

# Ventusium

A place of wind.

Ventus-ium

The latin word "Ventus" meaning wind and the suffix "-ium" making the word a noun.

The Ventusium is a sailing school complex built at the Sterkfontein Dam Nature reserve on the border between the Free State and Kwa-Zulu Natal





## Table of contents

1. Abstract .....	8	3.4 Conclusion.....	40
2. Introduction.....	10	4. Memory.....	42
2.1 Motherhood.....	12	4.1 Research Question.....	44
2.2 Burra charter .....	16	Design Discourse.....	46
3 Site analysis .....	18	1. Imagination.....	48
3.1 Expansive analysis.....	20	1.1 Mythology .....	48
3.1.1 Tugela-Vaal Water Exchange.....	22	1.3 The Senses .....	50
3.1.2 Sterkfontein Dam.....	24	1.4 Meaning.....	51
3.2 Intermediary site analysis .....	26	1.5 Conclusion.....	52
3.2.1 The lookout point.....	28	2 Conceptual design.....	54
3.2.2 Dwelling styles .....	30	2.1 Concepts .....	56
3.2.3 Locality of the site for sailing .....	32	2.1.1 Wind.....	59
3.3 Locality analysis .....	34	2.1.2 Earth .....	63
3.3.1 The Footpath.....	35	2.1.3 Water .....	67
3.3.2 The Roadhouse.....	36	3. Touchstones .....	70
a. Road view. ....	36	3.1 Background.....	72
b. The escarpment .....	36	3.2 Functionality .....	73
3.3.3 The sailing school.....	38	3.3 Observations.....	74
a. The conservation needs of the site... 38		4. Practical discourse.....	76
b. The needs of the sailing school..... 38		4.1 Practical implications of designing	

This book is written as though it is a colporteur; Colporteurs tell stories of the exotic and the different with artefacts and language. Their stories and small goods are bits and pieces of alterity that bring semantic possibility in miniature. (Seremetakis, 1993, p. 7)

# 1. Abstract

This book concerns itself with the influence that substance has on architecture and architectural engagement. Architectural substance is explored through the register of the imagination, a term coined by James K.A. Smith to refer to human's everyday understanding of the world. The register of the imagination is informed via the senses through substance, so the senses and their interaction with the world form a large part of the practical discourse of this document. The senses lead to practical ways in which to create architecture which includes the entire body and leads to meaningful engagement with the world, and the creation of meaning through the mythology of the building.

Keywords:

**Imagination; Fabric; Substance; Landscape; Colporteur; Motherhood; Detailing; Experience; Mythology; Mystic; Edge Condition**

Secret



Figure 2. Sailing Society of South Africa logo (Sail.org, n.d.)

## 2. Introduction

Ventusium

The Latin word *ventus*, meaning breeze, combined with the suffix “-ium” which makes it a noun. It means “a place of wind”.

The Ventusium is built for the Council for Sailing South Africa, which is in charge of sailing education and competitions in South Africa.

The Ventusium is on the border of Kwa-Zulu Natal and the Free State. This specific placement means that the area doesn't get much rainfall because it is on the escarpment -the Dam is part of a water exchange scheme. The ridge, however, does not stop the high-altitude winds from travelling- for a short distance- into the Free State. The high winds and the large body of water made the Dam somewhat of a sailor's paradise. The Sterkfontein Dam Nature Reserve is close enough to major cities such as Johannesburg and

Bloemfontein that it is viable for people to drive there for the weekend.

The specific location of the Dam is essential for sailing. While most people associate sailing with the sea, the Dam's locality allows high winds to blow on an inland body of water, creating conditions like that at sea. As a result, the Dam already has a sailing community which shows up every time the wind blows hard enough for some high-speed sailing.

The sailing community is disjointed, however. The Dam has no designated sailing areas; fishing takes up most recreational areas. When the sailors arrive, the fishermen usually leave as fishing in upwards of 30km/h winds is no fun. Yet there remains a sense of intrusion and hostility from the fishermen's side. The sailors have just as much claim to the Dam but are unwanted.

## 2.1 Motherhood.

Nadia Seremetakis tells a story in her journal entry: *The Memory of the Senses: Historical Perception, Commensal Exchange and Modernity*. The story is a way of viewing *dasein* as integral part of the landscape. In this story the landscape takes on the role of a grandmother and *dasein* is the grandchild that she cares for.

At the edge of a field in Tuscany, a grandmother sits with her baby grandchild. The grandmother takes a piece of crustless bread from the centre of the loaf and puts it in her mouth. She rotates her tongue and moistens the bread with her saliva until it becomes a paste or “clay”. When the consistency of the bread is correct, the grandmother puts it in the toothless mouth of the child. The baby swallows the softened bread, and along with the bread, she swallows the saliva of the grandmother. The grandmother reaches for more bread and repeats the process. While this is taking place, the grandmother talks to the child, calling it “my eyes,” “my heart,” and “my soul”. She continues until the child falls asleep. Raising a child in this way is often referred to as resurrecting a child. This is then further cemented by the fact that the child has been given the *same* name as the grandmother. (Seremetakis, 1993, p. 2).

C. Nadia Seremetakis was an author and professor of cultural and applied anthropology at NYU and also the

University of Greece. She views cultural anthropology as a thoroughly emplaced phenomenon. She believes that the anthropological development of a culture is rooted in the topology of the landscape. She says: (the grandmother) “is a woman in the middle of chickens, dogs, cats, rabbits, goats, wells, mountains, oceans” (Seremetakis, 1993, p. 6). In other words, the grandmother and the culture surrounding her are emplaced and emplotted in the landscape and topography of Greece. They are inseparable; the grandmother is as a part of her surroundings as the chickens and the dogs. She is not a foreign object to the culture, existing in some superior cognitive realm; she is an integral and embodied part of what is going on around her and is just one more cog in the process. The anthropological view that Seremetakis has is rooted in the culture of Greece, but it is not limited to Greece. The notions of motherhood which is exhibited by the grandmother in Seremetakis’ story are found worldwide. She explains it out of the perspective of the greek culture, but these principles are universal. Just as easily as a greek grandmother lovingly taking care of her grandchild, it could just as easily be a African grandmother, or a south American grandmother who takes care of her grandchild.

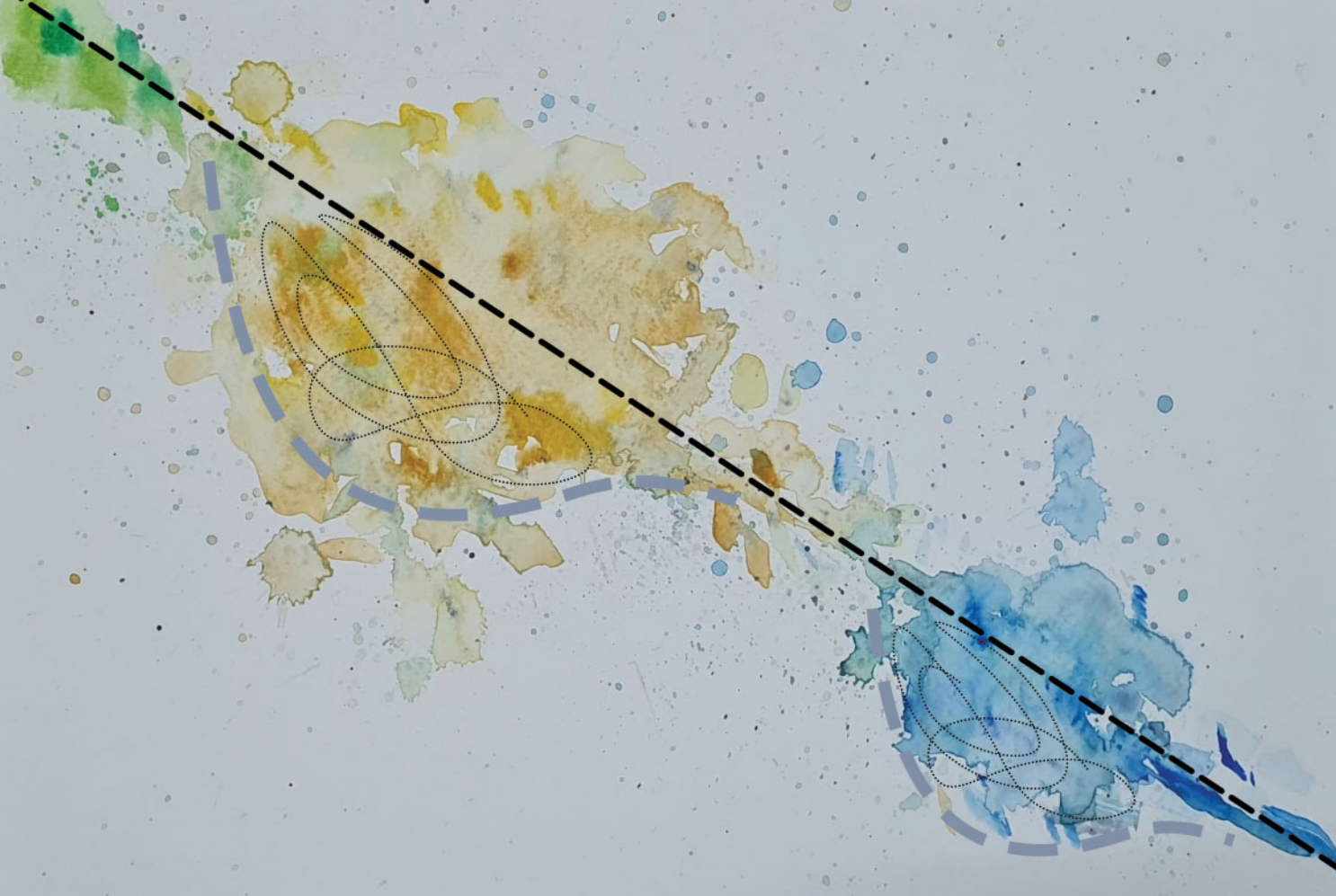


Figure 6. Embodied knowledge passing from grandmother to granddaughter (Author, 2022)

In the light of Seremetakis' view of Cultural and anthropological development, consider the following quote by her:

“The child is resurrected because the passage from the womb is a passage out of the dark and from a state of sleep. Babies are wrapped in cloth, and dough (for bread) is covered with blankets and towels to rise. The mouth of the grandma (softening the bread) is an oven, as is the womb. The Grandma feeding the baby with her mouth is resurrecting it by awakening its body point by point, by calling and naming points of the body: “my eyes”, “my heart,” “my soul,” or “my olive”. These are inferential codes for a complex act that engages other parts and points of the body not explicitly named. The entire act of feeding the child and naming the points of the body is an awakening of the senses. The act of talking to the child engages hearing. Naming the eyes awakens vision; the transference of substance from mouth to mouth animates taste and tactility.” (Seremetakis, 1993, p. 3)

Seremetakis describes how the woman raises and animates her grandchild. She caringly feeds her with “food out of her mouth” (Seremetakis, 1993, p. 4). In the grandmother's mystical worldview, the food resurrects the child, bringing it out of the dark and into the light. It is a prolonged process of birth. Moreover, ritual feeding awakens the child's senses- which the grandmother considers her own- and makes “one heart for two bodies” (Seremetakis, 1993, p. 4).

In the grandmother's mystical worldview, she transfers her senses to the child, resurrecting herself in

## 2.2 Burra charter

The Burra Charter advises architects on how to approach “places of cultural significance” (Australia ICOMOS, 2013, p. 1). It is a guideline for architecturally approaching culturally significant places. Most architects believe it only applies to monuments, but when dealing with virgin sites and already existing rituals, the sensitivity in its approach is applicable, if not necessary.

The approach to the design is specifically concerned with the conservation of the site’s spirit and the successful translation of sailing rituals. The rituals are significant to long-time sailors. Article 3.1 of the Charter says that “*conservation* is based on a respect for the existing *fabric*, use, associations and meanings. It requires a cautious approach of changing as much as necessary but as little as possible” (Australia ICOMOS, 2013, p. 3). Article 5.1 elaborates, “*Conservation* of a *place* should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others” (Australia ICOMOS, 2013, p. 4). What is especially important to notice about the previous articles is that the Charter places equal agency on *place* and *fabric* as elements to consult when considering a change to a specific site.

The site analysis has been conducted, first of all to orient the reader to the position of the site. Through the

orientation, key parts of *place* and *fabric* are identified which become the backbone to later design decisions. *Place* and *fabric* is the grandmother with her mystical knowledge of the world; architecture is the bread (the tool) onto which the embodied knowledge is transcribed, and it is the peephole through which Dasein can interpret it.



## 3 Site analysis

As previously mentioned, the locality of the Dam is essential to the sailing community. Besides the high winds, it is near large cities, where sailors tend to come from, which is why it is so popular among many sailors. This section follows a detailed analysis of the site and a comparative study of on-site and surrounding dwelling style

## 3.1 Expansive analysis

The Sterkfontein Dam Nature Reserve is situated ideally for sailing for several reasons. The first and probably most important reason is it is within a weekend's drive from many densely populated areas. The placement of the Dam means many sailors can make the trek to the Dam when the winds blow and enjoy a weekend of sailing. Often sailors do not book their sailing weekends far ahead because the wind is unpredictable. This fact, combined with the fact that the Sterkfontein Dam Nature Reserve is one of the windiest places, has made the Sterkfontein Dam Nature Reserve a literal Mecca for sailors.

On any given weekend with strong winds, sailors show up in their droves, sailing the entire day. Usually, the tents are quiet at night because the sailors are too tired to socialise.



Figure 9. Sterkfontein Dam (Google earth, 2022: Adapted by Sybrand van Sittert)

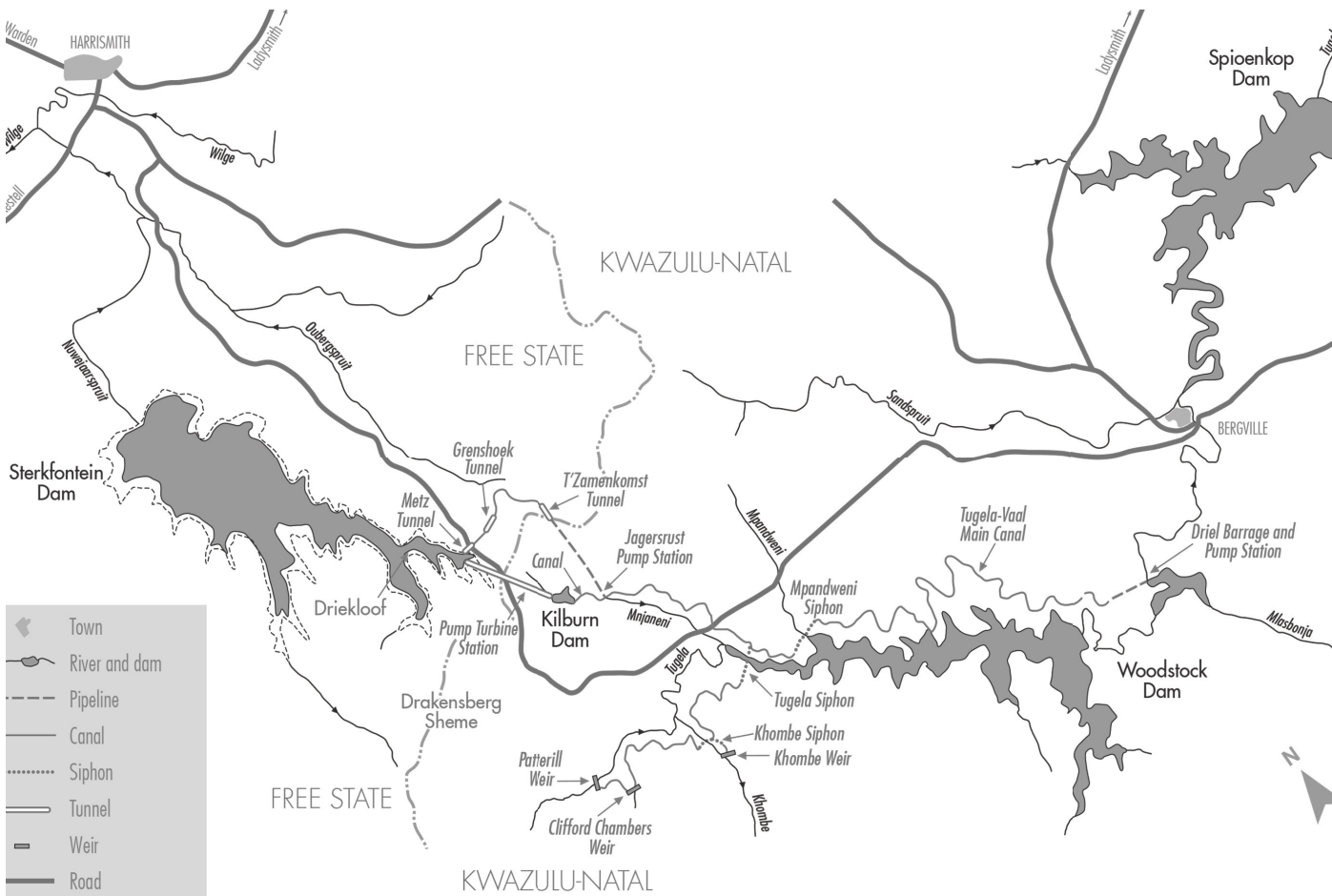


Figure 13. Tugela Vaal Water Exchange (ORASECOM Report, 2013: adapted by Sybrand van Sittert)

### 3.1.1 Tugela-Vaal Water Exchange

The Tugela Vaal Water Exchange is a system of water exchange which supplies Gauteng with water from Kwa-Zulu Natal. It works with a 100 MW turbine pumping water up the mountains at 24 m<sup>3</sup> per second. When the power grid strains, the water is rerouted back through the generator at about 40% efficiency to assist the grid.

This exchange works the same way as Can't help Myself because it is completing a task it can never finish. The helplessness becomes compounded by the fact that the turbine is only 40% efficient and is thus carbon positive. The fact that it is carbon positive, thus contributing to global warming, means that it is effectively lowering the long-term outlook of the people it is helping survive. In addition, it is poisoning the well by refilling it with dirty water. It is fighting a losing battle.



Figure 11. Red pool (CHIESA, 2016: Adapted by Sybrand van Sittert)

Can't Help Myself's continual scraping of red liquid pins down part of art's essential elusiveness (Angelopoulos 2019 Online). It continually scrapes hydraulic fluid towards itself but is busy with a never-ending task that is impossible to accomplish. This hopelessness is an apt reflection of the plight of the Tugela Vaal water exchange and how its hydro-electric power generation fights a losing battle.



Figure 12. Close up (GETTY IMAGES, 2019: Adapted by Sybrand van Sittert)

### 3.1.2 Sterkfontein Dam

As previously mentioned, the Sterkfontein Dam Nature Reserve gets a lot of wind. When it is at its strongest, the wind comes at 285° from the north. When wind travels over land, it is very turbulent and “gusty.” This is not conducive to sailing. Fortunately, the wind blows uniformly over water, and it recovers quickly. This means the sailing school should be positioned as far away from the western bank as possible.

The Reserve is divided into specific conservation zones, which cannot be developed so these zones need to be avoided. The particular site I have chosen is located close to a natural harbour. The school will not be in this harbour because it is shielded by a mountain, which makes for gusty wind, but it will be a helpful place for teaching exercises because it will not have waves.

The strong wind- as indicated by the wind rose- only blows in summer, in spring, fall and winter the wind does not blow strong. This means that the sailing school will only be used throughout the summer for sailing functions. the rest of the year the school will have to be used for other functions.

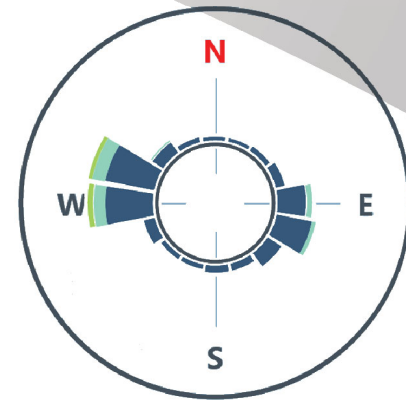


Figure 16. Wind rose (Windy.com, 2022)

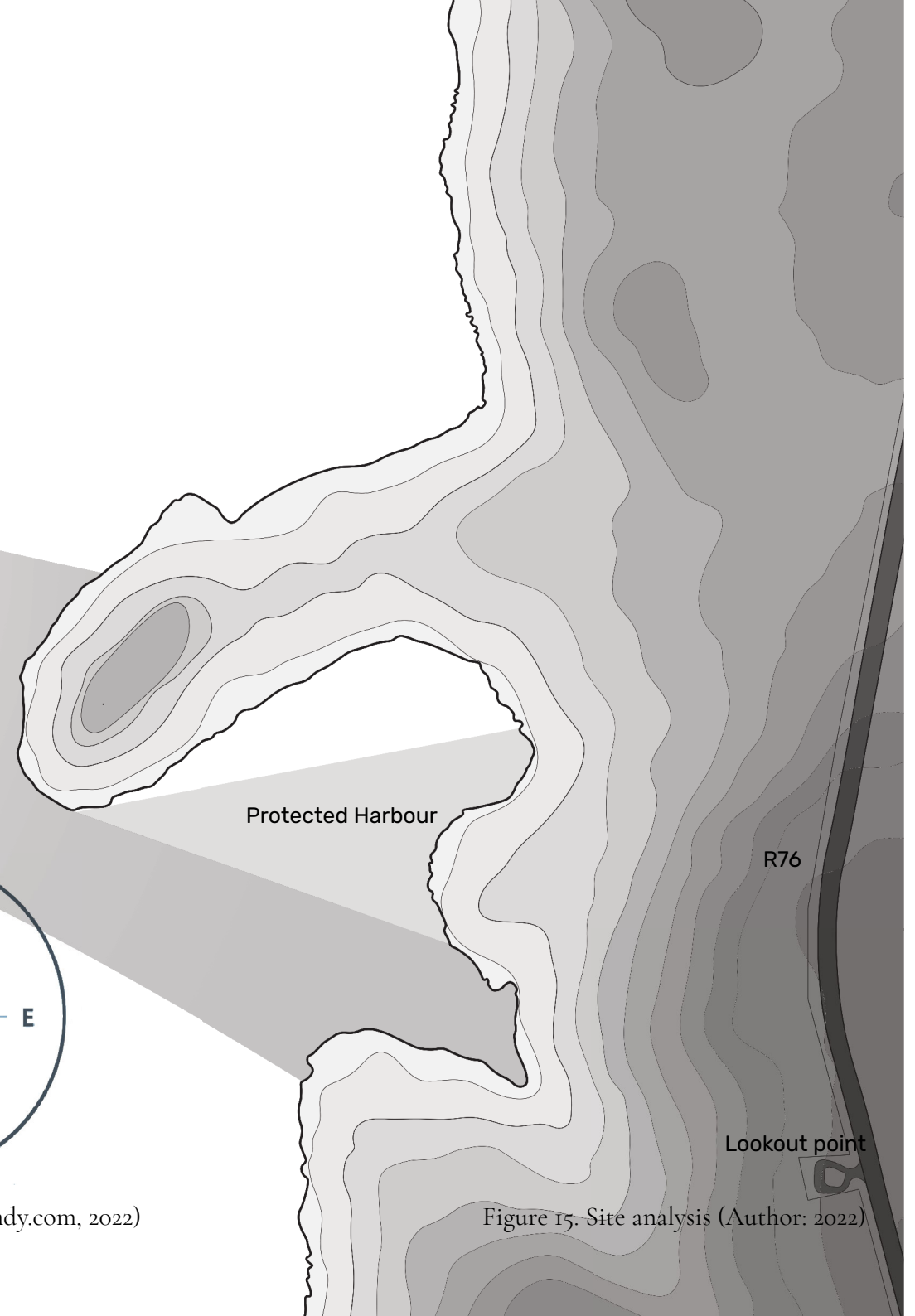


Figure 15. Site analysis (Author: 2022)



### 3.2 Intermediary site analysis

When I initially approached this site, I thought it was a virgin site with no previous human interaction. However, that was a naive approach as the site is interspersed with traces of human interaction. On the site, there is a gravel road which takes you to the vulture's restaurant and from which also extends a footpath which goes all the way straight down to the water. It has become a waterway because, naturally, rainwater follows it as the path of least resistance. The footpath became an anchor for the design linking two aspects of the intervention and is pivotal in the layout of the entire scheme.

Furthermore, there is a lookout point on the site with artisans who sell little clay figurines. These men have been on site for over 20 years and are a well-known point of interest in the area.

Figure 18. Figurines sold at the lookout point (Author: 2022)

### 3.2.1 The lookout point

The lookout point has been part of the Sterkfontein Dam's cultural fabric for over 20 years. It is a place to stop just before going over the escarpment into Kwa-Zulu Natal and many tourists use the route to get to their holiday destinations.

Over the years, craftsmen and vendors have caught on and started to trade with tourists with clay figurines. The craftsmen mold the figurines off-site in Winterton, from where they commute daily. The figurines are painted, detailed and sold on site. This way of living has been passed down from father to son for at least 20 years. The craftsmen are part of the cultural fabric of the Dam. They are a positive experience that many link with the experience of the Dam.

The craftsmen have been part of the site's fabric for so long, and holiday goers can buy the same type of figurine all over the R76 route and other Drakensberg mountain routes. Yet there is still no formalised location for them to use to sell their products. Though it may have been a grand roadside stop many years ago, the lookout point is now entirely run down. The tables are broken and so overgrown that one can hardly be seated anymore. The craftsmen pack their models in buckets to commute with because there is no safe place to store them. They sit around fires to keep warm because there is little in the way of shelter on the site, and when they exhibit their wares, they do so on a cleaned piece of the gravel road because there isn't another place to display it.



Figure 20. Knowledge Kopeka, one of the craftsmen at the dam who has been selling figurines here for over 20 years and who was taught by his brother (permission obtained) (Author, 2022)

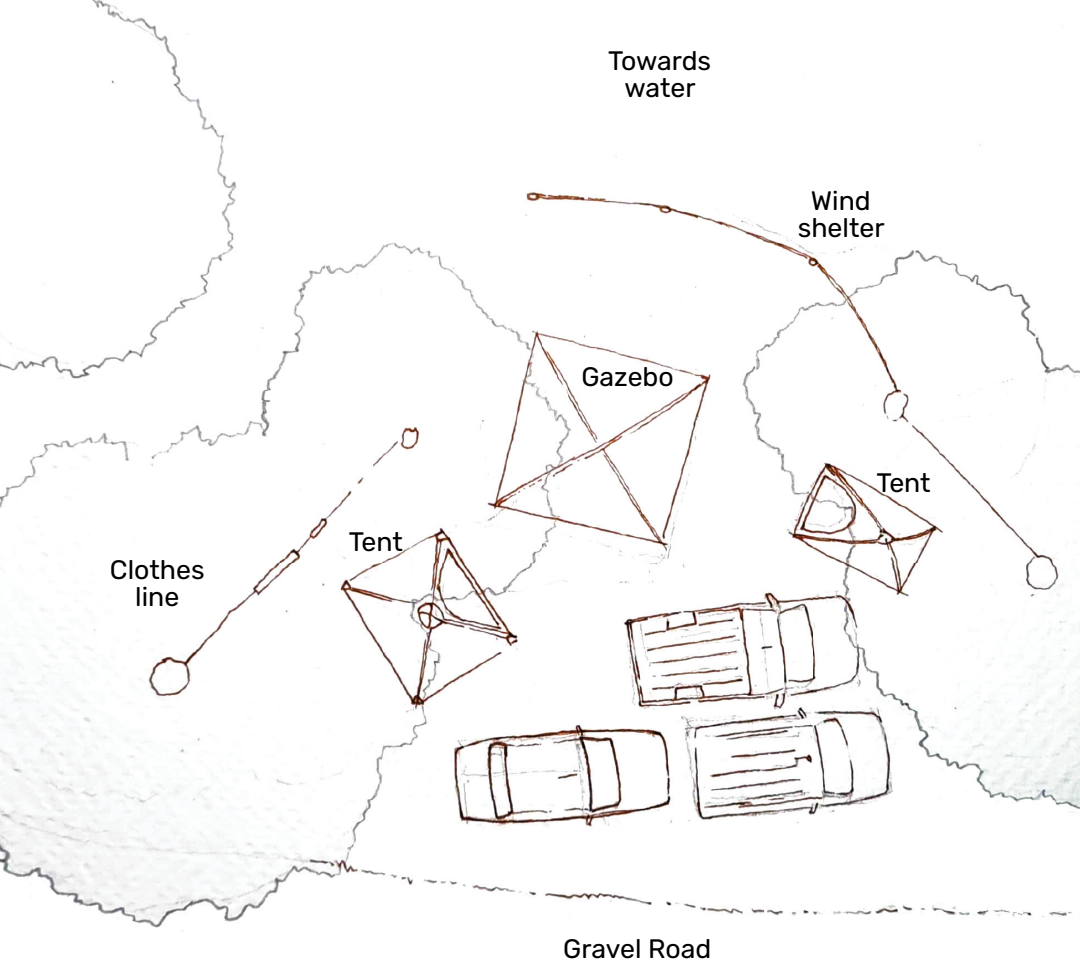


Figure 22. Tent encampments at the dam (from satellite photos) (Author, 2022)

### 3.2.2 Dwelling styles

The dwelling styles in the area are most interesting. Historically we have the Basotho people who build a variation of a Sesotho rondavel. The Rondawels are the same as the Sesotho people in the valleys of the mountain kingdom, but the Basotho shepherds build it differently. They spend their summers in the mountains, building the rondavel out of rocks rather than the traditional clay brick. The herdsmen change the roof thatching every year after the winter, but the stone is a much more durable material. If the herdsmen had used clay bricks, the Rondawel would have collapsed

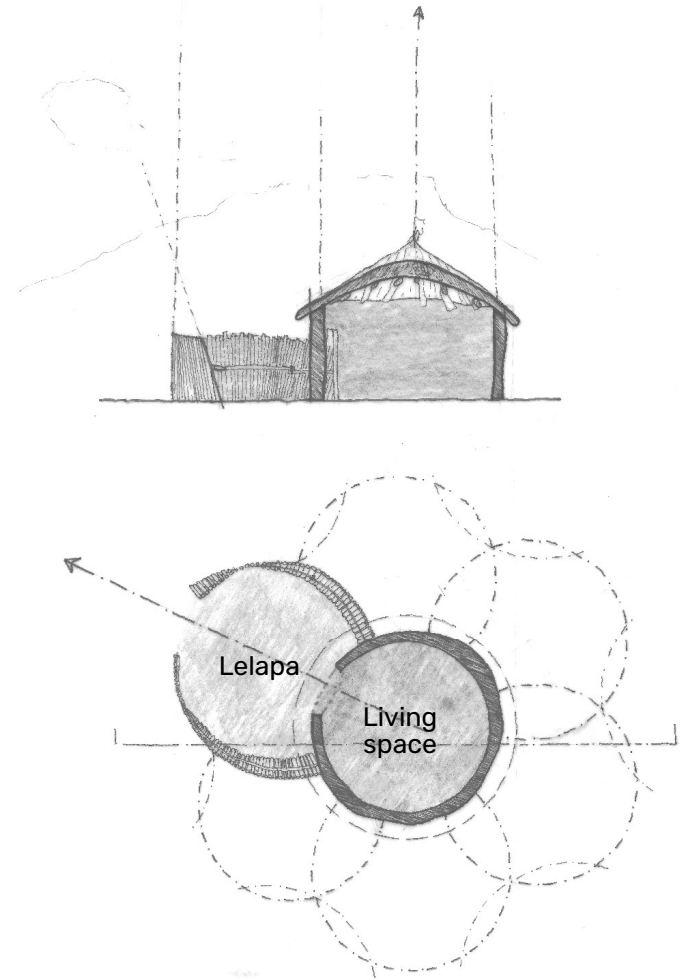


Figure 23. A sketch approximating a Sesotho dwelling (Author, 2021)

when the thatching caved in. The material's durability is probably the driving factor for the material choice, and it doesn't change much of the hut except aesthetically.

In most other ways, the hut is very similar to a Sesotho Hut; the only thing missing is the Lelapa, which is a thickening of the threshold and a barrier between public space and private space. Interestingly, this element is missing from a Hut built far in the landscape where there are no trespassers, but it is put in place intentionally in a populated area.

### 3.2.3 Locality of the site for sailing

In previous chapters, the importance of choosing a site on the eastern banks of the Dam was discussed. It has also been mentioned that the placement of the scheme is close to a natural harbour, which will be instrumental in teaching young sailors how to sail.

Other elements worth mentioning include the beaching site of the boats should be sand as far as possible. The banks should be free of stones because sailors often drag their vessels and boards onto the banks. The selected bank is also perpendicular to the wind, which means it is easy to launch from there (a boat cannot sail directly into the wind, so it usually launches perpendicularly to the wind or downwind). If a launch site is perpendicular to the wind, it is usually an excellent place from which to launch. In this case, the wind pushes the vessel back to the land and not out to the middle of the Dam, which is good, especially for sailors only beginning to sail. However, it could be a significant risk to allow new sailors onto the water if they do not know what to do if the wind starts pushing their vessel away from land.



Figure 25. Footpath (Author, 2022)



Figure 26. Sandy banks (Author, 2022)



### 3.3 Locality analysis

It is always difficult to start building on virgin sites. The most challenging part is knowing where to start. The following section analyses the general layout of the proposed scheme and highlights points of interest which inspire the placement of the building.

Figure 28. The footpath (Author, 2022)

### 3.3.2 The Roadhouse

The Roadhouse is the intervention made around the ritual at the current roadside stop. The ritual currently exists around two parties. The first is the tourists and holiday makers who stop at the roadside to enjoy the view over the Dam. They usually eat something and buy one of the crafted items from the craftsmen. This ritual also follows a progression. Most visitors look at the crafted items first, then move on to eating.

The second party of import is the craftsmen themselves. They commute daily from Winterton, bringing uncompleted items with them, and then they sit on site all day and paint their wares while selling them. A lot is lacking in their daily ritual. They do not have safe storage; they do not have shelter from which to work; they do not have a place to go to the bathroom; they do not have a safe place to store their wares. These are essential things to remember while designing the intervention for these men.



Figure 30. View from the lookout point (Author, 2022)



Figure 31. Escarpment (Author, 2022)

#### a. Road view.

Contemplating the position of the roadside stop concerning the sailing school, the roadside stop had to be changed because the distance from the current halt to the proposed sailing school was far too great. This created a problem. If the building is not at the traditional stop, it has to be somewhere highly visible. That leaves only one other options.

#### b. The escarpment

The proposed site of the building is on the escarpment, a place where the building is highly visible to holiday makers who are going from the direction of the Free State to Kwa-Zulu Natal. . . This placement gives the roadside stop a great natural advertisement and . . . it in relation to the sailing school it places it in such a way that it becomes an orientating feature in the landscape, which is essential when sailing and trying to make it back into the harbour from kilometres out.

### 3.3.3 The sailing school

The sailing school is a more difficult building to place because of the diverse needs of the site and the program

#### a. The conservation needs of the site.

The Sterkfontein dam Nature reserve is one of the natural breeding grounds for the Largemouth Yellowfish. These fish have recently moved off the endangered list, which has relaxed the conservation laws, which were very strict around their spawning areas (Barkhuizen, 2016: online). However, they are still nearly threatened, and it is good practice to mind their spawning areas. The yellow fish spawn in the area's valleys, where vegetation is dense. There is such a zone close to the proposed site of the Ventusium. While it is not technically a conservation zone, disturbing it would be to destroy a place that contributes to the steady recovery of a species that nearly went extinct. Therefore, the layout of the scheme avoids this area at all costs

#### b. The needs of the sailing school.

As mentioned previously, the Ventusium needs an area with sandy banks where boats are not harmed when they are moved on land and out to sea in the process of sailing. Furthermore, the school needs to be positioned on the banks where the wind is not turbulent and where it blows in such a way that the launch of the boats is easy (perpendicular to the banks).



Figure 34. The Largemouth Yellowfish (fishthefly.co.za, 2022 Online)



Figure 33. The level of threat for the Largemouth Yellowfish (Wikimedia commons, 2022: Online)



Figure 35. Yellowfish spawning area (Author, 2022)

## 3.4 Conclusion

The landscape of the Sterkfontein Dam Nature Reserve is specifically conducive to the construction of the Ventusium. The specific amalgamation of various elements in the landscape has led to the creation of the perfect inland sailing body of water. In addition, the culture which exists around sailing on this Dam is resilient, and that is juxtaposed over a very fragile ecosystem which supports an at-risk animal. Each of these points is considered in the scheme's design and reflected in the theoretical discourse.



Figure 37. A Hobie 16 enjoying the possibilities provided by the dam (Van Sittert, 2021)

## 4. Memory

If the architecture is to take the role of the bread, it must convey meaning. The bread in the grandmother and grandchild's ritual, embodies the grandmother's memory and the meaning she ascribes to it. Meaning comes from- and is carried by memories. But for memories to come into the present and manifest as *meaning*, they must first be hauled up out of the subconscious.

Nadia Seremetakis offers a way to do this later in her article.

The grandchild and her parents make their way back through the countryside to the village where she was born. When they arrive, the child greets the grandmother and “enters her world through the textures of her dress.” (Seremetakis, 1993, p. 5) The grandmother tells the grandchild stories of fairies and brigands laying in wait. She entwines the fairy tales with her body, the objects and surfaces in her house and the surrounding topography, using them as actors and artefacts in the story. By doing this, she transcribes the fairy tale into reality:

“Through her fairy tale, the grandma brings the past into the present as a transformative and interruptive force. This very action defines the efficacy of the fairy tale as post-mythic — something related to

## 4.1 Research Question

*How can architecture be a mnemonic device to moore people in the Ventusium by uphauling memories of sailing and interacting with the Dam?*

Let us start unpacking this question by defining a few words. A *mnemonic device* is a word or sentence which helps a person remember something, usually in literary terms (Oxford, 2013; Online). In the text, this word connotes a more general description of remembering, not a conscious process or tool, but more on that in the latter discourse.

To *moore*, a vessel is to make it fast in a harbour and leave it in the safety of its walls. (Oxford, 2013; Online) The ship is not sailing but floating; it is stationary and not in use. In other words, it is to make (something) fast in a safe place.

Uphaul is a sailing term. It means to hoist a sail or to pick up a mast to start sailing. In other words, it takes the sail from a position of uselessness to a place of usefulness, where it harnesses the wind.

Within the research question, there are sub-questions which need answering:

If architecture becomes a mnemonic device, which parts of the design directly affect the recognition and retention of memory?

What anthropological or architectural phenomena connects a design to a place so much as to moore them?

How can architecture be configured to uphaul memories? How can the material of architecture be used to accomplish this?



# Design Discourse

Dr H.A. Auret said in my fourth-year theory of architecture class that he thinks one of the secrets of design lies in the semantics of the Afrikaans word for design; *ontwerp*. The root word '*werp*' means "throw", and the prefix "*ont-*" means to undo that which follows. So it is not difficult to deduct that to *ont-werp* (un-throw), one must first *werp* (throw) something, and the something thrown is the completely designed (*die komplette ge-ontwerp-de*) scheme. In other words, when starting with a project, the designer (*ontwerper*)

throws a design into their future, but the project's particulars remain hidden; they cannot see it. However, they know that it is there, somewhere in the future. The task set before the designer then is to reveal the beautiful design which lays in the future, to unveil it.

Secret

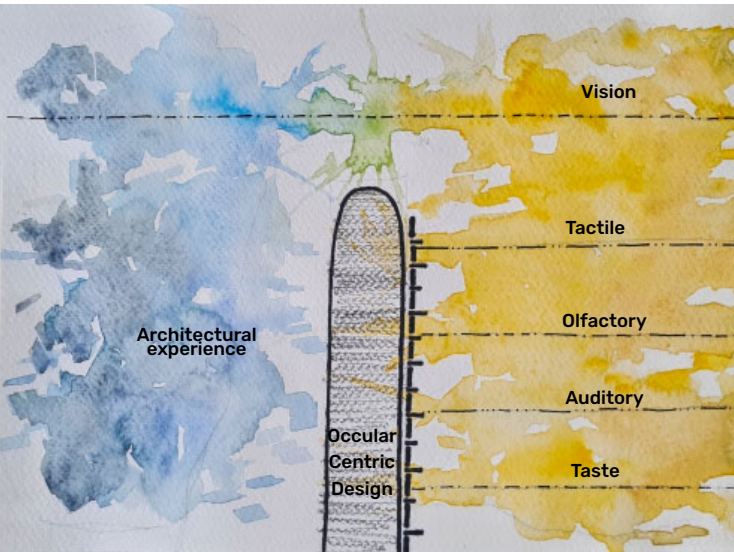


Figure 39. Ocular centric architectural experience (Author, 2022)

# I. Imagination

The research question is composed of general thoughts that many architects have wondered about, however, that does not mean that the answers are broad. The solution to each design would and must be different, as each site and building have their own unique challenges. Still, there must be global principals which influence each architect and design. To begin answering the research question, consider the following principle:

## I.1 Mythology

In *Theopolitical Imagination*, William Cavanaugh asks, “How does a provincial farm boy become persuaded that he must travel as a soldier to another part of the world to kill people he knows nothing about?” (Cavanaugh, 2013, p. 1). The question is not about the Provincial farm boy’s actions but what drives them, i.e., *how* does he come to this decision? *Why* would he choose this illogical course of action?

James K.A. Smith, a philosopher and author at Calvin College in Grand Rapids, Michigan, said this about the question:

“He does not enlist for an idea, though certainly signs up for an ideal -but the ideal to which he is devoted... is not something he *knows*; it is something he *loves*. It is not a matter of having acquired some new bit of knowledge that tips the scale and makes it seem ‘rational’ to become a soldier. No, the provincial farm boy is primed to be a soldier ... because he has been conscripted into

a *mythology*: he identifies himself within a story that has seeped into his bones in levels that even he does not comprehend” (Smith, 2013, p. 16)

The Boy is *conscripted* into a *mythology*, and yet, it was through no choice of his own. The Mythology drives him to do something so illogical, it is plain that logic is not involved. Smith argues that the power of conscription does not lie in the boy’s intellect but rather in the precognitive “register of the imagination” (Smith, 2013, p. 16).

The farm boy believes in a mythology. This mythology is not a pseudo-scientific cultist world view which drives him to think in contrived ways. Instead, each person is conscripted to a mythology without consciously knowing about it, in fact, most of us are conscripted to many clashing mythologies. A mythology is something inherent to dasein, it is a part of our thrownness. Every person on earth has grown up with certain beliefs, which they consider as objectively true and which they have extracted from the world around them. These beliefs are not religious, instead, if a person is religious, her religious beliefs form part of the mythologies to which she is conscripted. Mythologies are powerful, life-altering forces, which makes it even more frightening that we do not choose them, instead we are conscripted into them by the Register of the Imagination.

### 1.2 The Register of the Imagination

### 1.3 The Senses

Charles Taylor argues in his book *The Social Imaginary* that the most basic mode of understanding (*verstehen*) is visceral and tactile and runs off the images that the senses provide (Taylor, 2004: 23-30). “*Verstehen*” is a term used by Martin Heidegger to describe dasein’s “inarticulate understanding of the whole situation” (Smith, 2009, p. 65).

Taylor argues that dasein’s understanding of the world runs on their Imagination, which configures the world through sensory inputs. So, dasein’s understanding of the world is born *directly* from how the senses interpret the world. Therefore, *aesthetics* (Aesthesis) directly effects dasein’s understanding of the world. Gaston Bachelard calls this the Poetic register (Bachelard, 2014: xx [introduction]) which is another way of saying the Register of the Imagination.

Aesthetics are fundamental to our understanding of the world, and aesthetics are fundamental to architecture (though usually the ocular centric type). If the substance which underpins a mythology dasein ascribes to is repeated in architecture, can that create meaningful architecture?

Nadia Seremetakis writes:

“The awakening of the senses is awakening the capacity for memory, of tangible memory; to be awake is to remember, and one remembers through the senses, via substance” (Seremetakis 1993 4).

When Nadia Seremetakis mentions memory, I believe it is simply the past tense of what Smith calls the Register of the Imagination. The senses inform the Register of the Imagination via Substance. In Smith’s discourse, he misses the substance part. Seremetakis understands that the Register of the Imagination is affected through senses but that the Substance to which the senses interpret is essential for meaningful configuration of the world.

*Substance* is what the Burra Charter calls *fabric*. It lends legitimacy to Seremetakis notion of colportage. The Colporteur influences the Imagination via stories which ascribe meaning to her trinkets- which in this case is substance. Substance is the most crucial part of what defines a colporteur. Without Substance, Colporteurs don’t traverse worlds; they only explain them, they remain only storytellers.

the person doing them. To Smith, a practice classifies as meaningful if it changes the foundations of who a person is, observable in changes in a person's worldview. So, Cultural liturgies are inherently meaningful, because they are formative. And they are *informed through* the senses *via* substance.

A practical example of this is if person decides to take up the sport of sailing and, after a few months, they start calling themselves a sailor. They read articles on the sport and watch the competitions on the television, their worldview has changed. They have stopped thinking of themselves in one way and started thinking about themselves as a sailor. This is the Mythology Smith mentions when he refers to the provincial farm boy in the beginning of the discourse. (Smith, 2013, p. 16)

## 1.5 Conclusion

To summarise, the Register of the Imagination is the root from which understanding grows. It is informed on a fundamentally aesthetic level through the senses. The senses experience the world via Substance, and Substance is the birthplace of meaning. Through the *senses*, *Substance* and *cultural liturgies*, dasein create and continually define meaning and change the way they interact with the world.

I propose to moore dasein in the Ventusium by constructing an architecture with *Substances* which

relates to the mythology the users of the building are conscripted into, thereby hacking into their poetic register. The discernment of practical ways in which to embody the Substance of this mythology takes place in the following sections, employing theories such as embodiment, ritual and narrative, always viewed through the lens of the Imagination.



## 2 Conceptual design

In Chapter 1, we establish the backbone of the design discourse. Following this, we start laying the groundwork for the theoretical discourse that underpins the design. Finally, we discuss the overarching theme of the architectural interventions.

## 2.1 Concepts

A human being cannot survive in water. This is a very simple and undeniable fact. Humans have evolved to survive on land. This presents a problem as most of the earth is covered in water, which means, a human without any help cannot traverse most of the earth. She cannot use the rivers and lakes to transport goods and cannot travel across the ocean. So humans created a way in which to move over water with a life sustaining piece of dry land in the form of a vessel. When humans traverse water, we are not becoming aquatic or even amphibious animals, we are just hacking reality in a way which allows us to travel across water. We are taking a piece of dry land and using it as a vessel which keeps our lives intact so that we can exploit the benefits of travel and transport on water. When looking at a boat as a vessel, it is first and foremost a vessel containing the lives of the sailors which have entrusted it. It is a small piece of hospitable land, an island floating on the framework which the water provides. The vessel harnesses the wind to traverse the ocean. Without the wind it remains only a vessel, but with the wind it becomes a mode of transport, it can move in any direction, and it is able to travel great distances.

Notice that, for maritime travel, all three of these elements are necessary. First, the vessel which is needed to

contain precious lives. Secondly the wind is necessary to provide the vessel with a force to harness as a means of movement. Thirdly, both of these elements are used with the assumption that it is happening on water, otherwise they are of no use.

The composition of the landscape at the Sterkfontein Dam Nature Reserve is particular to creating the sailing sanctuary it is today. Because the specifics of the landscape are so important, the composition of the site is used as the underpinning for the three concepts. Each concept is linked to a specific phenomenon on site, be it part of the *place* or *fabric* of the site.

The concepts are split into three elements: wind, earth and water. Each of these elements are linked to a description or keyword which describes what it does in the landscape and the role of the concept in the grander discourse which make up the whole of the concepts.



Figure 42. Wind in both phases (author 2022)

When Wind does not have the sail attached, it is a poignant and mysterious statement. It is an example of a minimalist approach to design and construction. Everything necessary for the object to become so much more is already there, but it is not in use, creating a completely different spatial experience.

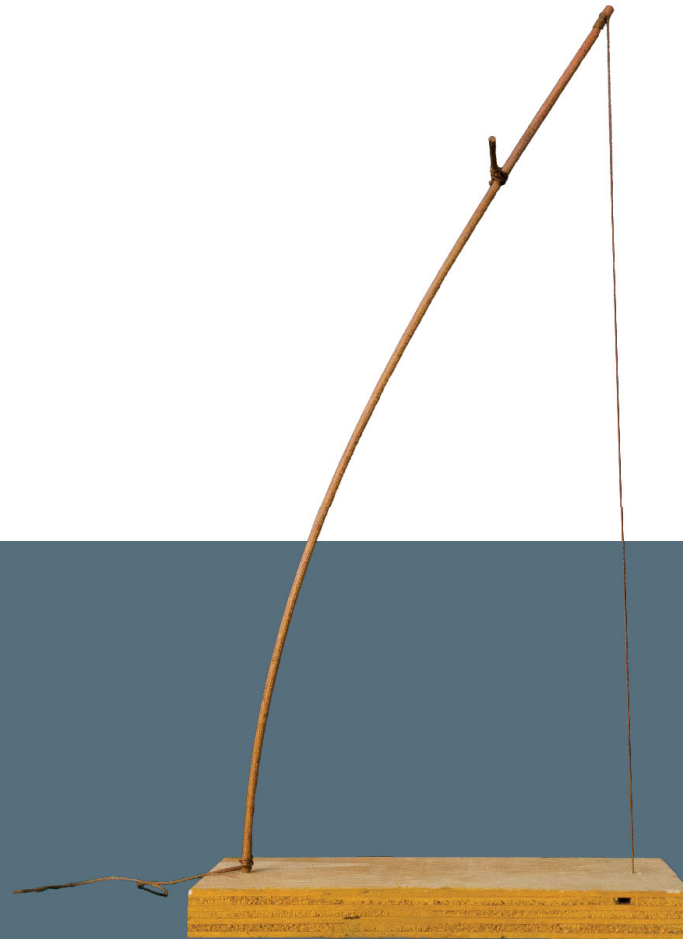


Figure 46. Wind; structure (author 2022)

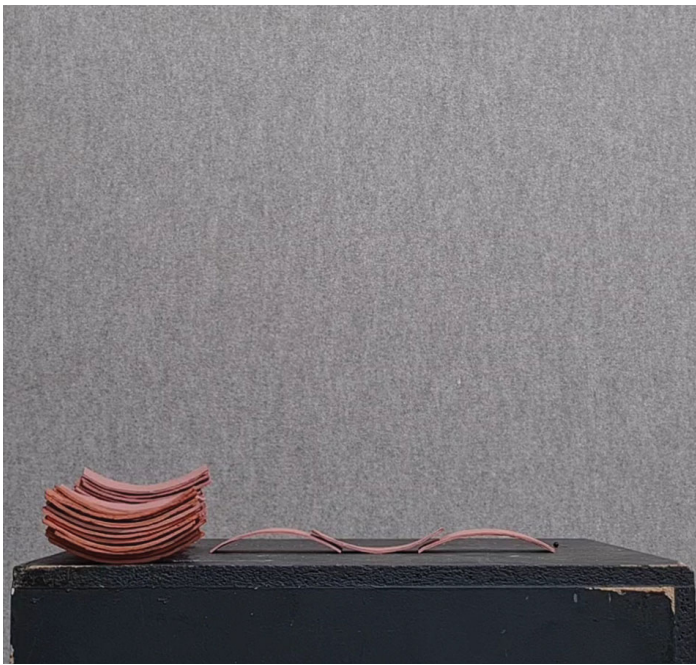


Figure 47. (author 2022)

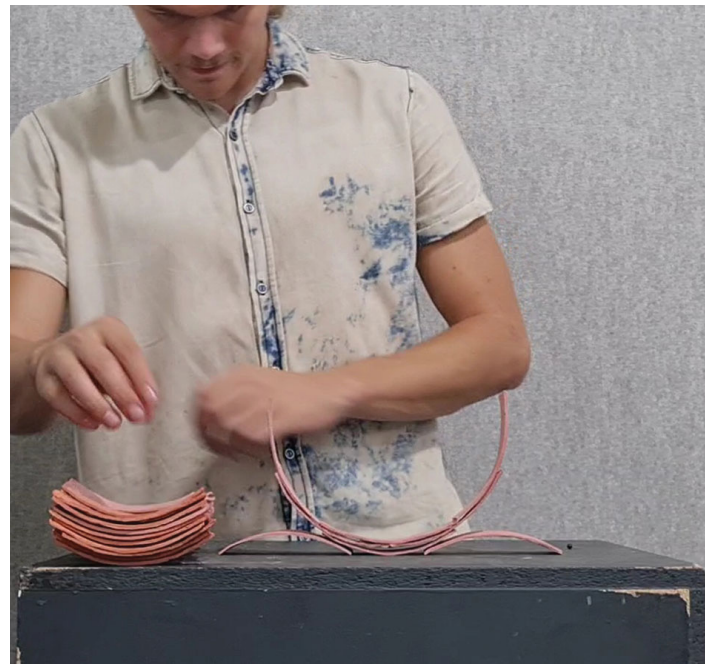


Figure 48. (author 2022)



Figure 49. (author 2022)



Figure 50. (author 2022)



Figure 51. (author 2022)



Figure 52. (author 2022)

The clay tiles used to create the model are stacked explicitly to provoke thoughts of different architectural places (inside; outside; on top...). Buildings in the area all vary in the size of building-unit they use. For example, the farmhouses have either baked clay bricks or mud bricks laid by frontiersmen. Similarly, the Basotho building styles in the area differ. They; they either use adobe bricks or dry stacked stones to build dwellings. The tiles represent the non-standard building styles which are prevalent in the area.



Figure 56. Front view (Author 2022)



Figure 57. (author 2022)

The structure is meant to be reminiscent of ruins, something which is not currently used to its full potential, but is still beautiful, nonetheless. It should be able to exist on its own as an object of beauty, something to be admired.

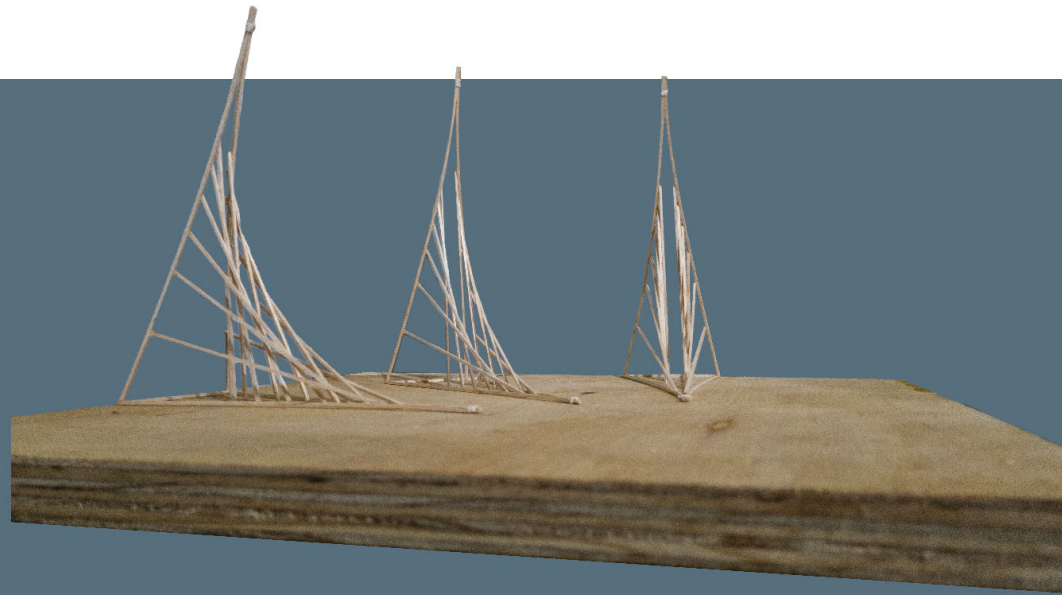


Figure 6i. Structure not yet clad (author 2022)



### 3. Touchstones

The touchstone in the design is the beginning of the theoretical thought process. This; this design encompasses many ideas.

Figure 62. Touchstone (author 2022)



Figure 63. Ephemerality of the touchstone  
(Author 2022)

### 3.1 Background

The touchstone of the design exhibits the transience of the building. Sailing is a sport which cannot happen at all times of the year; it is transient; it changes as much as the winds. Many things surrounding sailing, such as the temporary nature of the boats and the temporary nature of the winds.

The complex has two faces like the touchstone has two faces. So, it can house different states of use, whether during the sailing season or not.



### 3.3 Observations

The touchstone embodies the ephemerality which is prevalent in sailing and wind. It takes work for the touchstone to jump between its two stable phases. Yet, while moving between these, both phases are always visible, whether it be in the one phase or the other.

## 4. Practical discourse

Dasein experience the Substance of aesthetics through the senses. The senses are how our Imagination constitutes the world for us on a bodily level... (Plate, 2005, pp. 1-2). If our experience of the world, and the meaning we rationalise from that experience, is curated by our senses, how do we design to include the senses?

### 4.1 Practical implications of designing for a mythology

In The Ventusium, two kinds of people actively interact with the Substance of the building. They are the old hands, who have been sailing for a lifetime and thoroughly ascribe to the mythos of sailing, and the young sailors who have come to the Ventusium to learn. Both these groups have something in common; they love the wind and sailing through it. What these groups are mostly after is the experience that wind can bring and carries with it.

Designing for the experience of wind is difficult at first, because wind cannot be experienced, only its interaction with something can. We can see the leaves rustling, smell the rain on the wind, hear the roof groan under the strain of a gust, and we can feel it on our skin as it rushes over the landscape. The importance of wind as a narrative element in this building binds the spaces together. It affords an architect the possibility to design

a space where Imagination can coagulate into meaning via Substance.

Wind is not the only sensory experience which needs to be designed into the building, but it is the most important. Wind connects the *landscape* with the *function* of Ventusium, which are the two influences which determine the design most heavily. The type of design alluded to in the previous paragraph is easy to attain through smart passive detailing. Each space connected to one another through their connection to wind, including details derived from the landscape and from the function.

Marco Frascari believes that “in the details are the possibilities of innovation and invention, and it is through these that architects can give harmony to the most uncommon and difficult or disorderly environment generated by a culture” (Frascari, 1996: 503).

Marco Frascari is an Italian architectural theorist, and this excerpt comes from his essay *The Tell-The-Tale Detail*. The culture at the Sterkfontein Dam Nature Reserve is quite settled. The Harmony Frascari refers to happens through detailing as he mentions to inform a plot:

“...architecture [is] the art of appropriate selection of details in the devising of the tale. A plot with the appro-

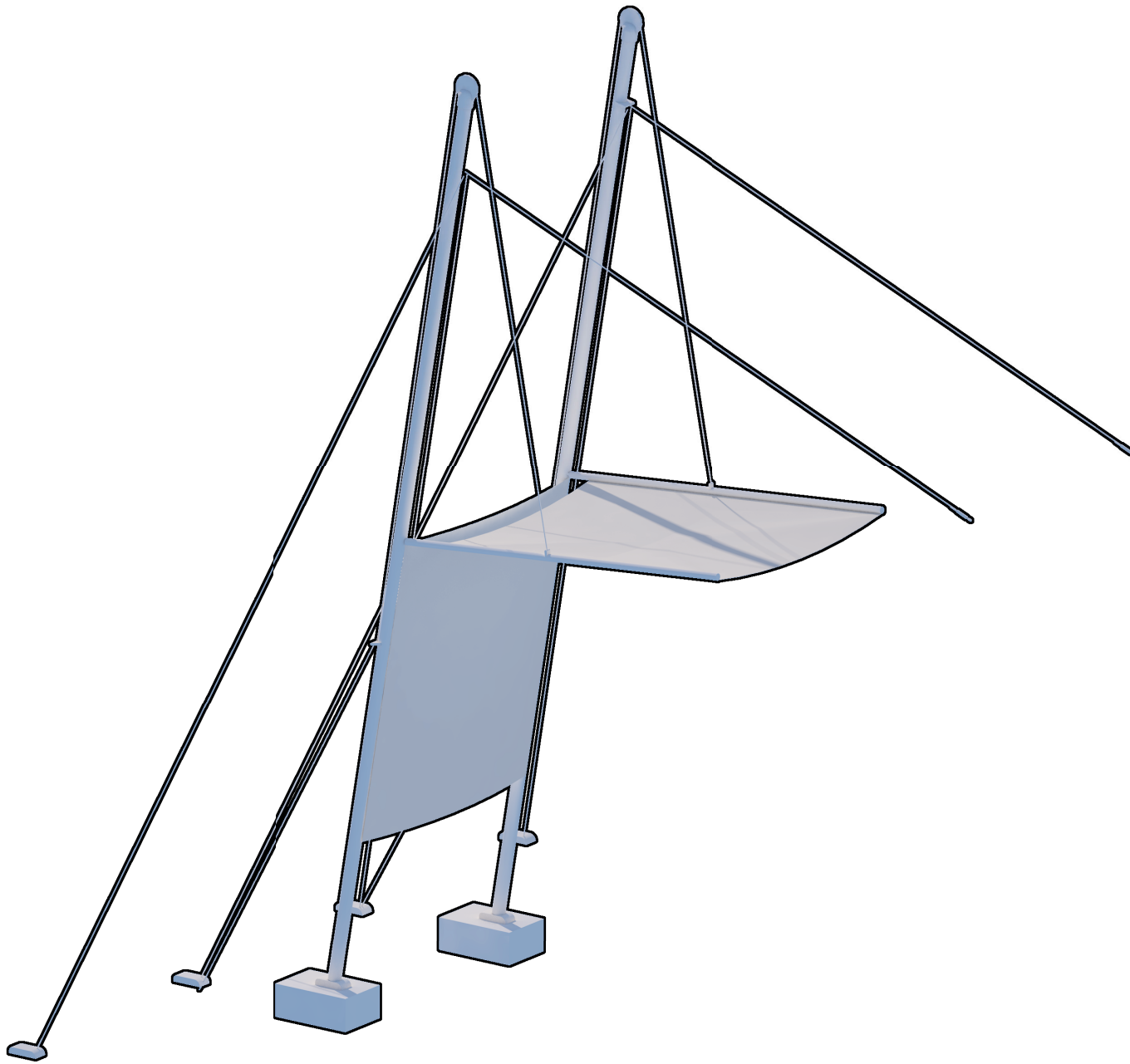


Figure 66. Detail as a vehicle for knowledge - a detail from the Ventudium which recycles old parts of boats to create wind and solar shelter (Author, 2022)

85) Barbed wire is a great example of Seremetakis' meaningful Substance and Frascari's meaningful detail. The barbed wire is made of a Substance which is associated with prison walls and concentration camps, and the way in which it has been detailed, the way it has been put together is in a prickly and confining way, which fits with the associations people have of it.

Through the barbed wire's Substance, dasein are remembering through the senses via Substance (Seremetakis, 1993: 4). Goldblatt writes about the Substance of material through the lens of a museum, which is, once again, an ocular centric way to look at Substance. When people were creating the associations they have with barbed wire, they were not looking at it, they were pricked by it and tangled in it. The existential dread that comes from being tangled in no man's land in a tumble of barbed wire creates the associations people have with it, not merely looking at it, but looking at it and *imagining*. To understand it, people do not have to have been in the situation. Sensory knowledge combined with the Register of the Imagination can create these associations.

The responses dasein have to Substance are rooted in their Imagination, and architects can curate these responses through smart detailing. If an architect has an idea of the type of person which is going to use the building and what affects that person's view of the world, we can start designing for that person's experience.

### 4.3 Theoretical precedent

The Bruder Klaus Field Chapel  
Peter Zumthor, 2007

A non-architectural example of Substance transferring knowledge is an archive. People come to the archive and spend time in the Substance of knowledge stored there. After they have read that which they wished to, they leave the archive and have not physically changed, but they have gained new understanding through the Substance stored in the archive.

The example of an archive is a one-dimensional example which falls solely in the cognitive realm. Architecture affords designers the opportunity to curate the experience of extracting meaning from the world through all the senses via the Substance of the architecture. Churches are a good example of a building which is used to further a mythology. Cathedrals were built with bible stories in the windows as a way of reminding believers of the parables which underpin their belief. It strengthens the “mythology” for the believers. Furthermore, on the outside of the church, the door was often sculpted as a frieze which contains the entire gospel, and it was used to teach non-believers about Christianity, also furthering the mythology. Churches have done this for ages, and though these are somewhat direct examples, in the modern era many examples have been built that take a more indirect approach.

The Bruder Klaus Field Chapel is one such example.



Figure 68. Approach to the Chapel (Amoretti, 2021)

The Bruder Klaus Field Chapel is built in a rural farming community. It was built by an old couple who wanted to give thanks for a long and prosperous life. The building interprets the life of Bruder Klaus.

Bruder Klaus was a man who grew up in a farming community who became a monk later in his life. He is said to have survived for 19 years on no sustenance but the eucharist. In his life, he had a dream which he interpreted as a vision from God. He saw himself floating in his mother's Womb, looking up toward a brilliant star.

Zumthor interpreted his life's story in the Substance of the building. He Used it as a colporteur would use a trinket to tell a story. The building is placed in a field at the top of a slight incline. It is an austere building, rising out of the ground like a Menhir. With these design choices, Zumthor does two things. First, he sets the scene for the sensuous experience on the inside of the building by forcing visitors and pilgrims to walk far up to an austere building. A building as austere as Bruder Klaus himself. This is a visual experience, but through it the visitors already know what to expect from the interior experience of the building. (Phiadon, 2021: [online])

Secondly, by building the chapel like a menhir, he invokes religious ideas which predate Christianity in Europe. Through this shape he denotes a religious building by using the verticality which menhirs and Christian churches share. (Zilliacus, 2016: [online])

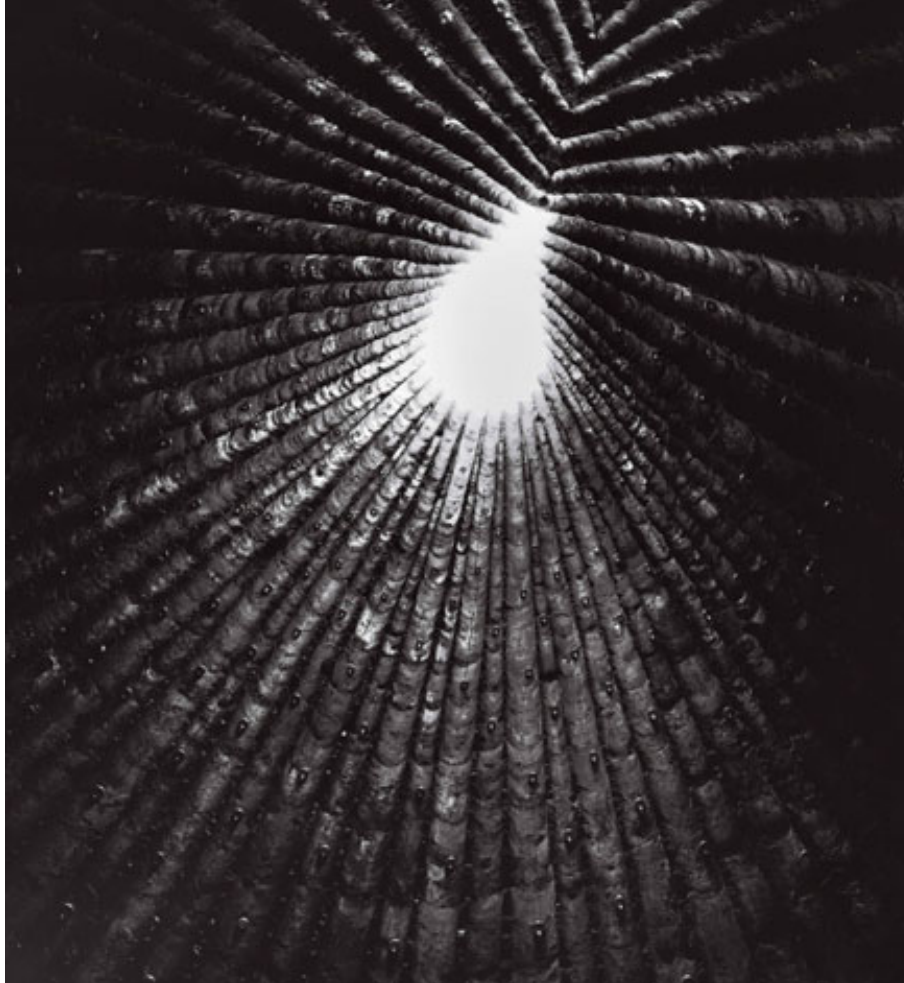


Figure 71. The Starburst (Amoretti, 2021)

The hole in the top of the building is the starburst in the story, and the chapel becomes the womb. But more than that it becomes the vehicle for the experience. Right up to the moment of being seated it is an uncomfortable sensuous experience, but then the experience of the ‘starburst’ on the relatively comfortable seat becomes so mesmerizing it is as if the viewer is floating.

In The Bruder Klaus Field Chapel, Zumthor invokes memories and stirs the imagination through the senses via Substance. He interprets the story of Bruder Klaus through the senses. For the pilgrims and believers, the substance of the building hauls up memories of the story and provides an experience of Civitas Dei which compares to the great cathedrals of Europe. For the uninitiated the building becomes a tool to teach with and prods the register of the imagination with vast experiences.

Both experiences are underpinned by the specific “mythology” of Christianity and the testimony of Bruder Klaus.

#### **4.4 Conclusion**

The use of a building as a Colporteurs Trinket has many uses in terms of teaching and experience for the initiated. Without a doubt it is worth exploring further. In the Ventusium, the mythology which underpins the building is sailing. The Design Devel-



# Design development

The design development shows the development of the design from the program through precedents and progress work to the final design. Each step in the design was crucial to get to the final product.

Secret

# I Case Study

## I.I Centro Gallega De Vela

Designed by architect Alfonso Penela, the Centro Gallega De Vela is a building with an area of 1,900 m<sup>2</sup>, distributed in semi-basement and ground floor, intended for the Technology Center and Sailing School. It is in Pontadevora, Spain.

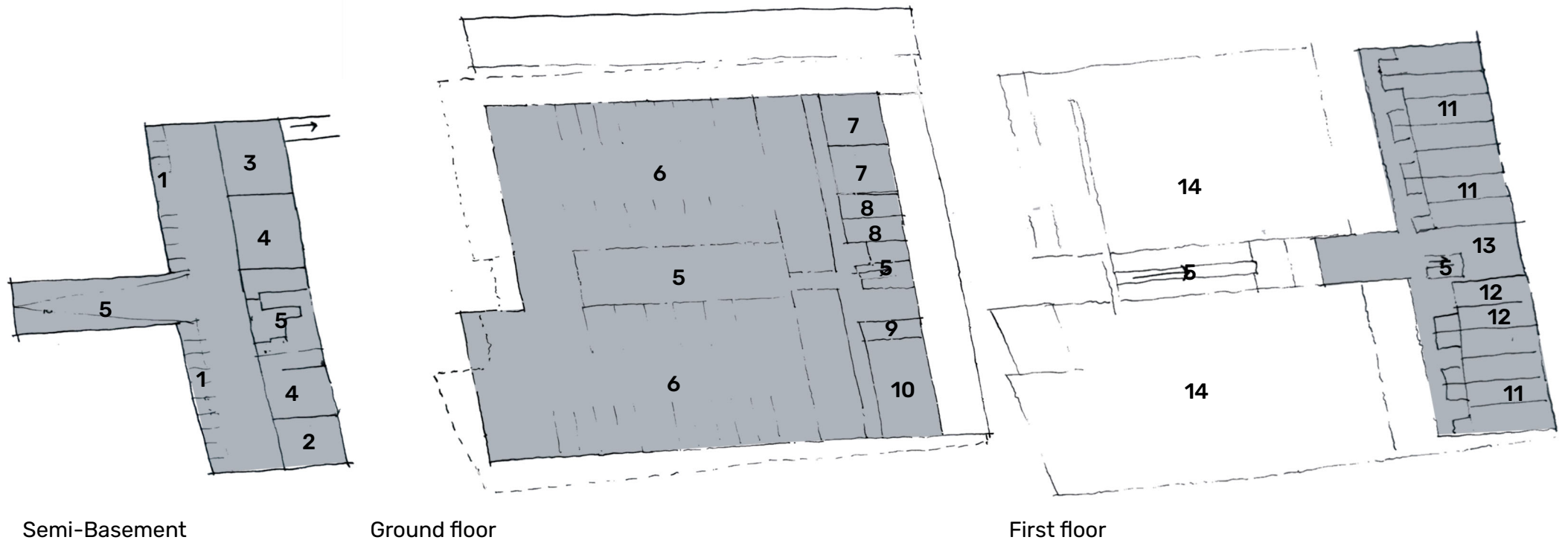


Figure 73. Centro Gallega De Vela Floor plans (Author 2022)

## Centro Gallega De Vela

Not To Scale

### Legend

1	Storage	11	Student rooms
2	Wetsuit Drying area	12	Instructor rooms
3	Workshop	13	Foyer
4	Change rooms	14	Roof
5	Circulation		
6	Sailboat Storage		
7	Classroom		
8	Admin		
9	Toilets		
10	Gym		



The main bulk of the building revolves around storage for the boats. Directly from the storage space, the boats have access to the jetty and the ocean. The sailors are sailing in the harbour on calm waters, which is a smart choice because they are still learning. The entire ritual of the sailors is designed into the levels of the building. If they are working on their boats, it happens in the Semi basement, with personal storage space, and a workshop. When they are done for the day, they can use the dressing rooms there and the wetsuit drying area.

The educational functions of the building is separated from the sailing functions, with classrooms on the ground floor. There is also a gym and the admin of the building. This space is where the students do classes either before or after they have been out sailing and have already showered and dressed again.

Finally, on the first floor is the rooms of the sailors who stay at the school and the rooms of the instructors. The sailors also have a foyer space with a balcony where they can mingle and rest after a long day of learning.

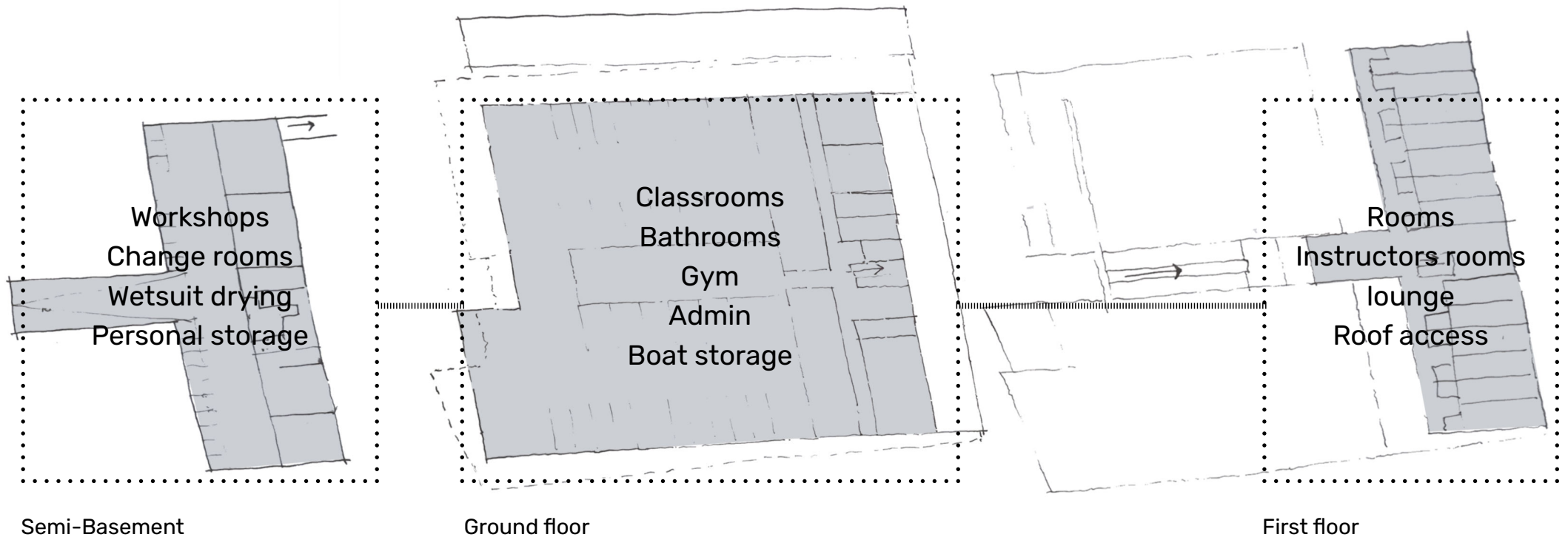
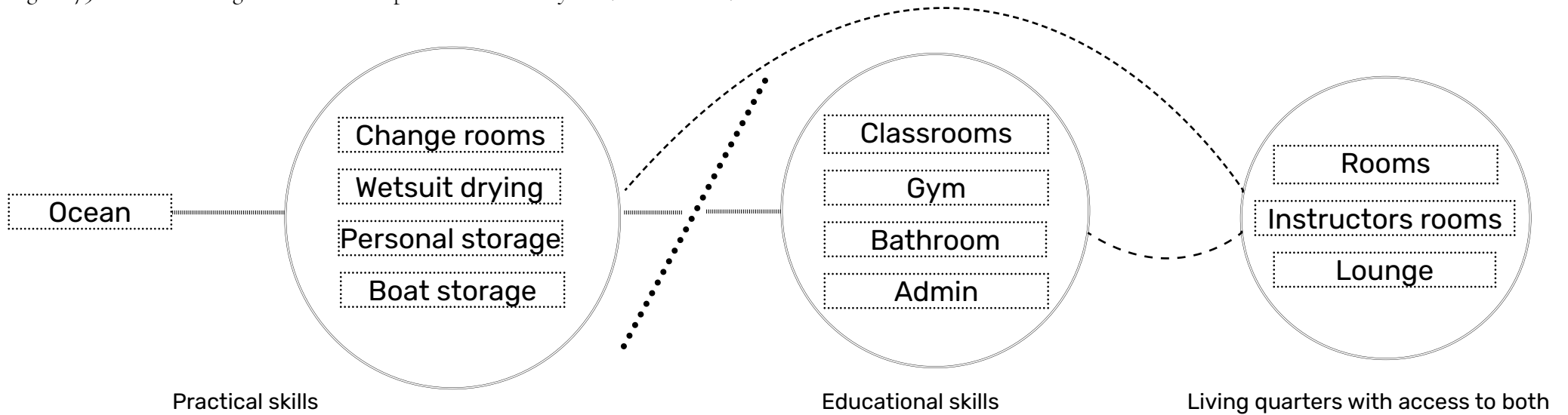


Figure 75. Centro Gallega De Vela Floor plans functions layout (Author 2022)





## 2Program

The program of the Ventusium is separated into two separate entities: the sailing school and the roadside stop. In the next part, both will be handled in detail.

Figure 77. Hobic 18 (DEADSHAPPER, 2014)



## 2.1 B Winter months

The sailing school's facilities are also suitable for water safety training. 1500 people drown every year in south Africa and most of them are children under the age of 14 (Marriah-Maharaj, 2022: [online]). The sailing school will be a centre for water safety awareness for the schools in the area, each school can schedule a yearly field trip where they camp at the site and undergo the training throughout the weekend.

Furthermore, the water safety training which people in the tourism sector need to undergo can also take place in the sailing school. Lastly, the school can become a centre at which skippers licences are tested for and obtained.

Throughout the year the school will also be a camping spot for avid sailors. Currently there is no place on the dam which is designated for sailing, this will be the ultimate function of the sailing school. It provides a place for people to fall in love with sailing and for them to act out their love.

Figure 8o. Motorboating (DE LA VEGA, 2022: [online])

Figure 81. A Craftsman selling and exhibiting his wares. In the background his exhibition is visible on the floor, and the bucket which he is sitting on is what he uses to protect his wares on his daily commute (permission obtained)(Author, 2022)



## 2.2 The roadside stop

The roadside stop currently attracts about 60 people per day. About one car out of every five, many of these people (around 25-30) stop at the lookout point at the lunch hours between 12h00 and 14h00

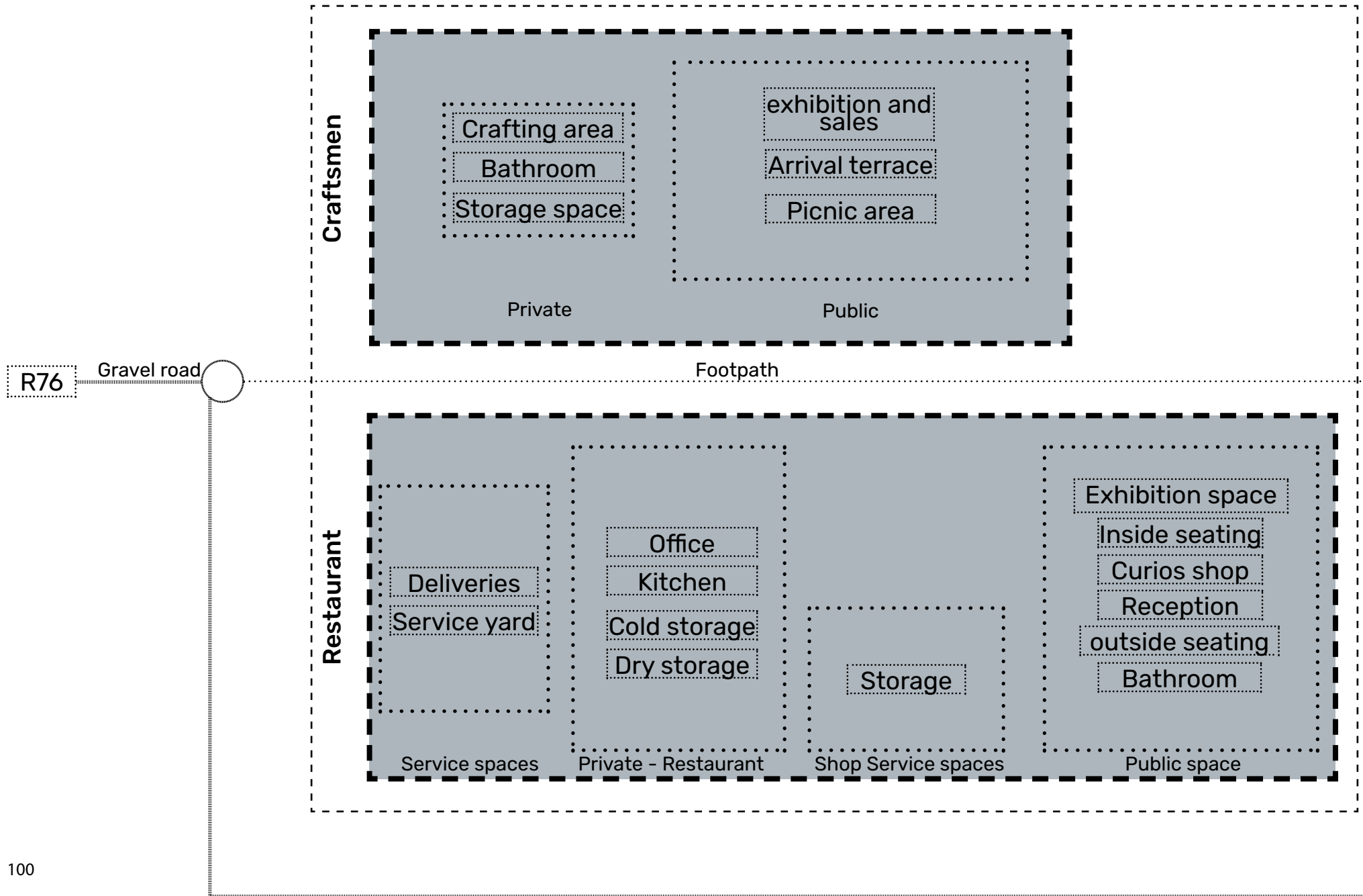
### 2.2. A The Craftsmen

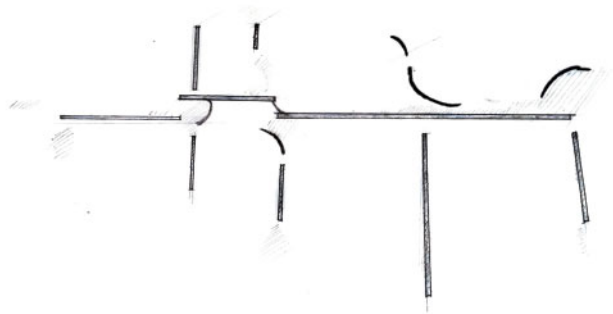
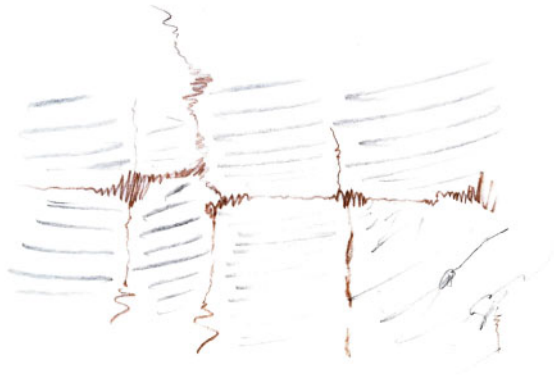
The roadside stop has two main functions. The first is that it carries on the culture surrounding the craftsmen. They need places at which to properly exhibit their work, and they need a place where they can paint their figurines.

Currently on site they do not have shelter, so a place in which they can mingle, paint their sculptures and rest is provided. Furthermore, they need a place where they can store their wares overnight while they are not there.

### 2.2. B The Restaurant

The restaurant capitalises on the time in which the people are visiting the rest stop. Most of them visit the stop at lunch, so the restaurant provides places to have a picnic as well as food for the picnic. It has a gallery space in which the work of the Craftsmen is showcased, and it has a shop where mementos are sold.





### 3. Design progression

The design progression follows the development of different elements of the design separately. In each element certain points have been highlighted which best show the progression until it arrives at the final design.

Figure 82. Exploration sketch of sailing school floor plan

### 3.1 Sailing School

The sailing school's floor plan developed around the program and the site. The first thing placed was the paddocks which the sailors will need. The first attempts at design

were made s though the plan was a ruin, especially visible in Floor plan 3. That path was soon abandoned, but it remains prevalent in Floor plan 3 and the first model.

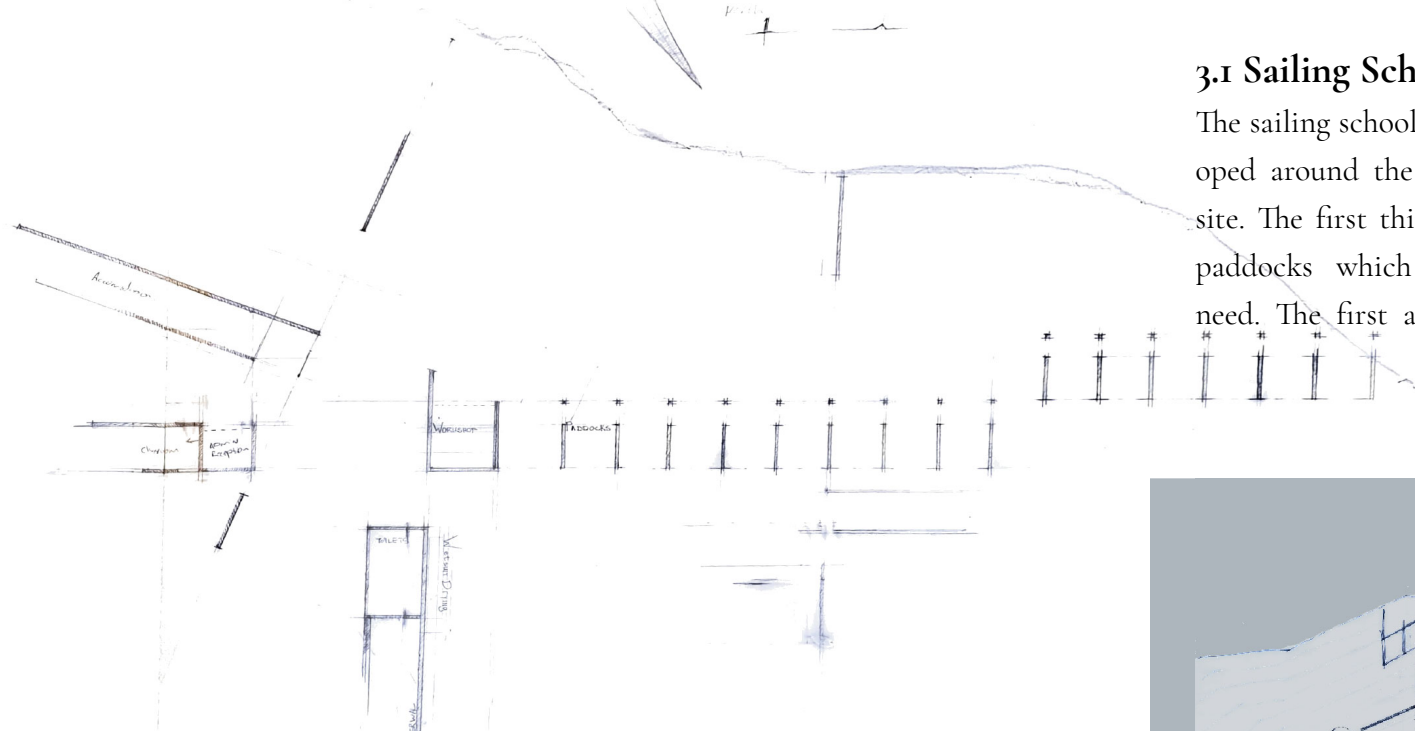


Figure 84. Sailing school plan 1 (not final)

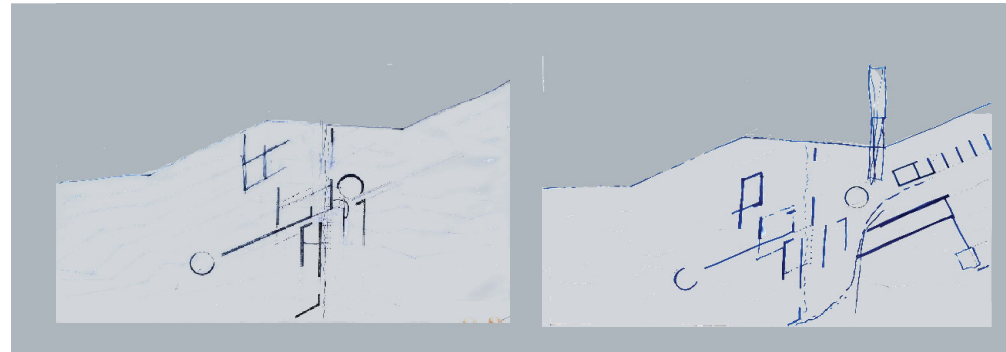


Figure 86. Progression between floor plan one and two

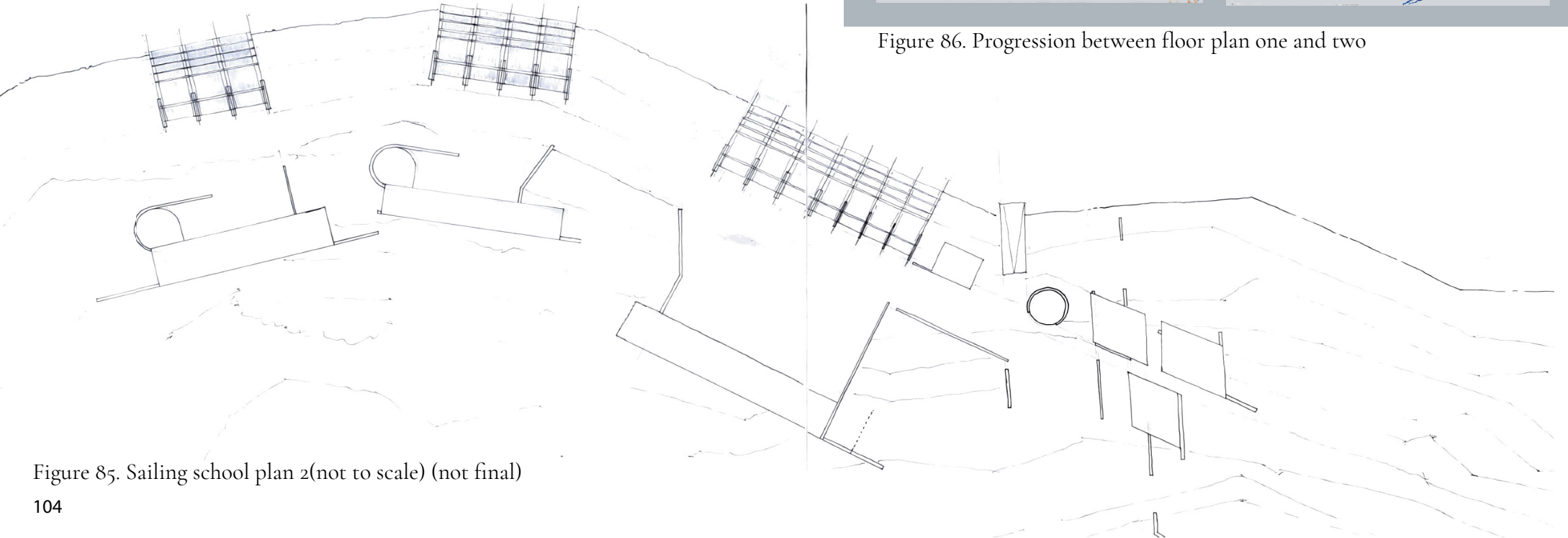


Figure 85. Sailing school plan 2(not to scale) (not final)

After the first external review it was evident that the approach of the building as a ruin was not working. The next couple of weeks an architectural language was developed for the sailing school.

The language's parti would be a bunch of straight lines and at each place where the lines intersect, there is a circle, like an elbow. It took a while to develop from a linear plan into a plan which reads well which is not linear, but once I discovered the language, intermediary floor plan followed quickly.

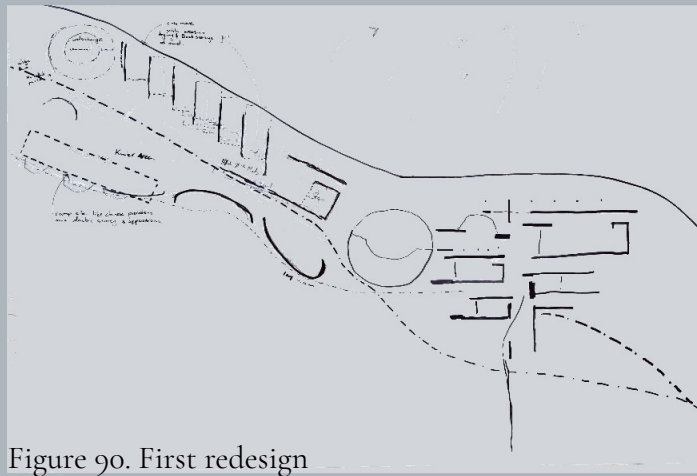


Figure 90. First redesign

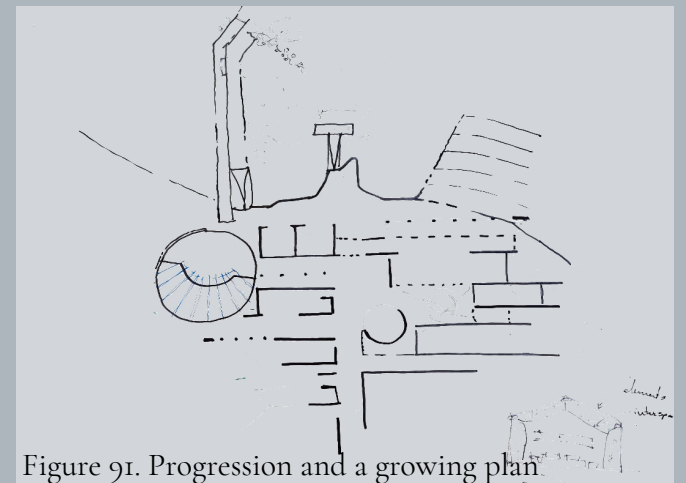


Figure 91. Progression and a growing plan

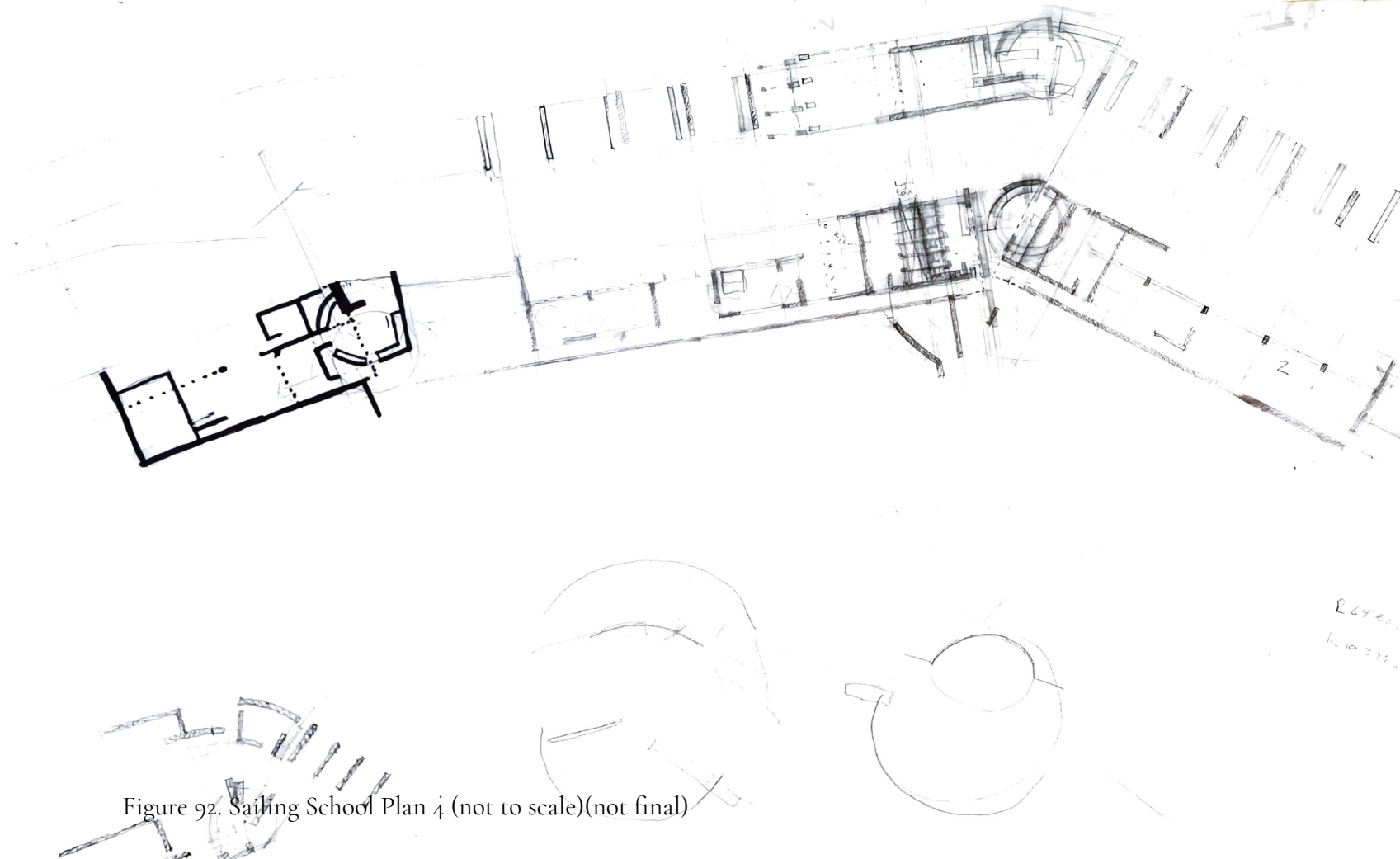
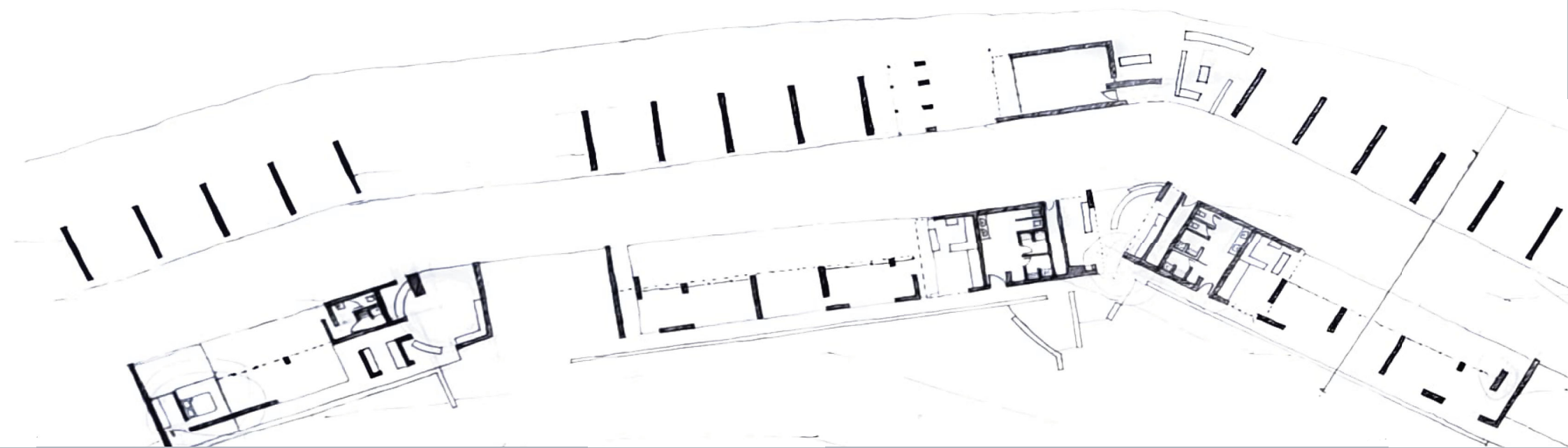
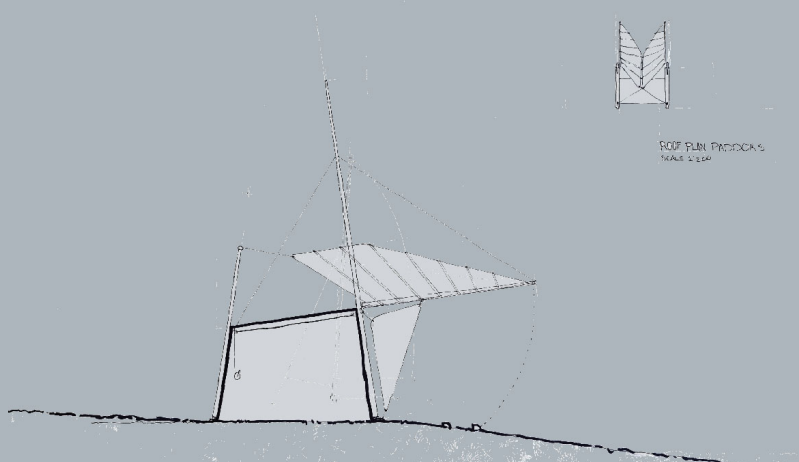


Figure 92. Sailing School Plan 4 (not to scale)(not final)



ROOF PLAN Paddock's  
SCALE 1:250



SECTION Paddock's  
SCALE 1:250

Figure 96. Paddock section (not to scale)(not final)



SECTION AMPHITHEATRE  
SCALE 1:50

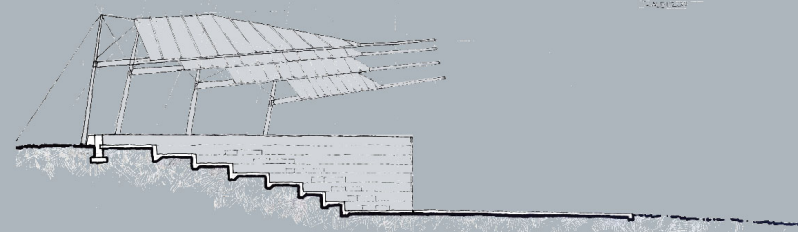
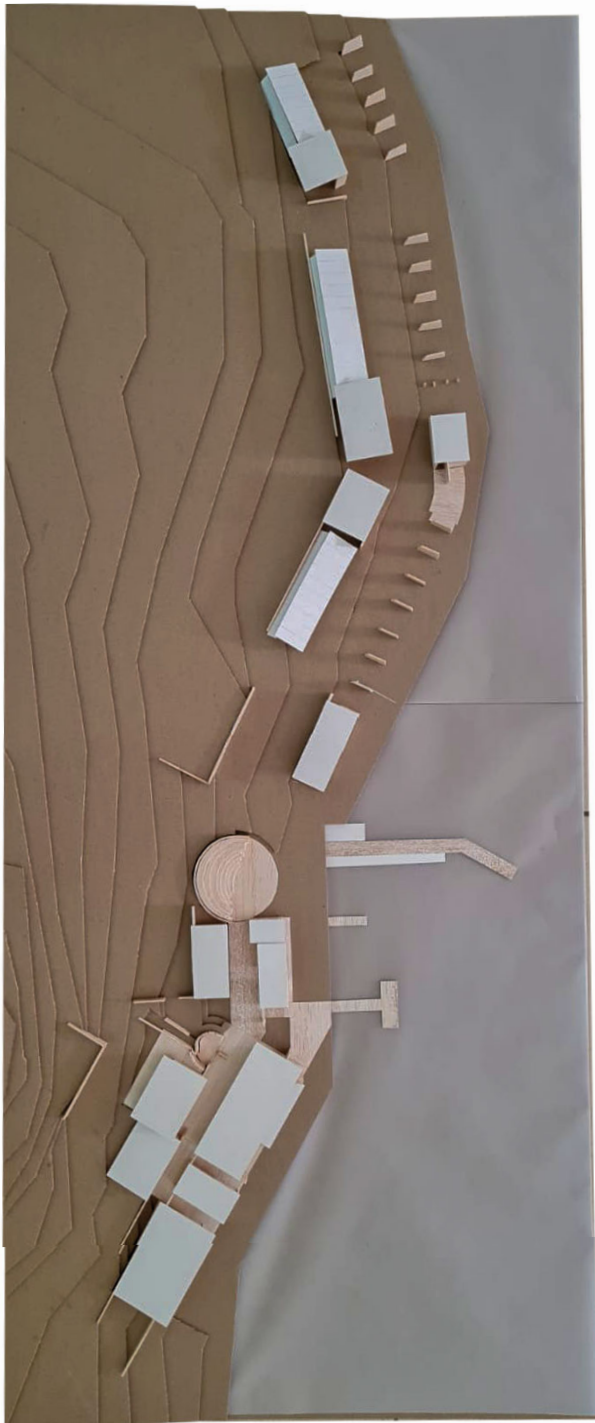


Figure 97. Amphitheatre section (not to scale)(not final)



110

Figure 100. Full plan top view(not final)

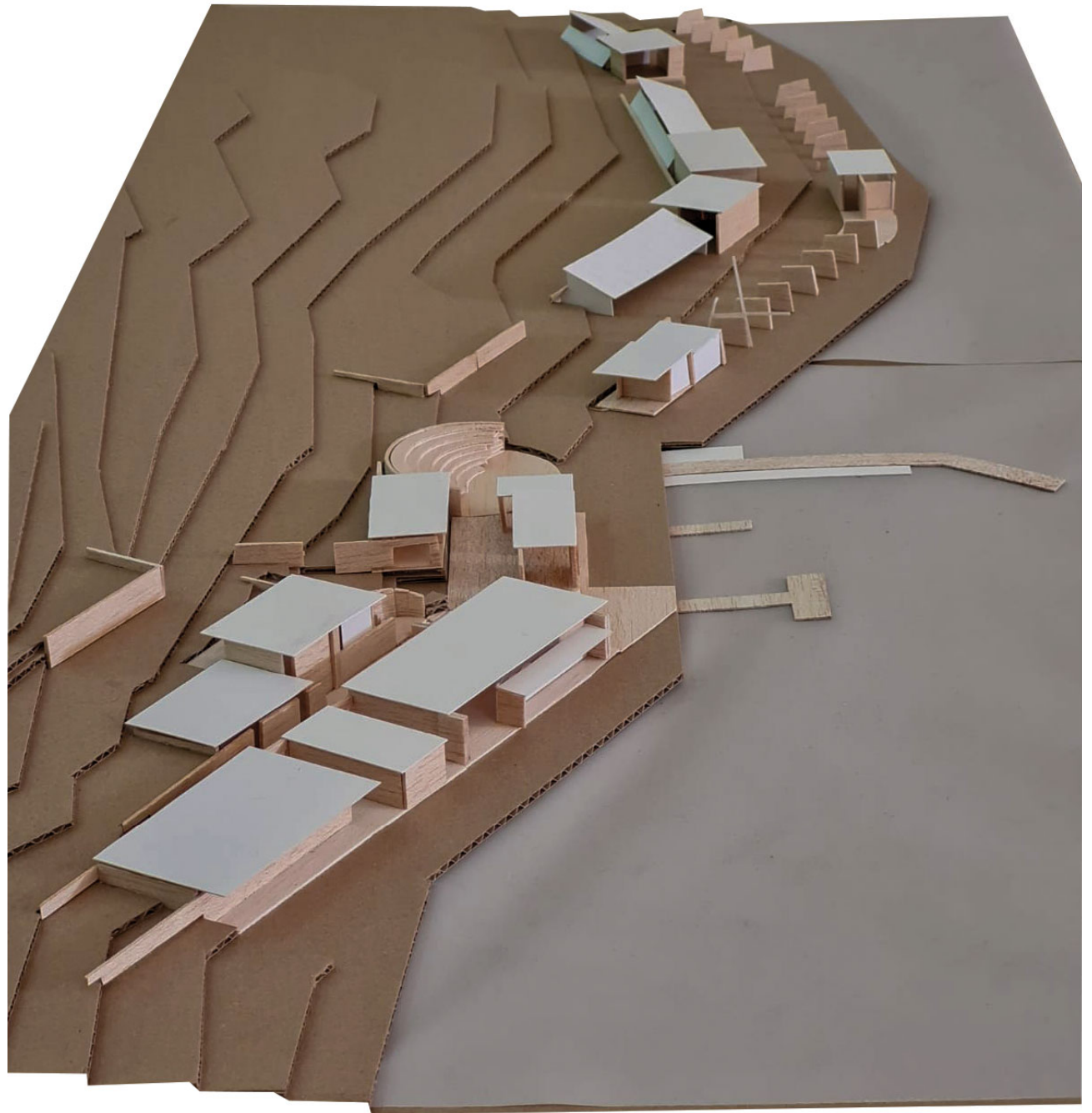
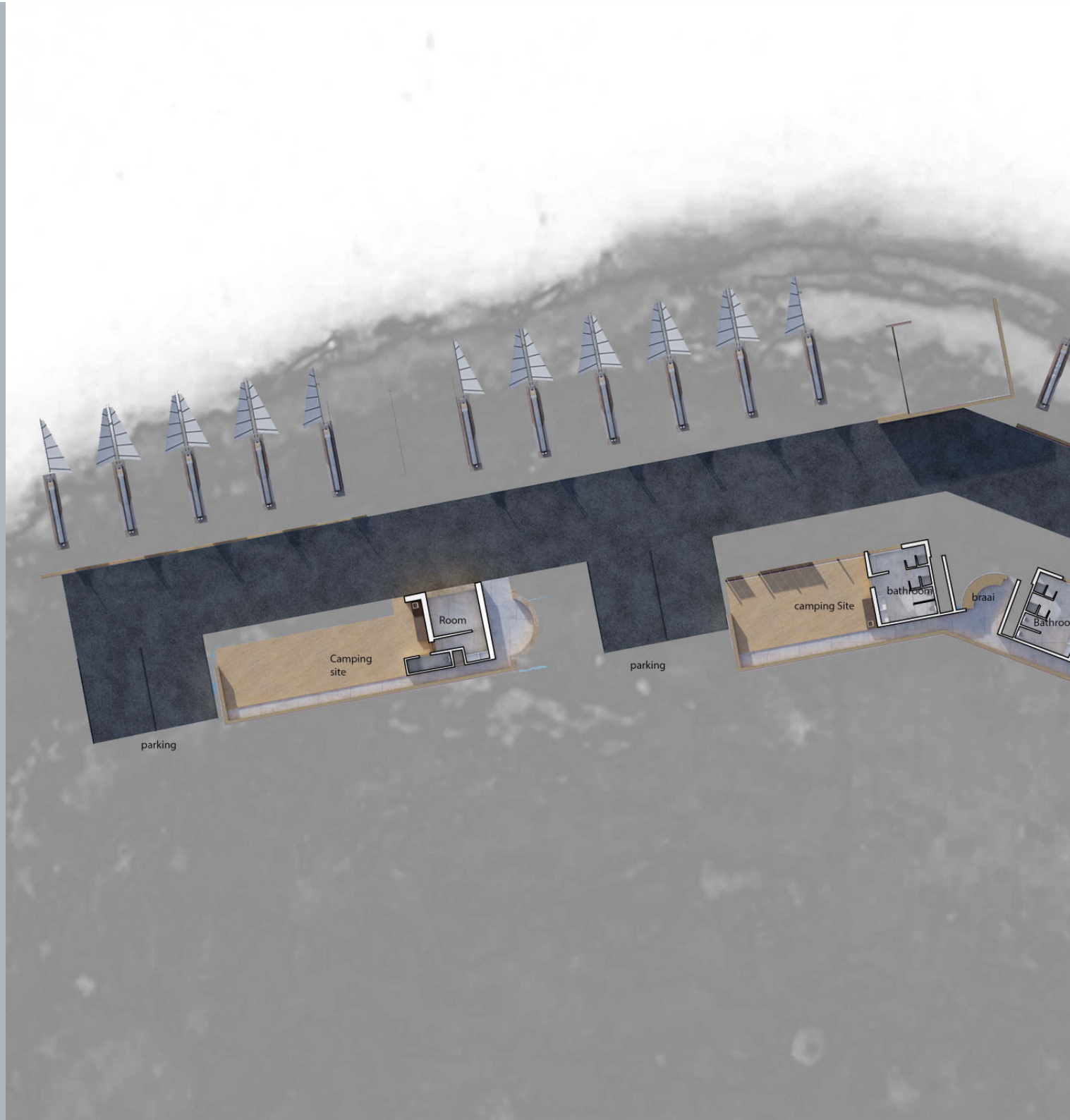


Figure 101. Full plan axo(not final)

The Design for external review 3 addressed the suburban feel which the design for External review 2 had. the building is placed within its context in the landscape and the floor plan has been updated to better fit the landscape.

This is the final iteration of the plan before the final plans. The plan was finalised quite well for this review, but the nuance of it will be discussed in further chapters.



### 3.2 The Roadside Stop

The roadside stop exists as a kind of welcoming to the Sailing school. It is the first thing which any visitor will see, and it will see many more visitors throughout the year because it is a permanent structure -in use throughout the year- and it caters to holiday goers who can quickly stop for lunch. The first iteration of the design was very derivative of the Earth concept, and it was quickly disregarded.

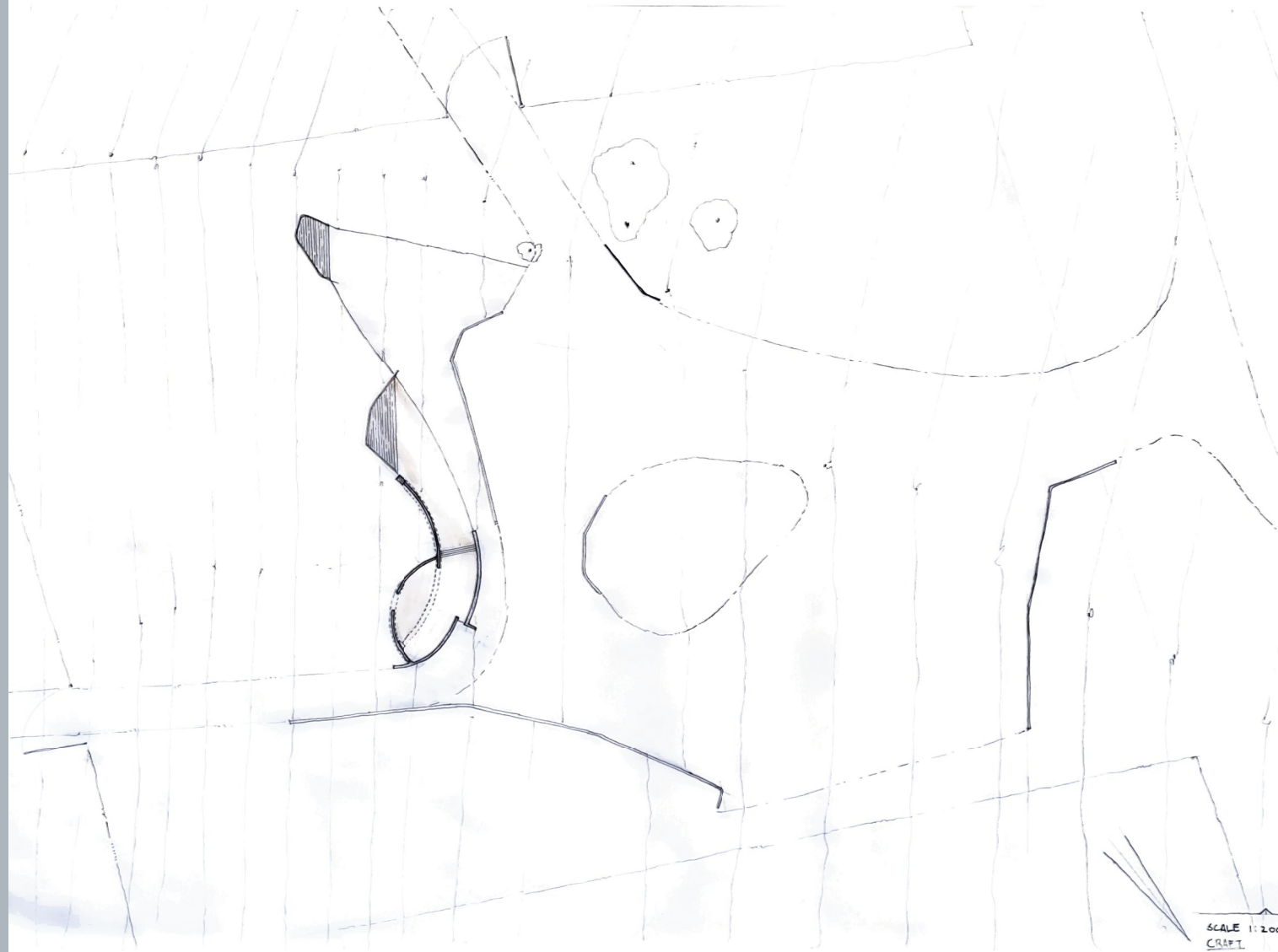


Figure 105. First Roadside stop plan (not to scale)(not final)

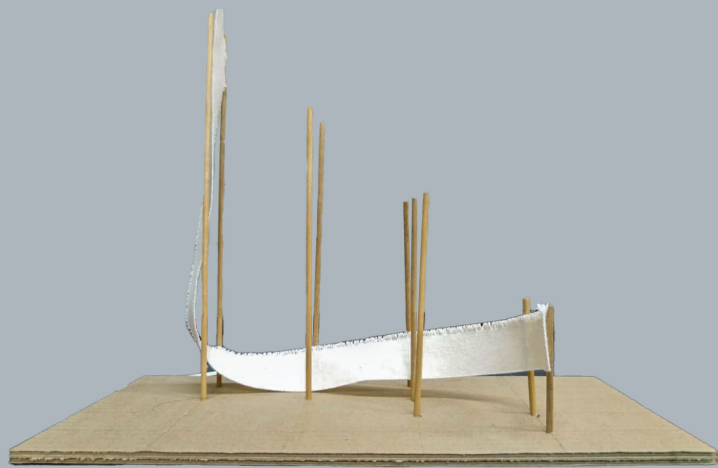


Figure 109. Model exploration 1

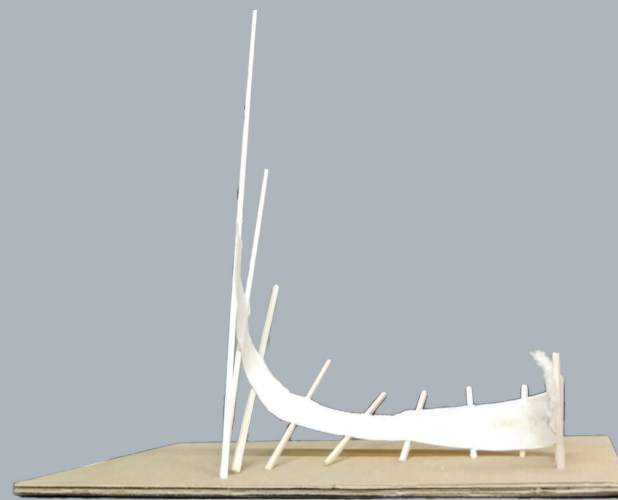


Figure 110. Model exploration 2

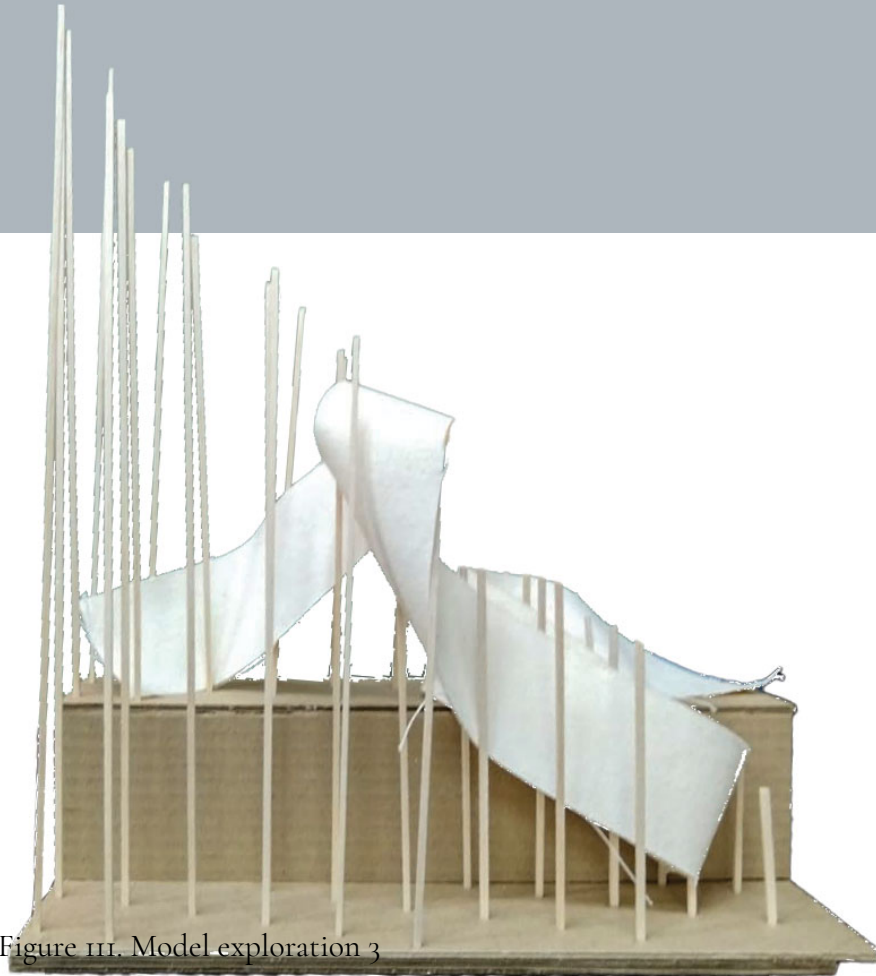


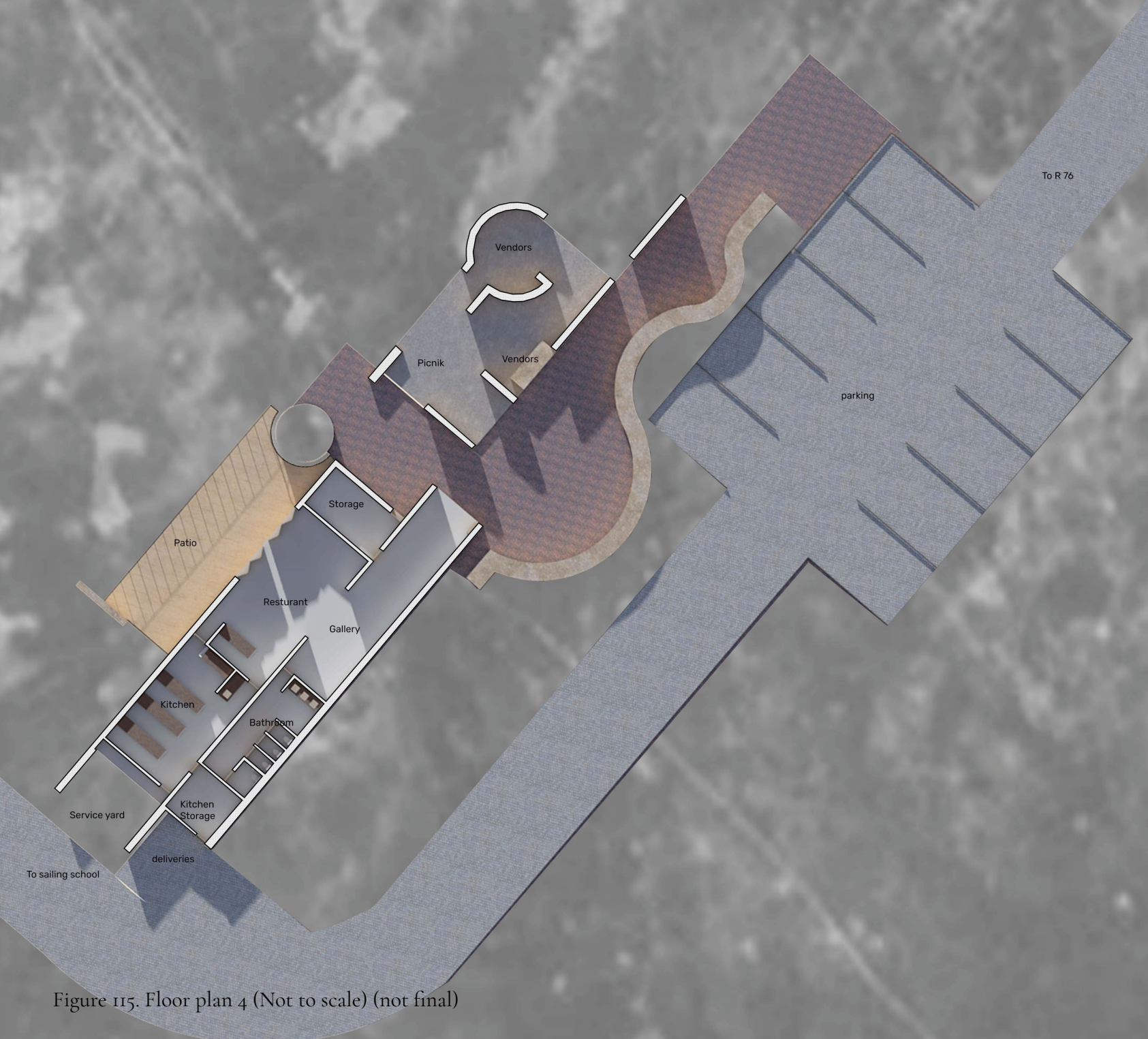
Figure 111. Model exploration 3

After the failure of the first attempt, I went back to conceptual thinking. The Roadside stop serves as a beacon in the landscape. It beckons to the drivers of the R76 to come and enjoy the view. Furthermore, when the sailors are out in the water, the Roadside stop serves as a beacon by which to navigate back to the Sailing school.

To understand the relationship between a beacon and the building I built these three models. Each exploring both ver-

ticality and horizontality. Verticality because the building will need a vertical element to stand out in the landscape and horizontality because it would be inappropriate to build a building which is more than one story in such a vast landscape.

In the end I decided to utilise a silo shape for the verticality element. It is the only thing in the area which sets precedence for such a tall vertical structure.



The final plan moved from a kinked approach to a linear plan. This is because the site changed on which the building is proposed. The building now lies in the path of a footpath connecting the two sites (the Sailing school and the Roadside stop). The proposal is still separated between craftsmen and Restaurant, and in the middle is a place for picnics which is the mediator between the two spaces.

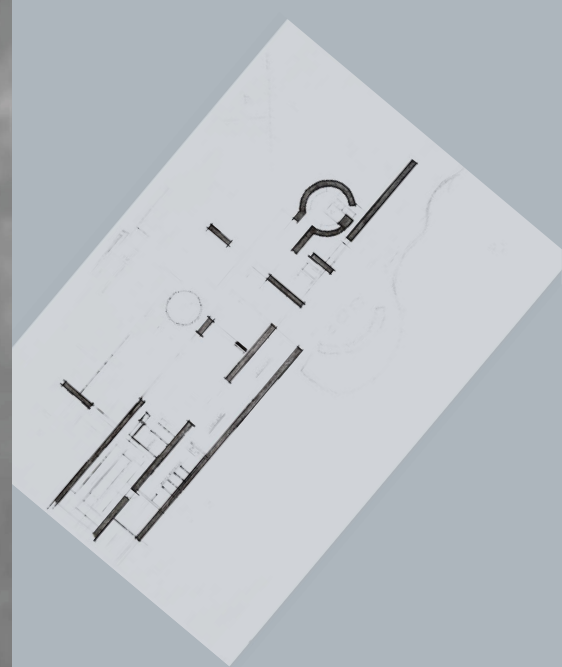


Figure 115. Floor plan 4 (Not to scale) (not final)

# 4. Final design

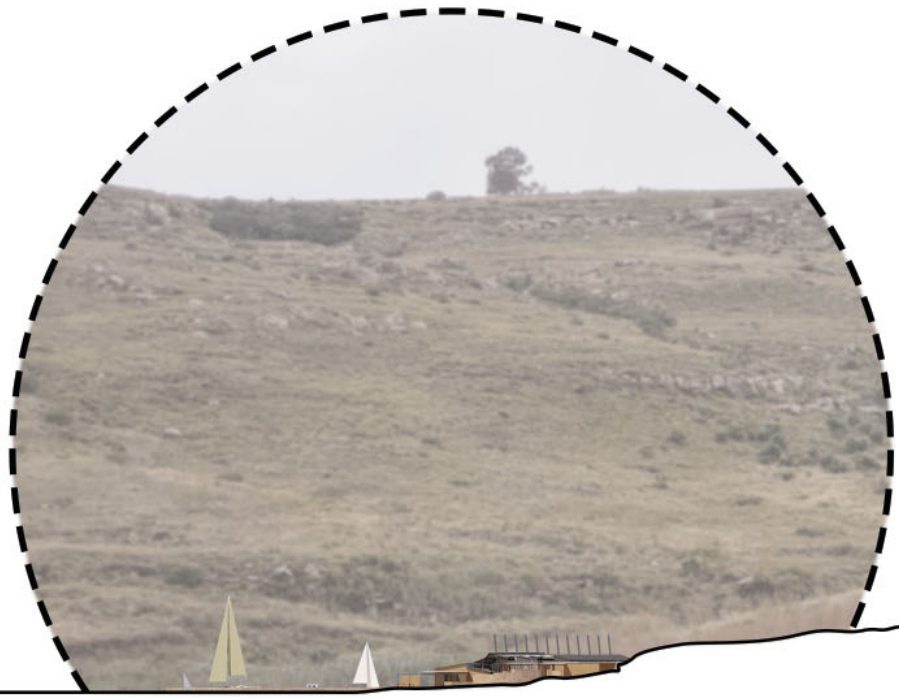
## 4.1 Placement on site

The building has been placed on site along an existing route. The two buildings are about 500 meters apart, which is a short hike and a shorter drive.

The position of the roadside stop has is dictated by the landscape, as the hiking route passes the space in which it is built, but that is also the only place which in which a car can pass over the ridge. The ridge breaks hear, which creates the opportunity for a road to be built.

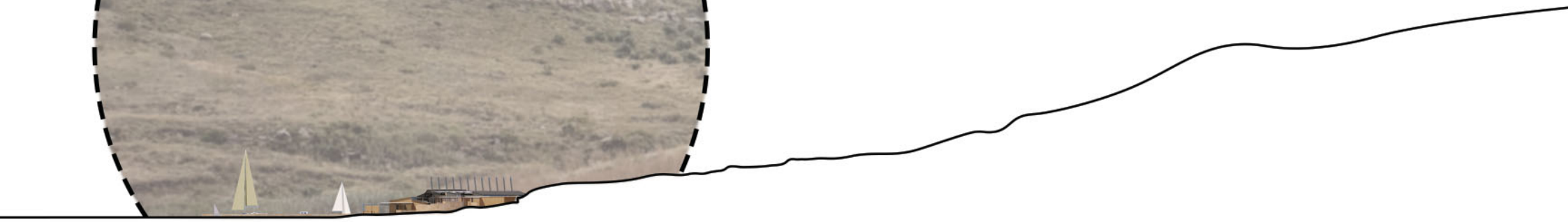
The general layout of the sailing school was dictated by the water line. The school has to have easy access to the water to serve its functions best, so the design was created around the water- line.





Sailing school

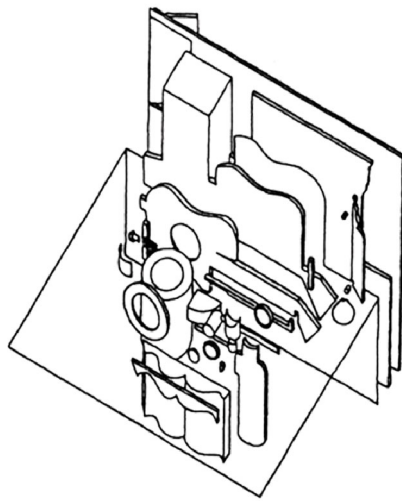
Site section  
Scale 1:1100





#### 4.1 Spatial composition

The Eastern Free-State landscape has the most beautiful light quality. It is soft and light and not as overbearing as the general African sun which we are used to. This fact is visible in the landscape and the mountains forming layers as though they were part of a painting done by a romantic artist. The progression of the hills in the area inspired the first crucial design aspect of the building: the spatial layout. The mountains progress from the closest being “detailed” with different elements clearly readable, to the furthest mountains being a “wash” as if a watercolour artist has stripped them of all detail and simply filled that layer in with one colour.



Spatial compositioning is a term first coined by Le Corbusier to explain how a seemingly flat painting is composed out of objects in space, and this creates a natural promenade through which the user of the building can meander.

The progression on site, as dictated by the program, is from the craftsmen to the sailing school. The craftsmen use the substance of the site to craft figurines and make their living. The sailing school uses substance from far away to practice a sport which they love. The crafted items are site specific, and the sailboats are industrially produced machines made to perform at the peak of the sport. The building engages this dichotomy by ascribing each form of substance -sailboats and figurines-its own materiality.

#### 4.2 Coromandel Manor House

To better understand how a linear progression through large walls would work, the Coromandel manor was used as a floor plan study. The coromandel manor sits in the landscape as though it is a terrace in the landscape. It forms part of the landscape.



Figure 119. Large stacked stone walls(Van Helsing, N.D.)

The Coromandel Manor House has large, stacked stone walls made from locally sourced stones., like the materiality of the walls in my design.

The large walls divide the building into two long linear enclosed areas with an open corridor in the middle. This corridor moves along parallel to the contours of the landscape. A large part of the success of this building is the fact that it was built to resemble a ruin and that conceals it in the landscape.

The walls of the Coromandel Manor House and the way the spatial organisation reacts to them is used in the final design of the Ventusium.

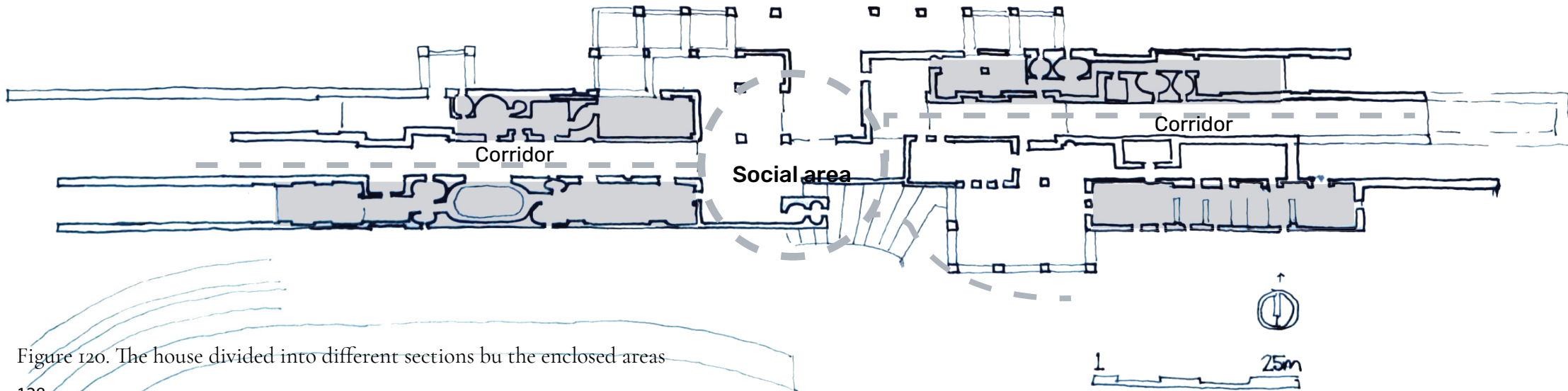


Figure 120. The house divided into different sections by the enclosed areas

### 4.3 Sailing school

The sailing school has taken cues from the design of the Coromandel Manor House on its approach, the progression through the building to the dam and the circulation within the building.



# Sailing School Floor Plan

Scale 1:500

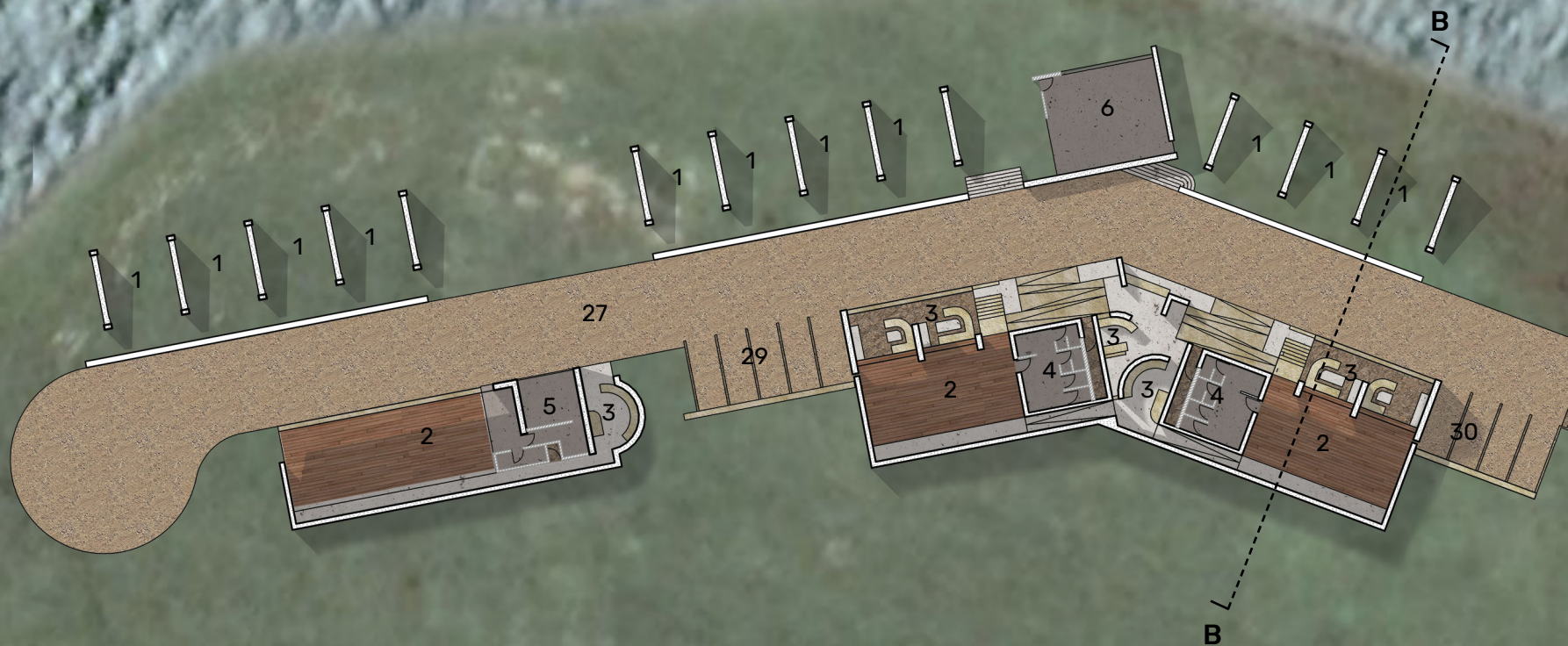
5 10 20

Meters

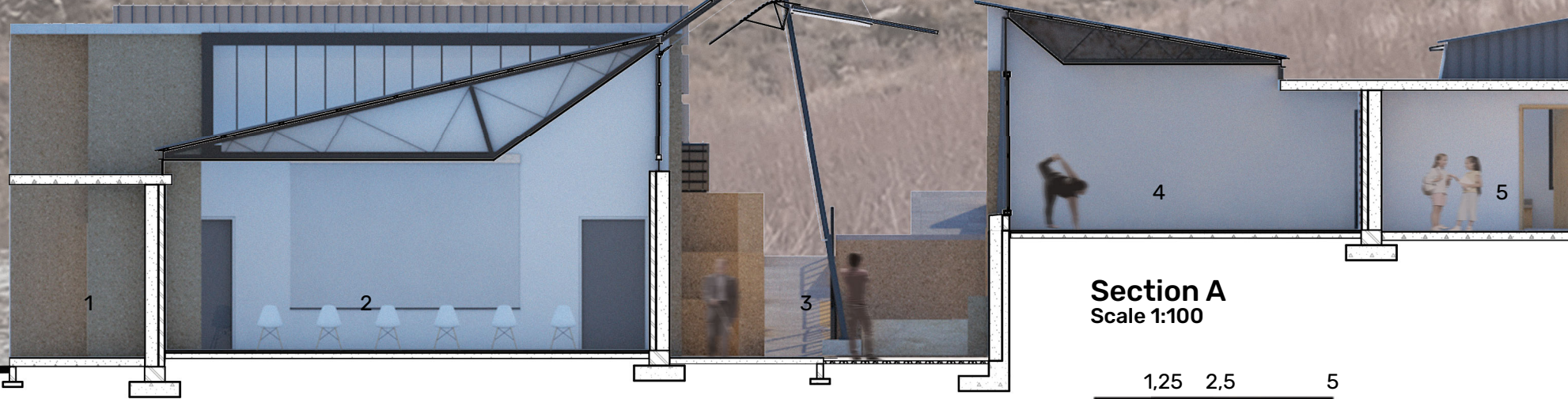
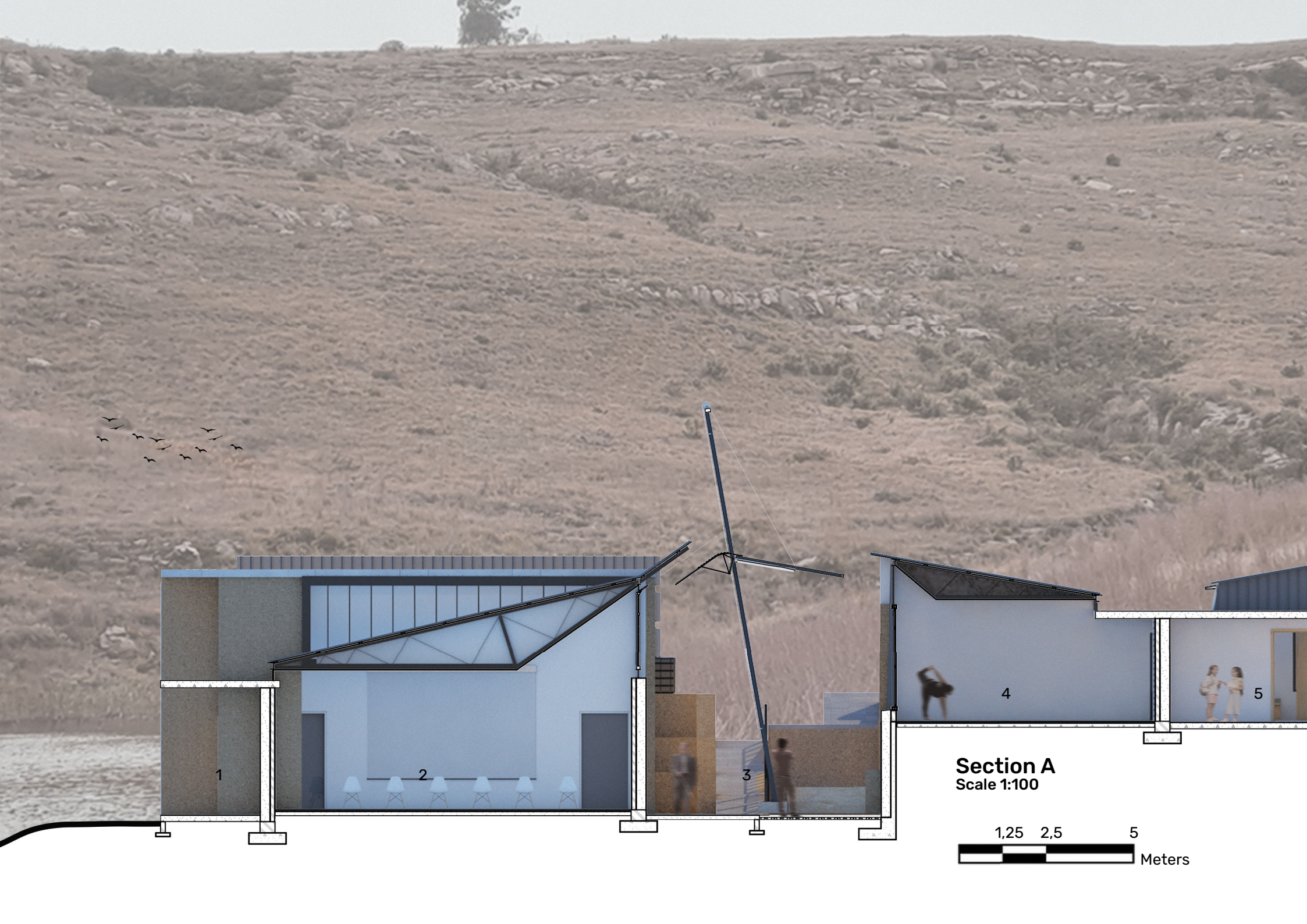


## Legend

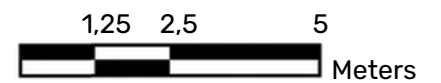
- |    |                     |    |              |    |                       |
|----|---------------------|----|--------------|----|-----------------------|
| 1  | Paddocks            | 11 | Entrance     | 21 | Harbour wall          |
| 2  | Camping platform    | 12 | Shop         | 22 | Harbour walk          |
| 3  | Braai area          | 13 | Storage      | 23 | Jetty                 |
| 4  | Change rooms        | 14 | Infirmary    | 24 | Multi functional hall |
| 5  | Chalet              | 15 | Studio Gym   | 25 | Classrooms            |
| 6  | Sailing workshop    | 16 | Bus drop off | 26 | Instructor Chalets    |
| 7  | Sailing storage     | 17 | Kitchenette  | 27 | Gravel road           |
| 8  | Mechanical workshop | 18 | Reception    | 28 | Footpath              |
| 9  | Amphitheatre        | 19 | Promenade    | 29 | Covered Parking       |
| 10 | Admin               | 20 | Launch       | 30 | Uncovered parking     |



The sailing school opens up into a plaza. Past the plaza the vistas of the dam and the sailors and fishermen using it are visible. If the steps are followed and the person moves to the right, the multi-functional hall opens up along with a corridor, to the left is the amphitheatre and the practical spaces.



**Section A**  
Scale 1:100



Substance is very important in the design of the Ventusium. Earlier in the design The Coromandel Manor House was used as a precedent study on how to work with large stone walls. The large stone walls are a derived from the Earth Concept (Section B). They are dry stacked stone walls made from locally sourced cut sandstone blocks.

The top part of the image is the part of the building which links most to the sailboats. It uses standardised and industrialised material to form its aesthetic. The stone walls face south, towards the figurines and the standardised- industrialised walls face the dam, towards the wind and the boats

The material is all steel, it is made from H-columns which have been halved to produce a chamfer as columns, the infill is made up of Klip-Lok, as well as the roofing infill. The System is designed to be a module of 700 mm, as 3 Klip-Lok sheets fit in perfectly in 700 mm. thus the entirety of the northern walls and the roof has been designed in modules of 700 mm.

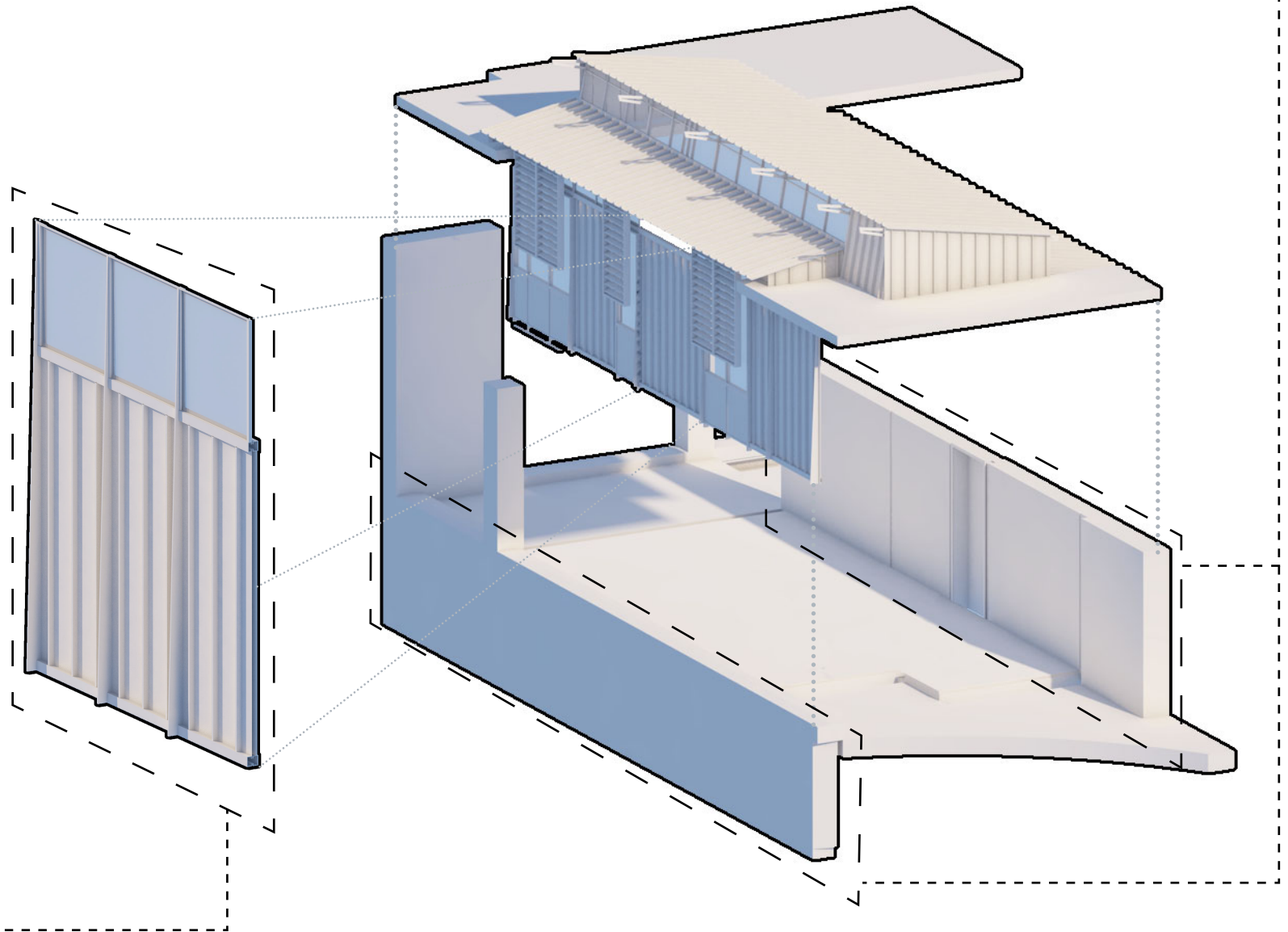


Figure 126. Conceptual synthesis



Figure 128. Corridor 2

The spaces in the Ventusium have been designed to include views of the dam and the surrounding landscape wherever possible. The Edge condition of the Building oftentimes blurs between outdoor space and indoor space, with the landscape and specifically the wind making itself known in all the spaces.



Figure 129. Studio gym

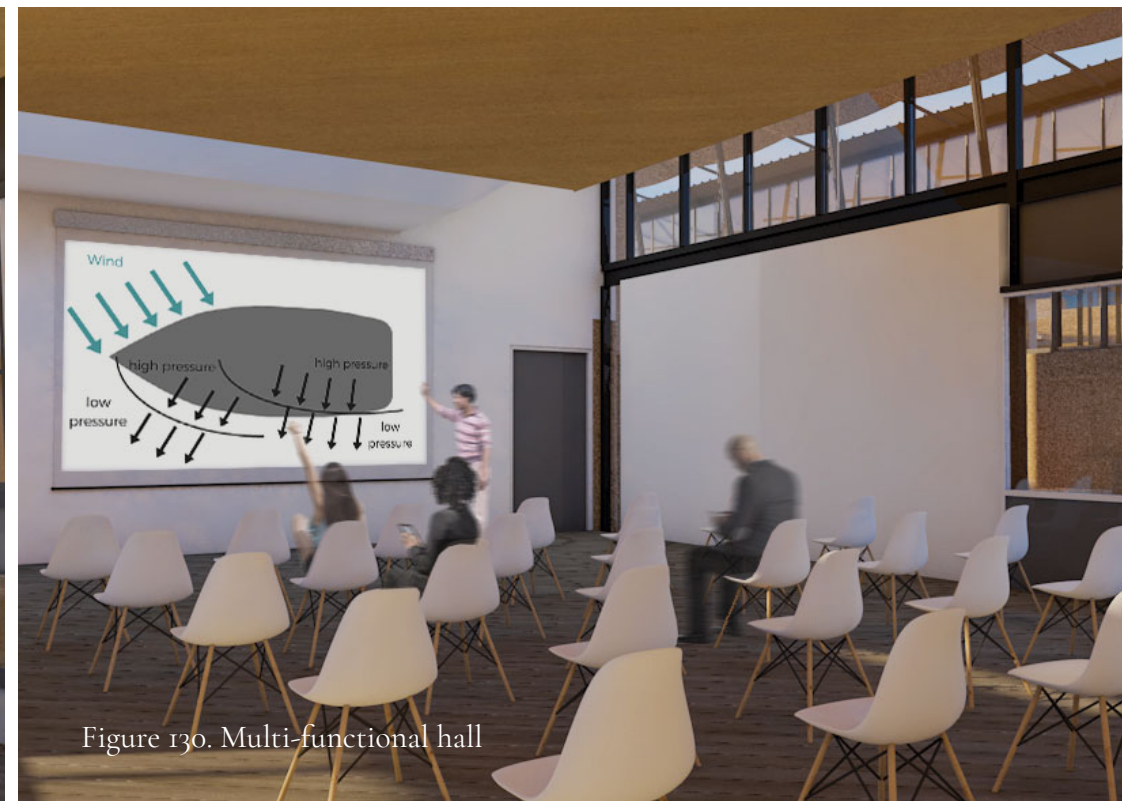


Figure 130. Multi-functional hall



Figure 132. Villa Eila (Arquitectura Viva, 2021)

#### 4.4 Precedent study: Villa Eila

*Heikkinen + Komonen Architects, 1995*

Villa Eila is used a precedent for the camping platforms because it is successful in making a formalized space have a sort of African informality to it, which is exactly the type of edge condition a camping platform should have.



## Section B

Scale 1:100



## Legend

- 1 Camping space
- 2 Viewing Platform
- 3 Braai area
- 4 Road
- 5 Paddocks
- 6 Dam

## 4.5 Practical Training

The camping platform section was heavily influenced by the Villa Eila precedent. It is built to accommodate large wind loads from

the Dam's side and provide sweeping views of the dam to wake up to and to fall asleep to.

As the name suggests, the practical training side of the camp is where the training happens. It is where Landscape and function touch. It only makes sense that the two conceptual points -the walls out of the Earth and the walls derived from the function- touch as well.



Figure 138. Regatta view



Figure 137. Entrance to the camping spots

The paddocks have been built with dry stacked stone walls built in a variation of a Flemish bond. The brick bond ensures that the two faces of the wall have a mechanical connection without the

need of wall ties or a wall core. The walls have also been encased on either side by a concrete column and are covered by a concrete coping. The stones are laid on a foundation of non-facing bricks.

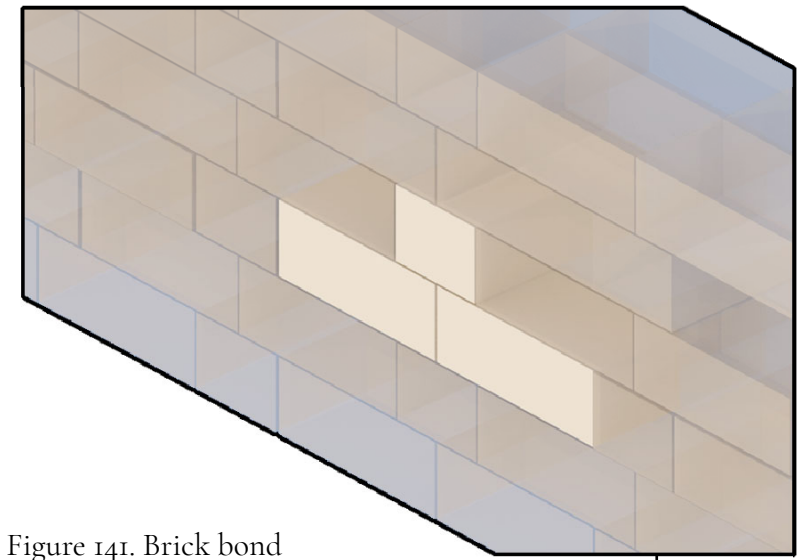


Figure 141. Brick bond

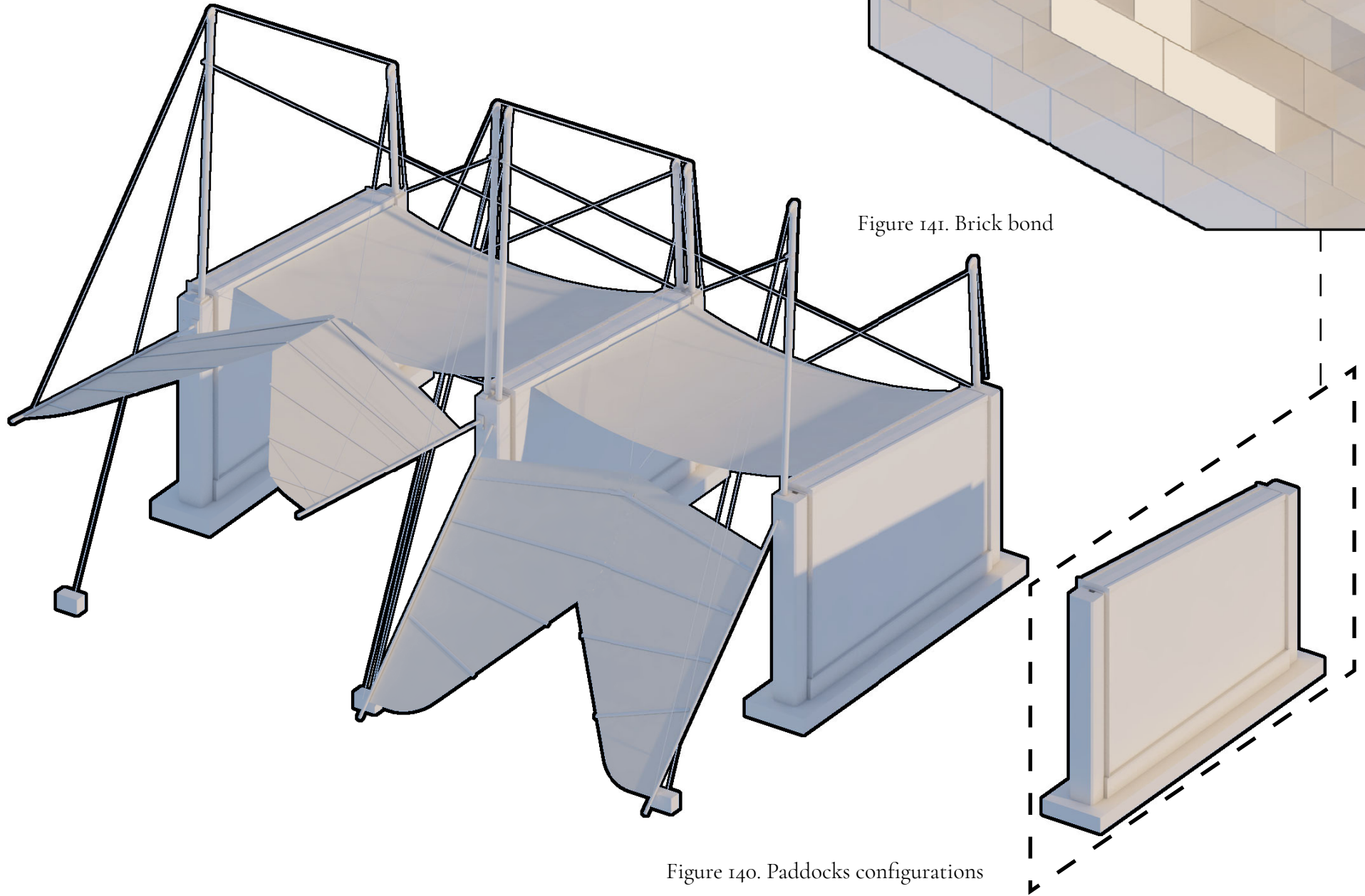
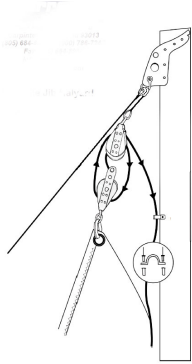


Figure 140. Paddocks configurations

## 4.6 Construction precedent

### A Hobie Catamaran

The sails are rigged to the mast using different pulley systems which are fixed to the mast by bent plate steel and rivets. The cables are fixed by different sizes of D-shackles. D-shackles are important because they are very strong and they are easy to assemble and disassemble.



Most of the rigging on the boat which does not have to be handled regularly is cable. Of course these are also the points which have been designed to take most of the stresses.



The mast itself is made of a custom aluminium profile. The shape of the profile is designed so that the mast is very strong, yet it allows the mast to flex while sailing, the more the wind blows, the more it flexes and the more wind the sail can harness.

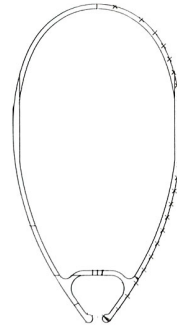


Figure 147. Mast (West Coast Sailing, 2005)

The batons in the sail are what give the sail its stiffness. They are removeable members which are stiff but also capable of flexing more than expected. They are used to keep things in place and to give them their form.



Figure 148. Sail (West Coast Sailing, 2005)

The bottom of the sail is fixed into the mast through the indent seen in the bottom part of the mast section. This fairly simple device allows the sail and the cross mast to fit into the mast all because of the notch designed into the mast. The device allows the cross mast 160° of movement.

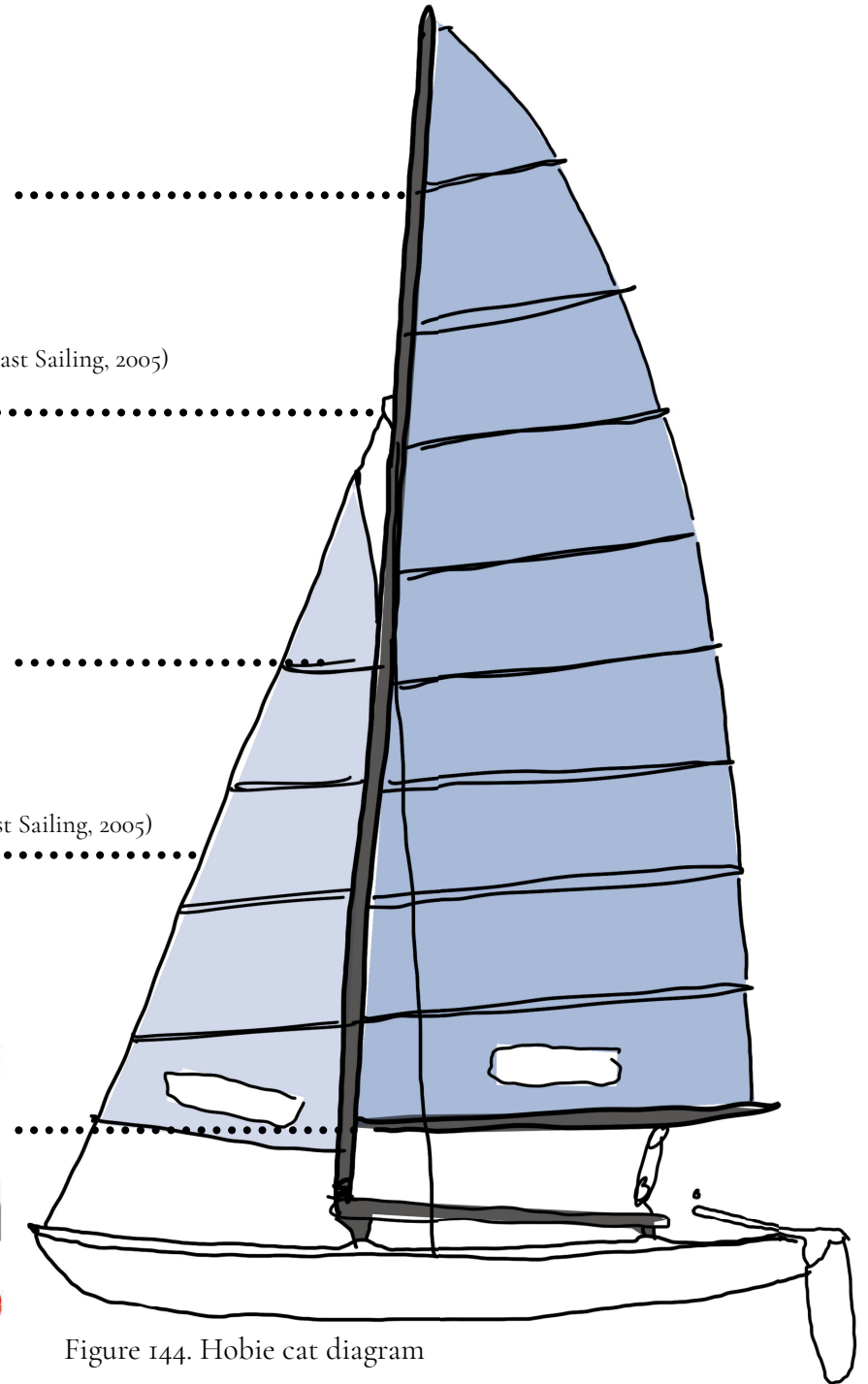
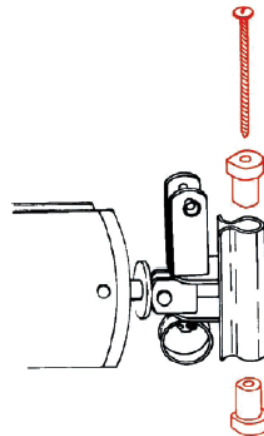
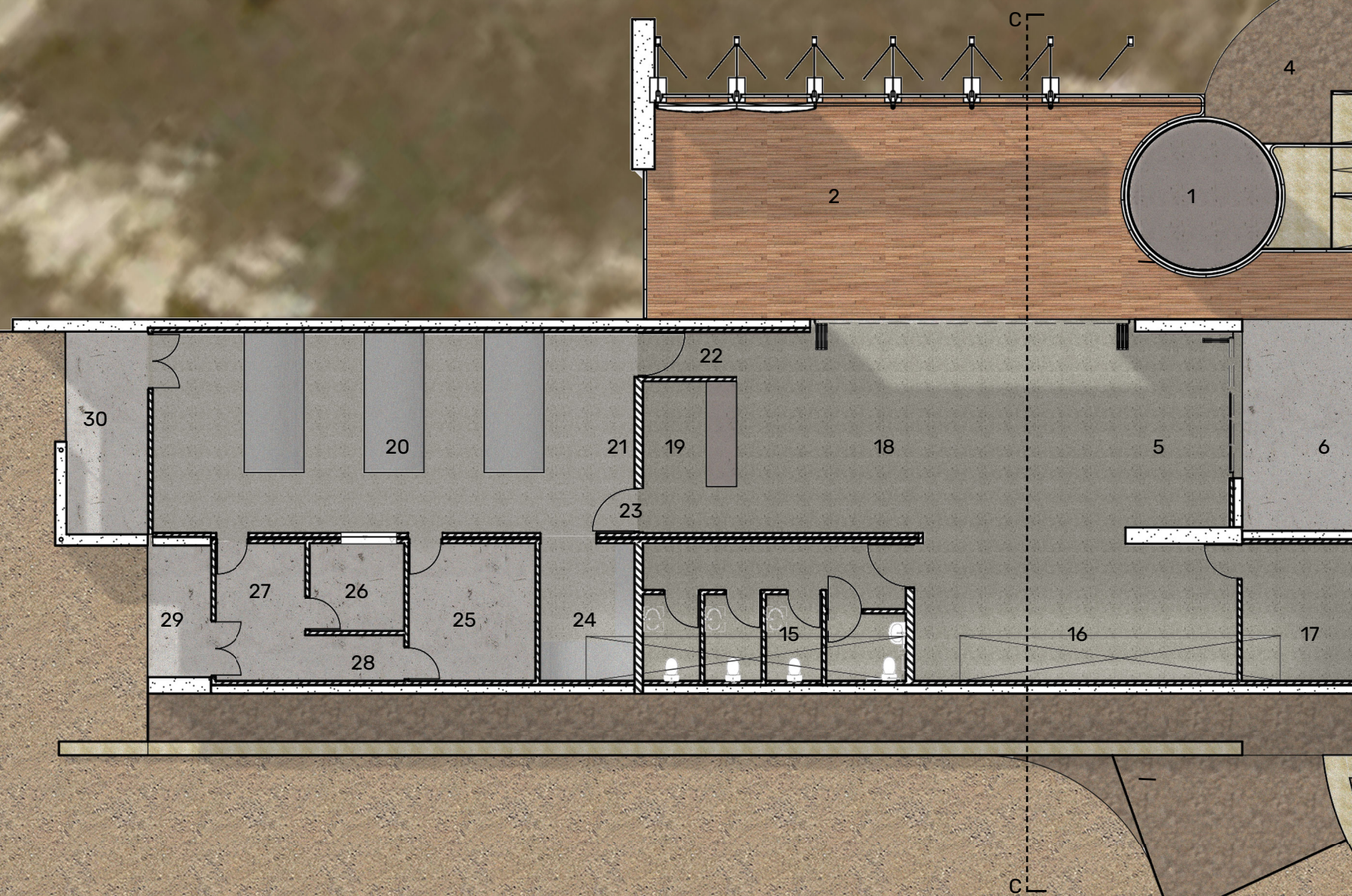


Figure 144. Hobie cat diagram

#### 4.7 The roadside stop.

The roadside stop was designed to attract attention from afar. It needs to grab the attention of the tourists passing by on the R76. To this end the building has been placed so it breaks the skyline, with the silo reaching highest of all.

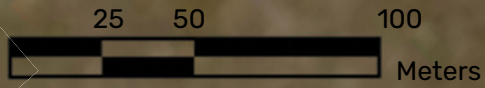
To Sailing School



**Roadside Stop Floor Plan**  
Scale 1:200

**Legend**

- |    |                      |    |                      |    |                   |
|----|----------------------|----|----------------------|----|-------------------|
| 1  | Silo                 | 11 | Craftsmen seating    | 21 | Plated food       |
| 2  | Patio for restaurant | 12 | Craftsmen sale space | 22 | Plated food out   |
| 3  | Ramps to Footpath    | 13 | Craftsmen working    | 23 | Dirty dishes in   |
| 4  | Footpath             | 14 | Storage & sales      | 24 | Dishwashing space |
| 5  | Curios shop          | 15 | Bathrooms            | 25 | Food storage      |
| 6  | Restaurant entrance  | 16 | Exhibition space     | 26 | Office            |
| 7  | Picnic area          | 17 | Storage              | 27 | Foyer             |
| 8  | Walkway              | 18 | Indoor seating       | 28 | Corridor          |
| 9  | outside seating      | 19 | Reception            | 29 | Deliveries        |
| 10 | Parking              | 20 | Kitchen              | 30 | Service yard      |



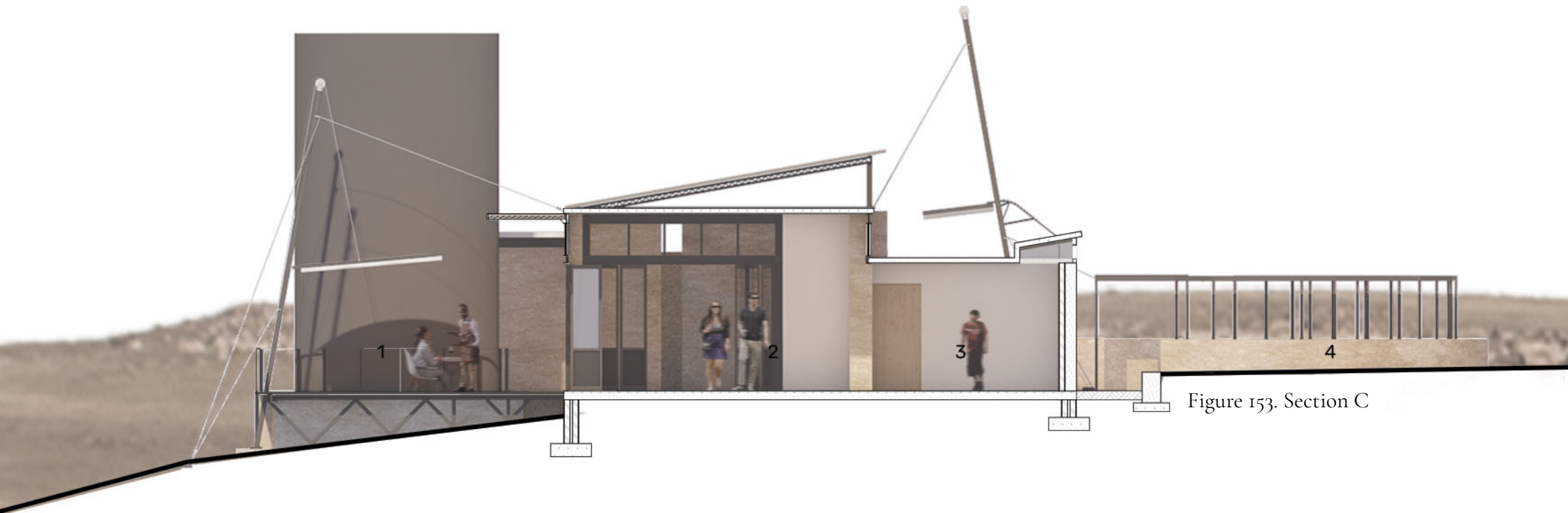
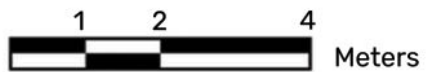


Figure 153. Section C

**Section C**  
Scale 1:100



**Legend**

- 1 Outside seating
- 2 Restaurant and curios shop
- 3 Gallery
- 4 Parking

The section was designed to sit on the broken ridgeline and to project out towards the dam. The southernmost part of the section is buried into the landscape with the seating patio lift-

ing up off of the ground on lightweight steel. Conceptually this links to the progression from the figurines to the sailboats, from Earth to Wind.

The Roadside Stop has been designed with the view in mind. Each of the spaces has a view of the dam. from the picnic area to the restaurant, the most important thing is the dam and the view of the dam.



Figure 156. Framing Vistas

The patio and the entrance feature solar shading devices made from parts of boats. Each part featured in them comes from the catalogue of the Hobie 16, one of the most popular sailing boats in the world. There are many old hobbies which are unsailable because of wear and tear, so the solar devices will reuse and recycle old parts and take advantage of their systems. The system featured has an interchangeable wind break and solar shade, and the users can decide which ones they want to use and which not.

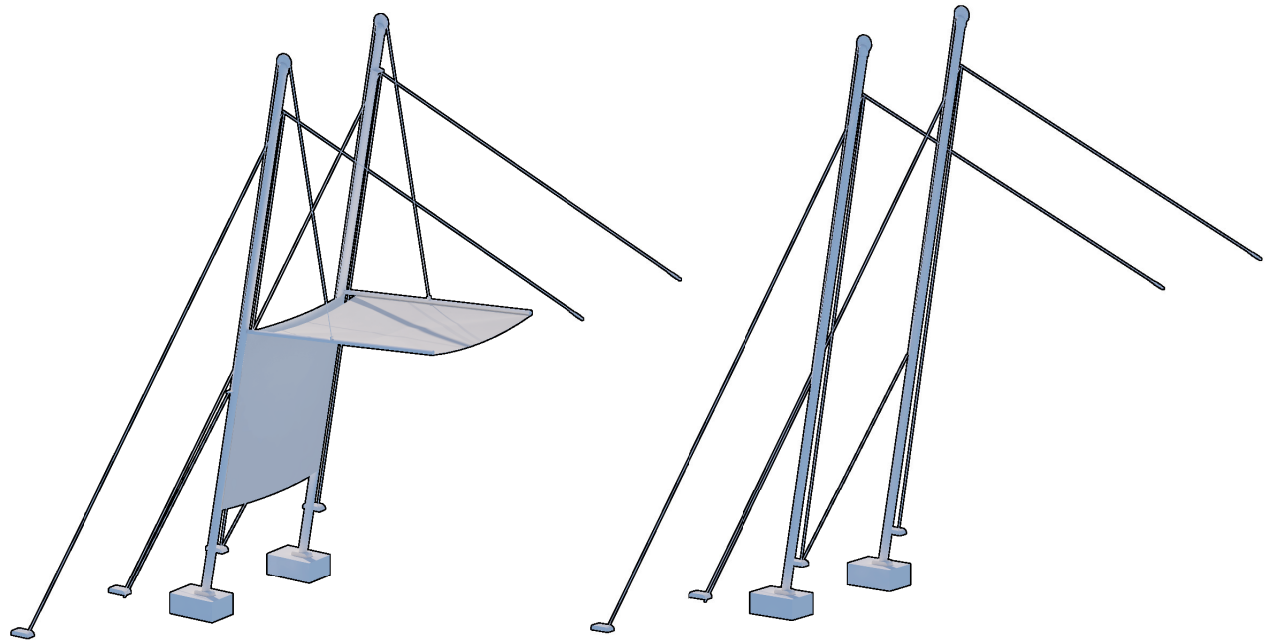


Figure 158. Solar and wind shield in both set up and taken down position

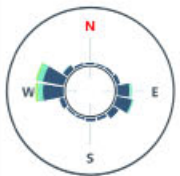
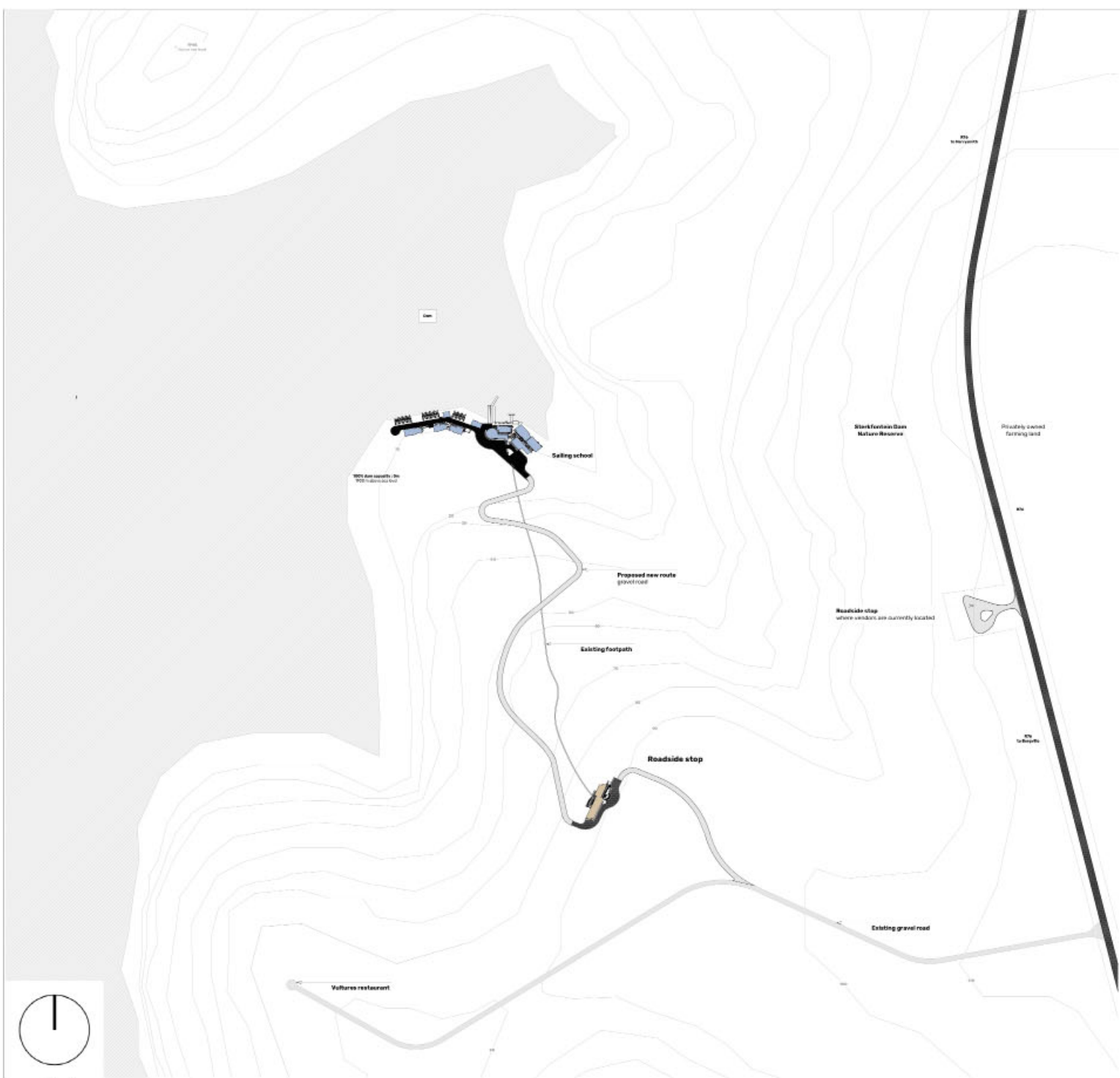


Figure 159. Solar and wind shield in taken down position



Figure 160. Solar and wind shield in set up position

# 5. Technical data



Wind rose



Locality plan  
Scale 1:2000

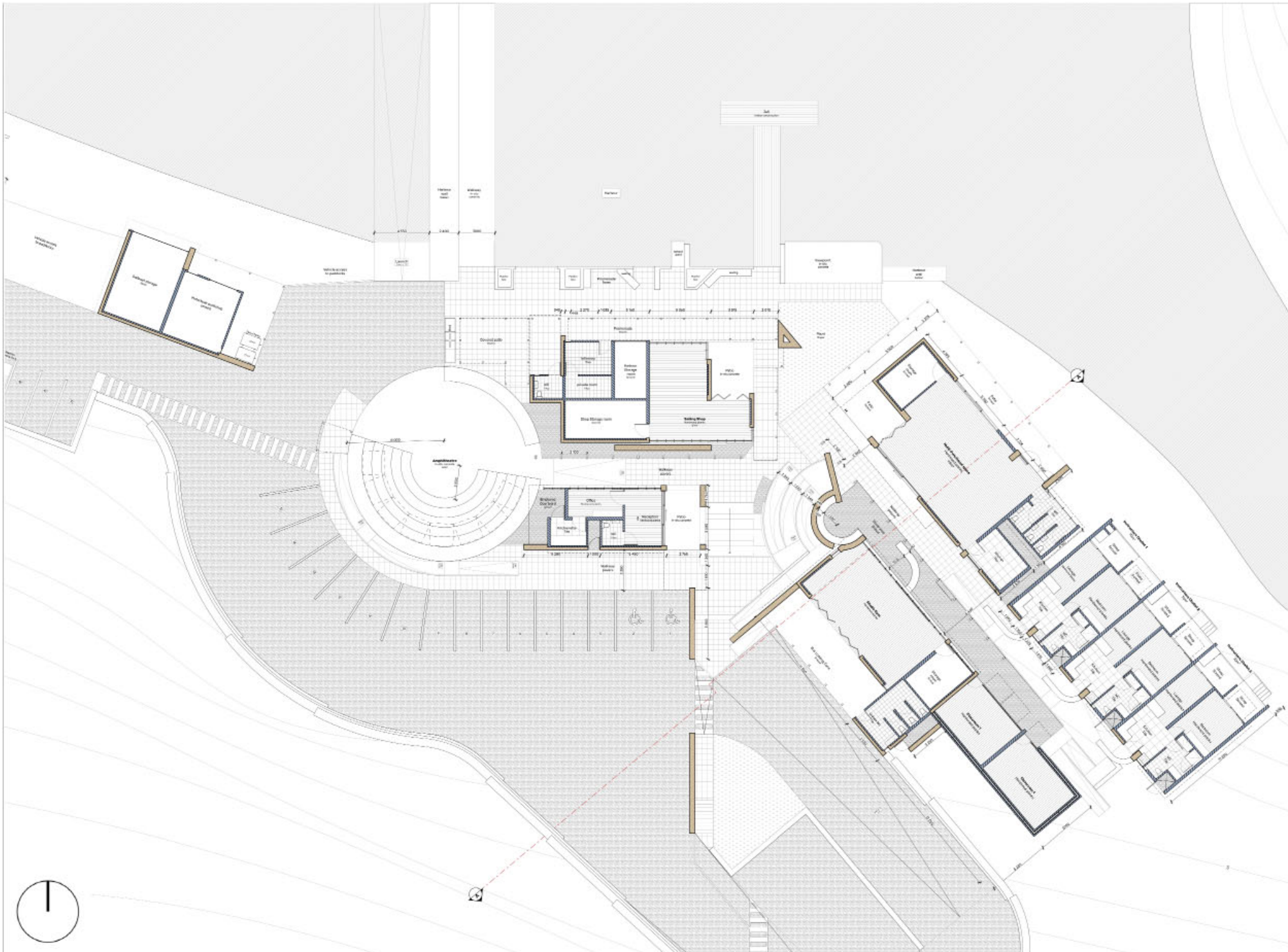
**Sterkfontein Dam Nature Reserve**

Project Name  
**Ventusium**

Project Location  
**Sterkfontein Dam**

Client  
**South African Sailing**  
Sytbrand van Sittert 2022/11/07

**Ventusium | Locality plan 01**



Legend

<b>Cut Sandstone Masonry</b>	

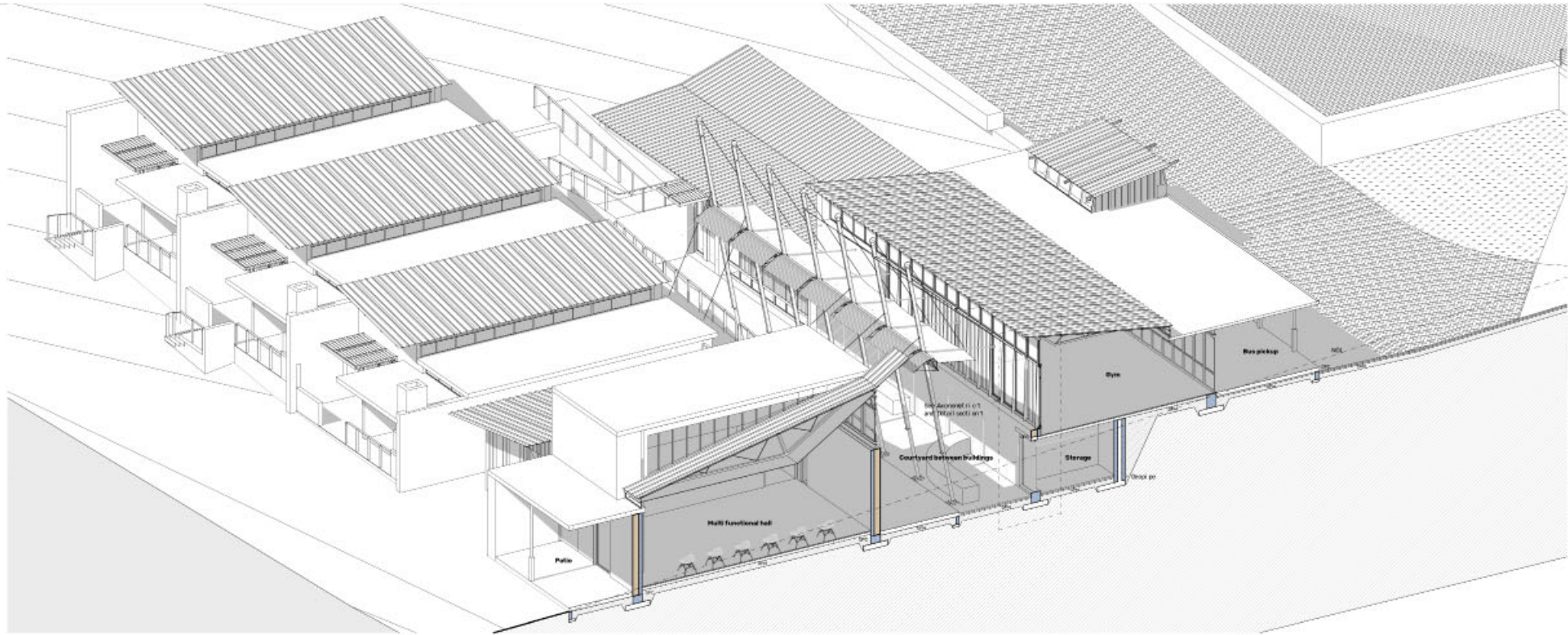


Project Name  
**Ventusium**

Project Location  
**Sterkfontein Dam**

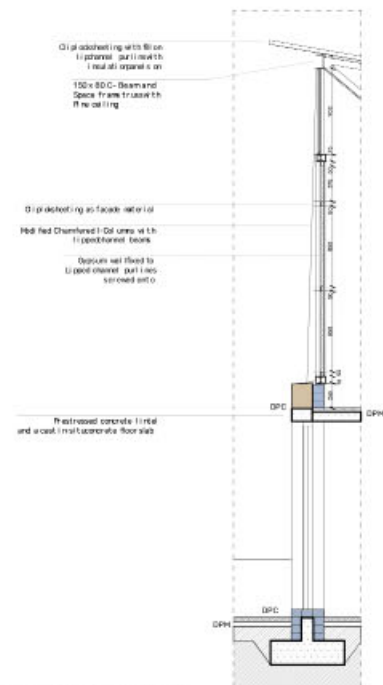
Client  
**South African Sailing**  
Sytbrand van Sittert 2022/11/07

**Sailing school floor plan | Academic**  
**03**

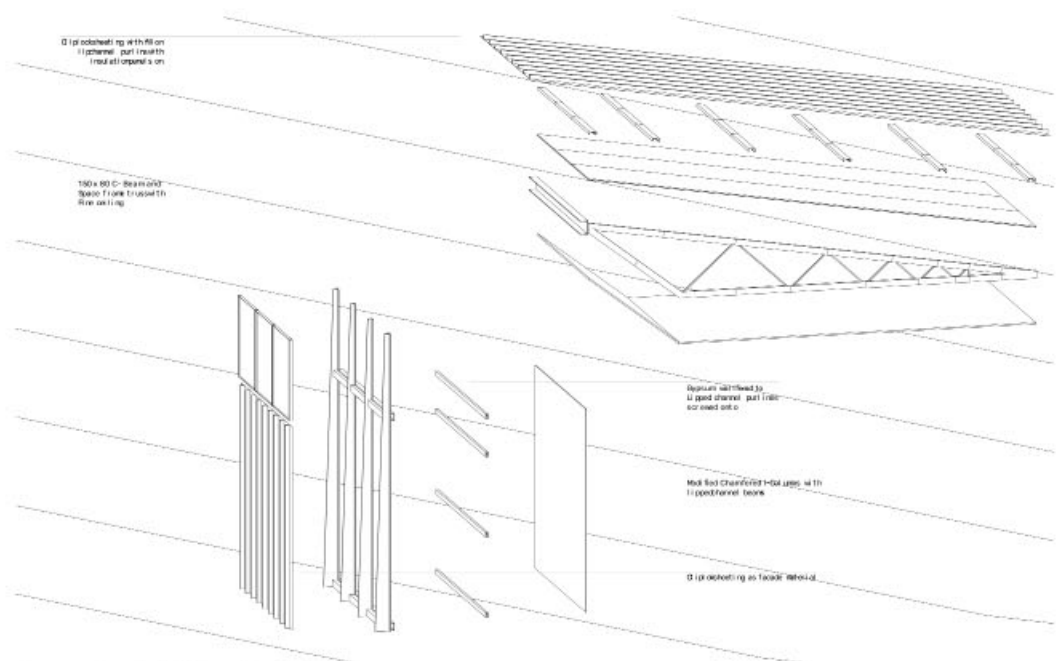


**Section A**

Scale 1:50



**Detail 1 | Wall detail**  
Scale 1:20



**Axonometry 1 | Wall and Roof detailing**  
Scale 1:20

Legend

**Cut Sandstone Masonry**



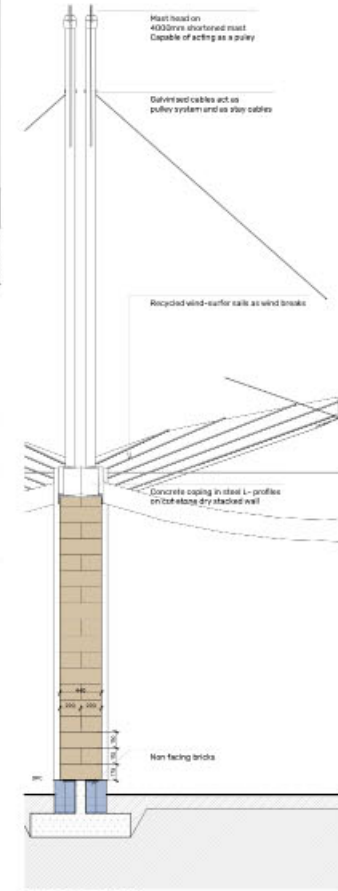
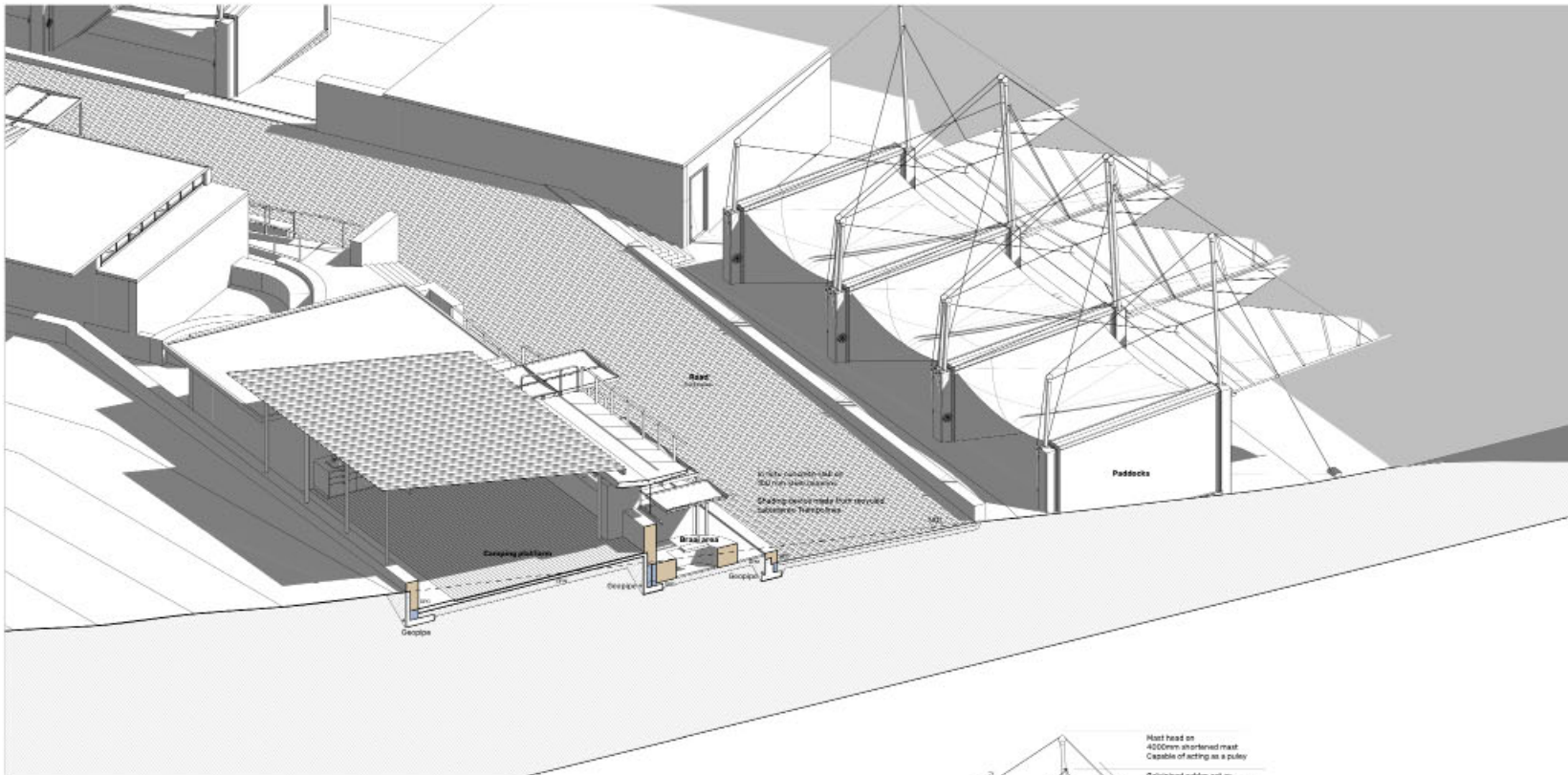
Project Name  
**Ventusium**

Project Location  
**Sterkfontein Dam**

Client  
**South African Sailing**

Architect  
**Sytbrand van Sittert | 2022/11/07**

**Sailing school | Multi functional 05**



**SECTION 01**  
Scale 1:20

Legend

	Cut Sandstone Masonry
	Non facing bricks



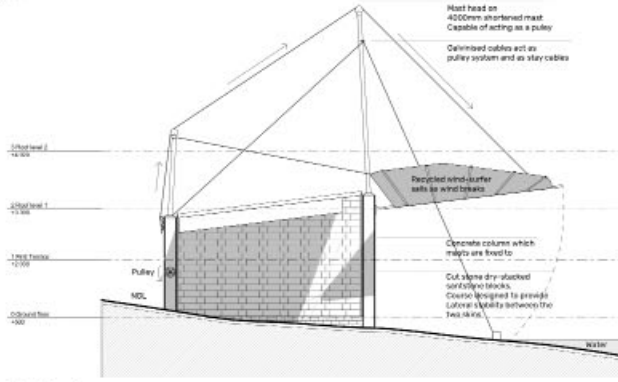
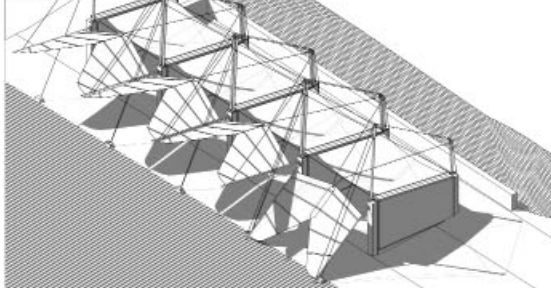
Project Name  
**Ventusium**

Project Location  
**Sterkfontein Dam**

Client  
**South African Sailing**  
Sytbrand van Stierik 2022/11/07

**Campsite | Section and Elevations 07**

**Section B**  
Scale 1:50



**Paddocks**  
Scale 1:50

**Paddocks**  
Scale 1:100



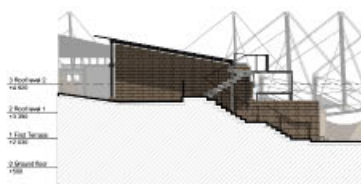
**NORTH EAST ELEVATION |Camping platform**  
Scale 1:100



**SOUTH WEST ELEVATION |Camping platform**  
Scale 1:100



**NORTH WEST ELEVATION |Camping platform**  
Scale 1:100



**SOUTH EAST ELEVATION |Camping platform**  
Scale 1:100



Roadside stop | Ground floor plan

Scale: 1:100

Legend

<b>Cut Sandstone</b>	
<b>Masonry</b>	



Project Name  
**Ventusium**

Project Location  
**Sterkfontein Dam**

Client  
**South African Sailing**  
 Sytbrand van Sitter | 2022/11/07

**Roadside stop | Floor plan**  
**09**

# 6. Conclusion

*How can architecture be a mnemonic device to moore people in the Ventusium by uphauling memories of sailing and interacting with the Dam?*

Architecture becomes meaningful to people after they have started interacting with its substance. The more they interact with it, the more meaning it accumulates. Meaningful interaction with architecture can be helped along with the substance used to construct the building, be it conceptual or physical- as long as the users have a connection to it.

The substance used to connect with the users in the Ventusium is the different parts of a sailboat. These parts were used because they are already designed to be put up and taken apart regularly, which is something the Ventusium needs given the transient nature of the winds. I daresay that this is what makes the winds so exciting to the sailors, their transience. The winds are ephemeral and unpredictable, even the best prediction algorithms are wrong half the times. The wind is something to be chased for the sailors, it carries with it adrenaline and experience which only comes once a year for many.

This hunger for the winds is what the solar devices made out of the Substance of the sailboat hacks into. The tool we use to harness the winds is built into the building and asks of the users of the building to interact with it.

The Tracing paper pages in this book symbolise the transience of the wind and the ephemeral structures built to honour it, and the increased pedestrian traffic which comes with it. The reader has to interact with it, move it and position it to find out more information about the page which it analyses. It is the exact same thing which the solar devices in the Ventusium ask of the user, only when the user touches the device, she is reminded of a mythology which she ascribes to, and of memories which have convinced her to sail more. Through building a scheme which hacks into the mythology its users ascribe to I hope to moore them in the Ventusium.

# 7. Reflection

The Ventusium was a very difficult project for me. Lecturers always warned us against choosing virgin sites for our master's mini dissertation, turns out they were right. At every turn the designer has to question their design decisions at every turn. That is why I decided to use the site and the function as measuring sticks to further the design. The entirety of the design is built of clues from the landscape and the function and at least it this I can be happy.

Now in the detailing I am happy. Recycling old and used boats to give them a second breath of air hacks into my poetic register. These artefacts can now be used to train a new generation of sailors,

as though they are given a retirement, how poetic! With everything which can be said about the design, whenever my father, a fellow sailor- walked by my table while I was working on this dissertation he would look at the screen longingly and say "if only there were a way to actually build this, it would be most wonderful." In that I feel accomplished; past the architectural intent and the theoretical discourse my father, a sailor and thorough subscriber to the mythology of sailing, would love nothing more than to actually have Something like The Ventusium at the Sterkfontein Dam Nature Reserve.

# 8. Bibliography

Arnardóttir, H. (2006). Villa Eila in Guinea, by Heikkinen + Komonen. [online] STORIES OF HOUSES. Available at: <http://storiesofhouses.blogspot.com/2006/05/villa-eila-in-guinea-by-heikkinen.html> [Accessed 11 Oct. 2022].

Arquitectura Viva (2021). Villa Eila, Mali - Heikkinen-Komonen Architects. [online] Arquitectura Viva. Available at: <https://arquitecturaviva.com/works/villa-eila-en-mali> [Accessed 11 Oct. 2022].

Australia Icomos (2013). The australia ICOMOS charter for the conservation of places of cultural significance : Known as the burra charter. Melbourne: Rmit.

Bachelard, G. (2014). The poetics of space. New York: Penguin Books.

Barkhuizen, L. (2016). IUCN Red List of Threatened Species: Labeobarbus kimberleyensis. [online] IUCN Red List of Threatened Species. Available at: <https://www.iucnredlist.org/species/63292/174782649> [Accessed 22 Sep. 2022].

Camina, E. and Güell, F. (2017). The Neuroanatomical, Neurophysiological and Psychological Basis of Memory: Current Models and Their Origins. *Frontiers in Pharmacology*, [online] 8(1). doi:10.3389/fphar.2017.00438.

Cavanaugh, W.T. (2013). Theopolitical imagination. London ; New York: Bloomsbury.

DE LA VEGA (2022). Delmo Group, Don Beto Day Speed Boat. [online] de la Vega arch. Available at: <https://www.delavegadesign.co.uk/copy-of-sydney-penthouse> [Accessed 30 Sep. 2022].

De-Modernism (2011). Search Results for 'villa Eila'. [online] De-Modernism. Available at: <https://cjbuildsllc.wordpress.com/?s=villa+Eila> [Accessed 11 Oct. 2022].

- Marriah-Maharaj, J. (2022). Almost 1500 drownings in SA every year, mostly children under the age of 4. [online] www.iol.co.za. Available at: <https://www.iol.co.za/news/south-africa/kwazulu-natal/almost-1500-drownings-in-sa-every-year-mostly-children-under-the-age-of-4-10b7bbfa-17d5-476f-82bf-1f45d131ca3c> [Accessed 30 Sep. 2022].
- Misturas (2013). Misturas» Escola de Vela en Vilagarcía de Arousa (Pontevedra). [online] Misturas. Available at: <http://misturas.es/project/escuela-de-vela-vilagarcia-de-arousa/> [Accessed 30 Sep. 2022].
- Oxford (2013). Oxford essential dictionary for elementary and pre-intermediate learners of english. Estados Unidos De América, New York: Oxford University Press.
- Phiadon (2021). Sacred Stories - Bruder Klaus Field Chapel | architecture | Phaidon. [online] www.phaidon.com. Available at: <https://www.phaidon.com/agenda/architecture/articles/2015/february/04/sacred-stories-bruder-klaus-field-chapel/> [Accessed 5 Oct. 2022].
- S Brent Plate (2005). Walter Benjamin, religion, and aesthetics : rethinking religion through the arts. New York: Routledge.
- Sail.org (n.d.). Home | South African Sailing. [online] www.sailing.org.za. Available at: <https://www.sailing.org.za/home/> [Accessed 26 Sep. 2022].
- Seremetakis, C.N. (1993). The Memory of the Senses: Historical Perception, Commensal Exchange and Modernity. *Visual Anthropology Review*, 9(2), pp.2–18. doi:10.1525/var.1993.9.2.2.
- Smith, J.K.A. (2011). *Desiring the Kingdom : Worship, Worldview, and Cultural Formation*. Grand Rapids, Michigan: Baker Academic.
- Smith, J.K.A. (2013). *Imagining the Kingdom : How Worship Works*. Grand Rapids, Mich.: Baker Academic.
- Taylor, C. (2004). *Modern social imaginaries*. Durham ; London: Duke University Press.
- West Coast Sailing (2005). Hobie Cat Parts and Accessories | West Coast Sailing. [online] westcoastsailing.net. Available at: <https://westcoastsailing.net/parts/hobie-cat> [Accessed 11 Oct. 2022].
- Zilliacus, A. (2016). Peter Zumthor's Bruder Klaus Field Chapel Through the Lens of Aldo Amoretti. [online] ArchDaily. Available at: [https://www.archdaily.com/798340/peter-zumthors-bruder-klaus-field-chapel-through-the-lens-of-aldo-amoretti?ad\\_medium=gallery](https://www.archdaily.com/798340/peter-zumthors-bruder-klaus-field-chapel-through-the-lens-of-aldo-amoretti?ad_medium=gallery) [Accessed 6 Oct. 2022].



The Ventusium is comprised of a sailing school and a roadside stop. Each of these spaces have been individually designed to cater to the specific needs prevalent on their site.

The roadside stop has beautiful views over the dam and, a restaurant and local craftsmen who have been selling their items on this site for over 20 years.

The Sailing school is designed around the experience of wind. It enhances wind through smart detailing and the Substance of sailing.

