NAVIGATE

Project Report

Familiarizing the unknown
How to interact with a changing water environment and (re)imbrace its natural power

Project Report

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Transitional Territories Studio 2018-2019
North Sea: Landscapes of Coexistence
Altered Natures and the Architecture of Extremes

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The P4 presentation principally focuses at showing the development of a spatial intervention as the concluding element of the yearlong research path. It is also a moment to reflect on the process to led up to the final design.

01.
The relationship between research and design.

The research aspect of my project began with a broad investigation into the North Sea's past, identifying its historical position as being perceived as "the edge of the world". It was a time when the sea and its cold northern waters was seen as an evil in itself, as a physical and a mental border, difficult to pass and coexist with. Following this analysis, the scientific research was brought to the present, analysing the current conditions we (man) are being confronted by nature. Based on the research, I was able to conclude that throughout history the relationship of human with water has been constantly linked with the fear of the hidden, natural power of water. In the past, the North Sea was difficult to navigate. Today, we are facing the issue of climate change and rising sea levels. This shows the phenomenon of nature's power is once again taking control over human. The subject of the project is focused on the strategy of overcoming this fear but once again harnessing it power as an opportunity for humans.

In the past, people faced the challenge of passing the fearful water by improving sailing boats, discovering navigation techniques and studying its natural movements, currents and tides. This process helped us to familiarize ourselves with the initially unknown and to learn how to coexist with nature. Today, we are confronted with the increasing power of water, which we have fortified ourselves against from it by building high advanced dams, walls and floodgates. We are using physical, monstrous engineering interventions to protect ourselves from the water rather than embracing its power – like we did in the past.

The design in itself aims to tackle the current issue of water level rise in a more traditional way, to open up to nature, to understand its behaviour and draw on our experience and knowledge.

As such, I mapped the North Sea's historical conditions, which was a method to test and identify a possible site for my architectural intervention. The project has been set on the Shetland Islands, to serve as a metaphorical connection of the fear of water in the past and the present. From the conducted research, the Isles were the location of the first settlers, the Vikings. Historically they embraced the fear of the waters mystical power and sailed through the unknown sea. As a link to the present, the geographical location of the Shetlands' dictates that their coastal line will be one of the first to be impacted by the rising sea. Moreover, the island is by definition a transitional territory, the link between the Norwegian Sea and the North Sea.

The relationship between the power of water and the site was further explored in the architectural proposal. It was important to develop a cohesive narrative in the design, to bridge the past and present perception of water's power with the site (fig. 1). Here, I tied together tangential threads of the investigation and spatialized it in the design. This specifically related to the introduction of using renewable water energy as the main component in my project's program. This addressed my research questions in both a literal and metaphorical way. During the research process, I have been analysing interviews, photography and personally investigating the local issues of the site. Alongside, researching current knowledge of using water's power as way combine the site issues with the advanced technologies into one coherent solution. By following this, I had to consider how far I can use the aforementioned natural power to not to damage the rough beauty of the site as well as the rough beauty of the natural power of water. This led to the introduction of the three architectural elements of my design (fig. 2) – the harbour, the tidal power plant and the experiential path which links these two - the traditional way of using water (the harbour) with the advanced one (tidal power plant).

As the design developed further, certain aspects such as the process of energy production had to be revisited and further strengthened with more information. Given the poetical nature of my project, the three interventions act as one line of experience, the deconstruction and analysis of building the tension (fig. 3) and reflection of the story around the natural power of water, was an important procedure of translating

the narrative into an invented design. What was particularly challenging for me was a striking balance between being poetical with the metaphor of intervention and making it realistically useful for the local residents.

This is why the experiential path along one of the Shetland's coasts brings the visitors closer to water, encouraging them to fully experience its sounds, smell and movements, while also showing that waters power is still present but can utilised in a more productive means for humans rather than against them. For example, the potential renewable energy which can be produced. Widening my research allowed me to uncover other examples of how the relationship between human and nature can coexist as an architectural program.

02.
The relationship between your graduation project topic, the studio topic, your master track and your master program.

The Transitional Territories Studio this year focused on the North Sea territory and its altered states as an outcome of an increased environmental degradation, urbanization and by the consequences of extreme weather. The sea as a territory remains as the last borderline, with much of it still unknown, unoccupied and unmapped, our efforts largely thwarted by its impermanence and constant movement.

My research investigates the phenomenon of the historical and current relationship between the sea and the human. It highlights the issue of people deflecting from water because of its unpredictable behaviour, extreme climate changes and depletion of its natural resources. The project serves as a medium familiarizing this rough natural power and linking it with humans once again.

Furthermore, the project in itself has a strong emphasis on the translation of the research output into the design concept. It illustrates how the research and specifically determined conclusions might be potentially solved by an architectural intervention, this highlights the aim of the master program, focused on using architecture as a scientific tool tackling global issues.

03.
Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work.

A number of research methods were employed during the course of my graduation project, varying to the scales being undertaken. When dealing with the North Sea in its entireness, mapping was my main tool of investigation as it capably visualizes different forms of information in a coherent format. In addition, the overlaying of these maps was a useful analytical exercise, revealing information that would not have been apparent in remained as data sets (fig. 4). The overload of information was initially a limiting factor in this process but due to reading literature such as Mohsen Mostafavi's Cartographic Grounds I understood that the power of the map as not just a research tool but also as a tool for design.

The site research helped to grasp the vast differences in the landscape along the islands' coastline and indicated the dynamics of water shaping, influencing and characterizing the site. Moreover, personal investigation, interviews with locals and photography helped to precise the local issues of the site.

At the scale of the theoretical research, the attention was focused on historical and qualitative research strategies. Within the historical design, I conducted extensive archive research of the mythology in marinescape (fig. 5), detailed stylistic analysis of all the practices of Vikings and their habits, and an artefactual inventory of the archaeological findings – including Vikings ships. Focusing on the historical research, I identified with the poststructuralist school of thought, which sees material products of culture and history as parts of a larger immanent discourse, especially socio-cultural. By trying to understand the historical phenomenon of translating the power of nature into demons and the personification of gods, we could consider this historical period as a web of discourses which have contributed to our modern, transcultural reality.

Through simultaneously interweaving qualitative research design within my thesis, I gave an overview of the changing relationship between a man with the power of nature in this area of the North Sea. The research revealed the transition, and this is illustrated in the architectural intervention. Phenomenological studies seek to focus on existential studies, to make up of essences of the experience that transcends individual subjectivity, this brought my research from a pure data analysis about the current

conditions within this area to a deeper examination of socio-cultural aspect, in the vision of rising seawater and its connection to the historical aspect of the sea as the edge of the world. Moreover, the tidal power plants and harbour serve as the basis for the typological research of structures gaining energy from the water. By interpreting the power of the plants and harbour, a better sense of what these structures are as a whole, their components, their function, their stories, is achieved and provided an insight into what the architectural intervention of the project will become.

At the scale of the architectural project, the focus shifted from mapping, theoretical research and analysing into a more intuitive way of working. I found that remaining within the rational and precise realm of analysing and visualizing cannot create anything new, therefore I experimented with a series of imagined hand-drawn impressions, plans and sections. Though not yet architectural, my sketches and paintings led to more experiential design method that I was more satisfied with. Crucial in this process was the exposure to multiple reference artworks, sculptures and music which inspired me visually and helped me to realize the extent of what my design could be, such as drawings by Hans Dieter Schaal, Nancy Holt or Richard Serra.

The idea of an experiential path, formed the essential part of my intuitive research, it also helped me to design at the architectural scale. The two major functions of my project consisted of a harbour which would allow the local residents to reach the 'new island' and a tidal power plant which provided electricity for a third of the residents of the Shetlands. Finding a way to link these two totally different functions by a simple path, required testing out in sketch plans as there was a need to balance the design objective with experiential aspect. Breaking down the program into this path divided into stages allowing me to develop a design which combined the metaphorical past with the future unknown. By separating major functions to the ends of the path, the circulation between them emphasizes as a mean of ritualizing the process – creating a moment of stability amidst the unpredictability of the powerful nature – water.

04.
Elaboration on research method and approach chosen by the student in relation to the graduation studio methodological line of inquiry, reflecting thereby upon the scientific relevance of the work.

Within the context of the circular economy, clean energy production and new development logic, the major instability is driven by climate change which is one of the main subjects of the global discussion. As seawater levels rise, coastal cities, in particular, will have an increasing obligation to develop strategies to deal with coexistence with water. From active strategies of protection to more passive strategies that allow for controlled flooding, there are many other opportunities for a man to use the power of water in case of transport, dwelling or energy production.

To possibly best address, the issues posed by climate change, water management, urbanism, architecture etc. come all together to create a complete approach in constructing solutions. In this thesis, multiple aspects of designing with water to enhance urban living are employed to create a unique environment where man's safe environment stretches into the waterscape.

By examining potential strategies of operating with the seascape, this project provides theoretical, alternative schemes and architectural approaches for solidification of human coexistence with water, particularly in the northern part of the North Sea territory. The dynamic nature of the North Sea landscape challenges conventional design and answers by the definition of human development reaching into the future. Furthermore, building in the neighbourhood of the seascape provides a number of logistical and technical solutions; while developing the approach of the feasibility of using water as a location for potential urban development globally.

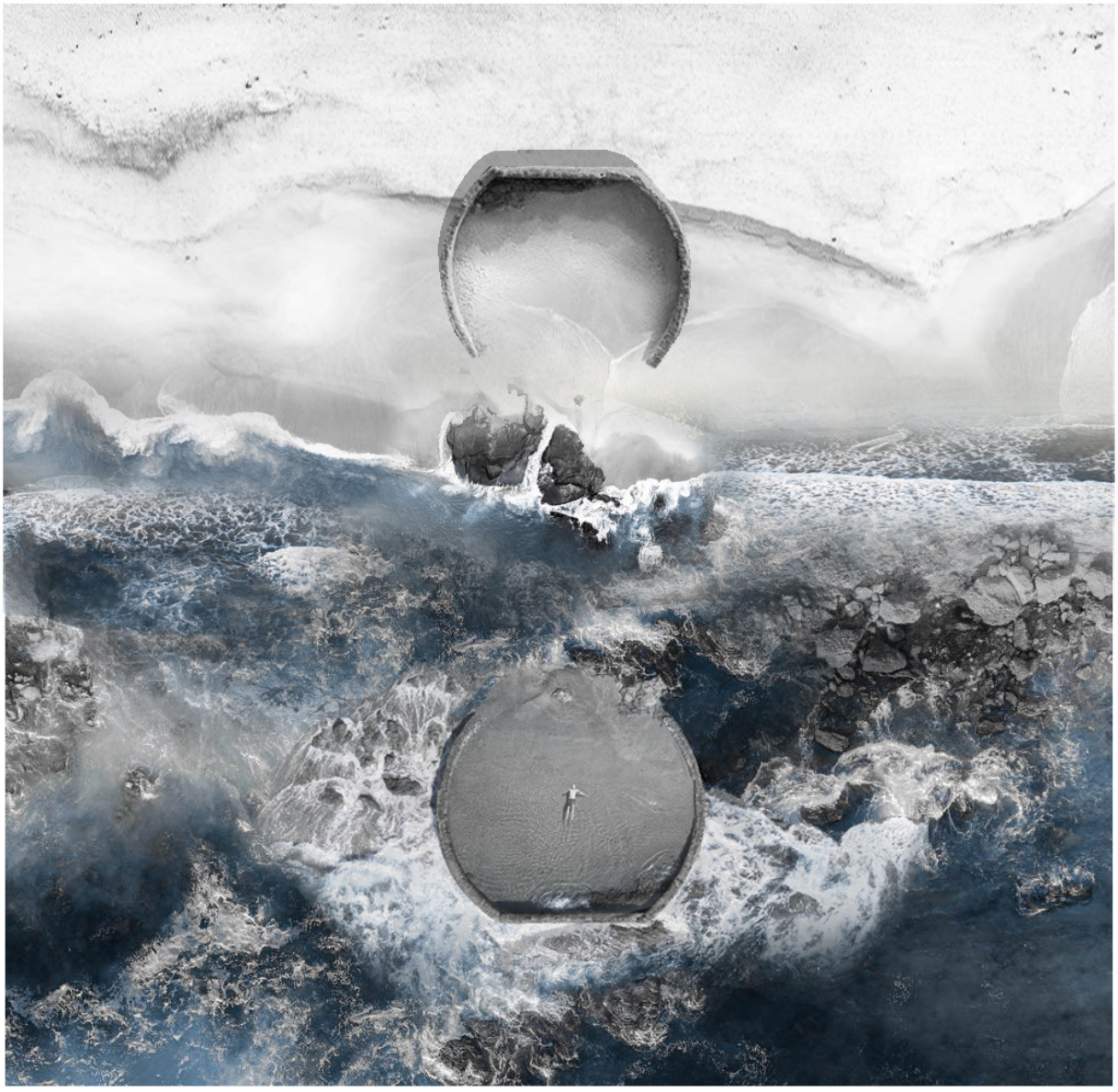
05.
Discuss the ethical issues and dilemmas you may have encountered doing the research, elaborating the design and potential applications of the results in practice.

Ethical issues I have encountered in the process of research have related to the status of water level rise. One aim of the studio as a whole was to investigate the relationship between humans and the environmental changes within the North Sea. The water level rise has the potential to jeopardize the future of low-lying land in some countries of the North Sea. These countries are constantly trying to block the sea and its waters by investing in dams and dykes. These highly advanced technological solutions sever the link between humans with water, this becomes the main argument of my thesis. The project faces the problem in the opposite way, it tries to open up to nature, it

understands its behaviour and benefits from it what is not so simple to introduce in the southern countries in the North Sea. The thesis argues with the concept of hiding from the water behind the tall walls - which in the future will be more and more insufficient – is not a viable solution. Nevertheless, it is the only solution we have developed, for now.

The second ethical issue, which has been found on the way of my thesis was the dilemma how far we can intervene with the power of nature to keeps its original, natural roughness. In the times of a number of global climate change protests, each possible solution has to be precisely analysed if it is a strategy rescuing our climate or another anthropocentric investigation.

I NARRATIVE

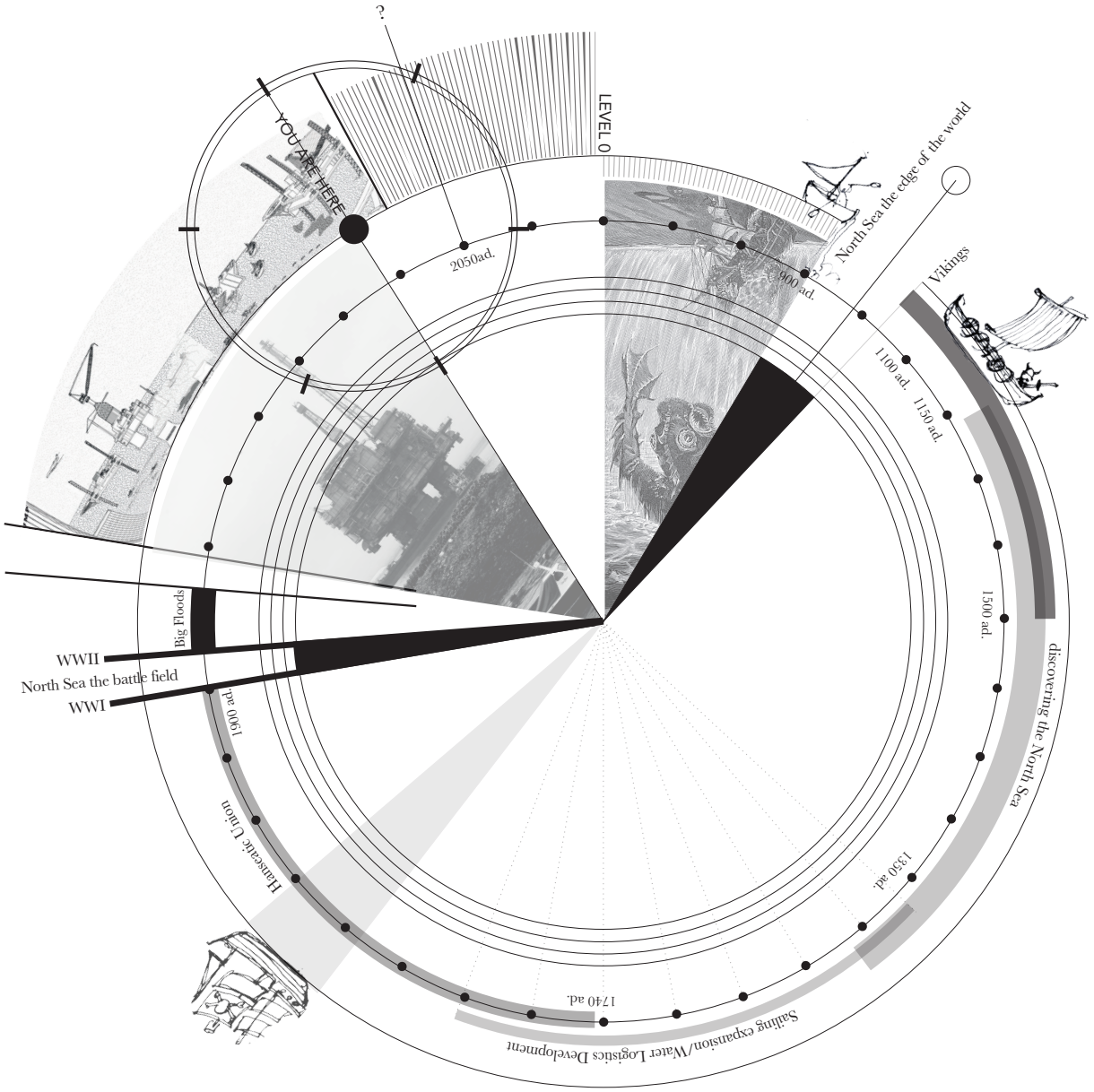


NARRATIVE

„We need a Brooch, situated at the top of the North Sea. Location of the Shetland Islands where two sea edges meet, the North Sea and the Norwegian sea, is a transitional territory, separated at low tide but merged together at high tide. The Shetlands act as a space of connection, a new realm that blurs the sea's geographical edges.

I want us to create a space to rediscover, feel and honor the power of the sea. While looking to the past, we can understand its demons, just as the Vikings did. Following them, human needs to relearn these lessons, to connect nature's power with man's advancing technology. We should overlay all the historical traces which has created our current world, in order to understand our tomorrow. This results in one intervention placed on land and one on the water, neither can exist without the other in order to thrive harmoniously."

Part of the Letter
(Research Report p.11)



- Familiarizing the Unknown -

NARRATIVE

„Departing from an extensive historical reading of the power relation between man and sea, the architectural proposal delineates an experimental path from past to present, carving the hilly landscape of Shetland Islands/ St Ninian Island to connect a traditional way of using water (harbour) with a proposed advanced one (tidal power plant). Given the poetic and metaphorical nature of the project, the architectural interventions act as one line of experience where site deconstruction, analysis and design are guided by the tension, knowledge and historical meaning of the natural power of the sea.„

Description of the project and its narrative by
Taneha K. Bacchin

The story about the relationship of human with water has been always linked with the fear of the hidden, natural power of water. By identifying the historical position of the North Sea, it is confirmed that the sea has been perceived as "the edge of the world" in its past. The sea and its cold northern waters was seen as an evil in itself, as a physical and a mental border, difficult to pass and coexist with. Looking at the present conditions, we (man) are being confronted with powerful nature again. In the past, the North Sea was difficult to navigate. Today, we are facing the issue of forecasting sea level rise and unpredictable weather. This shows the phenomenon of nature's power is once again taking control over human. The subject of the project is focused on the strategy of overcoming this fear but once again harnessing it power as an opportunity for humans.

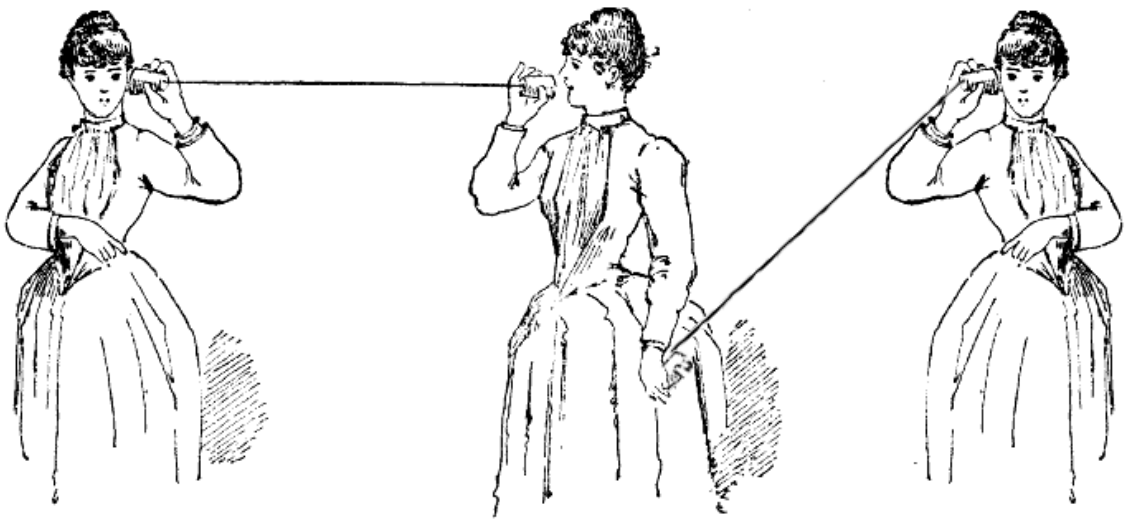
In the past, people faced the challenge of passing the fearful water by improving sailing boats, discovering navigation techniques and studying its natural movements, currents and tides. This process helped us to familiarize ourselves with the initially unknown and to learn how to coexist with nature. Today, we are confronted with the increasing power of water, which we have fortified ourselves against from it by building high advanced dams, walls and floodgates. We are using physical, monstrous engineering interventions to protect ourselves from the water rather than embracing its power – like we did in the past.

The design in itself aims to tackle the current issue of water level rise in a more traditional way, to open up to nature, to understand its behaviour and draw on our experience and knowledge.

The project has been set on the Shetland Islands, to metaphorically connect the story of the project with the first settlers of the Isles first settlements of the Vikings. Historically they embraced the fear of the waters mystical power and sailed through the unknown sea. As a link to the present, the geographical location of the Shetlands' dictates that their coastal line will be one of the first to be impacted by the rising sea. Moreover, the island is by definition a transitional territory, the link between the Norwegian Sea and the North Sea.

The relationship between the power of water and the site was further explored in the architectural proposal. It was important to develop a cohesive narrative in the design, to bridge the past and present perception of water's power with the site. This specifically related to the introduction of using renewable water energy as the main component of the project. By analysing local issues of the Isles' residents and researching current knowledge of using water's power, the site issues with the advanced technologies were combined into one coherent solution. By following this, I had to consider how far I can use the aforementioned natural power to not to damage the rough beauty of the site as well as the rough beauty of the natural power of water. This led to the introduction of the three architectural elements of my design– the harbour, the tidal power plant and the experiential path which links these two - the traditional way of using water (the harbour) with the advanced one (tidal power plant). Given the poetical nature of my project, the three interventions act as one line of experience, the deconstruction and analysis of building the tension and reflection of the story around the natural power of water, was an important procedure of translating the narrative into an invented design.

This is why the experiential path along one of the Shetland's coasts brings the visitors closer to water, encouraging them to fully experience its sounds, smell and movements, while also showing that waters power is still present but can utilised in a more productive means for humans rather than against them. For example, the potential renewable energy which can be produced.



NARRATIVE

relation human - water
past
present
future

SITE

rough landscape

LOCAL ISSUES

off grid
fishing /farming
peninsulas - islands

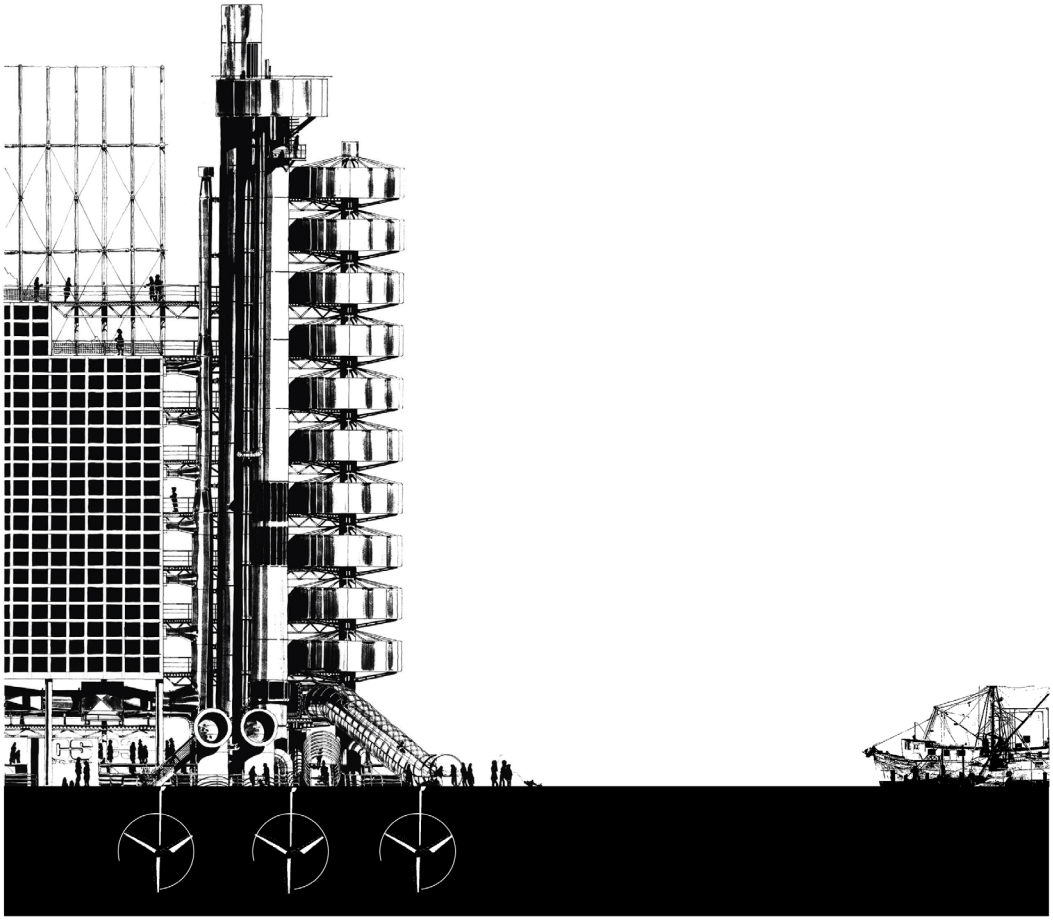
WATER

NARRATIVE

The aim of the project was to prove that balanced relation between human and nature is possible even in the 20th century. This is why it was important to take a lesson from the past and start cooperating with the natural power which is water and its unpredictable behaviour. Following this, it was important to develop a cohesive narrative in the design, to bridge the past and present perception of water's power with the site

By analysing local issues of the Isles' residents and researching current knowledge of using water's power, the site issues with the advanced technologies were combined into one coherent solution. By following this, I had to consider how far I can use the aforementioned natural power to not to damage the rough beauty of the site as well as the rough beauty of the natural power of water.

II EXPERIENCE

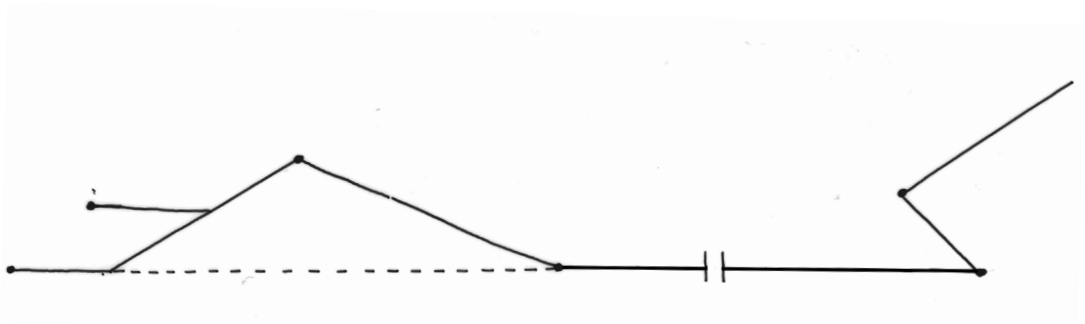


EXPERIENCE

The narrative lead to the introduction of the three architectural elements of my design– the harbour, the tidal power plant and the experiential path which links these two - the traditional way of using water (the harbour) with the advanced one (tidal power plant). Given the poetical nature of my project, the three interventions act as one line of experience, the deconstruction and analysis of building the tension and reflection of the story around the natural power of water, was an important procedure of translating the narrative into an invented design.

The function of the harbour - the traditional way of using water is confronted with the massive power plant which uses the highest technology to turn the power of water into electricity. Two programs face each other in the opposite part of the experiential path. They are totally different in their technology advancament, in period of time they were invented. Nevertheless, water and its natural power link them both.

1



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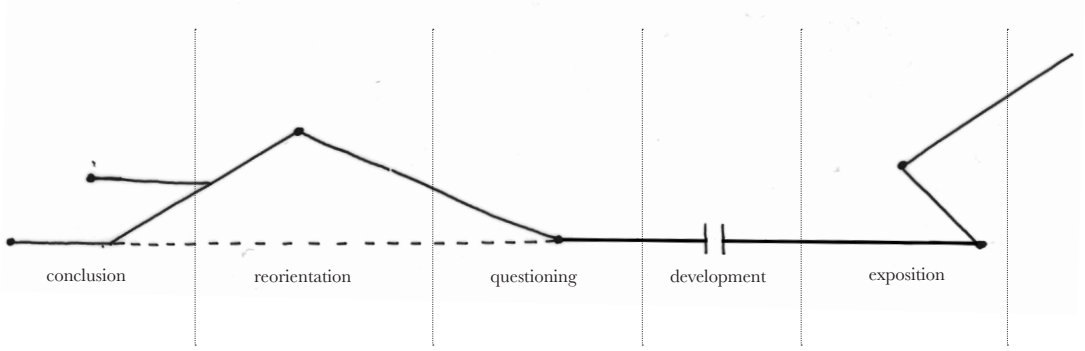

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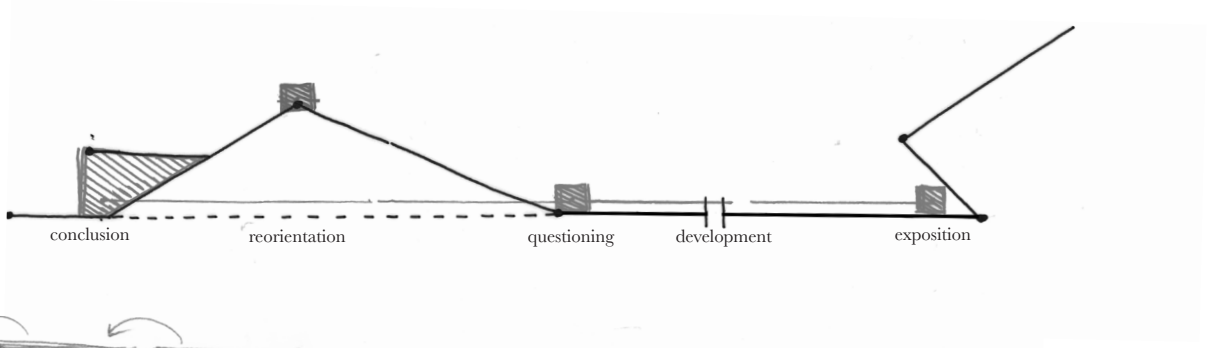

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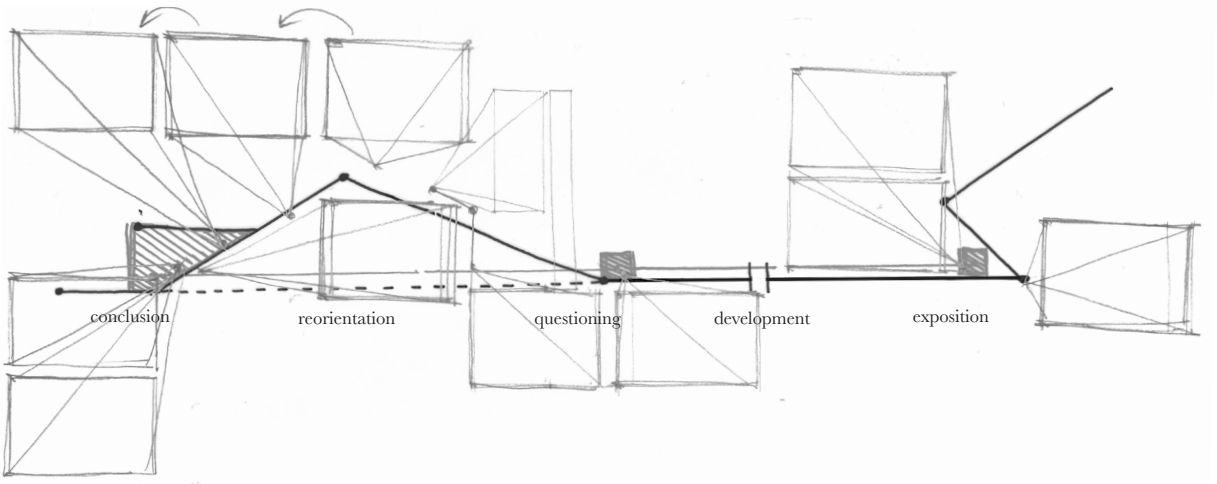

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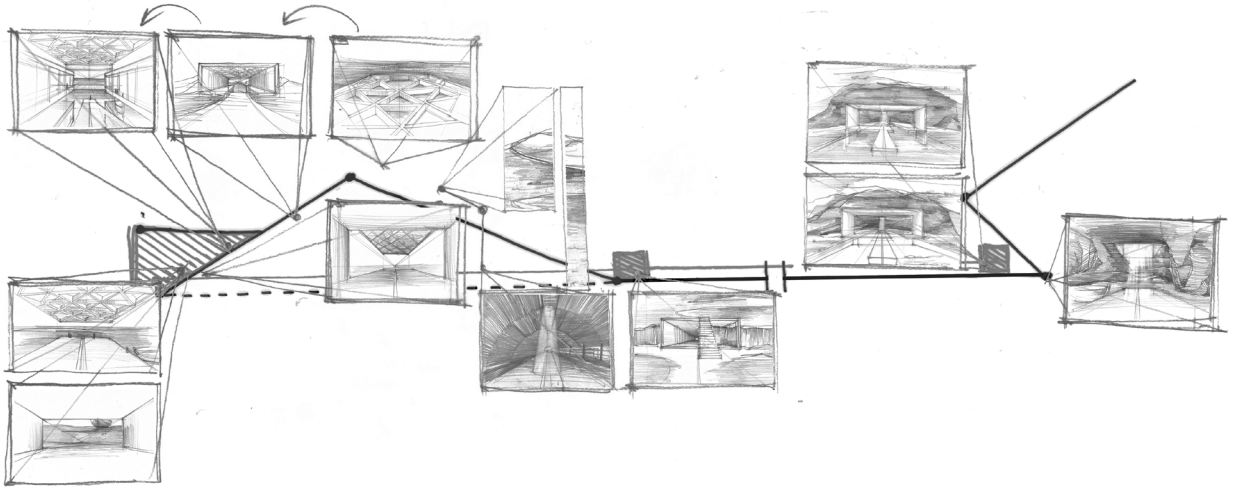


 Scheme of the experiential path // A. Gwardiak 2019

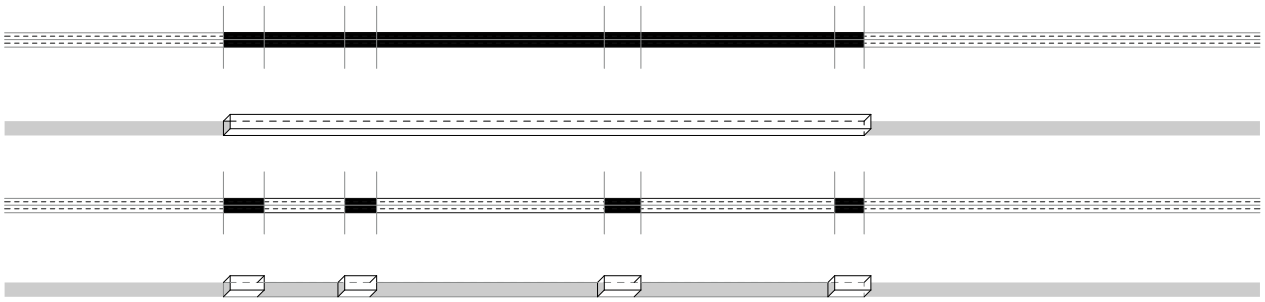
EXPERIENCE

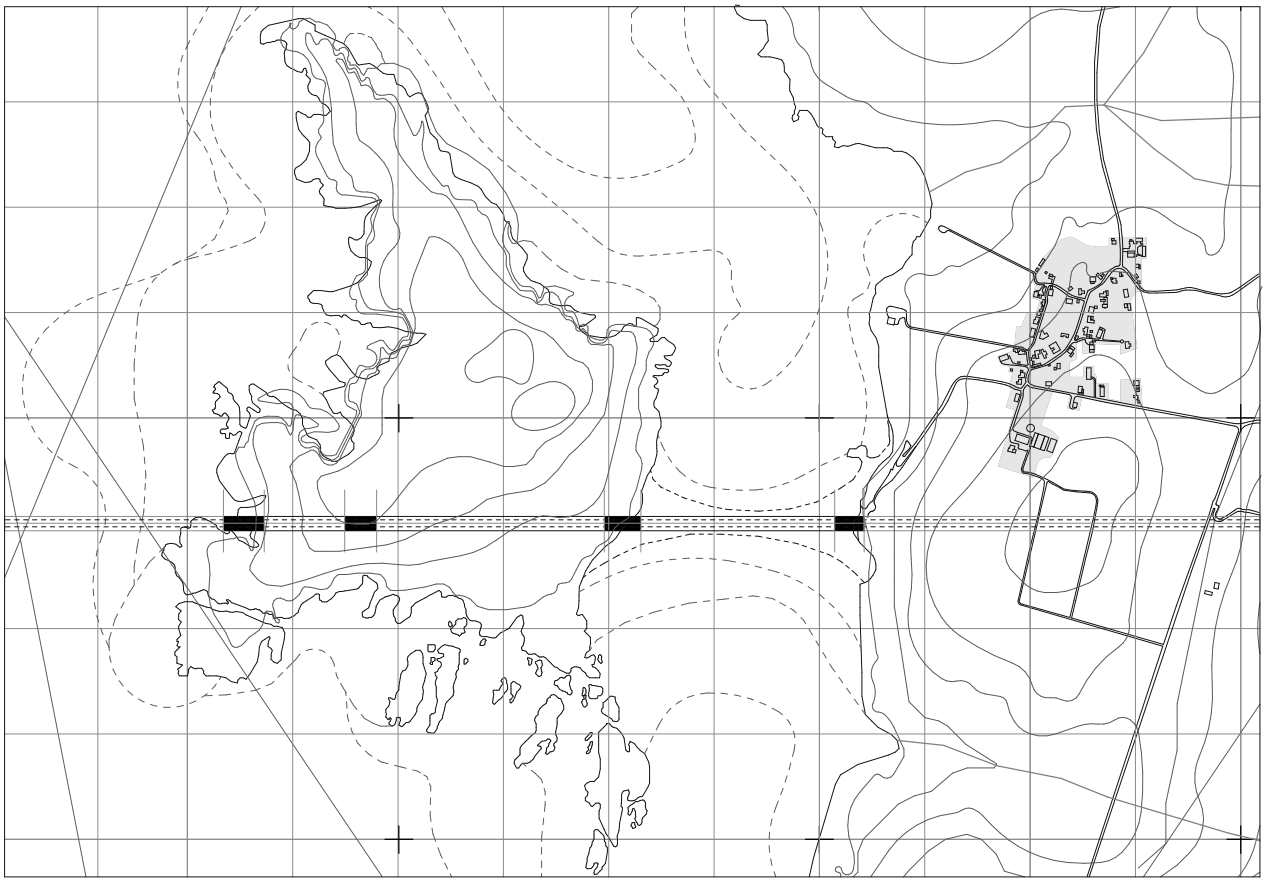
Two opposite functions, coexisting with natural power of water face each other in the end of the experiential path. The harbour is located in the cave to not to damage the landscape of the coastline and to bring the visitors to the past times. At the end of the promenade - there is located a massive power plant which closes the whole experience.

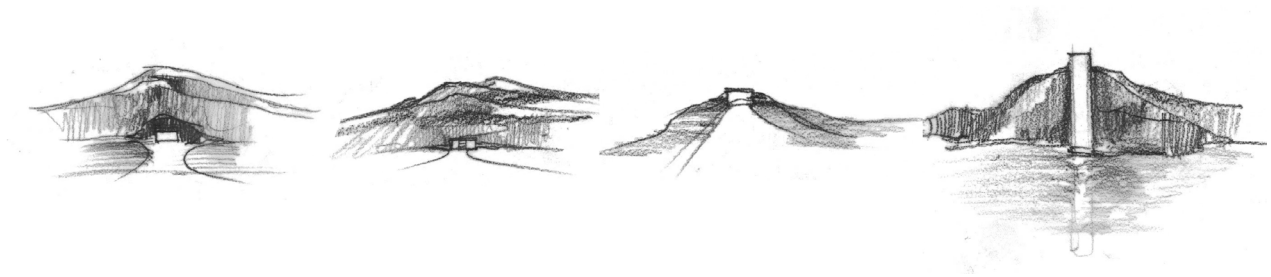
The experiential path deisgn was based on Le Corbusier theory about Promenade Arhictectural. Le Corbusier claims that each architectural experience should be divided into stages. Each of them has its own character and level of introducing the visitor into the project. The path is divided by 5 chapters, starting from exposition, than going through development, questioning, reorientation and ending at the conlusion. These steps were developed and placed on the path, linking the mainland of the Shetland Islands with St Ninian Island. The connection goes through tombolo which is possible to pass in specific times and seasons.

Explanation of the drawing: „Scheme of the experiential path"
The drawing presents the symbolical section through the designed path. The experience works from right to left (same as the section through the mainland and the island). Visitors start from the right, going downhill towards the coast of the mainland. There, they find a cave and the first pavilion which is the baginning of the path and represents the „exposition" chapter. Directing to the island, visitor passes the tombolo what is the develeopment of the path. This step is driectly connected with experiencing the calm water of the bay between the mainland and the island. Questioning is represented by the second pavilion, located on the eastern coast of island. Following this, the walker hikes through the island to reach its top which opens the view towards the rough sea - this is „reorientation step". The path is ended by the conlusion which is the underlined by the biggest pavilion located on the left of the drawing. From here, the visitor can come back by the boat towards the beginning of the path.

The important aspect of the path was the experience of the walk. This is why design was mostly focuse on the senses of the visitor which is the view, sound and smell. The last of the graphics represents the views linked to the experiential path.







EXPERIENCE

To keep the idea of the path, linking the past with the advance future, I decided to treat the possible building as a structure as well. The experiential path turns then into the builiding stretched along the landscape and divided into pavilions which highlight the chapter of the story which you are in. The idea of having one builiding stretched along 900m path brought me to deisgn 4 pavilions with the same main characteristics which is the widith of the architectiral infrastrucres and the line laong which they are placed.

Relation to the path
Relation to the ground
Relation to the water
Experience space
Stay/Go
Viev direction
Width/Height
1 exposition
2 development
3 questioning
4 reorientation
5 conclusion

EXPERIENCE

Even though the path is made by one building stretched along the landscpae and divided into pieces, each of this pieces has its own characteristics. Pavilions were designed in this way to underline their fucntion in the theatricality of the path, which means that they had to fit to the chapter they represent.

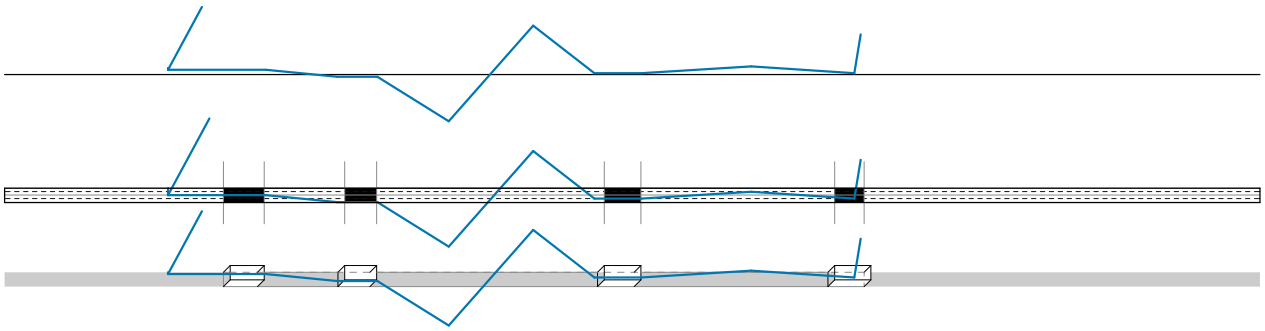
The conducted analysis brought me to the outcome of placing the harbour in the cave. The harbour as the first step represents the exposition. Its form and location exposites the visitor to the mysterious vibe of the past and frame the view to the next chapter. The harbour was placed into the cave not only to keep the historical past of the North Sea as the edge of the world and Vikings, but also to notto damage the beautiful landscape which surrounds the site. First four pavilions are well hidden in the landscape to not to damge it but improve it.

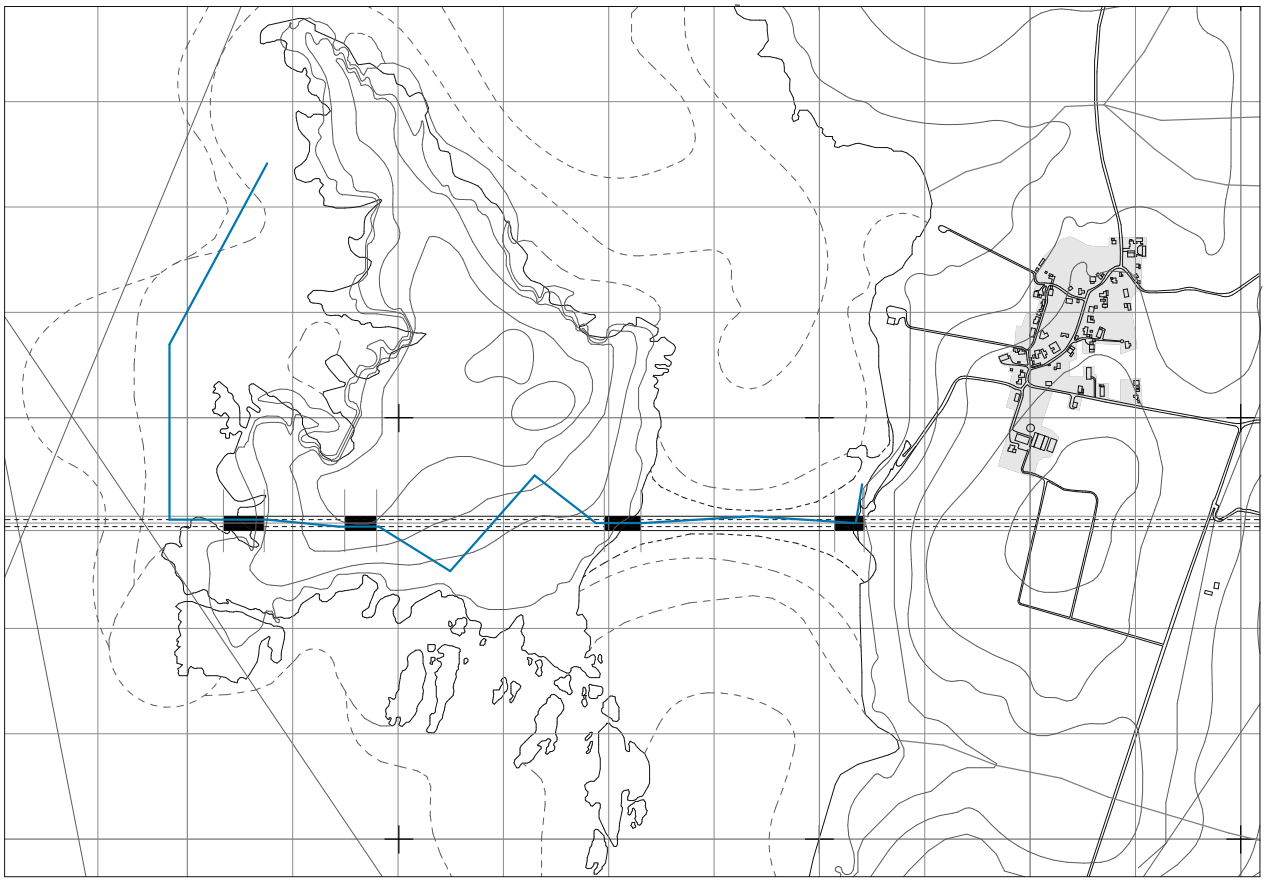
The second chapter - development - is represented by the tombolo which is our first meet with water and its power. Either water let us pass the link between the mainland and island or not. Eveyrthing depends on the level of the tide.

The third chapter is represented by narrow stairs, leading visitors towards the island. It is like a gate for St Ninian Island. The narrow passage limits the views, opens to the sky and directs towards the next part.

After the hike from the bottom to the top of the hill, visitor is being caught by the fourth chapter with is reorientation. This element leads people to go down for a while, to loose the horizon and focus on a different view. This moment should prepare us for the final part.

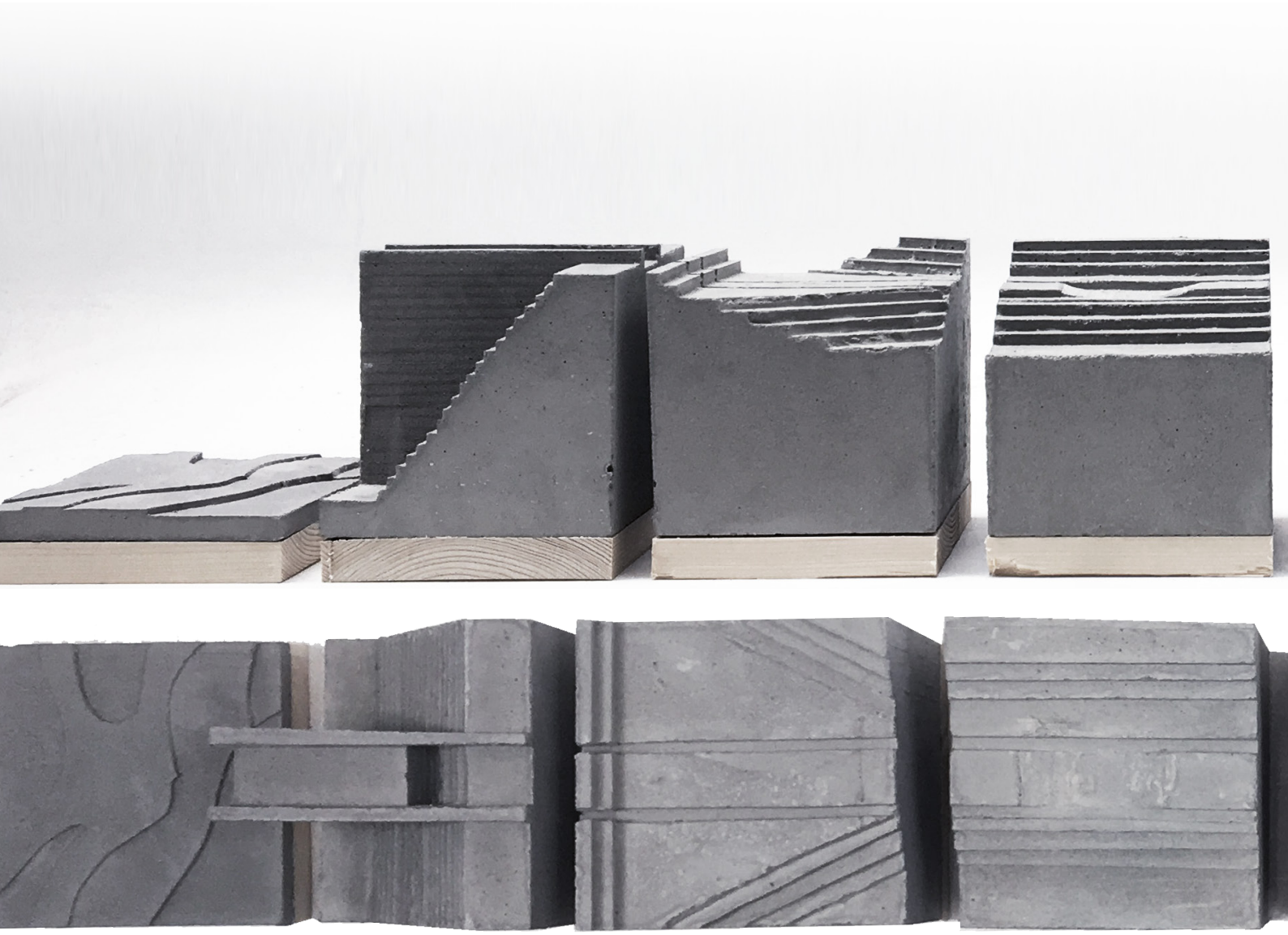
The end of the experiential path is the tidal power plant. It is the massive building invisible from top of the island. The island and the path introduces us towards it. The power plant is a huge contrast while comparing to the other pavilions. This part could be massive because it is ivisible form the mainland. Moreover it is metaphorically prepared for the unknown which will be brought by water and its hidden, mysterious power.

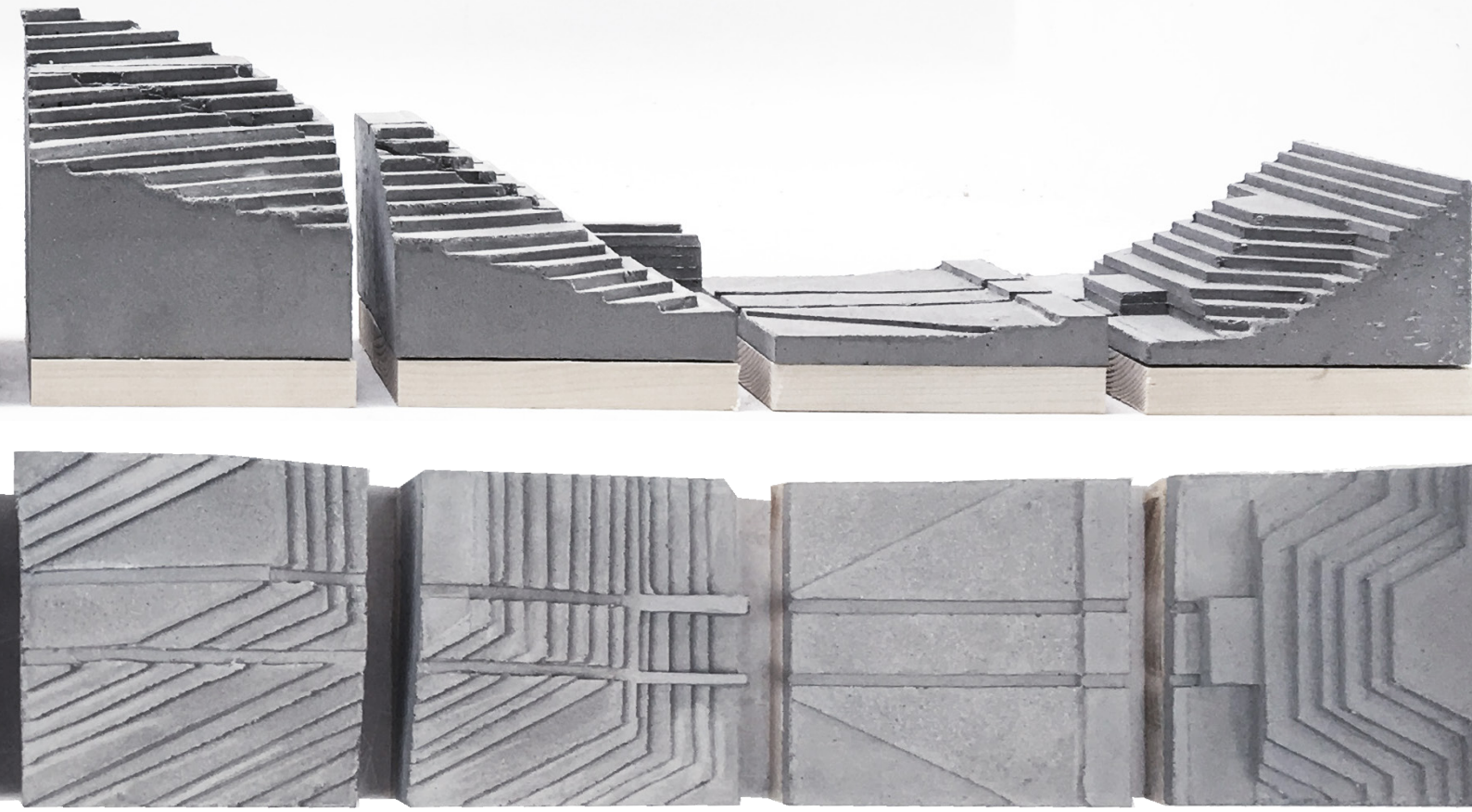




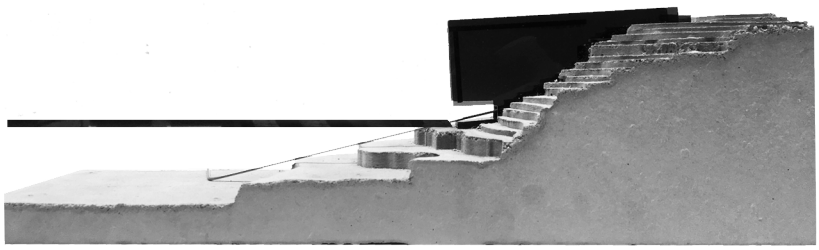
EXPERIENCE

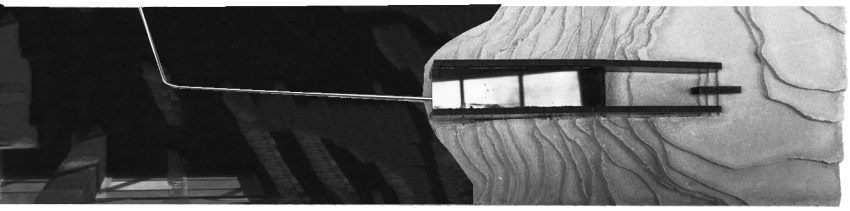
The project says about the relation of human with nature. Human intervention is represented by the line of pavilions and buildings along the path. What about the nature? Each of the pavilions works like an infrastructure introducing you to the nature. Moreover the line of the path is unnaturally broke in a several places to show the contrast between solid human intervention vs unpredictable nature (black line vs blue line.

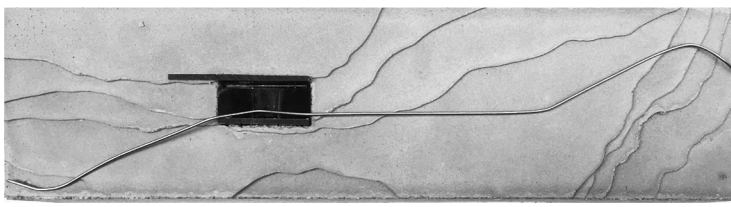


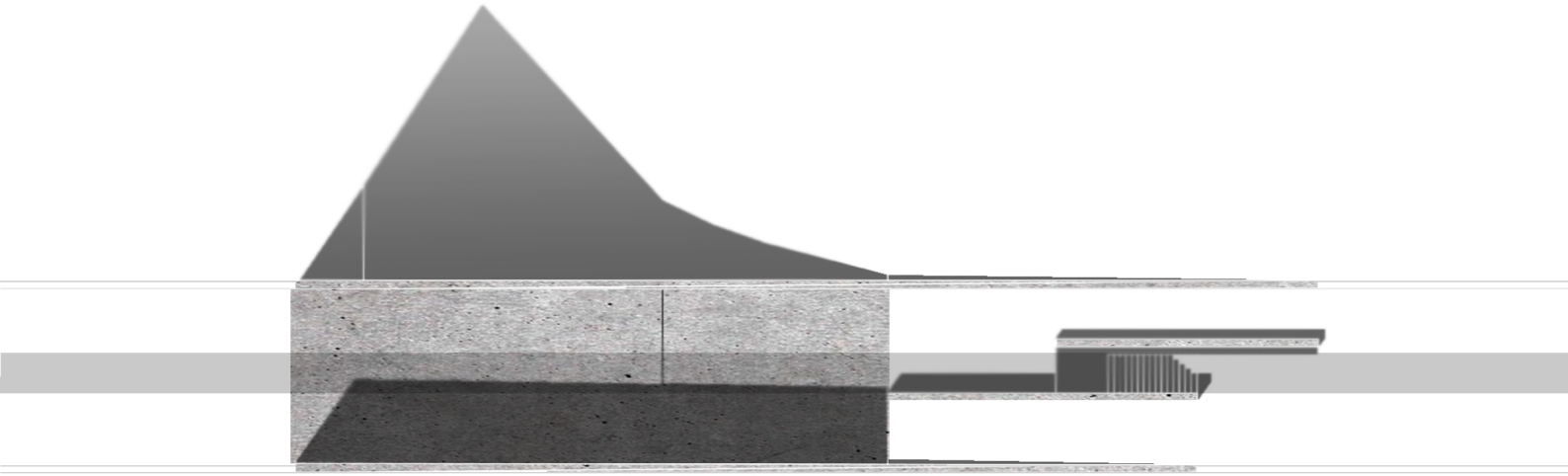


III PROJECT

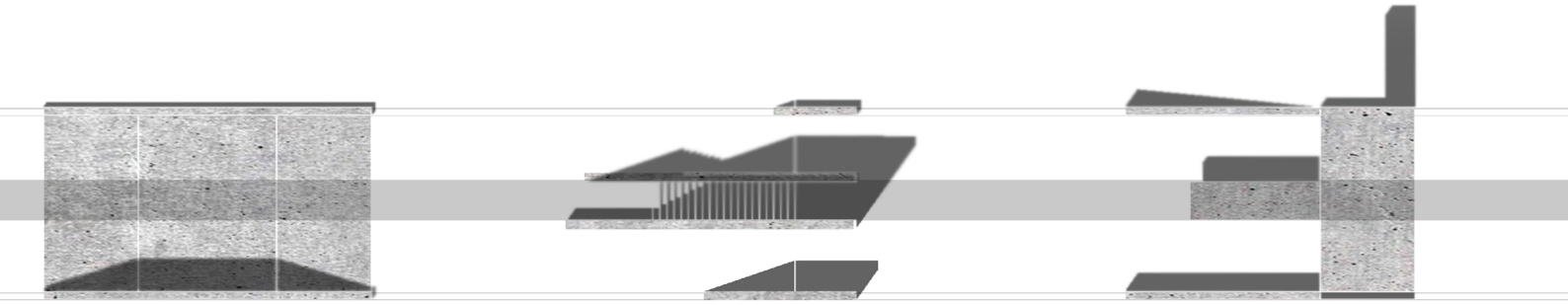




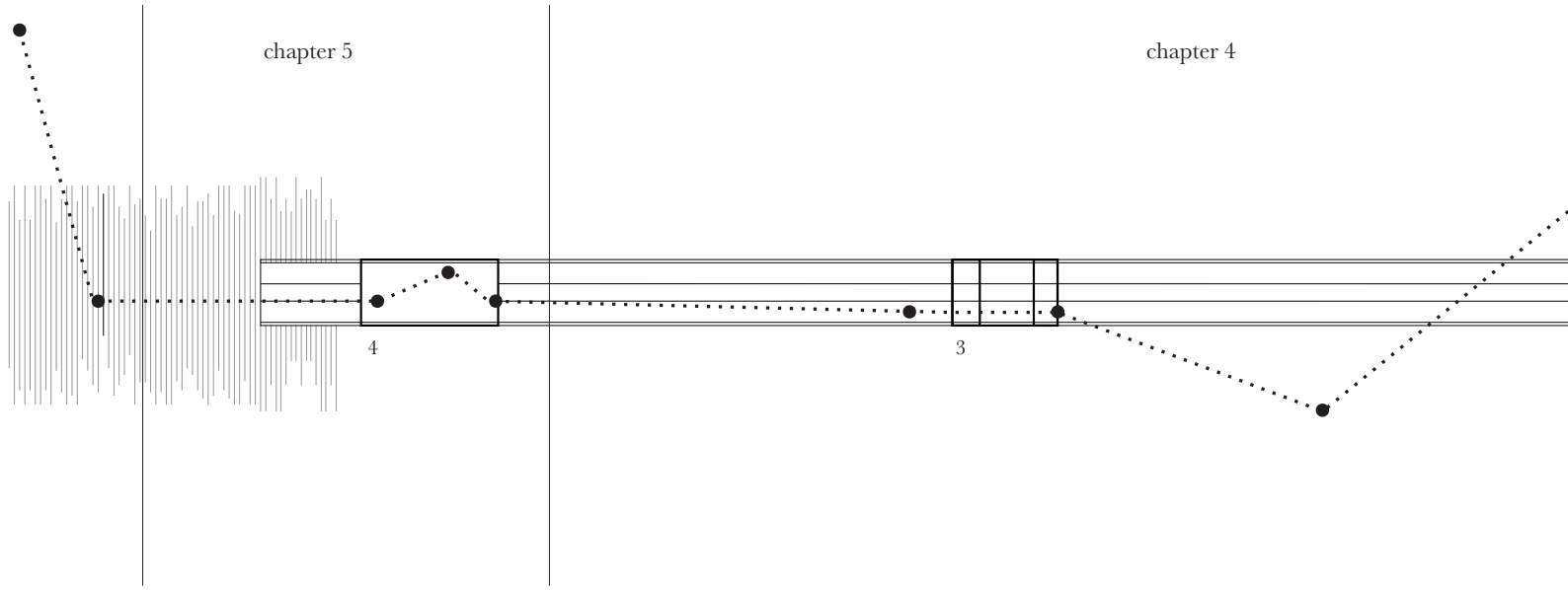




ARCHITECTURAL PROJECT



The idea of an experiential path, formed the essential part of my intuitive research, it also helped me to design at the architectural scale. The two major functions of my project consisted of a harbour which would allow the local residents to reach the 'new island' and a tidal power plant which provided electricity for a third of the residents of the Shetlands. Finding a way to link these two totally different functions by a simple path, required testing out in sketch plans as there was a need to balance the design objective with experiential aspect. Breaking down the program into this path divided into stages allowing me to develop a design which combined the metaphorical past with the future unknown. By separating major functions to the ends of the path, the circulation between them emphasizes as a mean of ritualizing the process – creating a moment of stability amidst the unpredictability of the powerful nature – water.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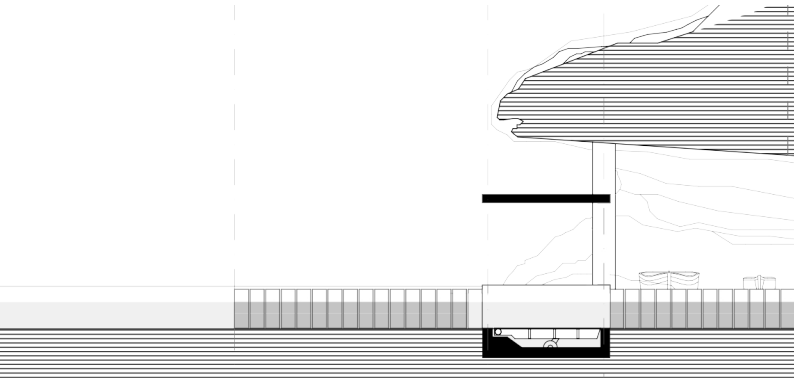
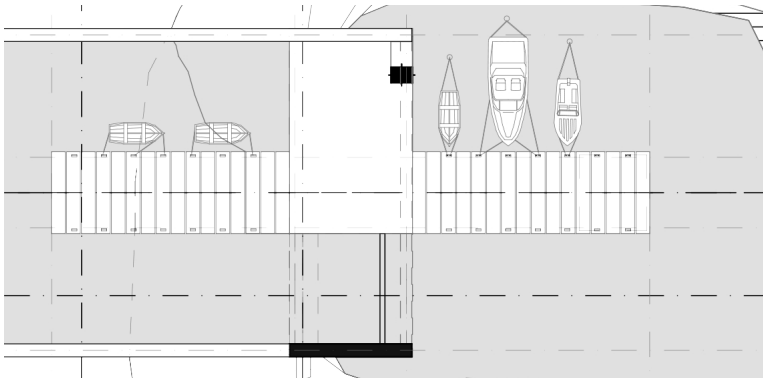
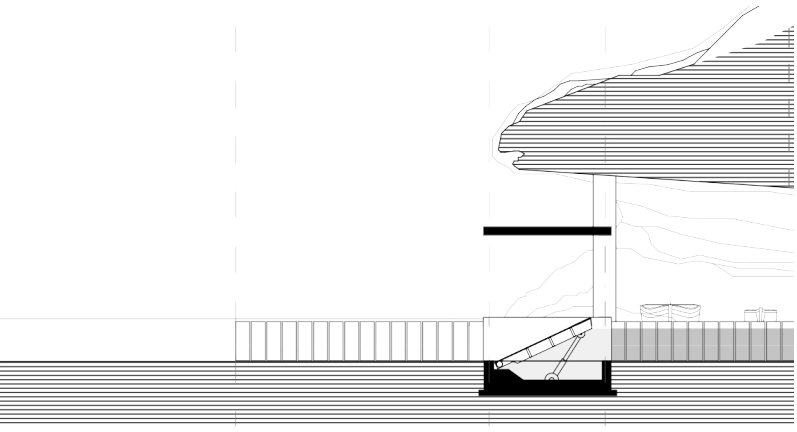
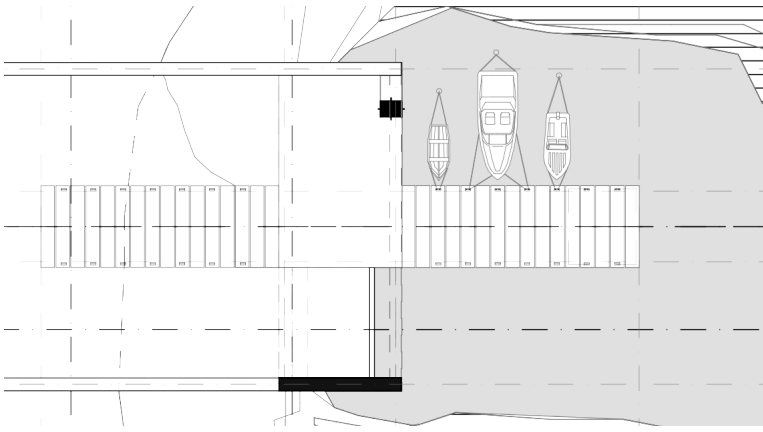
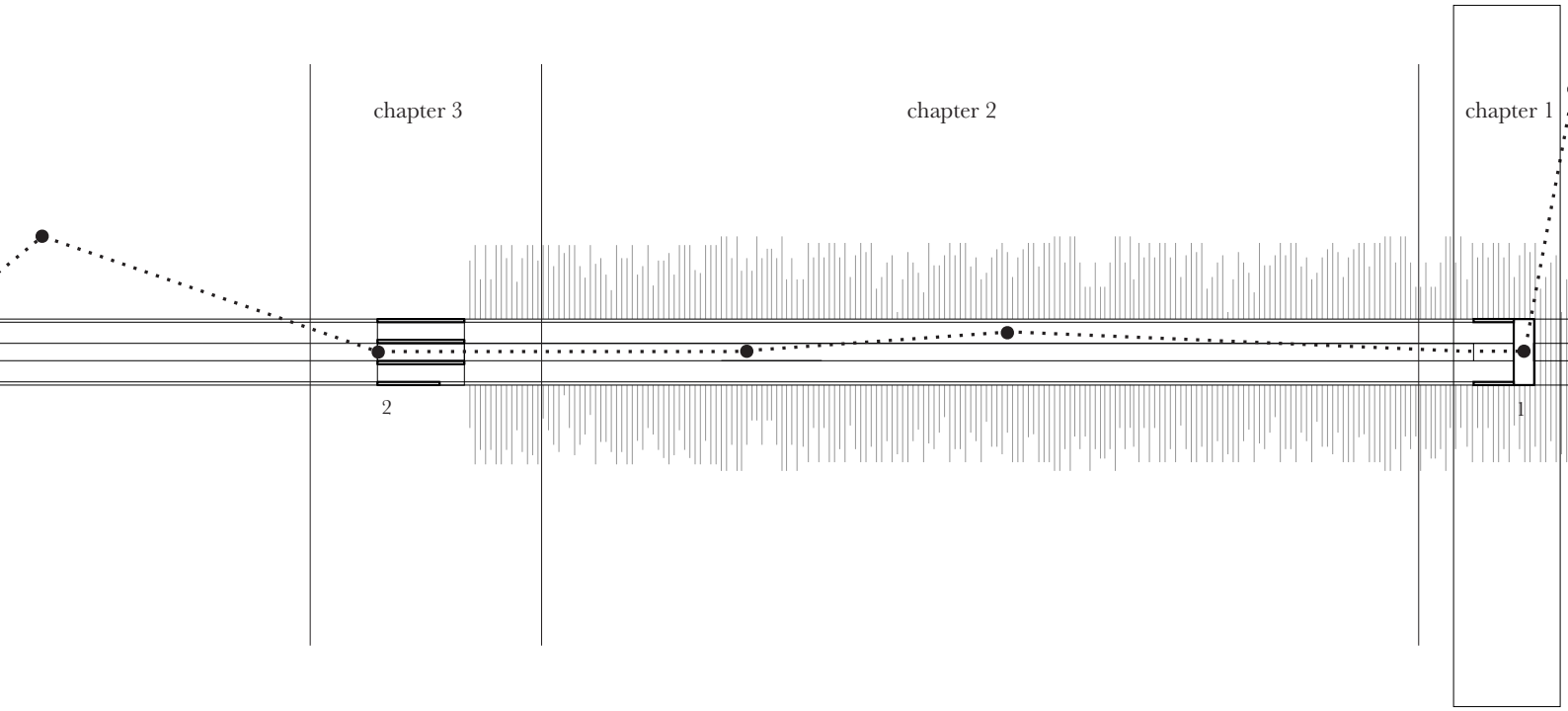






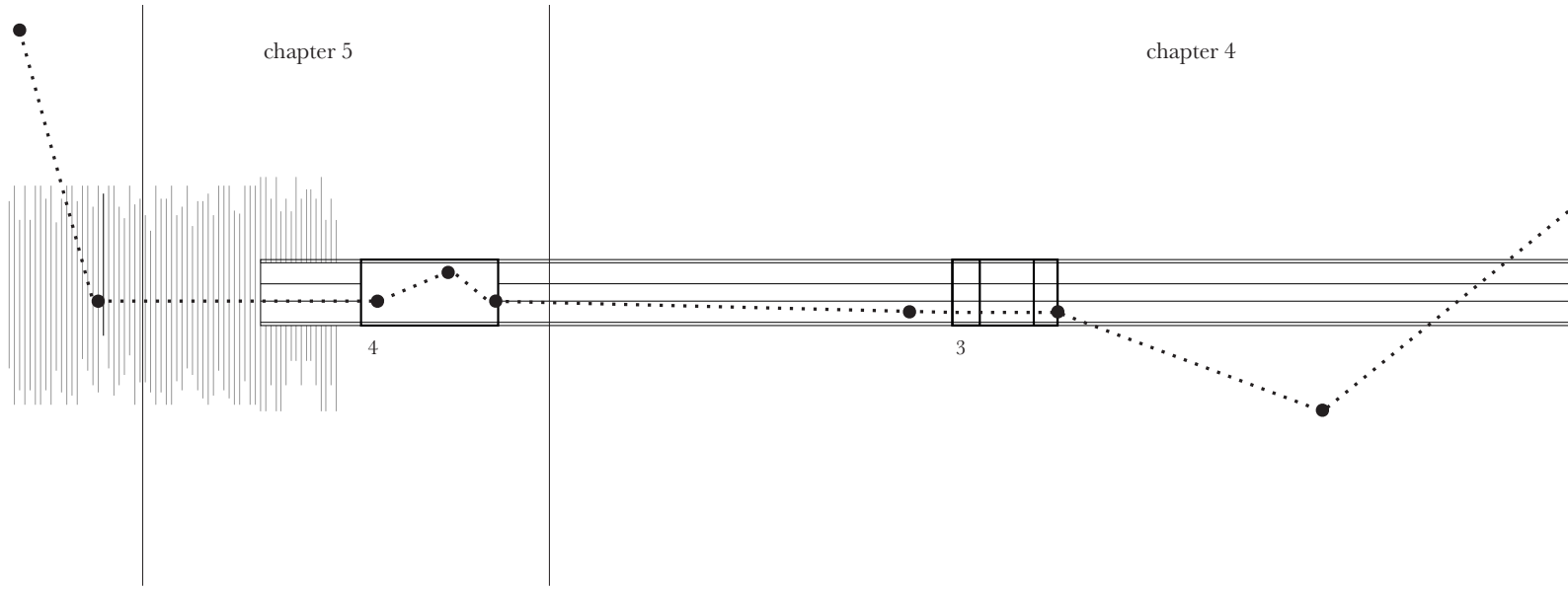




THE HARBOUR - LOW TIDE/HIGH TIDE

The harbour is located in the man made cave at the beginning of the experiential path. It serves as the reminder of the way of using water in the past, when Vikings and brave sailors lived in the Island. This is the reason why it is attached to the mainland - old land. The pavilion in itself works like a gate to the cave. Thanks to the movable water barrier, it keeps water inside the cave during the low tide. When there is a high tide, the gate opens and boats can easily leave the place. The form of the architectural infrastructure works also like a frame of the view - the view towards the next chapters. Leaned column is a symbol of unpredictable nature vs human which the pavilion symbolizes.

The harbour - internal view towards the path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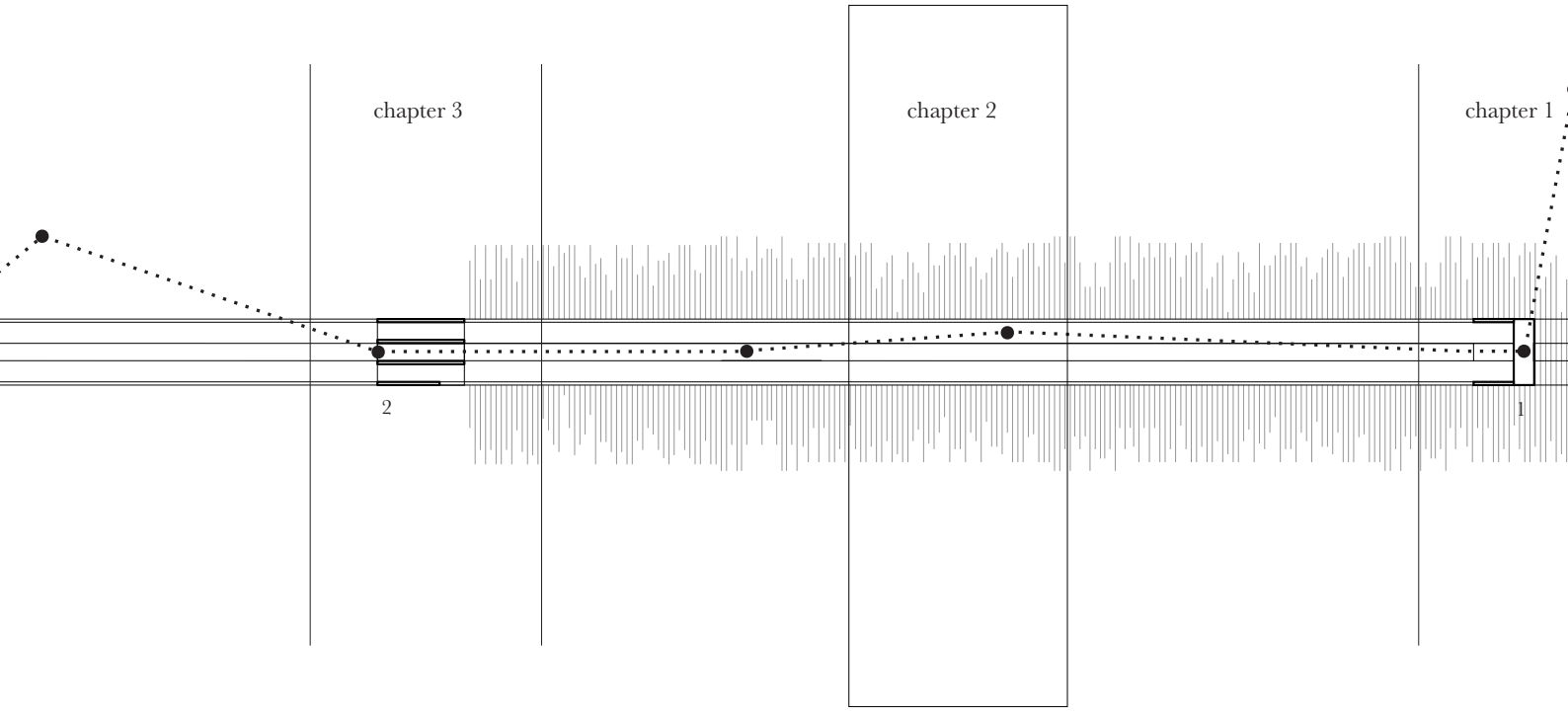
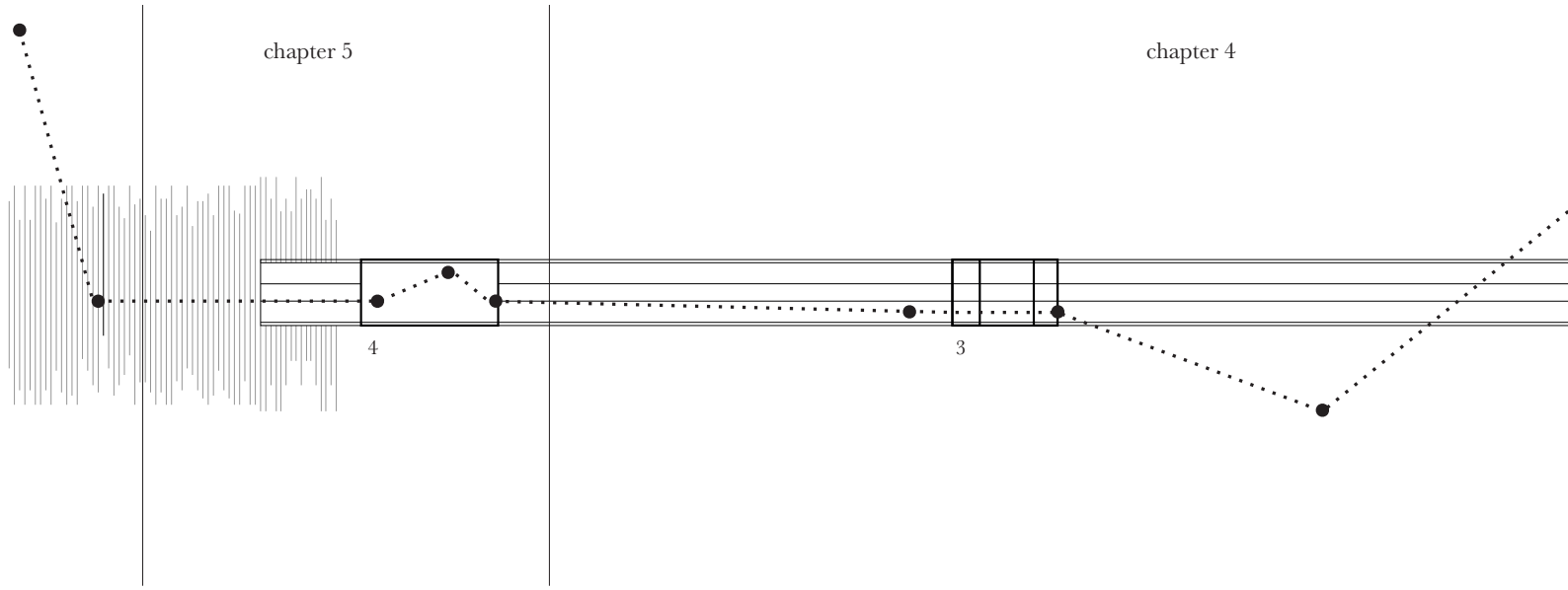


TOMBOLO

The Tombolo links the mainland (old land) with the island (new land). The relation between Tombolo and the path is the best representation of the relation of human with nature. It proves that we sometimes do not have enough power to stop nature. Tombolo links the island with the mainland during the low tide. However, during the high tide, the St Ninian Island is fully cut off from the mainland. We can only predict tidal movements thanks to the moon phase. Nevertheless, we can not stop or prevent the path from flooding every 6 hours.

Tombolo - low-tide view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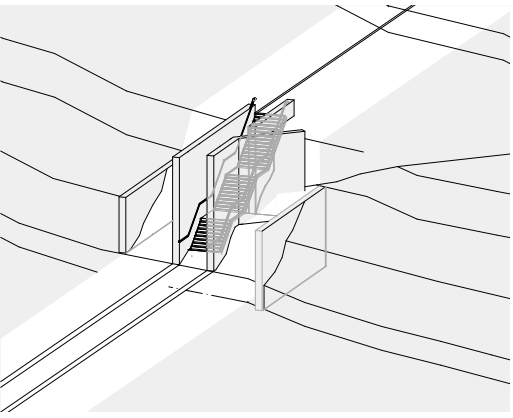
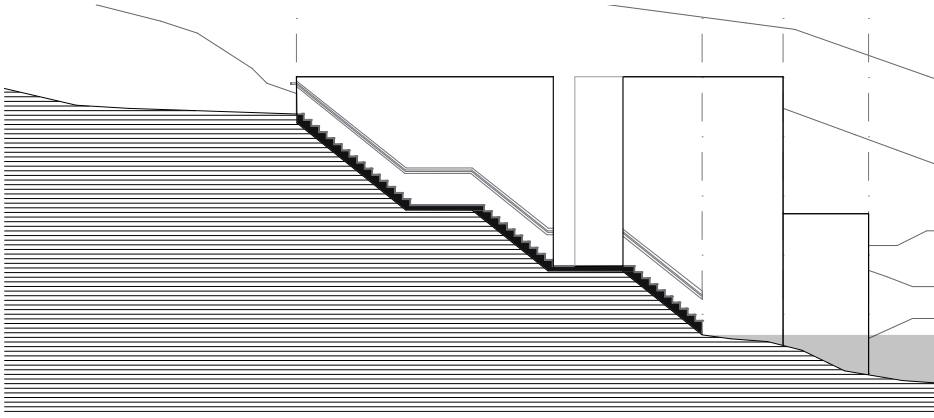
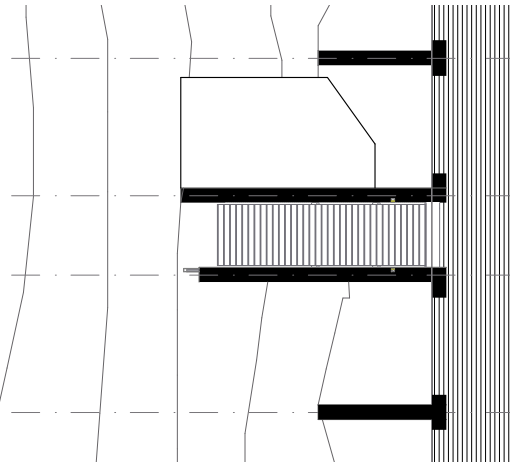
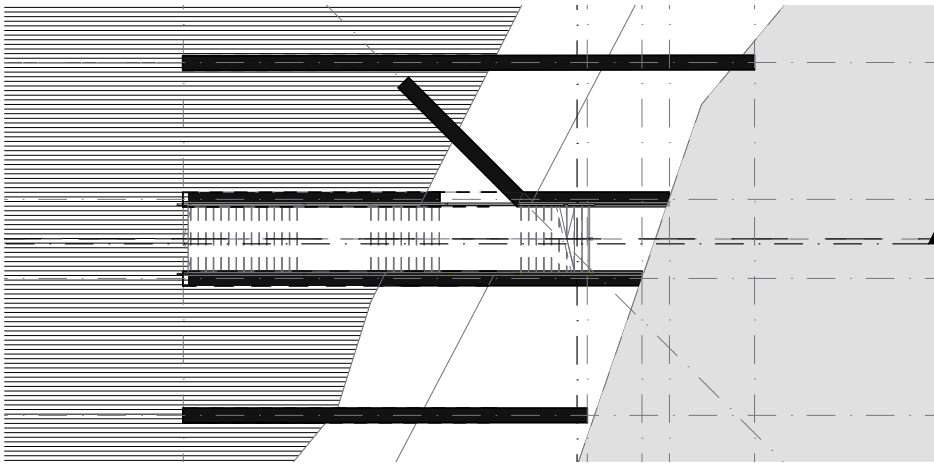
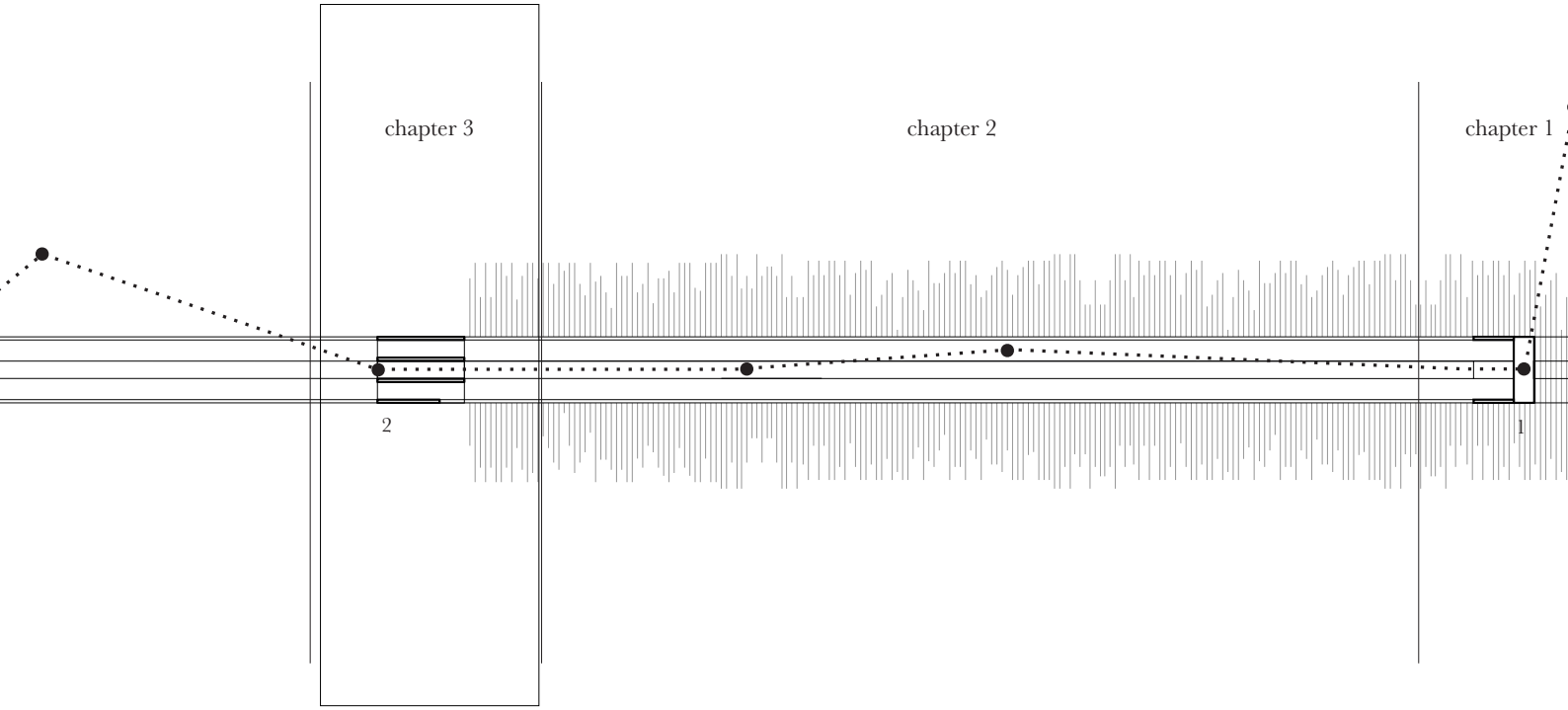








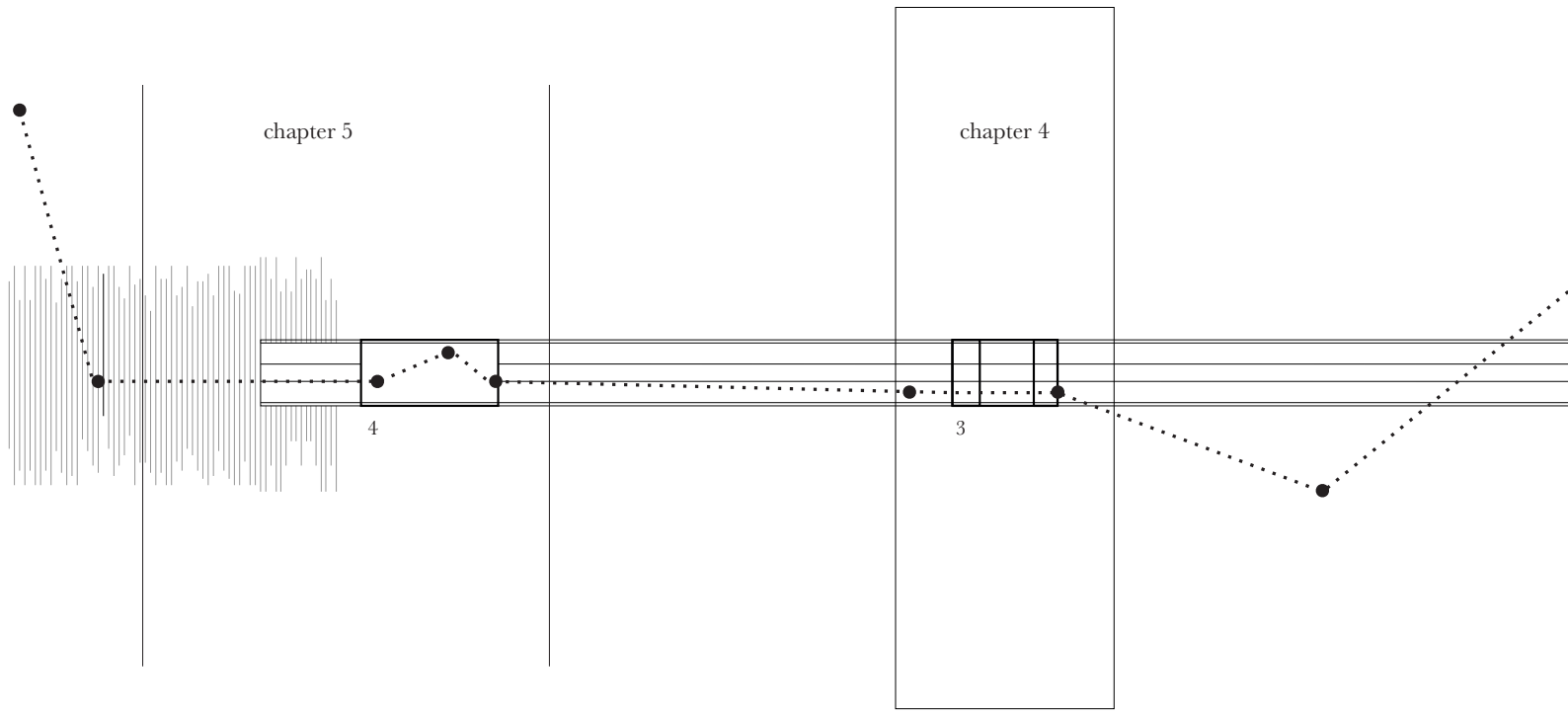


STAIRS

The stairs represent the third chapter which is questioning. This is why in the middle of them is located an opening which might redirect the visitors to the additional route which is the leftovers of the medieval church damaged by the storm in the 15th century. Stairs have been designed to limit the horizon of the visitor and highlight the transition from the old land to the new land.

Stairs - extra opening

Stairs - main axis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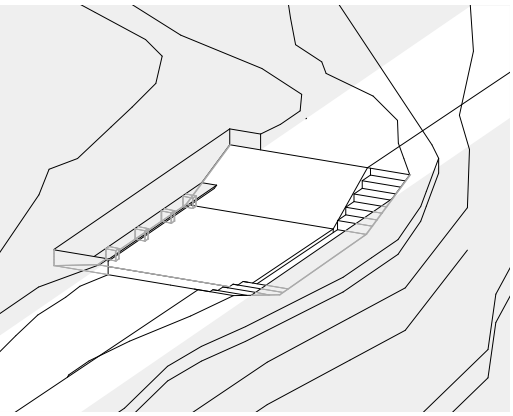
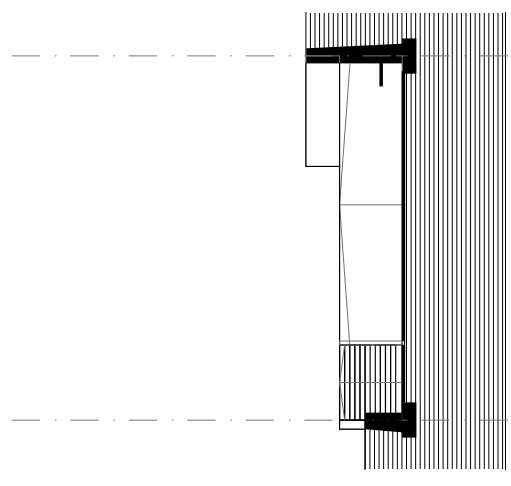
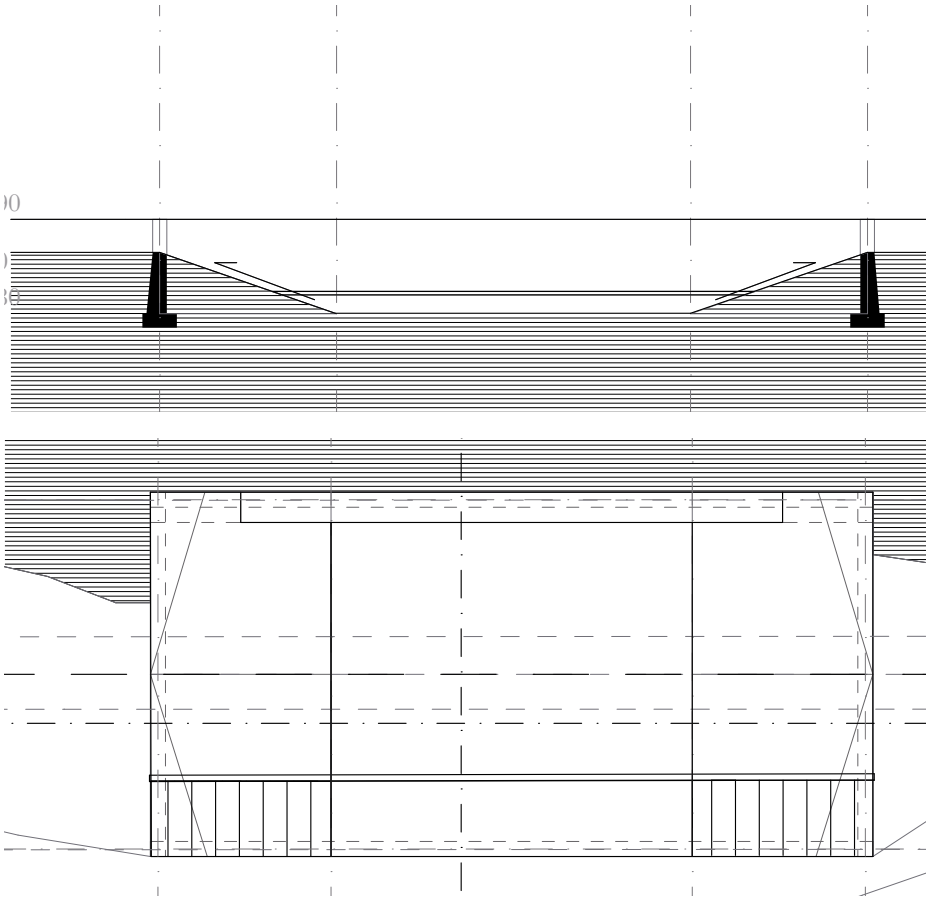
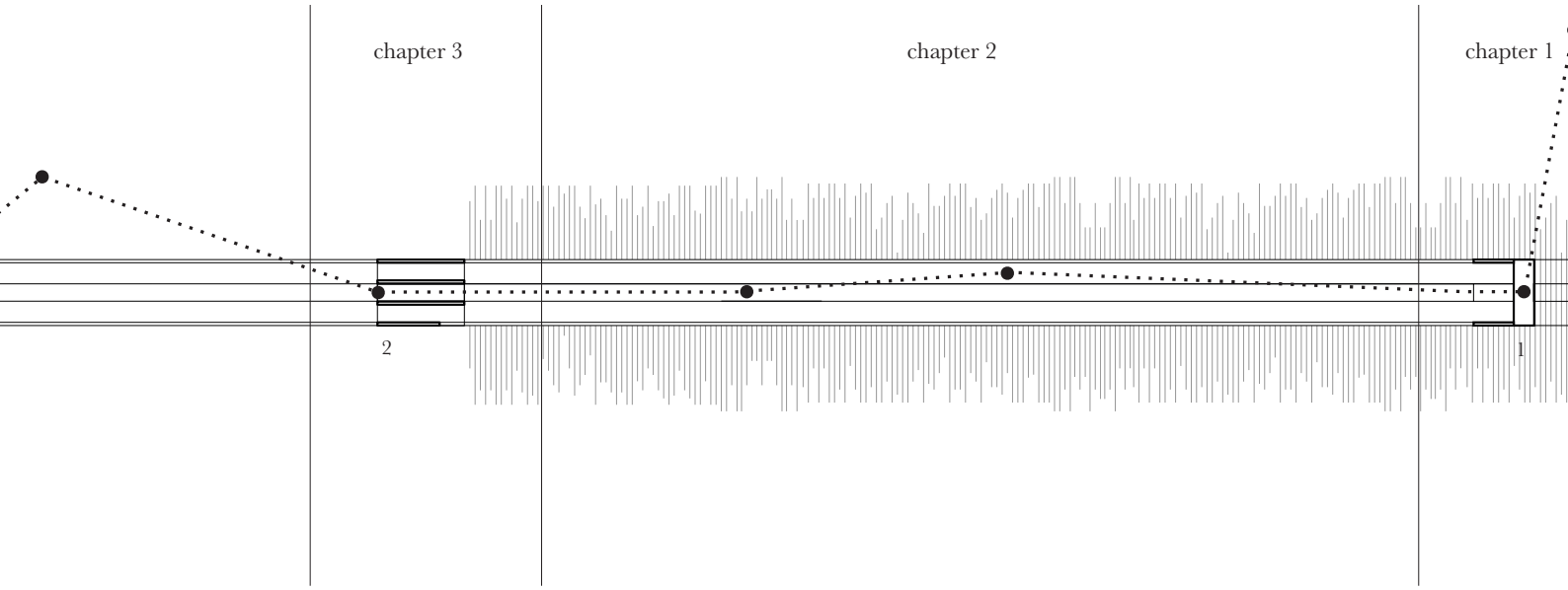


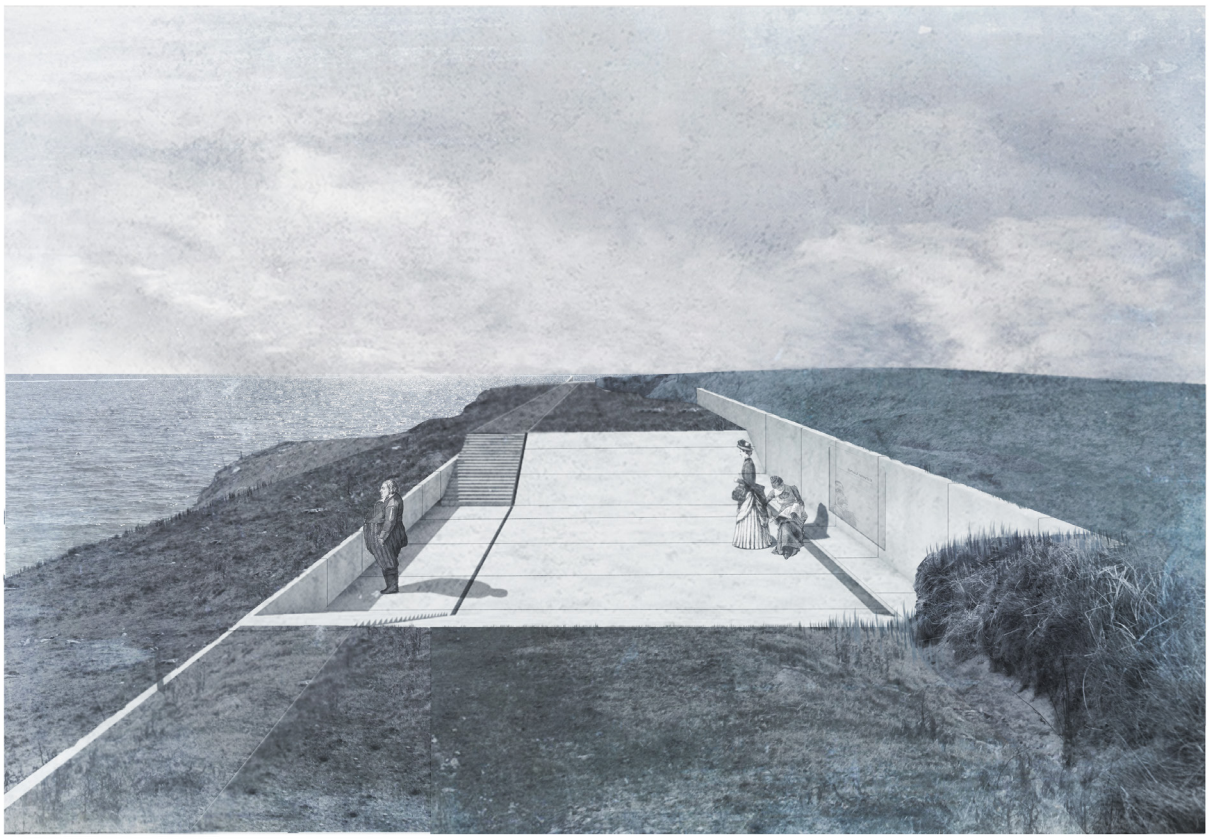






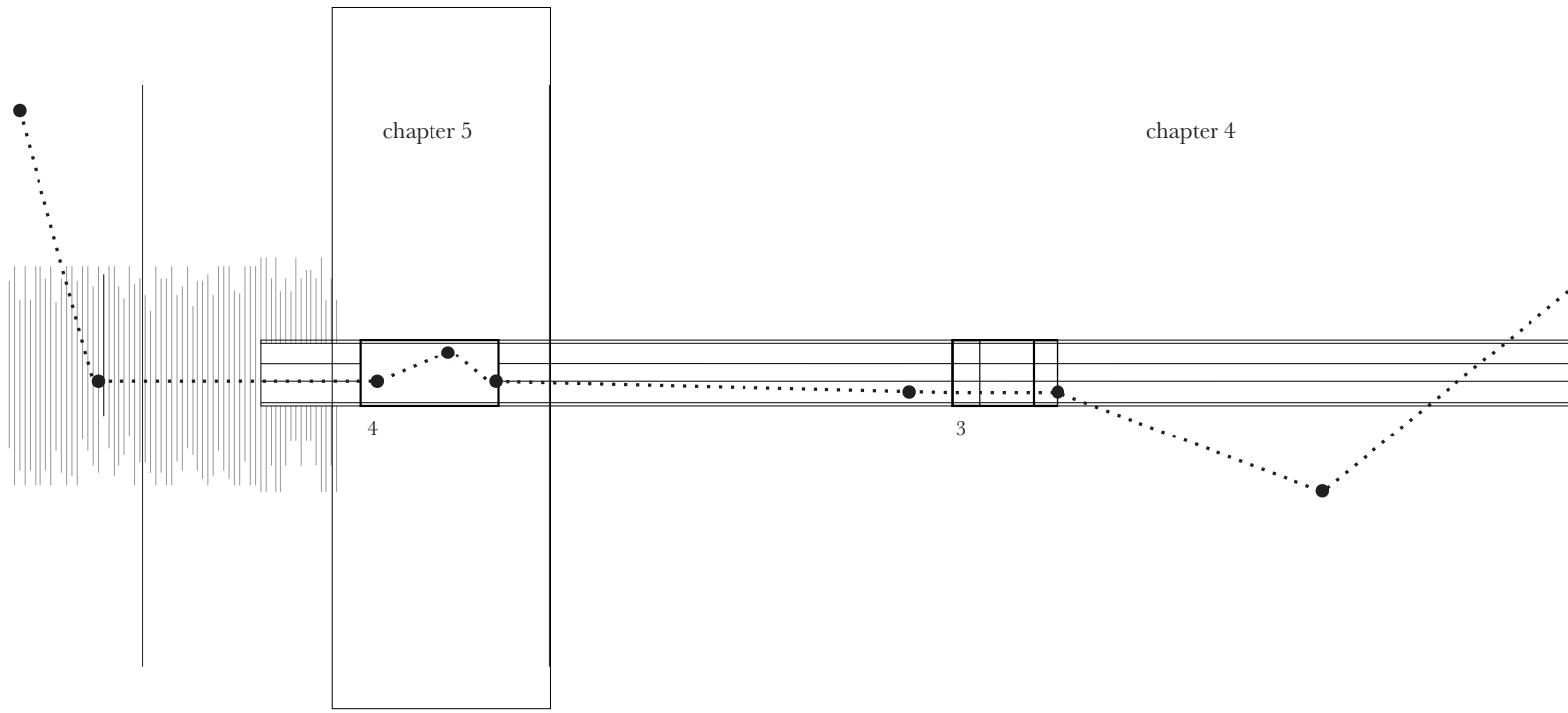
BASIN

Basin represent the fourth chapter which is the reorientation. The intervention cuts the top of the hill to change way of perceiving the path and nature for a while. The basin works like a viewing terrace where people can focus on another views than the main axis. Moreover, it is the place of focus before the final stage of the theatrical experience.

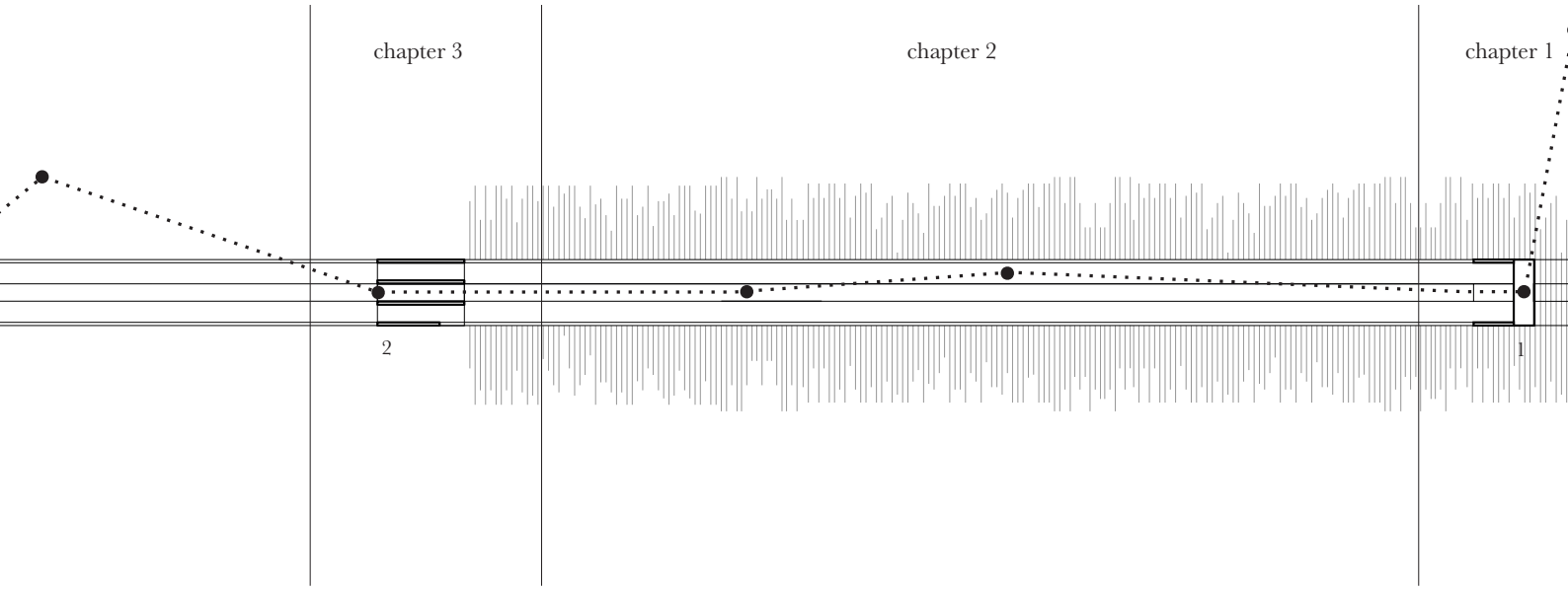


Basin - perspective at the entrance

Basin - the viewing deck



- Familiarizing the Unknown -



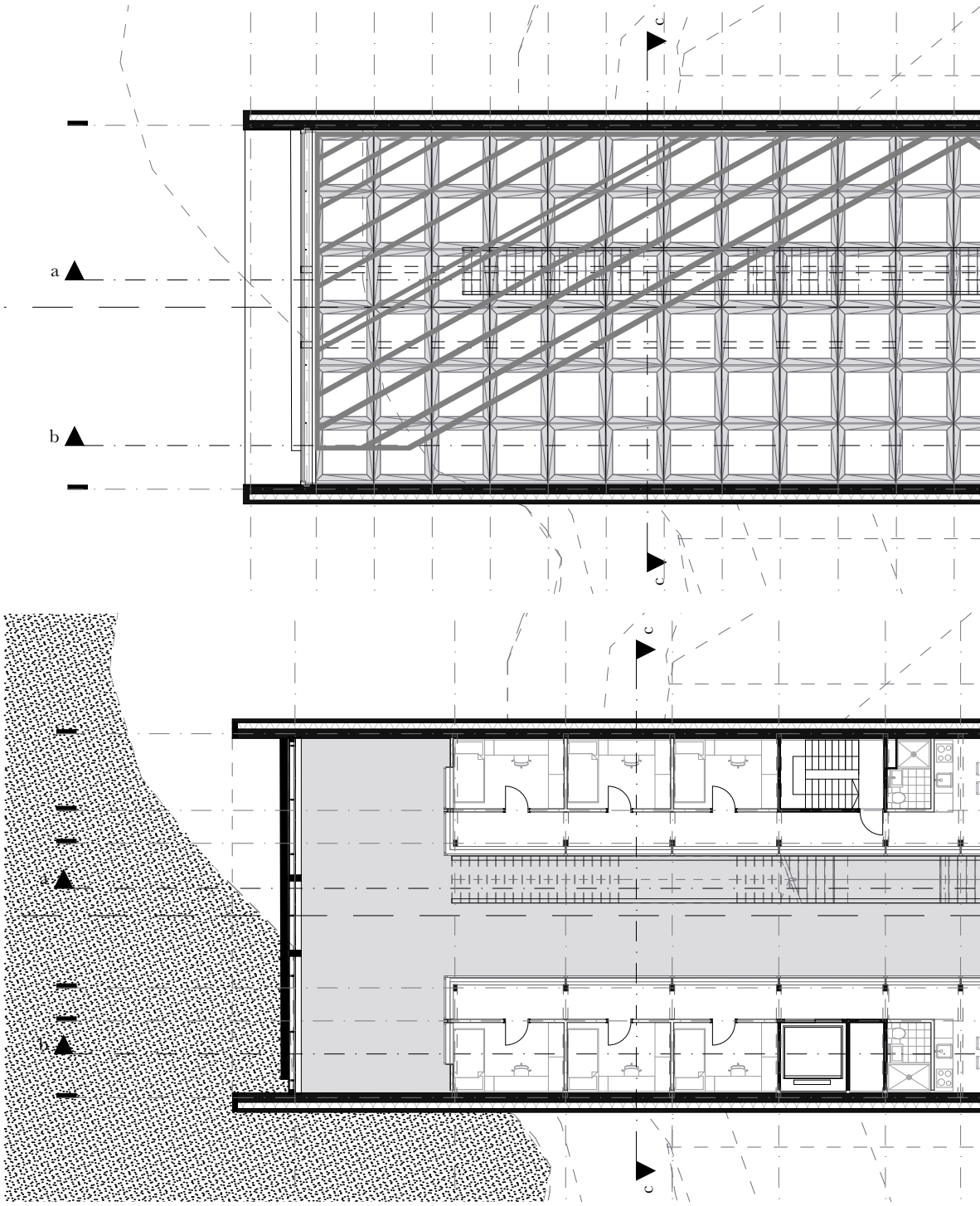
TIDAL POWER PLANT

Tidal Power Plant is the most important element of the project. It is an extension of the experiential path as well as the opposite function to the traditional harbour which is highly advanced power house.

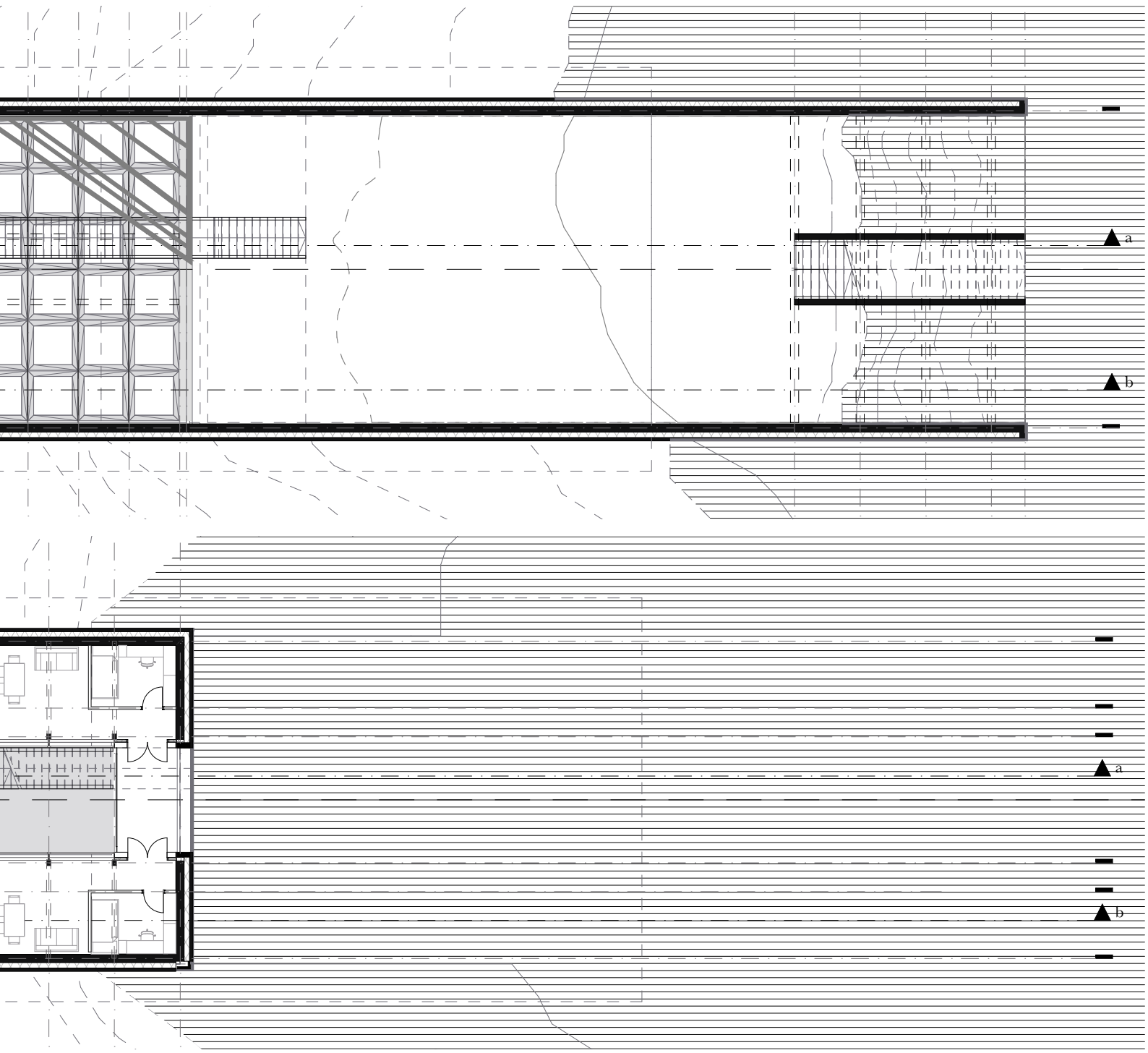
The building is a massive structure, growing out from the hill to underline that human needs can coexist with nature and its unpredictable power. Moreover the function of the Tidal Power Plant shows that gathering green energy from natural resources is another example of maintaning the constantly changing behavior of water. We can turn the fear of water into the opportunity!

The mass of the builidng represents the human shield which is directly confronted with the open rough North Sea waters. The architectural intervention is divided into two parts - the experiential path where visitors can walk from the top to teh bottom and observe the second part of the building which is functional rooms of the power house. The main staircase fulfills so called edutaiment function which is the combination of entertainment with education. While walking down the stairs - visitors can observe shelters for workers, control rooms, batteries and machinery working.

Beside providing the basic program requirements and the path going through the building, the powerplant plays the experiential role as well. When you enter from the top, your view is limited to the roof top view (facade is hidden). While you walking down the stairs and experiencing the lively interior of the builiding you walk back and forth towards the past (rock directed to the mainland-old land) and the future (glass facade opening directed to the open sea). Facade keeps opening along your way to confront you with the open sea in the bottom of the building. This is the place where you feel the powerful human structure and the power of the sea confronting each other.



floor +6 - entrance/ floor +5 - shelters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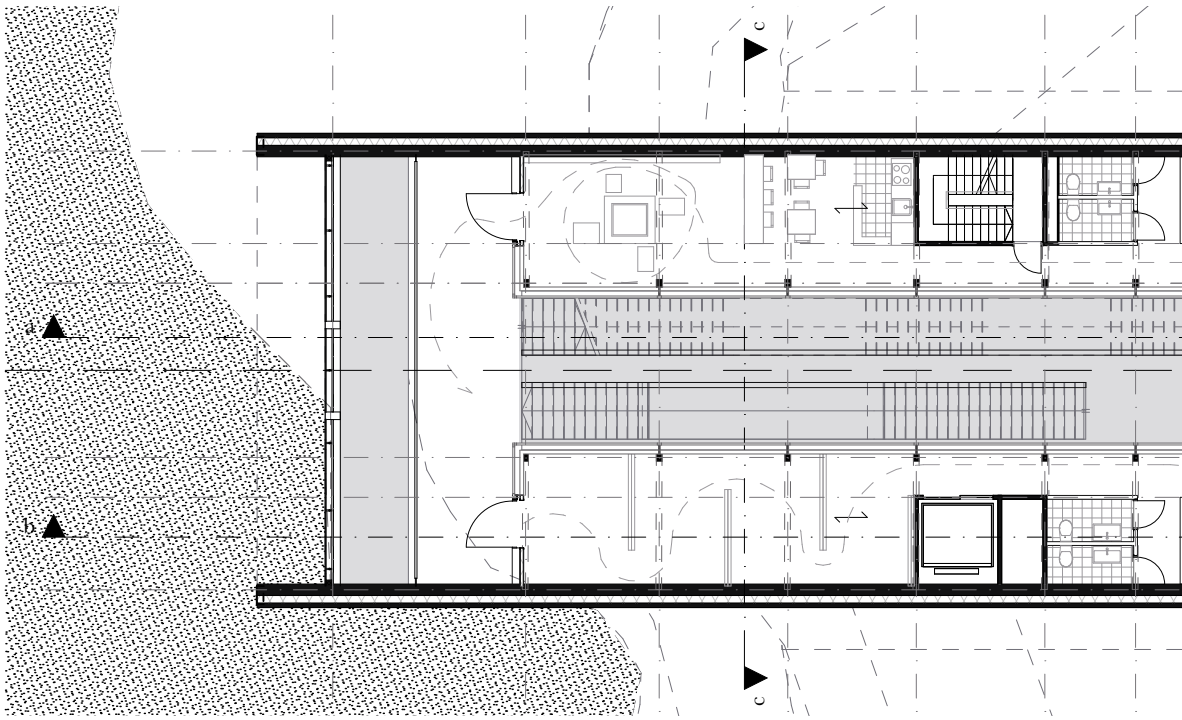
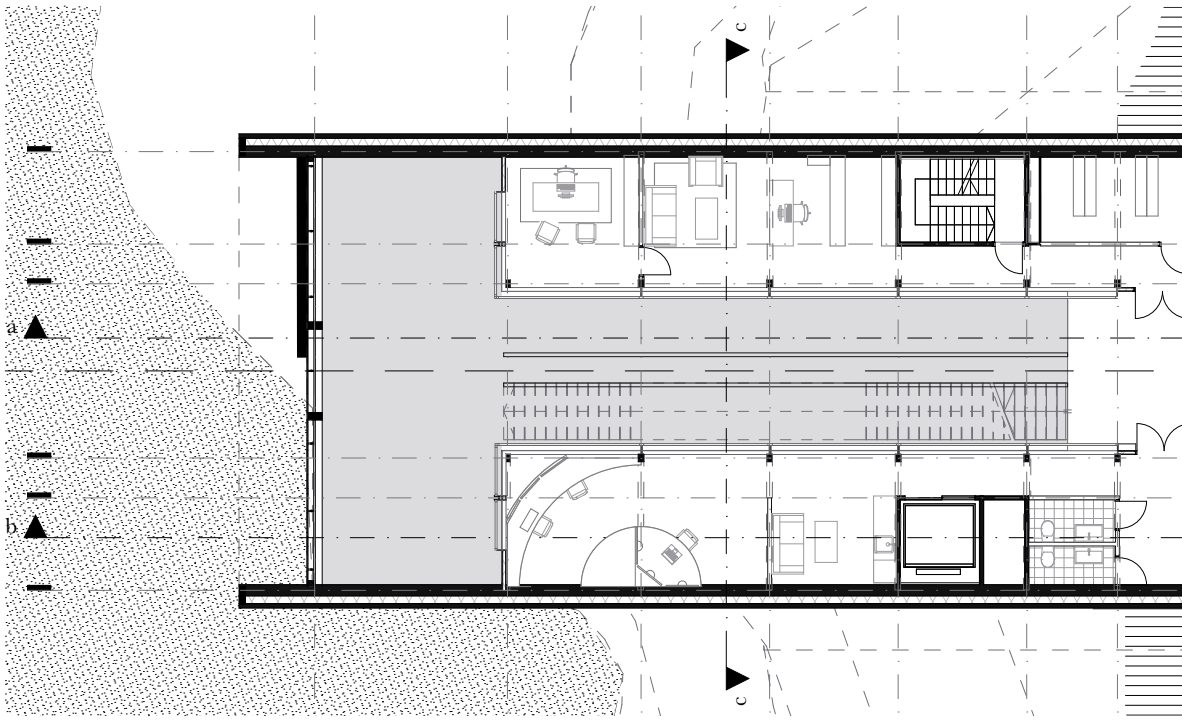
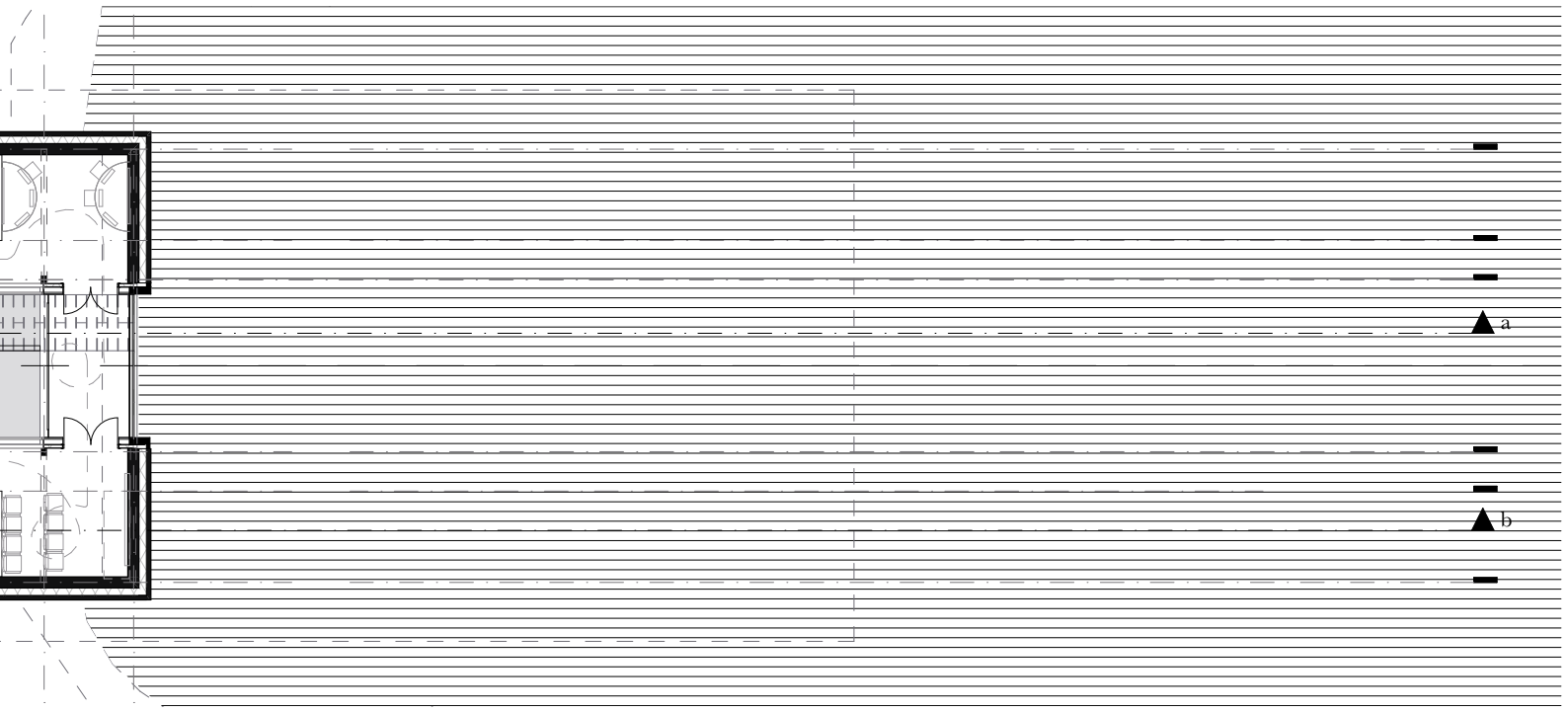




floor +4 - visitors centre/ floor +3 - control room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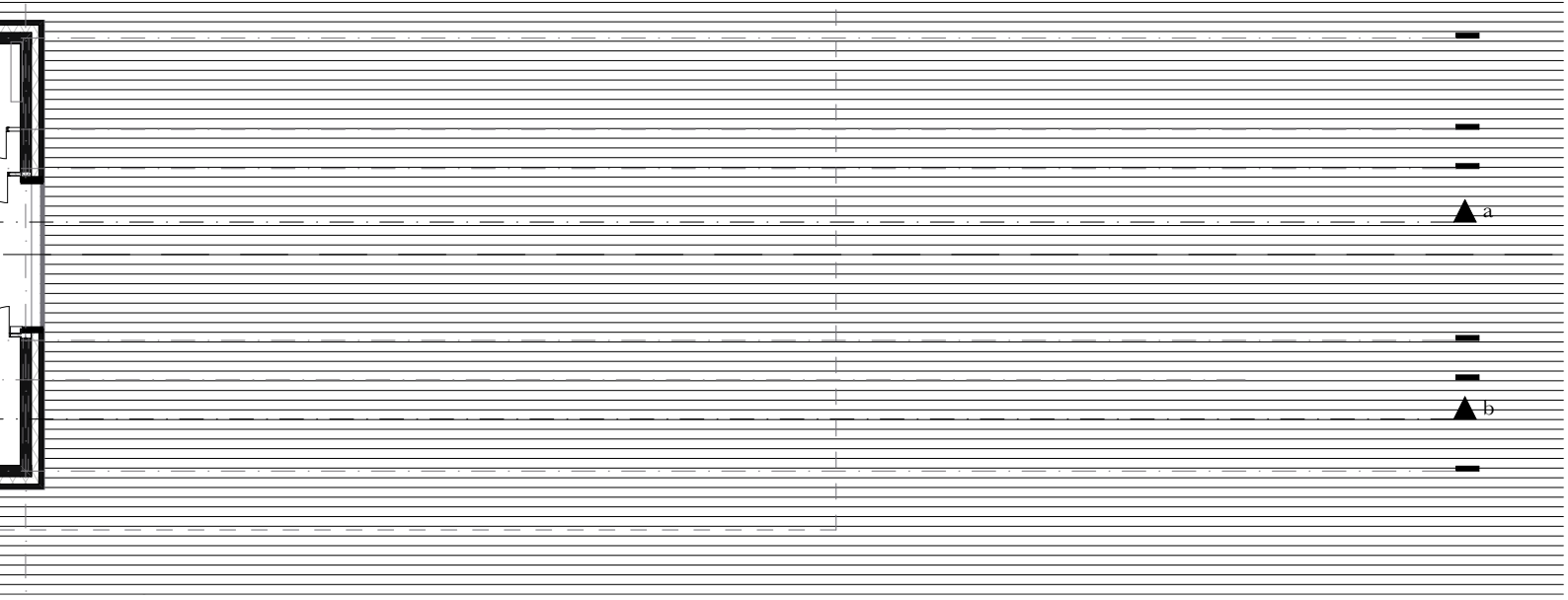
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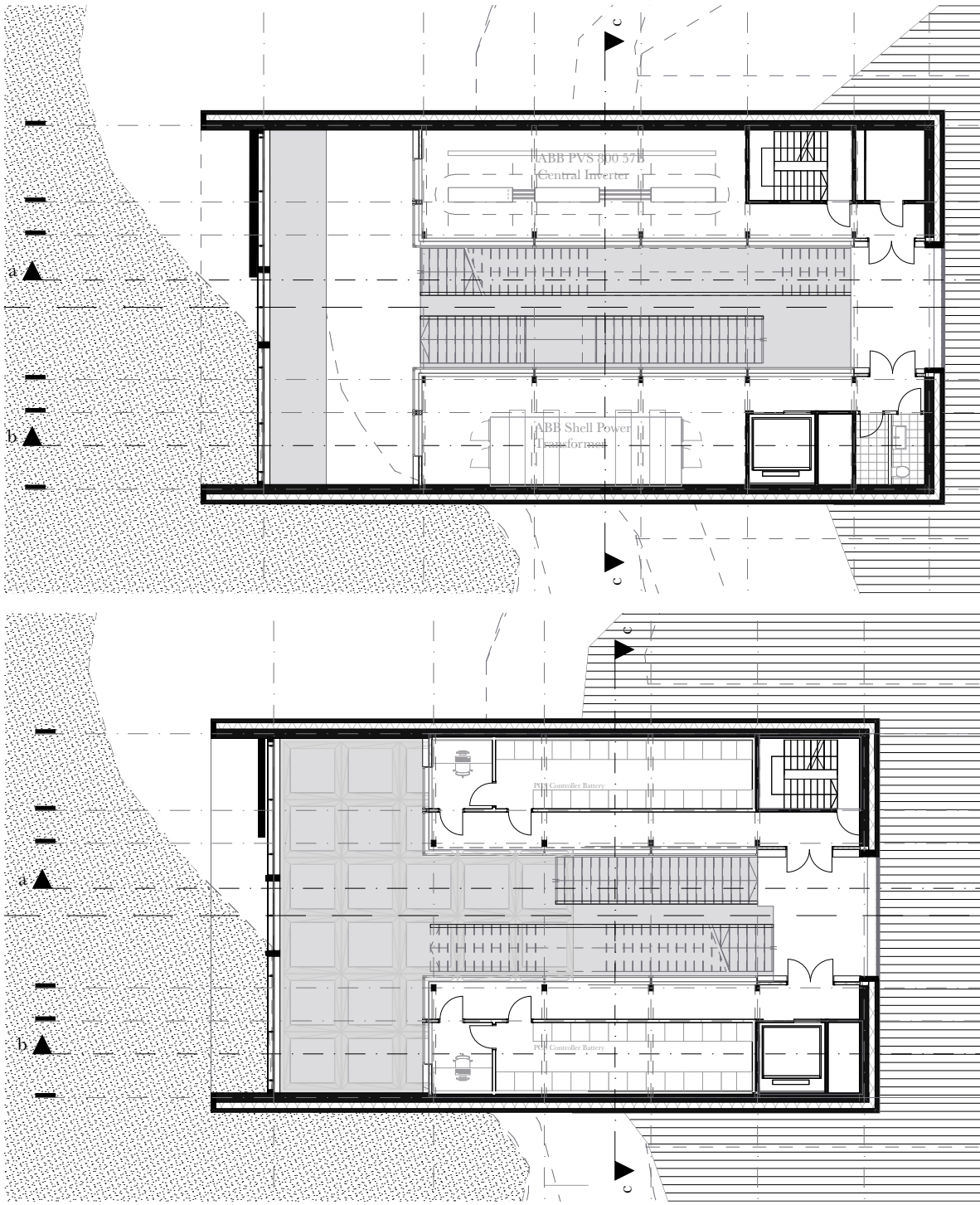
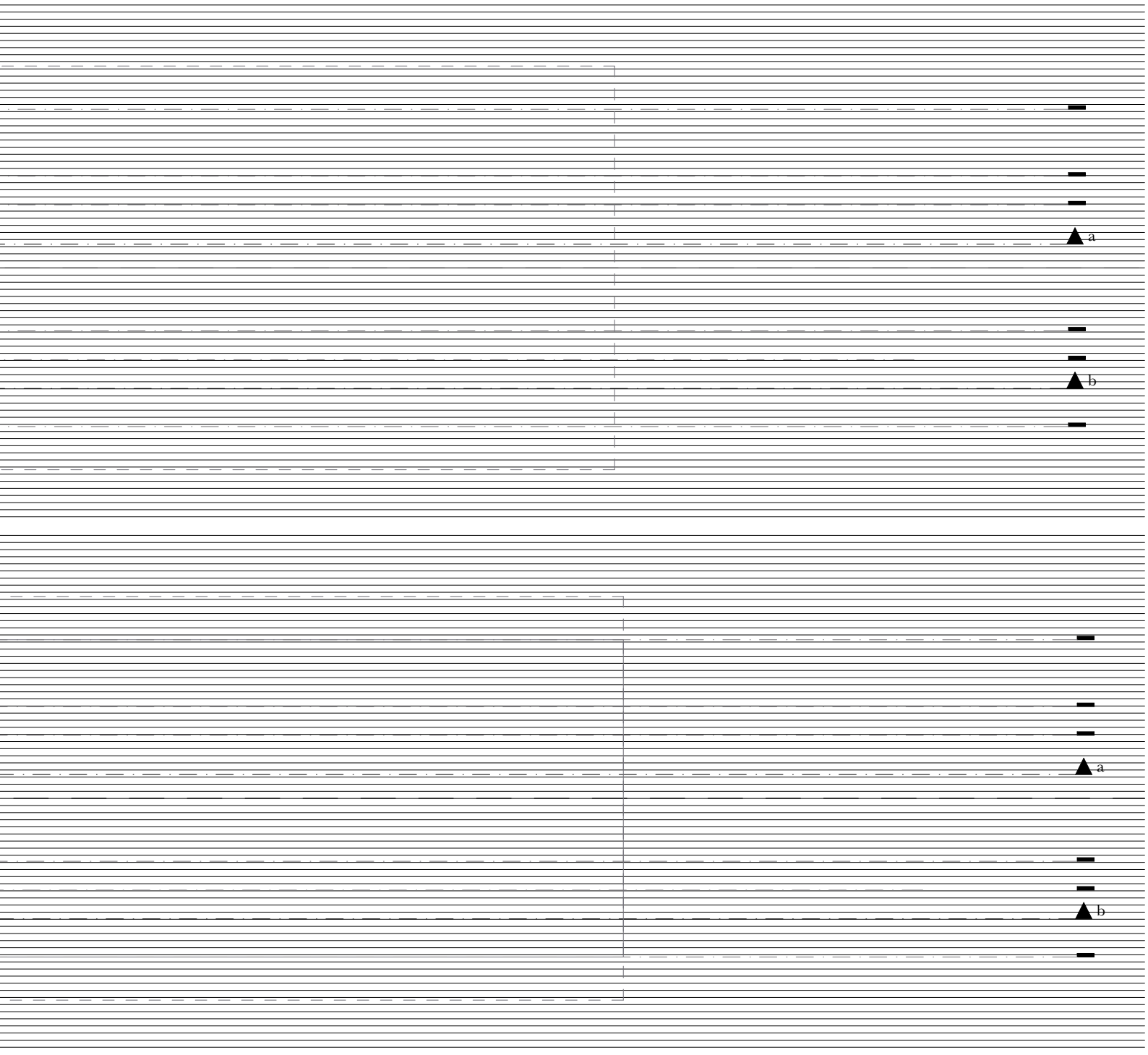


floor +2 - converter,transformer space / floor +1 - battery storage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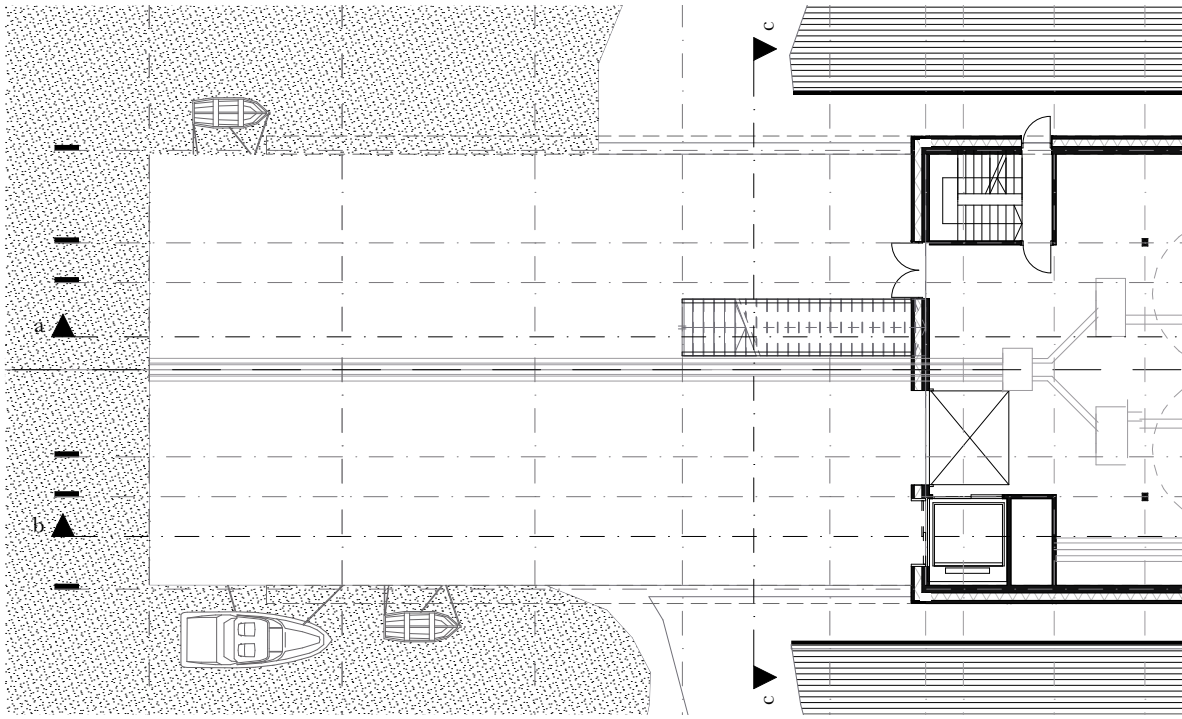
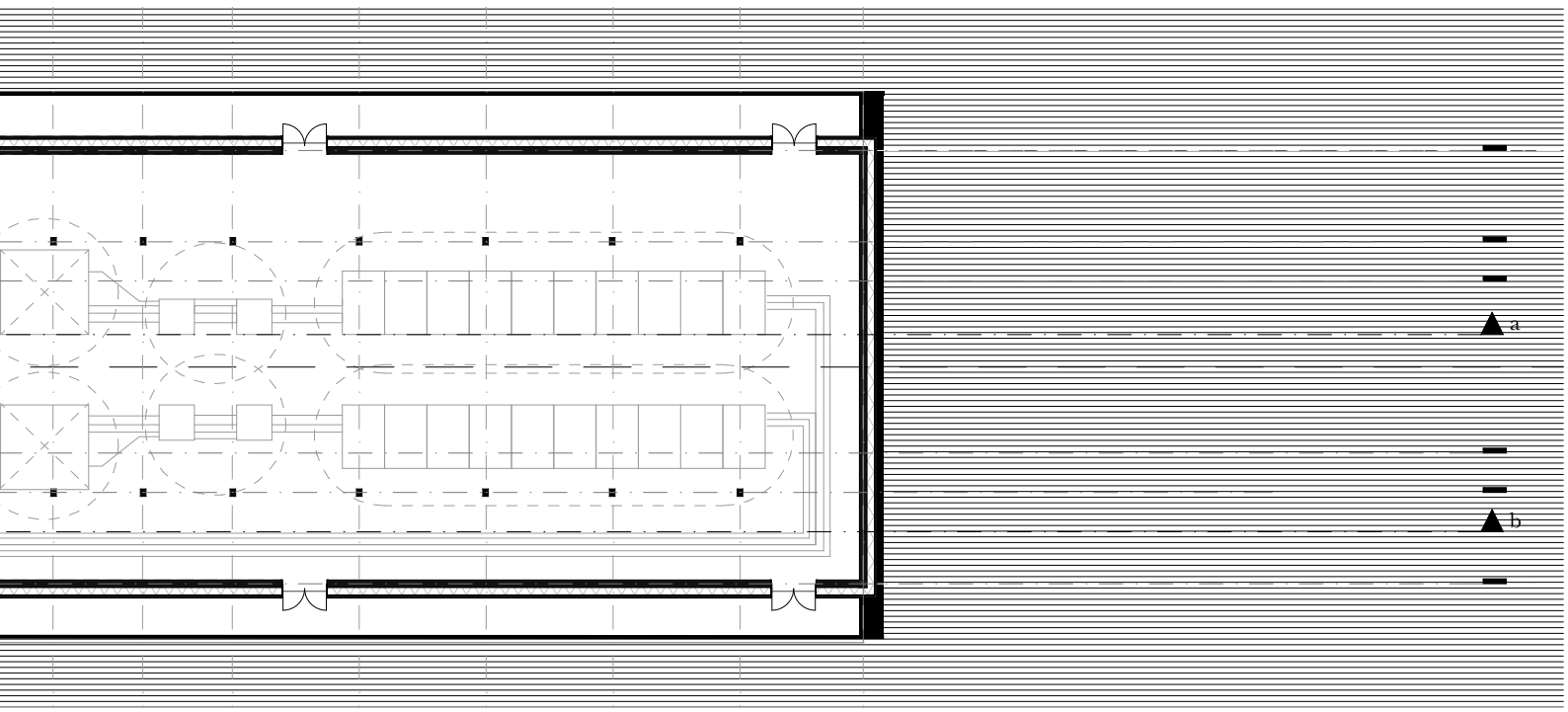


floor 0 - machinery, deck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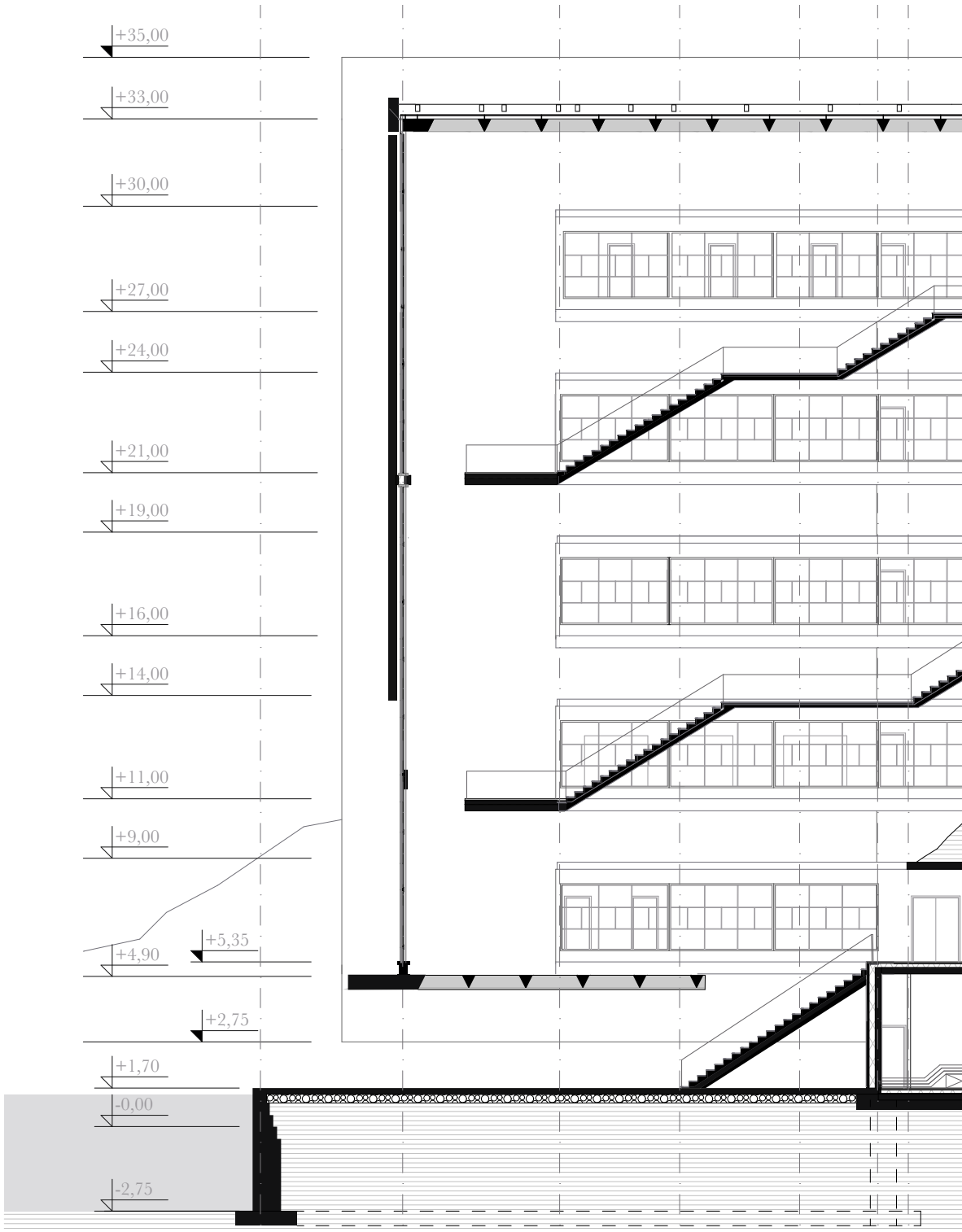
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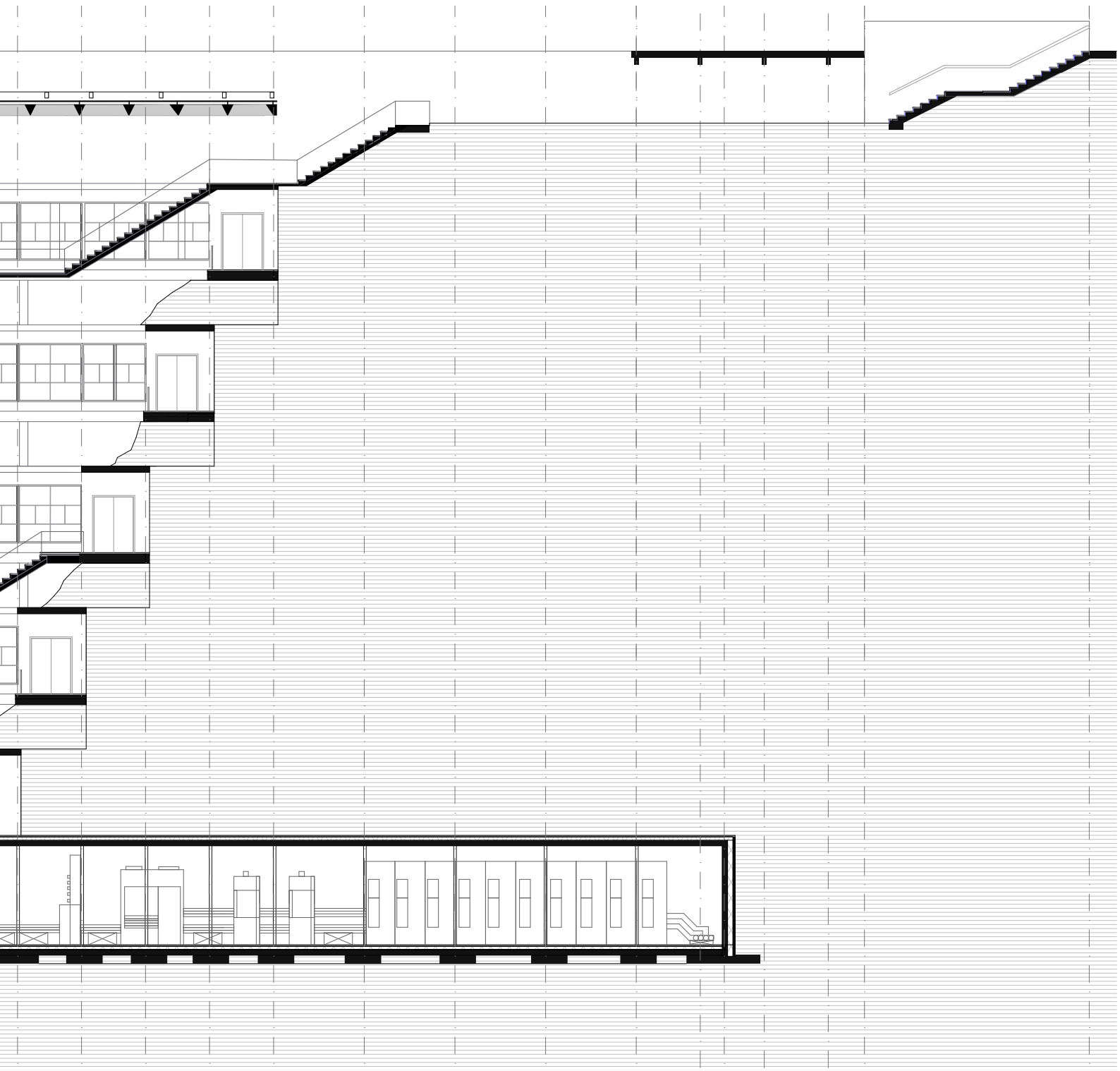

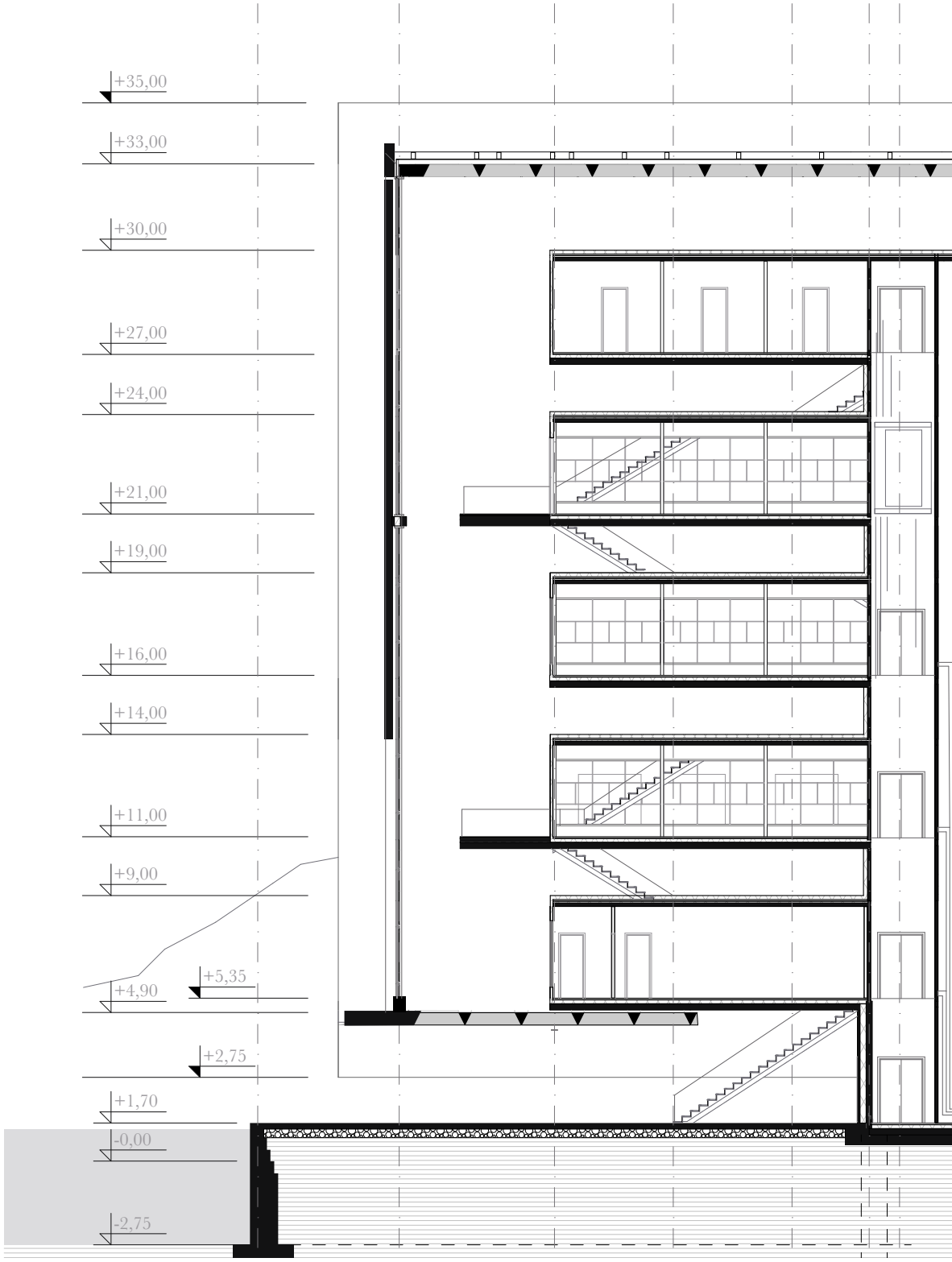
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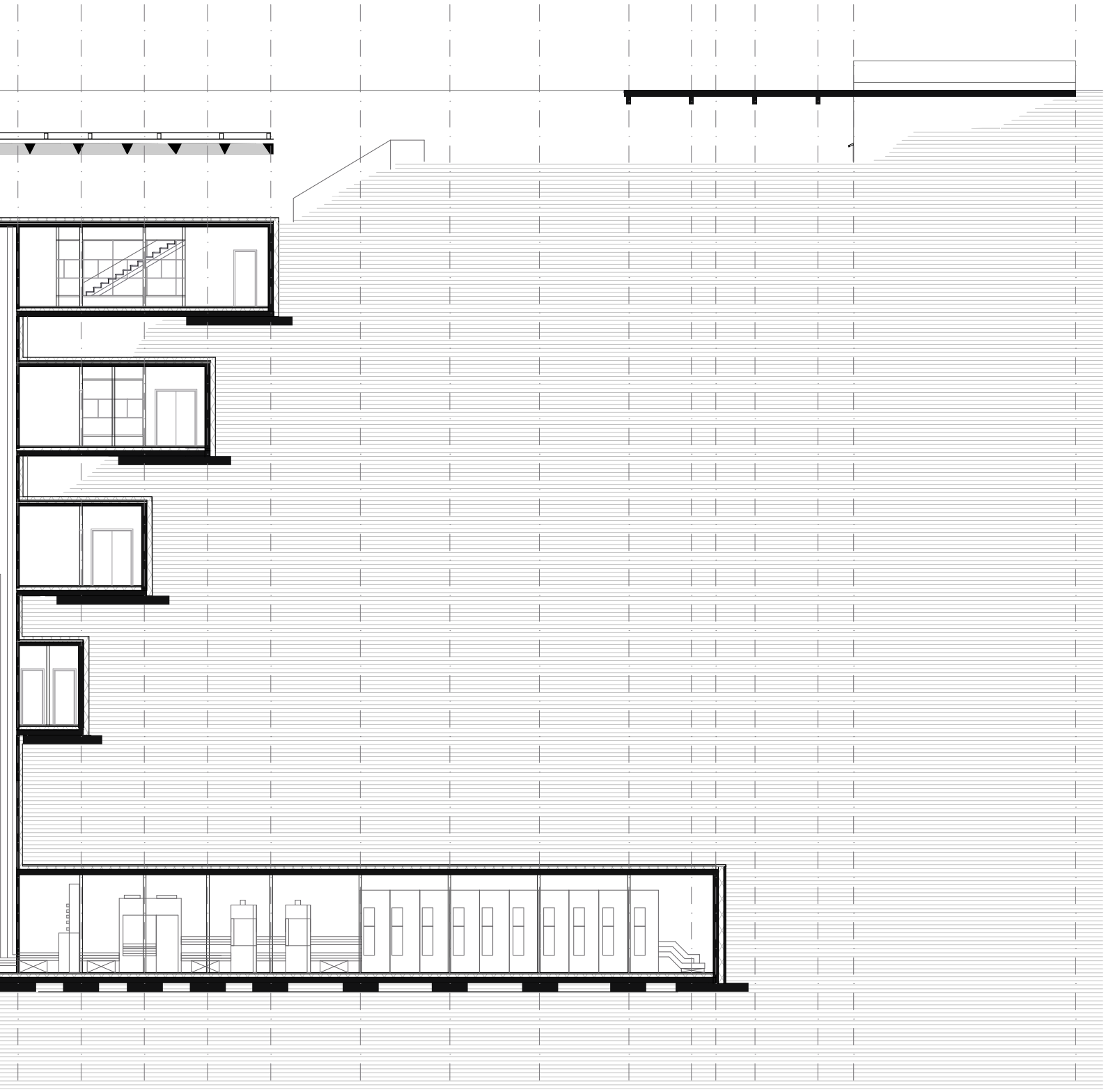
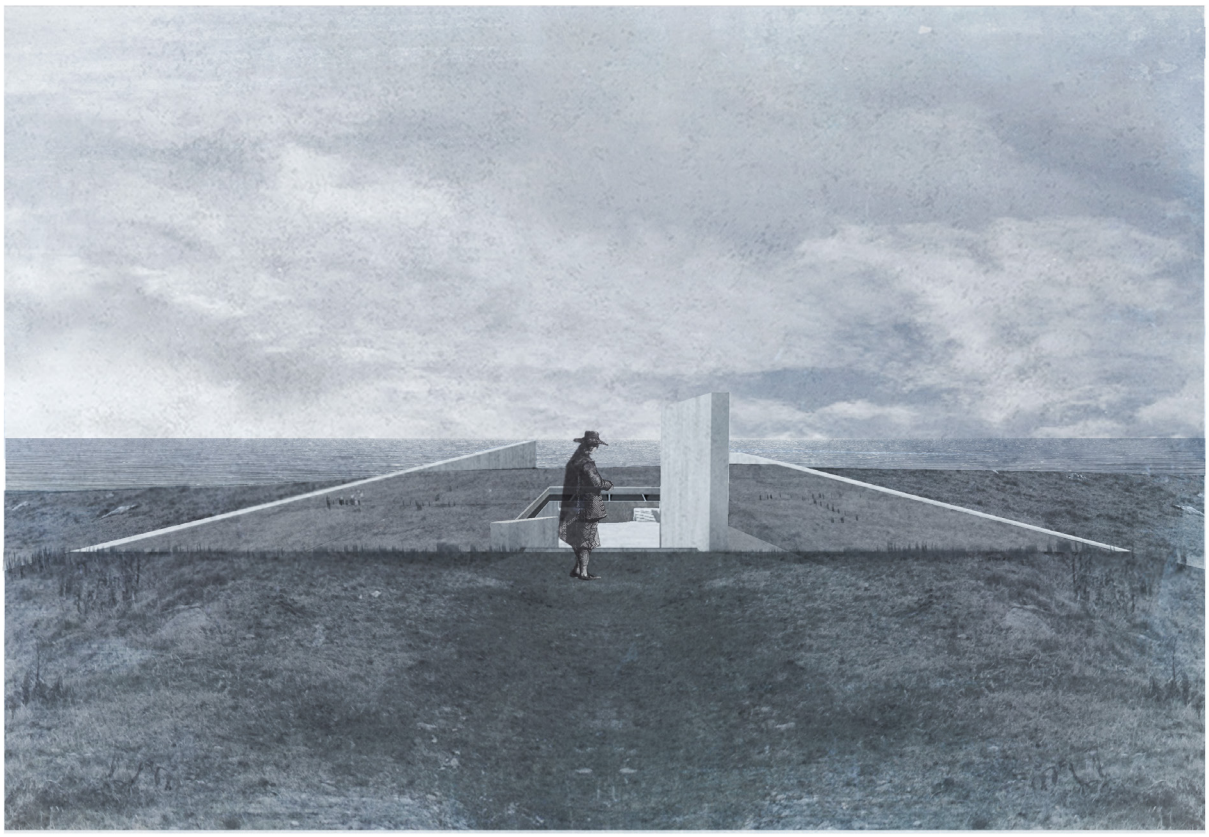
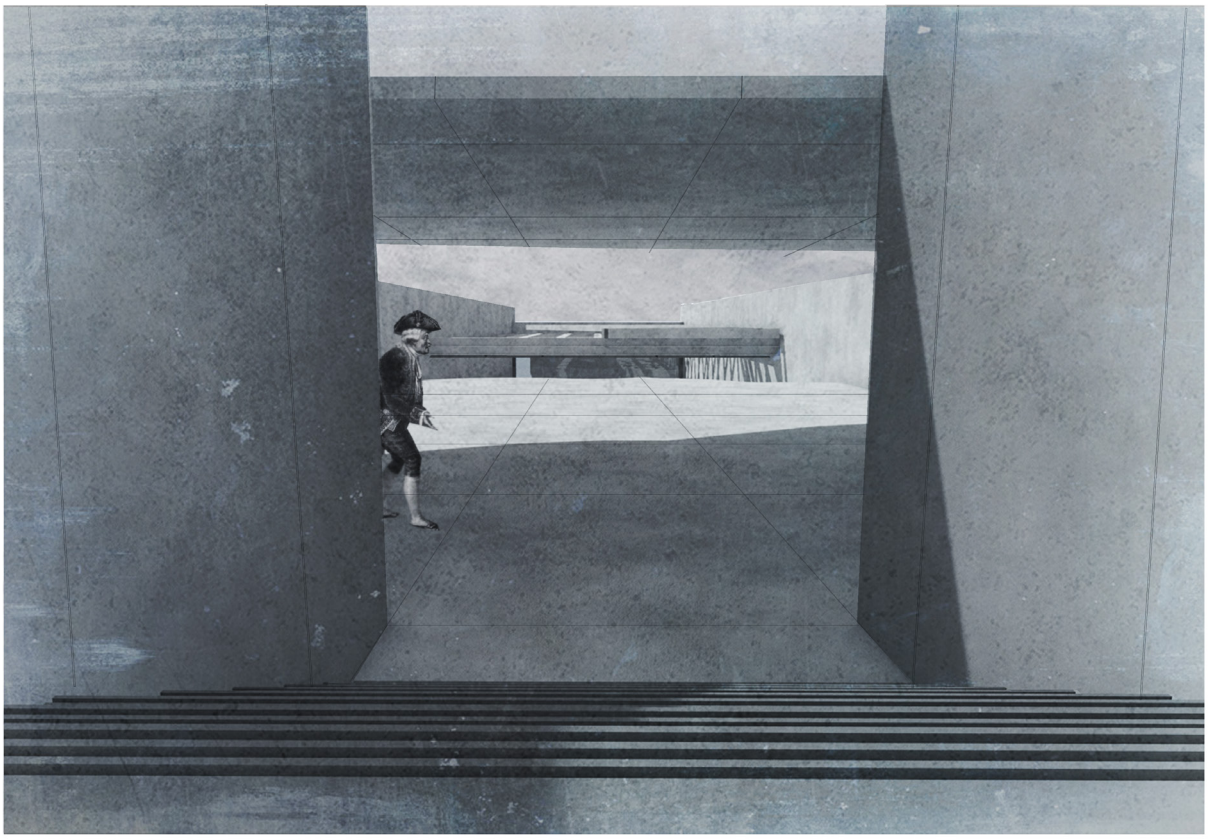
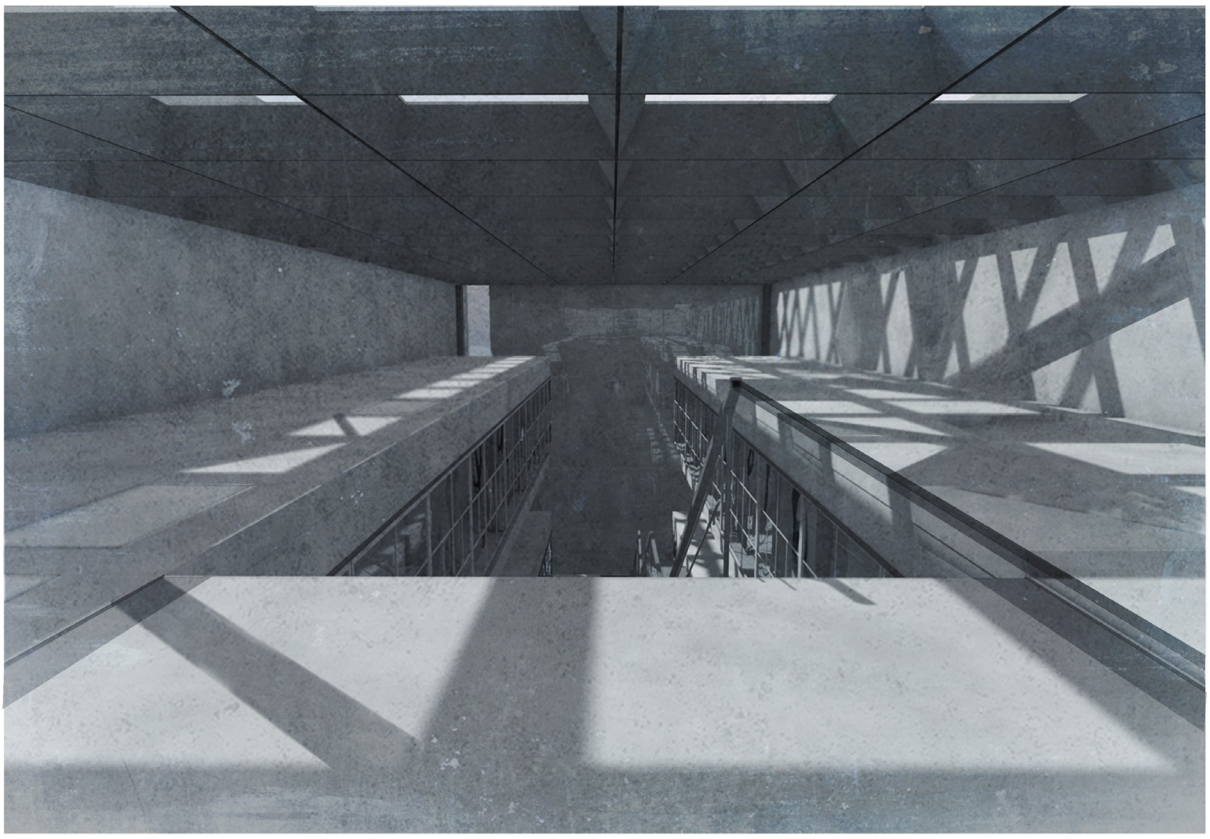




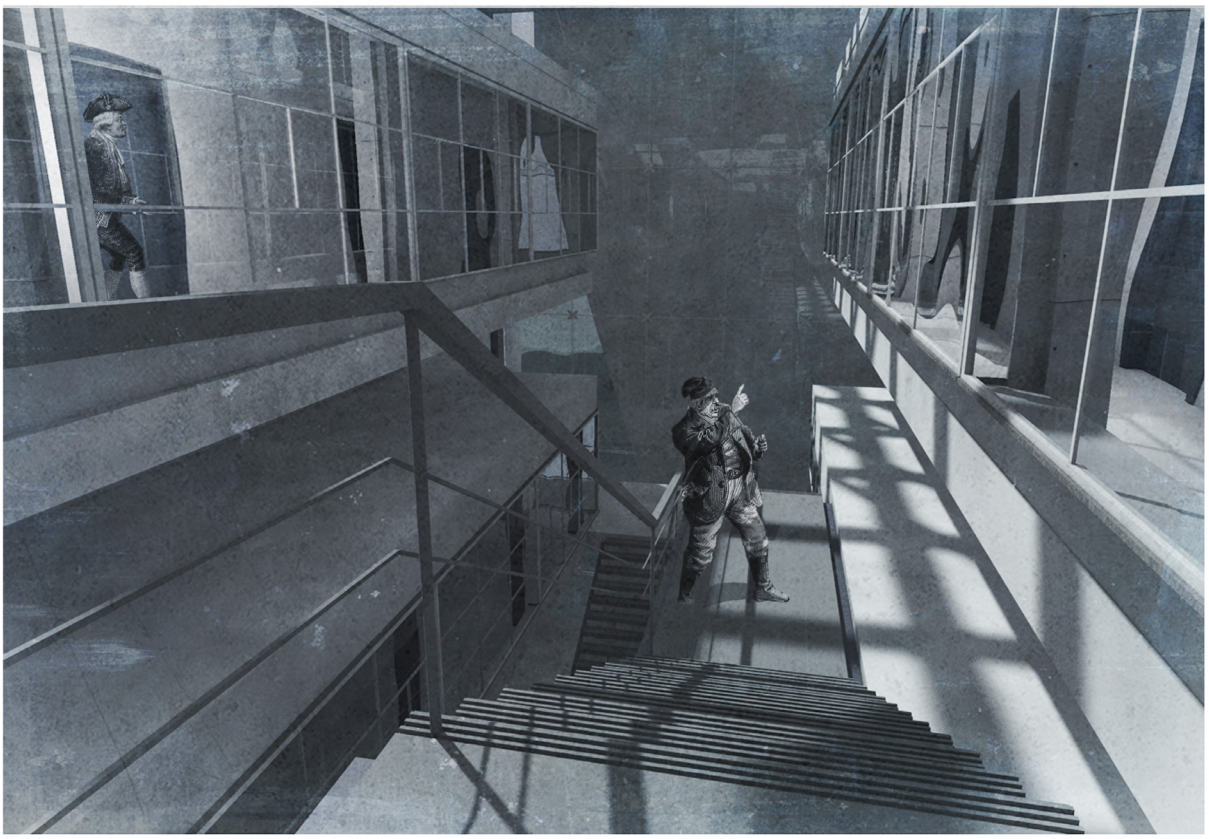
Tidal Power Plant - Hidden entrance in the landscape



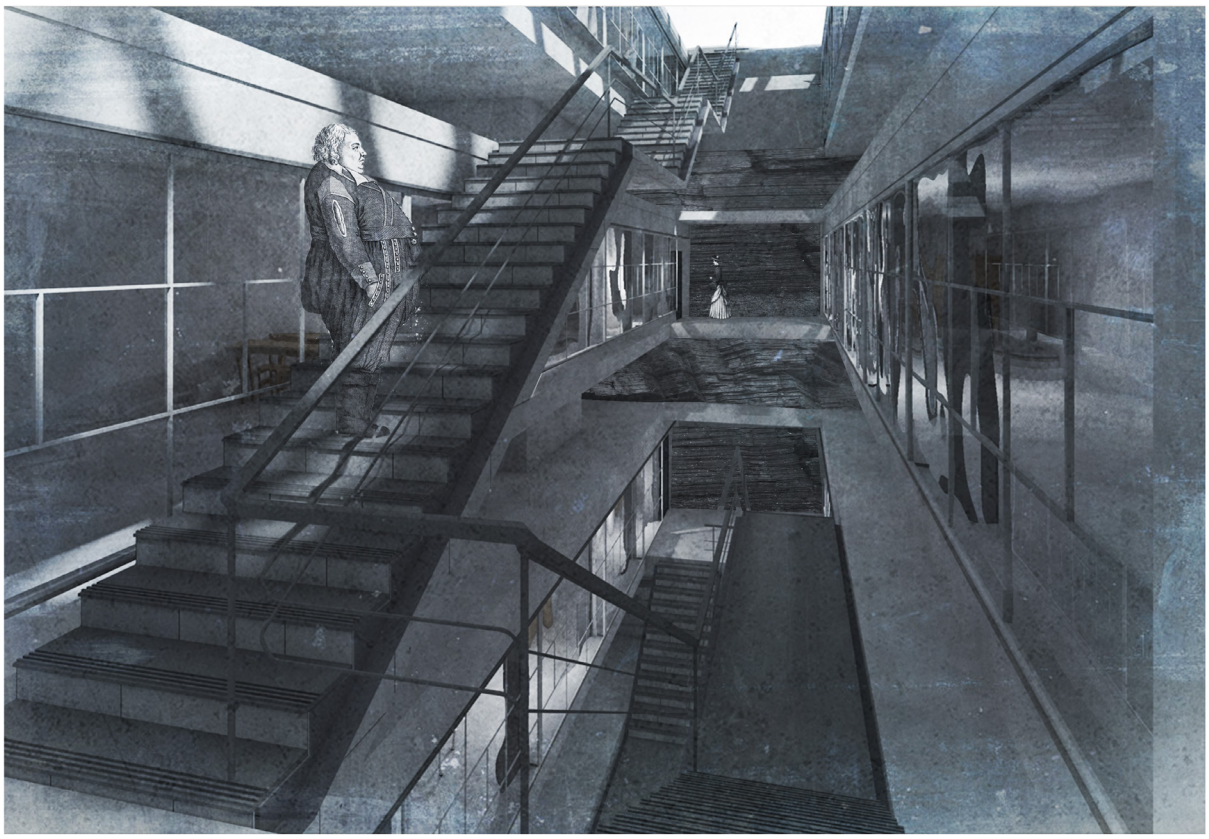
Tidal Power Plant - Entrance



Tidal Power Plant - Top View

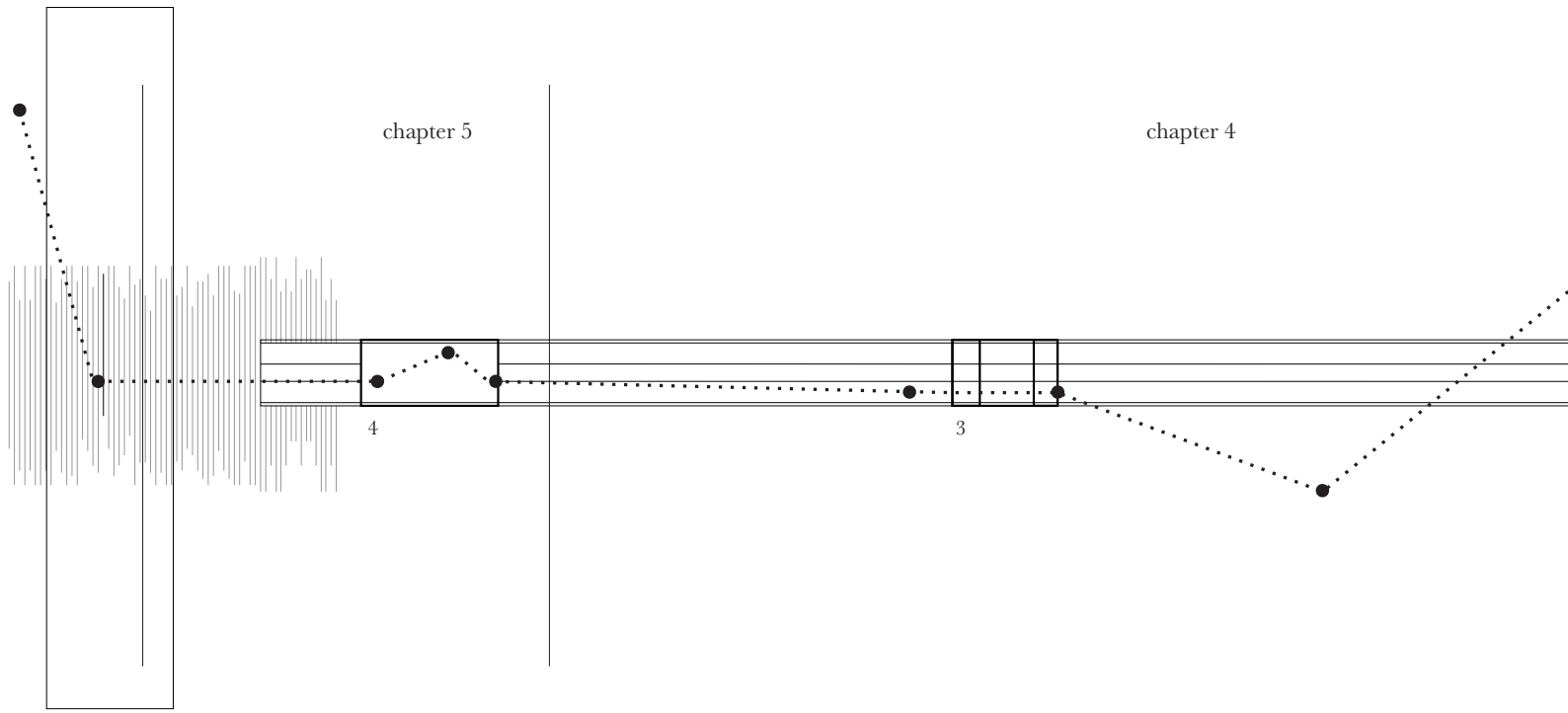


Tidal Power Plant - Interior

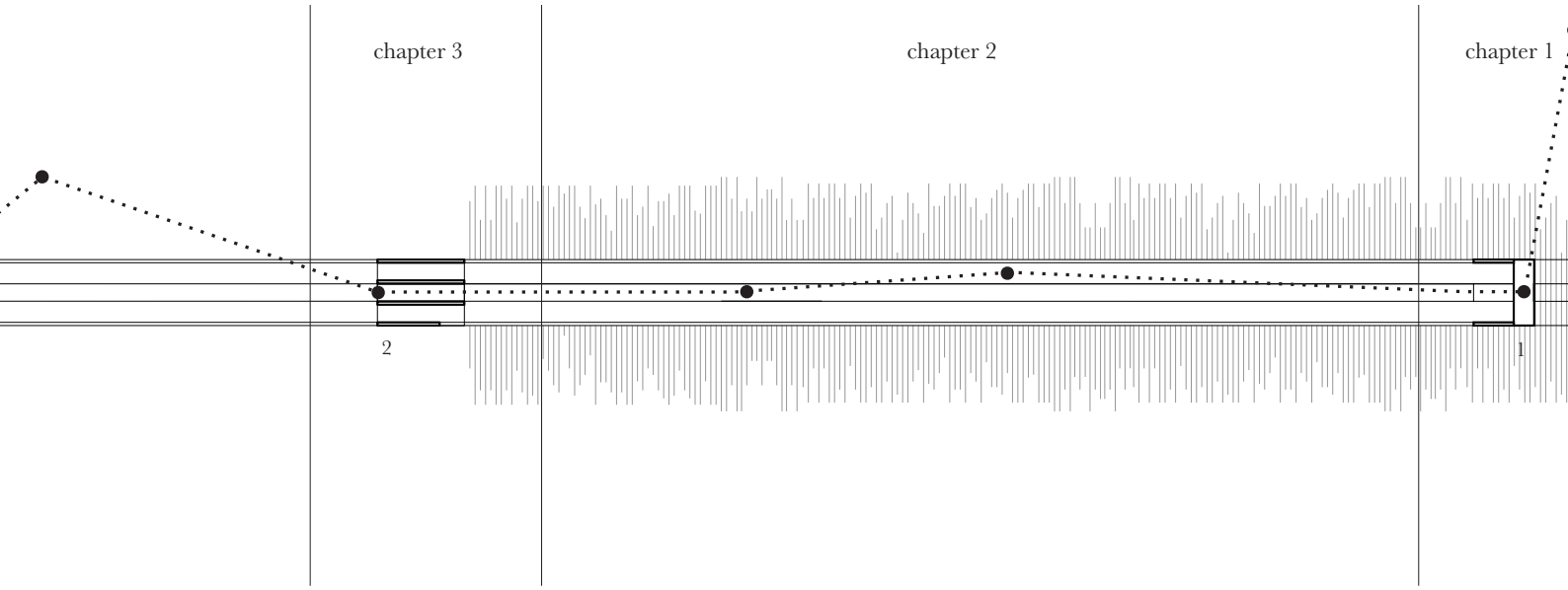


Tidal Power Plant - Interior

Tidal Power Plant - Interior



- Familiarizing the Unknown -



DEPARTURE

The deck of the Power Plant is the place of departure. Here, the visitors can see the oberwhelming balance between human and nature. Here, the visitors take a boat and come back to the mainland by boat. This chapter is the conlcusion of the story, the conlusion of all the chapters where human might be in a direct contact with the natural power - water.

Tidal Power Plant - External Deck - Exit

Departure

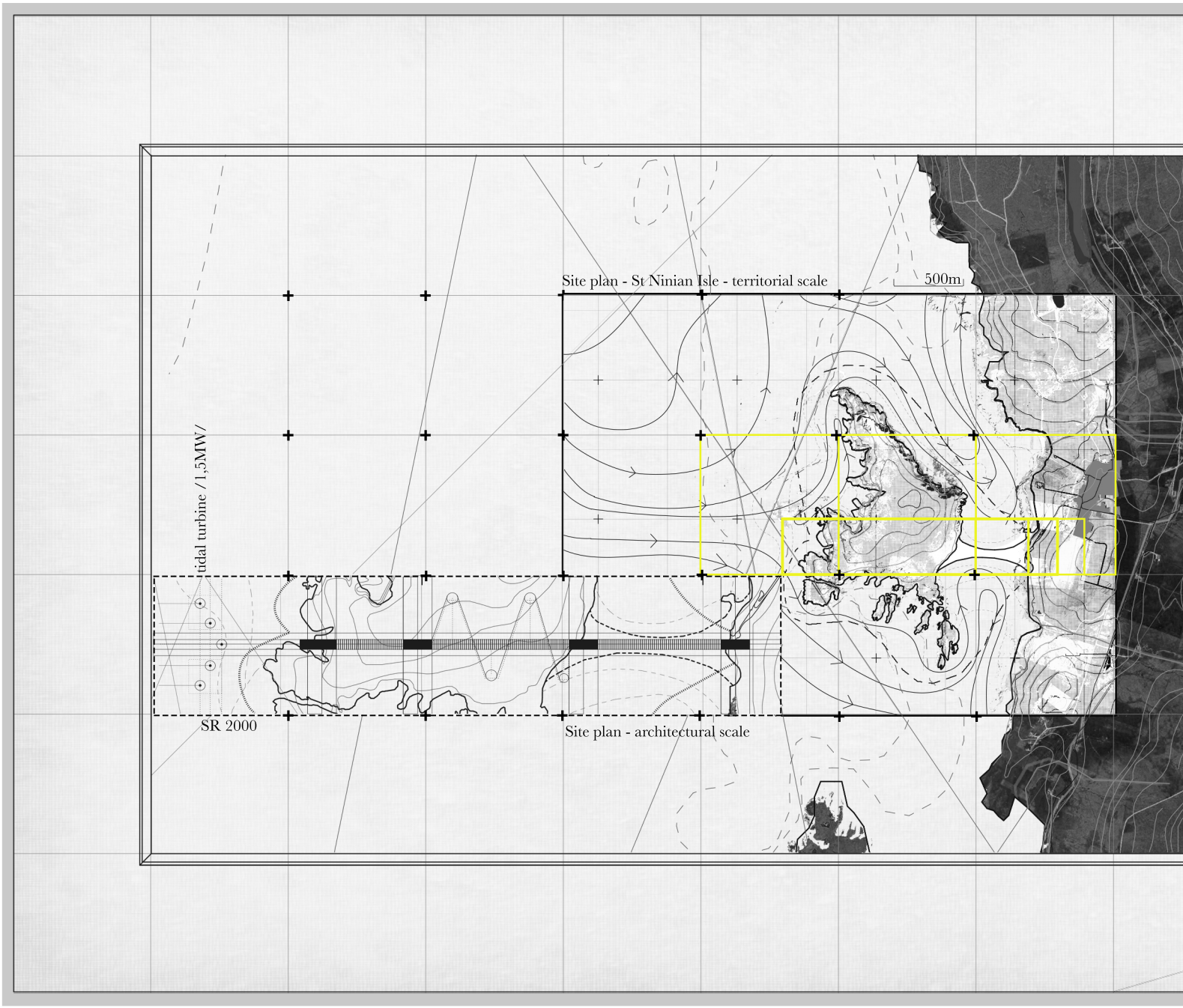
Tidal Power Plant - Southern Facade

Tidal Power Plant - Cross Section from southern facade

Tidal Power Plant - western facade

Tidal Power Plant - cross section from western facade

IV TRANSITION


Site plan - St Ninian Isle - territorial scale
500m
tidal turbine / 1,5MW/
SR 2000
Site plan - architectural scale


NORTH SEA
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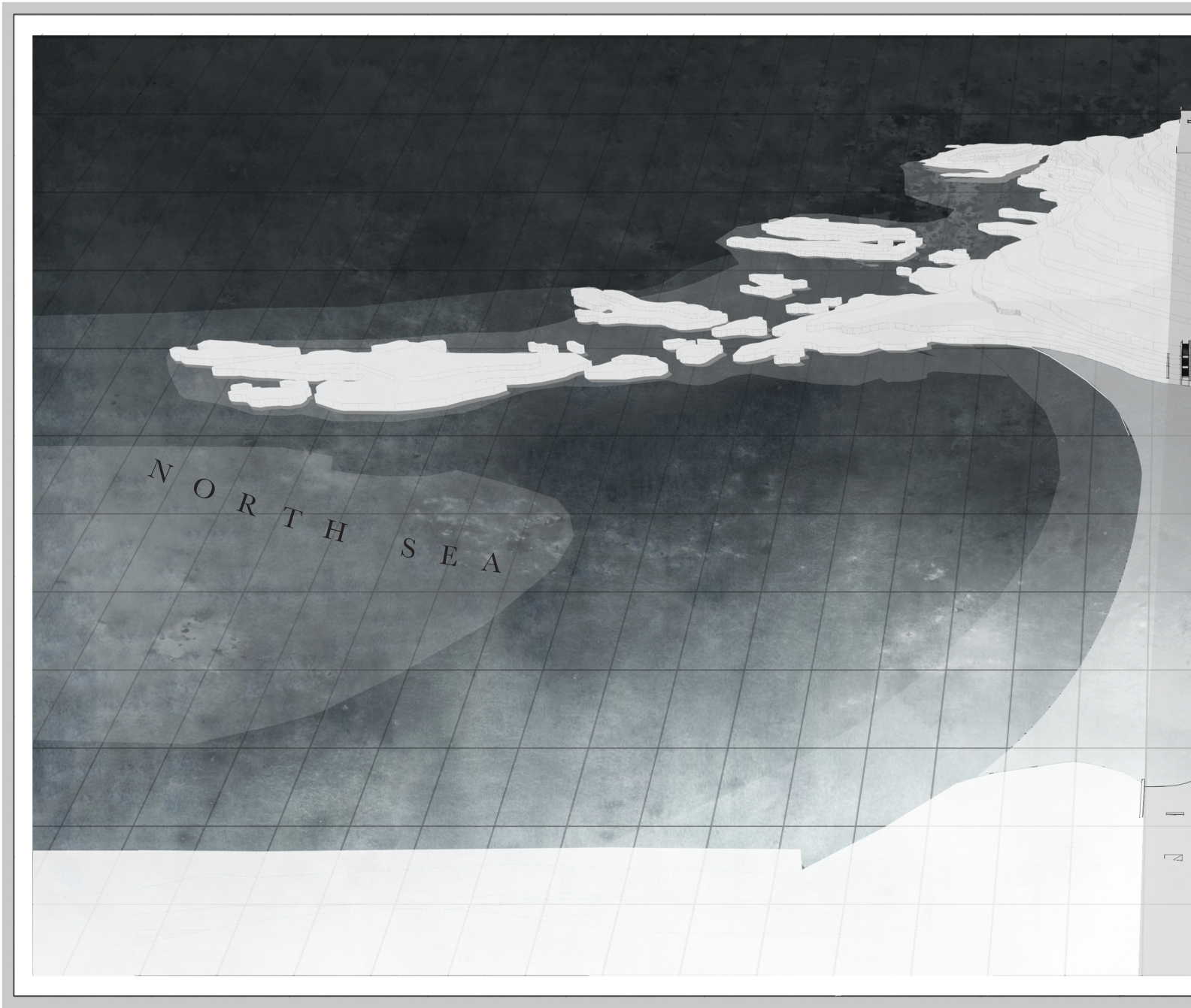
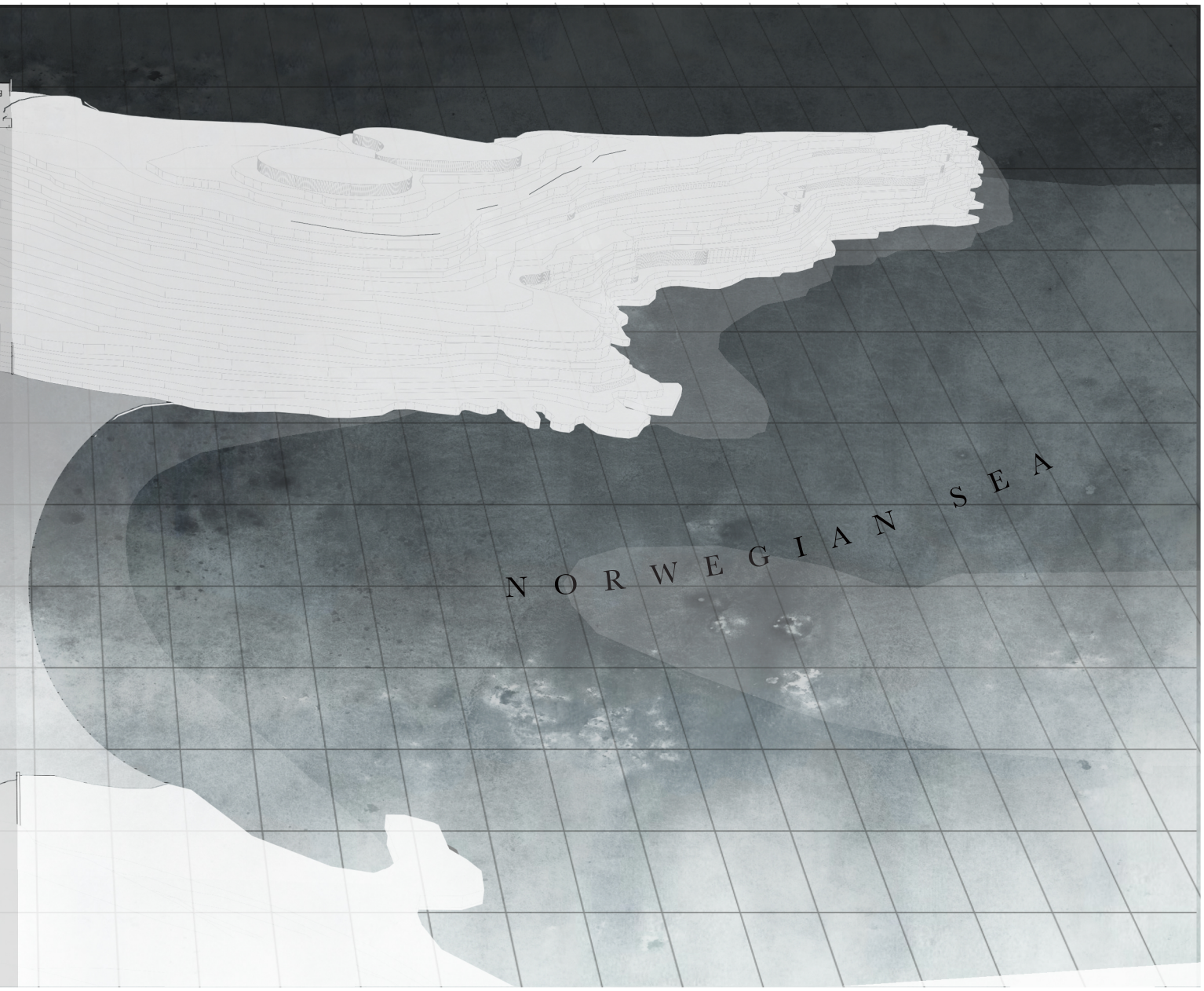
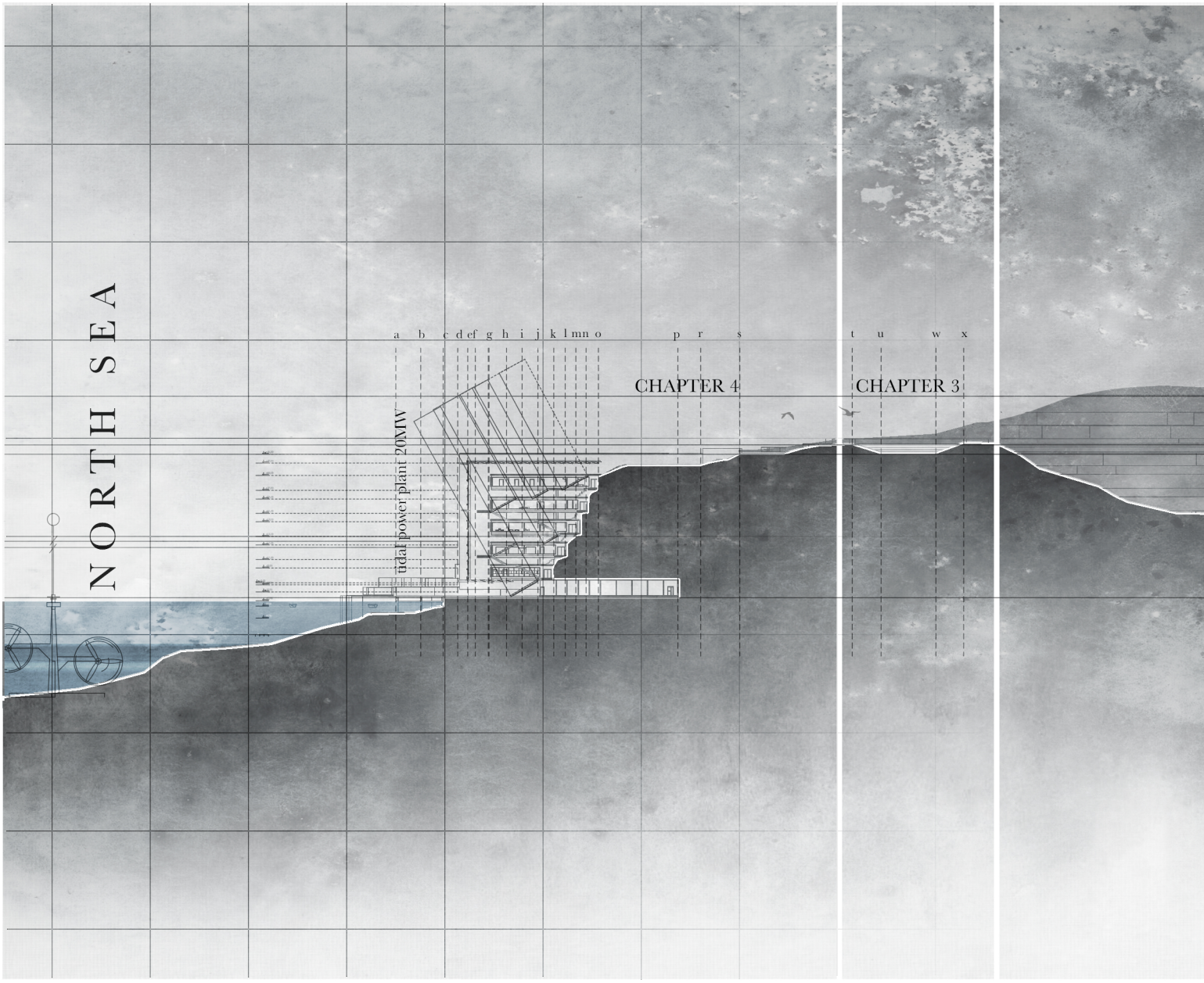
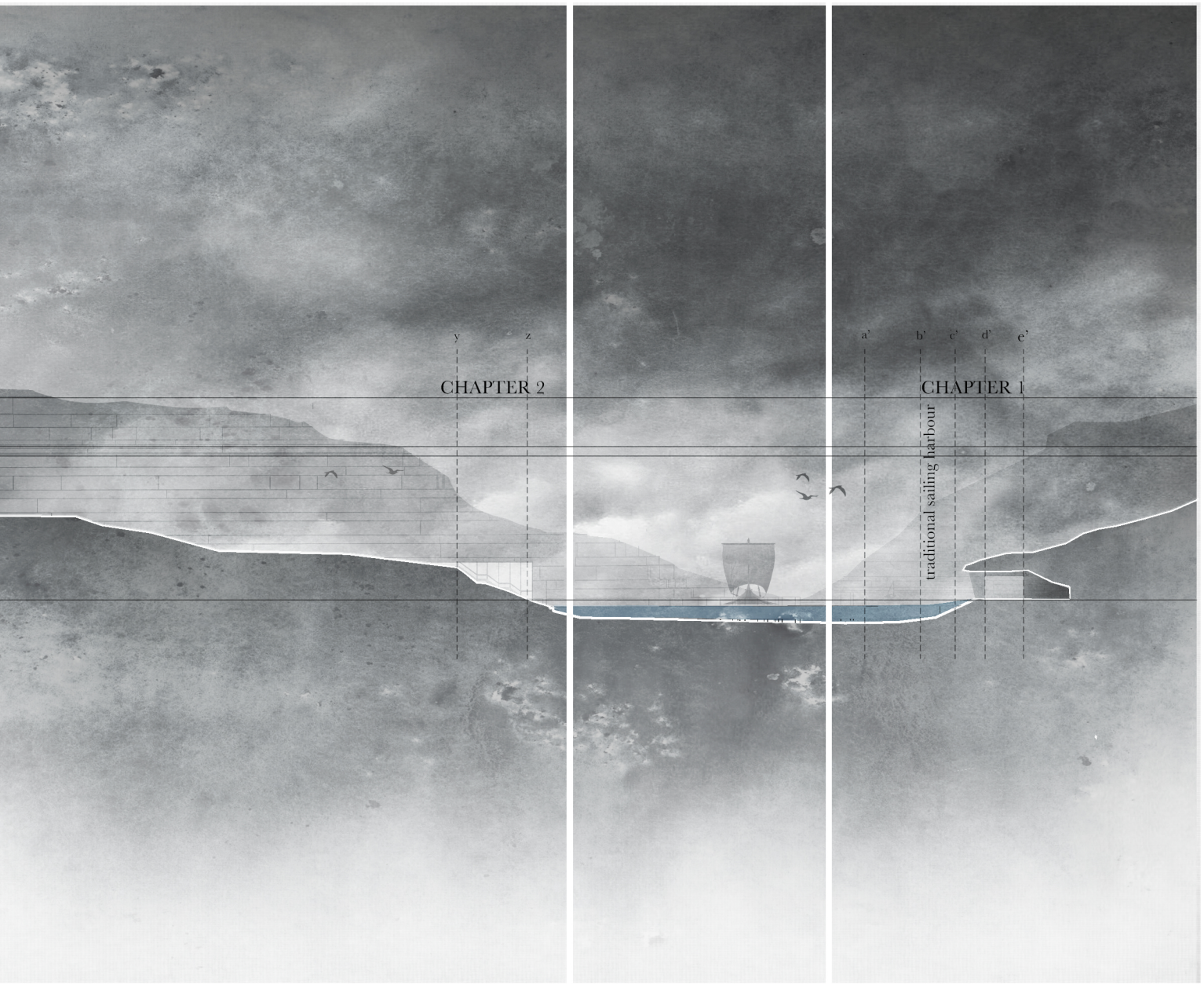
Territorial scale- - Shetland Islands
1000m

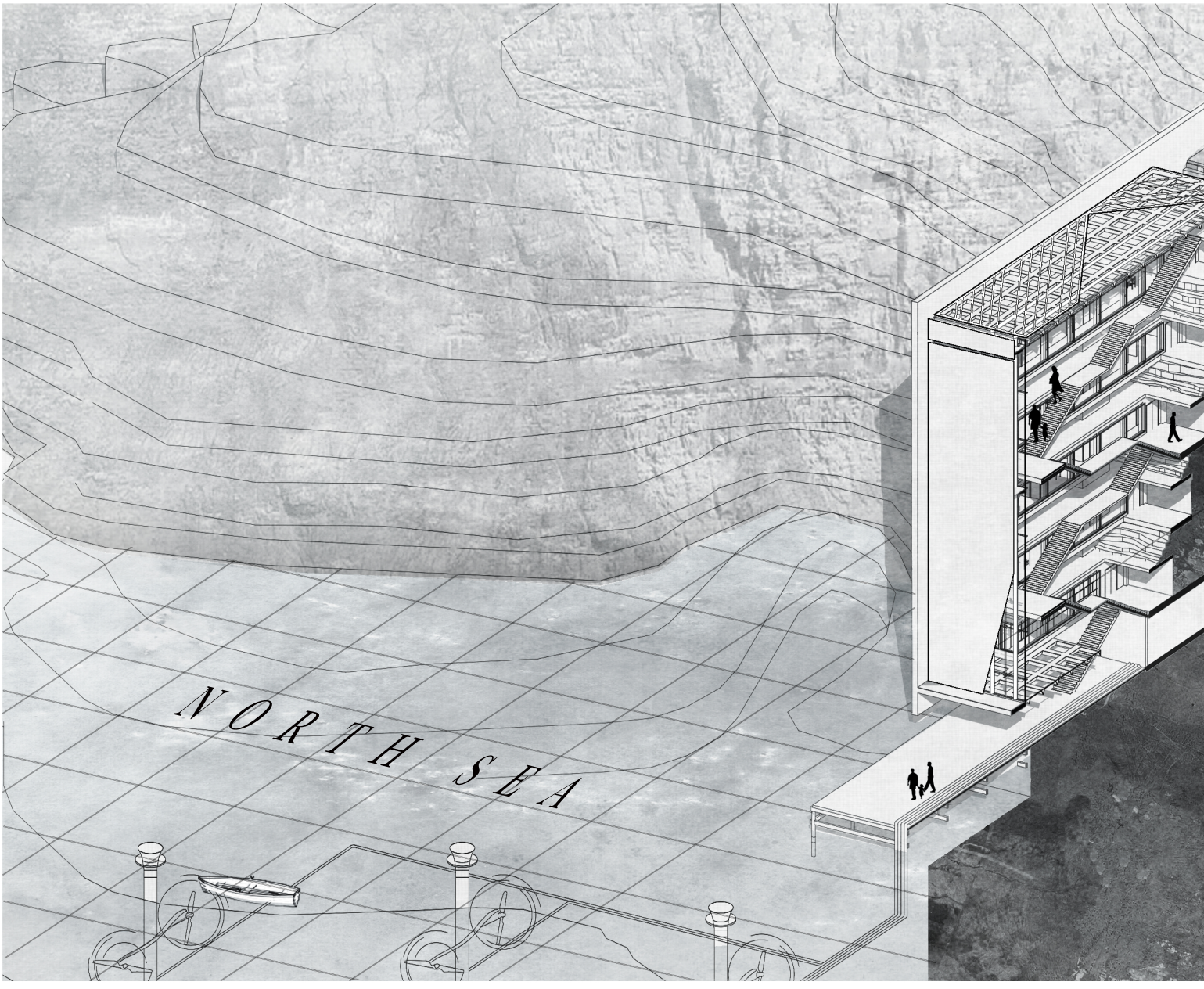

NORTH SEA


NORWEGIAN SEA

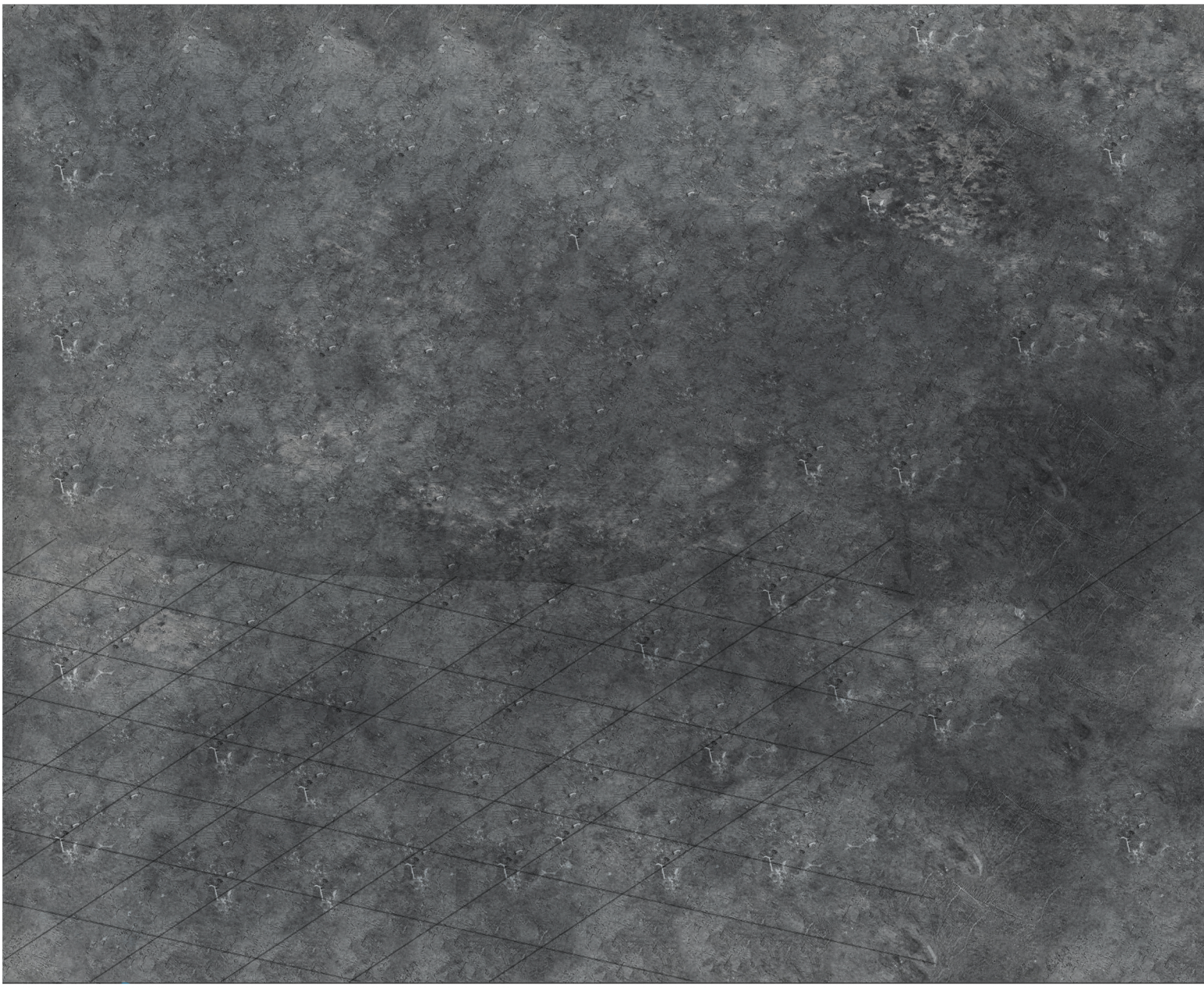


92 Section through the experiential path


y
z
a'
b'
c'
d'
e'
CHAPTER 2
CHAPTER 1
traditional sailing harbour



94 Cross section through tidal power plant



96 Cross section through tidal power plant