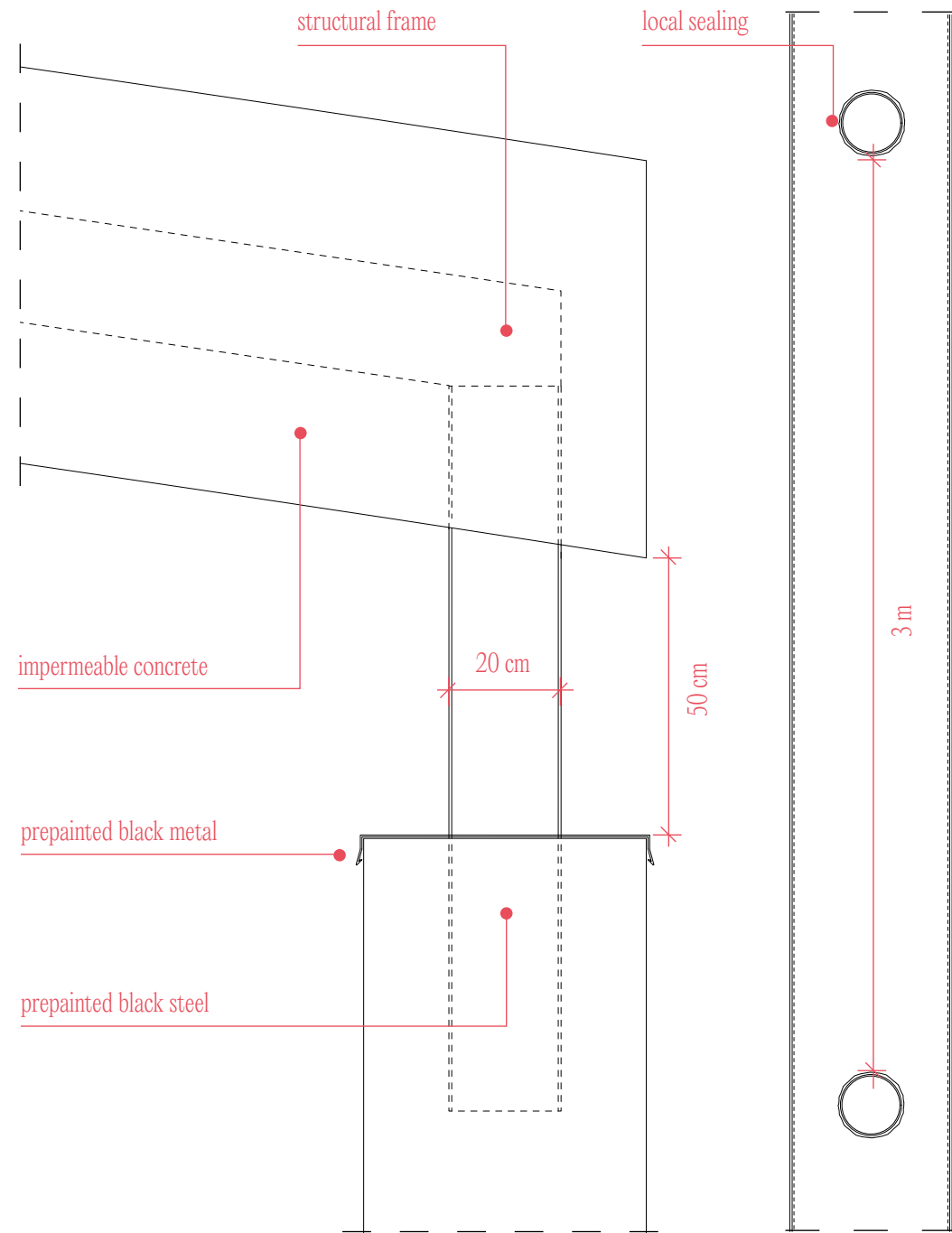
*The endless circle*

*The structure accompanies the visitor from the main entrance, linked to the hiking trail, to the central space of the architecture. A series of irregular openings open up on one side of the wall, offering countless views of the surrounding forest and the fauna that inhabits it.*



### *The serpentine*

*A tree is incorporated into the structure and protrudes from its ceiling. The beauty of nature bursts into space through the rupture of horizontal surfaces. Other trees, outside, are welcomed by the curved wall that meanders through the vegetation and then opens up towards the north-east. The smooth surface lets in the spring wind and its mist and leads it into the interior of the structure. The serpentine is a space created primarily to serve the fog and vegetation. However, visitors can also pass through it to exit the structure and immerse themselves in the forest or stay outdoors in a cosy environment.*



#### roofing details

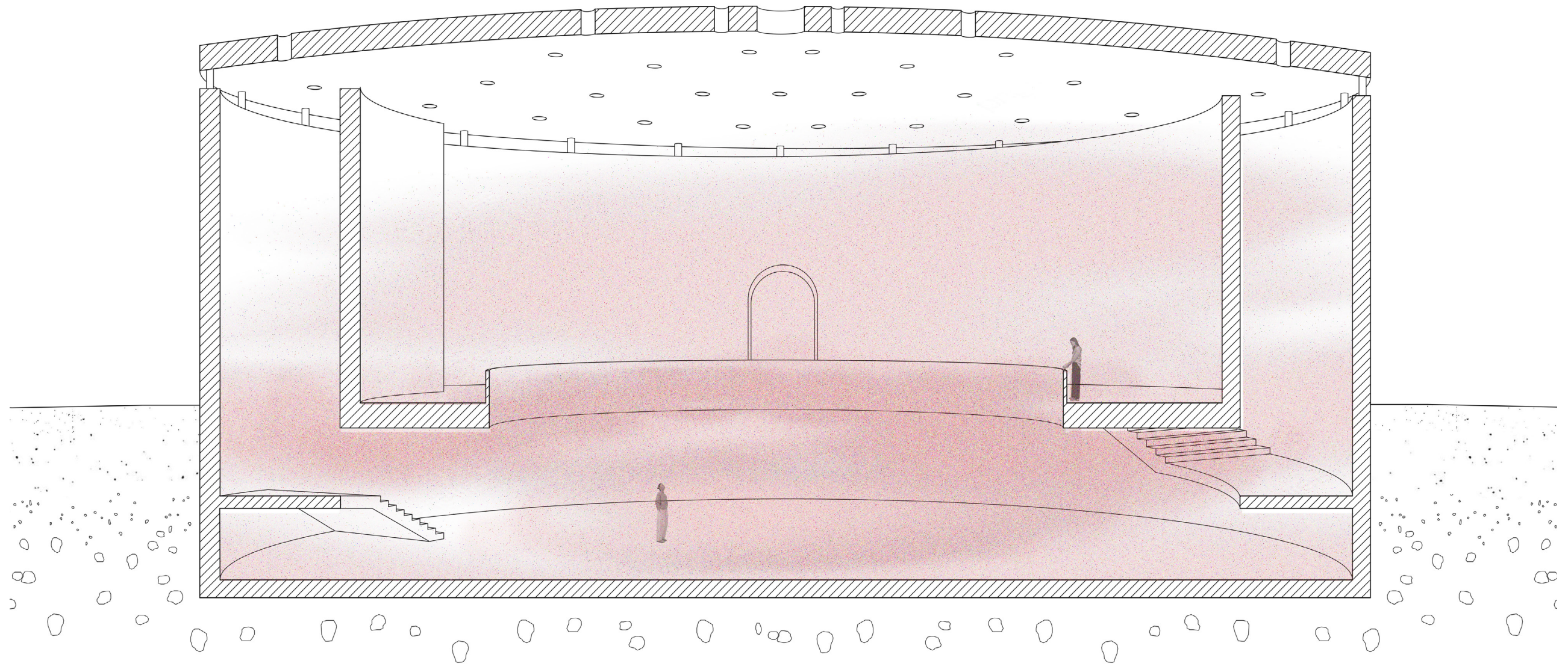
The technical detail shown above is a section of the ceiling of the central, most important space. The ceiling is not directly connected to the vertical surfaces, but appears raised, as if suspended. Vertical metal supports are in fact positioned at regular intervals to create this suggestive sense of lightness and play of light.



#### The nembus

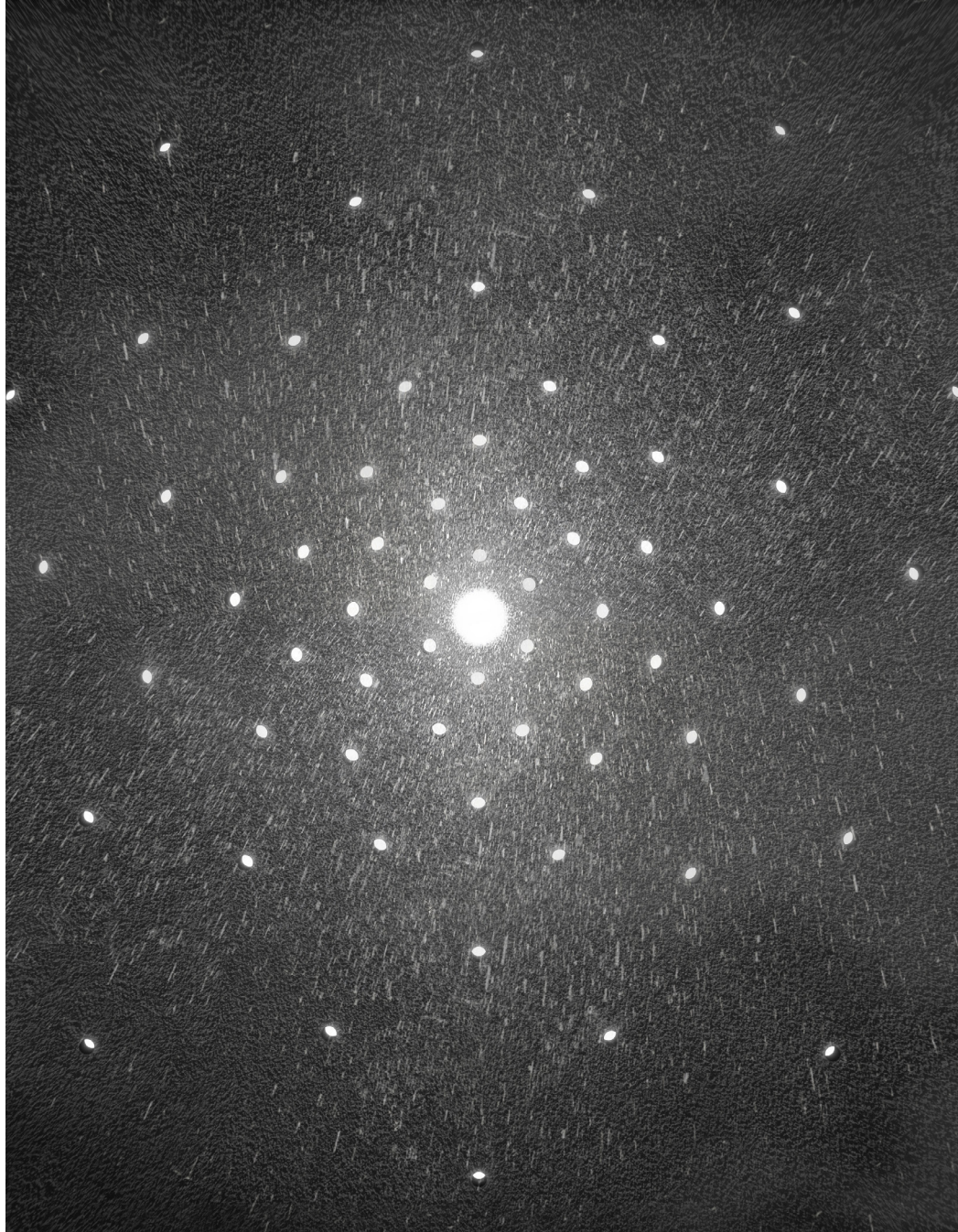
The main environment uses pure forms such as the ellipse, circle and arc to create visual symmetries.





### *The nimbus*

*The double-height space aims to recall the shape of the summer clouds and to collect the mist. Two curved specular staircases connect the floors and allow a free circulation. Both the environments are characterised by darkness and rough surfaces. Light becomes a sculptural element falling as water drops from the perforated ceiling in narrow beams.*



#### *The void*

*This particular space was created to receive the fog of the autumn and winter months coming from the west. The collected moisture is accompanied in an underground space, which is connected to the central room by a double height. The space is particularly interesting for the visual relationship that is created from the underground space with the roof. The latter in fact has perforations that allow not only a suggestive view of the night sky, but also the entry of daylight and rain. The environment, hidden in the ground and characterised by a gloomy atmosphere, remains as if in silence, waiting for a luminous or meteorological event, listening for a signal.*



*effort rewarded*

*The perspective shows the slope present before reaching the cantilevered platform. The staircase, consisting of 33 steps, has no intermediate landings. The feeling of discovering is here linked to a sense of fatigue in order to make the experience even more unique and unsettling.*



*The peak*

*The walls accompany the visitor to the end of the route, gently sloping down in height to allow a 360° view of the Ocean or the summer fog.*



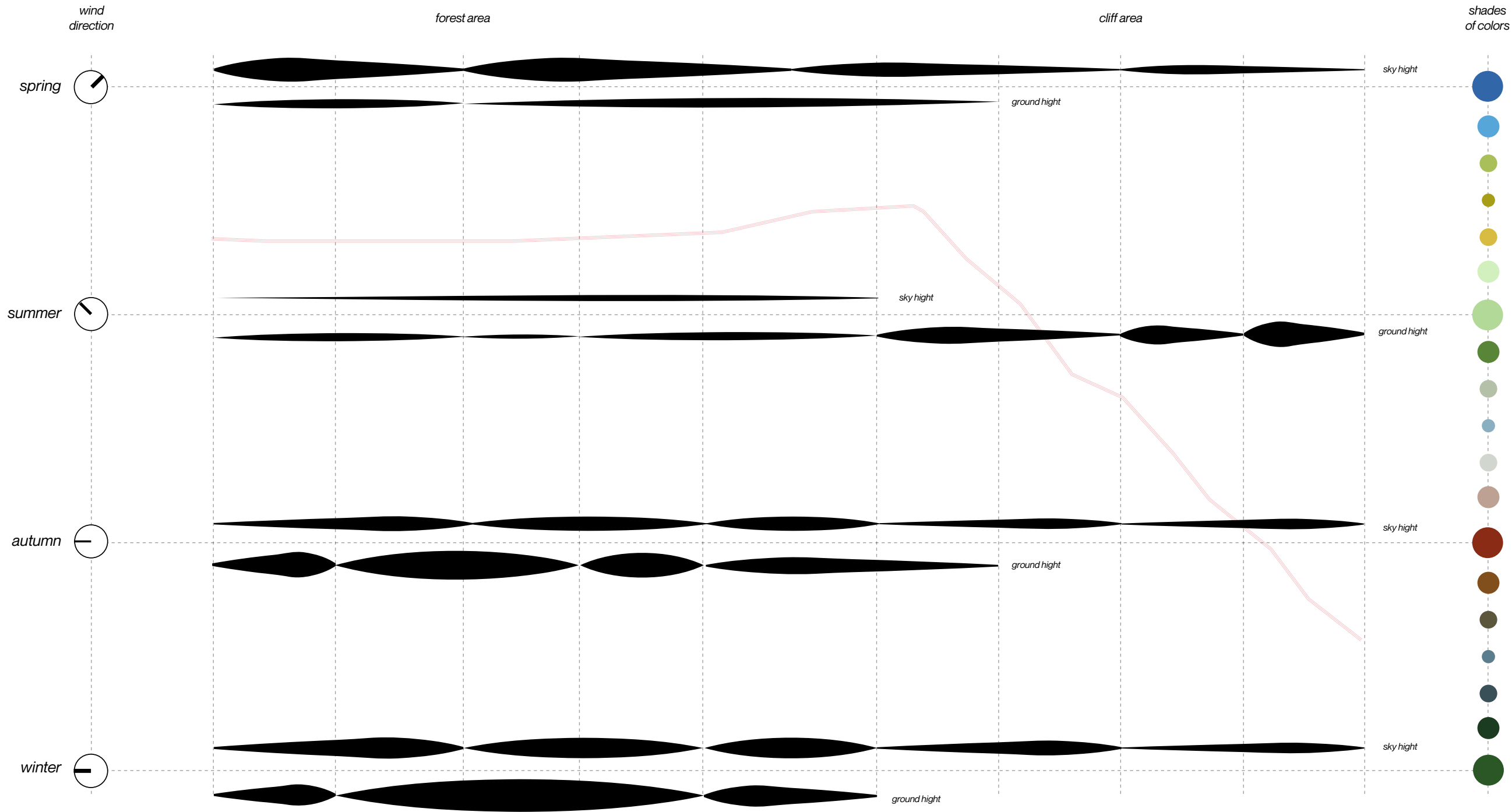
## about time

the influence and role  
of time within the project

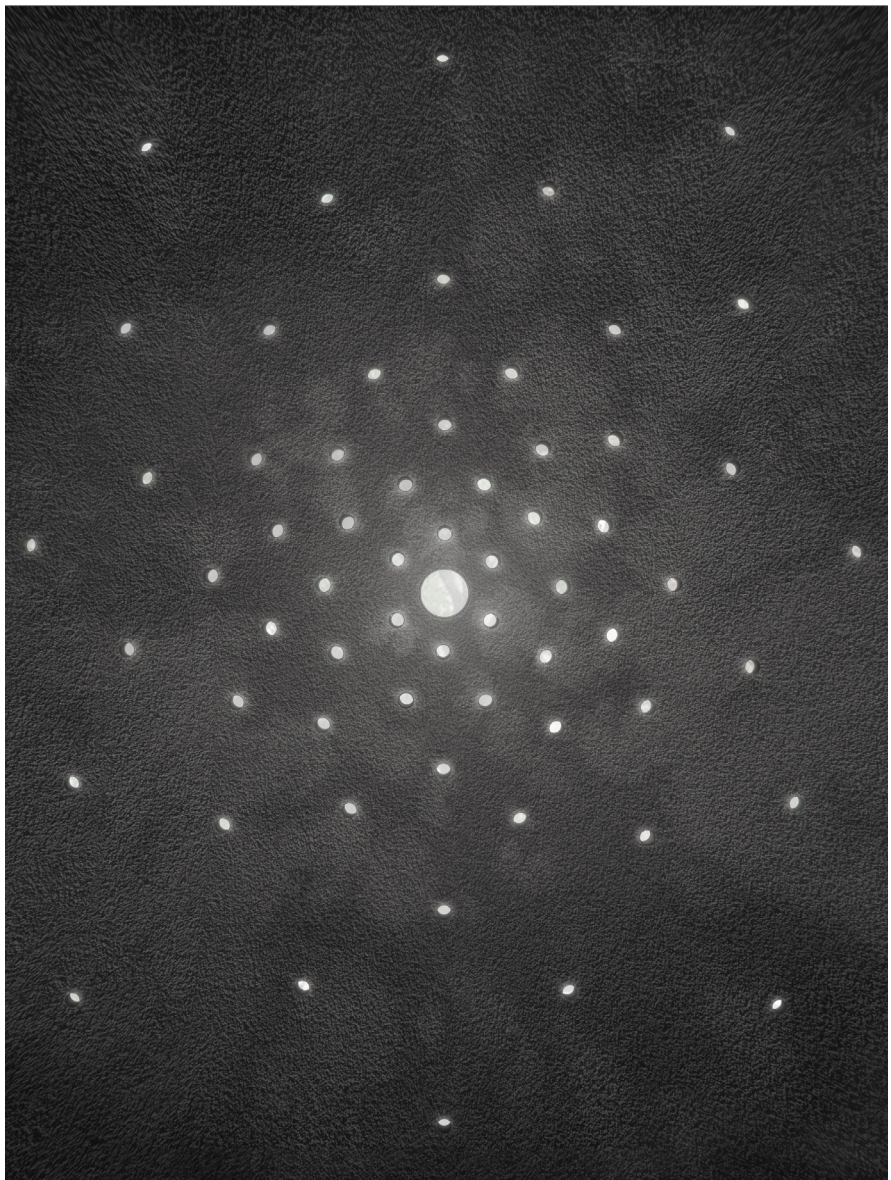
The chapter is entirely dedicated to time and its influence and role within the project. The images, accompanied by brief captions, and the graphics created are intended to illustrate first the general aspects of the area and its characteristics, then to visualise how these influence the perception and final rendering of the environments. The complex dialogue between nature-architecture and mist is analysed in the contrast between day and night, in the succession of the four seasons, and in the continuous presence and absence of mist and its visual effect on the structure. Time is thus represented through a series of images that tell the story of nature's changes and its effects on human life and intervention. In this way, an immediate visualisation of this ephemeral element is possible.

what is the role  
of time?

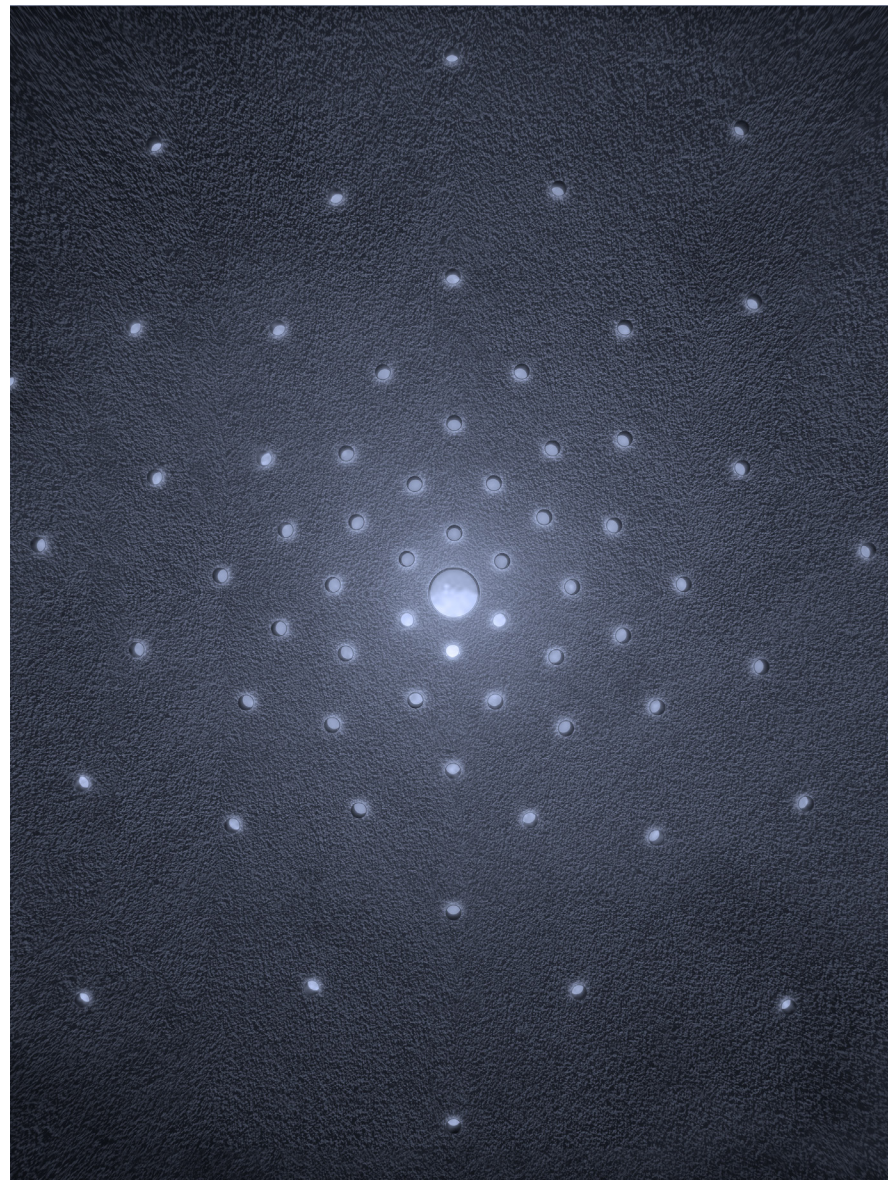




mist diagram  
understanding the transformations  
of the landscape during the year



*daylight*  
 warm sunlight enters through  
 the perforated ceiling and the shadows  
 of the vegetation are projected into the space

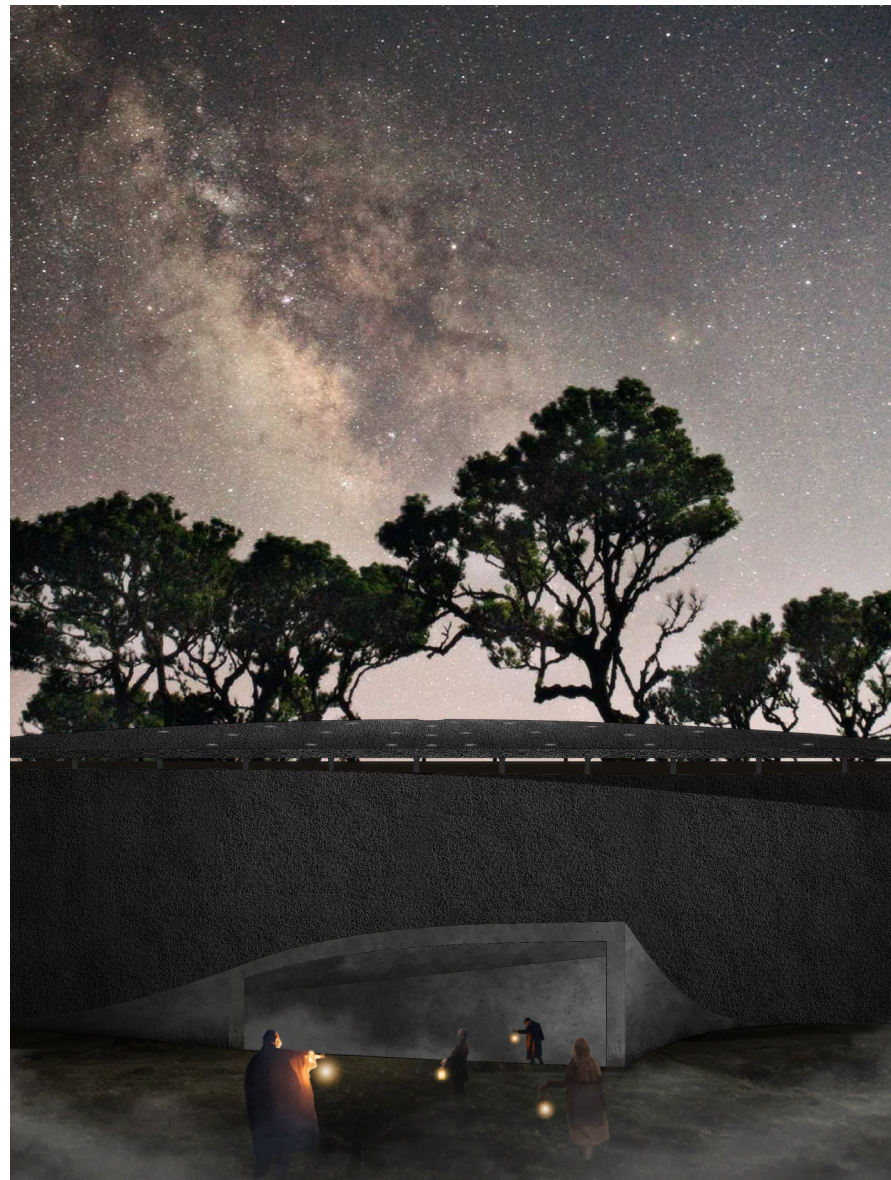


*night time*  
 the light of the moon and stars  
 gently enters and the ceiling  
 is transformed into a starry sky



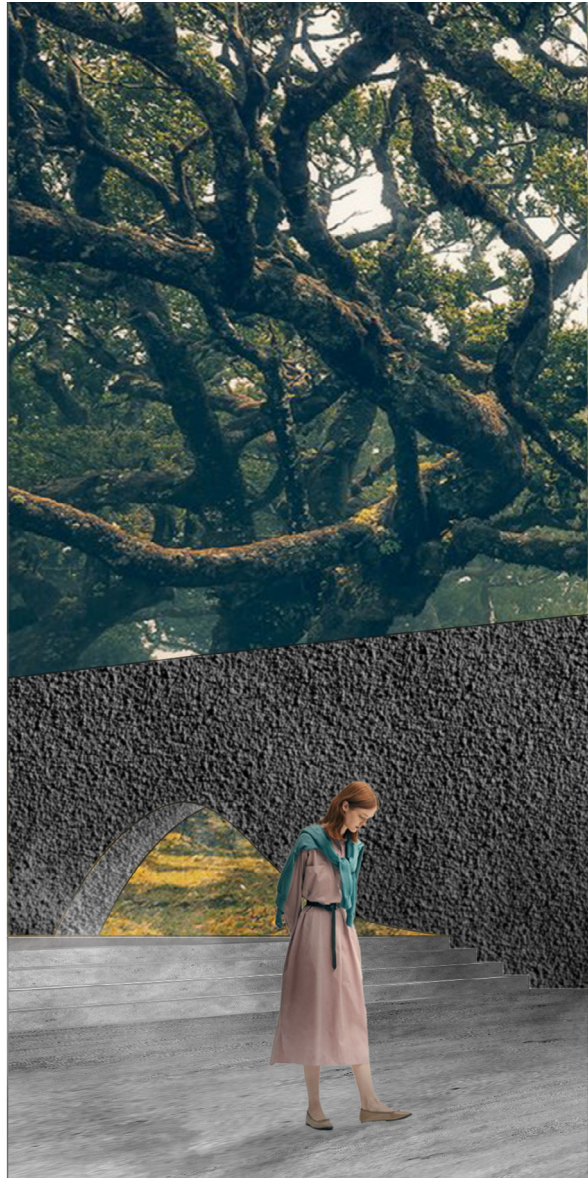
*misty night*

*during foggy nights mist is the main space actor; human figures seem to vanish in the midst of it and the space is entirely enlightened by the moonlight*



*starry night*

*Due to its distance from human settlements and its altitude, the site offers a wonderful view of the starry sky. The space is naturally lit and people can access it by using the light of lanterns and torches.*



*spring*  
*the rain has passed;*  
*a shy sun is emerging*



*summer*  
*warm light permeates the structure,*  
*fog is almost completely absent*



*autumn*  
*the landscape becomes gloomy and*  
*with uncertain contours: cold tones prevail*



*winter*  
*the fog becomes more and more intense*  
*and the colours of the forest duller*



*spring*  
*rain falls on the landscape*  
*and the structure; the clouds stay low*



*summer*  
*the clouds remain low over the ocean*  
*and the visitor is surrounded by fog*



*autumn*  
*the fog comes from the forest and the*  
*architecture; the view of the ocean is clear*



*winter*  
*the colours turn grey*  
*and the fog intensifies*



*mist presence  
and intensity  
mist changes the perception  
of space, accompanying  
disorientation and making all  
sharpness and distance disappear*

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# dénouement

unravelling of the plot;  
conclusion of the narrative;  
final reflections about the thesis  
project and its relation with Time

The narrative concludes with a reflection on the significance of the project and its relationship to Time. The structure is a true home for mist and its encounter with humans. The fog, Genius Loci of the project site, becomes within the space a kind of mysterious and sneaky God who transforms the environments by inhabiting them according to his rhythms. Its nature and scheme are only revealed at certain moments and after careful observation, when human can finally enter into dialogue with Natural Time. Due to climatic conditions, mist is constantly changing; therefore, all environments are always subject to change, as is their perception, which responds to the metamorphoses of the surrounding nature.

*Il racconto si conclude con una riflessione sul significato del progetto realizzato e la sua relazione con il Tempo. La struttura è una vera e propria casa per la nebbia e per il suo incontro con l'uomo. La nebbia, Genius Loci del sito di progetto, diventa all'interno dello spazio una sorta di Dio misterioso e insidioso che trasforma gli ambienti abitandoli in base ai suoi ritmi. La sua natura e il suo disegno si rilevano solo in alcuni momenti e successivamente ad un'attenta osservazione, quando l'uomo può finalmente entrare in dialogo con il Tempo naturale. Per via delle condizioni climatiche, la nebbia è in continua trasformazione; perciò tutti gli ambienti sono sempre soggetti a mutazioni così come la loro percezione, che risponde alle metamorfosi della natura circostante.*

*L'architettura permette quindi infiniti incontri tra l'uomo e la nebbia, in un dialogo in continua evoluzione, dove non si ottiene mai una risposta precisa ed univoca. L'uomo si trasforma così come la nebbia e viene influenzato dalla nebbia stessa: da osservatore del cielo stellato diventa una figura spettrale; da semplice spettatore del mondo naturale viene chiamato ad essere parte della foresta. La regola che definisce 'il Tempo' della natura viene rivelata in un istante perfetto e subito scompare per lasciare il posto alla vita, all'eterno fluire delle cose. Lo scenario progettuale apre a molteplici possibilità di abitare e vuole essere uno stimolo, un invito per l'uomo a fermarsi per rivalutare la bellezza del mondo, ritrovando il proprio Tempo in quello della natura.*

Architecture allows endless encounters between human and mist, in a constantly evolving dialogue, where a precise and univocal answer is never obtained. Space inhabitants are transformed as well as the fog and are influenced by the fog itself: from observers of the starry sky they become spectral figures; from simple spectators of the natural world they are called upon to be part of the forest. The rule that defines 'natural Time' is revealed in an instant and immediately disappears to give way for the eternal flow of life. The design scenario opens up multiple possibilities of inhabiting and wants to be a stimulus, an invitation for man to stop and re-evaluate the beauty of the world, finding his own Time in that of nature.

*In tutte le cose c'è un ritmo che è parte del nostro universo. Ha simmetria, eleganza e grazia [...] Noi cerchiamo di farli rivivere nelle nostre vite e nella nostra società, di farne rivivere il ritmo, la danza che ci riconfortano.*

*E tuttavia, un pericolo si nasconde nella perfezione finale. E' chiaro che lo schema ultimo contiene la sua propria fissità. In questa perfezione ogni cosa procede verso la morte.*

*from the book Dune by Frank Peter Herbert*



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