

*Julia Gustafsson*

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## **INTRODUKTION**

***I mitt examensarbete** har jag valt att undersöka utformningen av en utomhusteater och hur denna kan integreras i sin spektakulära kontext; en kusttomt i Portugal.*

*Min strategi och metod har utgått från ett givet program samt deltagandet i idétävlingen "ArkxSite - Theatre". Problematiken i att planera och designa en harmoni mellan "kontrollerad" och "okontrollerad" har därefter varit ledande under examensarbetet.*

***I denna rapport** beskriver jag den undersökande designprocessen genom att dela upp berättelsen i "förundersökning" och "utveckling". Förundersökningen resulterar i tävlingsförslaget "Competition entry" (s.42) och utvecklingen resulterar i "Final proposal" (s.60). Mellan dessa designfaser har jag valt att redovisa en sammanfattad reflektion av förundersökningen (s.54).*

*Arbetet och designmetoden behandlar därför två förslag, av den anledningen har jag valt att presentera både "Competition Entry" och "Final proposal" som två skilda designförslag.*

<i>Introduction</i>		
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<i>What is a theatre?</i>		<i>p. 20-29</i>
<i>Design incentives</i>		<i>p. 30- 41</i>
<b>Competition entry</b> <i>Crevice</i>		<b><i>p. 42- 53</i></b>
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<i>Evaluation</i>		<i>p. 54-59</i>
<b>Final proposal</b> <i>Crevice</i>		<b><i>p. 60-79</i></b>
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**Site**



*Peniche, Portugal*



*Windy*

*Natural*

*Surfspot*

*Ocean*

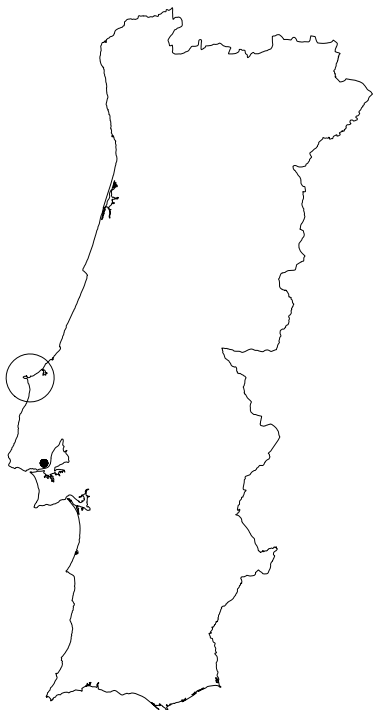


*Cliffs*

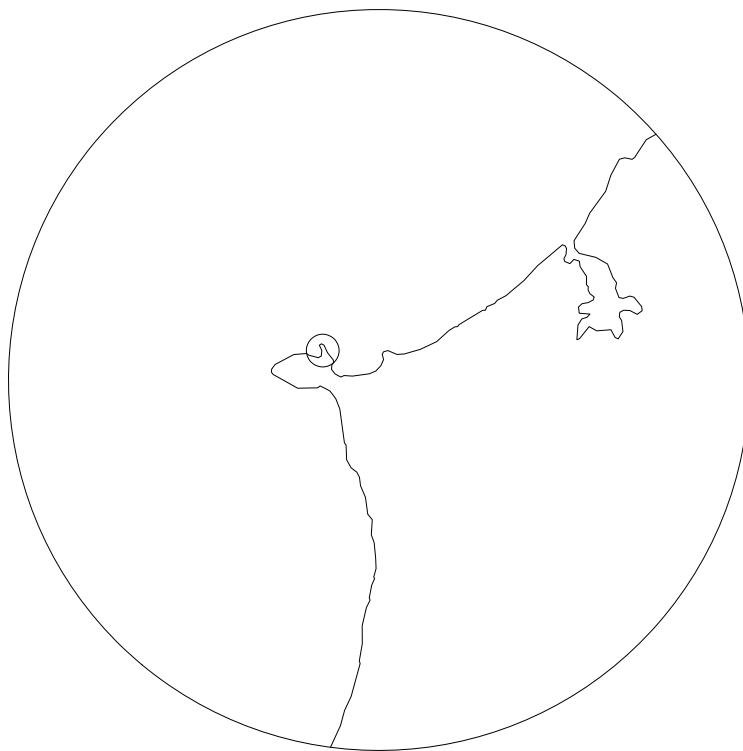
*Baleal*

*Fortress*

*Wild*



*Portugal*

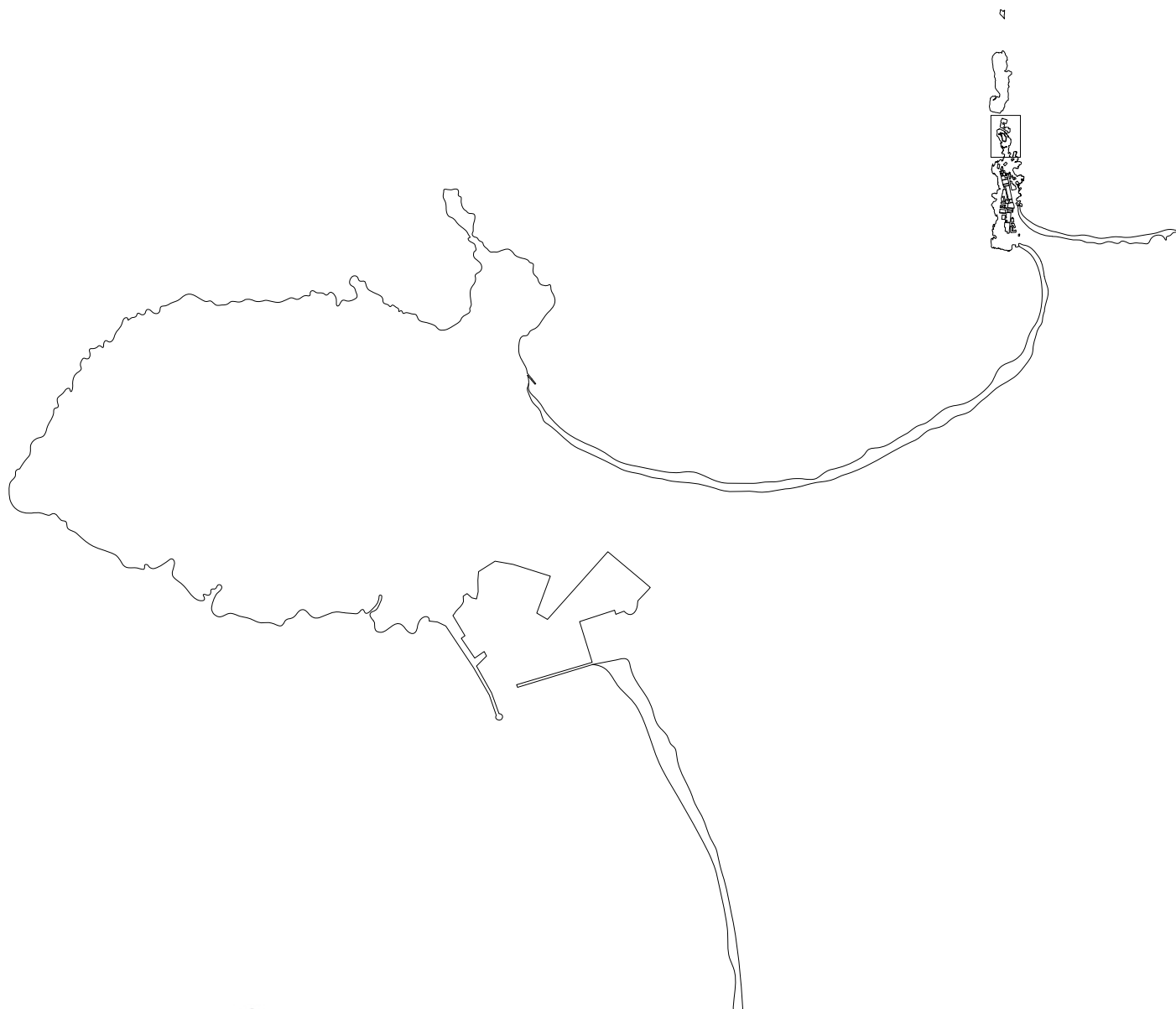


*Peniche*





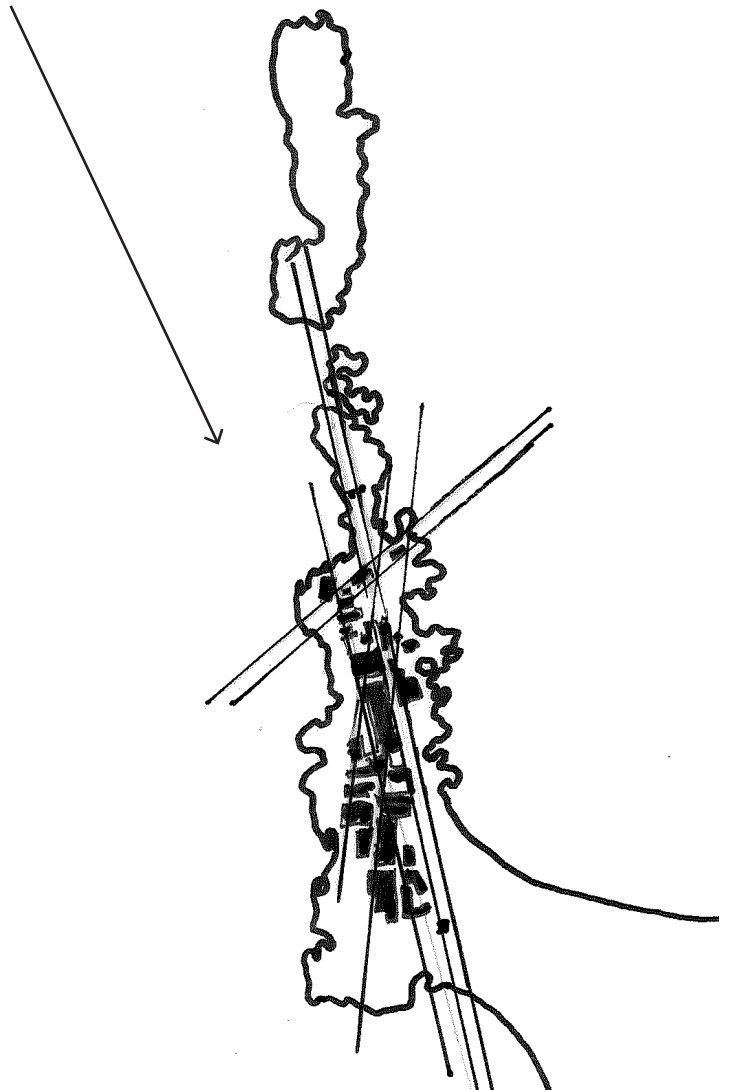




*Balear Peninsula*



0 500 m 1000 m



**Study:**

Direction of built surrounding

Direction of wind



## **Observation:**

### *Site features*



*fortress - ruins*

*The proposal must acknowledge the historical context. Ruins occupying the area are of interest and could contribute to the design.*



*Spectating*

*Spectating will be an important feature for the planning and design.*

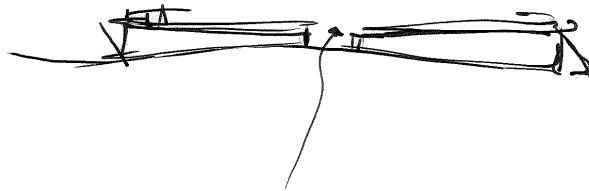


*Coastal*

*Baleal is a peculiar and intrusive location. The proposal must harmonize with its prerequisites.*

**Observation:**

*Ruins forming an entrance to the site*



**Observation:**

*Ruins forming an entrance to the site*





**Observation:**

*The natural landscape of Baleal possess an obvious direction of motion; it leans upwards towards the west.*





**Observation:**

*Baleal is made out of intensely eroded limestone.  
The formation has a peculiar shape which  
attracts tourist and geological enthusiasts.*





**Observation:**

*Great winds from north west has shaped the formation of the landscape through erosion.*





***Program***

## ***Open-air theatre***

### *Outlines*

- *Entrance* 15 kvm
- *Performance space* Flexible
- *Outdoor seating* 200 spectators
- *Dressing area w/private restrooms* 20 kvm
- *Café* 40 kvm
- *Restrooms* 20 kvm
- *Storage room* 15 kvm



## ***Search: Theatre***

*The history of theatre production and architecture can be traced back to 500 B.C. The auditorium is one of our civilisations most developed architectural designs and has surprisingly been proven to gain successful acoustics in the open-air in ancient designs.*

*The following chapter contains observations and studies of the relationship between auditorium and stage.*

*Typology*

*Intuition*

*History*



*Acoustics*

*References*

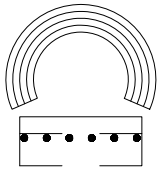
*Scale*

## Typology

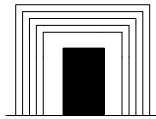
Stages



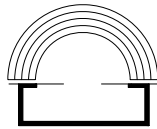
*Two-storey*



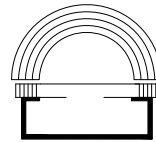
*Thrust stage*



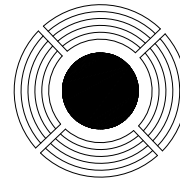
*Picture frame*



*Fore stage*



*Circus*



*End-stage*

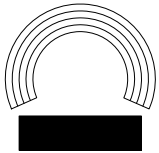




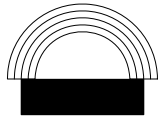
*Auditoriums*



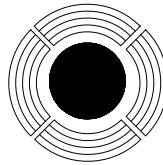
*210-220 degree*



*180 degree*



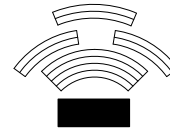
*Circus*



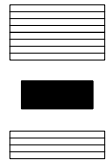
*90 degree fan*



*Multi-tiered*



*Traverse*



**Relationship**

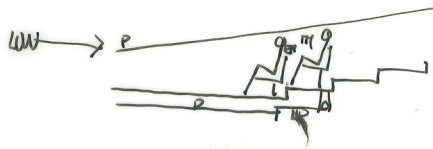
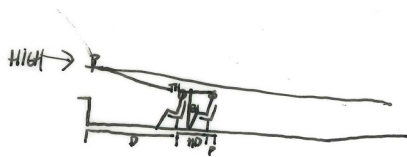
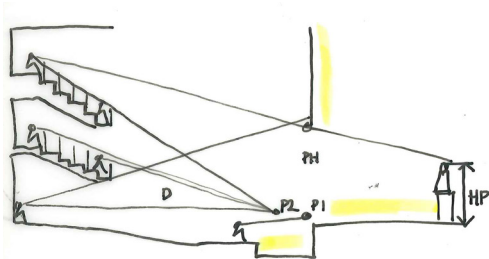
Stage - auditorium

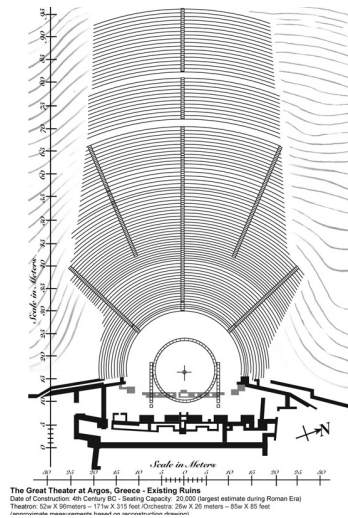


	<i>Portrait?</i>	
<i>Intimate?</i>	<i>3D?</i>	<i>Intimate</i> ↔ <i>Distanced</i>
<i>Individualistic?</i>	<i>Decieving?</i>	<i>Grandios</i> ↔ <i>Simplistic</i>
<i>Simplistic?</i>	<i>Truthful?</i>	<i>Framed</i> ↔ <i>Symbiosis</i>
<i>Fancy?</i>	<i>Framing?</i>	<i>Mutual</i> ↔ <i>Disconnected</i>
<i>Participating?</i>	<i>Void?</i>	
<i>Observing?</i>	<i>Decorated?</i>	
<i>Hiding?</i>	<i>Object?</i>	

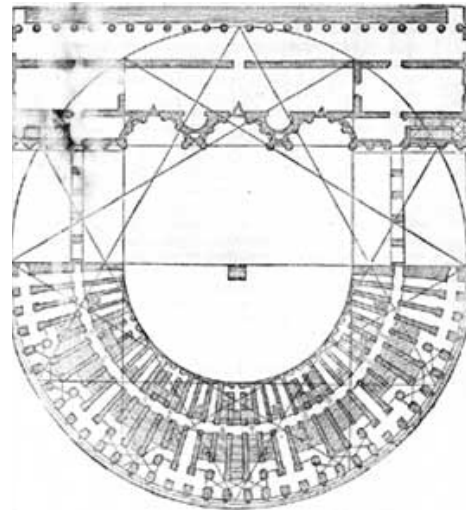
## Studies

Scale



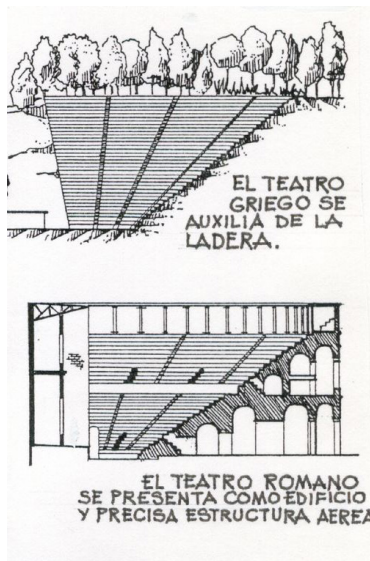


Great theatre at Argos, 500 B.C



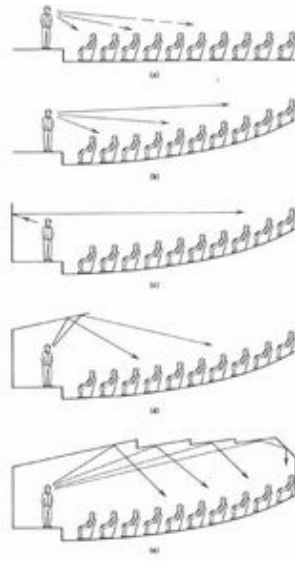
Vitruvio geometric study

- Symmetry



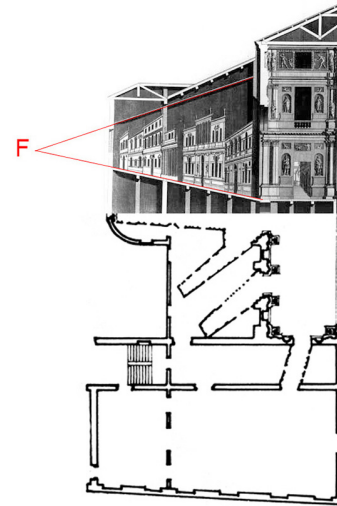
### Construction

- Entrance and programmatic ideals



### Acoustic diagram

- Indoor acoustics



### Teatro Olimpico, 1580

- Arranged perspective

## Influencing ideas

500 B.C

0-450 A.D

900

1400

*Hellenistic*

*Roman*

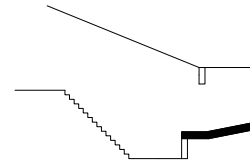
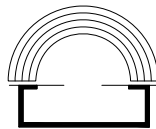
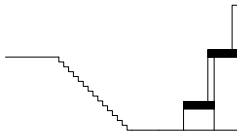
*Medieval*

*Renaissance*

- *Birth of the drama: Tragedy-Comedy*
- *Political propaganda*
- *Elaboration with permanent / temporary structures*
- *Reintroduction of drama for biblical education*
- *Inspiration from classical architecture and theatre.*
- *"To see ad be seen"*

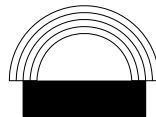
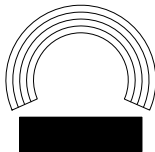
## Stage design

- *Outdoor*
- *Two storey thrust stage with fond*
- *Shited focus to proscenie*
- *Semi-outdoor*
- *Platform stage*
- *Moving stage on wheels*
- *Used forced perspectives*
- *Raked stages*
- *Introduced lighting*

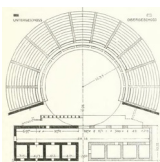


## Auditorium design

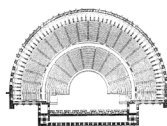
- *Amfi format on slopes*
- *Outdoor*
- *Entirely separated from performance and service*
- *Semi-circular format on ground*
- *Introduced shading with wooden roof*
- *None*
- *Brought classical amfi together with the stagehouse as one unit*
- *Indoor*



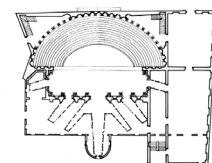
## Examples



*Theatre in Epidauros*  
500 B.C



*Theatre of Marcellus*  
23 A.D



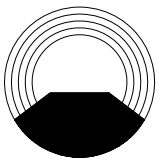
*Teatro Olimpico* 1580

1580

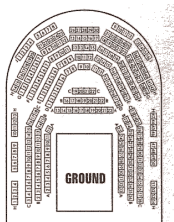
Elisabethan

- Contraction of actor-audience relation

- Outdoor stagehouse
- Thrust stage



- Introduction of galleries and boxes



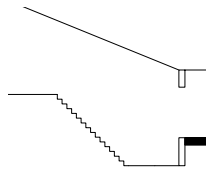
The Swan Theatre, 1595

1600

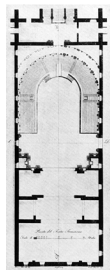
Baroque

- *Theatrum mundi:* "the world is a stage"
- Dialogue between theatre and visual arts.
- Directed toward a new enlightened audience

- Reintroduction of the proscenium format creating the "Picture-frame"



- Often rectangular in shape



Farnese Theatre, 1618

1900

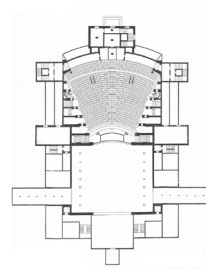
Wagner

- Class-less theatre
- One mystical sound
- and a indefinite barrier between two worlds
- (auditorium - stage)

- Intro of double proscenium



- Return of the single-tier and steeply raked auditorium.
- Fan-format
- Orchestra-pit to create chasm between two worlds

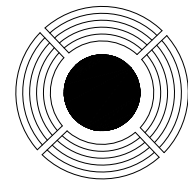


Bayreuth 1872

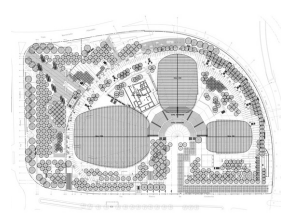
2000

- Modern realistic.
- Settings are environments instead of backgrounds.
- Actors intimacy with audience

- Popular: thrust stage and arena format



- Multi functional spaces



Parco Della Musica, 2002

## ***Design incentives***



*The early concept of design, prior to research, derived mainly from intuition, initial explorations of the site and common principals of theatre design.*



*Acoustics*

*Direction of landmass*

*Direction of wind*

*Excavation*

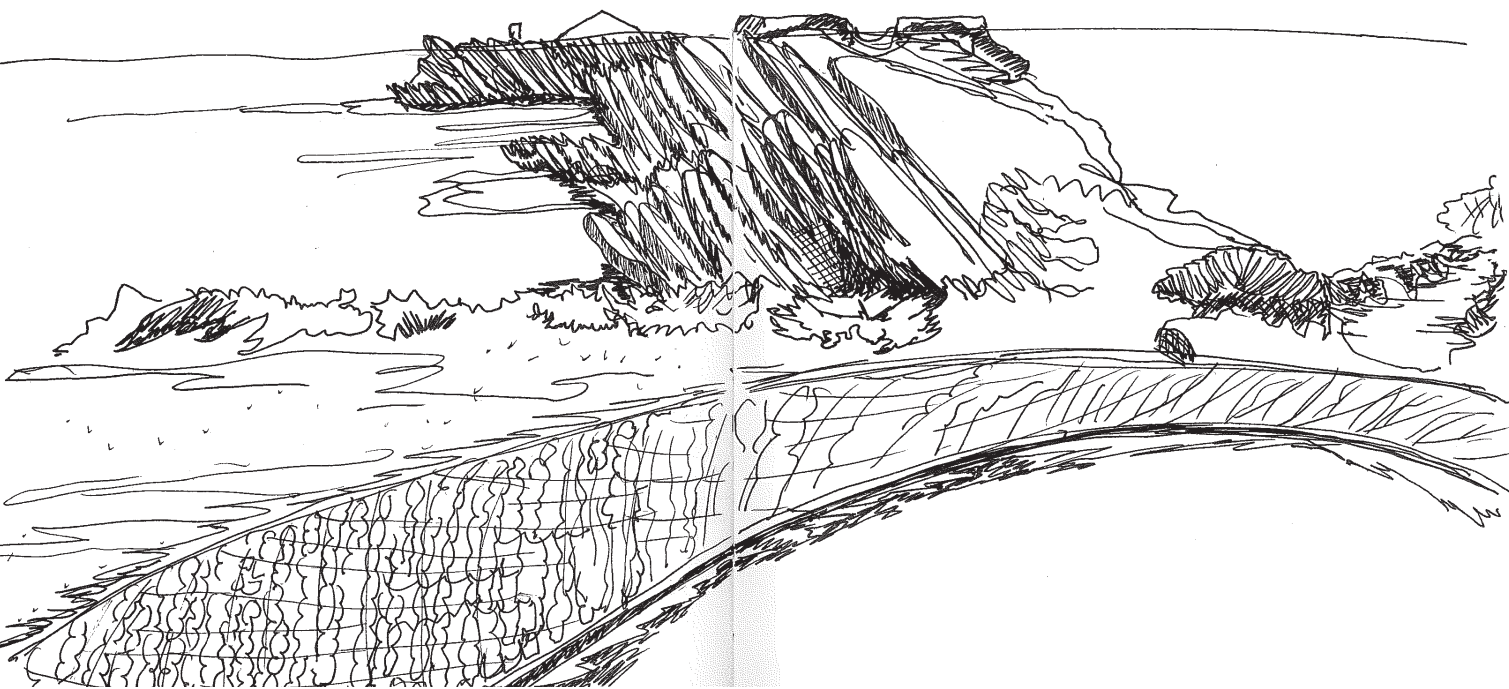


*“Framing”*

*“Hidden”*

*“Nesting”*

*“Revive & Recall”*







## **Rockmass**

*One of the incentives is to fix the architecture with its immediate context. I will use the direction and structure of landmass in the methods of finding architectural form.*

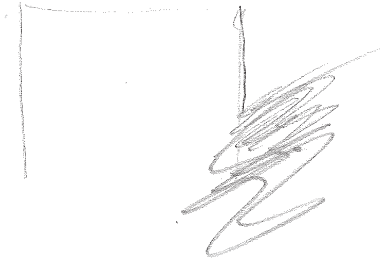
## ***Excavation***

*The incentive is to create intimacy with the landscape of Baleal and provide shelter from exposure.*

*To achieve this, a distinct excavation will be the leading approach. Built structure on top of the peninsula would be much exposed and eroded by climate. Rooms will therefore be partially carved out of the natural limestone.*

*Due to the excavation of the cliff the concept of framing could be used for providing a “door into the topography” as visualized in the sketch (2).*

1.

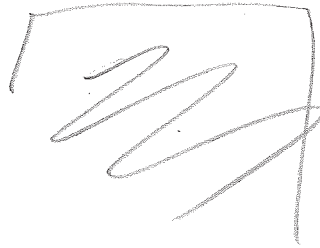


2.



DOOR FOR  
TOPOGRAPHY

3.



DRAMATISERA TOPOGRAFIEN  
INTRÄDE I SALONGEN

**Revive and recall**

*The excavation has been planned to take place in close proximity to the ruins to revive their use as an architectural element and recall their presence. Additional structure, which relates to the dimensions of the ruins will be added to point out their historic context.*



## ***Nesting***

*The concept of nesting provides with a unique exploration of adding structure inside of an already existing structure.*

*This approach relates to the nesting that occurs by animals in naturally sheltered places like tall trees, caves or inside logs.*

*The method does also explore a way to create unified space of landscape and architecture.*

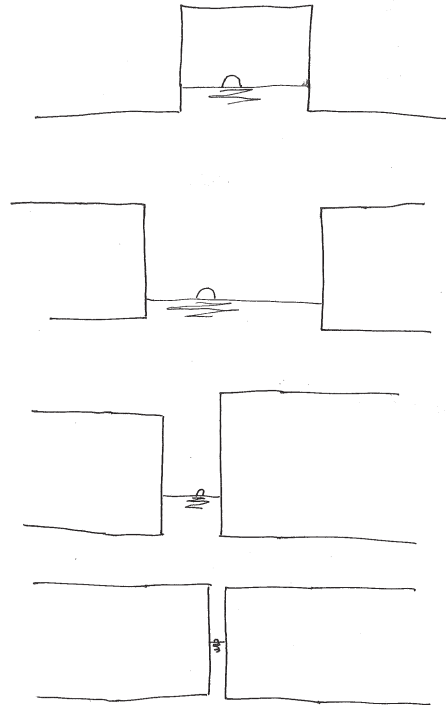


## Framing

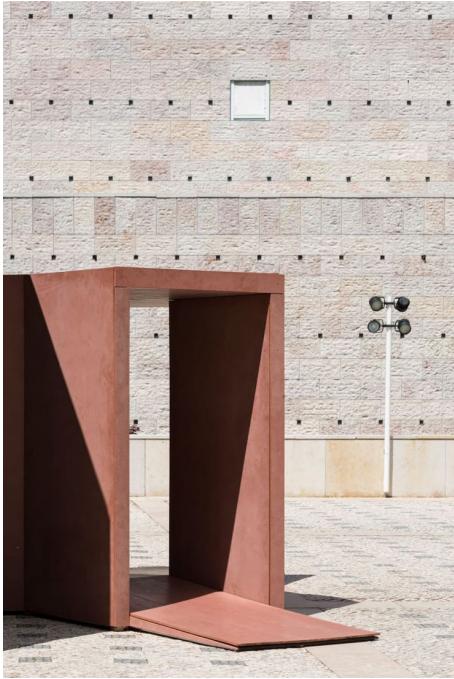
*Framing will be used to enhance the surrounding landscape and natural materials.*

*By limiting the extents of views, a more striking experience can be formed. I believe this approach is most efficient in landscapes with wide views, such as the Baleal.*

*Inspiring references of form has been gathered on the following pages.*







**Souto de Moura** *Unknown*



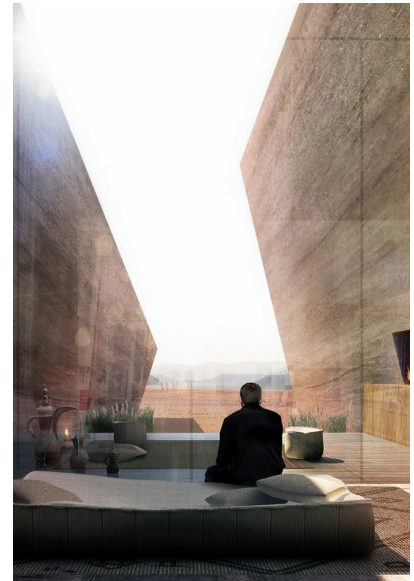
*Unknown*



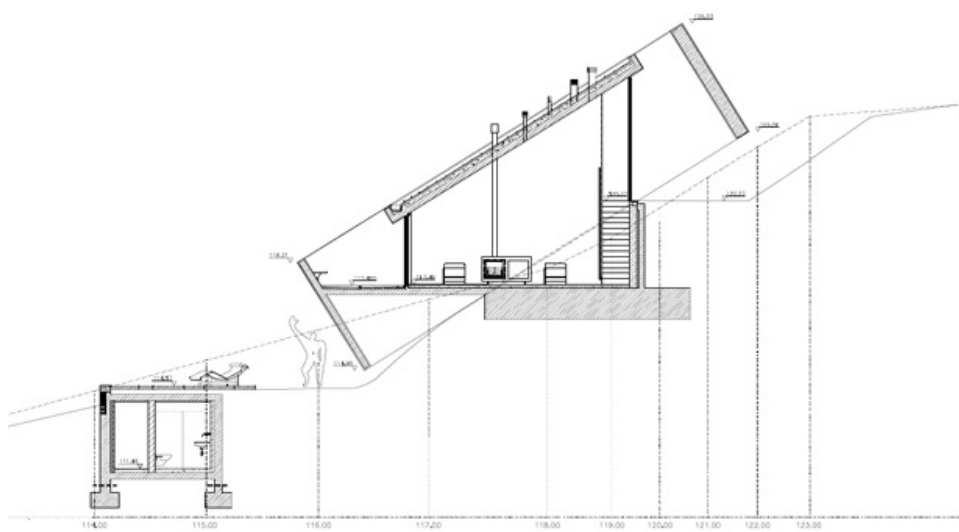
**Wespi de Meuron** *House in Brissago*



**John Pawson** *Neunendorf House, Mallorca*



**Oppenheim** *Wadi Rum Lodge, Jordan*



**Souto de Moura** Ponte de Lima, Portugal





## ***Competition Entry***

*The initial search and design incentives  
thereof concludes in a complete  
architectural proposal for ArkxSite Theatre  
2017 named Crevice.*

## ***THE IDEA:***

*Harmonizing the relationship  
between control and wilderness*

## **THE INCENTIVE**

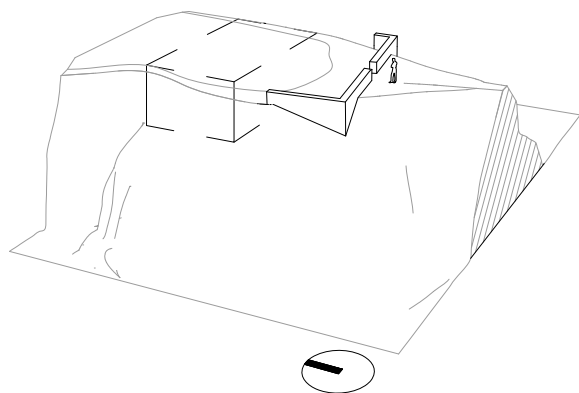
*The intrusive sound of wind and waves at Baleal is a constant reminder of its proximity. You cannot hide; on Baleal you are always exposed. The power and danger of climate can't be neglected when visiting the peninsula.*

*Like the desert lizard seek physical shelter in the natural crevice of its habitat, as do we seek hideaways to temporarily escape the social scene. The proposal, Crevice, seeks to define contrast between shelter and exposure without vulnerability in the dramatic environment of Baleal.*

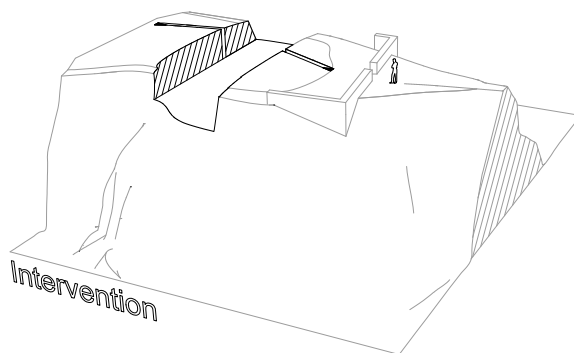




**STRATEGIC CONCEPT:**

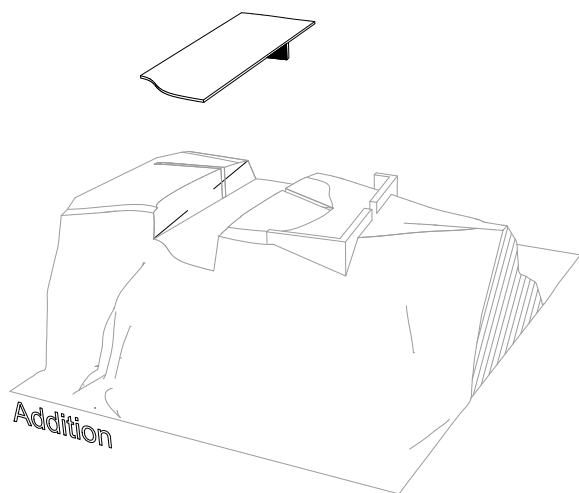


1.



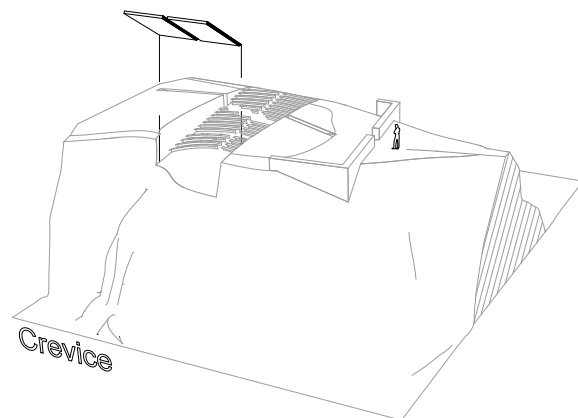
2.





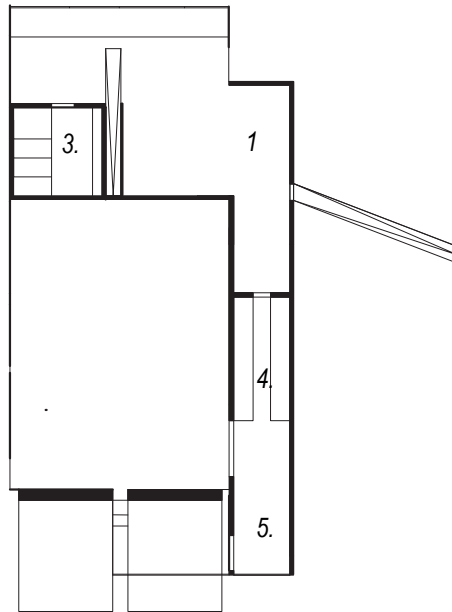
Addition

3.



Crevice

4.



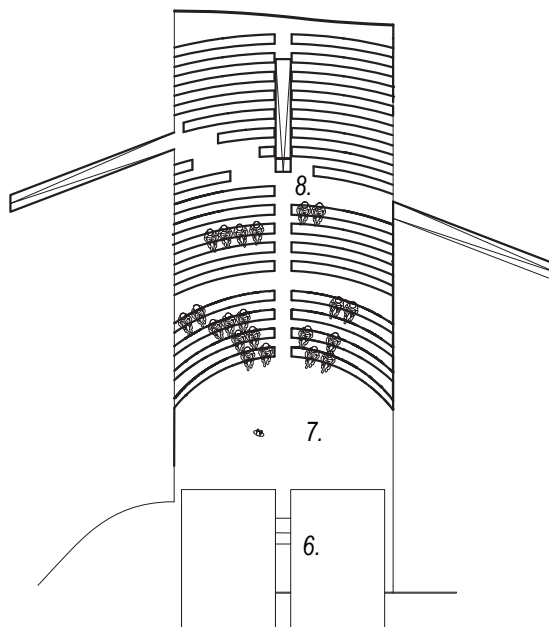
# **UNDERNEATH SLAB**

1. Foyer and café	86 m <sup>2</sup>
2. Entrance to auditorium	
3. Public restrooms	21 m <sup>2</sup>
4. Storage	14 m <sup>2</sup>
5. Dressing	24 m <sup>2</sup>

Tot.

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**145m<sup>2</sup>**



# **ABOVE SLAB**

6. Backstage	18 m <sup>2</sup>
7. Stage	60 m <sup>2</sup>
8. Auditorium	

Tot.

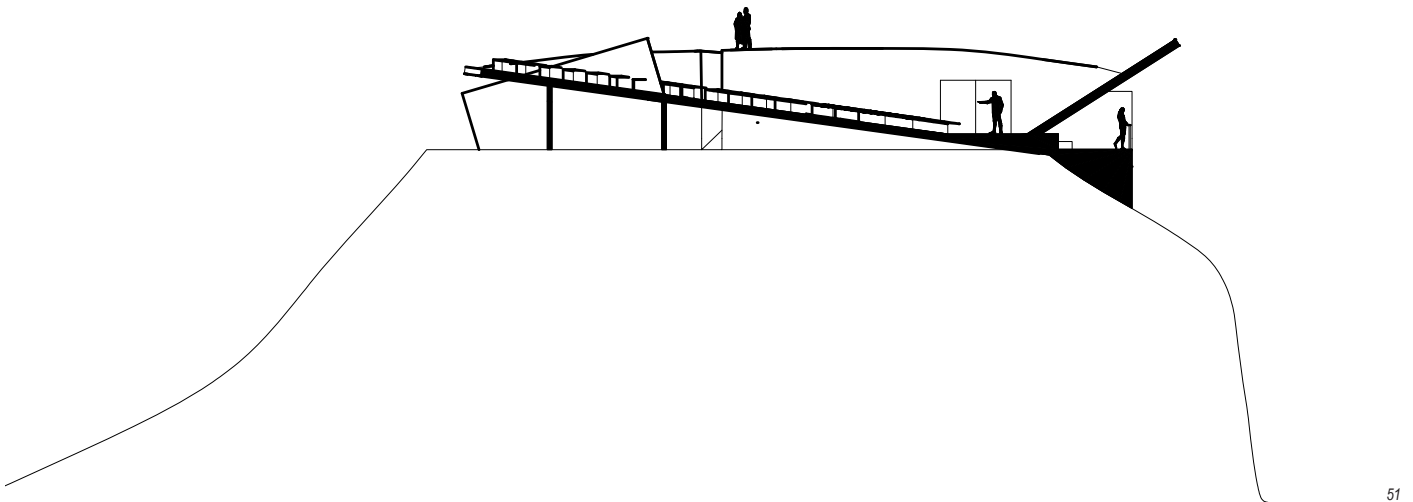
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**78m<sup>2</sup>**



## DESIGN

*The wilderness of the Baleal is a performance of its own; a performance which enters the theatre at all times. With a distinct excavation into the wild limestone landscape controlled space and shelter can take form. By using drill and saw the proposal aims to reveal the beautiful section cut from the rock mass and thus narrates an understanding of the landscape structure and creates intimacy with the site.*











## **VISION**

*The Baleal theatre uses the reality as its canvas and the immediate landscape as its scene. Actors appears from the reality, via the crevice and onto the scene; a representation of honesty. No filters, beautification or arranged perspective.*



## ***Evaluation***

## **Thoughts**

*During the evaluation of the proposal I realized that the material had failed to explain how it connects with the direction of landmass. Therefore the architecture seemed “disconnected”.*

*An explanation to this could have been the problems I met when modelling the topography. Neither 3D-tools nor physical modelling worked well to reconstruct the breathtaking landscape of Baleal. To strengthen my concepts I kept this issue in mind when producing new material.*

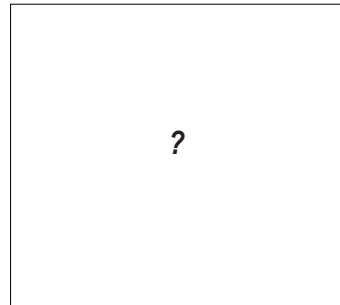
*The following topics which are explained in more detail on the following pages illustrates my priorities during this process:*

- *use of materials*
- *divisions of levels*
- *directions of circulation and site*

## 1. Materials

*The cliff and the concrete is literally the same material with two different processing. Therefore the design evolves in the border between these.*

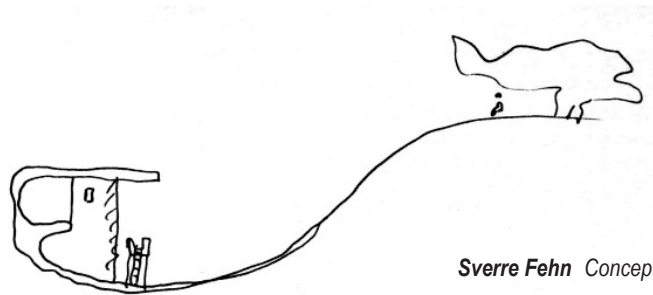
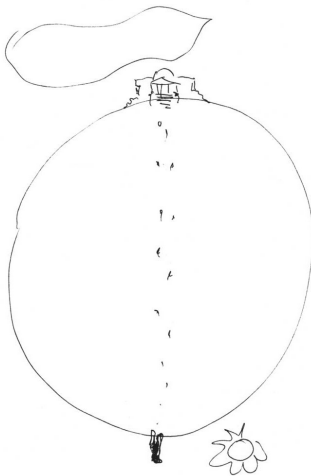
*The concrete, as a material, could be seen as added to solve programmatic ideas and ambitions. Additionally, a third, more processed material could highlight the proposal and bring a new level of tactility to the area.*



## 2. Division

*As seen in the works of Sverre Fehn, the main feature of an architectural experience is often the divisions between sky, ground surface, horizon and surface of water.*

*This philosophy is definitely applicable in my project and I have decided to rework the architectural promenade to form an experience of this phenomenon.*



**Sverre Fehn** Conceptual sketches

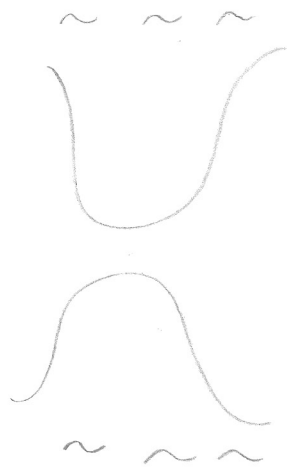
### **3. Directions**

*The early proposal does create a **new** direction of motion on the peninsula; east-west.*

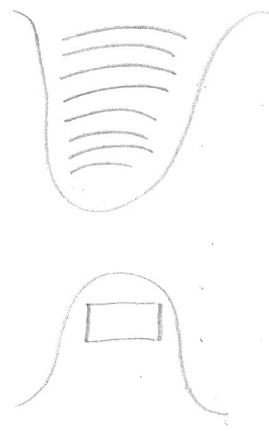
*The intervention basically cuts the existing path of Baleal peninsula in half.*

*The meetingpoint of these two colliding directions will be further investigated as explained in the diagram to the left.*

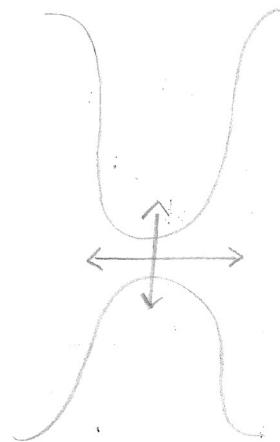




excavation



functions



architecture

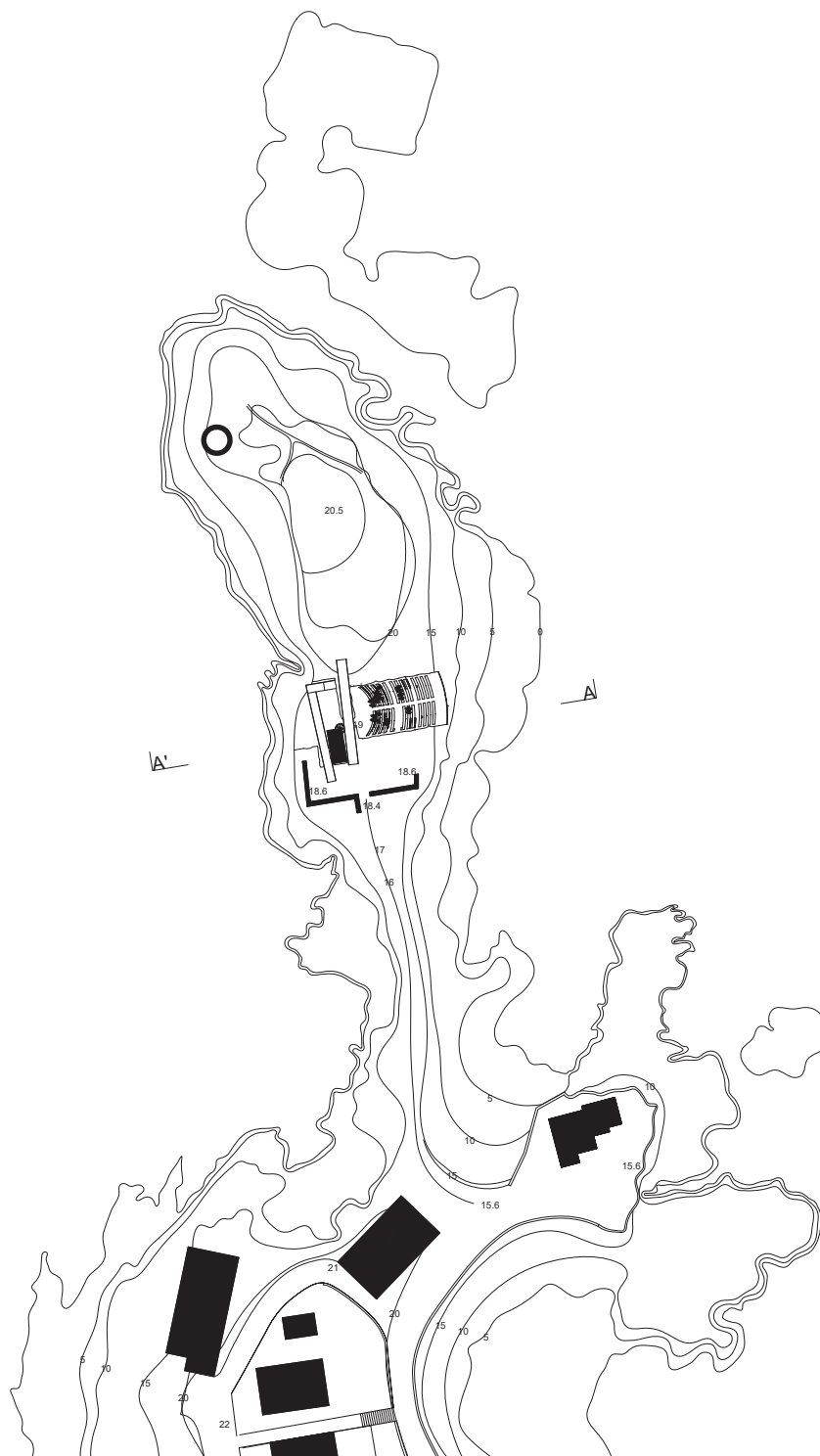


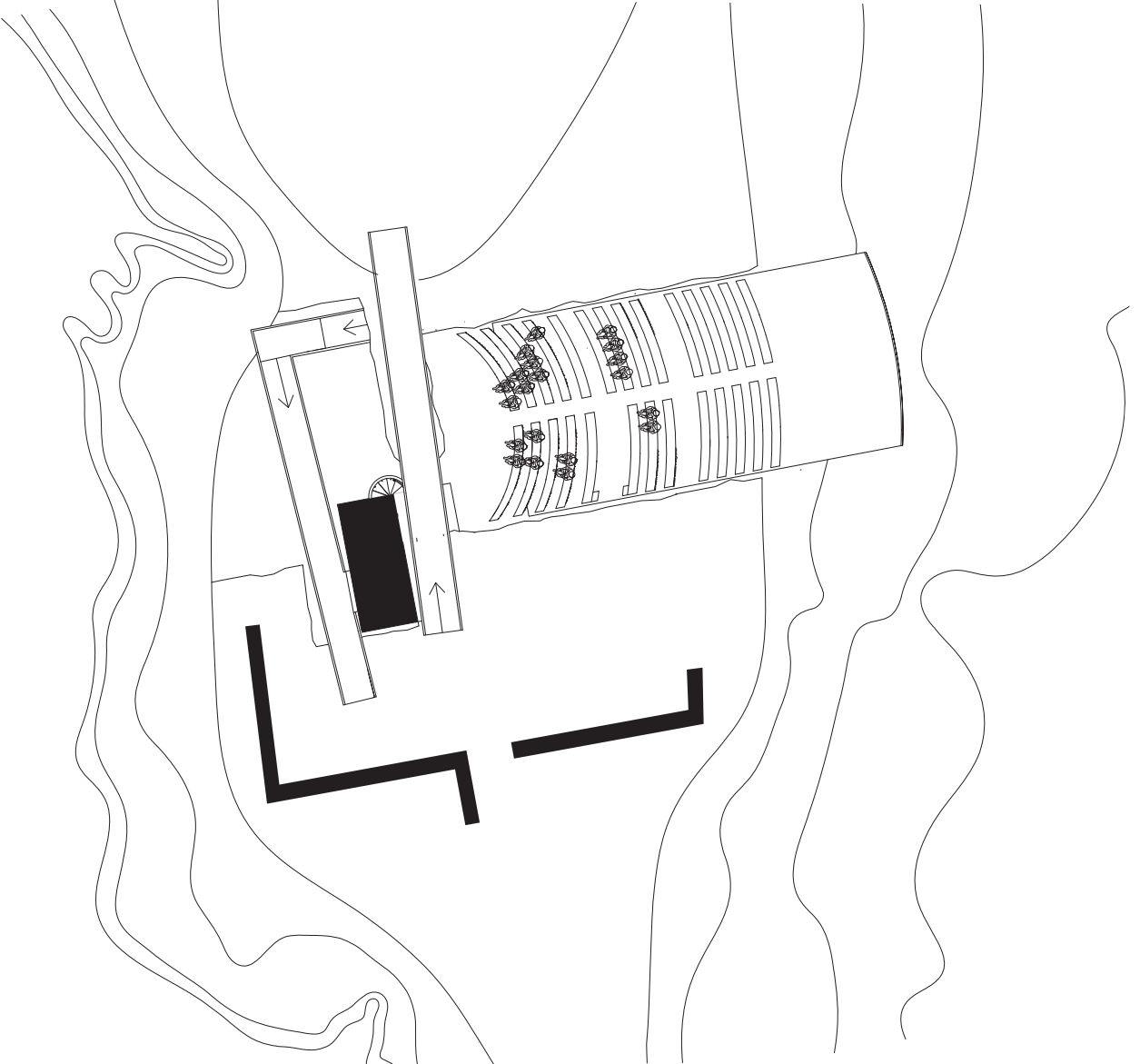
## ***Final proposal***

*Reconsidering earlier design statements  
and developing the competition entry  
into a stronger proposal with higher  
complexity.*

### ***THE IDEA:***

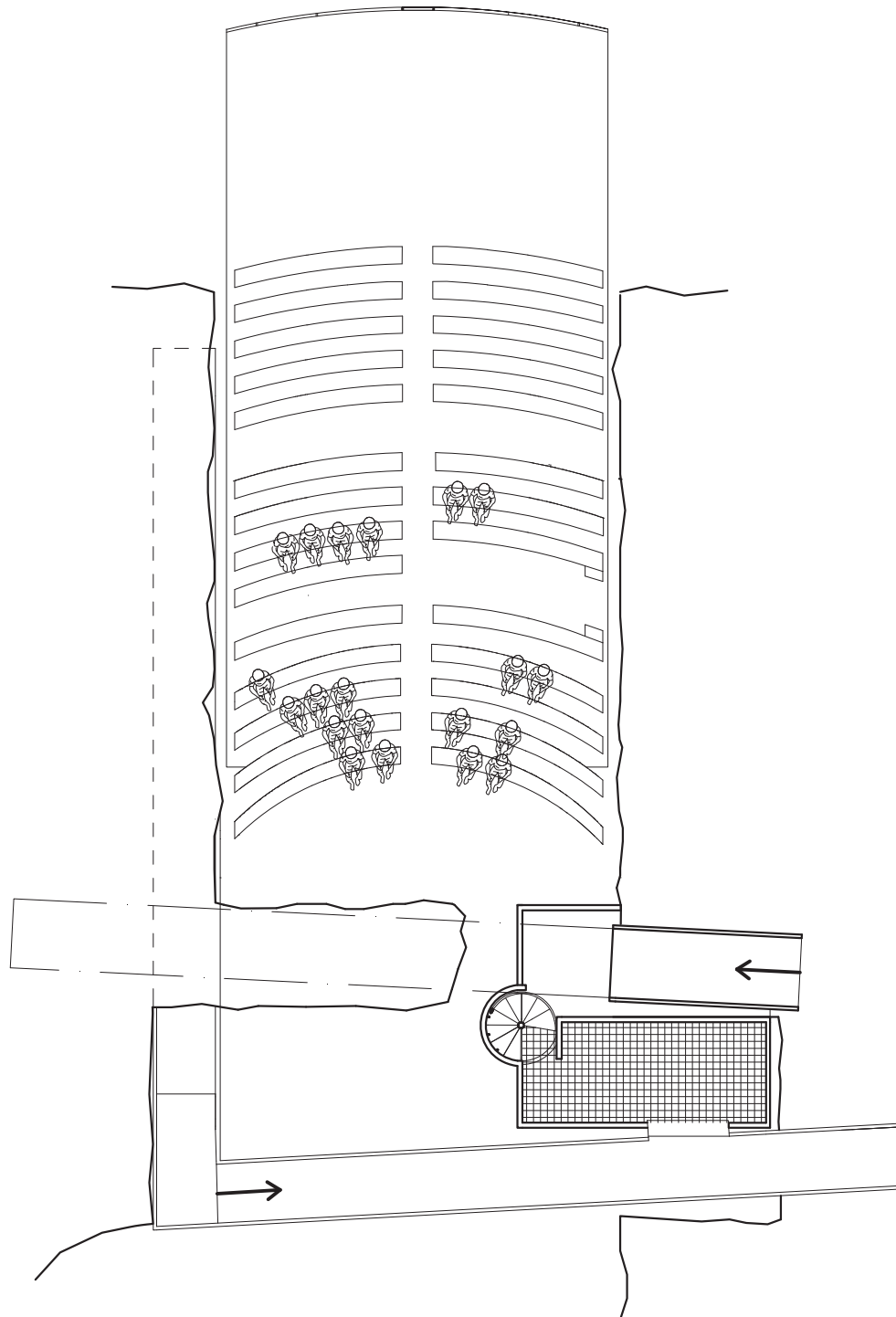
*An open air theatre on the coast of Portugal  
strives to prove a link between man-made  
and natural form.*





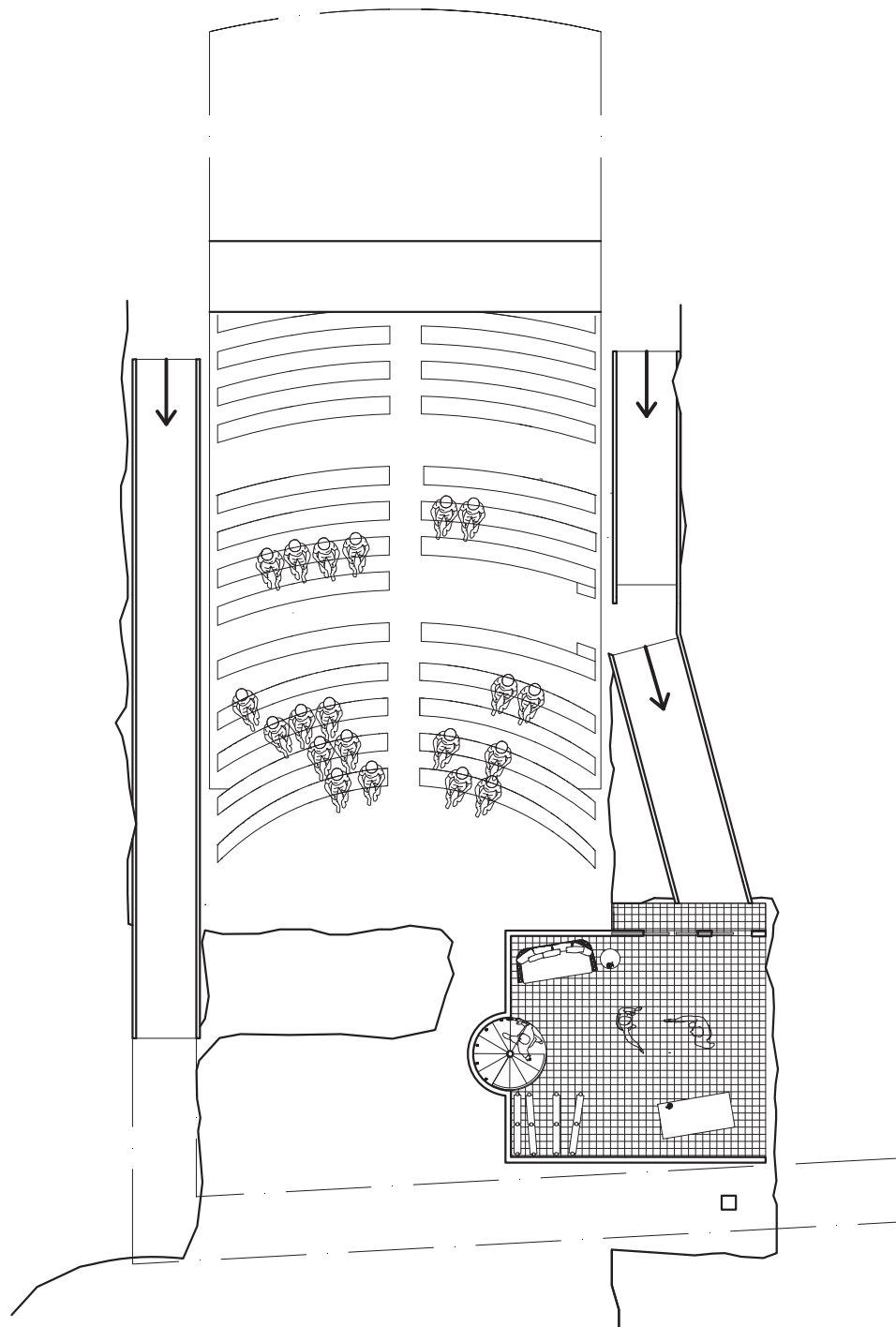
ENTRANCE





— **ABOVE**  
1.200  
Reception 21 m<sup>2</sup>

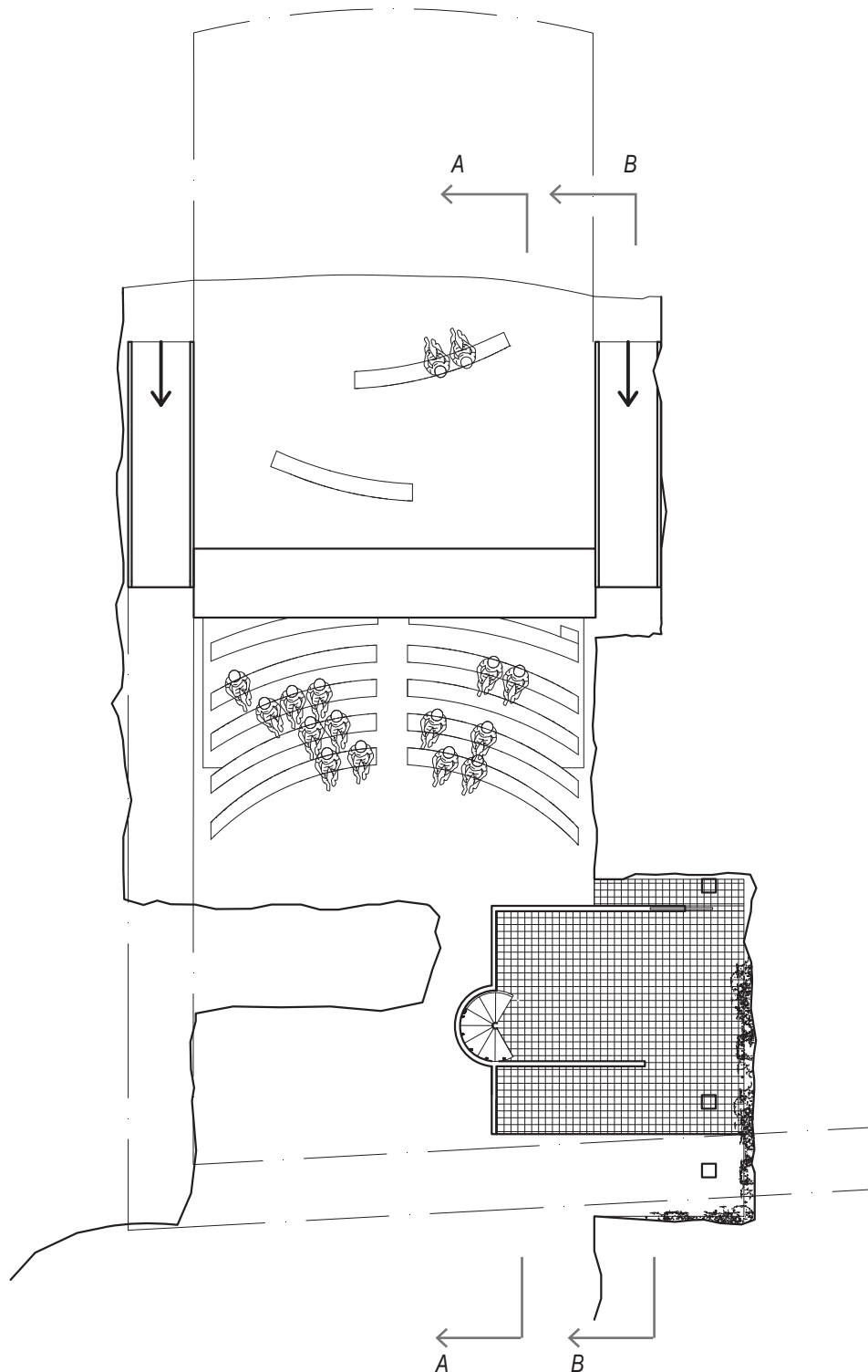





— **IN BETWEEN**  
1.200

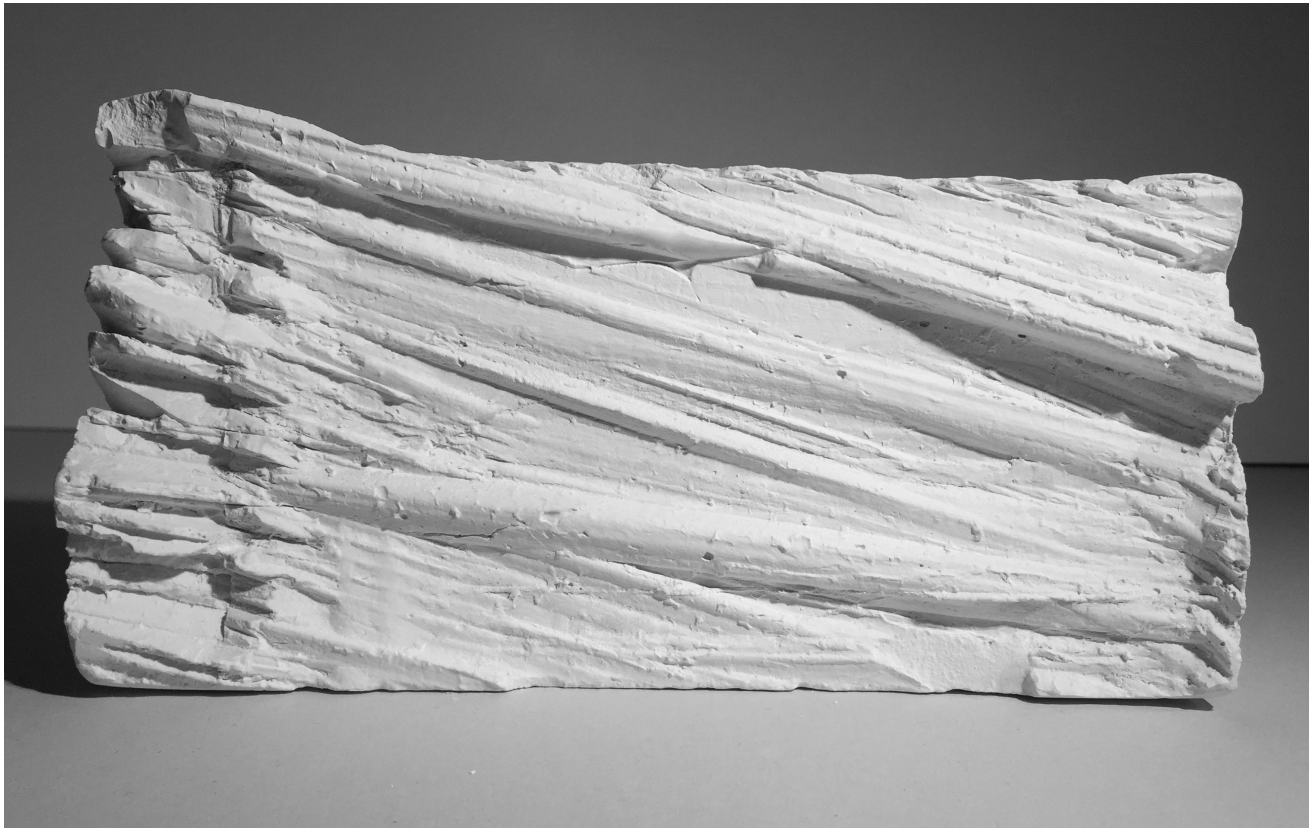
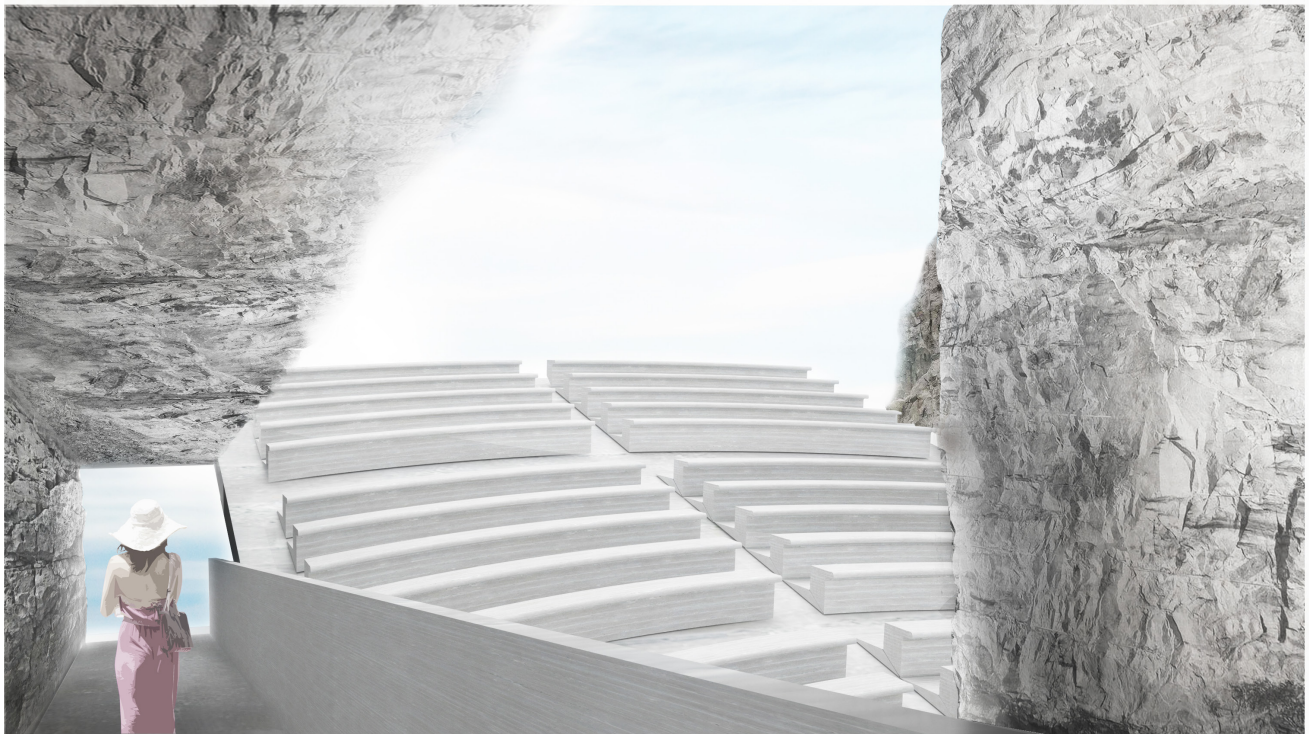
Walkways	103 m <sup>2</sup>
Auditorium	186 m <sup>2</sup>
Lounge	50 m <sup>2</sup>

Tot.  
**339m<sup>2</sup>**



	<b>UNDERNEATH</b>
	1.200
Foyer	90 m <sup>2</sup>
Scene	30 m <sup>2</sup>
Indoor backstage	40 m <sup>2</sup>
Bar	25 m <sup>2</sup>
Outdoor backstage	50 m <sup>2</sup>

Tot.  
**235m<sup>2</sup>**







## BAR

*Multifunctional space of the bottom floor allows the backstage to be used when the theatre is closed. Café services attracts customers during these hours.*



## LOUNGE

*Sunlight hits the rock wall and creates tactility. Plumbing and drainage is exposed along the full length and width of the wall through shining pipes of copper.*



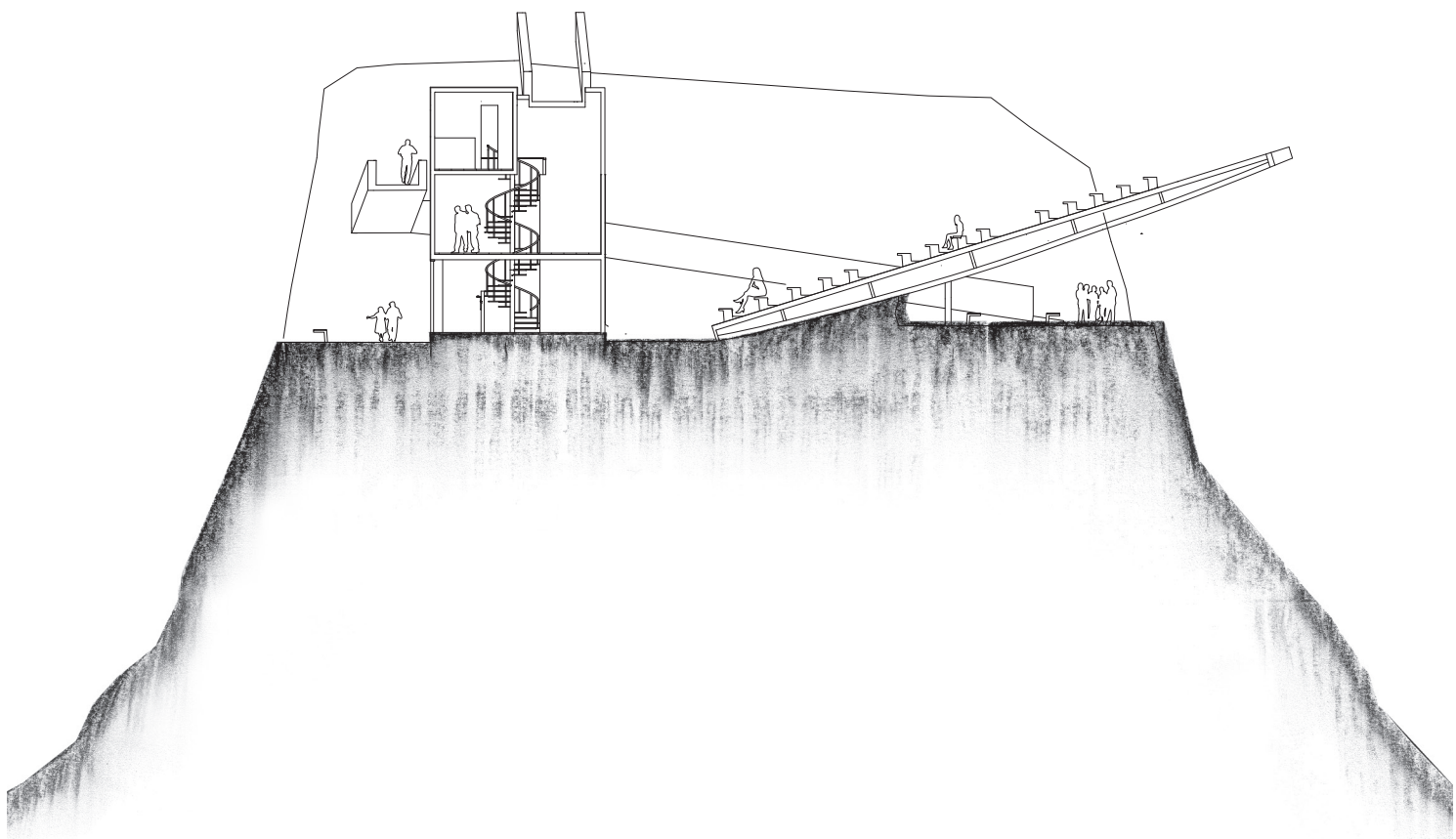
## WEST SIDE

*The area is reachable at all hours of the day, a great spot to enjoy the sun or watch the waves and feel as if you're in the midst of a theatre production.*

## **CREVICE**

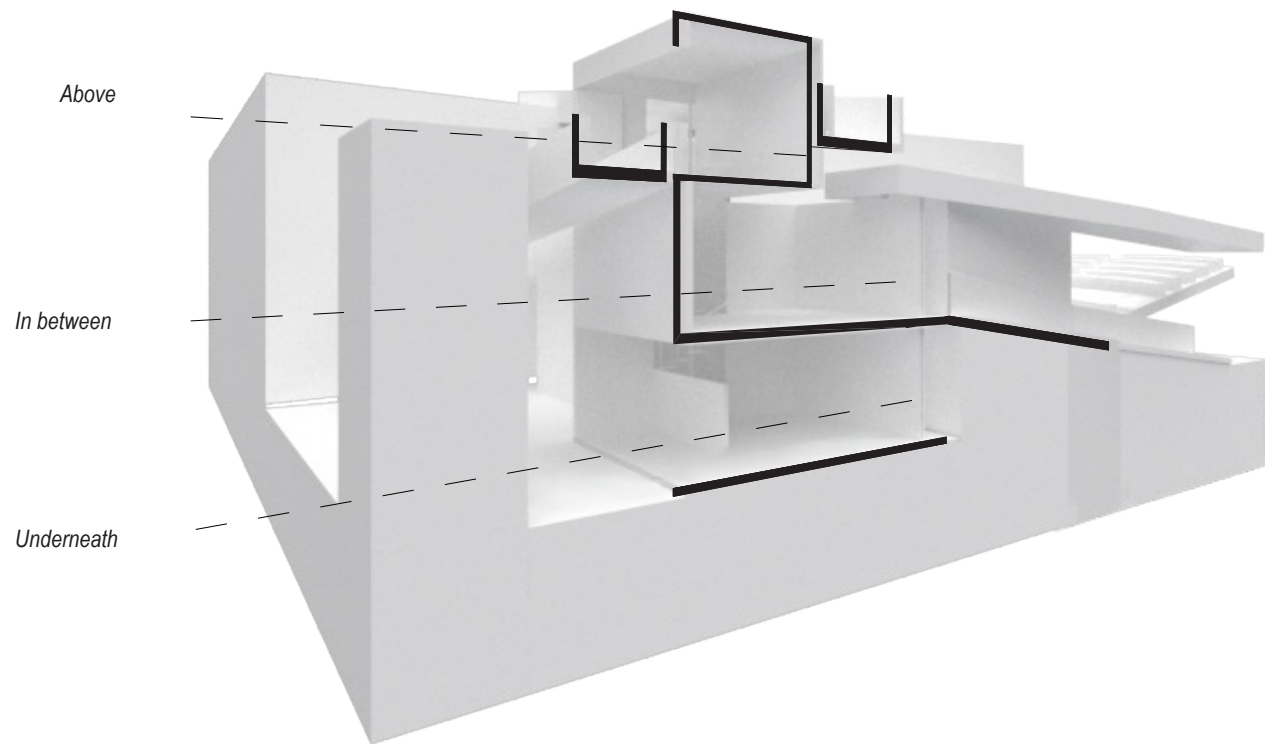
*The relationship between backstage  
and scene hold the same tension as in  
the competition entry .*



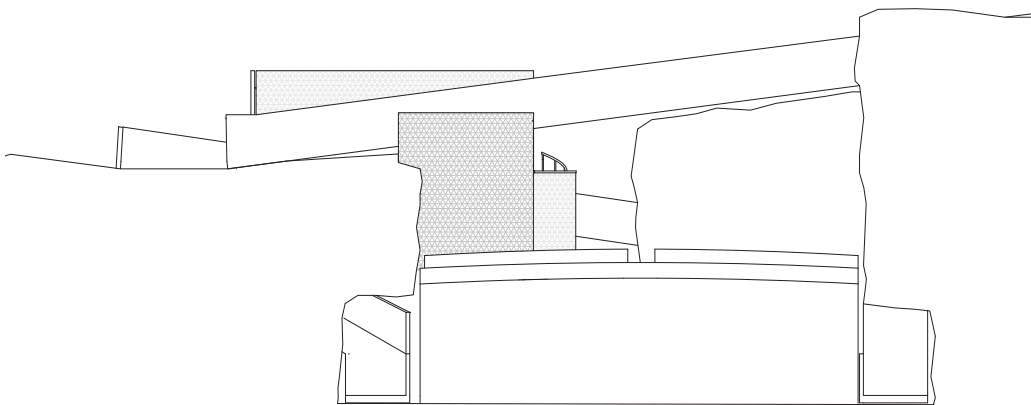


A-A





**B-B**



## **FACADE EAST**

### **1.200**

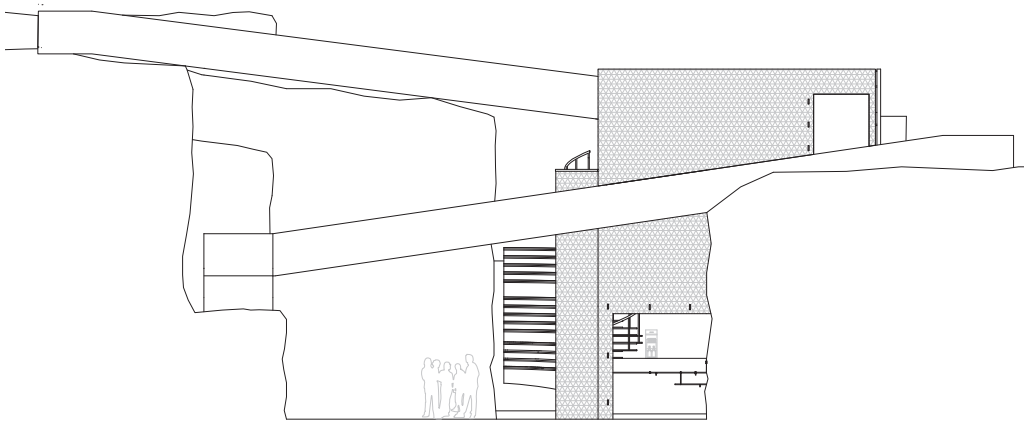
*The foyer is located underneath the auditorium on the east side of the peninsula. The room catches the morning sun, a great location for early birds to check out waves and wind conditions.*



**SITE MODEL**

**1.500**

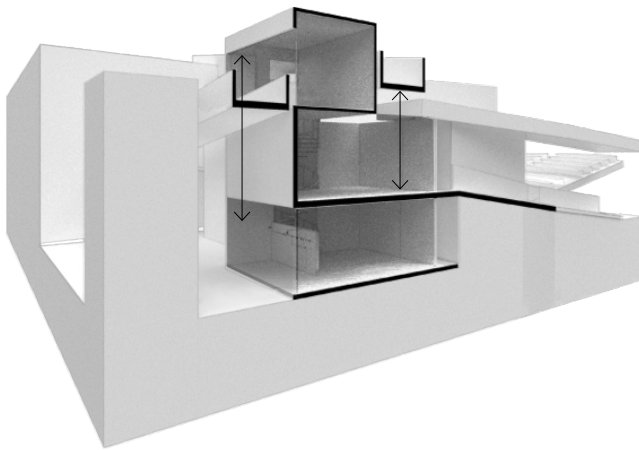
*Describing the situation of the  
theatre seen from the water.*



## **FACADE WEST**

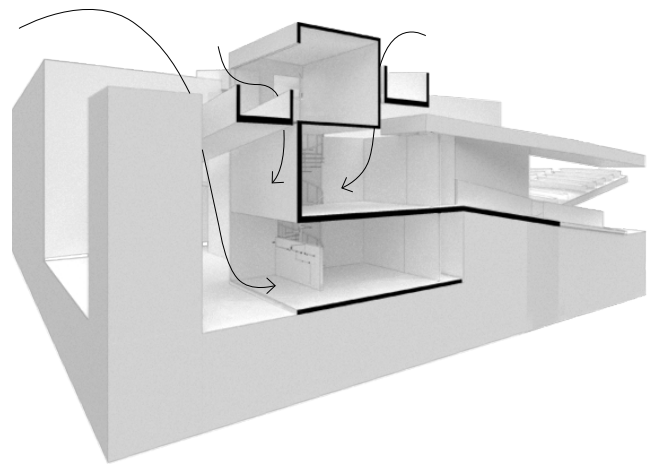
### **1.200**

*The west side of the peninsula holds place for actors and staff to prepare scenary and props. A multipurpose area with possibilities for café service. The walkways defines the motion and circulation and seems to float in the air above.*



### **VERTICALITY**

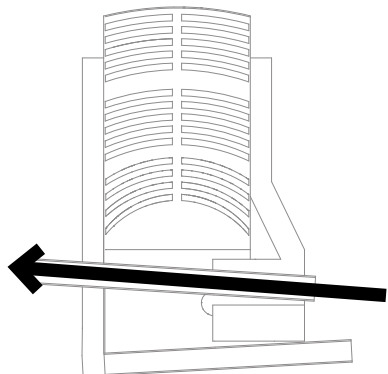
*The walkways are experienced throughout the project; from both above and underneath .*



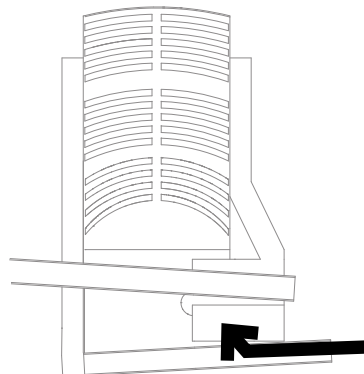
### **FLOATING**

*Physically deattached from the rock mass and separated from the building to enhance verticality and highlight “the entrance” of the new direction.*

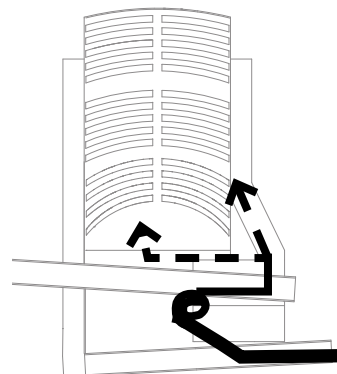
*Passing by*



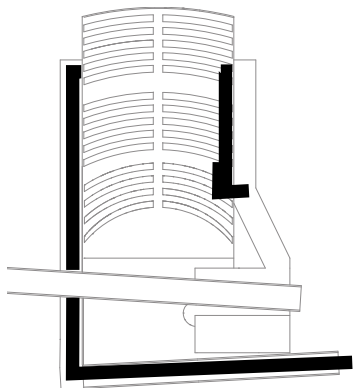
*Reception*



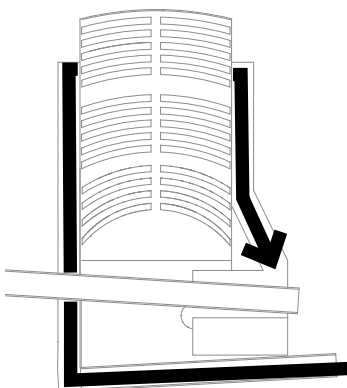
*Stage*



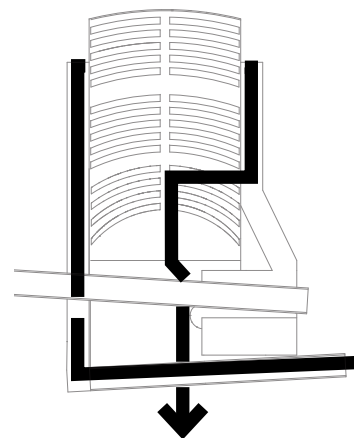
*Auditorium*



*Backstage*



*Café/bar*



**CIRCULATION**

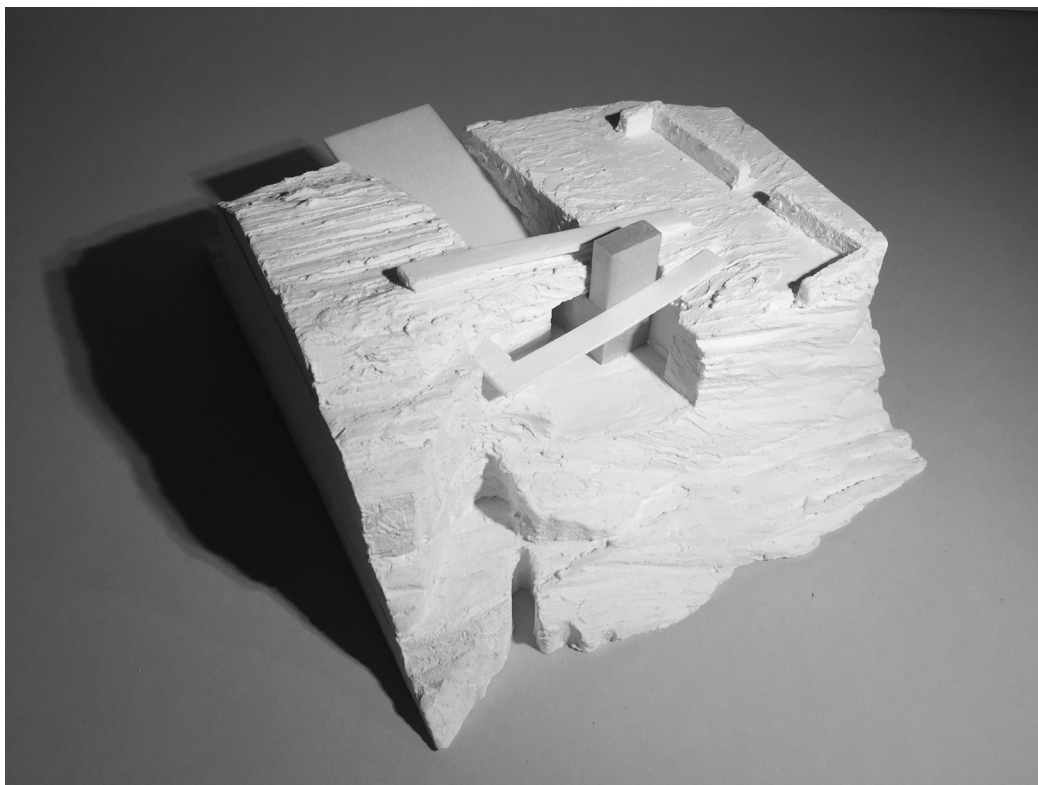








**SKETCH 1.200**



## ***References***

*Marianne Yvenes (red.). 1997    Arkitekt Sverre Fehn. Intuisjon- Refleksjon - Konstruksjon    Oslo: Zoom Grafisk AS*

*Norberg-Schultz, C. Postiglione G. 1997.    Sverre Fehn. Works, projects, writings, 1949-1996    New York : The Monacelli Press*





Arkitekt Sverre Fehn.  
Museum, Hamar Norway