

l'Amour des moules

A love story

The Design of the Encounter

A project by Arvid Schoots, Belle van den Berg and Jurriaan Blom
Rotterdamse Academie van Bouwkunst / Tutors: Alessandra Covini, Giovanni Bellotti

l'Amour des moules

Maybe there is no better place in the Netherlands than at the belvedere of the Slufter to get a thorough sense of the contrast between industrial growth and natural growth of land, vegetation and animals. It is where cranes and windturbines meet the strong wind from the sea and the never ending coming and going of the waves in the surf. It is where ever changing dunes create a transition from the vast, flat and ominous stretch of manmade land with factories, cranes and ships to the more brownish, green and soft yellow area of shoals, bushes and seaweed. On some days one might be able to smell chemicals or smoke on one side of the dunes and five minutes later smell only salty and fresh air after crossing the dunes and walking on the beach.

There is a place where human interference and natural growth form less of a contrast and more of a symbiosis. About 50 meters off the beach, there where the shoals run dry at low tide but are flooded at high tide, there is a circle shaped mussle farm. Mussels are stimulated to grow there, like they used to do all along the Dutch coast. In any place where mussels could find a bit of shelter from the wind and waves, they could be found in abundance.

The ring gives a degree of shelter to the mussle whilst allowing the salty water (and other species) to come and go freely. But only the more adventurous of the other species can reach this place. If they dare, curious seals can explore the maze of 'bouchots' at high tide. Though they might get shy and leave as soon as a scuba diver arrives to enjoy this under water forest. Small fish and crabs won't be disturbed so much by adventurous divers. They can hide in all the corners and nooks this ring has to offer. Crabs can even indulge on the mussels themselves, since they like them so much!

Seagulls and ducks are invited to rest on the amfitheater, the floating bouchot-island or at the ring, as long as they are not disturbed by any human presence. Which will be the case during most of the winter and spring. Whatever excrements they leave on the structure, the sea will rinse it off sooner or later.

Particularly during late spring and summer people will be able to enjoy the ring and its designat-

ed areas or elements. That is, only if they dare to get a bit of wet feet and cross the 50 meters of shoals within the limited time of the tides. If they want to make it back in time they need to keep in mind when high-tide arrives. In the meanwhile they can get to know the mussle in all its diversity:

- as a nutritious meal or snack, raw or cooked
- as a water filter
- as a source for buttons, jewels, coins (shell)
- as a fixative for the sandy bottom of the sea
- as a shelter for other animals like fish, crabs
- they attract other animal species (birds, seals, fishes)
- as an attraction for scuba divers

The natural timeslot that tides provide allows a species time and opportunity to enjoy the mussels without disturbance by other species. The ring is where the encounter with mussels is shared between the human species and animals. It is where the love for mussels can begin and grow.



The Atlas

MUSSLE HABITATS

Lines: Banks

1. Aerial photo musslebanks, Oosterschelde, formed naturally on the bottom of the Oosterschelde

2. Aerial photo Oosterschelde, man-made musselbanks. The structures creating lines in the landscape



1

Lines: Ropes

3. Aerial photo, musselfarm set up, western baltic sea, lines of buoys in the landscape

4. Aerial photo, musselfarm western baltic sea, lines of buoy's in the landscape



4

Lines and triangles

5. Man-made musselbanks, Oosterschelde, biodegradable structure where the mussel can settle in.

6. Research project, Oosterschelde, Steel fencework where mussels can clamp onto and that keeps them from flooding away.

Ropes, poles and banks

7. Mussel-farming, Marlborough, New Zealand, straight lines of buoy's accessible with boat

8. Close up mussel banks, Oosterschelde, the mussels grow against each other forming a bank of mussels

9. underwater view of the musselfarming with ropes, western baltic sea, mussels clampin on the ropes creating their a grid of mussels

10. hanging ropes and poles in the back-ground

11. mussels growing on poles

12. bay with hanging mussle farm, ropes, Oosterschelde



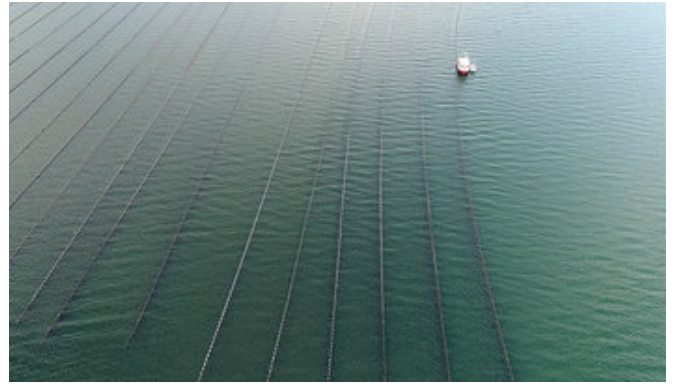
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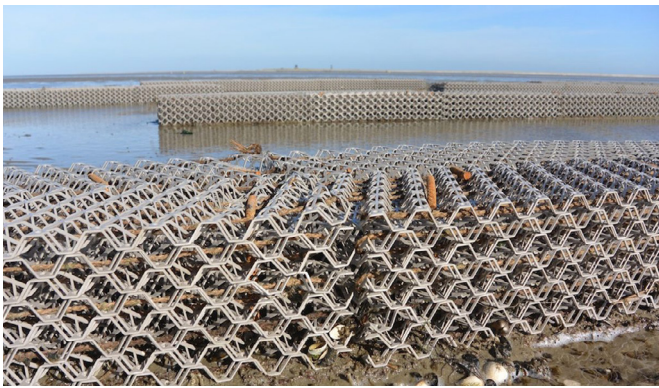
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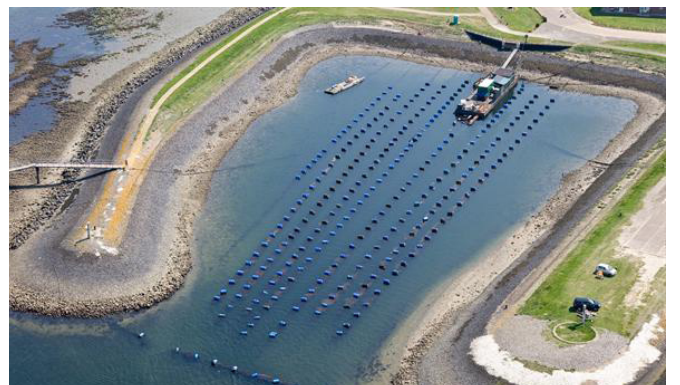
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12

GROTTO'S

Grotto's - caves, natural - artificial

1. Staffa Island, Scotland
2. Isola Bella, Taormina Bay, Sicilia, Italy
3. Mount Edgecumb, Earl's garden, UK



1

Arches in grotto's

4. Digital grotesque II, by Michael Hansmeyer and Benjamin Dillenburger, 2013.
5. Residences Memorables, Salomon Kleiner (1740)
6. Isola Bella, Lago Maggiore, Italy



4

Shell shape used architecturally

7. Versailles, the Groves
8. Versailles, the Groves, top view
9. Villa d'Este, The Hundred Fountains



7

Shell shape used decoratively

10. Detail Cherkley Court Grotto, UK
11. Detail from A Handbook of Ornament, Plate 59, Franz Sales Meijer (New York, 1920)
12. Detail of Stresa Isola Bella, Borromeo palace, grotto room, Italy



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Can we make a more organically shaped grotto that 'serves' the shells themselves, in this case the mussels, instead of the people? As shelter, and **place to grow.**



2



3



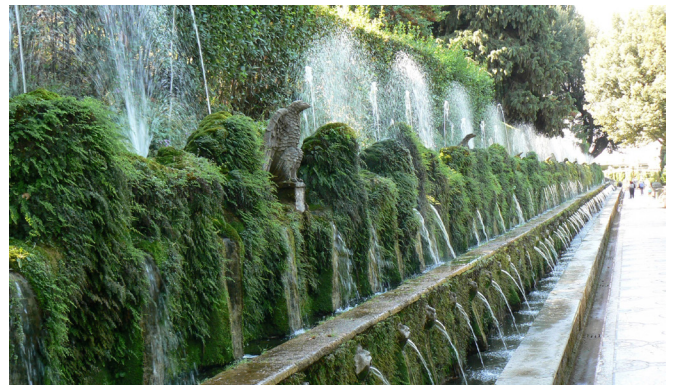
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12

Food: harvesting mussels, history and present

1. Taking young oysters from rooftiles (collection Van Oosten, Zeeland)

2. Mussle meal

3. Opening a mussle

4. Catching mussels and crabs in front of ruin of Iersekerroord (Zeeland). Detail of engraving by F. Galle, 1580.

Non food: mussle as sensor

5. Mussle as detector of contaminated water, Poznan, Poland.

Food: harvesting mussels, history and present

6. Picking seafood, Zeeland

7. Oisterpickers, raking oysters close to Yerseke, Zeeland, ca. 1900.

8. Cooking sections, eating oysters where they grow, Scotland.

9. Mussle boiling factory, ca. 1950, Zeeland.

10. Fishing crabs with a mussle

11. Detail of The Oyster Lunch, by Jean François De Troy, 1735.

12. Washing oysters, ca. 1915, Zeeland.



1



4



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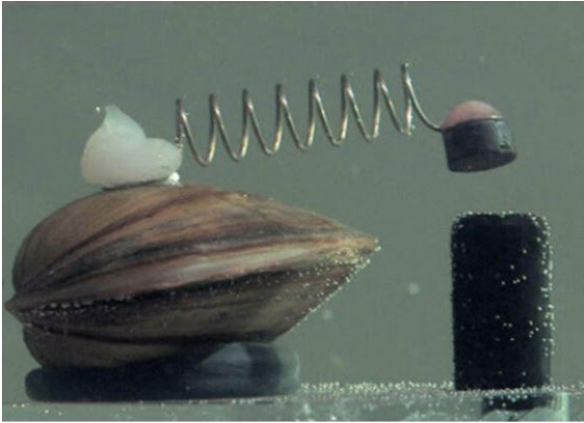
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From vast scale to tiny detail

- 1. Green strip on the higher parts of the dunes
- 2. Wooden poles at the beach, and separations of parts of the sandbank
- 3. Close-up of the shells at the beach

Relief and complete smoothness

- 4. Relief in the sand and a stream of water separating sandbanks
- 5. Close-up of the relief in the sand
- 6. Shallow water more land inwards, separating sandbanks

Colours, brown, yellow, grey and green

- 7. More to the east, shrubbery and vegetation
- 8. Reddish and yellowish sand
- 9. Close-up of sand and vegetation
- 10. Shore with a lot of green, a lot of textures and colours mixed
- 11. Swamp like area with seaweeds and algae
- 12. Close-up of green vegetation, seaweeds and shells



1.



4.



7.



10.



2.



3.



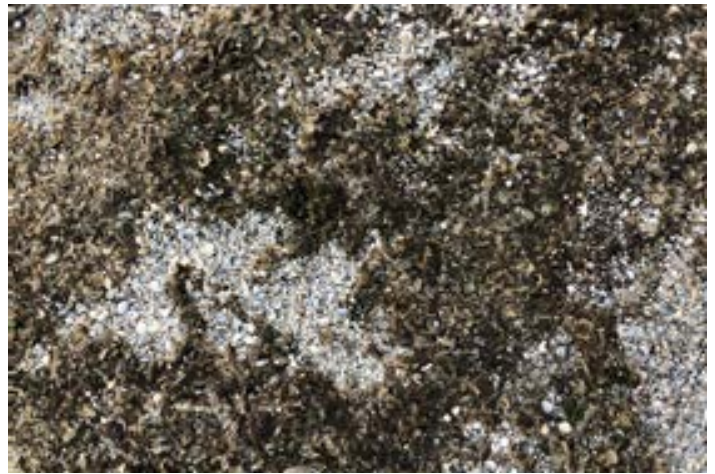
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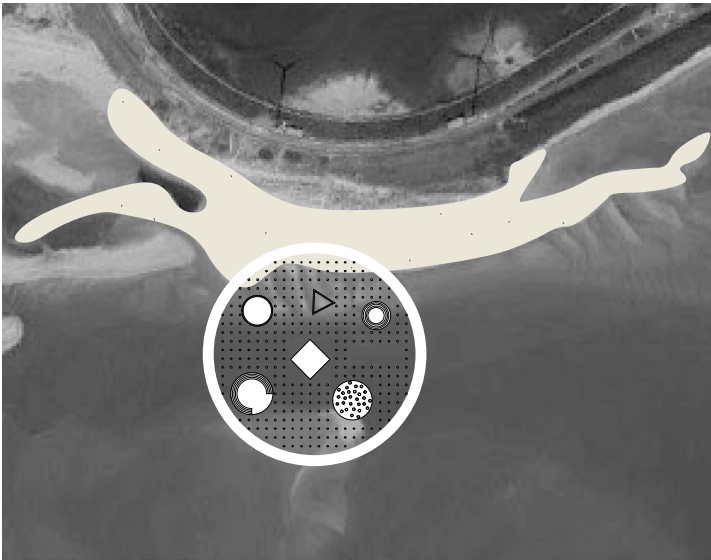
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Drawings

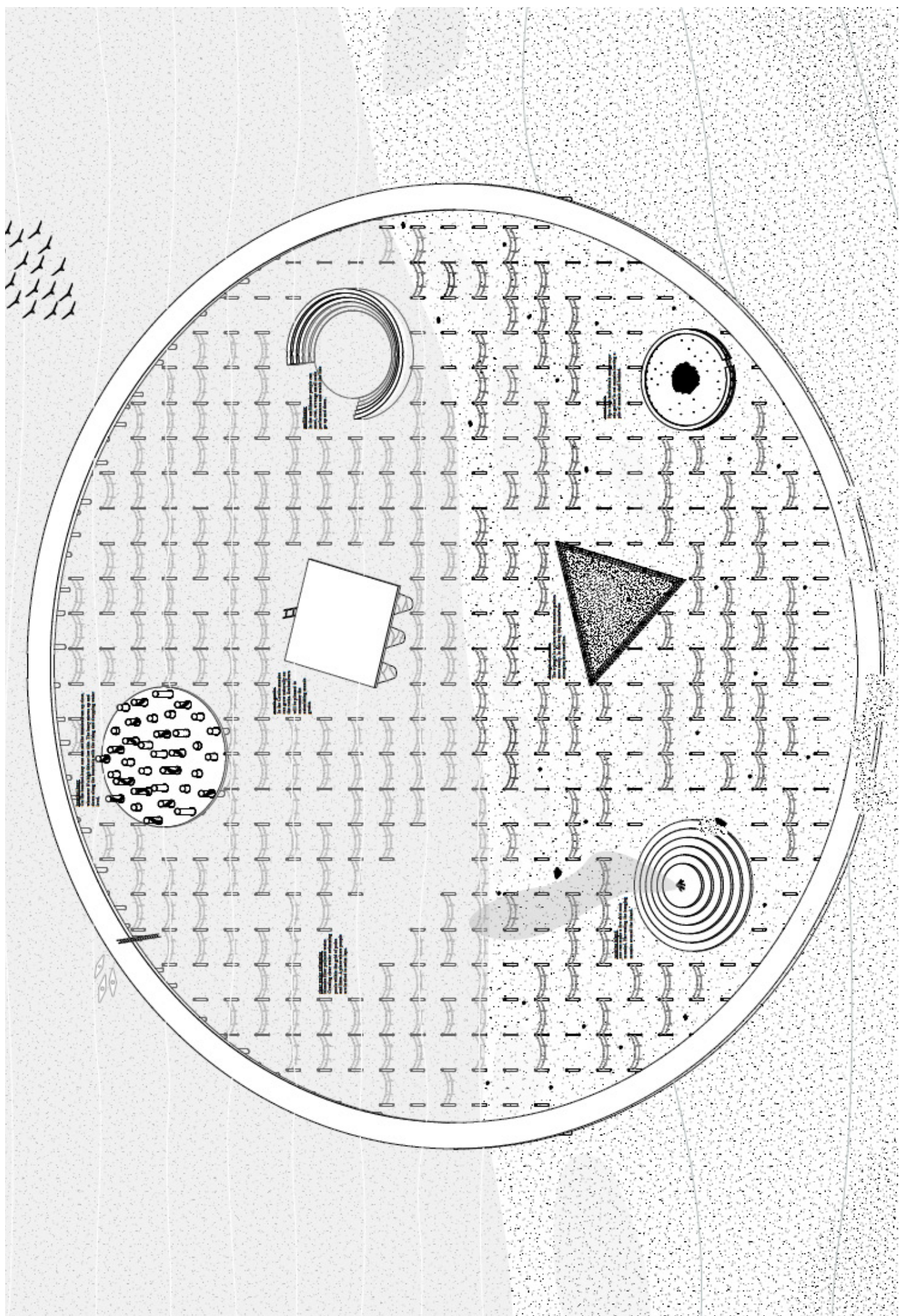
LOCATION



There is a place where human interference and natural growth form less of a contrast and more of a symbiosis. About 50 meters off the beach, there where the shoals run dry at low tide but are flooded at high tide, there is a circle shaped mussel bank. Mussels are stimulated to grow there, like they used to do all along the Dutch coast.



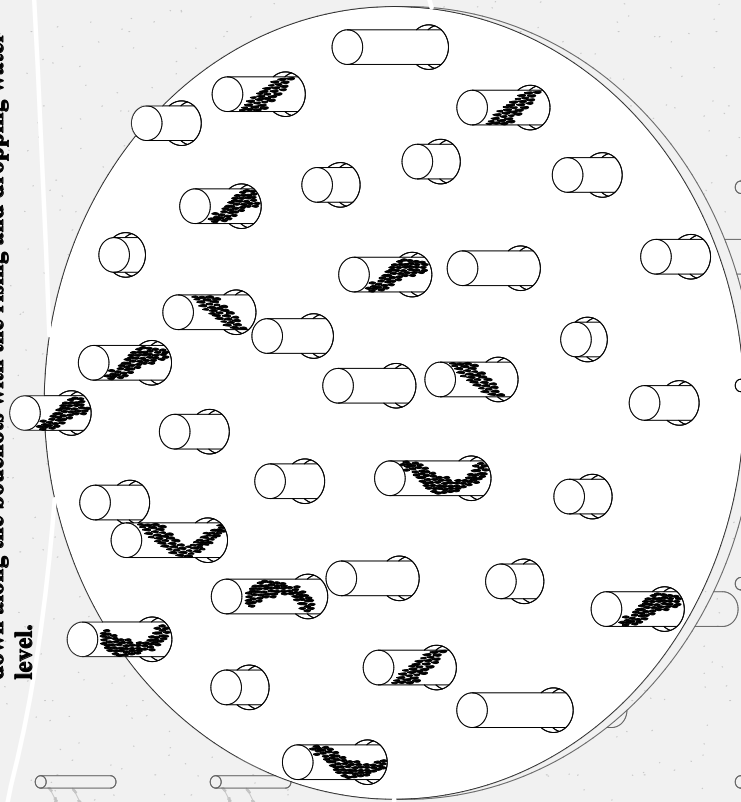
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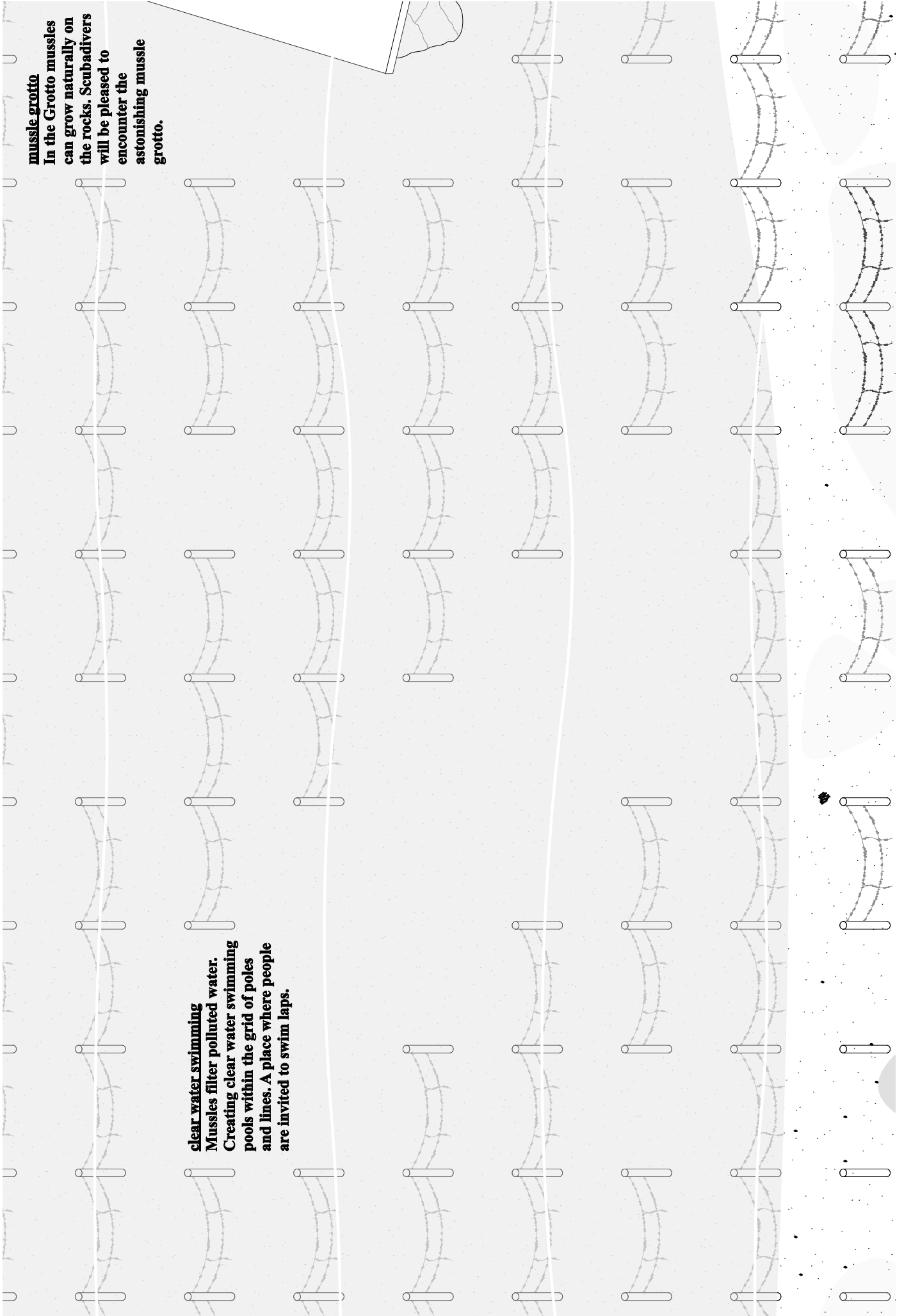
amphitheater
In the amphitheater people can meet, rest, arrange small scale performances and watch the tide go up and down.

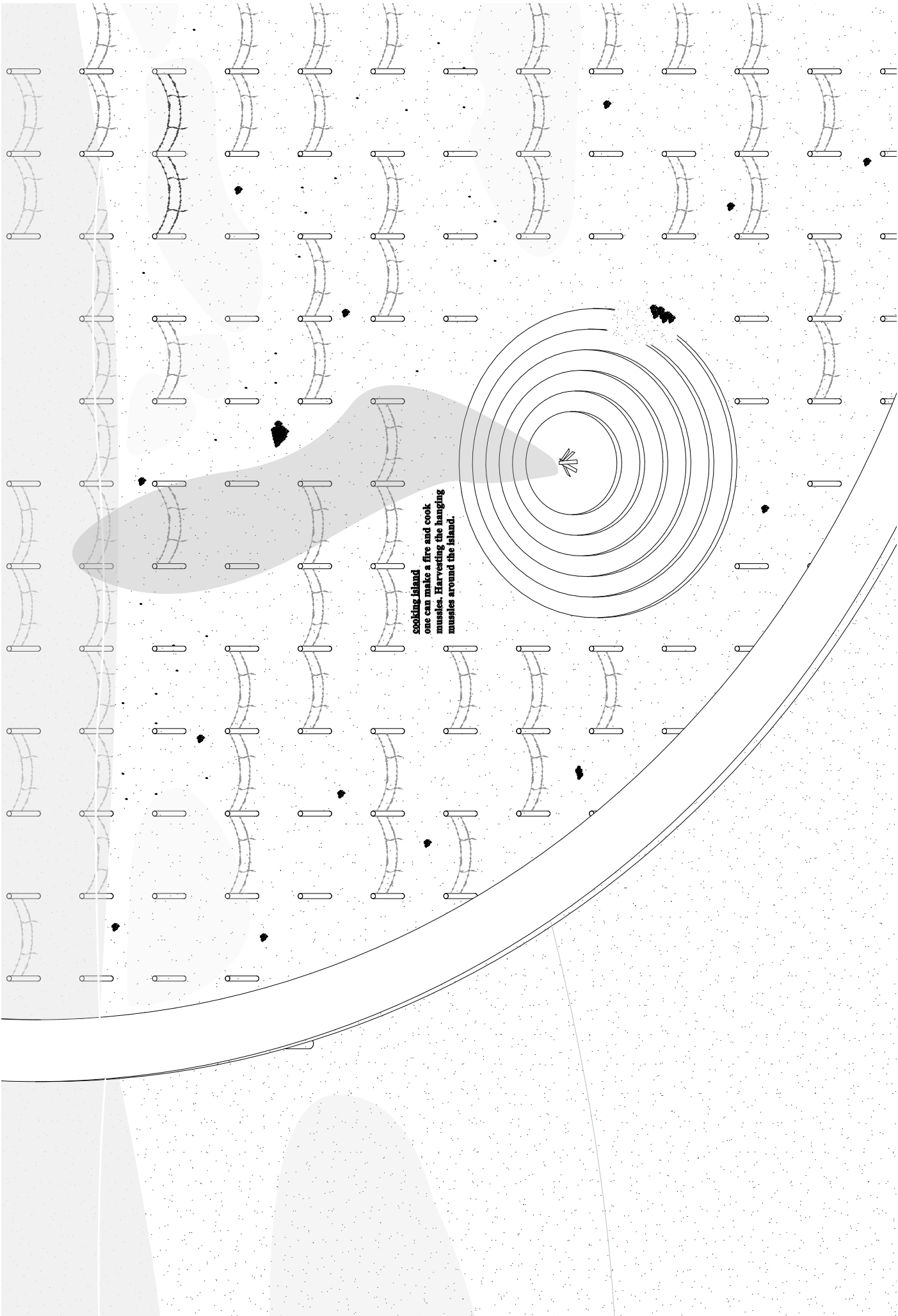
bouchot-buoy
On the bouchot-buoy one can see the mussels from up close, whenever it's high tide or low tide. The buoy moves up and down along the bouchots with the rising and dropping water level.



mussle grotto
In the Grotto mussels
can grow naturally on
the rocks. Scubadivers
will be pleased to
encounter the
astounding mussle
grotto.

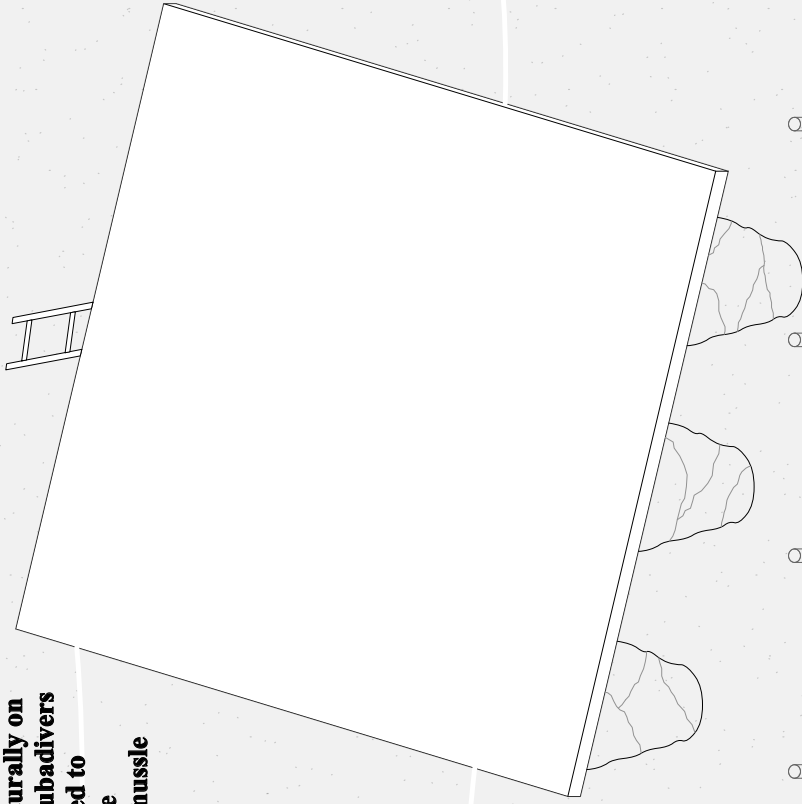
clear water swimming
Mussels filter polluted water.
Creating clear water swimming
pools within the grid of poles
and lines. A place where people
are invited to swim laps.



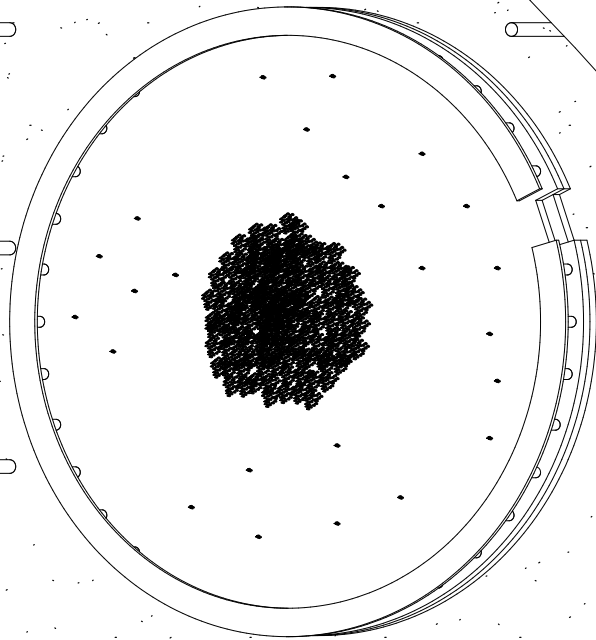


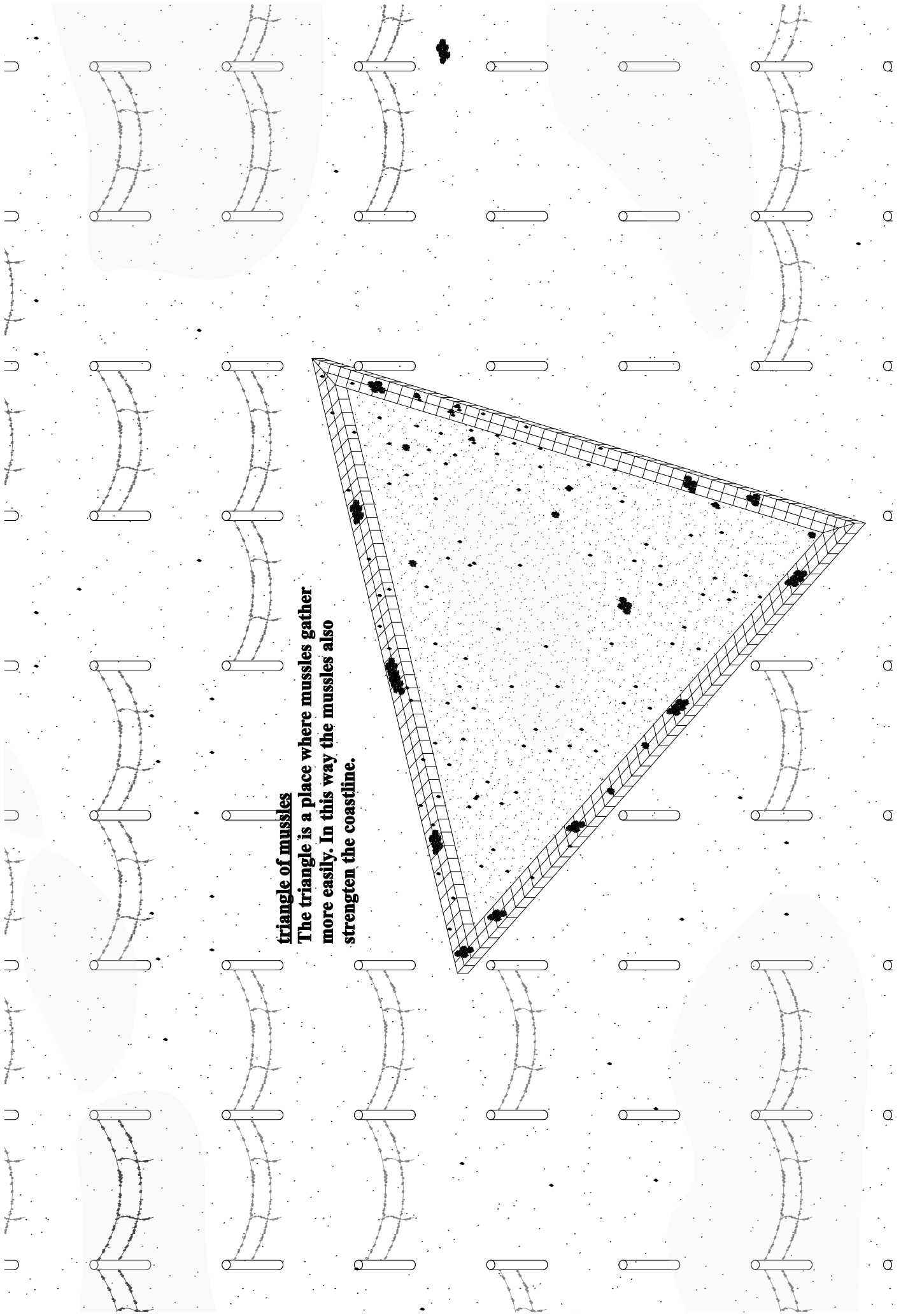
cooking island
one can make a fire and cook
mussels. Harvesting the hanging
mussels around the island.

mussle grotto
In the Grotto mussels
can grow naturally on
the rocks. Scubadivers
will be pleased to
encounter the
astounding mussle
grotto.



round table
Here both individuals and groups
can gather to eat mussels leaving a
pile of mussle shell behind.





triangle of mussels

The triangle is a place where mussels gather more easily. In this way the mussels also strengthen the coastline.



Cooking island at low tide, somebody picking mussels

The Tour

Overview of the model set-up









Amfiteater by night and low tide



Amfitheatre at high tide, sunset





The Bouchot buoy island at high tide. The buoy island moves up and down along with the tides, restrained horizontally by the bouchots (poles on which mussels are farmed).





The poles that form a grid inside the ring, at low tide. Here it shows how some poles are connected by ropes with mussels hanging from it.



Grotto at high tide





Grotto at low tide





View on ring, cooking island and grid of poles



















The mussle triangle at low tide





The round table at night







The ring on a foggy day







Process and Materials



Context and choice of area



CONT

Maas

CHOISE o

- + accessible for humans
- + sufficient water depth
- less sheltered than # 2 and 3

TEXT

Process

vlakte

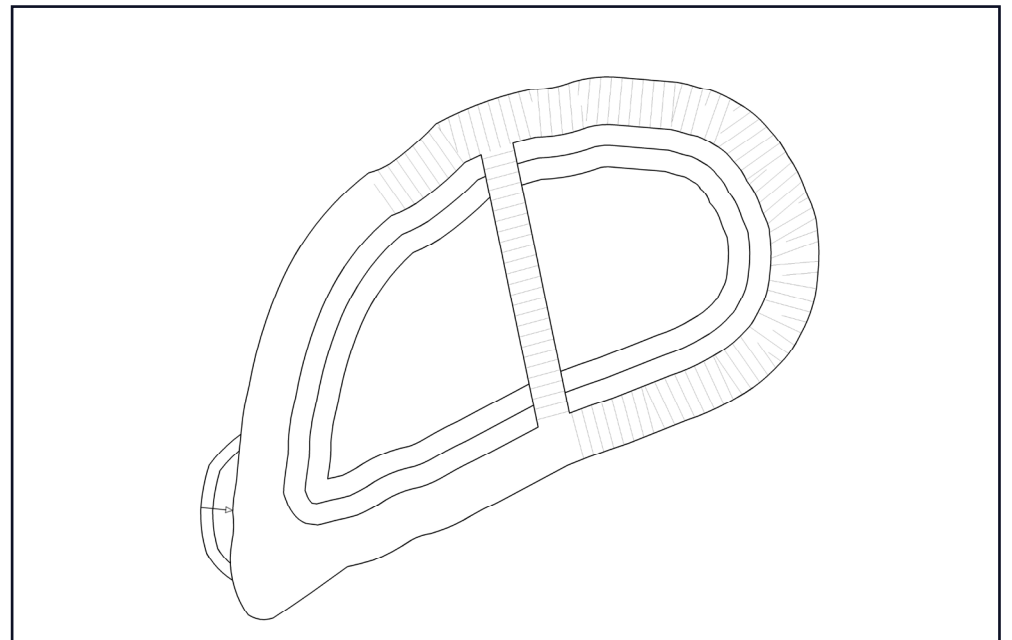
f AREA #1



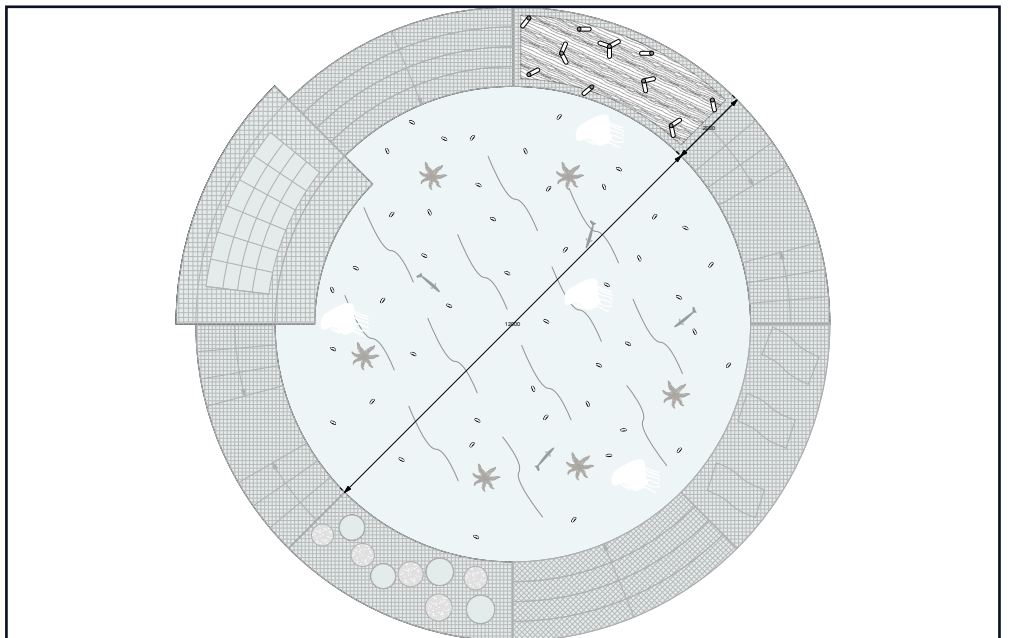
CONCEPT week 2
Jurriaan Blom



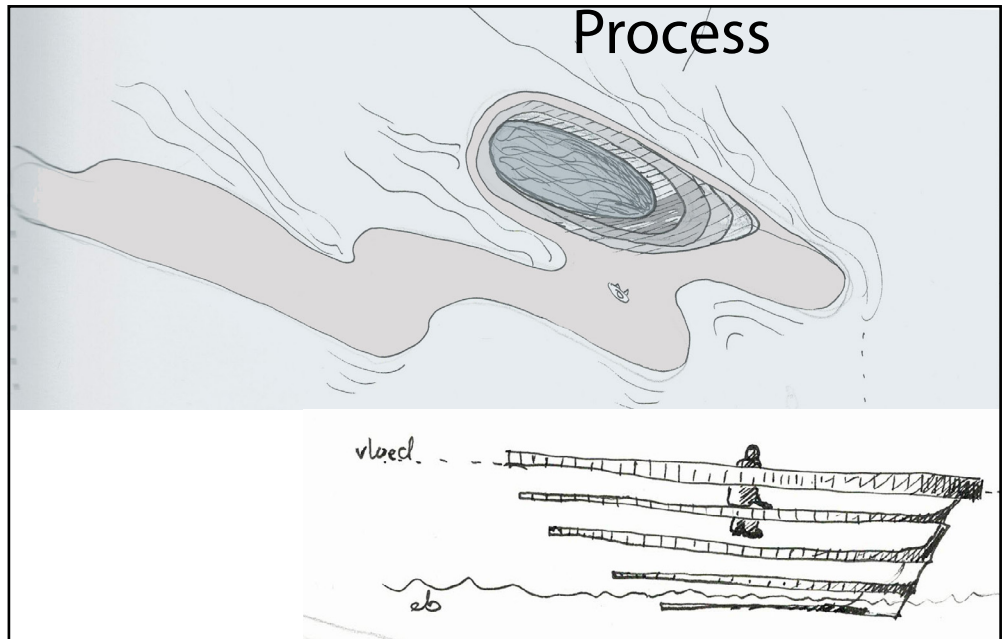
CONCEPT week 3
Arvid Schoots



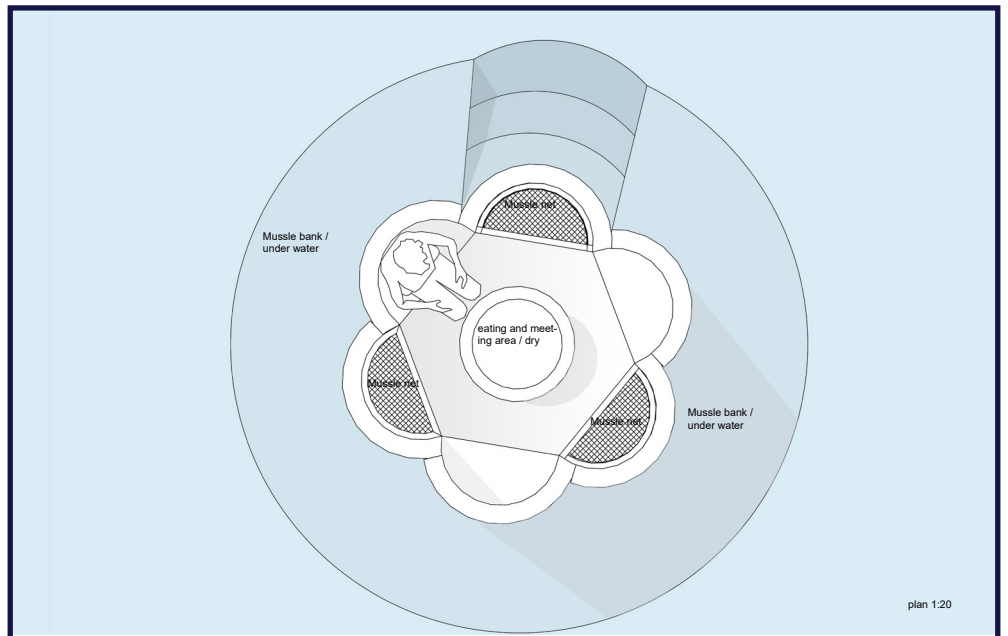
CONCEPT week 3
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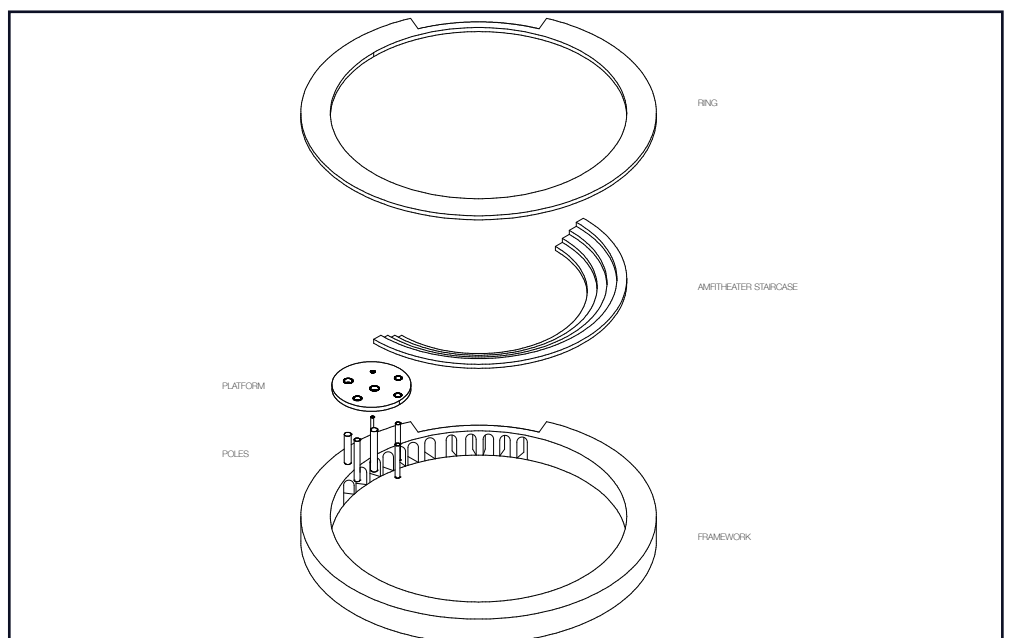
CONCEPT week 2
Belle van den Berg



CONCEPT week 3
Belle van den Berg



CONCEPT week 4
Jurriaan Blom, Belle van den Berg and Arvid Schoots



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1. Banks



2. Ropes

FIXED
FLOATING

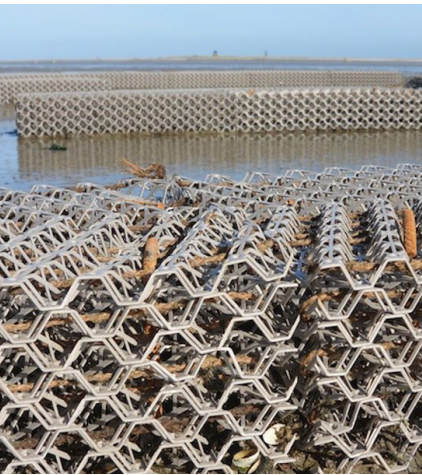


3. Poles

FIXED



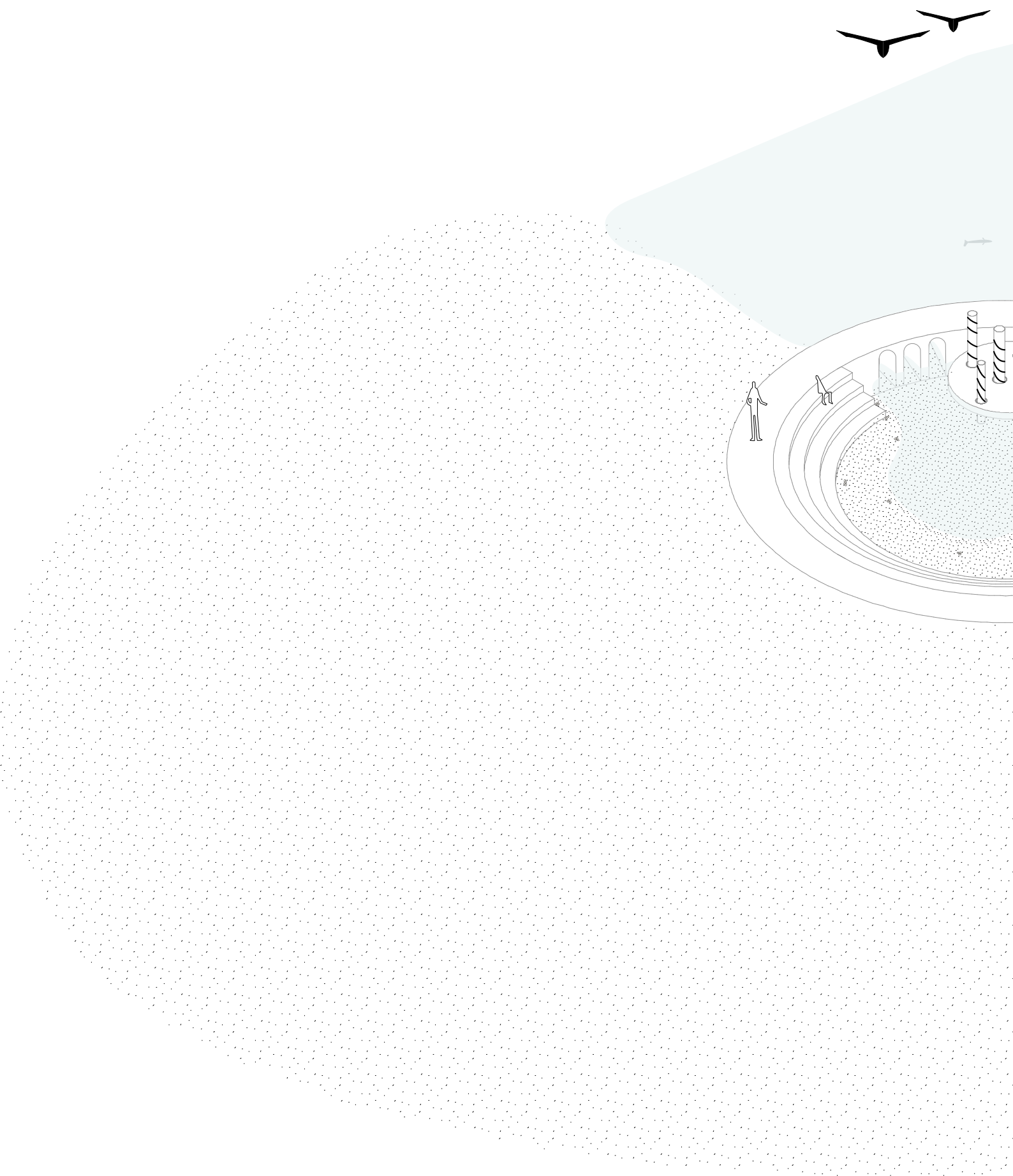
MUSSLE
ways of growing
floating - fixed



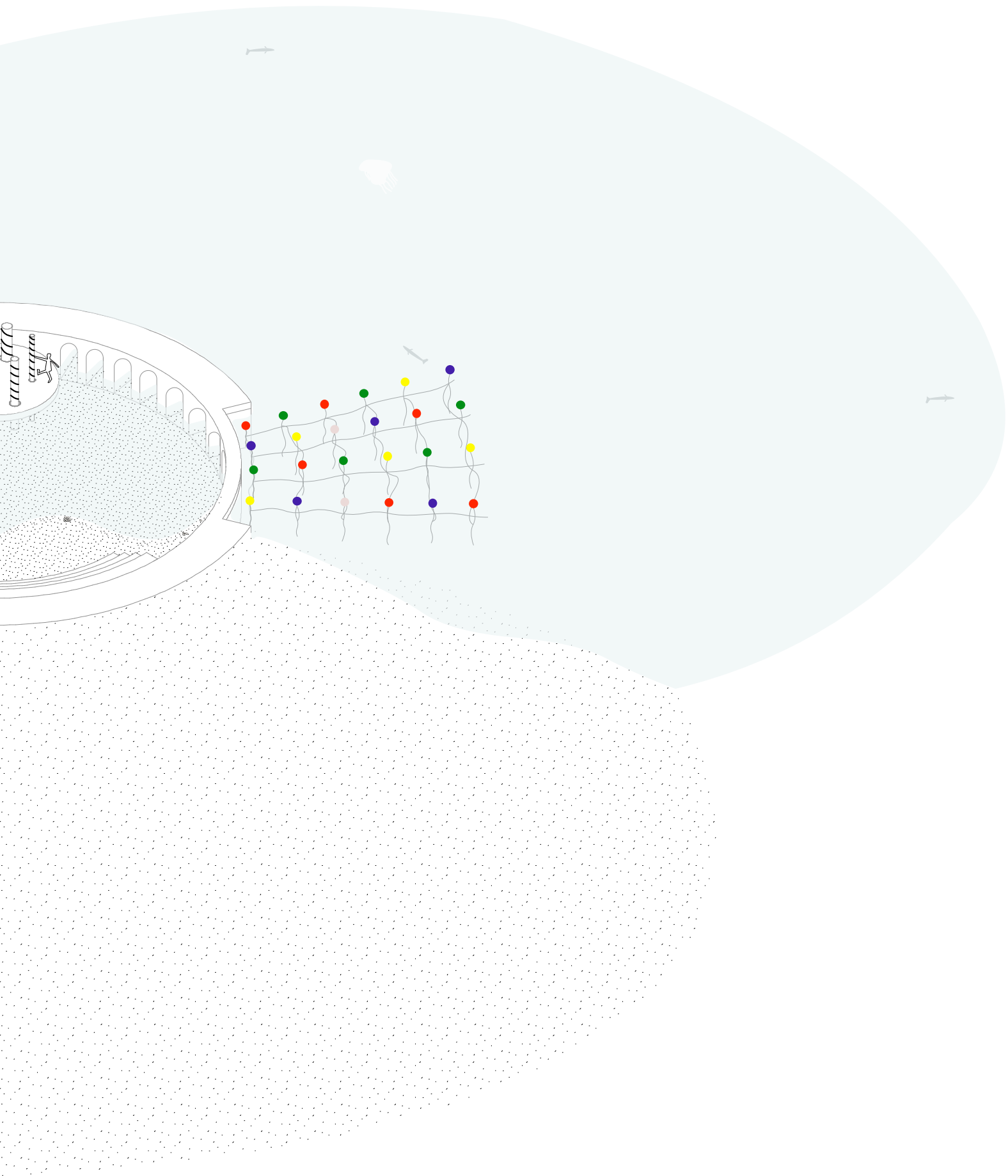
FIXED
FLOATING



Reaction to this concept:
- the ring is too small
- too much happening at the same time



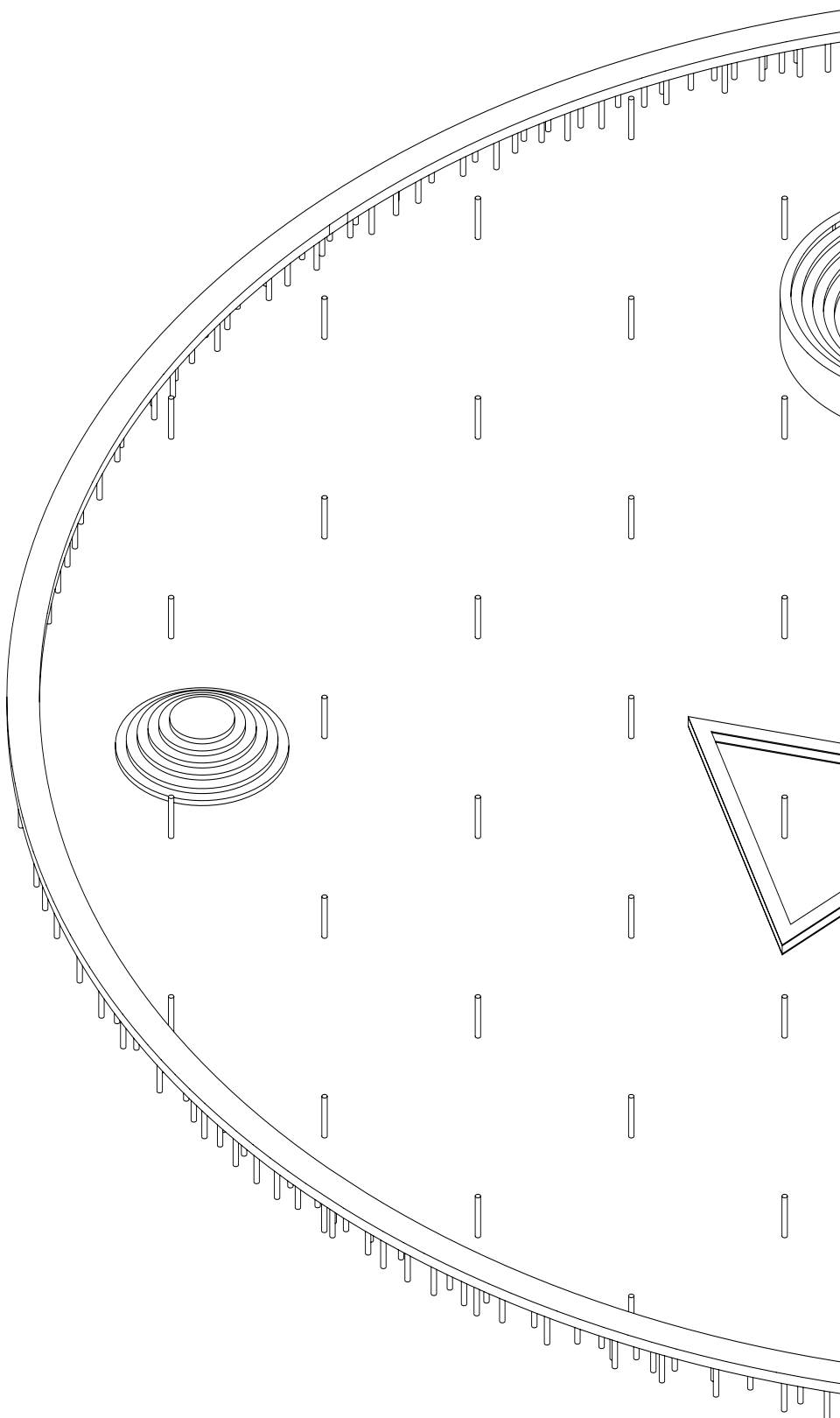
Process



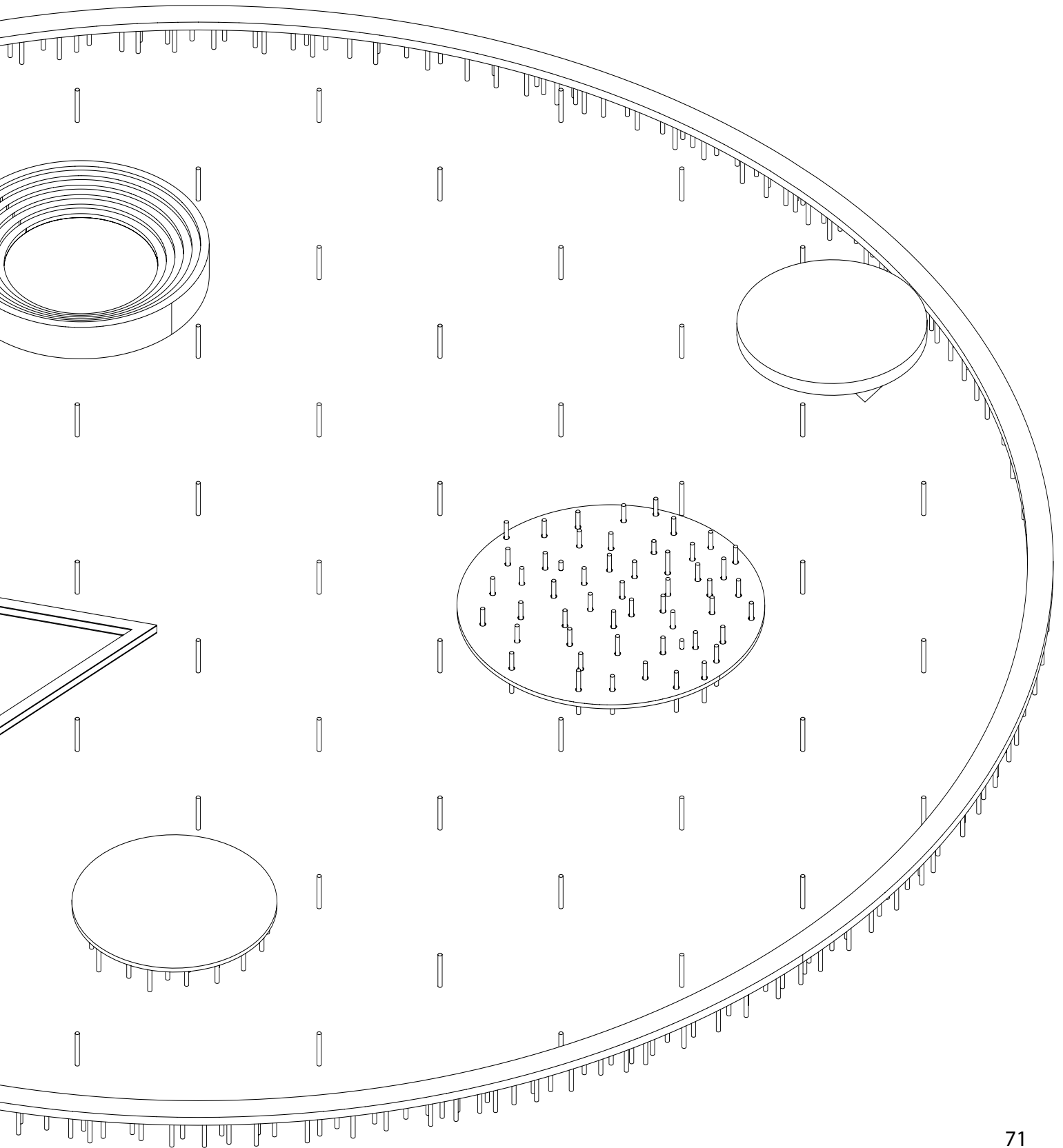
Final changes to the concept:

- the ring is enlarged, up to 100 m diameter
- it envelops the grid of bouchots (poles)
- and different designated elements as separate voids in that grid.

(in the final drawings, the grid is more dense)



Process





Model





The ring and the elements are made of a combination of concrete (here: plaster) and whole mussel shells ...

Mockup



... and fragments of mussel shells and dark stones (here: coal). The nooks and cracks this creates in the smooth concrete allows for the living mussels to attach more easily to the surface of the ring and elements.

Mockup



sample of concrete (here: plaster) with shell dust
and fragments (here: coal)

Model (in the) making

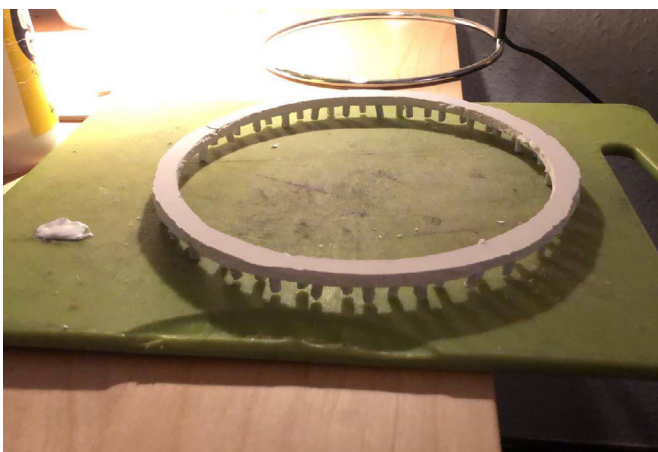




Before assembling the final model we all produced beforehand the various elements and the ring (in fragments).



From these examples of try-outs, only the round elements on the left made it to the actual model.





We soon found out we needed to fix the grid of poles to a foam board instead of sticking them loosely into the sand, in order to really produce the effect of straight lines, a rigid grid.







We also soon decided to adjust the height of the dunes in the back to resemble the Slufter belvedere dune..





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