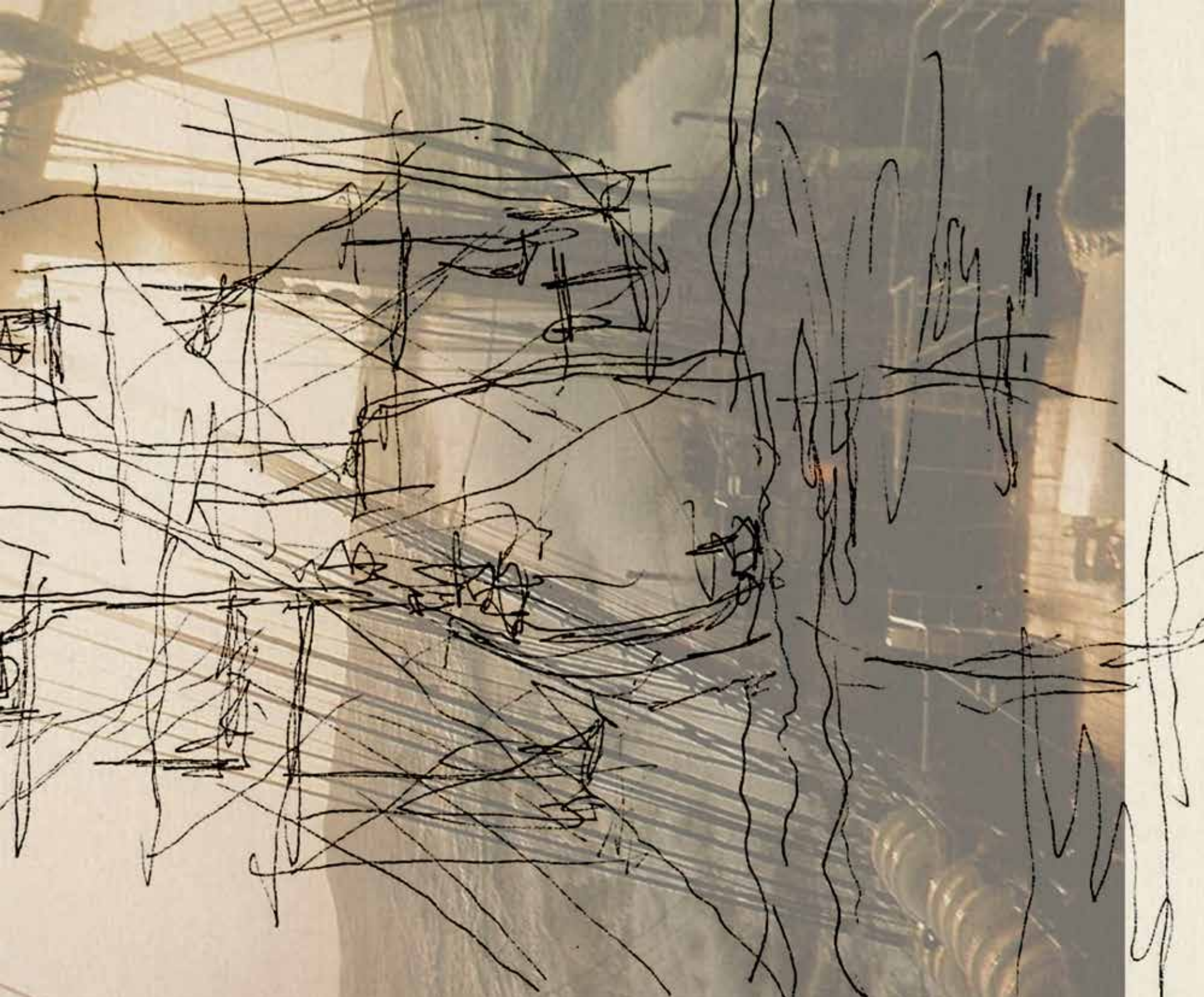




SPARRING WITH THE WIND

An Immersive Gap Year Settlement In The Geelkrans Nature Reserve

SPARRING WITH THE WIND

This dissertation is submitted in partial fulfilment of the requirements for the Masters of Architecture Degree. Department of Architecture, Faculty of Natural and Agricultural Sciences, University of the Free State, South Africa.

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Declaration of original authorship:

The work contained in this dissertation has not been previously submitted to meet requirements for an award at this or any other institution of higher education. To the best of my knowledge, this dissertation contains no material previously published or written by another person except where due reference is made.

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Figure 1.1.: On Site Sketch (author, 2024)

Abstract

Adventure camp architecture acts as both a shelter and the medium between the nomad and the landscape, temporarily influencing the adventurer's experience and perception. Existing adventure camp typologies often implement social principles but not to the extent that they incorporate the sensitivity of the coastal context. This begs us to ask:

How can architecture sparring with Wind, layered with the rituals of the nomad and settler, sculpt a temporary device that reveals the personas of an explorer within the cosmic and coastal landscape of Stilbaai.

The proposed project rigorously examines the relationship between the temporality of the coastal landscape and the structural manifestation thereof. It delves into the profound influence of wind in sculpting the physical and existential reflection of the nomad. The transiency of the coastal landscape of Stilbaai where its myriad manifestations are explored, and a gap year camp emerges as a focal point. Through this lens, a new perspective emerges on architectural discourse - one that embraces change and impermanence, fostering a profound connection between humanity and its ever-evolving environment.

Introduction

“When the winds of change blow, some people build walls and others build windmills” – Chinese Proverb.

An adventurous spirit cannot be tamed. It wants to become and do everything there is to do on this earth – the wind I assume has the same untamed spirit. Reaching everywhere it can. We can learn so much from its freedom and its temporality. Sometimes destructive and sometimes upbuilding is part of its character. Reflecting on those dependent on wind and the landscape, sailors, and ancient explorers know their limits and have a place to call home, yet are led by their inner child, following the stars and the currents to temporarily satisfy a hunger for freedom. With this thesis, my goal is to temporarily satisfy the security and safety needed as a gap year student in an adventure camp in Stilbaai, while imitating the actions of an explorer, their adventurous heart and bodily engagement in hoisting masts and sparring with the wind. Sparring as a verb means to box using fairly gentle blows instead of hitting your opponent hard, either when training or when you want to test how quickly your opponent reacts. It is the back-and-forth of blows that land softly. As a noun, a spar is a strong pole, especially one that a sail is attached to on a sailing ship (Collins Dictionary). This book is penned as though it was the journal of an intrepid explorer, accompanied by hastily sketched illustrations by the same explorer, in this case, the author herself. Embark with me on a journey of exploration of history, the elements and the future.

Kompas

- René Bohnen

Van Kromdraai tot Stilbaai
strek die wieg van my wasdom
en wapens van my menswees
Oor 'n duisend heuwels en berge
in skeure en grotte, deur skagte
loop my spore oor strepe dassiepis,
lê my afdruk in vlermuismis
Ek eet Magaliesklip en skulp
maak vuur in 'n boesmanskoot
en stap my oë nog die bergpieke oor,
het my asem reeds gaan draai
by die elwe en Palinggat in Stilbaai
In hierdie land lê ek NoordSuid,
my arms lê Oos gestrek en Wes;
daar is 'n klein bruin dans in my palm,

wildsbokke op my voorkop afgeets
vir impi's en nonne wat iewers
tussen soetgras en seevoels bly weergalm
Skedels talm
in die stiltes van my stamgrond
en 'n lied ontstaan om vure
in 'n blink nuwe maan
van 'n oer-ou rede
vir my bestaan
Vanaand en hiervandaan
Sal ek weer na 'n kromdraai gaan
Want alles was see en alles was leeg
Voor die sterre losgeskeur het
Uit die niks-alom
Toe het 'n son
Eenmaal om sy eie as gedraai
en verblindend opgekom
oor'n stil baai



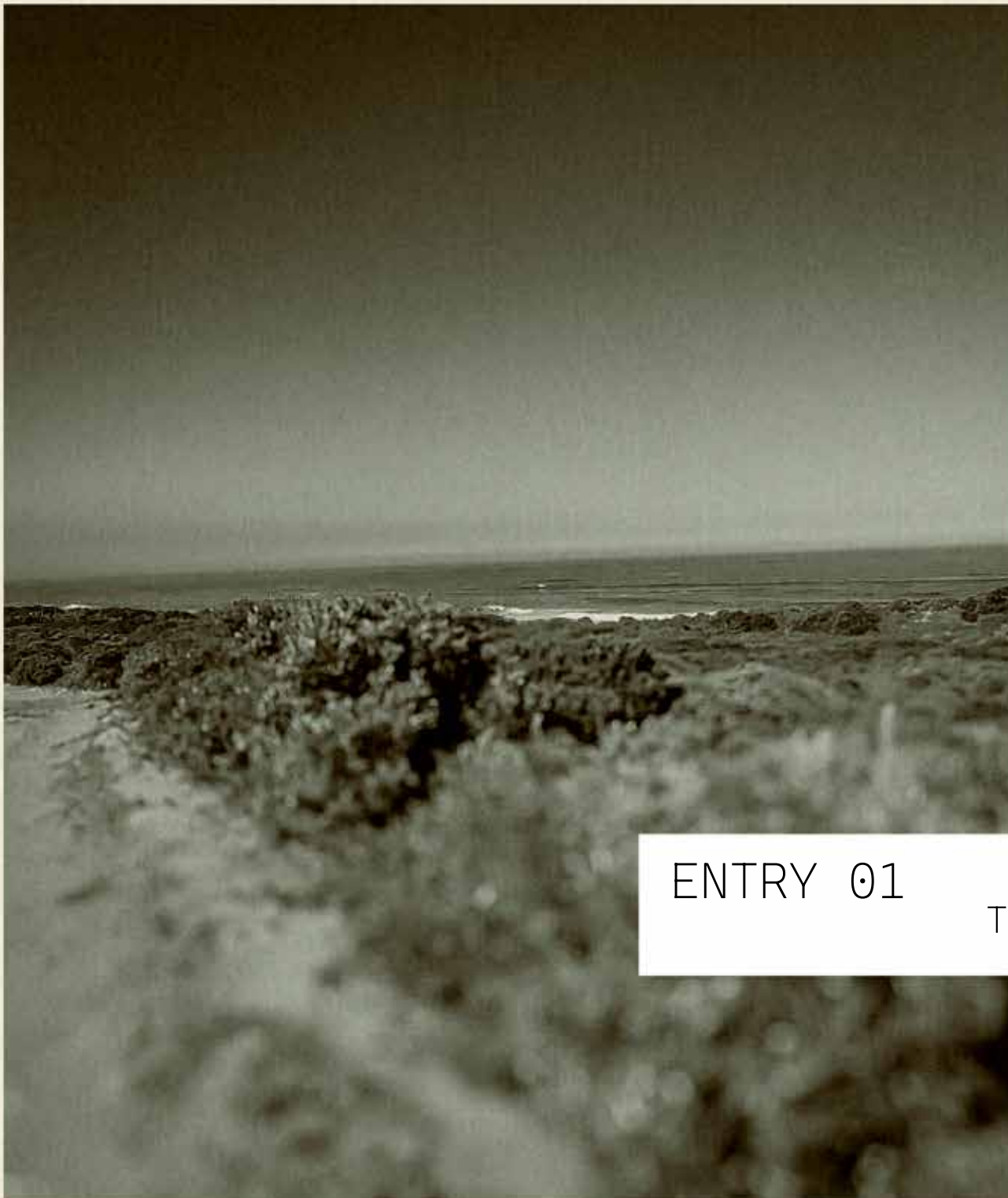
Figure 1.2.: Boardwalk (author, 2024)

Compass

- René Bohnen

From Kromdraai to Stilbaai
reaches the cradle of my growth
and weapons of my being
Over a thousand hills and mountains
in crevices and caves, through shafts
trudges my tracks over rows of hyrax urine
rests my markings in bat excretion
I consume Magalies rock and shell gravel
produce fire in a Bushman's lap
and still my eyes stroll over the mountaintops
has my breath already veered
at the elves and eel hole in Stilbaai
In this country I rest NorthSouth
my arms East stretched and West
There is a slight brown dance in my palm

bucks etched on my forehead
for impis and nuns that echoes
somewhere between sweetgrass and seabirds
Skulls linger
in the silence of my tribal ground
and a song arises around fires
in a bright new moon
for a century-old cause
for my existence
tonight and hereon forward
I will again set out to a crooked turn
for all was sea and all was void
before the stars tore apart
out of the nothingness
then a sun
turned around its own axle
and came up blindingly
over a still bay



- 1. Introduction
 - 1.1. Memory of the Site
 - 1.1.1. The Khoi-Khoi
 - 1.1.2. Dutch Arrival
 - 1.1.3. Current Inhabitants
 - 1.1.4. Fynbos
 - 1.2. The Coast
 - 1.2.1. Exploring the Landscape
 - 1.2.2. Climate
 - 1.3. Modern-day Nomads
 - 1.4. Patterns in the Landscape
 - 1.4.1. Abstract Journeys
 - 1.4.2. Embodied Memory
 - 1.5. Conclusion

ENTRY 01

THE SITE AND ITS TEMPORALITY

Figure 1.3: Geelkrans Hiking Trail (author, 2024)

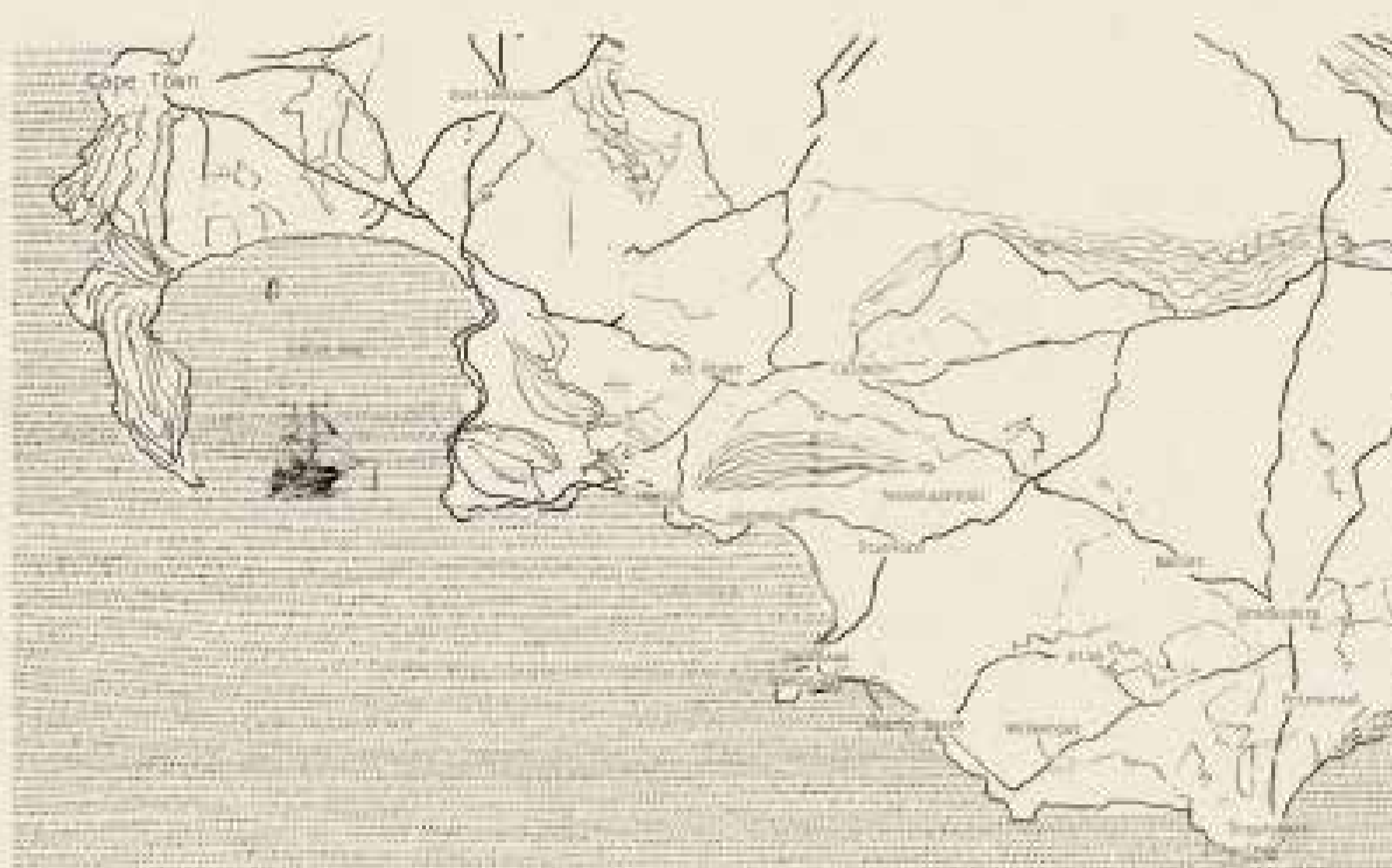
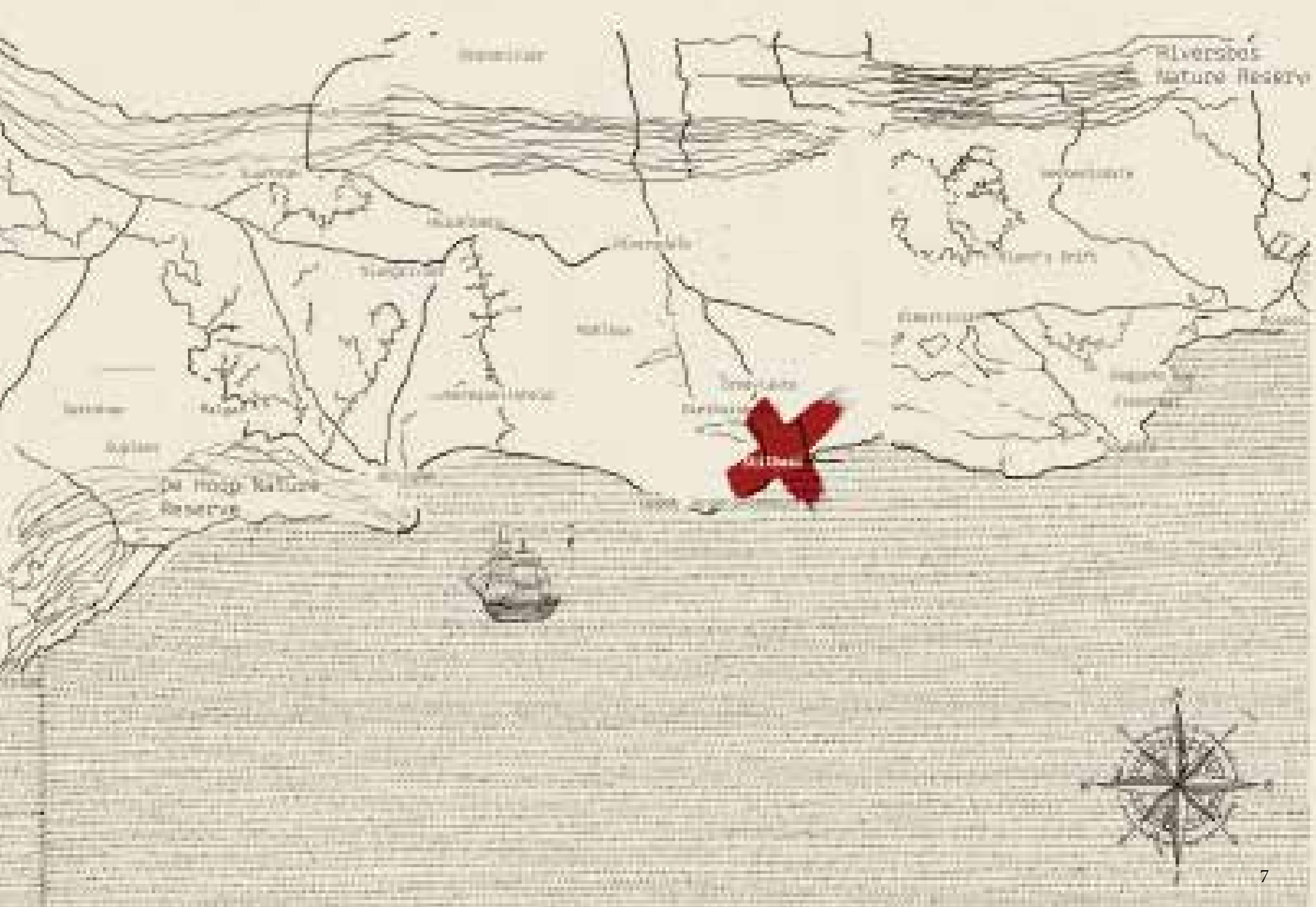


Figure 1.4: Map of the Coast of South Africa (author, 2024)



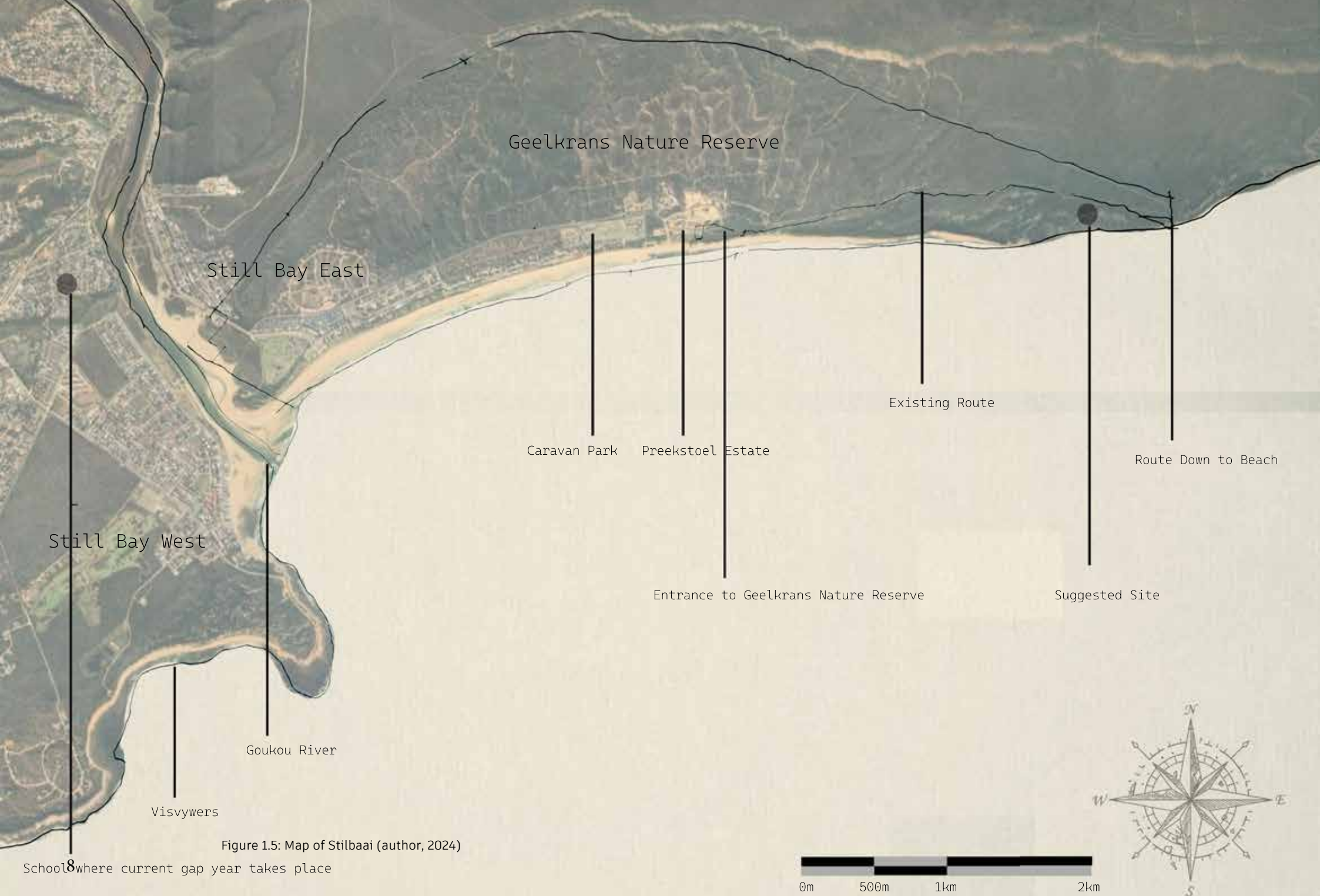


Figure 1.5: Map of Stilbaai (author, 2024)

School 8 where current gap year takes place

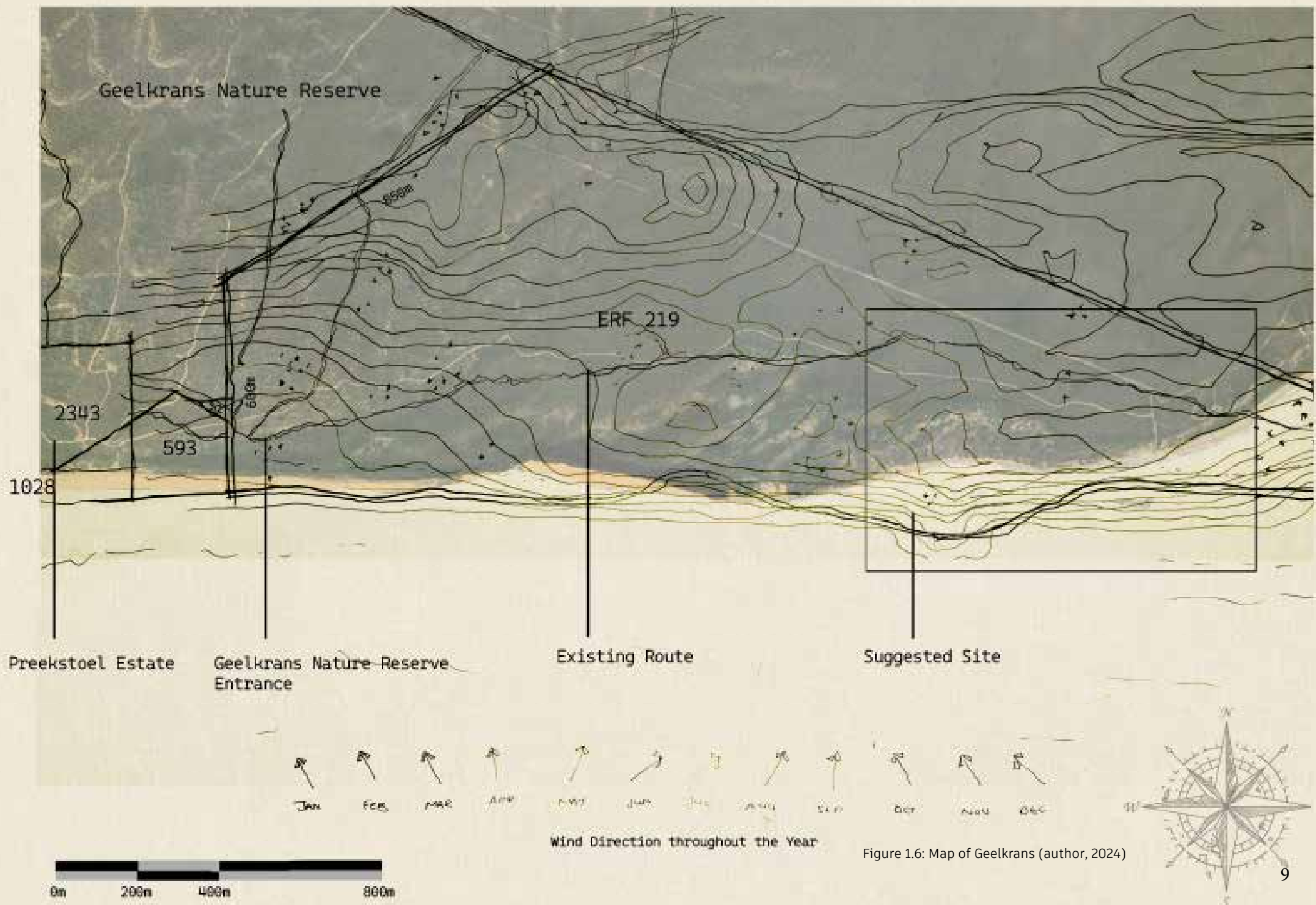


Figure 1.6: Map of Geelkrans (author, 2024)

1. Introduction

Some may know it as Stilbaai, but others call it “Bay of the Sleeping Beauty”. It is quite a small town in South Africa, the river Goukou and its embouchure spill into the Indian Ocean bordering it (Figure 1.7). The area is rich in archaeological heritage, and it is more often than not referred to in conversations where the cradle of humankind is mentioned. I often visit the caves with names such as Blombos and Sibidu where the Middle Stone Age was birthed by ancient tribes, while tidal fish traps along the coastline remind me how people were dependent on the ocean and her inner workings. As rich as its history, the area also holds a rich natural heritage, including various estuarine and marine habitats that are marine protected (Mpaforum, nd). Its variety of natural beauty to feast one’s eye upon includes dunes, sandy beaches, rocky shores, coastal fynbos, salt marches, reefs and estuarine reeds.

Figure 1.7: Ariel View of Still Bay (Stilbaai Duine, 2024)



1. Memory of the Site

1.1.1 The Khoi-Khoi

About 400 years ago, these hills and beaches and their beauty were probably nothing new to its wanderers. Noble nomads who depended on Earth and Ocean for their survival – the Khoisan tribes. The word “nomad” originates from the Ancient Greek word *nomas* which means to “roam” or “wander”. These early wanderers practised a livelihood as old as the earth itself. Some Khoi were hunter-gatherers who scoured the rocks along the coast for shellfish and caught fish in tidal pools (Figure 1.8). Others kept herds of animals and moved around to find grazing land. Carrying all their belongings or loading them onto the backs of animals, they moved according to and aligned to seasons and only stayed in one place for a few weeks. Because of their travelling, the houses had to be light and easy to erect and take apart, crafted with ingenuity (Sahistory, nd). The structures of the Khoikhoi were “matjieshuise” made from green branches that were planted, bent over and tied together (Figure 1.9). If they knew they would return, the foundational frames were left behind and the mats simply rolled up. Openings between the reeds allowed for circulation, while the inside was lined with extra skins in winter. Nomadism does not hint at aimless, unrestricted and undirected wandering, but is based on temporary communities whose stability hinged on the seasonal gifts of the land and the fruits of their utilisation. The degree of nomadism may vary from monthly to quarterly or semi-annual shifts of habitat. Their oneness and aloneness with nature were soon interrupted by explorers who came from over that exact ocean.



Figure 1.8: Khoi-Khoi relying on their surroundings by catching fish in tidal fish traps (MMAdmin, 2013)

Figure 1.9: Khoi-Khoi building matjieshuise from green branches, with their village in the background (alamy, nd)

1.1.2 Dutch Arrival

In the 1600's, Jan van Riebeeck and the *Vereenigde Oos-Indische Compagnie* (VOC) arrived in the Cape, now known as the Western Cape (Figure 1.10.). The VOC was the largest trading enterprise in the world. Workers were sent on long voyages by sea, but the need developed for a place of refreshment in mid-journey. In 1652, Jan van Riebeeck sent off an expedition to set up the Cape of Good Hope. Not too long after the original fort was set up and the outpost soon grew into a proper settlement of Dutch people (Figure 1.11.). Some of the servants were released and they were allowed to cultivate the land and herd cattle. The continual demands of the Dutch for cattle and intruding on their grazing lands and waterholes became overbearing for the Khoi-Khoi. Since they were nomadic, they felt they should have access to all the land in the area for cattle grazing, but the new settlers expanded and laid exclusive claim to some of the land. With very little time passed, the inevitable happened - the first conflict between the Dutch and Khoi erupted. Since the Khoikhoi were nomadic, they felt they should have no restrictions on the land for grazing, while the Dutch had been given land as part of the policy of freehold Ownership. This relationship will be explored in more depth in the theoretical discourse chapter. By the end of the 1600s, most of the Western Cape was under Dutch control and the Khoikhoi were forced to move north into less fertile and uninhabited parts and ally with the San (Sahistory). The only physical remains they left us to be aware they were there, are pottery in caves, shell middens and Fish traps (Figures 1.12. and 1.13.). The tracks of their traversing through the landscape are long gone now, blown into history by the wind.

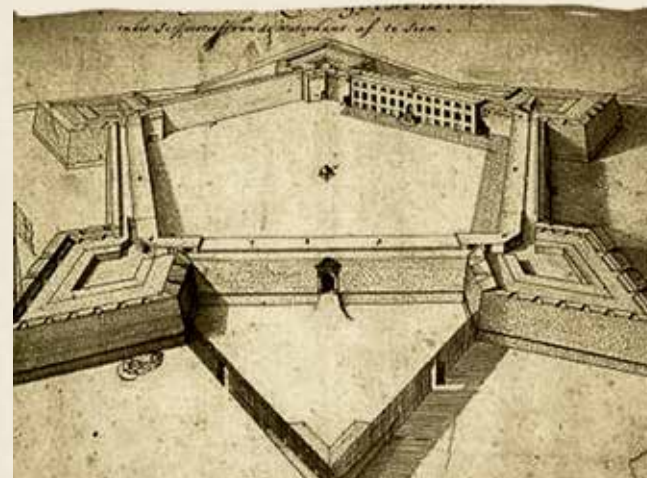


Figure 1.10: Dutch arriving in the Cape (Jones, 2020)

Figure 1.11.: Castle of Good Hope, notice the difference between Khoi and Dutch building within the same landscape (Manske, 2008)



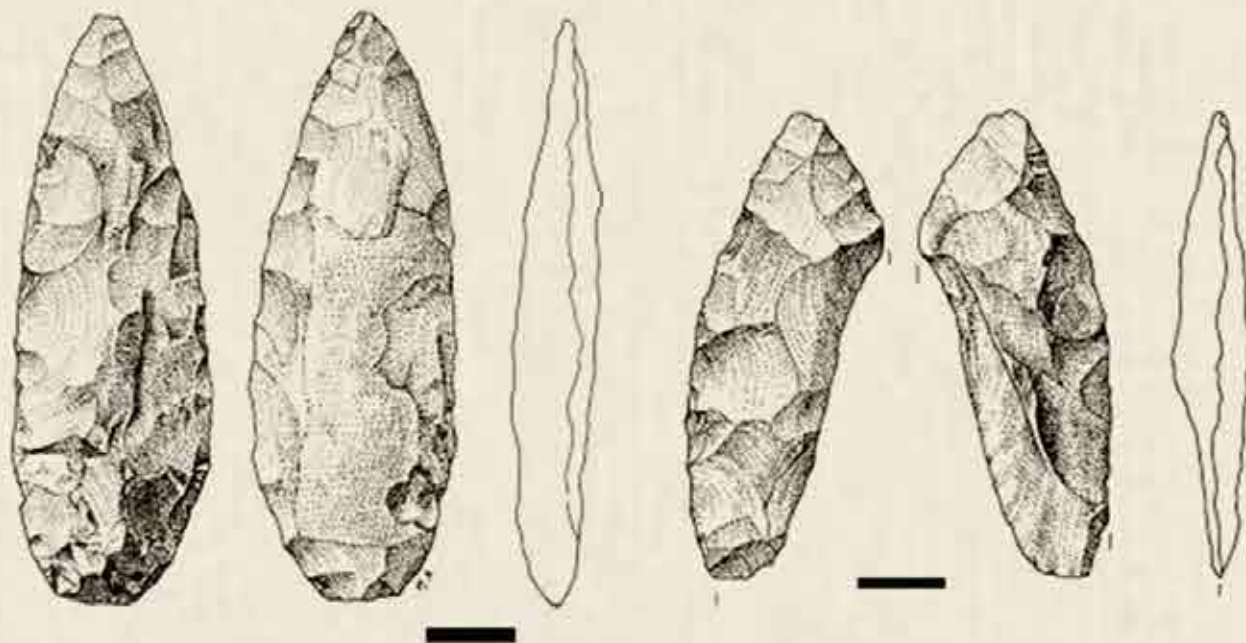
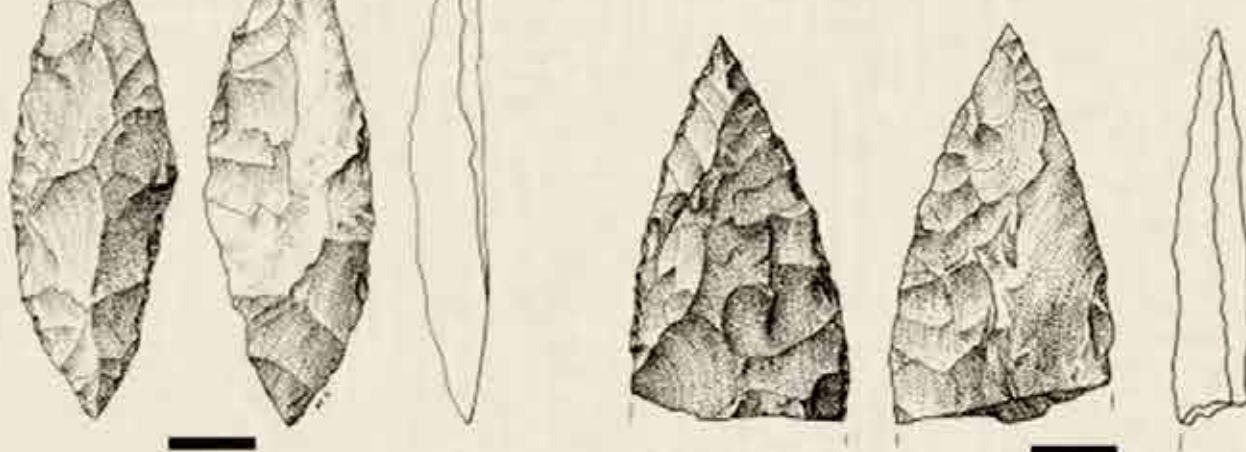


Figure 1.12: Ancient tidal fish traps in Stilbaai used by the Khoi-Khoi (southerncape.mobi, nd)

Figure 1.13: Khoi-Khoi building materials found in the Blombos Cave in Stilbaai (Villa, 2008)

1.1.3. Current Inhabitants

Many of the dwellings within the town remind of the Cape Dutch architecture, with its distinctive characteristics such as white-washed walls, external wooden shutters, thatched roofing, central gables and large wooden sash cottage panes (Figures 1.14 and 1.18). Most of them are more modern interpretations of this vernacular architecture (Figure 1.15). Within in the Bosbokduin Private Reserve, brick dwellings become very distinct with thatched roofs. They are situated next to the ancient tidal fish traps, reminiscent of the past, and within the fynbos landscape, these buildings could possibly become a way of interpreting the architecture suitable for this project (Figures 1.16 and 1.17). In the Geelkrans Reserve, information buildings as well as the decks are simplistic timber structures (Figure 1.19). To ensure the longevity of the timber structures, it is cladded or painted with protective layers such as varnish. When taking a stroll on the beach, timber structures with mainly corrugated steel or iron roofs greet you as you pass by (Figure 1.20).

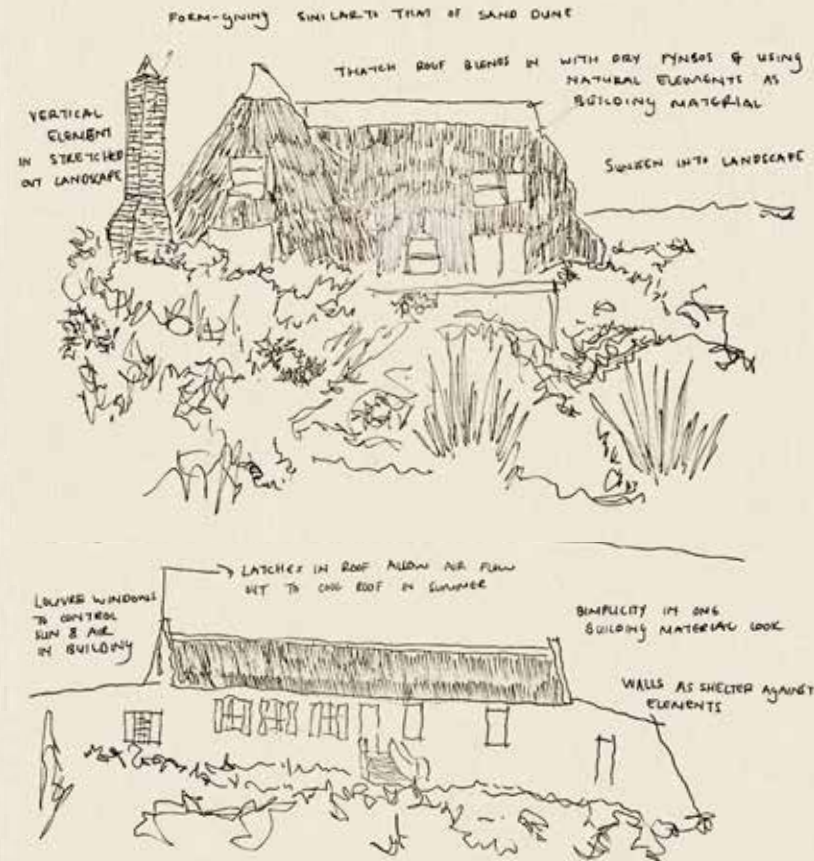


Figure 1.17:
Bosbokduin
building study
(author, 2024)

Figure 1.18:
Cape Dutch
building study
(author, 2024)



Figure 1.14: Cape Dutch dwelling, Stilbaai
(Myroof, 2013)



Figure 1.15: Thatch roof and stone wall dwelling
(Stonehouse Lodges, 2023)



Figure 1.16: Bosbokduin Private Reserve thach roof dwellings (reminiscent of African building)
(RE/MAX, 2023)

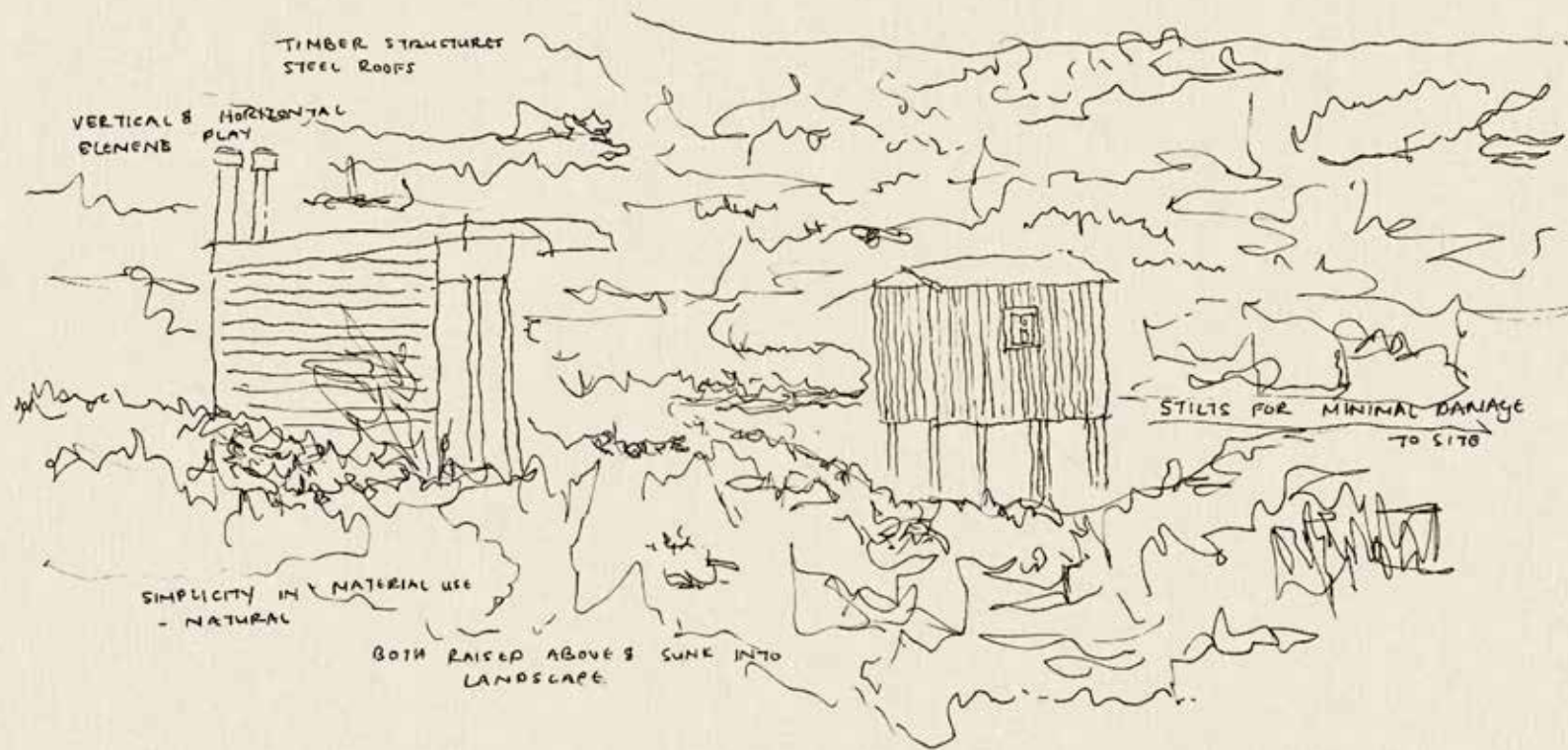


Figure 1.19: Geelkrans timber structures within Fynbos landscape (author, 2024)



Figure 1.20: Timber houses on the beach, Stilbaai (Elza, 2018)

1.1.4. Fynbos

Although the nomadic Khoi did not leave distinct tracks, we do catch sight of the patterns the cattle of the Khoi left us behind in the bigger landscape. It is rumoured that the high shrub cover of the Fynbos biome (Figures 1.21 and 1.23) is a result of continuous grazing from the Khoi cattle migration. We might never be fully sure. What we are sure of is that this plant kingdom, adapted to fire and drought, is a highly threatened kingdom of plants (CapeNature, nd). Typically, Fynbos is restricted to infertile, fine-grained soils such as deep aeolian sand over granite or sandstone. The Geelkrans, or yellow cliffs in the English translation, gets its name from the yellow sandstone formations that line the beach of the reserve (Figure 1.22). Sandstone is a sedimentary rock composed mainly of sand-size minerals or rock grains. Thinking about the building process, buildings resting on sandstone won't be impacted by soil shifting, swelling, and shrinking. It is also valuable aquifers since it allows percolation of water and is porous enough to store large quantities (Von Leyden, 2024).

Figure 1.21: On-site drawing of the fynbos landscape (author, 2024)

Figure 1.22: Geelkrans cliffs (CapeNature, 2023)

Figure 1.23: Geelkrans fynbos landscape (author, 2024)



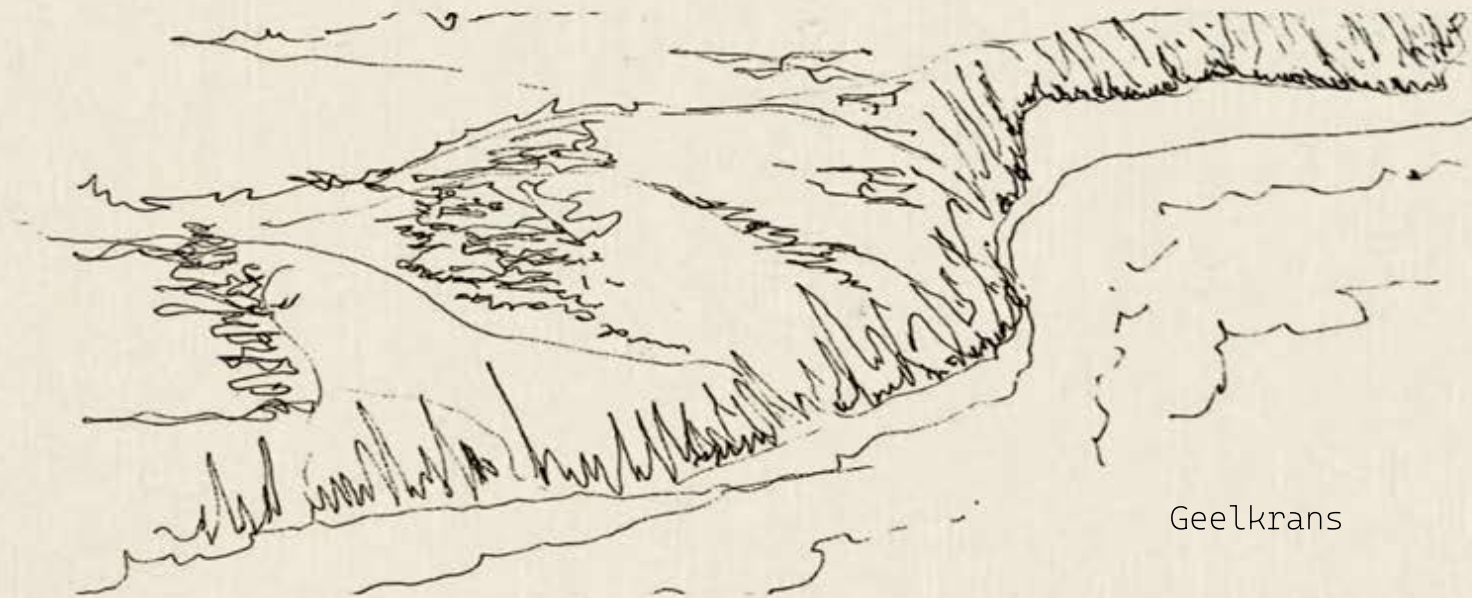


1.2. The Coast

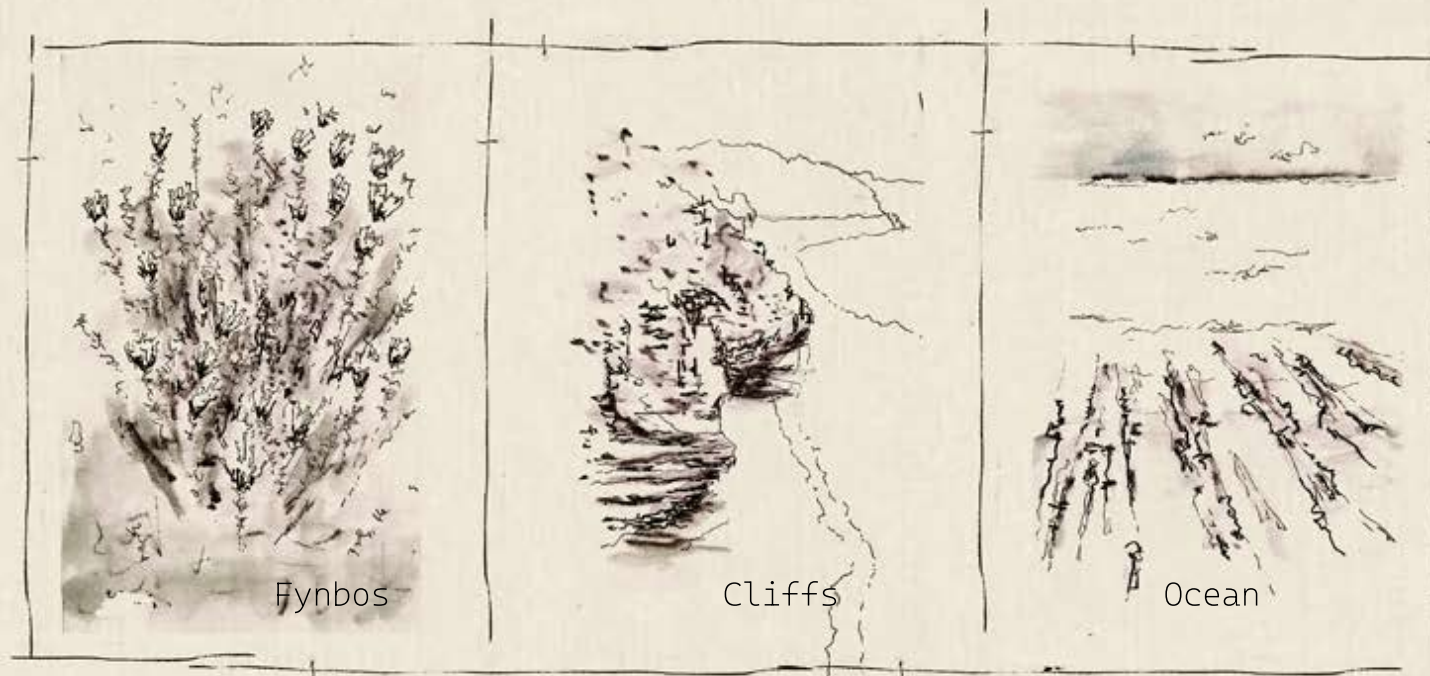
1.2.1. Exploring the Landscape

With such diversity within the natural environment, my inner swashbuckler cannot help but burn to explore the romance of Stilbaai. Consequently, I set out towards the east of the town where the Geelkrans Nature Reserve sits, always watching and waiting for those brave enough to venture into the unknown. When proceeding over that tarred bridge which crosses the Goukou River, a sudden change from a built environment to a few shy buildings which play hide and seek within the dunes is found. A beach called Preekstoel beckons as a detour on the way to the reserve with its rock formation carved out by the ocean, forming the ocean's podium for speeches. After focusing on the real journey again, I set out to the reserve, paying my modern-day entrance fee, journeying back in history through an abundance of dune fynbos and renosterveld for about 3 kilometres. My eyes dance over the mountaintops the same way Rene Bohnen described in her poem. In the distance, one can see the trail winding down and beaches curving out of sight around dynamic yellow cliffs. Here and there I stopped to rest at scenic wood decks, lengthy moments to take in the hills and valleys on the one side, and the vast expanse of ocean on the other. Travelling along the beach, I revel in the dynamic yellow cliffs – they reach and yearn to tell their ancient stories, stretching for I do not even know how many kilometres. I had a picnic under one of these reaching rocks and sheltered from the

scorch of the sun I admired the historic rock pools and families of birds treading along the sand. Unfortunately, one cannot linger there forever, although I wish I could. On the way back I had to manoeuvre over rocks, my adrenaline given a kick. I was quite ecstatic about the fact that I got so lost in time and space that I missed the low tide. I walked the 4.4 km route taking much longer than the estimated one and a half hours, the site a romancer. I yearn to wake up to the serenity every morning and marvel at the sights and freedom of the coastal landscape. Even if only for a few months. My inner soul experienced this was the sort of place man was supposed to be surrounded by – a glimpse of how it would feel to wander in the Garden of Eden. Or in this case, how it felt to wander when towns and cities did not exist yet. Just the nomad and nature, joined through the way the wind plays and blows. The Geelkrans Nature Reserve is managed by Cape Nature, which is the Management Authority, that ensures that the coastal zone is protected and overexploited marine life is rebuilt (Mpaforum, nd). Established in 1977, a 440-hectare sanctuary it borders the core conservation area of the Stilbaai Marine Protected Area along its coastal boundary. The area is important for the conservation of coastal fynbos as well as its rehabilitation through removing alien species (Cape Nature, 2023). The project will incorporate this rehabilitation as part of its program and learning experience. Geelkrans hosts multiple activities such as hiking trails, birding, whale watching, snorkelling and picnicking. The proposed site is accessible by a private road only to be used by those with permits.



Geelkrans



Fynbos

Cliffs

Ocean

Figure 1.24: Main elements within the Geelkrans Nature Reserve (author, 2024)



Figure 1.25: Geelkrans
Nature Reserve
hiking trail start
(author, 2024)



GEELKRANS
NATURE RESERVE
Hiking Trails



Figure 1.27: Geelkrans
Nature Reserve
hiking trail facing
back to ocean
(author, 2024)

1.2.2. Climate

The atmosphere of the Garden Route landscape is synonymous with its weather. On sunny days a very sharp light quality greets me. The green of the fynbos and its dark shadows in the thicket contrasts heavily against the clear blue of the sky and ocean. On misty days, the landscape appears hazy, the thickets fading into itself and the blue of the sky and ocean, becoming the mist itself. The climate of the site is typically moderate and Mediterranean with warm summers and mild winters. Rain is almost equally received over all 4 seasons, with frequent misty days, reminiscent of how it feels to be on that ship in the middle of the ocean. Most summer winds are south-easterly, with south-westerly winds in the winter, a ritual of prevailing winds from the ocean (Cape Nature, 2023).

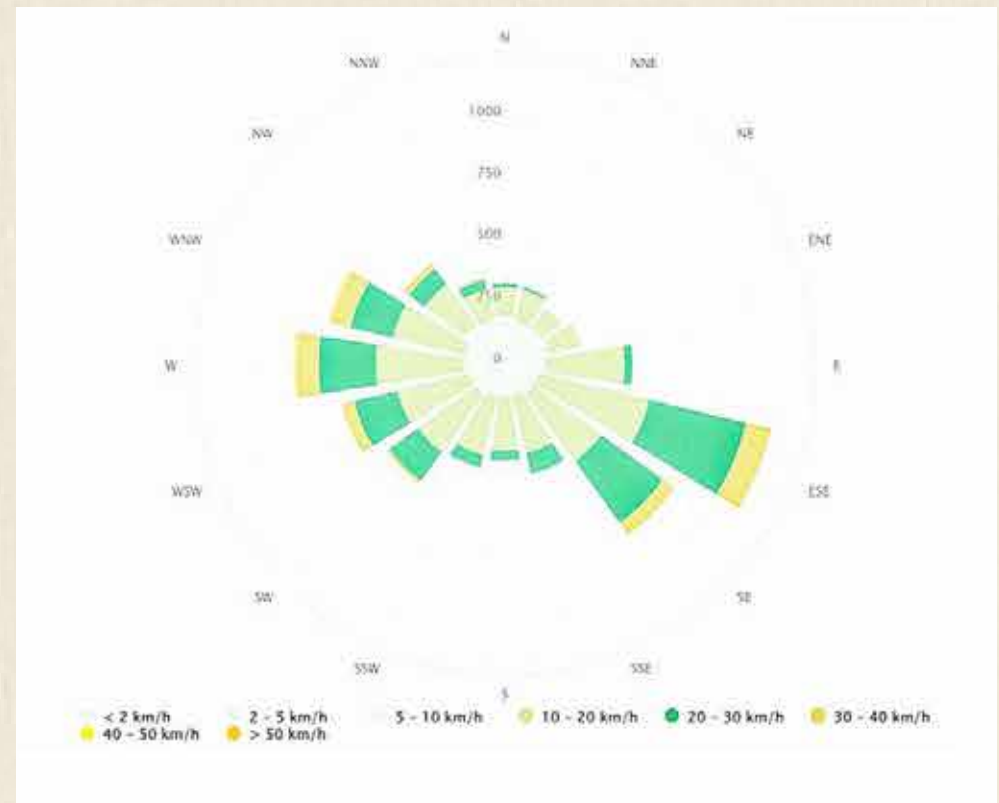


Figure 1.28: Wind direction, Stilbaai (Stilbaai Climate, nd)

Figure 1.29: Average temperatures, precipitation Stilbaai (Stilbaai Climate, nd)

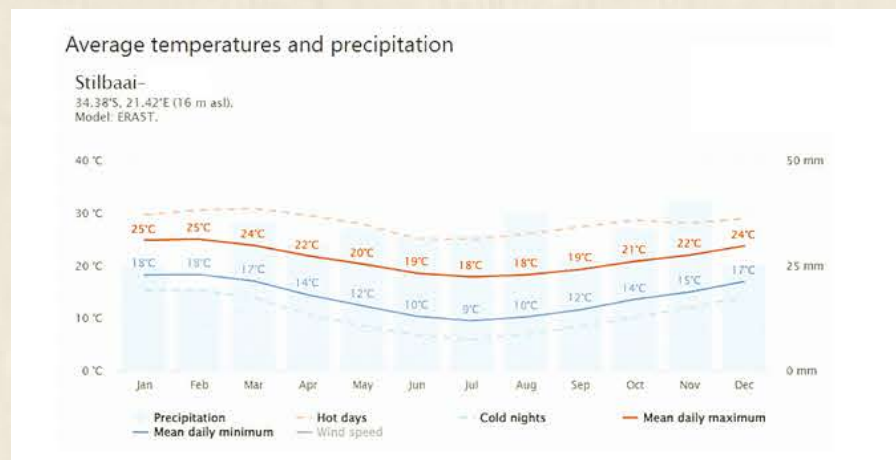
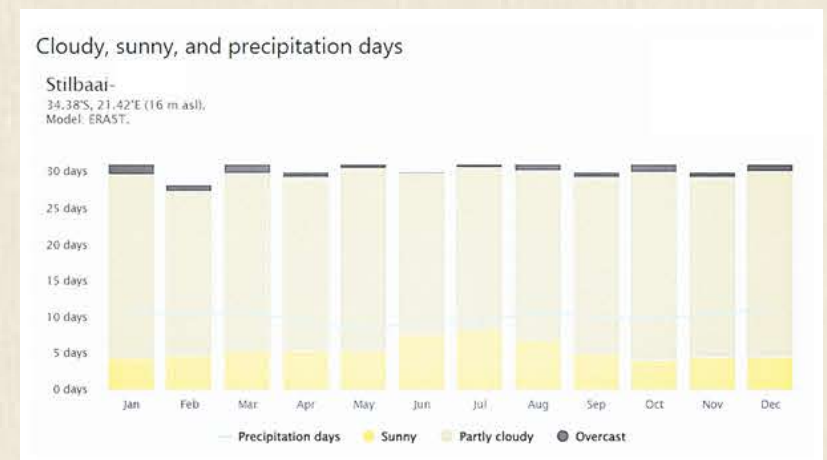


Figure 1.30: Cloudy, sunny, precipitation days in Stilbaai (Stilbaai Climate, nd)



1.3. Modern-day nomads

Looking back at those who traversed these sites long before us, they were completely exposed to these natural elements, especially when undergoing transitional rituals. The key elements involved a period of seclusion associated with vulnerability and danger, while fire and buchu were associated with protection. After the period of seclusion, the person would be reincorporated into society with a new role in accordance with their traditions (Boyce, nd). In the case of this project, the element of vulnerability is balanced with that of protection through a gapyear program within a Christian environment as the medium of self-discovery. iALA (International Academy for Leadership through Adventure) is an existing purpose-driven gapyear company based in Stilbaai, not currently housing all the facilities needed for an adventure gap year program. I was not able to visit the current facilities, since they were busy moving from facilities at that time. Some of these young people are uncertain about making important decisions about their future, while others simply need a break from school. A new ritual is sedimented on that of the ancient ones, adapted to a secluded, yet safe environment. One where students are exposed to situations where they develop skills which will provide and grow clarity of purpose and the *True North of life* (Figure 1.32). Activities include open water swimming and rockwork (Figure 1.36), medical level iii, fire-arm competency training, executive and life coaching, Scuba School International (SSI) open water scuba, Fish River canyon hike (Figures 1.33 and 1.35), surfing, mountain biking, career counselling, and hunting. After engaging for 32 weeks, training graduates are reintroduced to society, where they can explore and develop newfound roles to pursue (Ycikdevelopment, 2024).

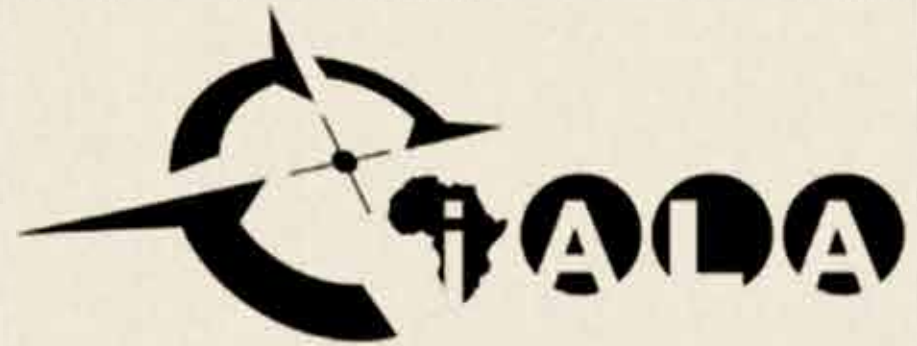




Figure 1.31: iALA
gap-year logo
(Ycikdevelopment,
2024)



Figure 1.32: Students
studying a map
(Ycikdevelopment,
2024)



Figure 1.33: Jan
Heenop, coordinator
(left) and a student
on the Visrivier
Canyon hike
(Ycikdevelopment,
2024)

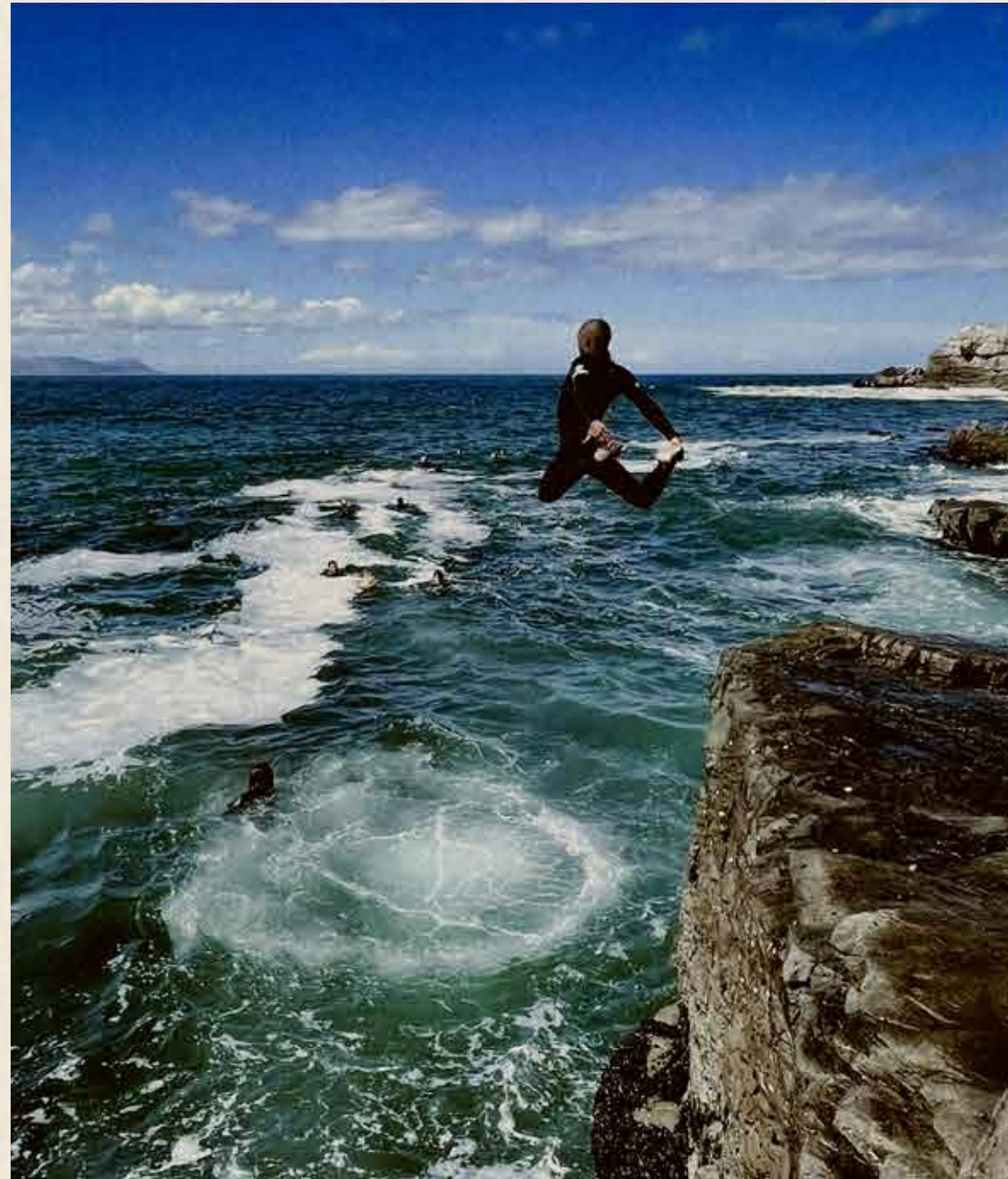


Figure 1.34: Students
making food in
the current house
(Ycikdevelopment,
2024)

Figure 1.35: Visrivier
Canyon hike
(Ycikdevelopment,
2024)

Figure 1.36: iALA
nurtures a sense
of adventure in
students through
various activities
(Ycikdevelopment,
2024)

1.4. Patterns in the Landscape

1.4.1. Abstract Journeys

In exploring the possible layouts for the program within this specific site with little to no historic scars as guidance on its earth, Marco Cadioli's *Abstract Journeys* and *Necessary Lines* (2011-2013) became a guide in the abstract feel of possible nomadic journeys on

the site. Cadioli explores land art pieces produced by the ploughing of fields (Figure 1.37). The ploughed fields become the necessary lines and the lines are the path the machines follow (Lucarelli, 2018). In the interpretation of the site, the contours influenced the necessary lines and became a preliminary site layout for a journey being interpreted. (Figure 1.38)

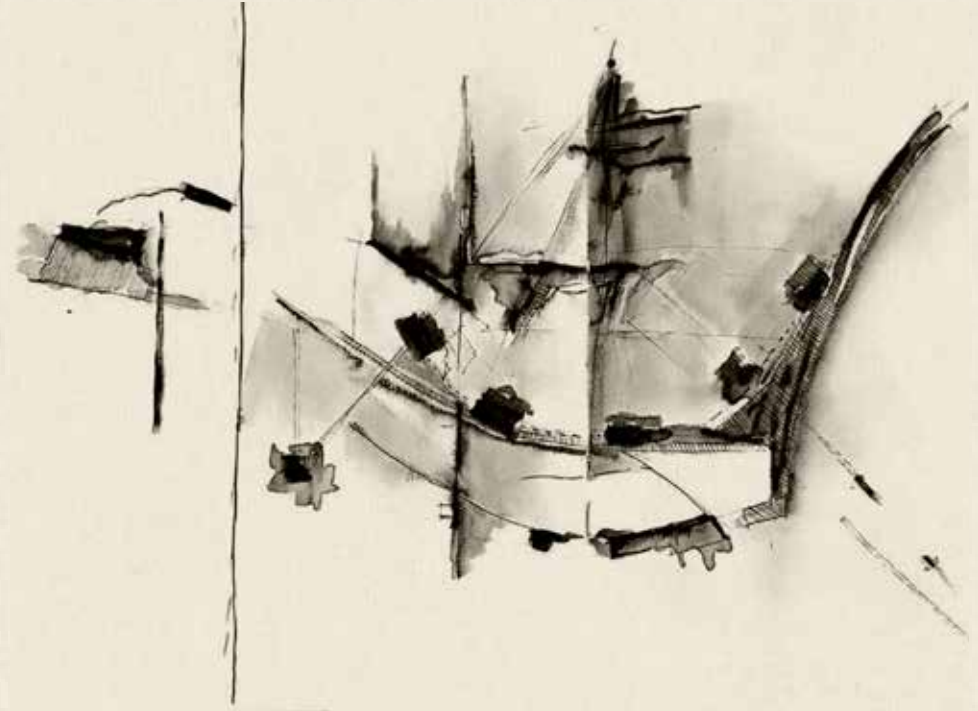
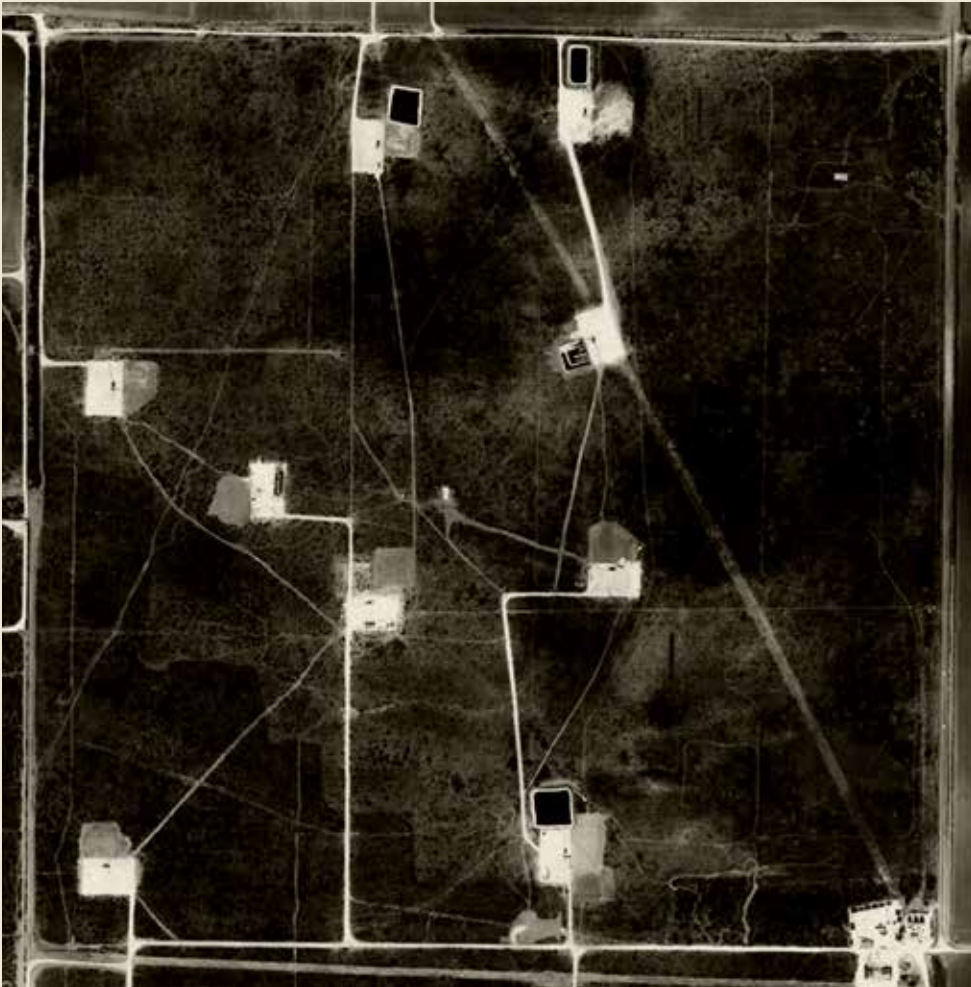


Figure 1.37: Ploughed fields as necessary lines (Lucarelli, 2018)

Figure 1.38: Site interpretation as possible necessary lines (author, 2024)

1.3.2. Embodied memory

Originally a lighthouse in Florida was deactivated and locals started to refer to it as the *House on Stilts* (Figure 1.39). It was burned down a few years later and the only thing remaining is the metal framework (Florida Memory, nd)(Figure 1.40). Interpreting this theoretical precedent, I realise that as humans, we base our understanding of

the present on the interpretations we have of the past. We project our future through an embodied memory such as a ruin. This precedent inspired the idea that the scheme will be designed in such a way that it becomes a ruin in the future, projecting the memory of its character towards the future.

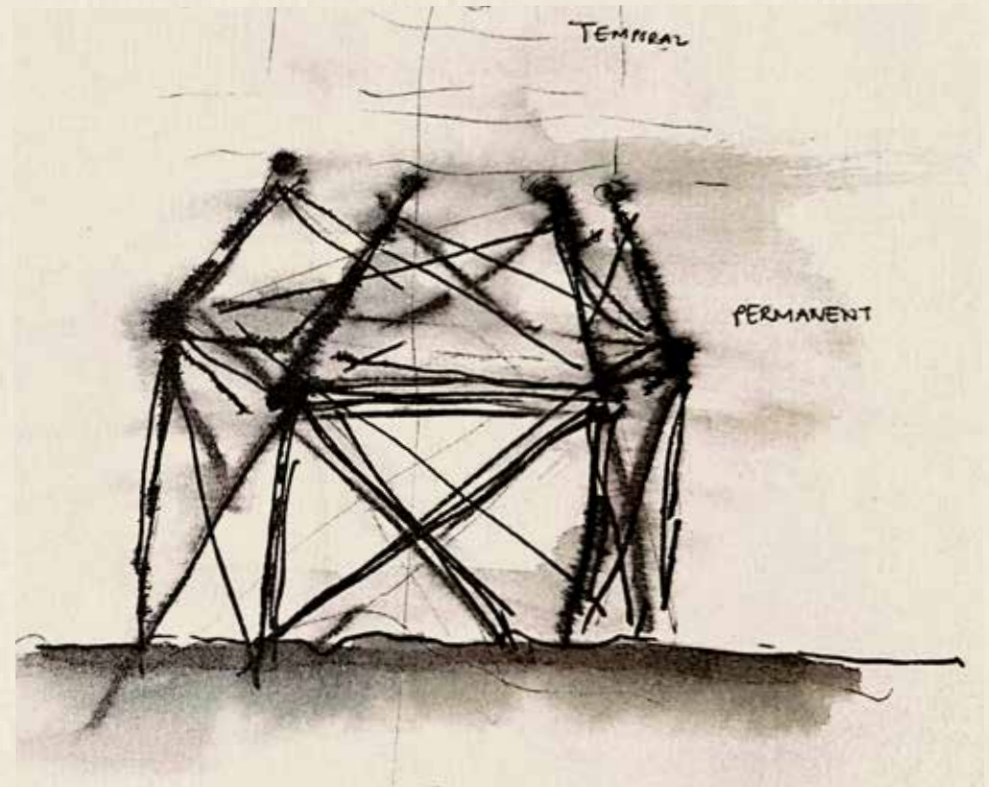


Figure 1.39: Florida House on Stilts before being burned down (Florida Memory, nd)

Figure 1.40: Metal framing as ruin

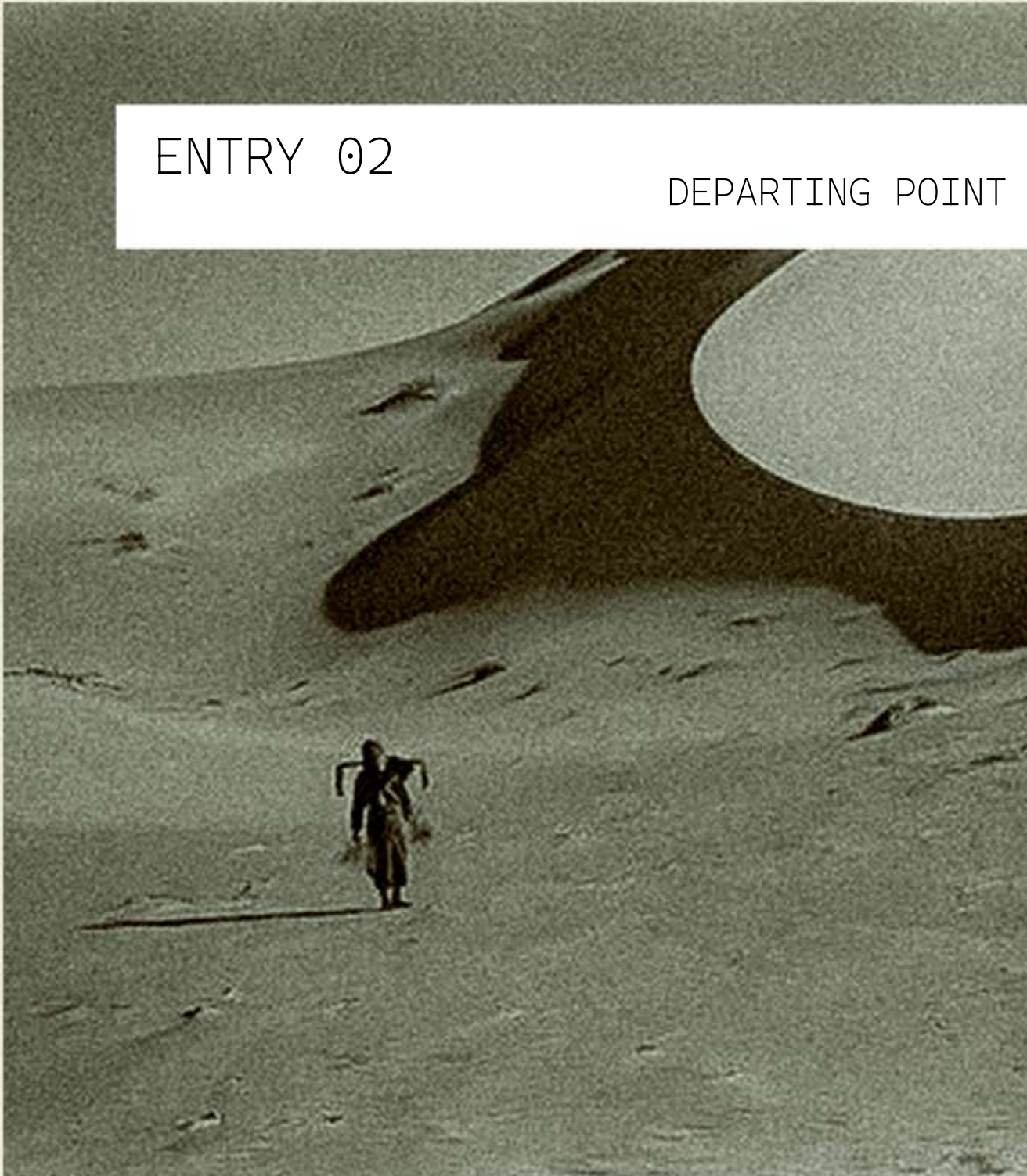
1.4. Conclusion

Embarking on a journey through the chronicles of Stilbaai, I delved into its storied past, exploring the tapestry of its history and the context it is found in culturally and physically. This initial exploration was crucial for anchoring the ship and understanding the atmosphere that will guide further ventures and creative pursuits on this site. Its integration within its natural landscape demands a delicate touch in architectural design. As we turn the page into my next entry, we will tackle the challenges presented by the gap year program and seek adventurous architectural solutions to address these issues.

Figure 2.1: Nomad on a journey

ENTRY 02

DEPARTING POINT



- 2.1. A Journey to the Solution
- 2.2. Touchstone: Sands of Time
- 2.3. Concepts
 - 2.3.1. Between Earth and Sky
 - 2.3.2. Winds of Change
 - 2.3.3. The Pilgrim's Regress
- 2.4. Research Question
- 2.5. Conclusion

2. Introduction

After the events chronicled in the previous entry, Stilbaai calls out to intrepid explorers, like myself, to uncover its secrets. This chapter will embark on unravelling the challenges this thesis aims to solve. The gap-year program, shrouded in both clarity and ambiguity, seeks a fitting dwelling – one that gives way to the whims of both the explorer and the surrounding landscape. The journey toward this ideal dwelling began with a broad, explanatory venture – a touchstone – to define the essence of the intention. From this foundation, three concepts emerged, each delving deeper into the core to find ideas translating into architecture.

2.1 A journey to the solution

The thesis proposes a vision of an adventure gap year settlement to be established along the coastline, well beyond the reach of urban sprawl. It seeks to remedy the shortcomings of existing accommodation, by crafting a balance between camp and campus that both shelters and provides students with freedom to explore the surrounding coastal wilderness. The new settlement will incorporate the temporality and sensitivity of the coastal context and its elements, collaborating with CapeNature to ensure the aid in the protection and rehabilitation of the natural habitat. The new structure needs to be sensitive to the vegetation, adaptable to the capricious coastal weather, and versatile enough for swift assembly, expansion or dismantling.

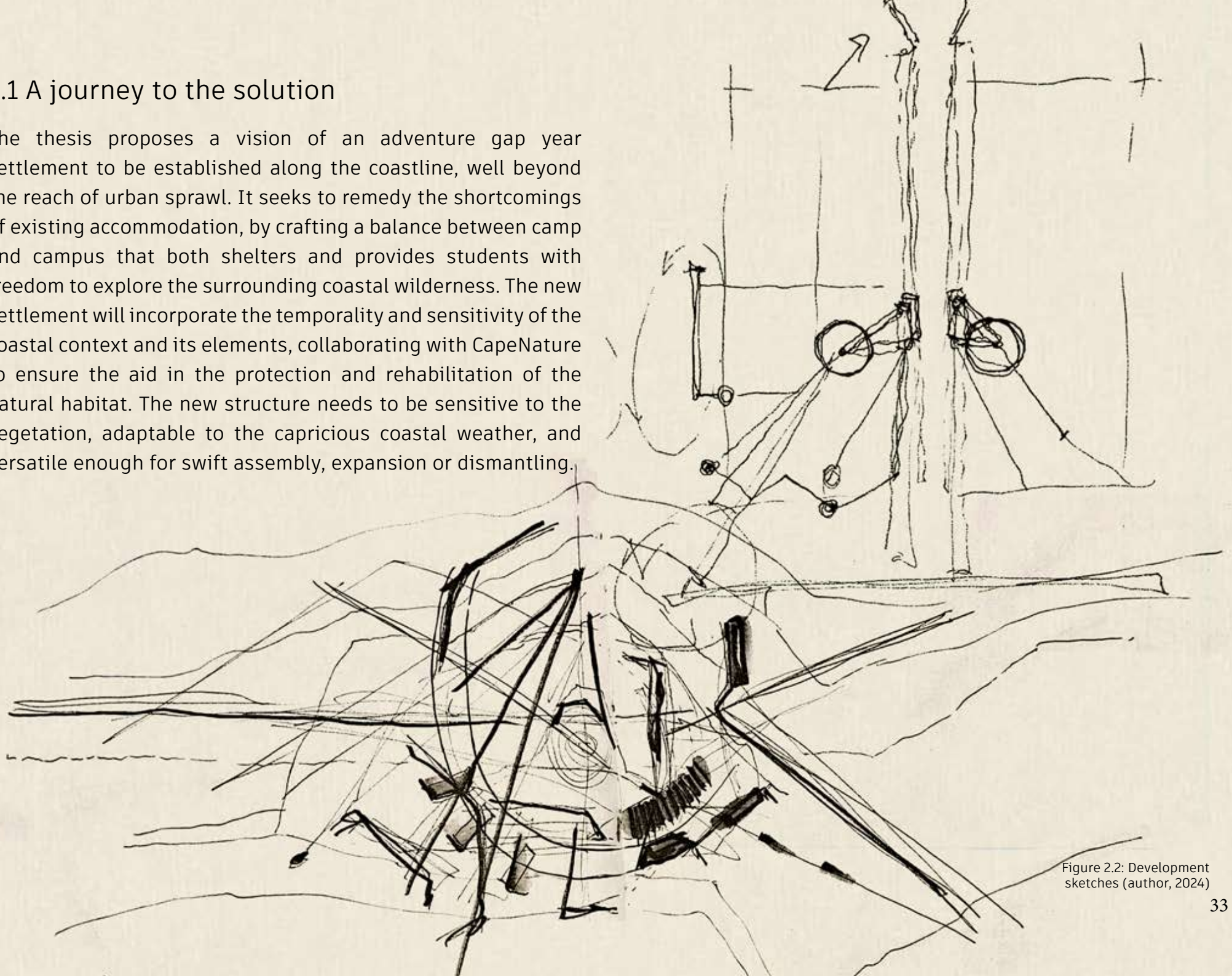


Figure 2.2: Development sketches (author, 2024)

2.2. Touchstone: The Sands of Time

In my explorations, I have come to appreciate the marvel of nautical instruments such as the marine sandglass, a dependable tool for time measurement at sea. The relative of an hourglass, it was specifically used to measure time at sea in small time increments. It used granular materials to give accurate measurements, able to avoid humidity and absorb motion (Balmer, 1978). Observing the coastal landscape, I find that time manifests itself through the sands chafed from sandstone. Dunes formed and reformed, leave intricate patterns across the terrain. Through the touchstone, a marine sandglass is reimagined, envisioning how an ever-changing landscape can influence architecture over time and vice versa. Human intervention is needed to introduce the landscape and the architecture to each other. As the sand grains fall, an interesting motion – the swaying of the obstacles takes place. Some grains of sand come to rest within the crevices of the obstacles, while others cascade through to mingle with similar entities. A layered pattern of landscape and the built is created, layers that adapt to each other when either element introduces more of itself. Once the elements of the obstacles are removed, the sand will form layers on themselves, a natural landscape once again with the memory of the other influences.



Figure 2.3: Marine sandglass touchstone: chafing landscape (author, 2024)



Figure 2.4: Pouring sand into landscape of steel plates to bring movement to site (Kaffka, 2024)

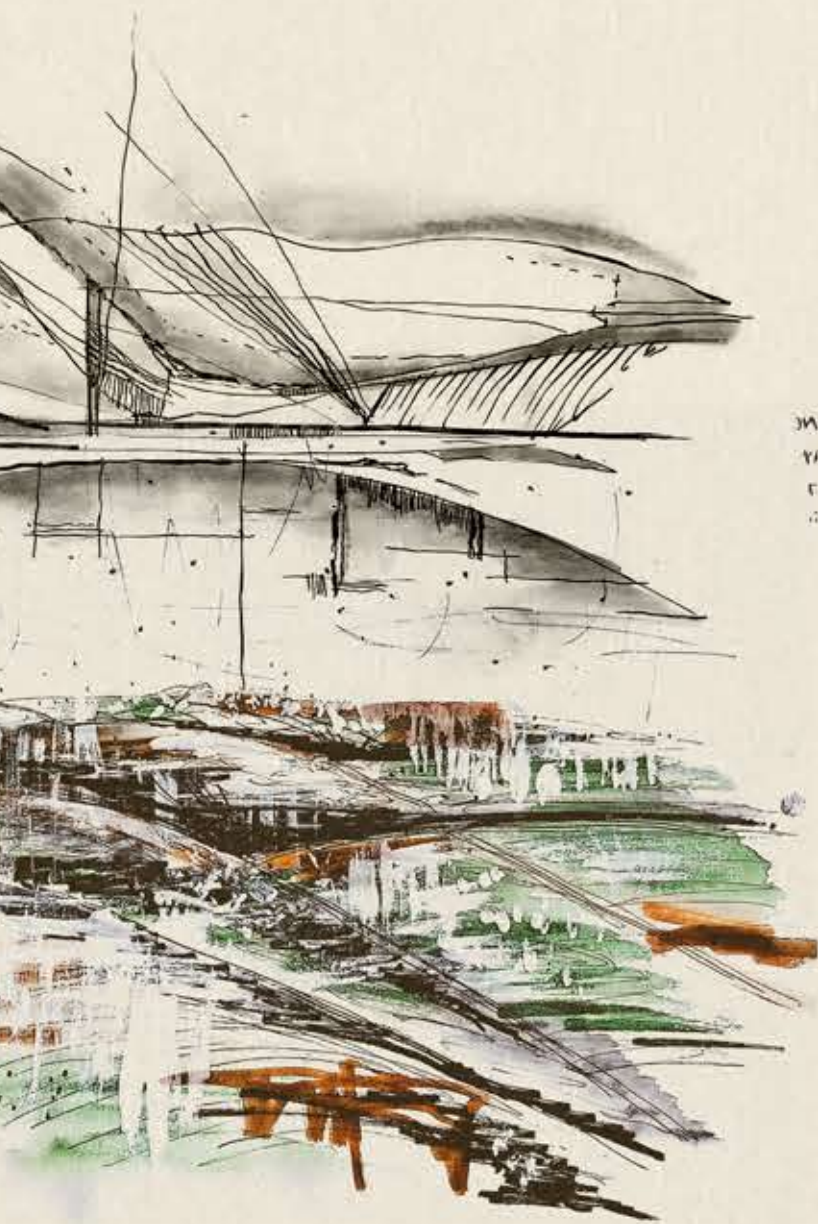
Figure 2.5: Interaction happens through isolated and controlled process between site and nomad

2.3. Concepts

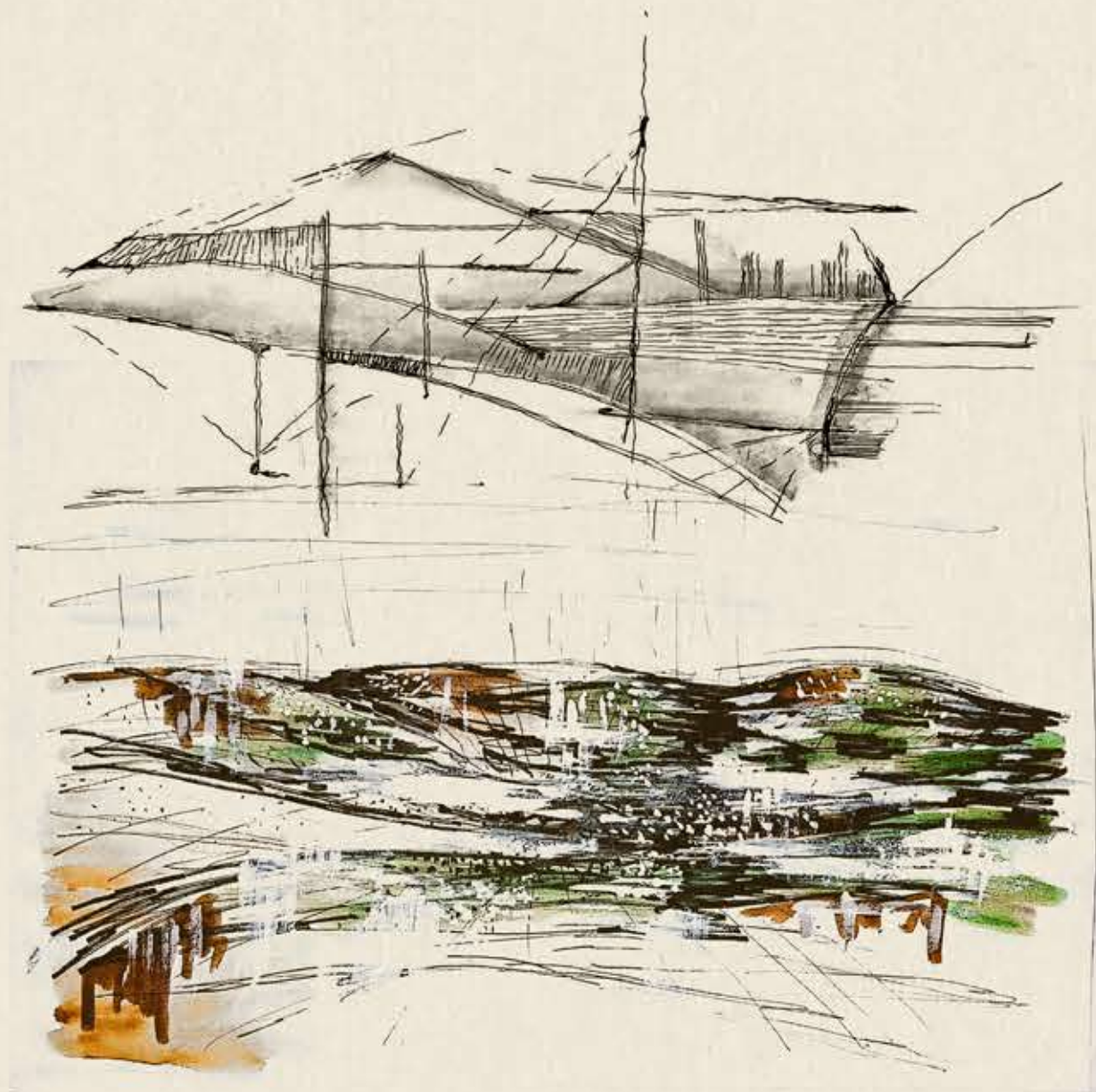
In order to explore the Touchstone and its possible footprints on the landscape further, three concepts were chosen and inspected. The relationship between the landscape, the user and the building were poetically considered and thus abstract plays and sketches of the rituals between them emerged. The order of space, spirit of place and temporality of space and place informed each concept.



Figure 2.6: 3 Concepts influenced by the site forms (author, 2024)



37
VI
E
II



2.3.1. Between Earth and Sky [order of space]

I have come to ponder the profound role that planets and stars play in being celestial waypoints, anchoring our existence in the expanse of the universe. They are our guides through the endless night, offering spatial references amidst the cosmic tapestry, navigating travellers, and marking the passage of seasons and the relentless flow of time itself. The horizon as we perceive it, manifests as the in-between, splitting the earth and sky. Guiding our eyes to focus on the intricate interplay of different layers and developing a profound sensitivity to the perceived landscape. Through this heightened awareness of the cosmic landscape, an intricate grid emerges, defined by an orthogonal axis and rhythmic gathering of the elements known as “space”, “time” and “order”. Integrating these elements into our architectural endeavours, allowing the principle of verticality to shape our structures, we achieve life inside the time and order of space. Through unifying these three elements, the true meaning of place can be realized.

Keywords: layers, axis, verticality





Figure 2.7: Model and sketches of *Between Earth and Sky* concept (author, 2024)

2.3.2. Winds of Change [spirit of place]

In my ongoing exploration of the meaning of place, I realize that once we grasp the meaning of place, its characters reveal themselves with startling clarity. Among, these, none is more vivid or benevolent than the wind. Commanding respect is sometimes avoided, fled from but never tamed (de Maupassant). The unpredictability of the wind offers a unique testinggroundfortheintegrationofarchitecture, nature engineering and structural prowess, The effects of wind, especially in the coastal realm we traverse, are everchanging, forming dunes and plantlife. Thus the architecture must possess the flexibility to shape around the form of the prevailing wind, adapt to the wind patterns and harness the productive nature of Wind while adapting to resist the destructive part of its nature. Though we may appear to be at the mercy of Wind, a deeper understanding may transform our role from mere passive observers to active participants in guiding and shaping its impact. Mastering the dance with this elemental character, we find a true challenge and opportunity for our craft.

Keywords: wind, movement, shaping





Figure 2.8:
Model and
sketches of
Winds of Change
concept (author,
2024)

2.3.3. The Pilgrim's Regress [temporality of space and place]

While charting the windswept landscapes, I am struck by the arrival of a gap year student, a newcomer to this realm, embarking on a journey described in biblical terms as that of a “sojourner” or “temporary resident”. Their journey is akin to a sacred expedition signified both by the physical and spiritual. The young students venture into this elemental domain not only to sharpen their skills but also to experience profound personal growth. Gaining wisdom from those who dwelled in the landscape before them, a combination of semi-permanent structures and intricately crafted temporary spaces emerge. The pilgrim transforms into a modern-day nomad, a traveller who leaves behind subtle footprints, swept away by the passage of time, and wind.

Keywords: bodily engagement, temporary, craftsmanship

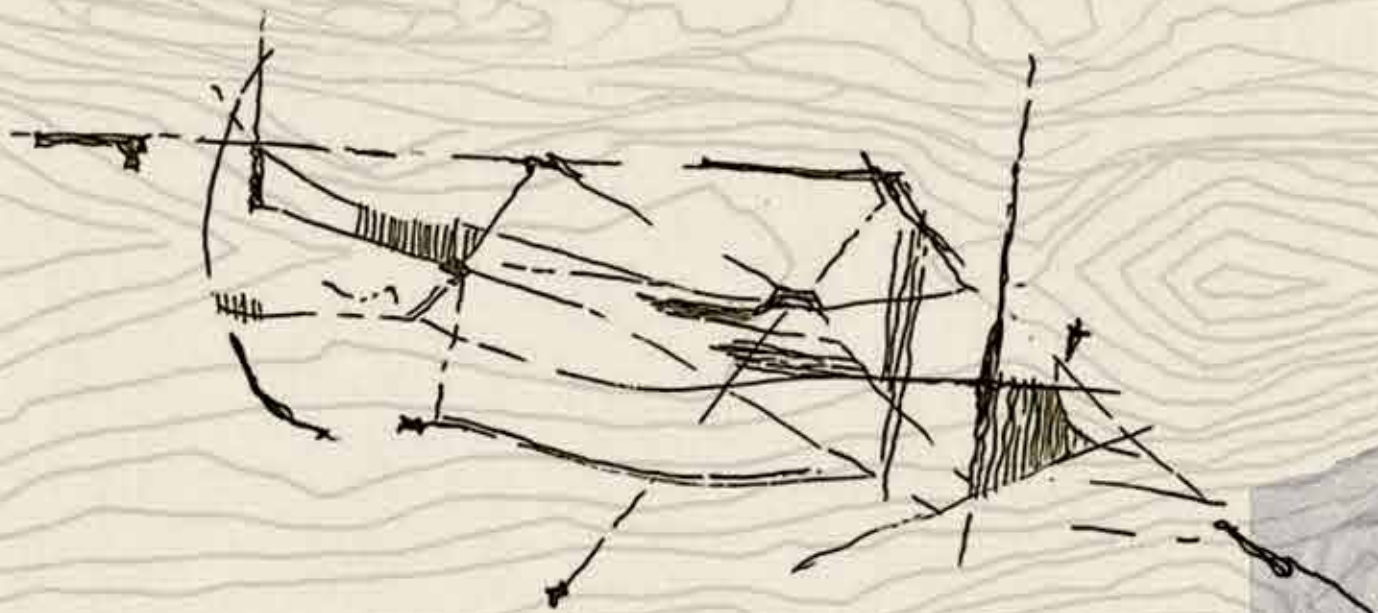




Figure 2.9:
Model and
sketches of
*The Pilgrim's
Regress* concept
(author, 2024)

2.4. Research Question

The journey thus far has illuminated the path forward, leading to the core question of this thesis:

How can architecture sparring with Wind, layered with the rituals of the nomad and settler, sculpt a temporary device that reveals the personas of an explorer within the cosmic and coastal landscape of Stilbaai?

1. *Sparring*: the act of back and forth between wind and architecture, dominance for one and then for the other (Concept 2)
2. *Layered*: layers like sand in touchstone, layering horizons of ground, fynbos, architecture, sky, wind and ocean
3. *Rituals of the nomad*: temporality, dependance on and living in the landscape (Concept 3)
4. *Rituals of the settler*: shelter from elements, control
5. *Sculpt*: similar to the action of the wind forming the landscape, architecture is formed around the landscape (terrain layout)
6. *Temporary device*: idea that building is like a ship that moves from place to place/ is temporal, depending on the wind for its movement
7. *Personas of an explorer*: seeking purpose through going on an adventure with the uncertainty of the outcome – gap-year students
8. *Cosmic and coastal landscape*: reverence to nature and the eternal (concept 3)

Figure 2.10: Explorative sketch of layers of the research question (author, 2024)



2.5. Conclusion

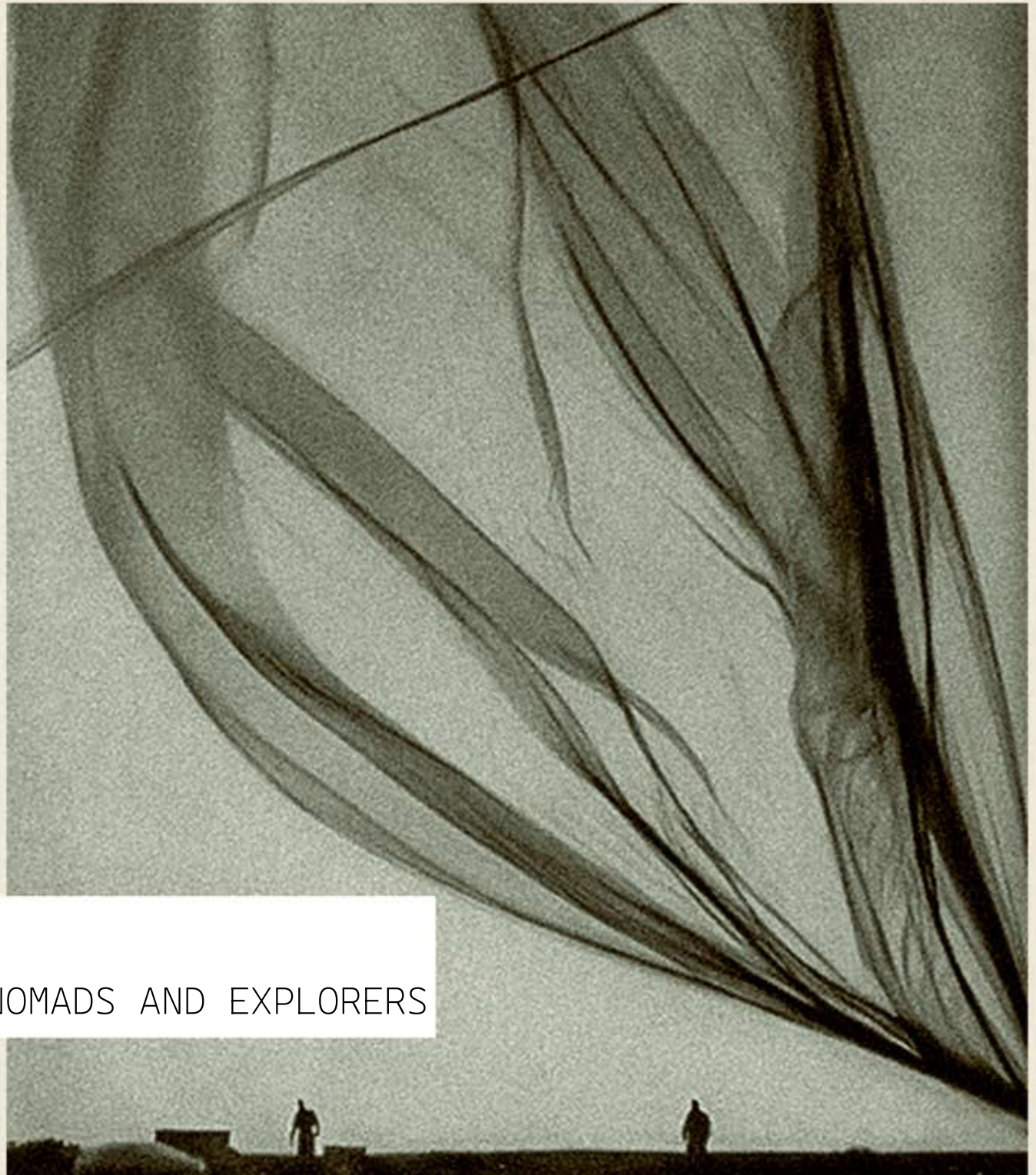
The process of creation in the Touchstone and concepts served as a background to articulate the scope of the project. Through an intuitively guided journey, the spirit and form of the design were continuously refined by the concepts of Earth and Sky, Wind, and the Pilgrim. Through delving and carving into this design, it became clear that the process itself was a wellspring of theoretical possibilities – ideas such as the nomad, the explorer, and the character of wind began to surface. In the following entry, I will investigate these emerging theories, to illustrate their significance beyond the initial explorations.

Figure 3.1: Nature of an explorer

- 3.1. Human Nature
- 3.2. The Nomad's Walk
- 3.3. The Settler's Defence
- 3.4. The Explorer's Freedom
 - 3.4.1 Wind as Negotiator
 - 3.4.2. The Sailboat as Dwelling
- 3.5. The Silence
- 3.6. Conclusion

ENTRY 03

TALES OF NOMADS AND EXPLORERS



3. Introduction

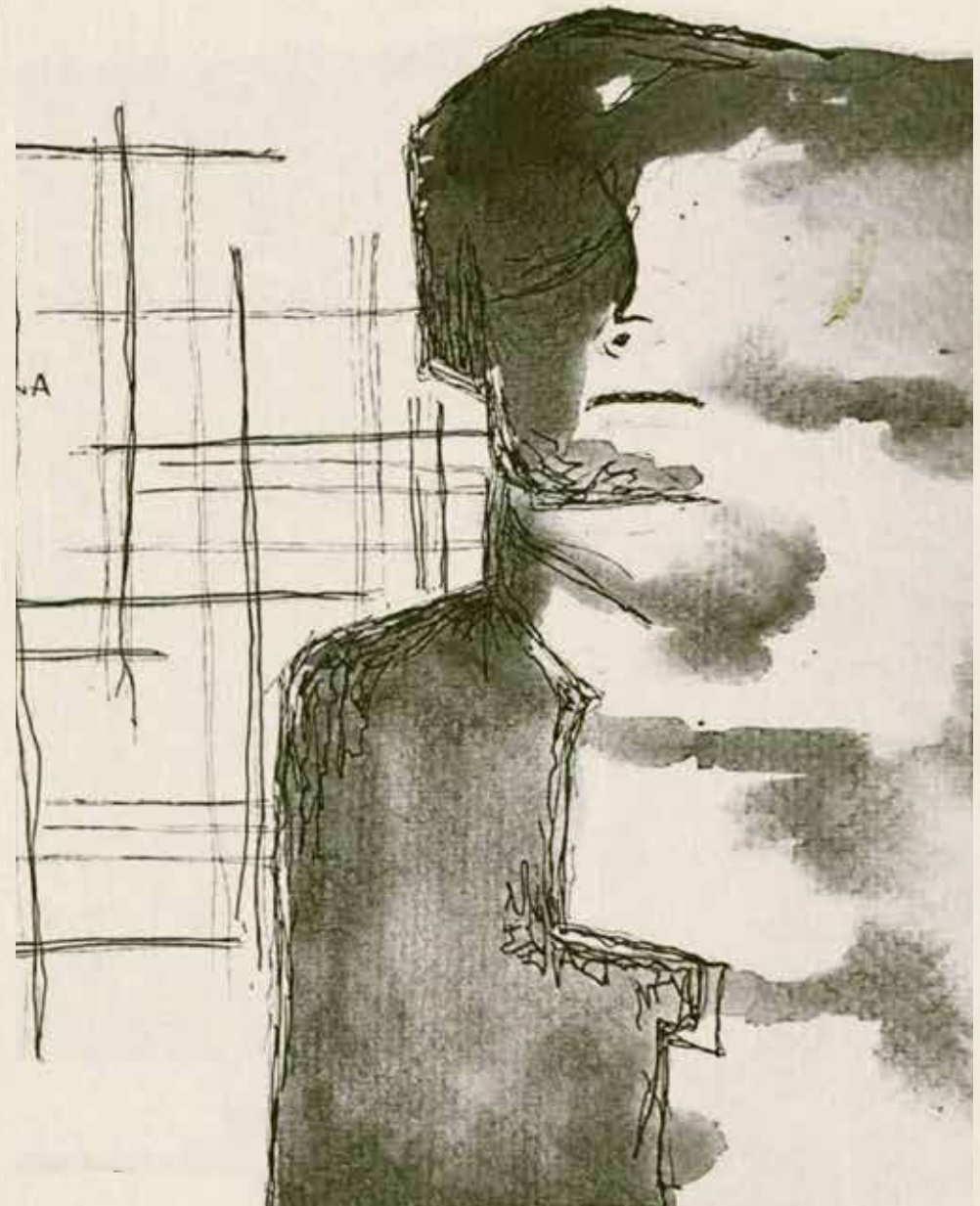
The previous chapter sketched the theoretical framework of the Touchstone and its guiding concepts. To unravel these notions further and weave them into a tangible design proposal, this chapter introduces the concept of human nature and our connection with Earth. For architecture to adapt to its tempered environment, I ponder how the building can embody this change. Three characters emerge through this process: the nomad, the settler, and the explorer. The explorer, swayed by the capricious wind, symbolises how the sparring between architecture and the landscape might awaken the beating of the adventurer's heart. These characters will now be discussed to unveil how each one plays a role in the construction of a gap-year adventure camp.

Figure 3.2:
Unadventurous
existence of a well-
behaved citizen (author,
2023)

3.1. Human nature

British philosopher and Nobel laureate, Bertrand Russell captures the tension between firstly the harmony of human beings and the world in which we live, and secondly the wild state of human nature. Human nature is seen as an adventurous instinct which is not yet fully tranquillized by civilization and organisation (Haaz, 2022). Bertrand writes in one of his lectures:

“The unadventurous existence of a well-behaved citizen, engaged in earning a moderate living in a humble capacity, leaves completely unsatisfied all that part of his nature which, if he had lived 400, 000 years ago, would have found ample scope in the search for food, in cutting off the heads of enemies, and in escaping the attention of tigers. When war comes the bank clerk may escape and become a commando, and then at least he feels that he is living as nature intended him to live. But unfortunately, science has put into our hands such enormously powerful means of satisfying our destructive instinct, that to allow them free play no longer serves an evolutionary purpose, as it did while men were divided into petty tribes the problem of making peace with our anarchic impulses is one which has been too little studied, but one which becomes more and more imperative as scientific technique advances.”





3.2. The Nomad's Walk

I remember being a little girl, the most liberating experience that of playing outside. Climbing a tree was my favourite pastime. Even now, as a 23-year-old, when I see a tree that beckons sturdily and welcoming, I cannot keep myself from grabbing its outstretched arms, climbing branch by branch to be able to see from as high up as I possibly can. Usually just more houses, but at that moment at least, I feel hidden from the hustle and bustle. A branch was the most comforting place when I felt sad or wanted to be isolated (Figure 3.3). On other days, digging little fingers into the earth, looking for earthworms and collecting them in a small bucket with more dirt, hoping to be a part of this burying into the earth, becoming one with the dirt. The dirt under my nails builds up when we bake mud cakes, drying them in the scorching sun. It has been a long time since I felt as free, just as long as the last time I had golden sun-kissed skin and a thousand freckles. Haaz (2022) writes in *Walking with the Earth* about similar experiences as a child in West Africa. In her recollection, these early childhood experiences gave the impression of genuinely being in nature, not just simply being surrounded by it (Figure 3.2). In those days, material privileges and digital distractions were at a minimum, and I am thankful today for the restrictions my parents imposed. At all seasons, senses were heightened by taking in everything nature has to offer. It dawned on Haaz that “walking through the forest” might not be the accurate words to use, but rather the sense that “the forest walked through us” (Figure 3.3). An intangible physical extension from our bodies to the elements of nature (Haaz, 2022).

As I reflect on the lands of Stilbaai, I recall the first inhabitants – the Khoi-Khoi. I aim to once again become like them in their ceaseless journeys, forging a unique and profound connection with nature. Their lives intricately woven into the rhythms of the natural world (Figure 3.5) - the changing seasons, shifting tides, and the migration of wildlife and birds. Being constantly on the move, nature is experienced in its rawest state and this constant exposure fostered a deep respect and understanding of the environment. As natural and instinctive as every breath drew. For these nomads, pilgrims in their own way, the sense of the body is called on through the perceptions of the body in contact with nature. The path reconciles us with our nomadic nature. A man who walks cannot be enslaved (Haaz, 2022). Something I can attest to as an intrepid lover of hiking. Yet, peace was fleeting, soon to be interrupted by the arrival of new humans.

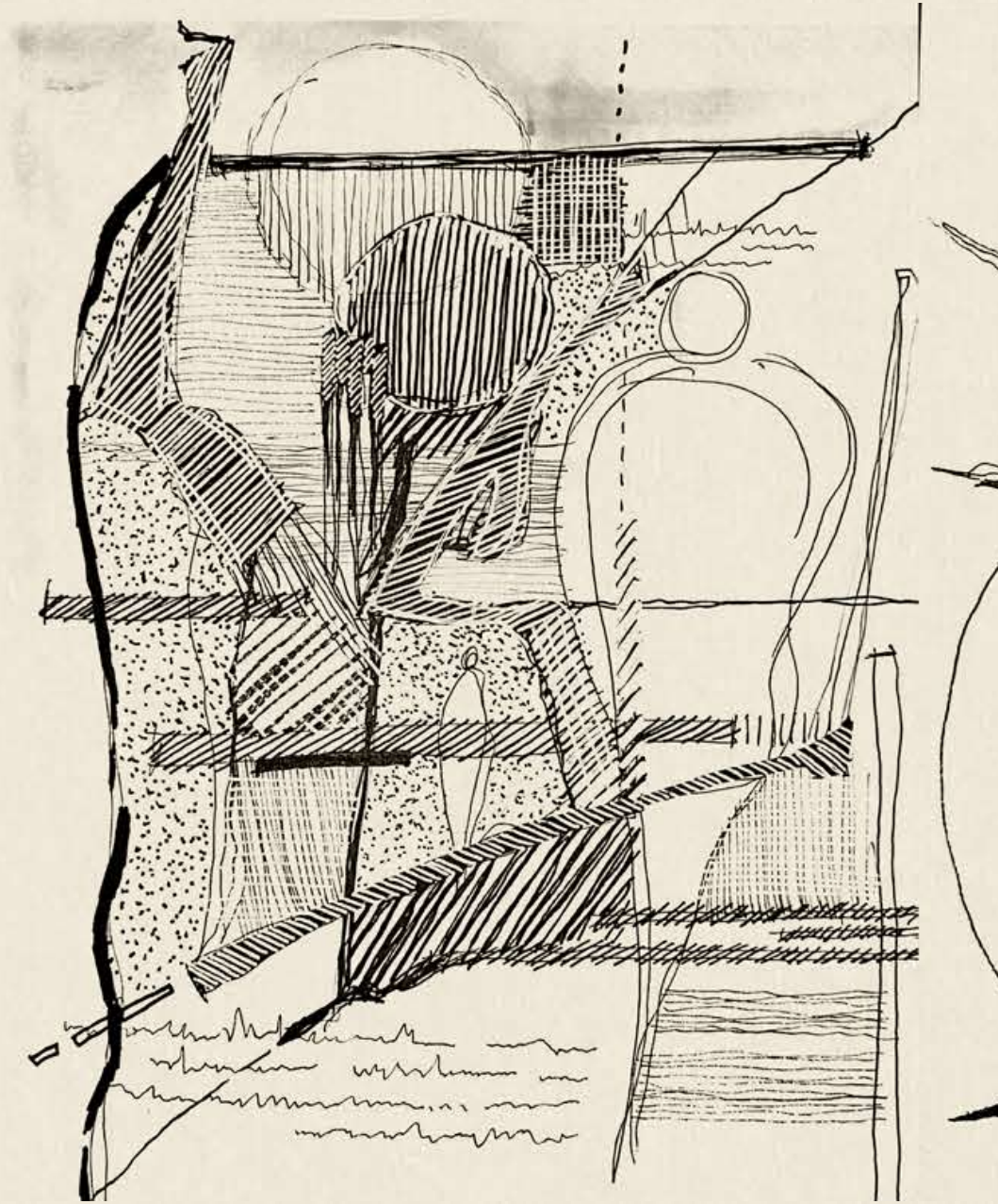


Figure 3.5: Khoi-Khoi lives woven into the fabrics of nature (author, 2023)



3.3. The Settler's Defence

At first, there were no city walls to distinguish between urban and rural. But in the context of the seventeenth century, foreign settlements were indicators of weakness, an alien presence in a landscape they did not dominate, reflecting the need to huddle in a single defensive building (Worden, 1988)(Figure 3.7). When humans were domesticated by agriculture one of the ideas bred into us was that the only way to survive was to control nature and those around us. We can see this by how winter was survived not by learning what food the land still held, but by labouring to make the land produce a surplus. More importantly, the attempt was made to tame nature inside as well. Those who wouldn't subdue their wild nature were brought under control. Toby Hemenway (year) writes that the idea that free people were living in deep union with nature, while we toiled behind the plough, was intolerable to the elites who ruled them. The wild needed to be tamed, or else some of us might stop being afraid (Figure 3.6). According to him, the only significant thing gained with all we have lost is writing. The rest, such as the military, freeways, welfare and processed food become unnecessary when leaving out the culture of fear. And he suspects someone could have come up with writing without civilization (Worden, 1988).

Figure 3.6: The mindset of the wild needing to be tamed (author, 2023)

ON VACATION
FROM REALITY

I AM A STRANGER,
A VISITOR TO LIFE
THIS STRANGE
WORLD IS MINE
AND MINE ALONE...

BUT IT IS NOT
MINE ALONE

I CAN TURN SURROUNDINGS
INTO WHAT I WISH

BUT I CANNOT INTRUDE
INTO REALITIES

MY WORLD IS MINE.





Figure 3.7: A stranger in the landscape (Ramerini, 2016)(adapted by author)

Figure 3.8: Hints on landscape influencing Dutch building (Van Oers, 2012)



3.4. The Explorer's Freedom

Pondering the nature of our existence, the question emerges: Should we anchor our home on solid stone foundations, finding solace in the ground beneath our feet? Or should we perceive our life not as a stone-carved object but as a fluid circumnavigation (Haaz, 2022). Georges Dumezil, a French philologist, sage of ancient lore, in his study of Indo-European mythology, shows the duality of domination – the magician-king and the jurist-priest (Wikipedia, 2024). These two poles stand in opposition, as the obscure and clear, the violent and calm, the quick and the weighty, the fearsome and regulated. But their opposition is only relative, they function as a pair. Complementary, necessary to one another, existing without enmity, devoid of a myth of conflict. Might an explorer and their dependence on the landscape serve as a middle ground (Figure 3.9)? Homes remain a common ground and shelter, and out there we perceive our lives as a fluid circumnavigation. Because untethering the lines from the dock is one of the most liberating exertions a sailor can make. It is the beginning of a journey, that leaves the past behind and turns the bow towards the horizon and unknown. Once the trepidation of the open seas and its tempests is overcome, the slow pace and flexibility of the voyage offers solace (Haaz, 2022). Ancient explorers, although having a settlement they came from and a settlement they were after, had to be completely reliant and dependent on the surrounding landscapes they feared so much. One of these elements has the name Wind.

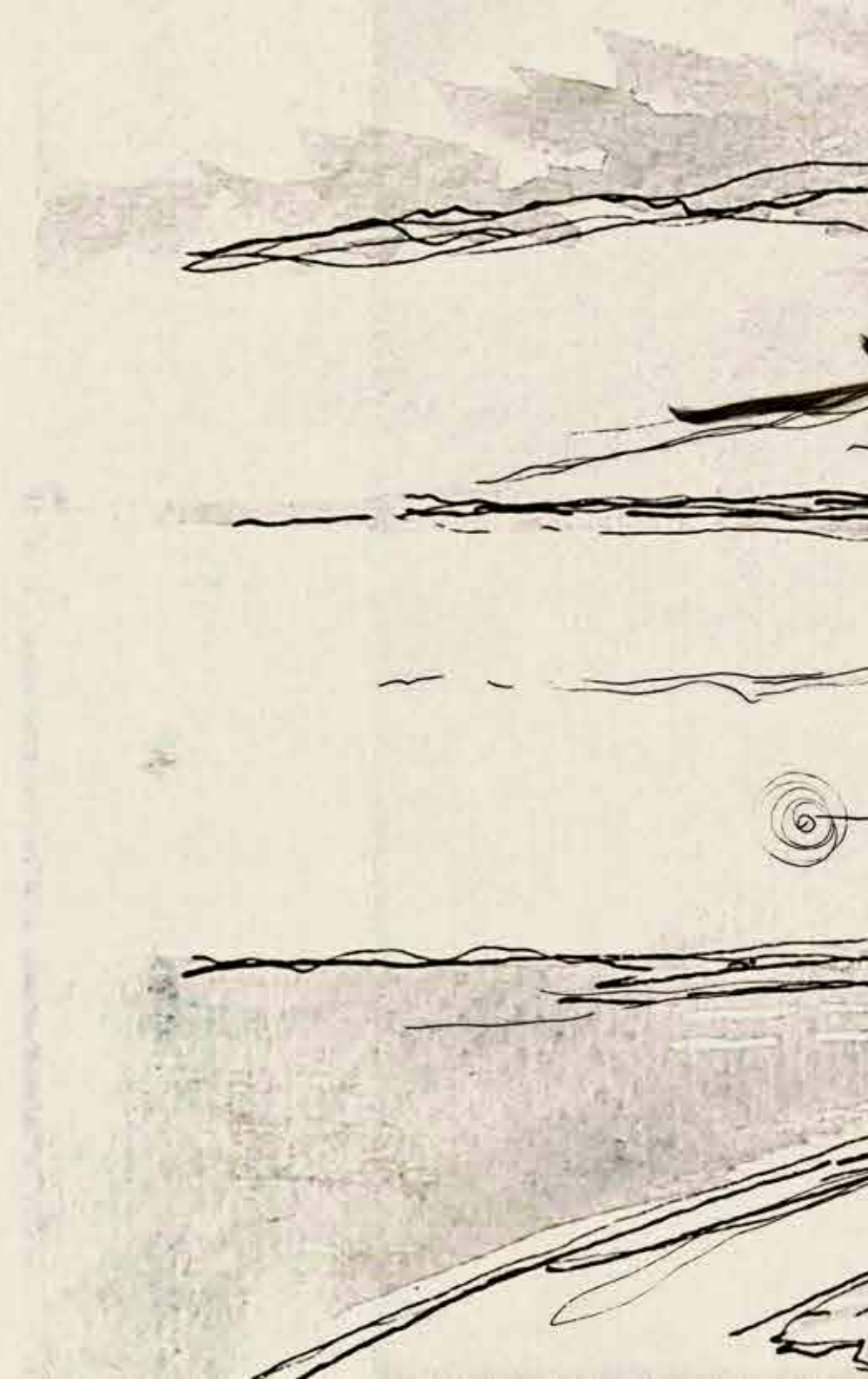




Figure 3.9. The Explorer
as middle ground
between having shelter
and being dependent on
nature (author, 2024)

3.4.1. Wind as Negotiator

Wind. A force with an unrivalled power to scatter, comfort, and shape. We resorted to turning our backs on this force of nature according to American author Jan DeBlieu. We erect structures to spite it, daring it to knock them down (DeBlieu, 1999). Wind is viewed as a discomfort, a friction we need to shelter against or use for its power, choosing not to reach into its everchanging whims and handiworks. The wind cannot be seen or taken captive, yet it can be felt and leaves its traces within the coastal landscape. Temporal traces as the insatiable artist constantly sweeps the sand off the earth and into a variety of geometrically different arrangements. The Britannica explains that the arrangement of dunes happens when the wind moves sand a mass of jumping grains. The coarser particles move along the surface and are kept in motion by the friction of the saltating grains (Breed, 2024). We experience this friction on a windy day at the beach, sand grains propelled against our skin. The device of alternative site analysis intends to harness this friction to reveal the essential hiddenness of the wind. As it blows, it sets into motion particles, as well as the

windmill. As the particles move, they fall onto the windmill, and are swept off and in between the two papers. Depending on the force, the friction leaves scratches, traces of itself and the wind's power. With the wind at the steer of erosion and other natural disastrous courses, we turn our heads and eyes away and choose to see only the enemy. But when we reach into the winds' whims, its unrivalled power becomes less of an enemy to spite but rather a force to spar with. A waltz of scratching and gnawing at each other's surfaces reveals the hiddenness of what has been covered under the skin (Nitsche, 2020). Through this waltz, small moments of force and gentleness are played off against each other. Sparring partners are careful of each other yet respecting and exploring where boundaries can be crossed. In some spaces wind is the determiner, in other instances the human, as well as some spaces where neither has the upper hand. We become less spiteful and see Wind for its truth – Creation's first food (DeBlieu, 1999).

Figure 3.10. SItE Date explorations - influence of wind on sand dunes, Stilbaai (author, 2024)





3.4.2. The Sailboat as Dwelling

The ship, in its essence, becomes the symbol of the Explorer and its dependence on Wind. The vessel must not only endure the elements but dance with them, embodying the three guiding concepts. Its masts rise with a rhythmic verticality, bridging the vast expanse of ocean with that of the stars as it charts a course toward the horizon. Its sails billowing in and harnessing the wind aim in the direction of its gusts. The explorers onboard make the ship come alive through their bodily engagement and constant alertness to changing circumstances. Unbeknownst to them, they engage in a continuous exchange with the ever-changing forces surrounding them. Space becomes not defined by grand structures but by a surface or a simple barrier (Figure 3.11). A distinct contrast to the surrounding natural expanse. Some place is temporarily bordered by rock, dried plants, leather, and other barriers, whether functioning as a protection, a possession, or simply a composition that serves as a sign to represent their understanding of the world (Trisno, 2023).

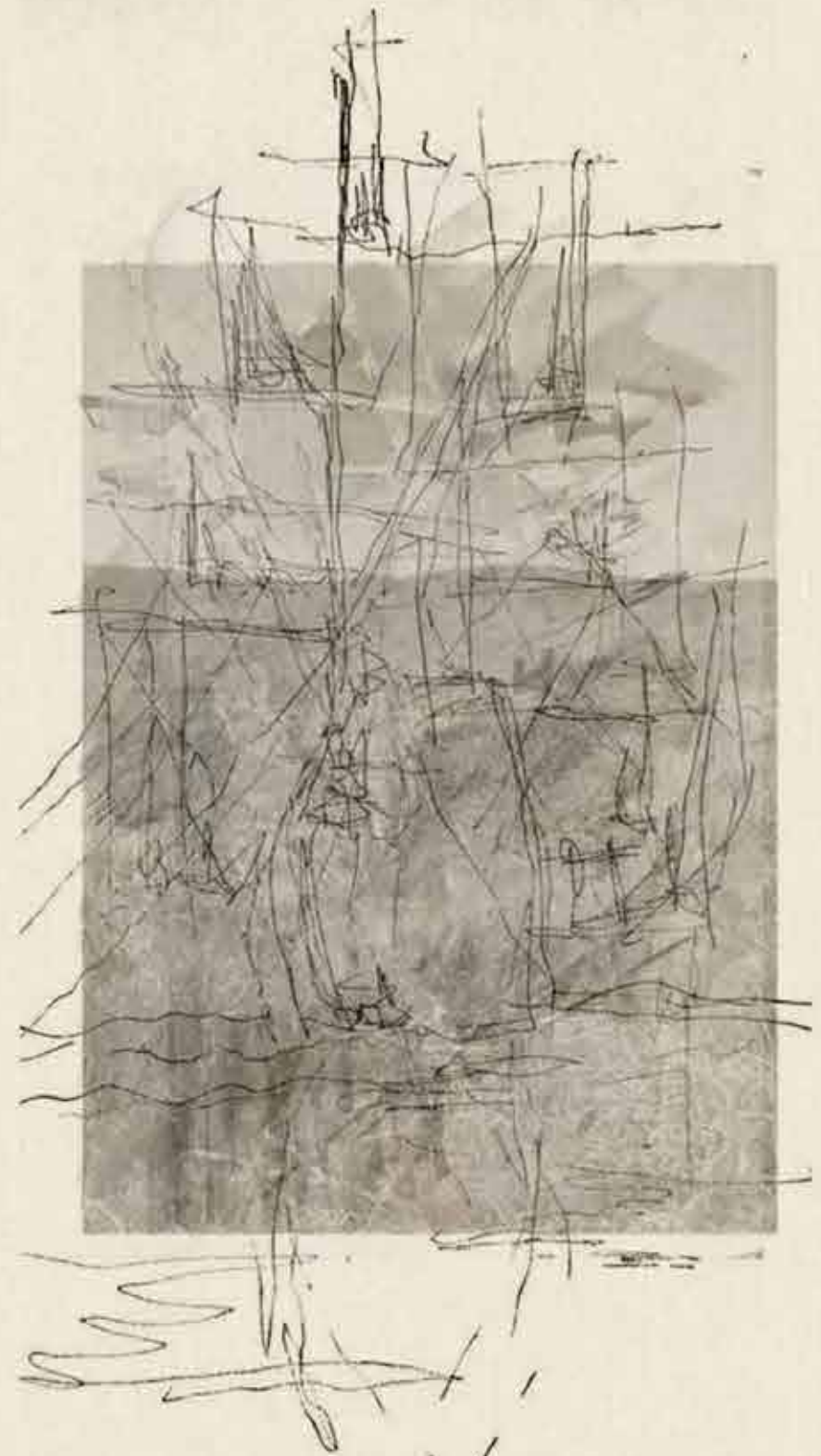


Figure 3.11. Sailboat
as vessel for bodily
engagement with Wind
(author, 2024)

3.5. The silence

In this sense, I am struck by the notion of Oikophilia to build and design our dwellings as if they were a sacred reverence to the Eternal. The architect detached himself from earthly interests and instead offered a gift to the tapestry of creation. Recent experiences have underscored a timeless truth: nature shall never be silenced and tamed. The human world may go extinct, but never the world of nature (Haaz, 2022).

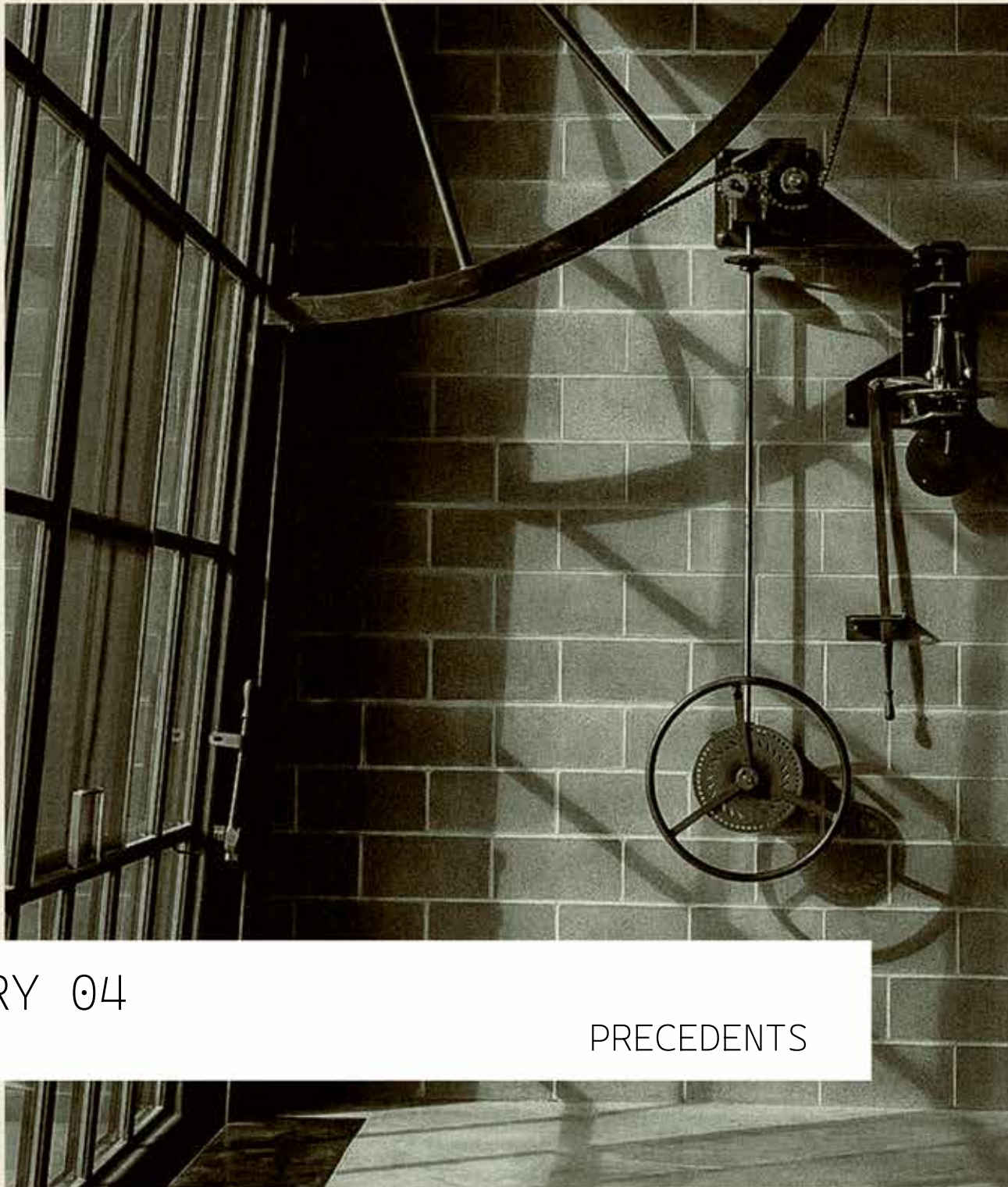


Figure 3.12: Building as sacred reverence (author, 2023)

3.6. Conclusion

The theoretical exploration uncovered various links between the evolving concepts to that of a specific theory. Delving into Russel's ontology required me to momentarily set aside the realm of architecture, yet it provided the essential framework for our journey. The characters of the nomad, settler and explorer charted a potential middle ground for temporary design. Therefore, forging an adventure camp one must deeply understand the wind's role as both the creating and driving force in the coastal landscape. My reflections returned to design when I examined a ship through the lens of the three concepts. The next entry will investigate some considerations for the new gap year camp, using three precedents as examples. I will explore how these precedents relate to their landscape and the rugged atmosphere of their designs.

Figure 4.1. Building as mechanism



ENTRY 04

PRECEDENTS

- 4. Introduction
- 4.1. Beyond Adventure Camp
- 4.2. JRF Eco Village
- 4.3. Kogelberg Cabins
- 4.4. Chicken Point Cabin
- 4.5. Conclusion

4. Introduction

This chapter sets out to examine the design and experience of the Beyond Adventure Camp, Camp JRF Eco Village, Cabins in Kogeberg and Idaho within the theoretical stance established in the previous chapter. While our study of the sailing ship has provided valuable insights, it falls short in guiding us on the organization needed for our ultimate endeavour - a gap year adventure camp. Getting information on existing summer camps or gap year campuses proved a difficult task. To gain a clearer understanding, four studies were chosen as precedents for deeper investigation. Each will be scrutinized for its functional success and its interaction with the surrounding landscape. The design of each gap year adventure camp finds itself between two forces - allowing the inhabitants to experience the raw force of nature while remaining sheltered and safe from it.



Beyond Adventure Camp - Bushman Sands Golf Estate, Alicedale

- Outside activity areas



JRF Eco Village - MetCalfe Architecture & Design, USA, 2014

- Draw outside in



Kogelberg Cabins – KLG Architects, Kogelberg Nature Reserve, South Africa, 2020

- Fynbos site layout



Chicken Point Cabin – Olson Kundig Architects, Idaho

- Motion

4.1. Beyond Adventure Camp - Bushman Sands Golf Estate, Alicedale

Within the enchanting Eastern Cape of South Africa, a curious establishment known as the Beyond Adventure Camp is ensconced within the existence of a once-hotel and golf estate. This gap year camp, endeavours to harness the surrounding bushveld as a stage for adventure. Yet, as I pondered the architectural value of this venture, particularly to the scope of Stilbaai, I found a disconnect between the grand structures and bushveld that surrounds it. The structures, while able to provide shelter, seem to lack communication with the beauty that surrounds it, stifling the very spirit of adventure they seek to offer. Moreover, the imposing scale of these buildings tends to fall more into the category of functionality rather than inspiration. It causes a feeling of isolation, hindering the camaraderie of a tight-knit community. A more adventurous design approach could resonate more with the youthful spirit of the campers. Smaller, interconnected structures could enhance social interactions. While the Beyond Adventure Camp may not inspire me architecturally, it does serve as inspiration of how outdoor spaces for a gap year camp should be utilized. Creating spaces where activities such as volleyball and soccer could take place is vital for students to unwind, something I overlooked during the initial process of designing a gap-year camp.



Figure 4.3. Beyond Adventure Camp in existing golf estate (Eduvisa, nd)



Figure 4.4: Outside play area (Facebook, 2024)

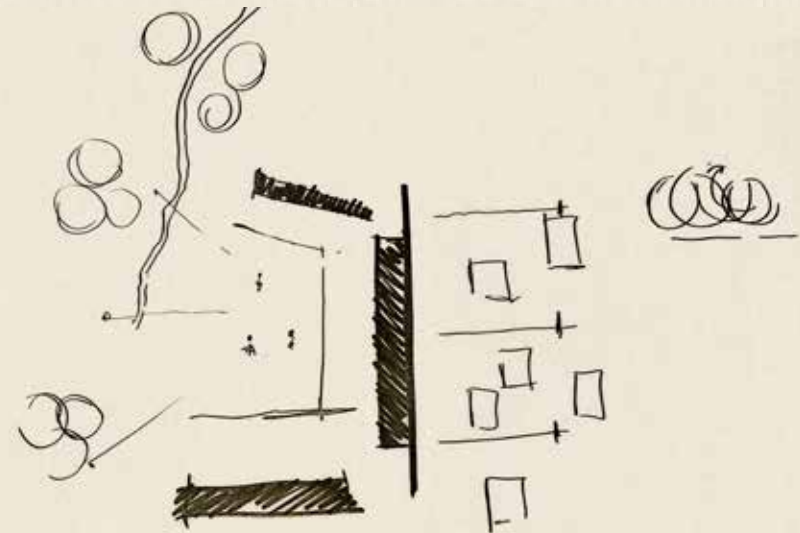


Figure 4.5: Site within bushveld landscape (Google Maps) (adapted by author)

Figure 4.6: Play area situated towards landscape, buildings isolate it (author, 2024)

Figure 4.7 and 4.8: Buildings with no relationship to outside, big scale (author, 2024)

4.2. JRF Eco Village - MetCalfe Architecture & Design, USA, 2014

Nestled within the serene Pocono Mountains and adjacent to an existing Jewish Reconstructionist summer camp, is designed to cater to older girl and boy campers. Unlike the previous precedent, this design immerses itself within the surrounding forest landscape, creating a harmonious relationship between the built and natural environments. The campus is an example of architectural sustainability, featuring solar panels and structures built from recycled materials that blend seamlessly into the natural environment. The smaller buildings are strategically positioned to foster meaningful outdoor experiences, offering campers intimate spaces for reflection and connection with nature. Each structure serves not only as a functional space but also as an educational tool, as many were constructed in part by the campers themselves. This hands-on approach instils a sense of stewardship and a deeper understanding of building sensitively within the landscape. With my project, I envisioned a layout reminiscent of classic summer camps, with buildings spaced widely apart in the initial design phase. However, through thoughtful consideration, I recognized the need for a more balanced approach. The final design aims to strike this balance by incorporating clusters of smaller buildings that provide a degree of shelter and communal space. This arrangement offers protection from the elements, ensuring that campers can comfortably engage in outdoor activities while still fostering a sense of community and collaboration throughout the site.

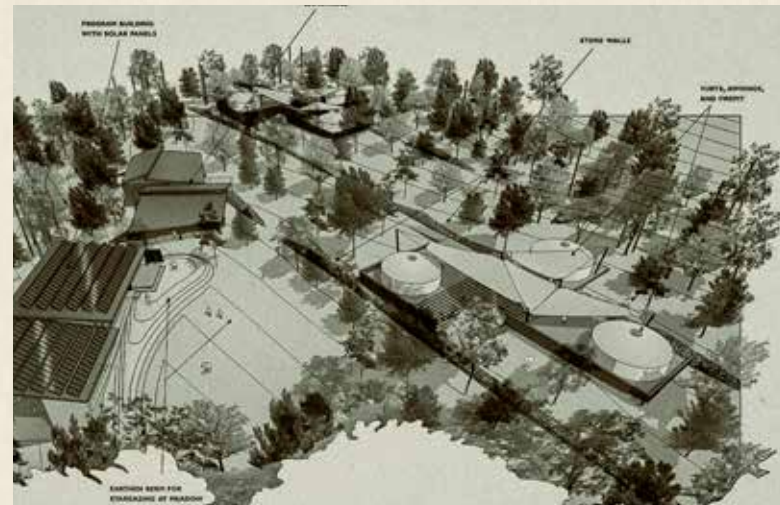




Figure 4.8: Cabins situated within the forest (Metcalf Design and Architecture, 2017)



Figure 4.9: Camp layout (Archdaily, 2011)

Figure 4.10: Firepit surrounded by rest of the camp, within the landscape (Metcalf Design and Architecture, 2017)

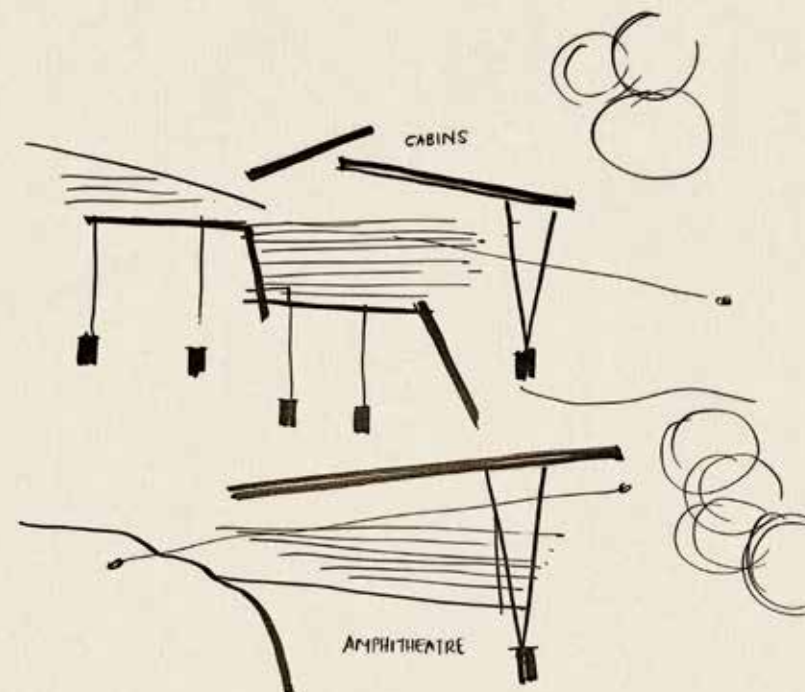
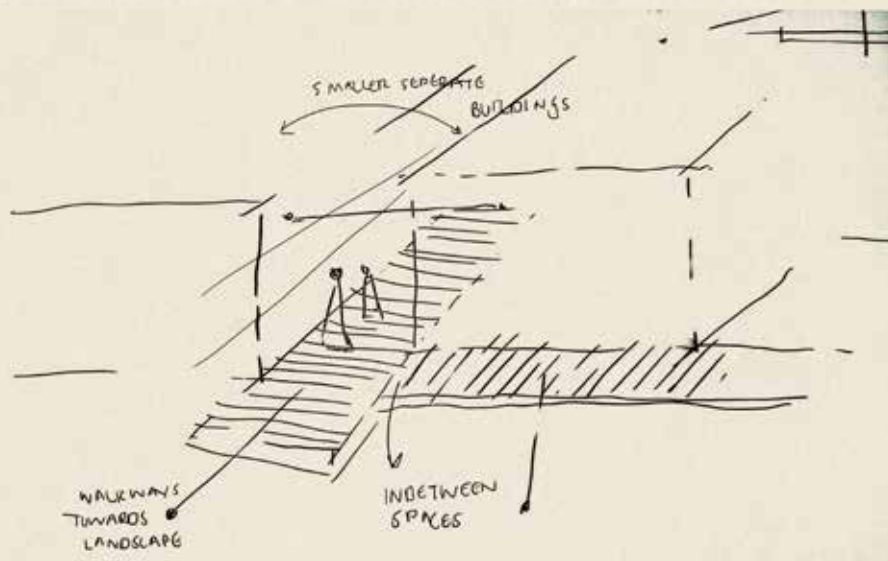


Figure 4.11: Walkways to separate buildings and interact with the forest (author, 2024)

Figure 4.12: Stilted cabins on concrete platforms interacting with slopes (author, 2024)

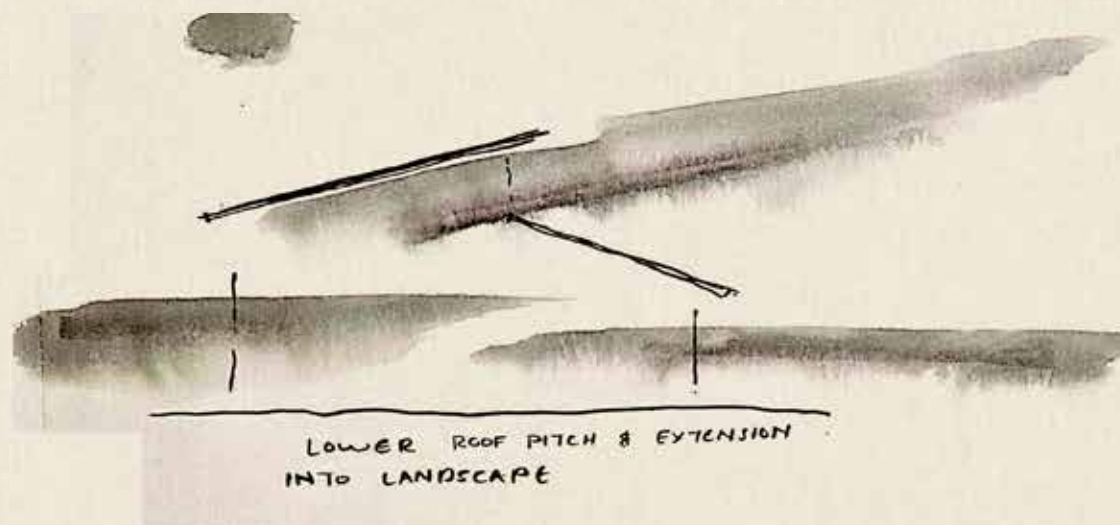


Figure 4.13: Roof design allows for interaction with landscape (author, 2024)

4.3. Kogelberg Cabins – KLG Architects, Kogelberg Nature Reserve, South Africa, 2020

The project is set within the Kogelberg Nature Reserve in the southern reaches of the Hottentots Holland Mountain range. This land, revered as the heart of the Cape Floral Kingdom, as well as being a renowned World Heritage Site, holds an air of sacredness and natural splendour. The facilities comprise of an administration building, a natural swimming pool, a network of floating timber boardwalks and tourist accommodation units (KLG Architects). The design was meticulously mapped out to reveal the topography and vegetation of this hallow ground. It is as though the buildings themselves are crafted as voids, while the spaces between them are filled with life. A rhythm, broken in its linearity, demarcating spaces and their functions. Viewed both in perspective and section, lays out a clear linearity of horizons - base, void and top. The architecture is carefully positioned between fynbos with small construction zones marked out to minimize disruption to this fragile ecosystem. Elevated above the ground, the structures allow the local fauna to have uninterrupted routes beneath them. Pine, chosen for its lightness and availability, will gradually blend with its landscape as its colour fades with time to be in tune with the surroundings. Placed apart, the buildings allow the visitor to connect with nature in an unobstructed way. The project is off-the-grid making use of a dry sanitation system, transforming waste into compost and sourcing water from a nearby river. Though there is room for greater interaction with the natural world, the craftsmanship shows simplistic and earthly connectedness and elegance.



Figure 4.14: Cabins situated within the Fynbos landscape, raised slightly (KLG Architects, nd)

Figure 4.15: Site Layout (KLG Architects, nd)

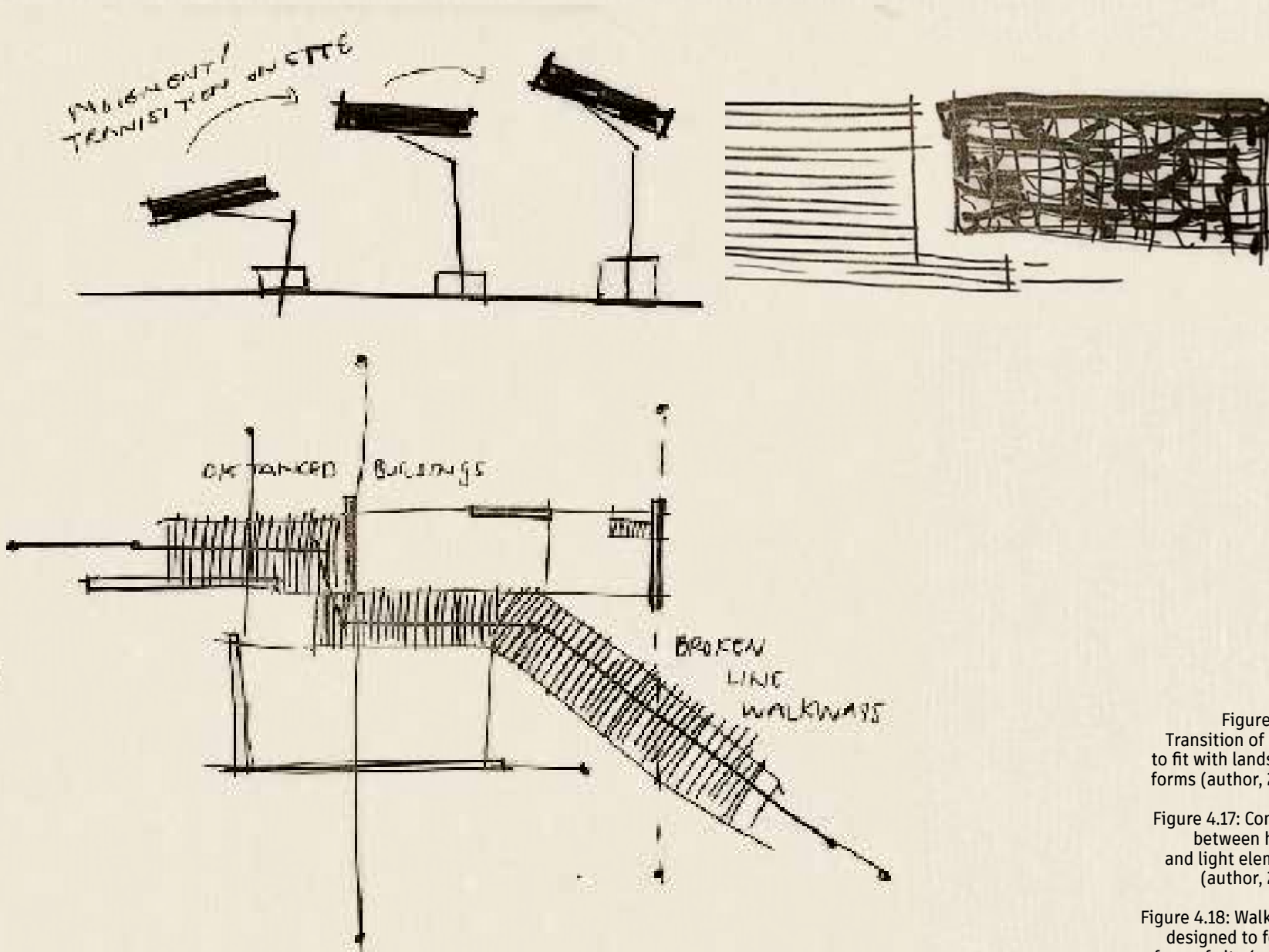


Figure 4.16:
Transition of cabin
to fit with landscape
forms (author, 2024)

Figure 4.17: Contrast
between haevy
and light elements
(author, 2024)

Figure 4.18: Walkways
designed to follow
form of site (author,
2024)

4.4. Chicken Point Cabin – Olson Kundig Architects, Idaho,

Situated beside a serene lake in northern Idaho, the architects have fashioned a shelter they describe as “a little box with a window that opens up to the surrounding landscape.” This large window wall unfolds the cabin to the vast landscape beyond, the entire dwelling meticulously designed around this singular feature (Kundig, nd). The intricate design of this cabin echoes the adjustments of a mast and sails on a ship. It embodies the pilgrim’s journey, where the shelter both contends with the wind and embraces the landscape. When closed, it offers refuge, when opened, it yields to the elements, sparring with nature in a dance of protection and exposure.

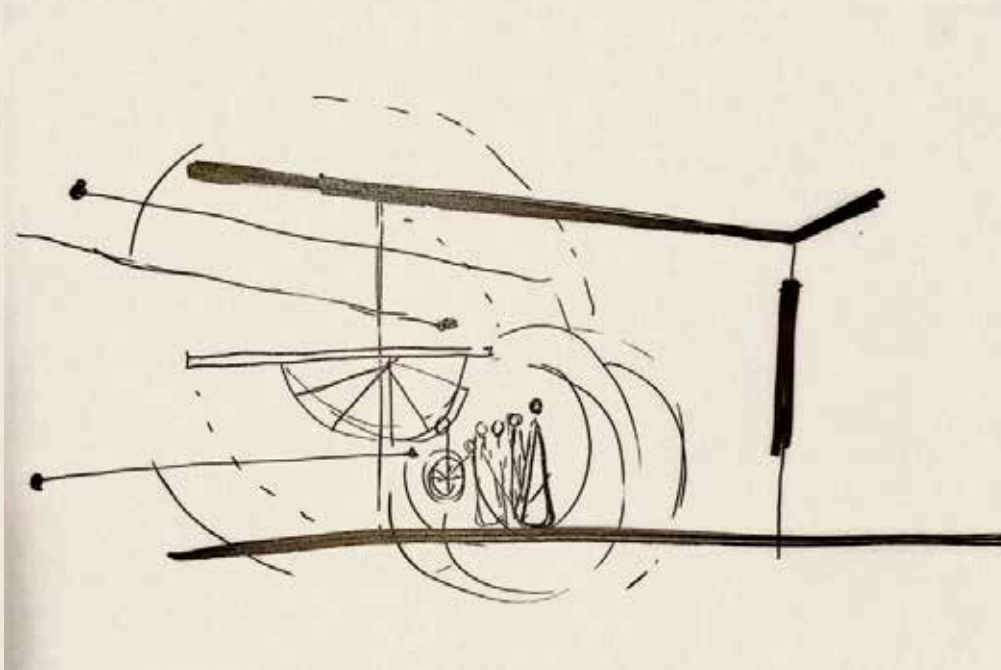




Figure 4.19: Movement of window causes movement in landscape and in person (author, 2024)

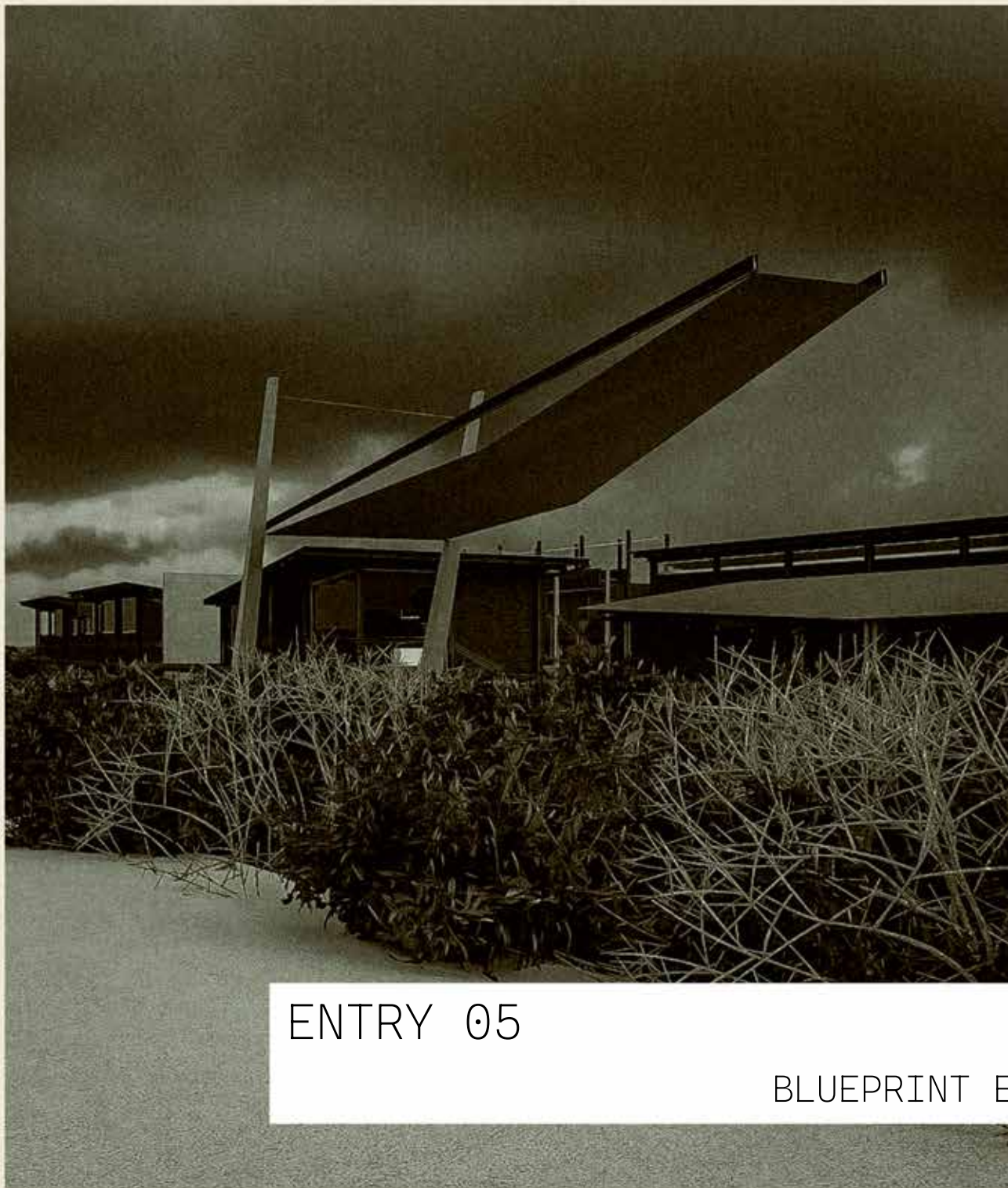


Figure 4.20. Letting outside in (Kundig, nd)

Figure 4.21. Turning gears - like hoisting ship's flag (Kundig, nd)

4.4. Conclusion

The precedents encountered hold great significance for the design proposal of the gap year adventure camp. The diverse successes and approaches of these examples have profoundly shaped my vision for the camp, the aim is to sculpt an environment that fosters a deep interaction with the elements, embraces the rawness of materials, link up with the earth in a natural foundational way, and converses harmoniously with the surrounding landscape. In the next entry, I shall delve into the traces left behind by these precedents, alongside the evolution of my design. This exploration will reveal how these influences have guided the quest to create a truly immersive and elemental experience.



ENTRY 05

BLUEPRINT EXPEDITIONS

- 5. Introduction
- 5.1. Program
- 5.2. Design Development
 - 5.2.1. The Scattering
 - 5.2.2. The Gathering at the Windmill
 - 5.2.3. Disentanglement
 - 5.2.4. Moments before the final blueprint
- 5.3. Final Blueprint
 - 5.3.1. Sparring with the Wind
 - 5.3.2. Paso Robles Residence
 - 5.3.3. The Journey
- 5.4. Conclusion

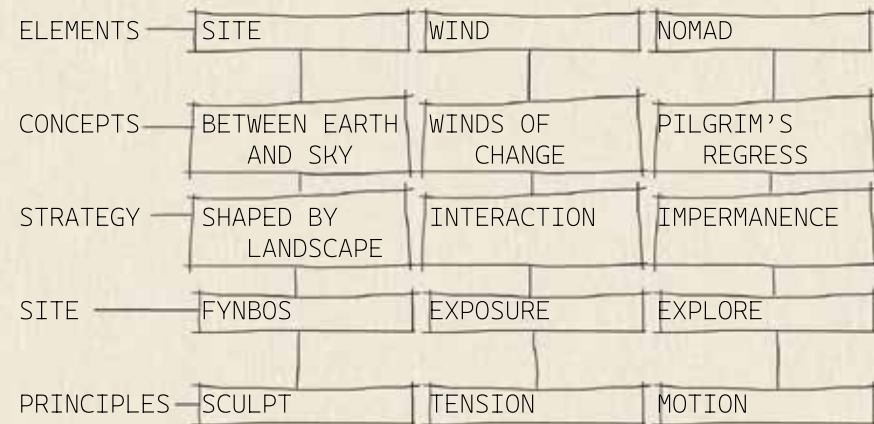
5. Introduction

In the previous chapters, the challenge at the heart of this thesis was laid down. I unveiled the conceptual explorations that serve as beacons on the path to resolution, delving into the influences of edifices that grace the land. In this chapter, these explorations will show how these threads are woven together to illuminate the layout, form and placement of the gap-year camp. Throughout this design process, the guiding concepts were ceaselessly visited, testing the validity of choices by a pursuit of drawings and models. All these explorations all gave rise to the scheme presented at the close of this chapter.

5.1. Program

Without a definitive boundary to the site, the extent, scale, placement and arrangement of the program was a blurry line at the start of the design process. To resolve this problem, the flattest expanse within the Geelkrans Nature Reserve became the blank slate for this project. A narrative emerges throughout various buildings scattered across the landscape. The program has been devised as a journey between three planes: *site*, *wind* and *nomad*. Every year, about thirty students arrive at the gap-year camp, a combination of boys and girls. Since the ratio of boys to girls differs each year, it was important to keep in mind that facilities, especially the bunks and bathrooms, should be adaptable to facilitate the groups each year. Students stay on the campgrounds for ten months of the year, going home between June and July due to it being too cold to do any outdoor activities. Instructors stay for a few days at a time, only needing to be there when lessons are presented, while the *site manager* says there more permanently.

Temporality



ACCOMMODATE NOMAD AND NATURE

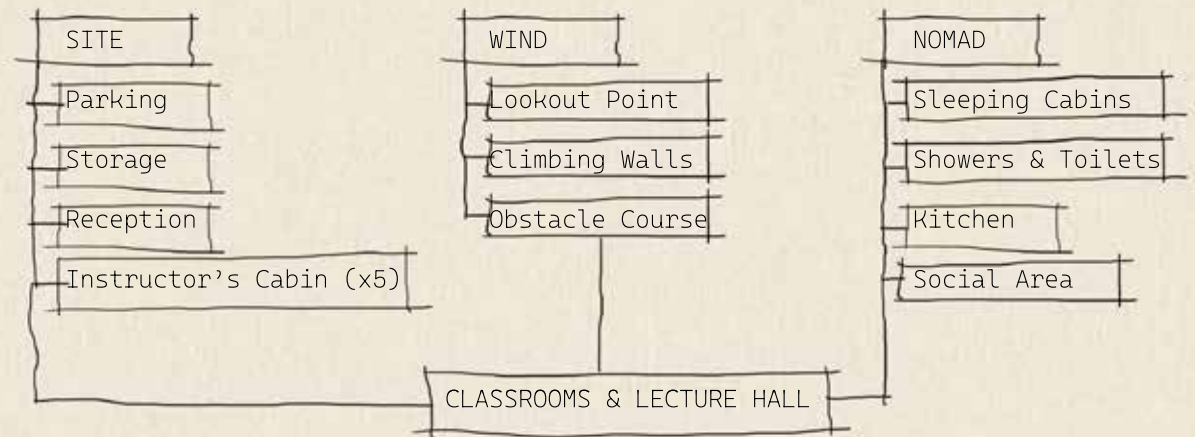


Figure 5.2: Strategy Diagram for Program (author, 2024)

Figure 5.3: Program (author, 2024)

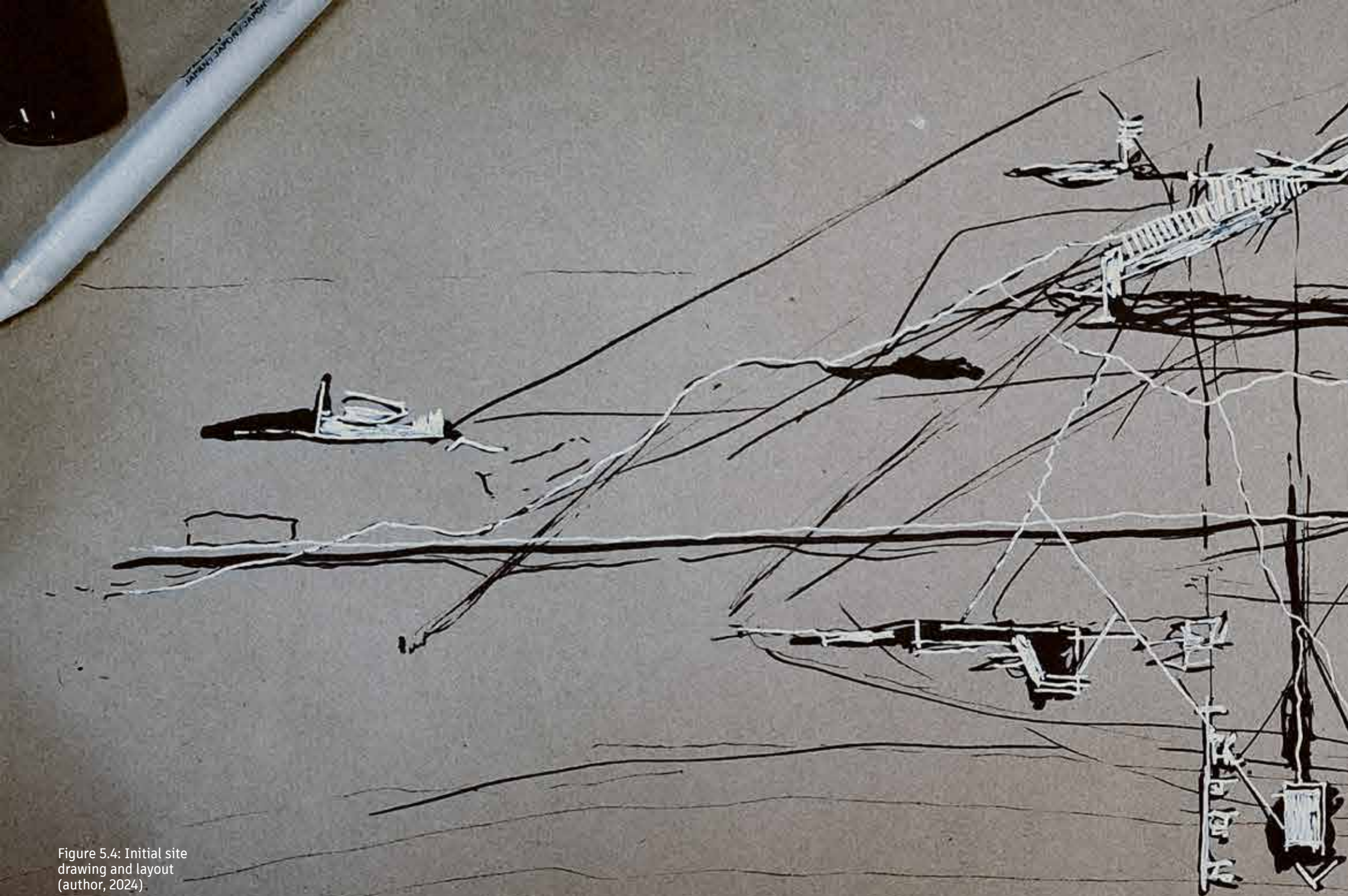
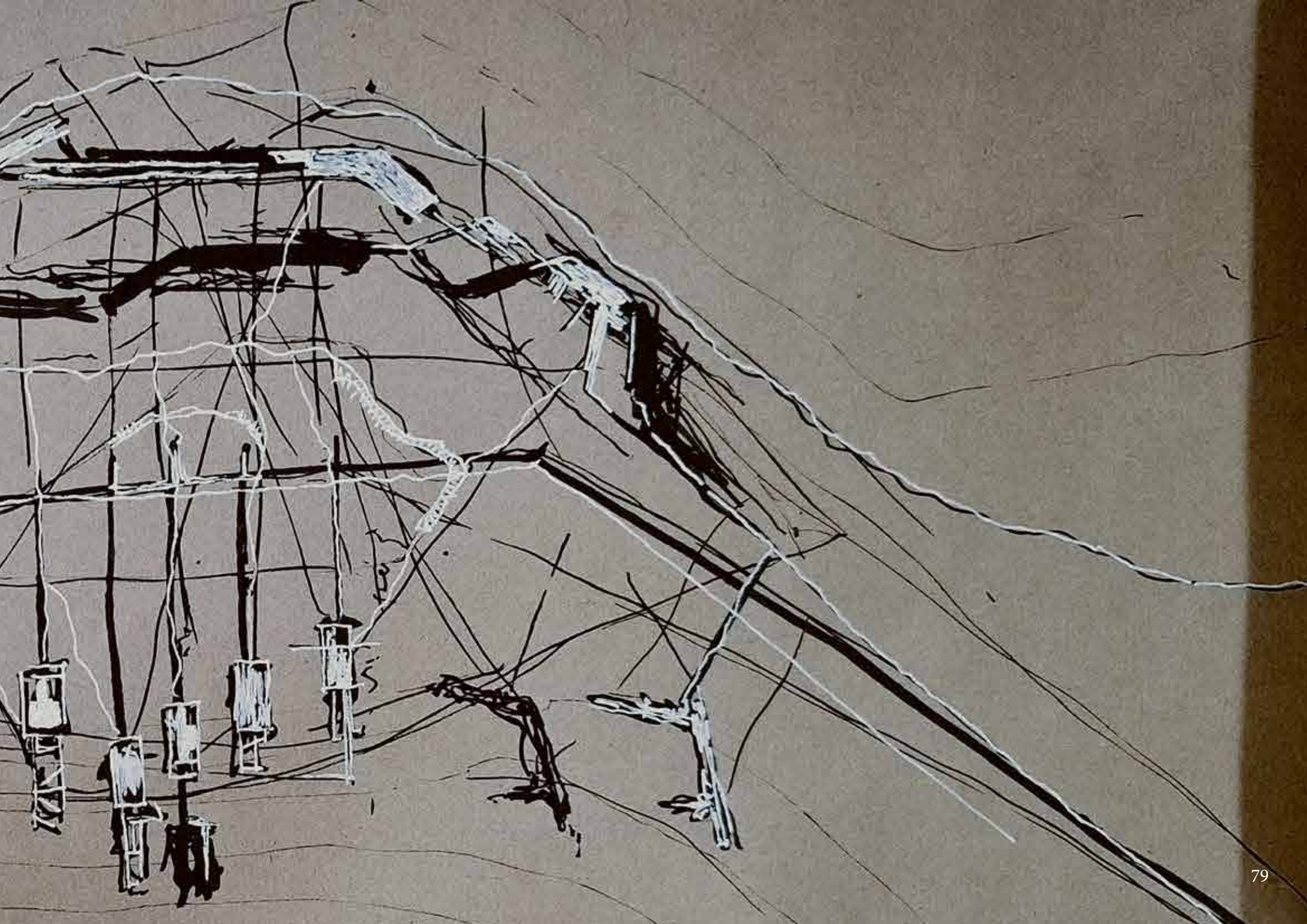


Figure 5.4: Initial site drawing and layout (author, 2024).



5.2. Design development

The layout of the camp was sculpted around the site and its contours, finding the perfect spot for it to nestle itself. All three concepts were incorporated into the scheme, finding a way that the site, wind and nomad can harmonize. The scheme went through multiple experiments and iterations, from a scattered camp, to following the construction of a windmill. The final design is a combination of these experiments.

5.2.1. The Scattering

In the early days of the endeavour, the design of the encampment was still very experimental, as if the luxury of time itself would be granted to us. Bold and expressive structures, resembling the form of tents were scattered throughout the landscape. The idea of the scattering came from the theoretical precedent of Marco Cadioli's *Abstract Lines*, where paths are traversed within a wide landscape. It proved to be an attempt to preserve the fynbos and minimize the impact of construction. Elaborate walkways connected these buildings, inviting exploration and discovery. and ultimately encircling the firepit - the heart of the campsite.



Figure 5.5: In studio drawing (Myburgh, 2024)



Figure 5.6:
Experimental
Drawing (author,
2024)

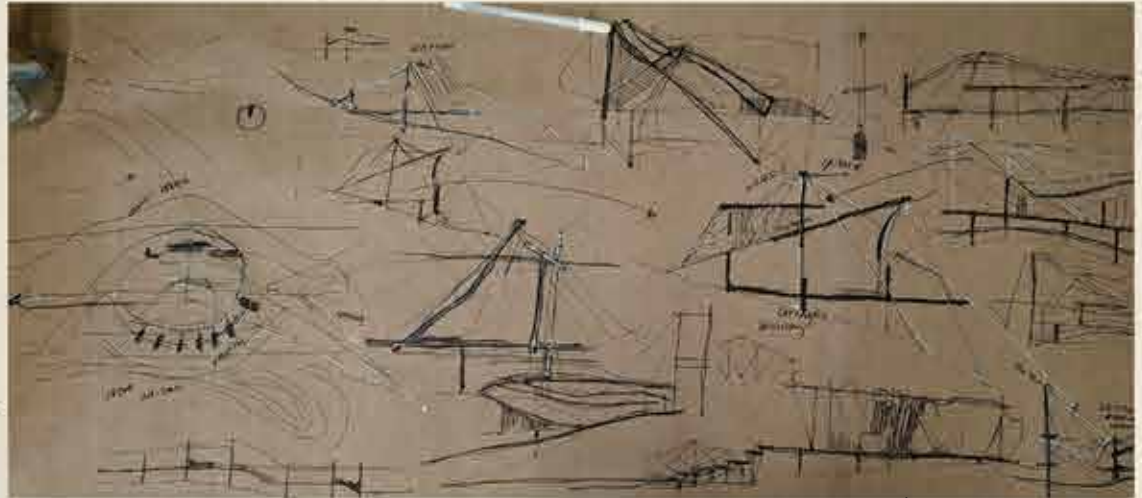


Figure 5.7: Brown
paper drawings

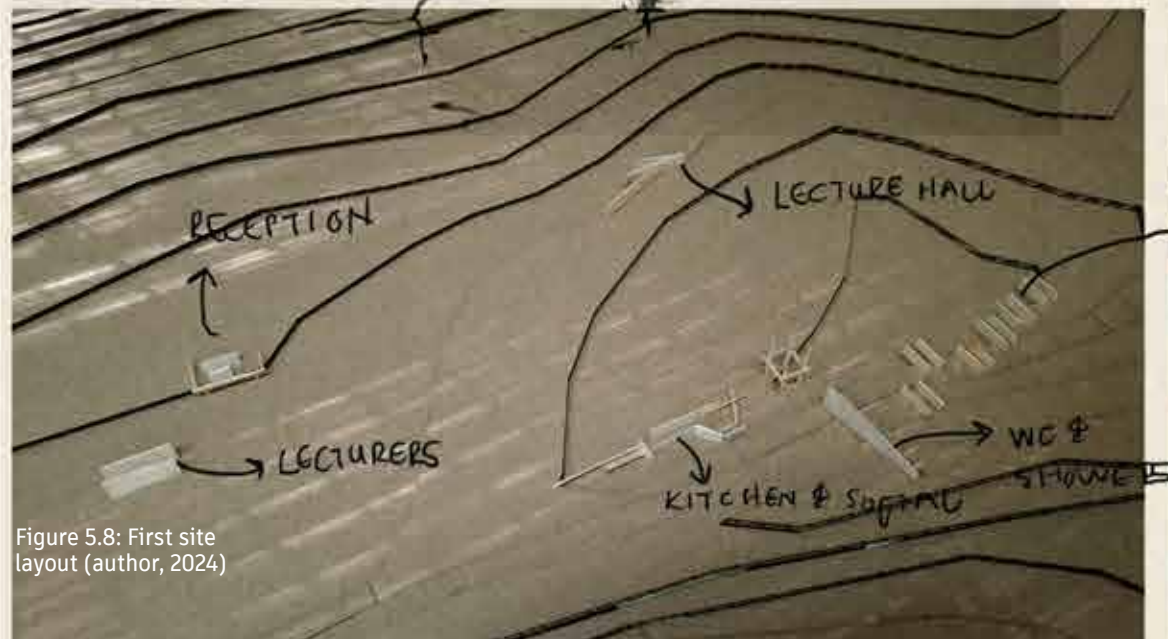


Figure 5.8: First site
layout (author, 2024)

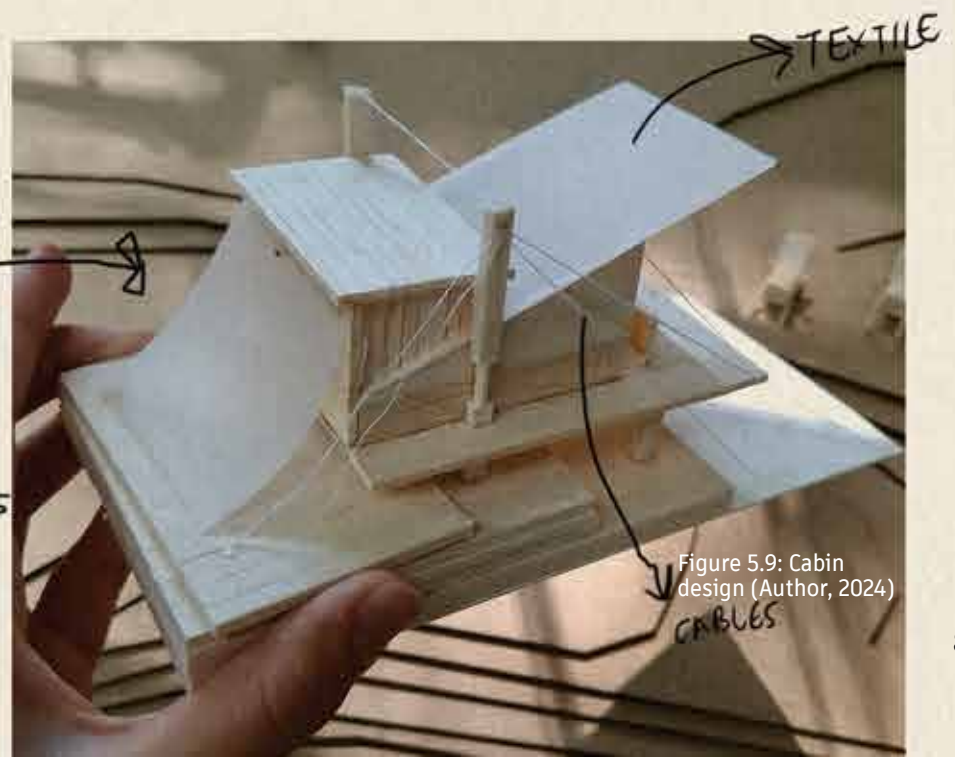


Figure 5.9: Cabin
design (Author, 2024)

After the SiteDate where I read about the coastal dunes and friction, elements of steel were introduced. Though heavy, they bore a certain fragility, marking the passage of time as the wind weathers them. Each element bore witness to nature's forces. Louvres adorned the outer walls, some on the inner walls, and others crown the rooftops to allow the breath of the landscape in from all sides. There was an attempt to draw a similarity between the structures and the wild beauty of the landscape surrounding it.

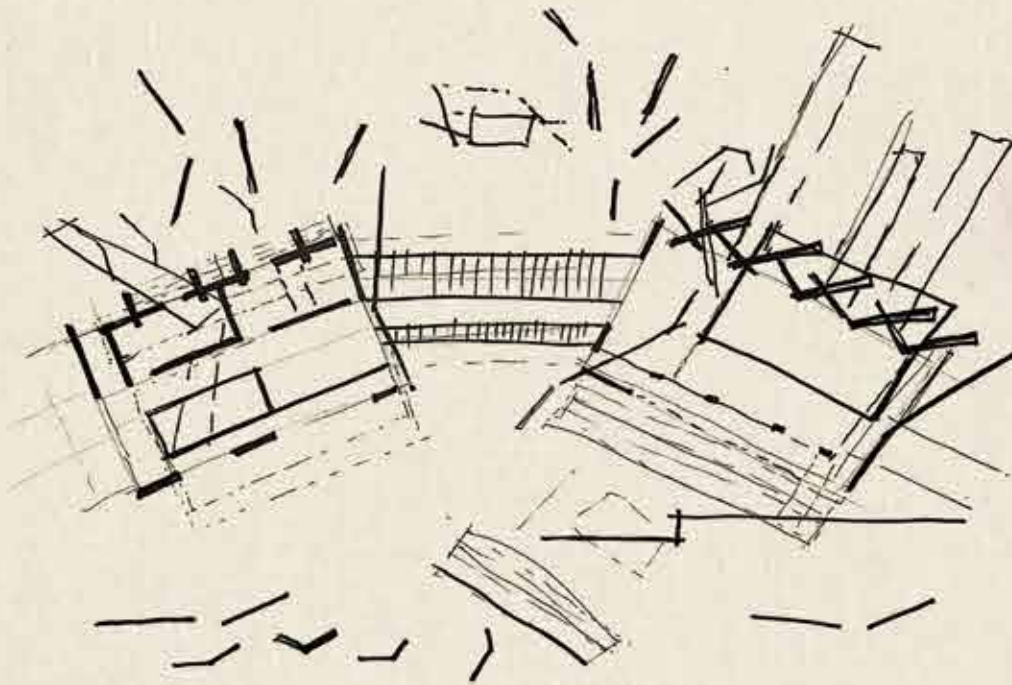


Figure 5.10: Kitchen and social area (author, 2024)

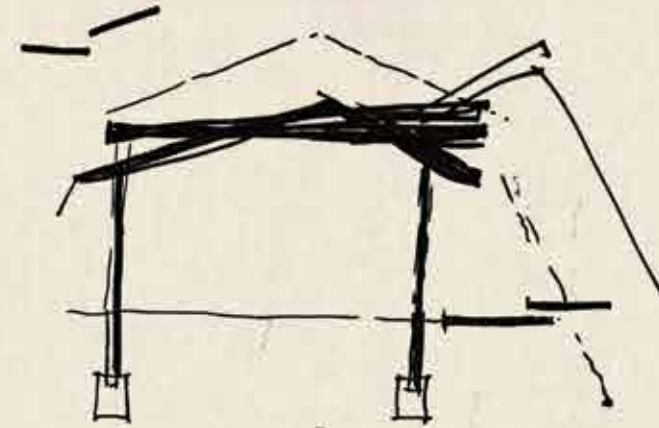


Figure 5.11: Reception (author, 2024)

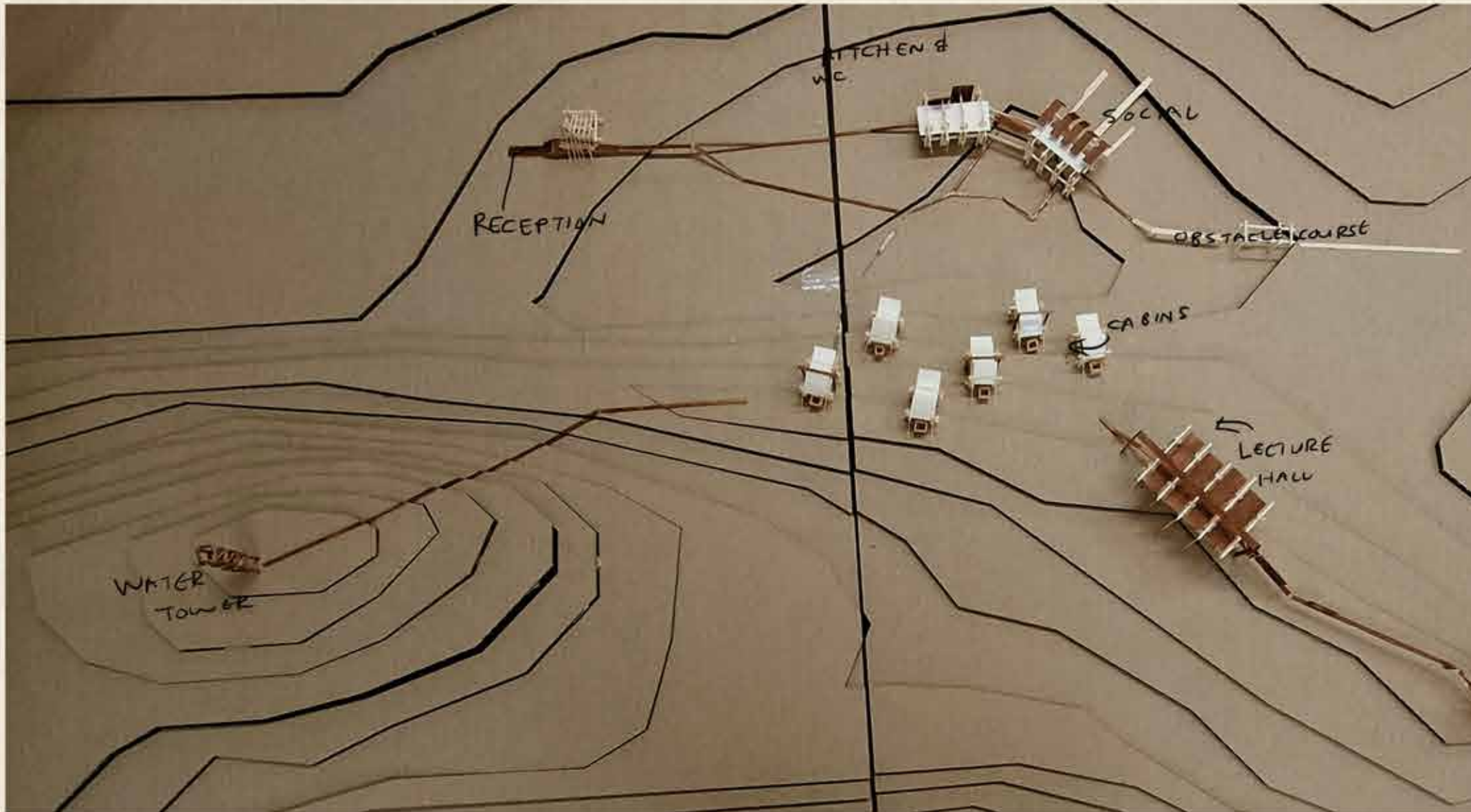


Figure 5.12: Scattered building - First external review layout (author, 2024)

5.2.1 The Gathering at the Windmill

After the first external review, it became evident to me that the daily rituals of life in such a scattered encampment would soon prove to be exhausting to students. Recognizing this, the camp was gathered together and the next round of experimentation started. Studying the construction of a windmill allowed for interesting sections to emerge, a direct approach of interaction with the Wind.

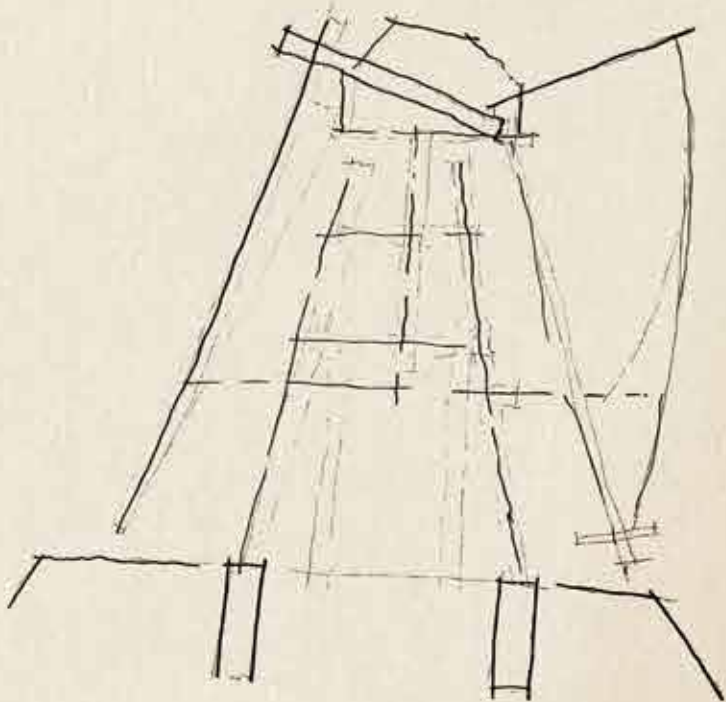


Figure 5.13: Section interpretation of a windmill (author, 2024)

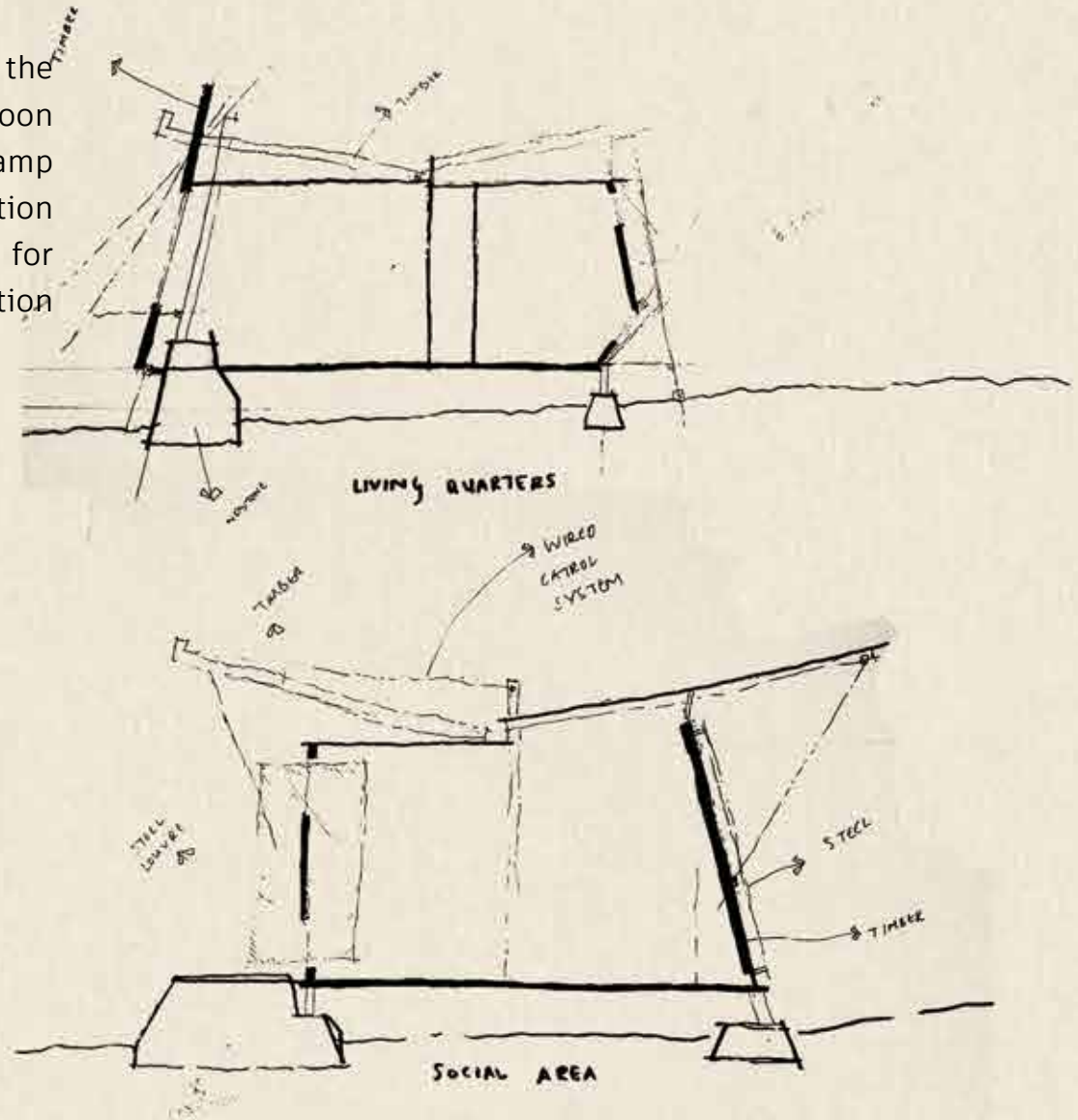


Figure 5.14: Sections with movable elements on the roof (author, 2024)

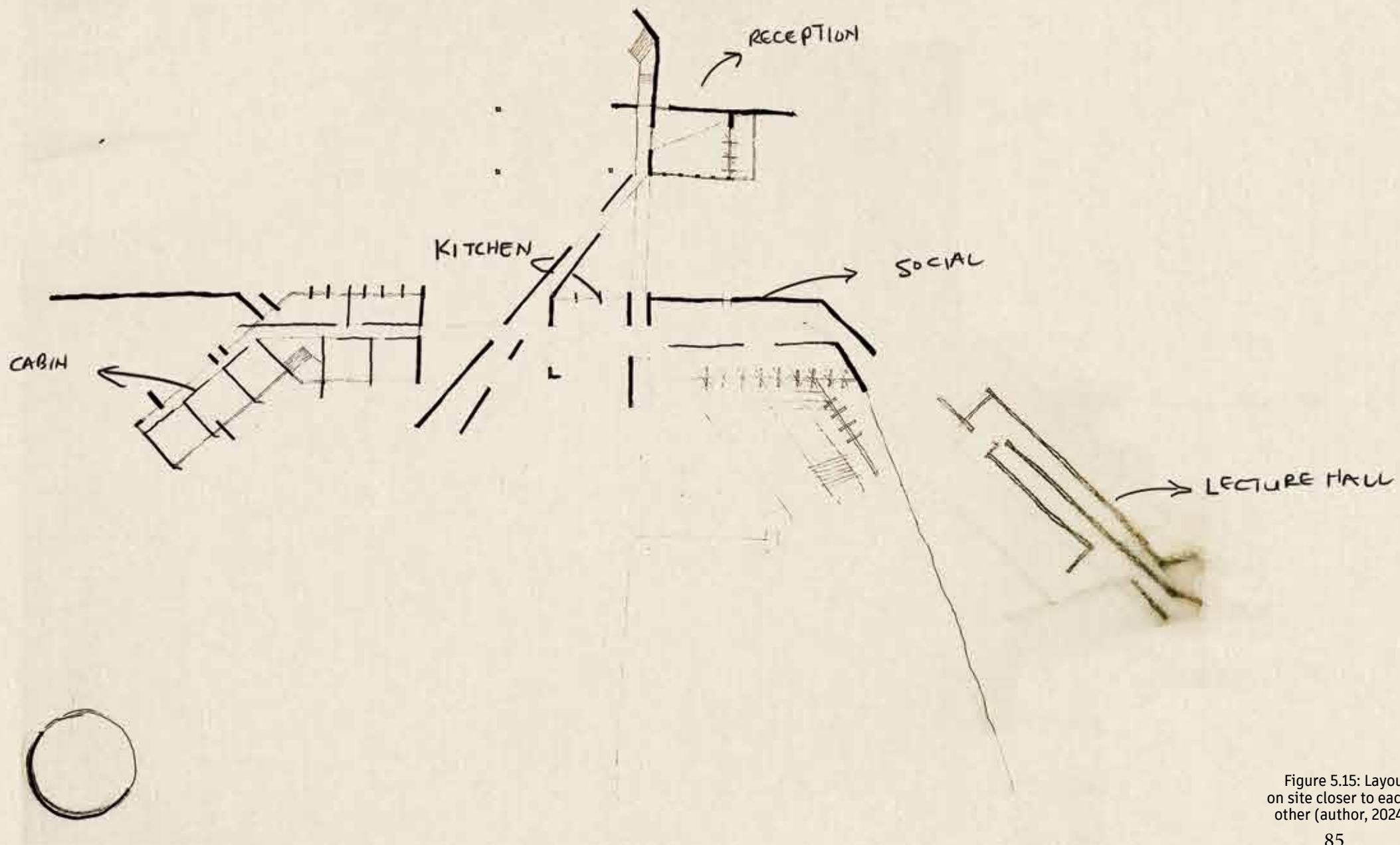


Figure 5.15: Layout on site closer to each other (author, 2024)

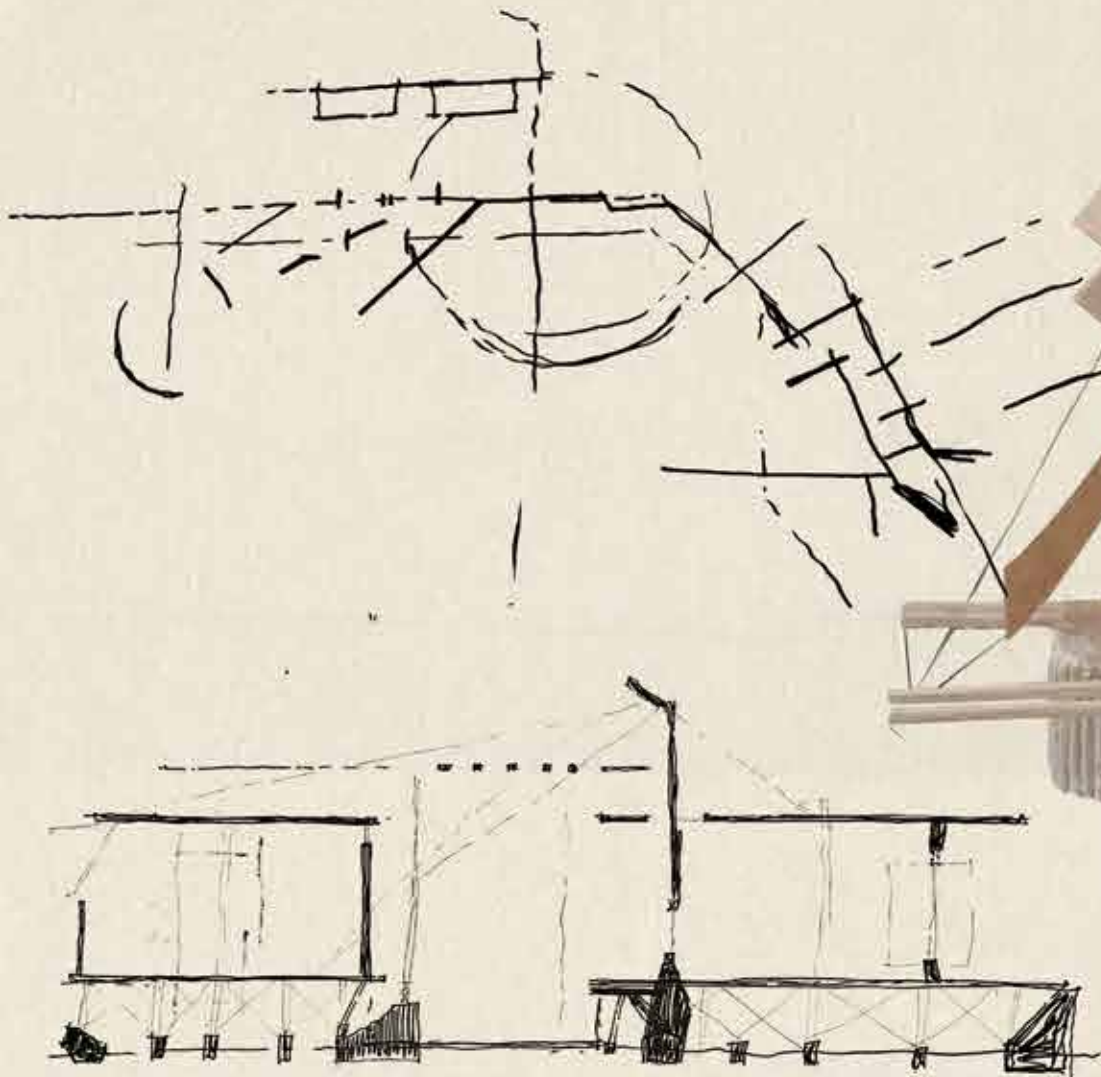


Figure 5.16: Entrance to site and reception (author, 2024)

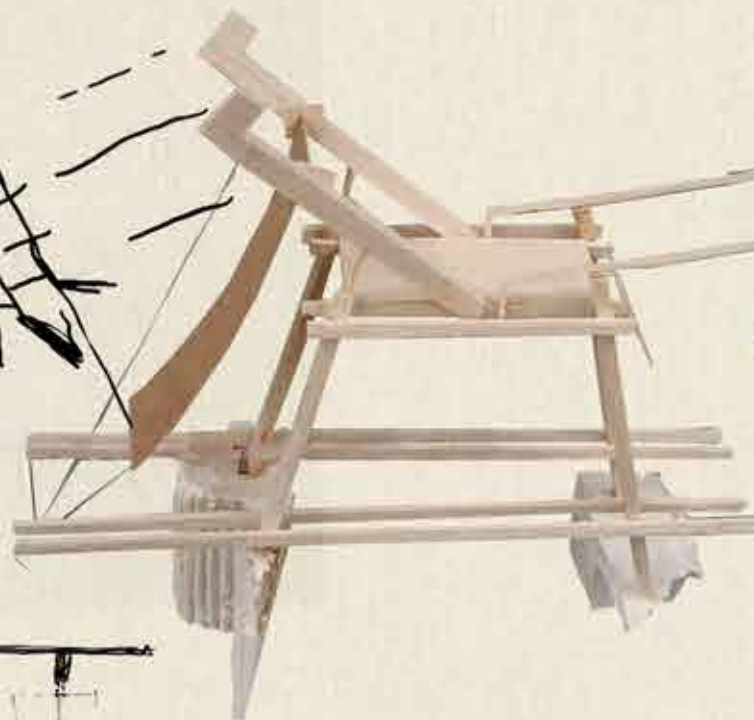


Figure 5.17: Construction touchstone mimicking the structure of a windmill (author, 2024)



Figure 5.18: Construction touchstone showing the temporality of its structure by being able to assemble and disassemble it Also showing foundations that will stay behind on site when the timber structure is removed (author, 2024)



Figure 5.19: Gathered layout with movable roof systems (author, 2024)

5.2.3. Disentanglement

Between the experimentation and the final design, the layout on the site started to mould around the curves of the coastal landscape, the roof elements that the fierce wind would easily blow away, was removed and the development looked to be more practical for everyday rituals. Yet, despite these adjustments, the heart of the design felt absent, lacking the warmth and vivacity essential to inspire the souls of those who would traverse this wild terrain.

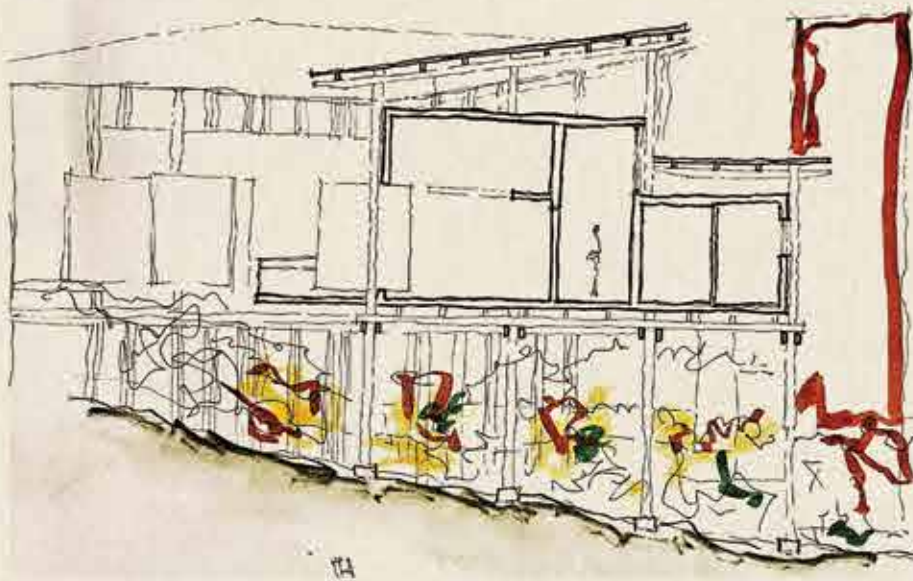


Figure 5.20: Section of the cabins and wcs
(author, 2024)



Figure 5.21: Floor plan
of the cabins and
social area (author,
2024)



Figure 5.22: Floor plan
of the reception and
the instructors cabin
(author, 2024)

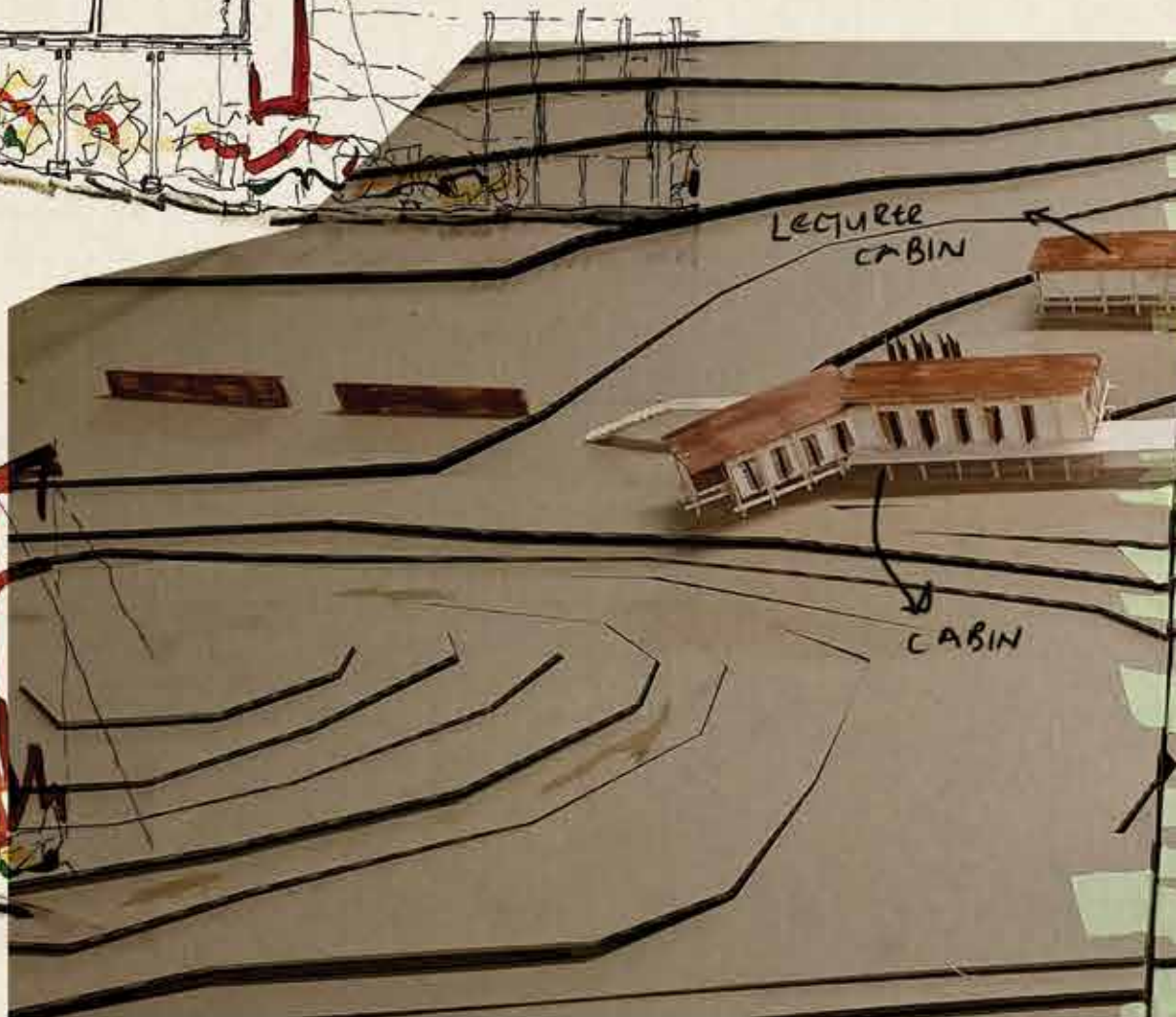
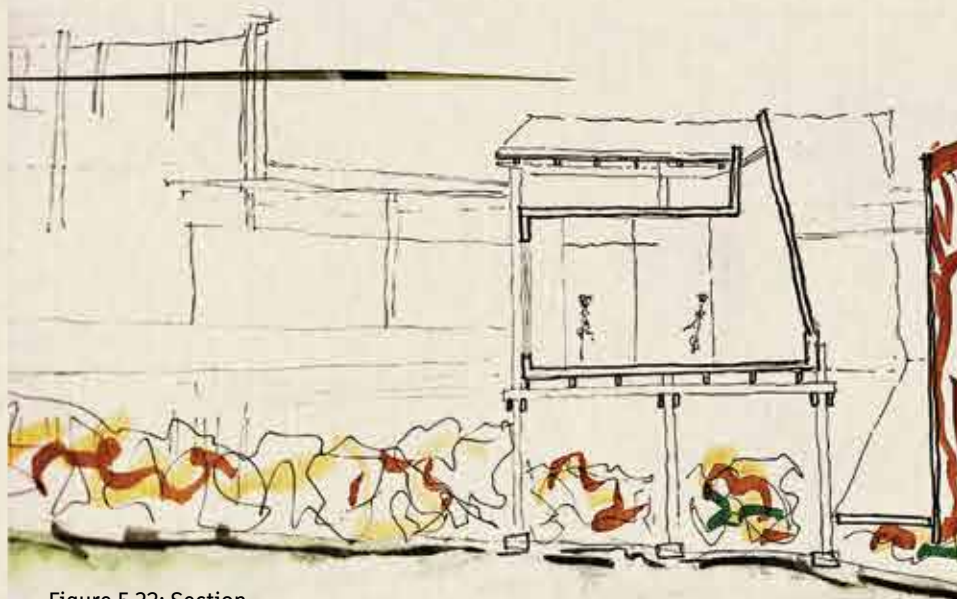


Figure 5.23: Section of the social area (author, 2024)

Figure 5.24: Section of the lecture hall (author, 2024)

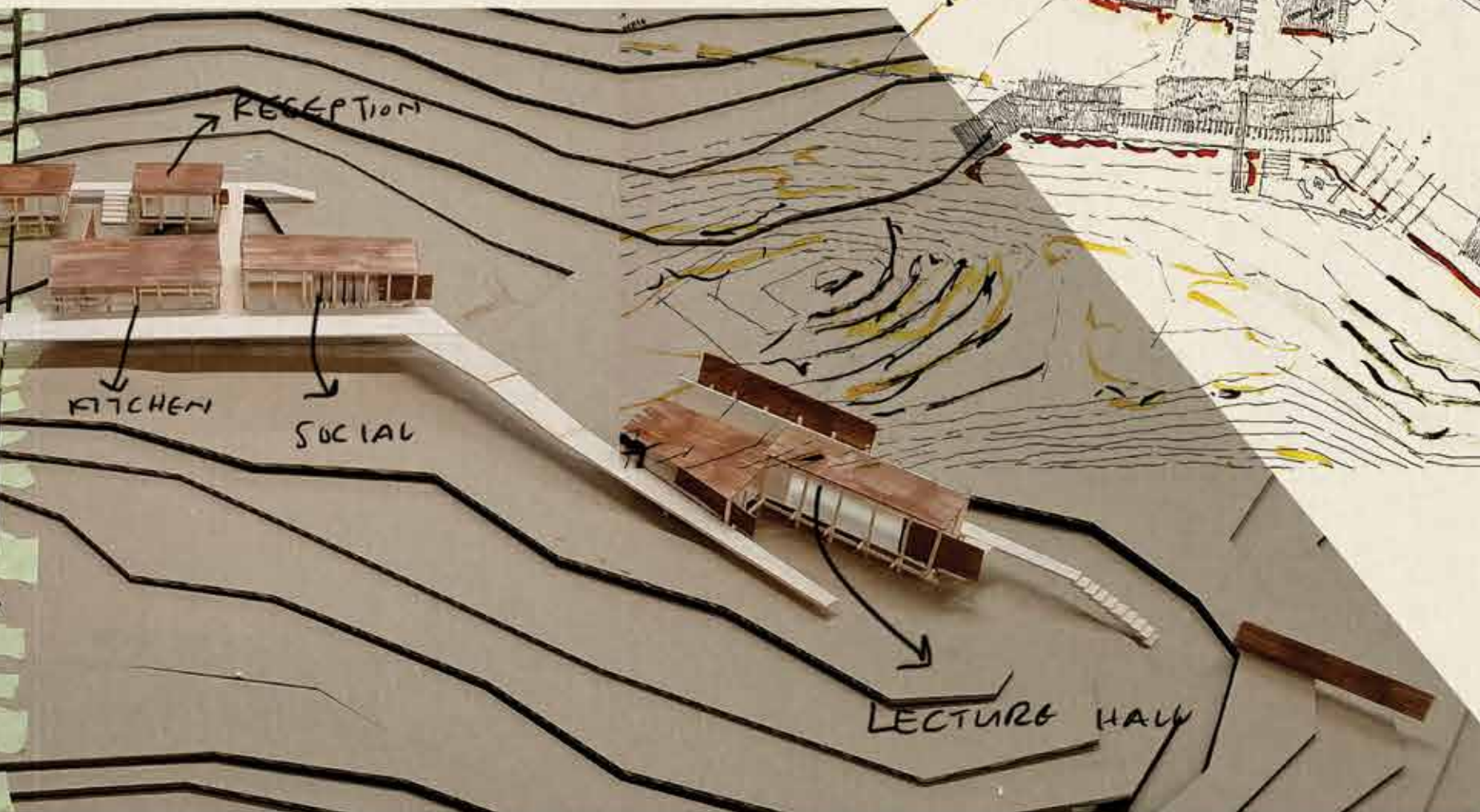


Figure 5.25: Site layout (author, 2024)

Figure 5.26: simplified model (author, 2024)

5.2.4. Moments before the final blueprint

Moments before the final project needed to be designed, I went back to all my initial drawings, models, theories, and precedents. Studying them under a magnifying glass, I chose elements that made me excited and reincorporated them to ensure a sophisticated, yet playful gap year camp for the students.



Figure 5.27: Section model of the cabin and wind towers (author, 2024)



Figure 5.28: Section model of the social area (author, 2024)

Figure 5.29: Section model of the lecture hall (author, 2024)

Setler vs Nomad
-Explorer

Balance Between Shelter & Exploration

Temporality of Coastal Landscape

Influence of Wind on Temporality

Figure 5.30:
Interpretation of the
layout of the building
and how it relates to
the title of sparring
with the Wind.

5.3. Final Design

The final design gathered the essence of the project through its concepts and later explorations to become a duet between simplicity and the explorative. It aims to be a project where the nomad student gets a chance to spar with the wind, having the chance to shape their own experiences while gathering new skills. .

5.3.1. Sparring with the Wind

The narrative of the wind on site has 3 plotlines – the one where human is sheltered against the wind, where the wind and human works together. And the one where the wind has more influence than the human. These will be referred to in the next few pages. In order to achieve the feel of the floor plan sparring with the wind, another precedent study was looked at – the Paso Robles Residence (Figures 5.30).

5.3.2. Paso Robles Residence, Aidlin Darling Architects, USA, 2010

A rural home situated on an agricultural site, the building responds to the extreme climate of the surrounding desert landscape (Archaily, 2010), and the relationship between indoor-outdoor living. Walls choreograph the space, some poking out towards the site, others framing the box-like inside of the spaces. This type of design proved to be ideal for the scheme I had in mind since the stilts limit the form-giving a bit. With the idea of walls poking out of the grid of 4000x4000 stilts, and the play of longer sheltering walls and moments of porosity, the building becomes more than just a building. It becomes a duet with the wind, the landscape.

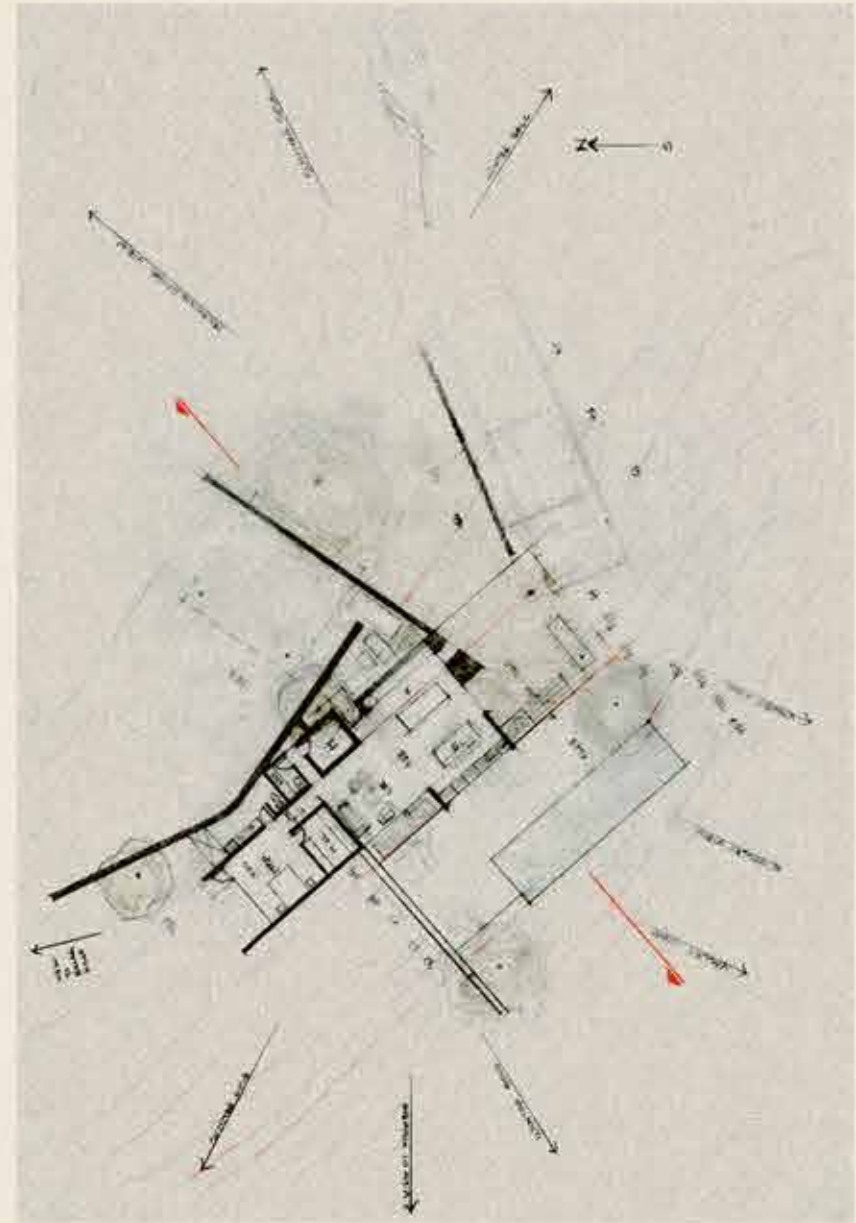




Figure 5.31: Sparring with the Wind floor plan (Archdaily, 2010)

Figure 5.32: Dwelling immersed in landscape (Archdaily, 2010)

Figure 5.33 Walls and roof poking out (Archdaily, 2010)

THE JOURNEY

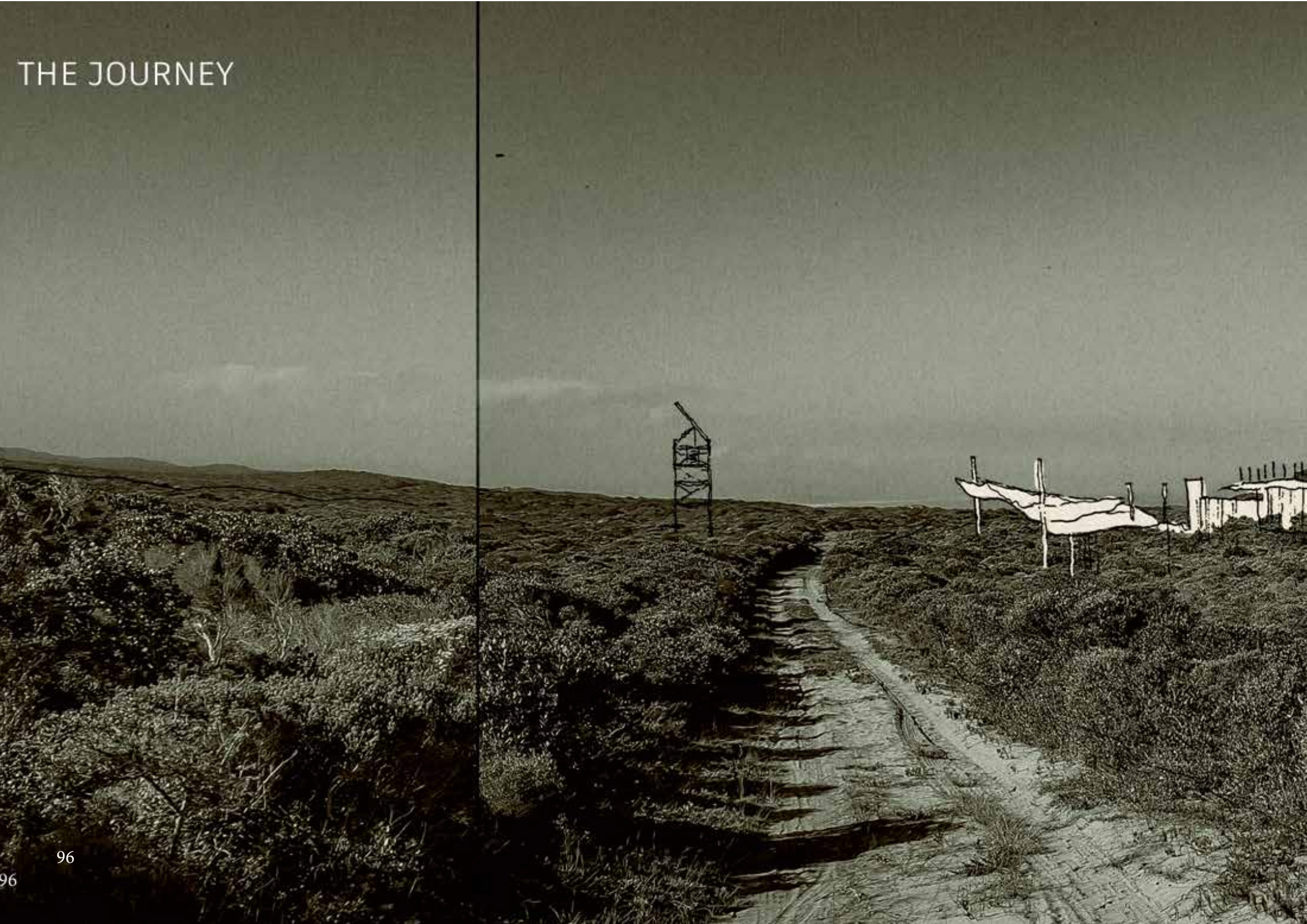
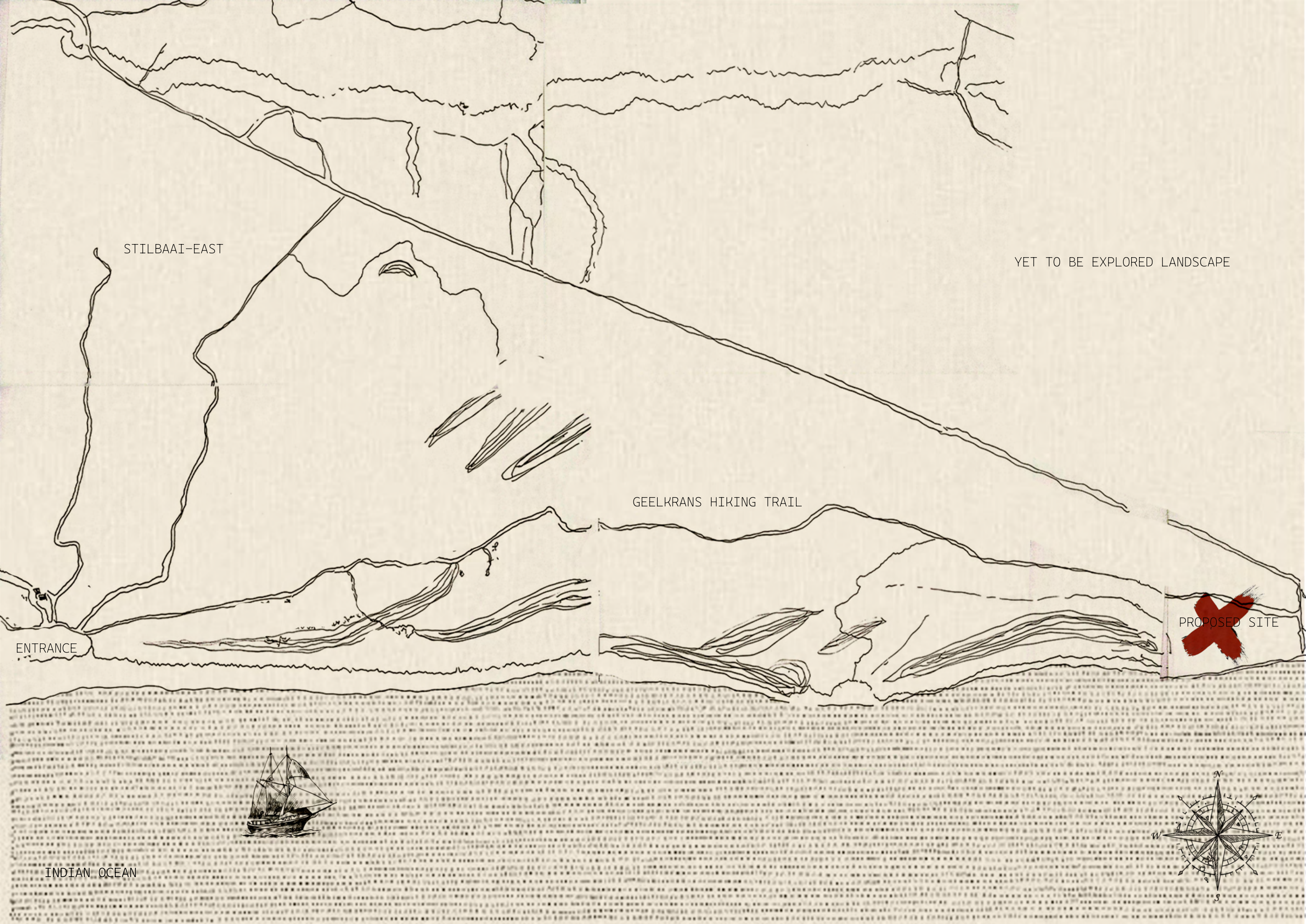




Figure 5.34: Hidden
amongst fynbos
(author, 2024)



STILBAAI-EAST

YET TO BE EXPLORED LANDSCAPE

GEELKRANS HIKING TRAIL

ENTRANCE

PROPOSED SITE

INDIAN OCEAN

FROM ENTRANCE

PARKING

RECEPTION

INSTRUCTOR'S CABINS

TO BE EXPLORED LANDSCAPE

GEELEKRANS HIKING TRAIL

OBSTACLE COURSE

CABINS

GALLEY

HEART

FLYBRIDGE

HELM

LOOKOUT

INDIAN OCEAN



****The Journey****

Daring traveler, once you have the map in hand that you received from the information desk at the Geelkrans Nature Reserve, you will walk along an existing hiking route heading east. Hidden among the fynbos, with hands reaching toward the sky and stars, you will only be able to see what is in front of you. Now and then, you might catch a glimpse of the landscape beyond. After about a two-and-a-half-kilometer walk, structures will emerge and poke out of the fynbos landscape.

You will arrive at a fork in the road. To your left, a water tower rises, its source from the ground beneath your feet, a reminder of your dependence on the landscape for the time you dwell on this site. Those brave enough have conquered the top, the view from above an experience I have yet to pen down in words.

To your right is the entrance to the camp, your home for the next ten months. Here, you will learn new skills, find joy, work hard, and, most importantly, get to know yourself and what you want to become.

And what lies ahead, you might ask? A sacred road paved straight down to the largest source of water on this earth, where the explorers of old spent most of their time searching for something... the Indian Ocean.

With your decision to turn right, you will be faced with mainly timber-framed buildings, sawn down by past generations of students just like you and crafted by the finest locals in the country. These light timber frames remind you of the detail, simplicity, and craftsmanship that went into the dwellings of those who walked this landscape years before you: the Khoi-Khoi. The light frames rest on heavier foundations—a solace for our feet—constructed from sandstone retrieved from the cliffs below. In the future, these timber structures might be removed, representing a seasonal exchange of the camp for the Dry Karoo or the Lush Highveld. The sandstone walls will remain behind as an embodied memory of the relationship between architecture and nature.

The first building you will encounter on your right is the parking shed. Here, the bus will take you to and from the campsite. Specialized equipment for all outdoor activities is stored in designated units, including tents, scuba and backpacking gear, mountain bikes, and cleaning equipment for the visvywers. This is also where your instructors will be parked.

Trailing up from the parking area is a staircase that will lead you up to a deck.

From here, you are no longer eye-to-eye with the fynbos. Ascending the stairs becomes a ritual of crossing the threshold between earth and sky, allowing you to peer into the vast expanse of the landscape surrounding you. Being raised above the ground exposes you to other elements of nature, particularly the main resident of the coast: the Wind. Its presence will greet you as the delicate fabric above your head dances in the breeze, serving as a daily beacon of the Wind's temperament. Some days, the Wind will be harsh, while on better days, it will be only a whisper.

Moving into the reception will be an effortless motion, as its structure opens onto the deck, blurring the line between inside and outside. When your parents become curious about where you stay—and believe me, even parents can have a childlike tendency to be nosy—they will be welcomed by a coffee

station and some seating to rest while all the forms for your adventure are filled out. If your profession is that of an instructor or a chef, you will continue down the walkway straight to your cabin, your shelter for the days you are needed on site. The cabin is small but cozy, with a central gathering space where you can get to know others or reunite with old friends.

****The Heart of the Camp****

If you are not an instructor, it is advised that you turn right when exiting the reception area. Here, gently brushing the sky, overhead frames guide you to more stairs. As you ascend these stairs, the distant horizon, where the ocean meets the sky, comes into view. Take a moment to breathe and soak in the scenery before you reach another fork in the walkway. This time, to your left, is the social area—a space for gathering within a shelter. To your right is where you will rest and recharge for another adventure tomorrow.

When you decide to walk toward the ocean that beckons you, a pair of steps descending into the landscape greets you. Here, intimate gatherings around the fire will become a ritual, where stories of the good ol' days and dreams of the future are recounted. Fellow students become family, and a song arises under a bright new moon. This space will become the heart of the

camp, a fusion of fire, water, earth, and air.

For now, you probably want to take a rest first, find a place to lay your head and unpack your belongings. More frames serve as beacons, guiding you to your cabins. You can wake up each day to the view of the ocean on your doorstep. Louvre systems allow for unobstructed airflow into the rooms. With a few choices, you can select a bunk on the top or bottom, close to the windows or near the corridor: there's even a choice between the east wing and the west wing. Since the ratio of boys to girls varies each year, provisions are made to create smaller or larger compartments using a railing system overhead. The bathrooms are also adaptable, featuring a movable divider wall.

The corridors converge where an ordinary washing room becomes an adventure of its own. Wind catchers, an ancient African method for cooling buildings, harness the wind by drawing in its breeze and letting the inside air out. By controlling a pulley system

to open and close louvres at the top and bottom, you can experience the thrill of managing airflow, almost like opening and closing the sails of a ship. This wind-harnessing area spills into a social gathering space for community events.

****The Galley****

After journeying to the cabins and taking a rest, you will most likely yearn for a meal. As you walk back toward the fire pit, you will pass the galley (a boating term for a kitchen located inside or on a deck). Inside the galley are multiple cooking stations that will be used to learn cooking skills and take turns preparing meals for the group. It becomes a social space that opens up to the landscape, where students will eat together and be briefed on their daily programs.

****The Flybridge****

As you walk further along the deck, you will approach the flybridge (a boating term for an area on top of a boat with a steering station and social space) mentioned earlier. Here, various social activities can fill the gaps between adventuring in nature, resting, and learning. Another pulley system opens up the games room to the deck, with breakaway study spaces in the back for when you feel less adventurous in the social setting. Stairs ascend to an outdoor deck, a space where you can breathe in the cool coastal air and feel the breeze on your face. Below deck, at the farthest end, a view of the larger landscape becomes a focal point in the living room. With a fireplace, it serves as a cozy retreat for those days when the coastal weather offers no mercy to its travelers.

****The Helm****

When you reach the end of the deck at the social area, another deck stretches out toward the ocean. A timber building rises among the fynbos, resembling the steer of a ship: the lecture halls. A set of frames guides you toward the building. It is a bit farther than the rest of the camp, offering a chance to take a deep breath of fresh air before skills training begins. This spot will equip you to venture into the real world again after these ten months.

When you arrive at the entrance after your journey, take a moment on the deck to gaze out at the ocean, yearning to be an explorer on the ship. Upon entering the building, you might feel as if you are indeed on that ship. To your left, more study rooms await you, including a formal classroom.

The true highlight of this building is the informal hall. As you enter to your right, you are greeted by high ceilings wrapped in textile. Once the louvre system facing the ocean is

opened, the cool sea breeze creates its own waves, dancing among the textiles. In this versatile space, you will learn practical skills, such as CPR on dummies and how to tie various knots. It becomes a beacon where all the stories of the relationship between the nomad and the wind can be heard. You, as the nomad and the student, are in control through acquiring skills and managing the power of the wind with the louvres. The Wind's presence is felt through the moving textiles, and the actions of the Wind and the nomad become intertwined in an intricate dance. While it is advisable to soak in the sacredness of this space for as long as possible, your journey is not over yet.

As you move outside the building toward the east, you find yourself next to high walls, catching glimpses of the landscape beyond through the spaces between them. As you round the corner, it becomes apparent that these are not just any walls, but timber-framed climbing walls designed to express your adventurous spirit and test the rope-tying skills you just acquired.

****The Adventure and the Solitude****

Zooming out from the camp itself, two routes stretch into the landscape, each guided by frames and textiles blowing in the wind—a constant reminder of the life surrounding you. On the western side, a route descends from the cabins into the fynbos, leading to an obstacle course that tests your teamwork and problem-solving skills. To the east, a path stretches closer to the ocean, starting from where you last stood next to the climbing walls. Walk southeast toward the cliffs until you reach a deck with an overhanging textile shading net similar to the one at the beginning of the route. This extension of the ship (lecture hall) serves as a lookout point on the steep cliffs that stretch along the coast of Geelkrans, from which the Reserve gets its name.

Here, take a moment to breathe in the sight of the ocean, with the town of Stilbaai visible in the distance and the campsite behind you.

For a sacred moment, unsheltered on
the edge of a cliff, it becomes just
you and the Wind. Welcome to Serenity.

THE ARRIVAL

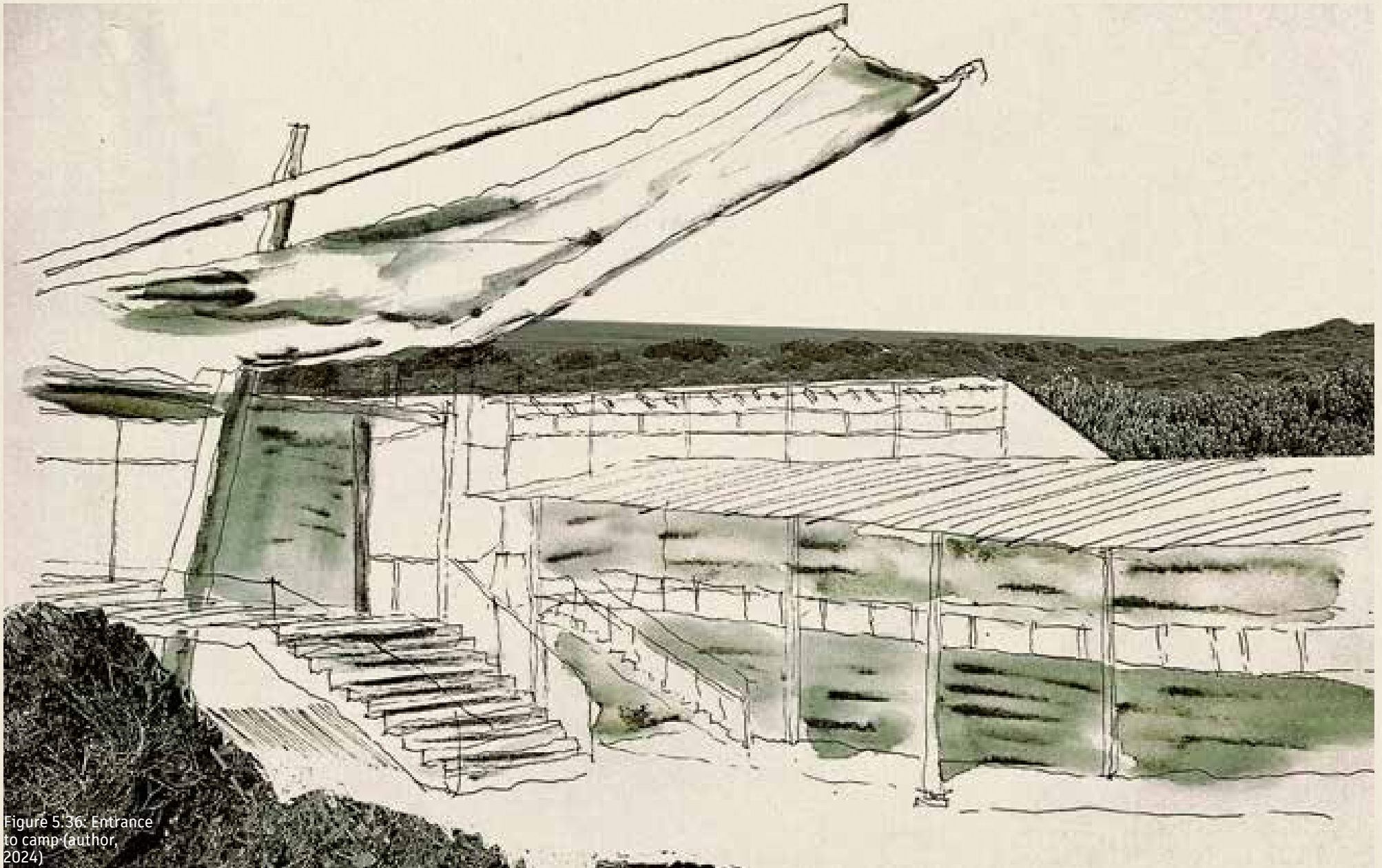
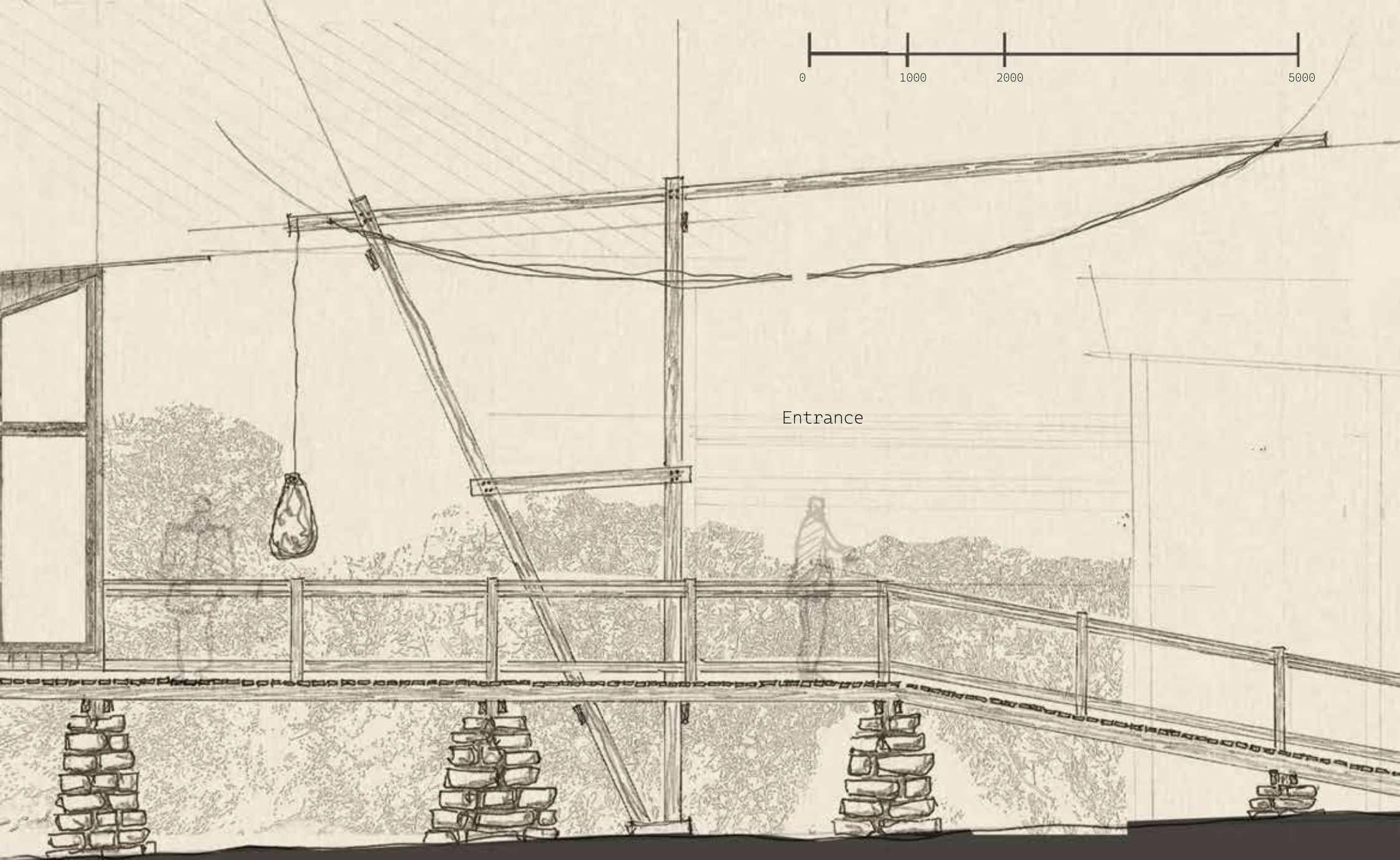
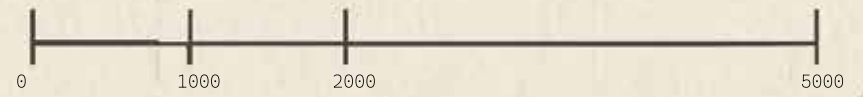
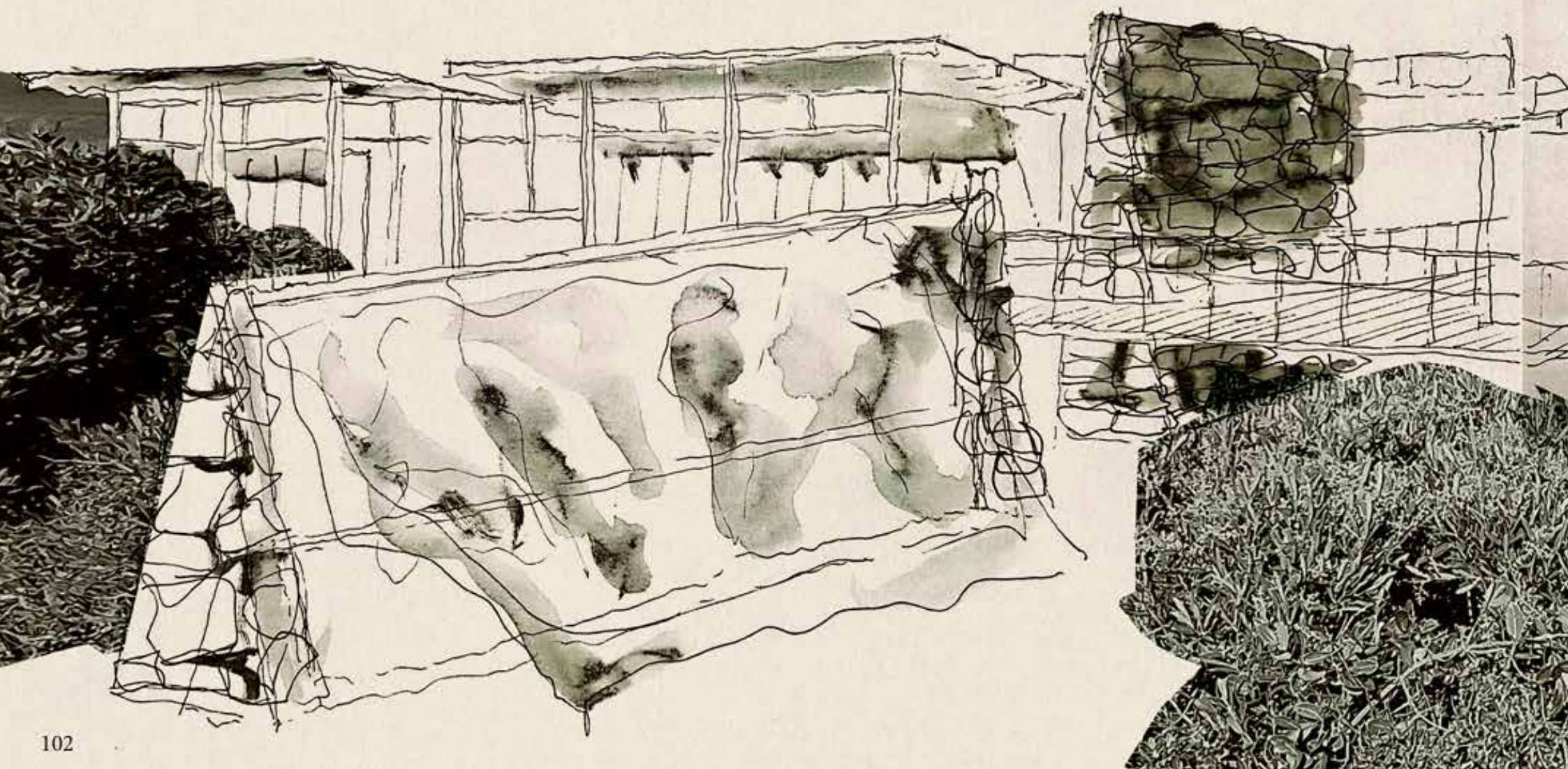


Figure 5.36: Entrance to camp (author, 2024)



Entrance



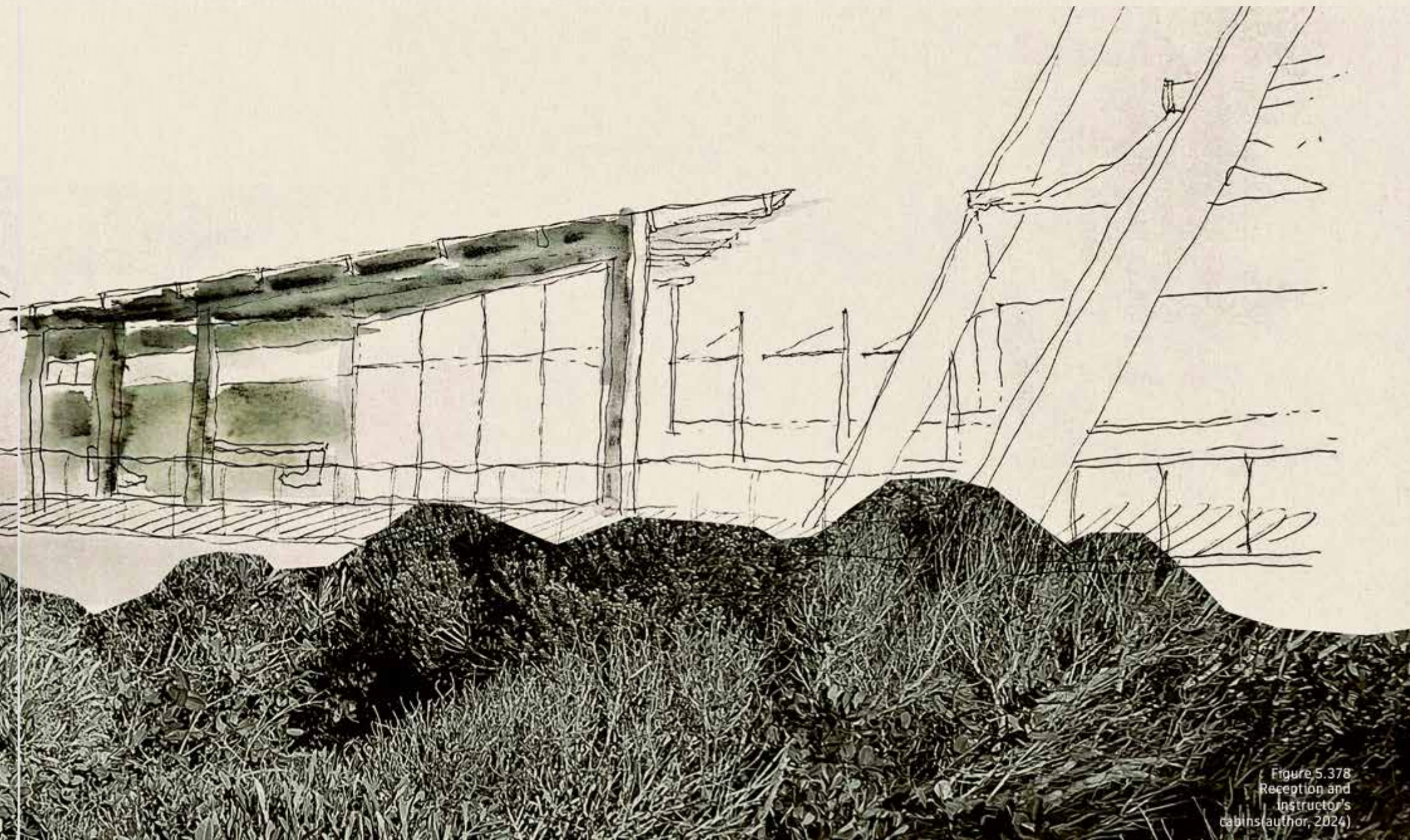
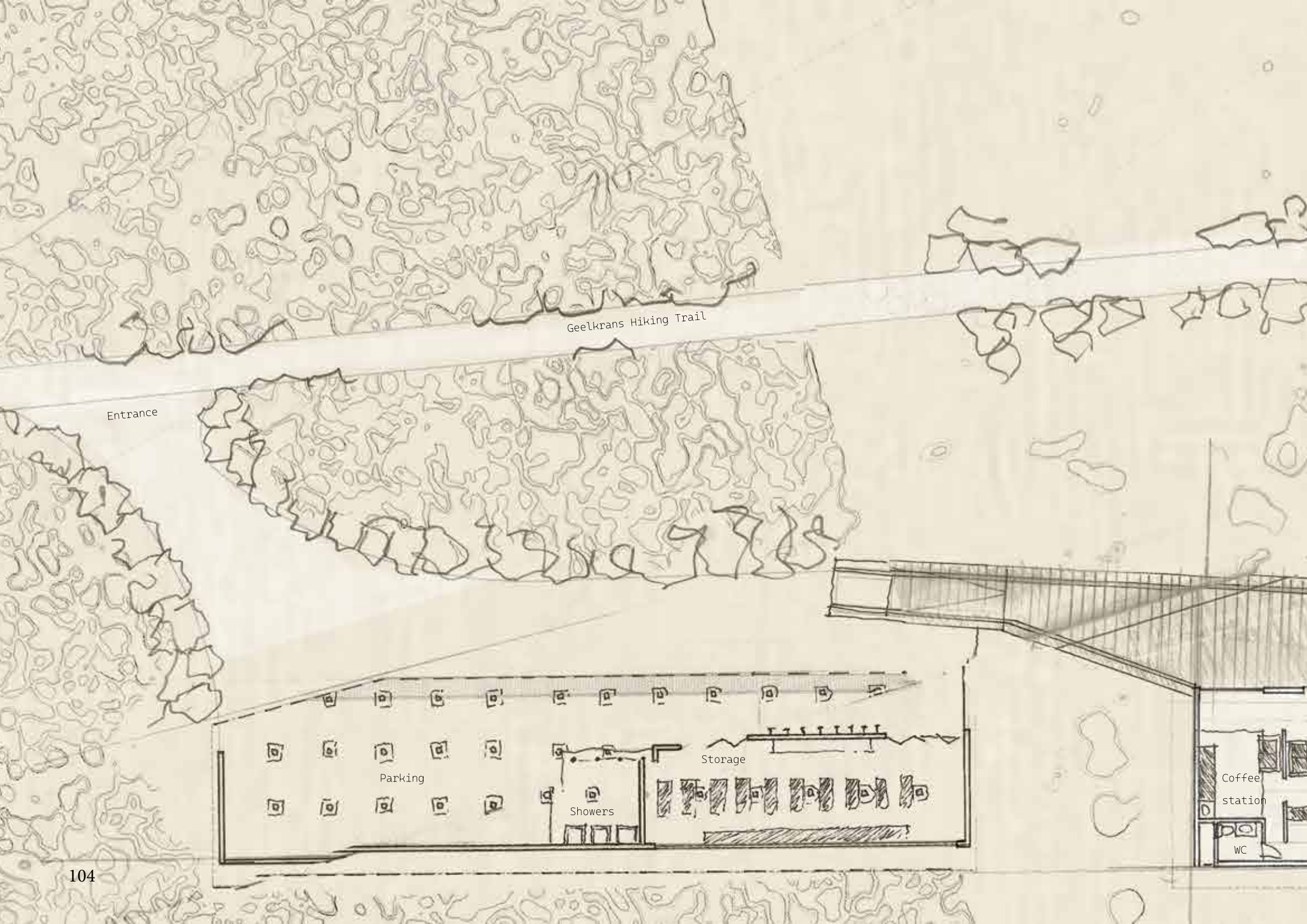


Figure 5.378
Reception and
Instructor's
cabins (author, 2024)

Cabins (author, 2024)



Geelkrans Hiking Trail

Entrance

Parking

Storage

Showers

Coffee
station

WC

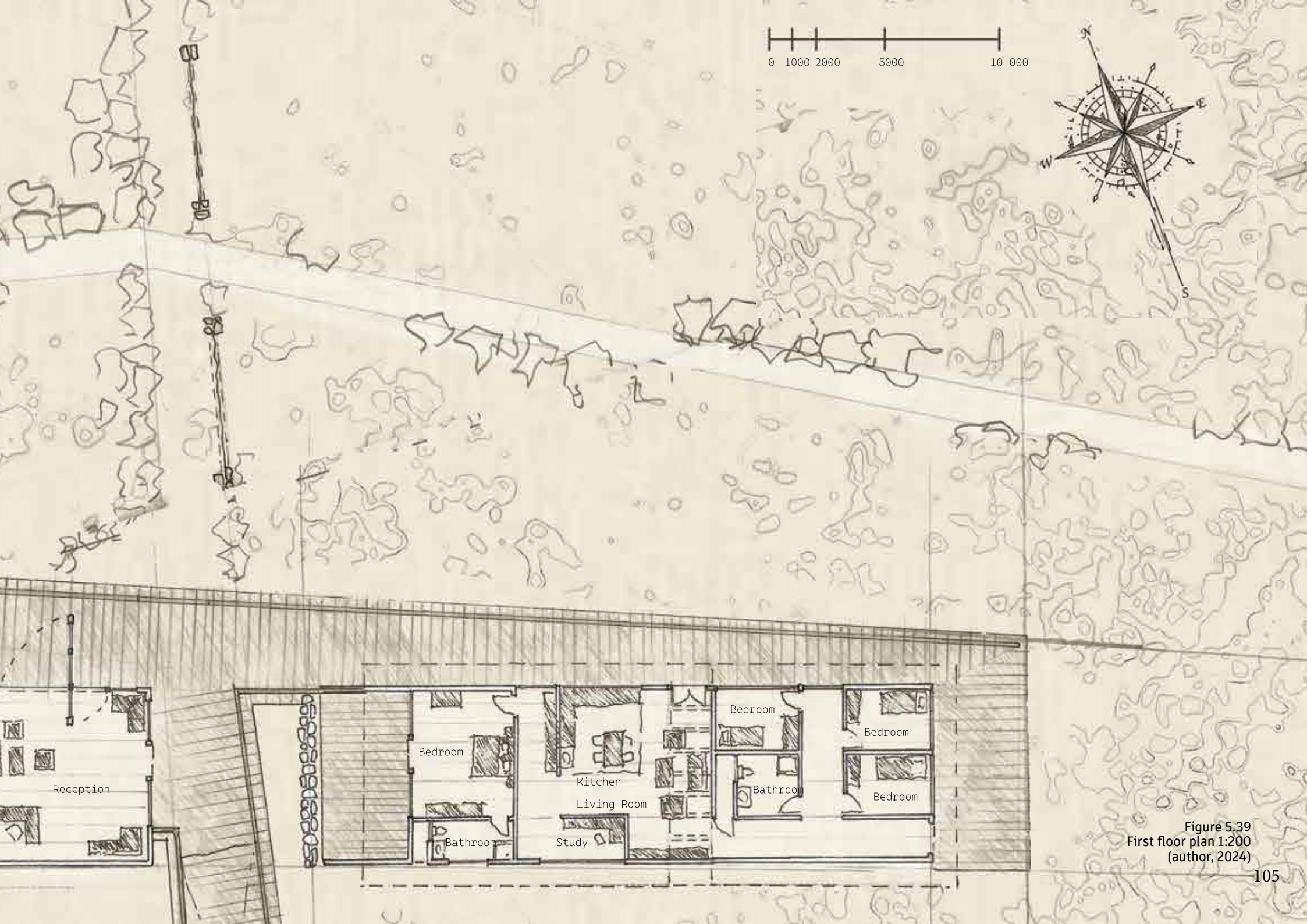
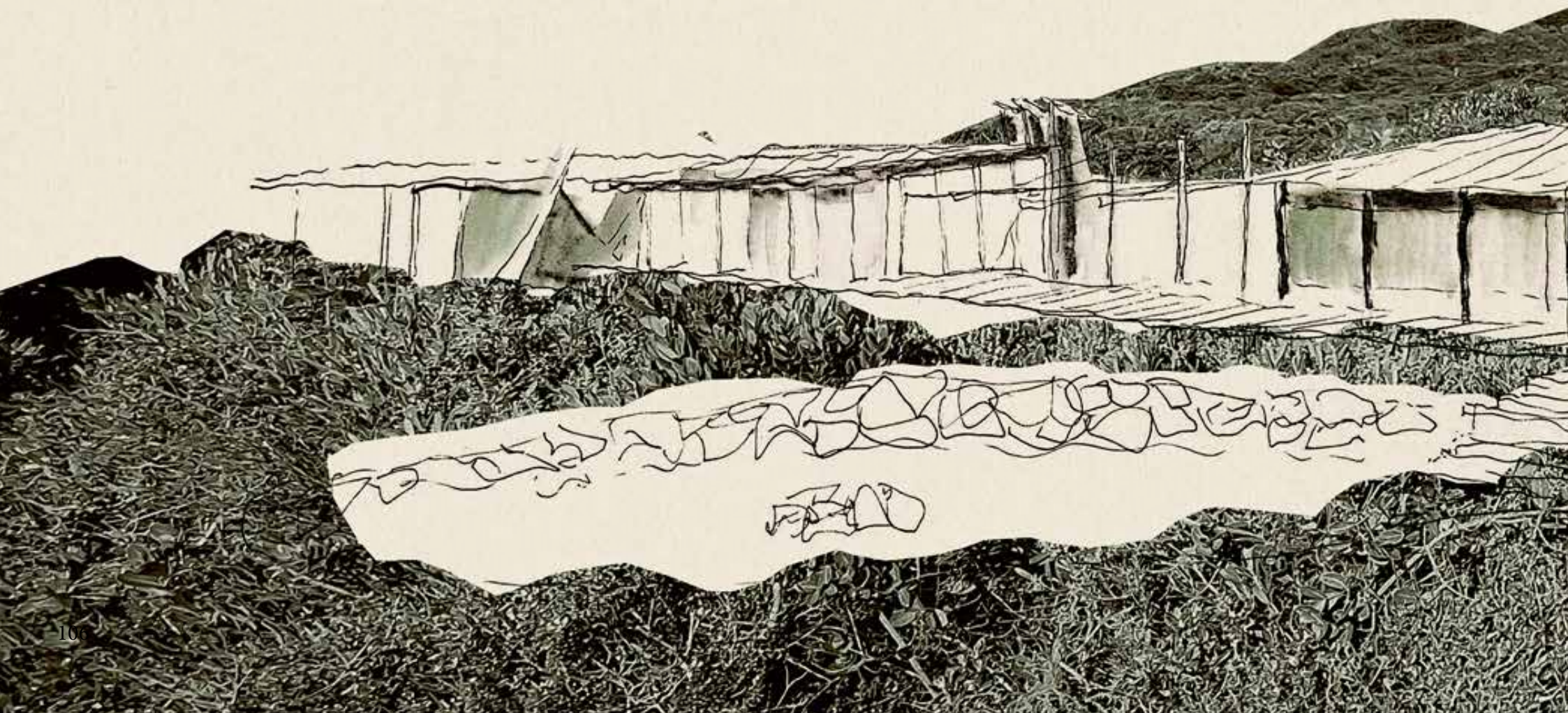


Figure 5.39
First floor plan 1:200
(author, 2024)

THE HEART



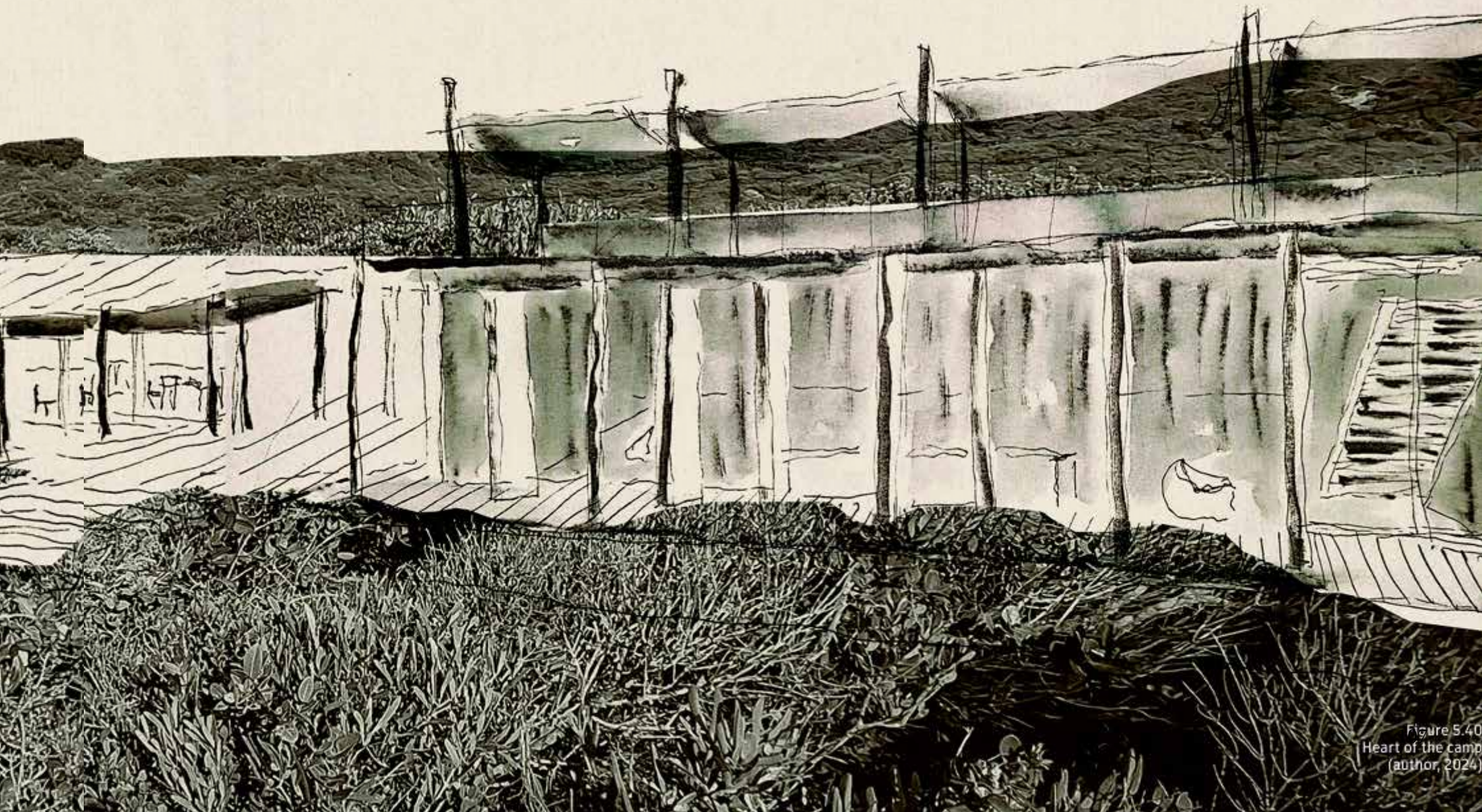


Figure 5.40
Heart of the camp
(author, 2024)



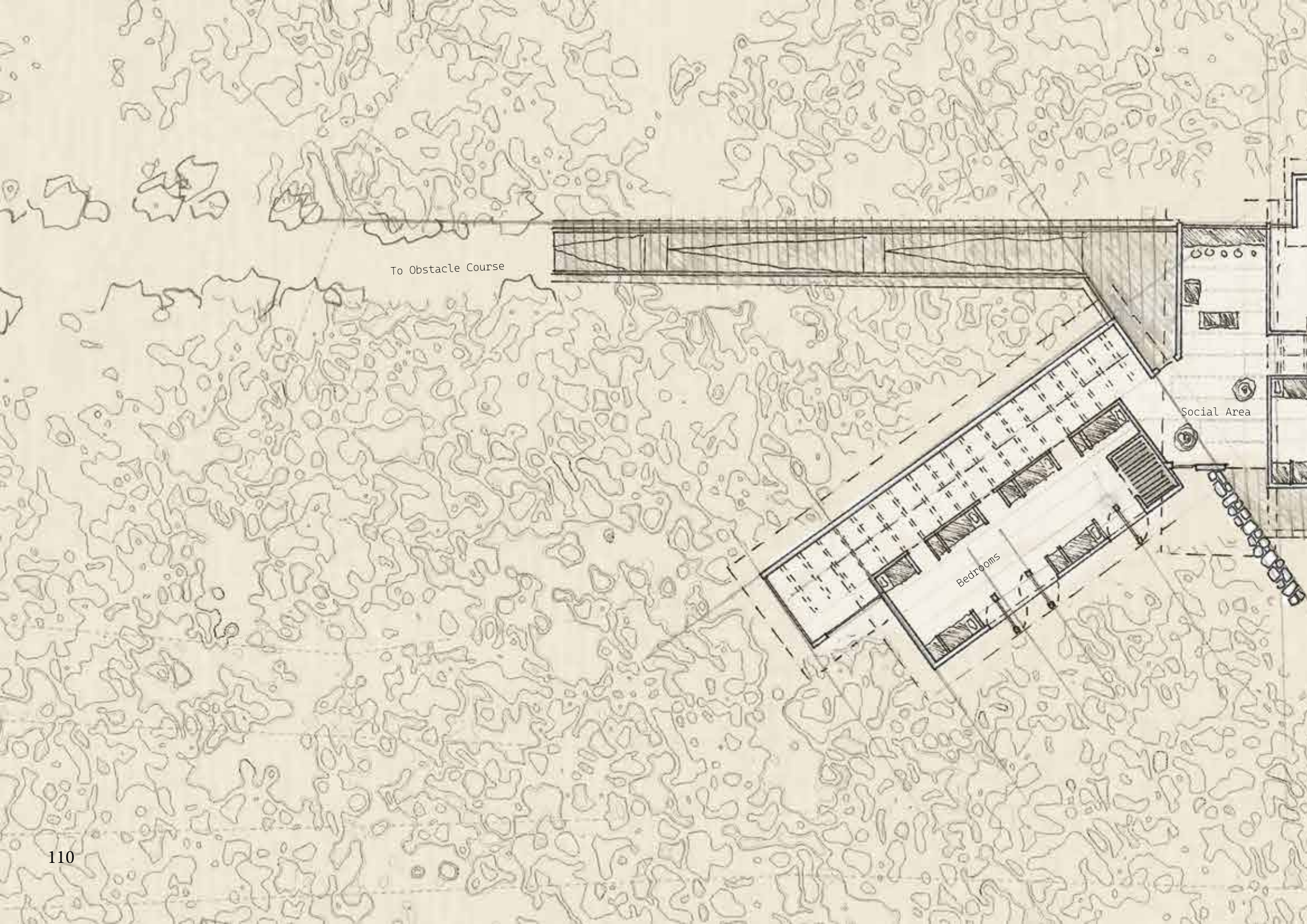
Firepit

Kitchen

Walkway



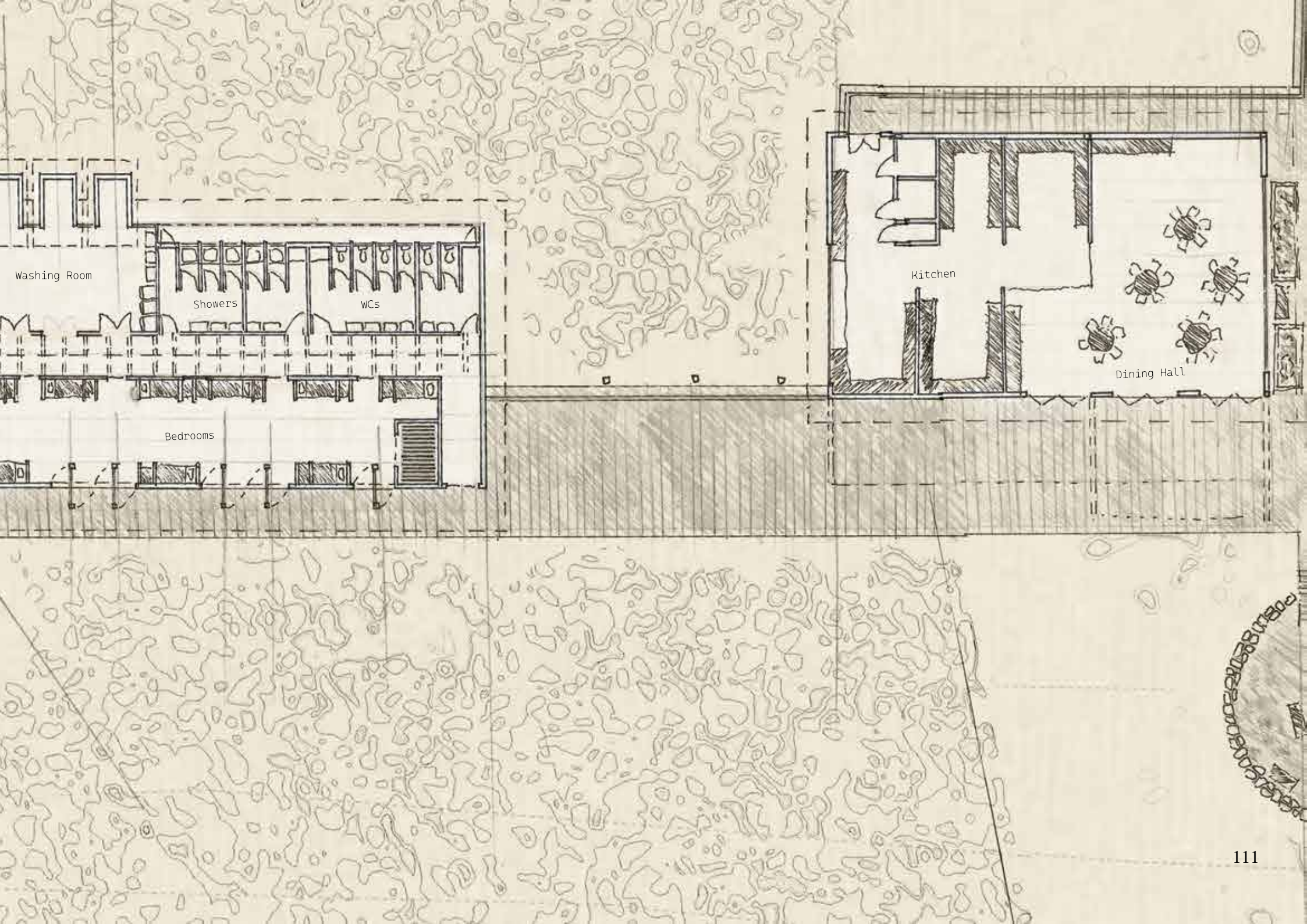
Figure 5.36
Section BB 1:200

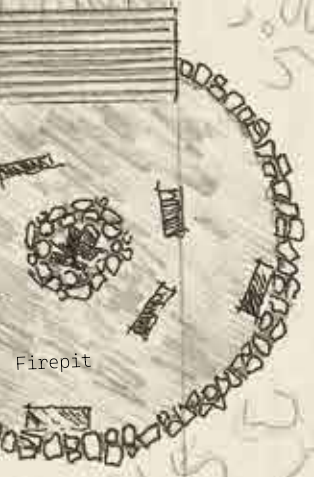
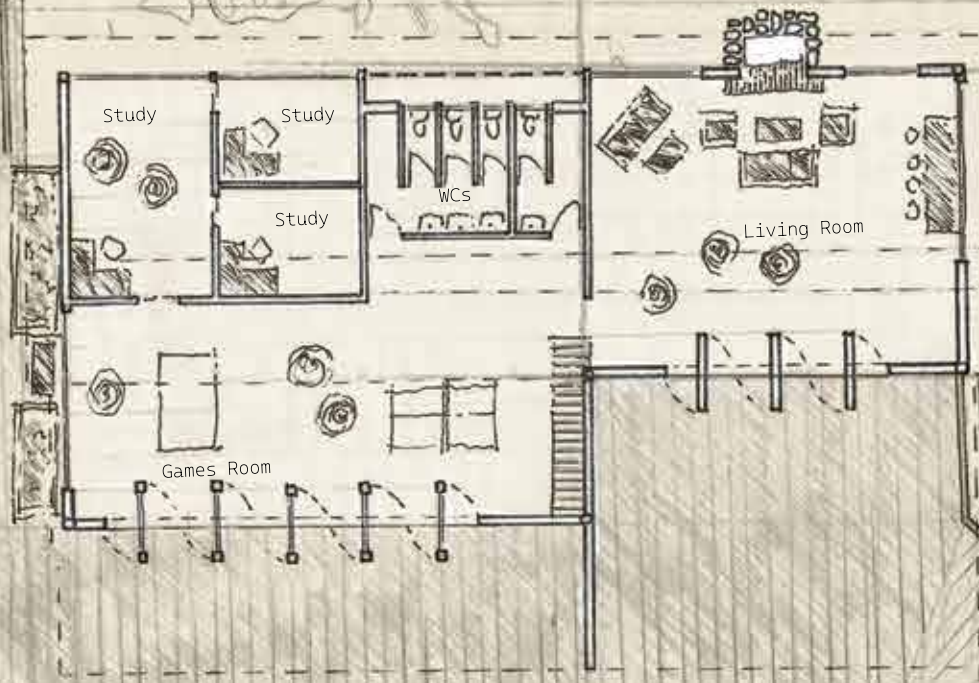


To Obstacle Course

Social Area

Bedrooms





To Lecture Hall

THE CABIN

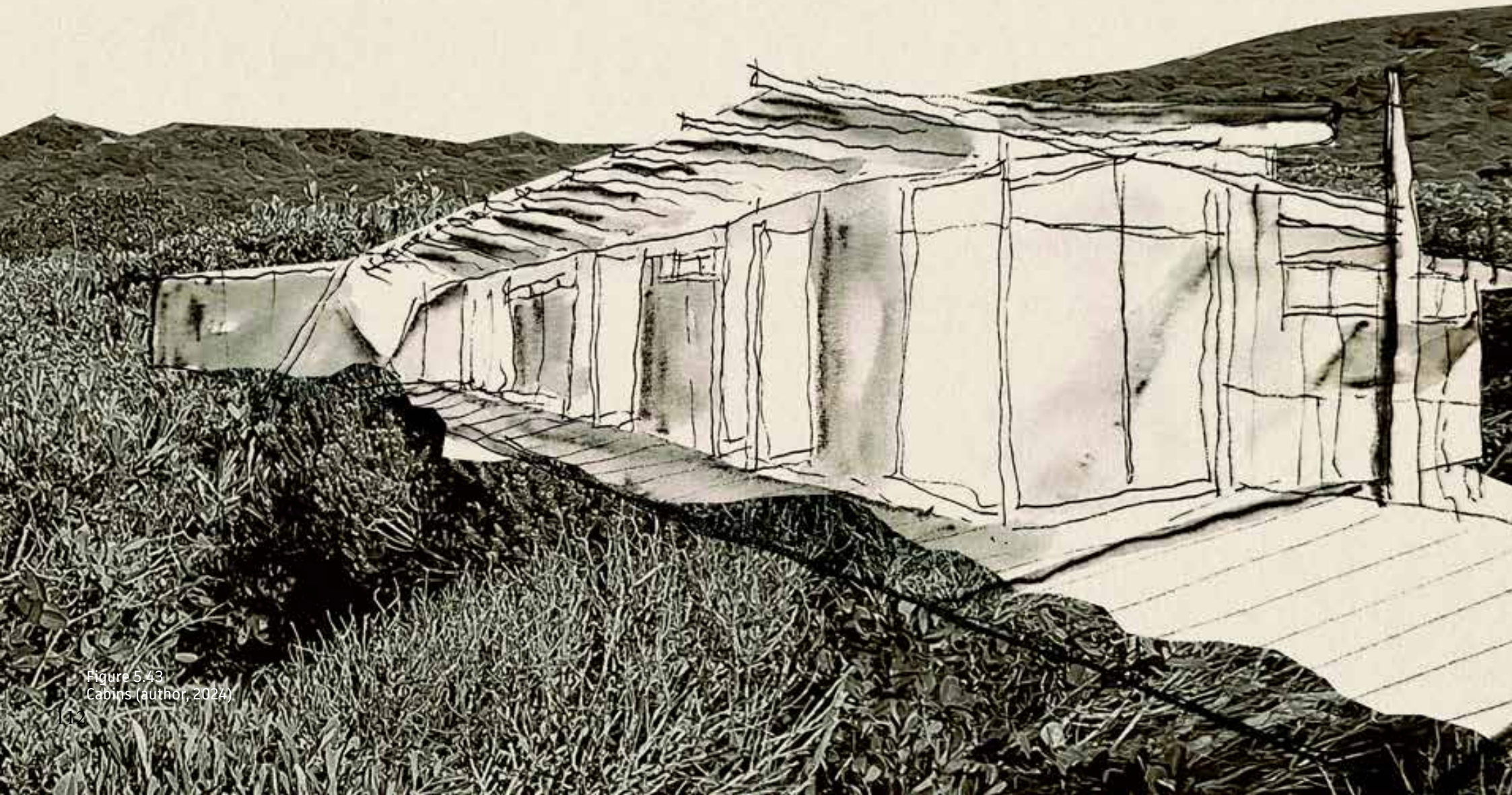


Figure 5.43
Cabins (author, 2024)

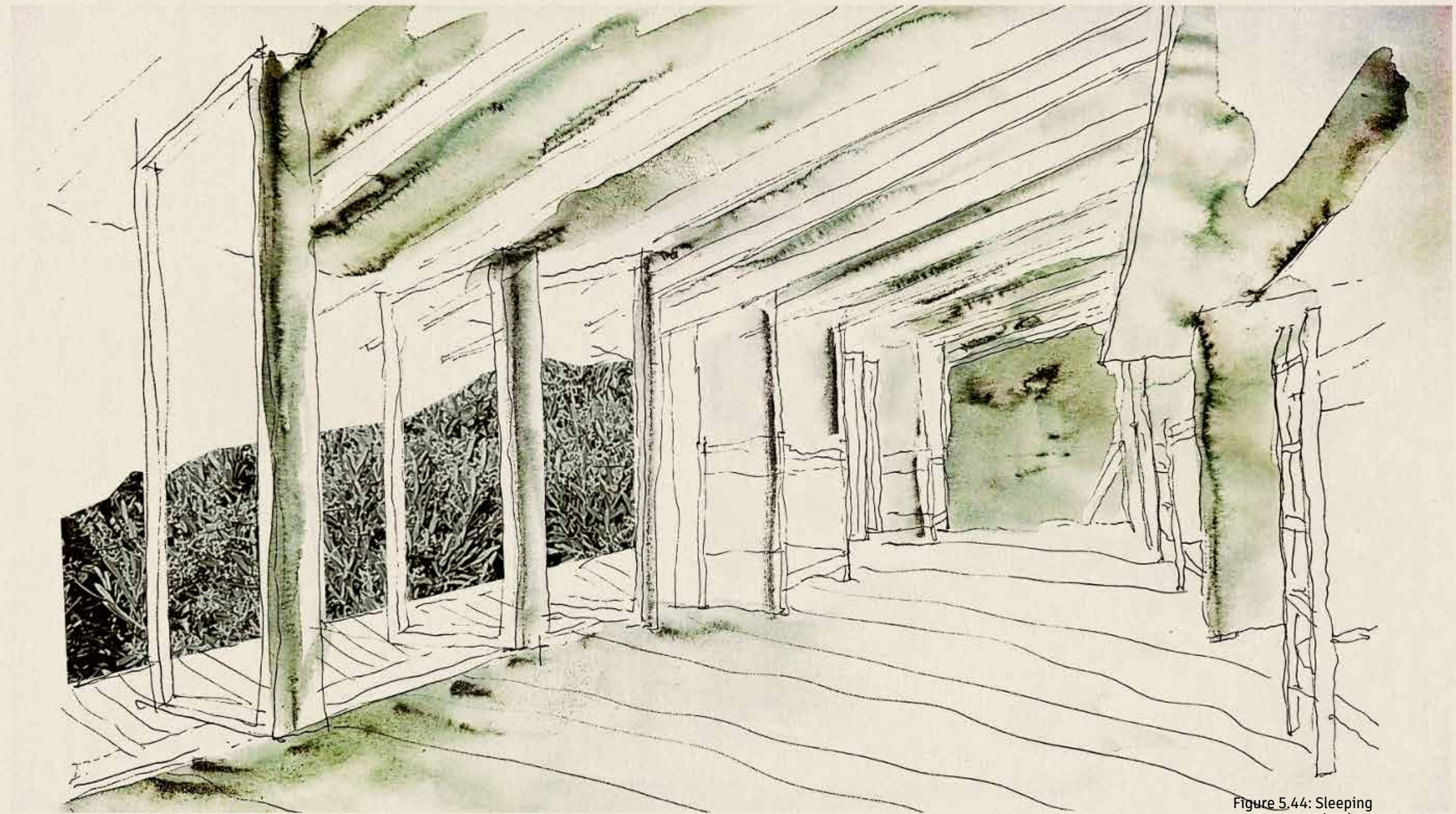


Figure 5.44: Sleeping quarters (author, 2024)



Figure 5.55
Wind catcher
mechanism (author,
2024)



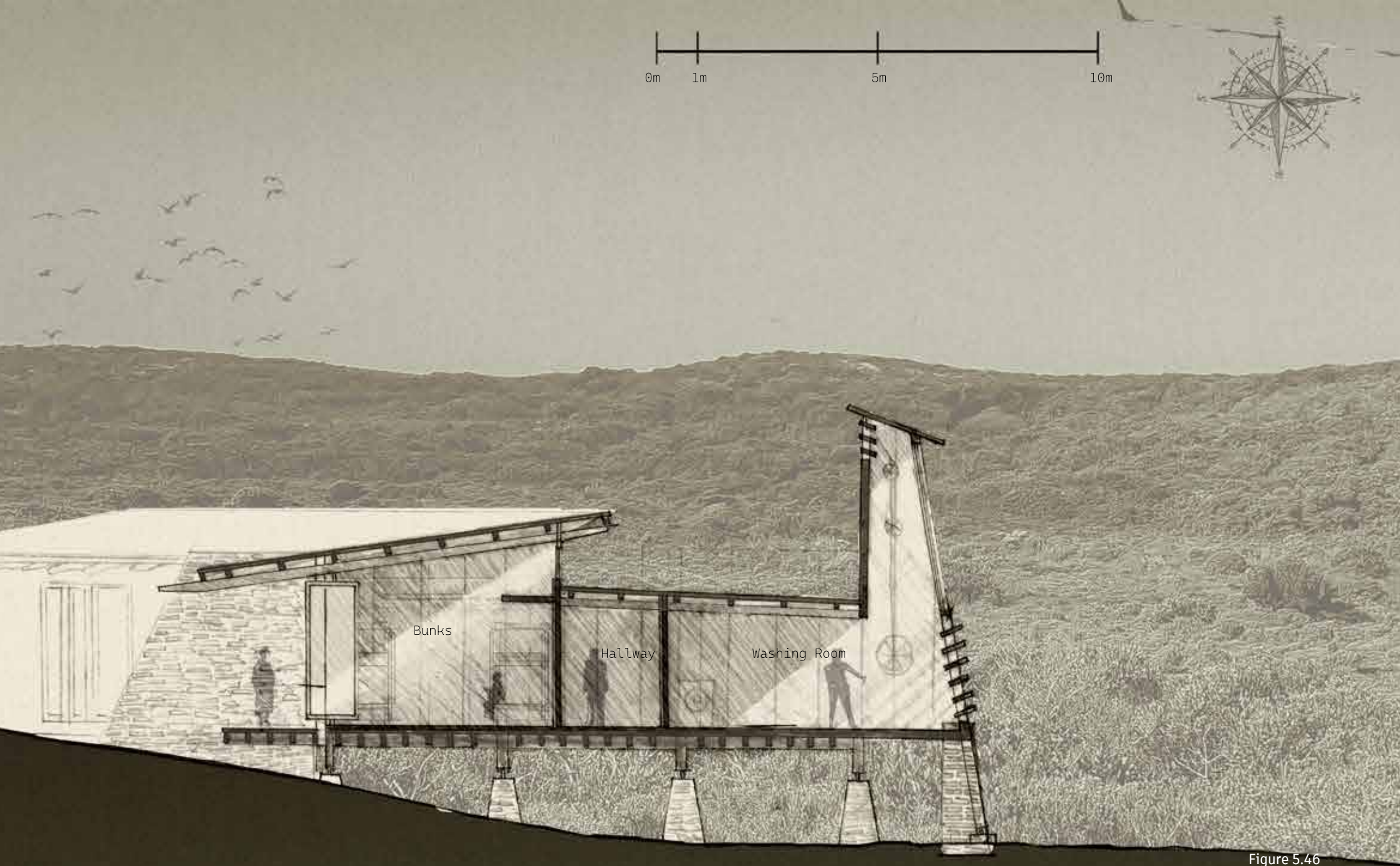


Figure 5.46
Section CC 1:100
(author, 2024)

THE GALLERY

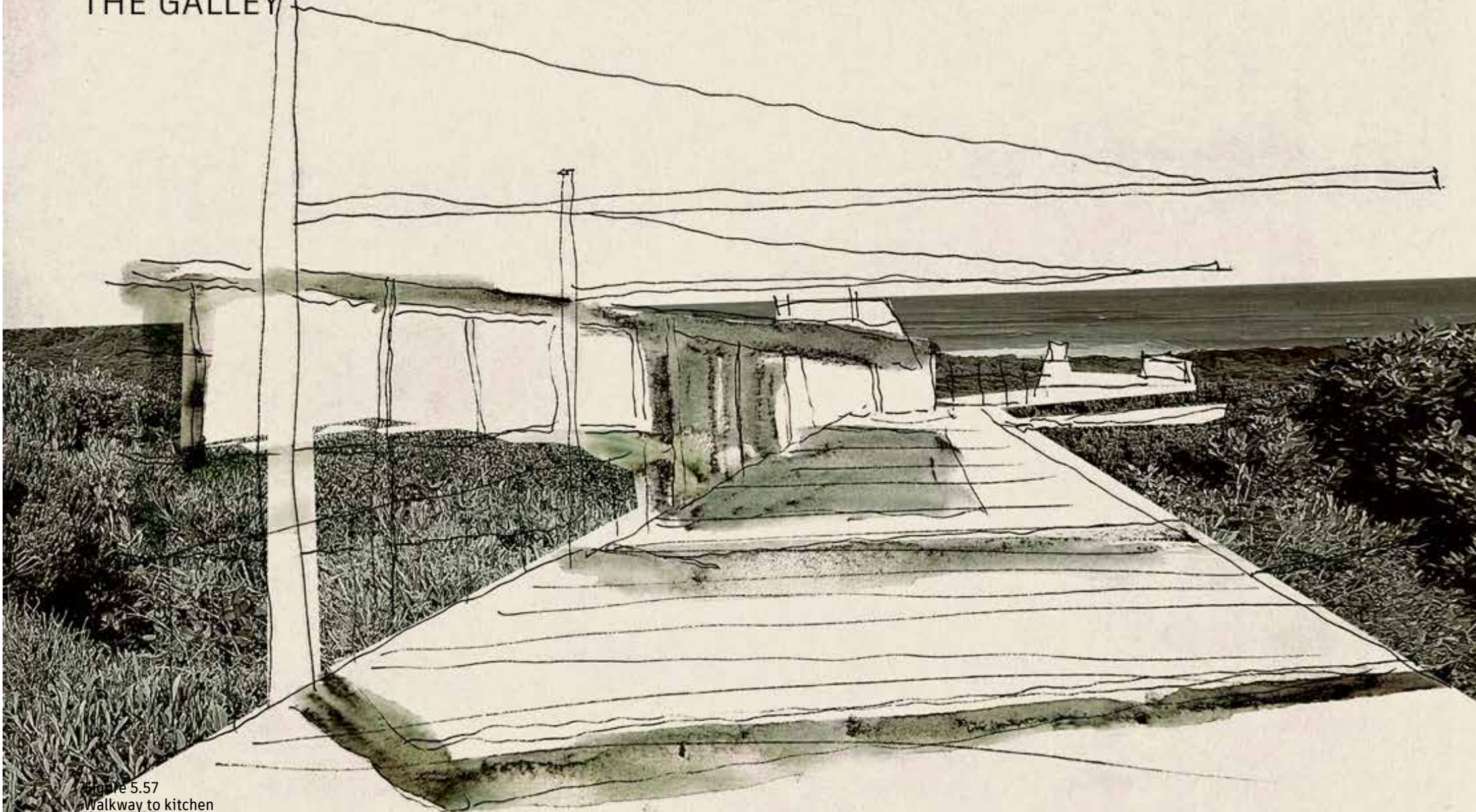


Figure 5.57
Walkway to kitchen
(author, 2024)

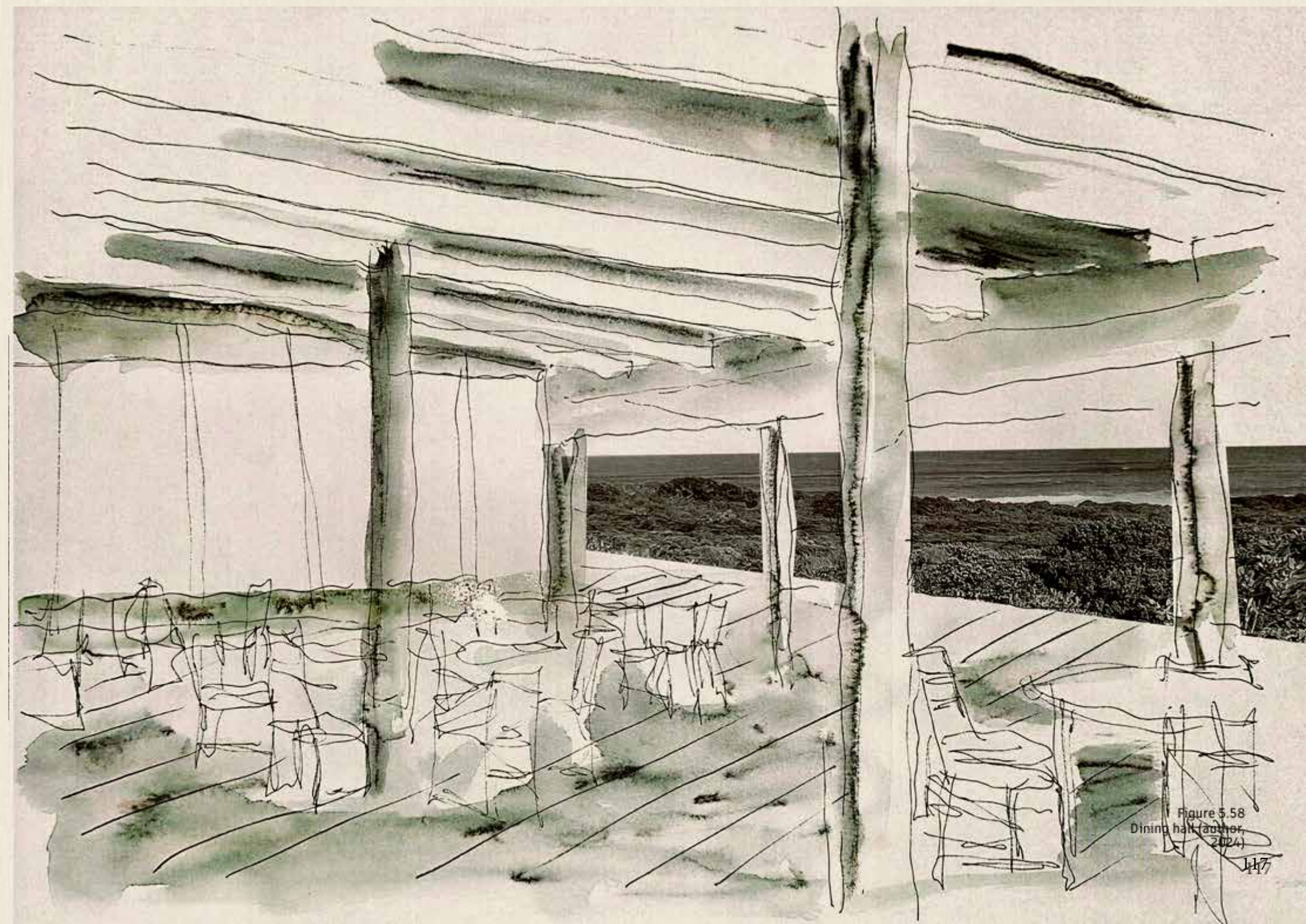


Figure 5.58
Dining hall (author,
2024)

THE FLYBRIDGE AND DECK

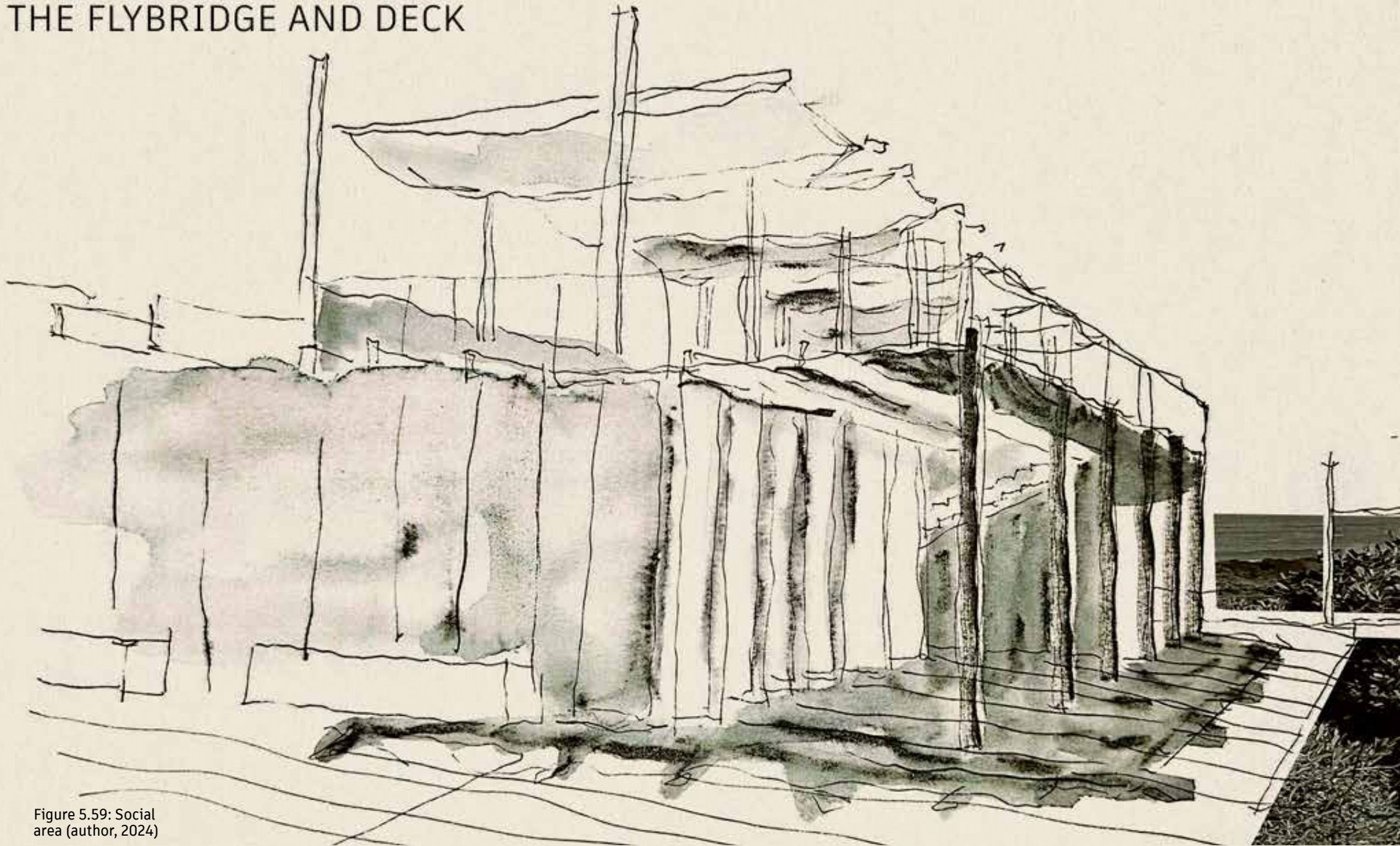


Figure 5.59: Social
area (author, 2024)

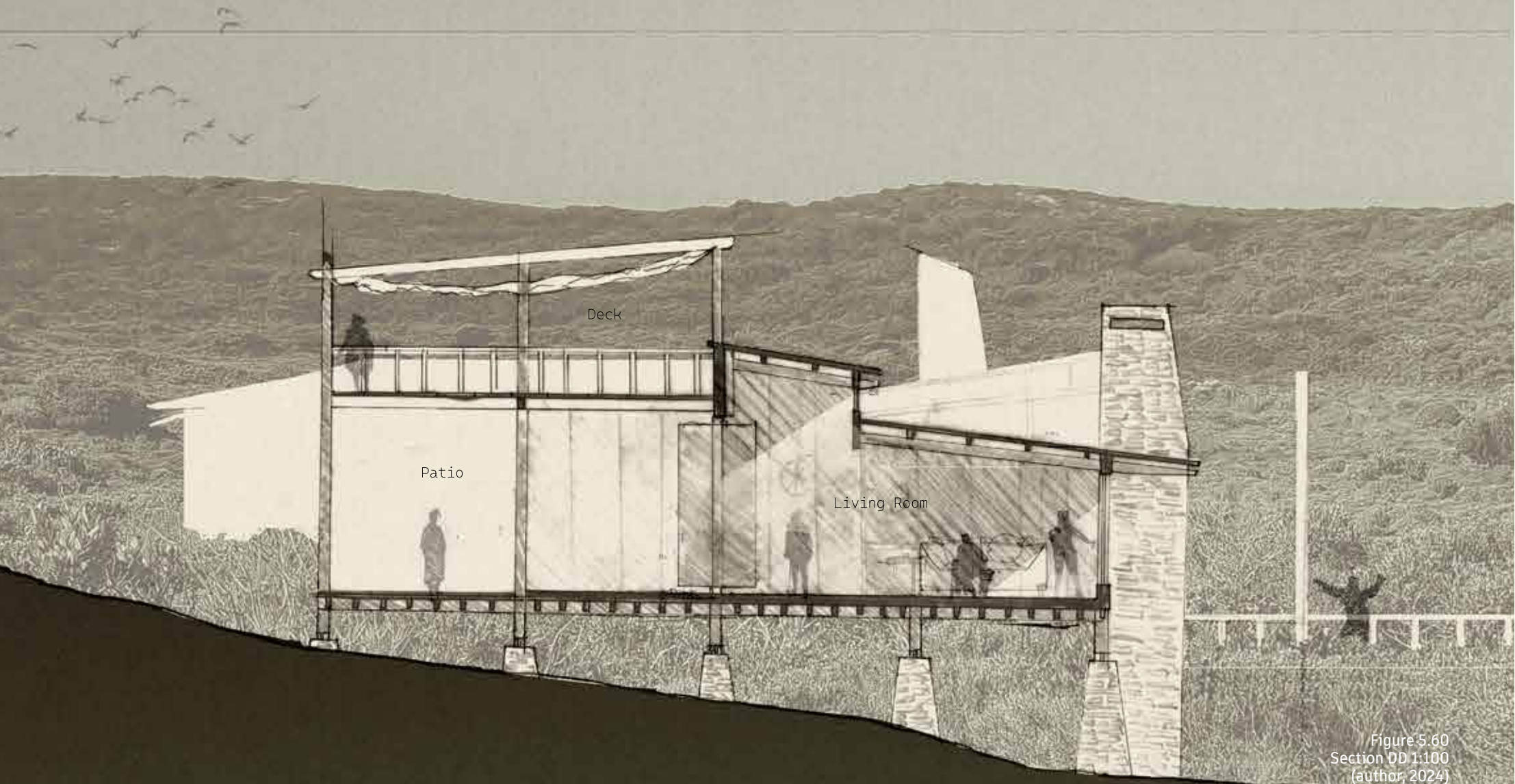


Figure 5.60
Section DD 1:100
(author, 2024)

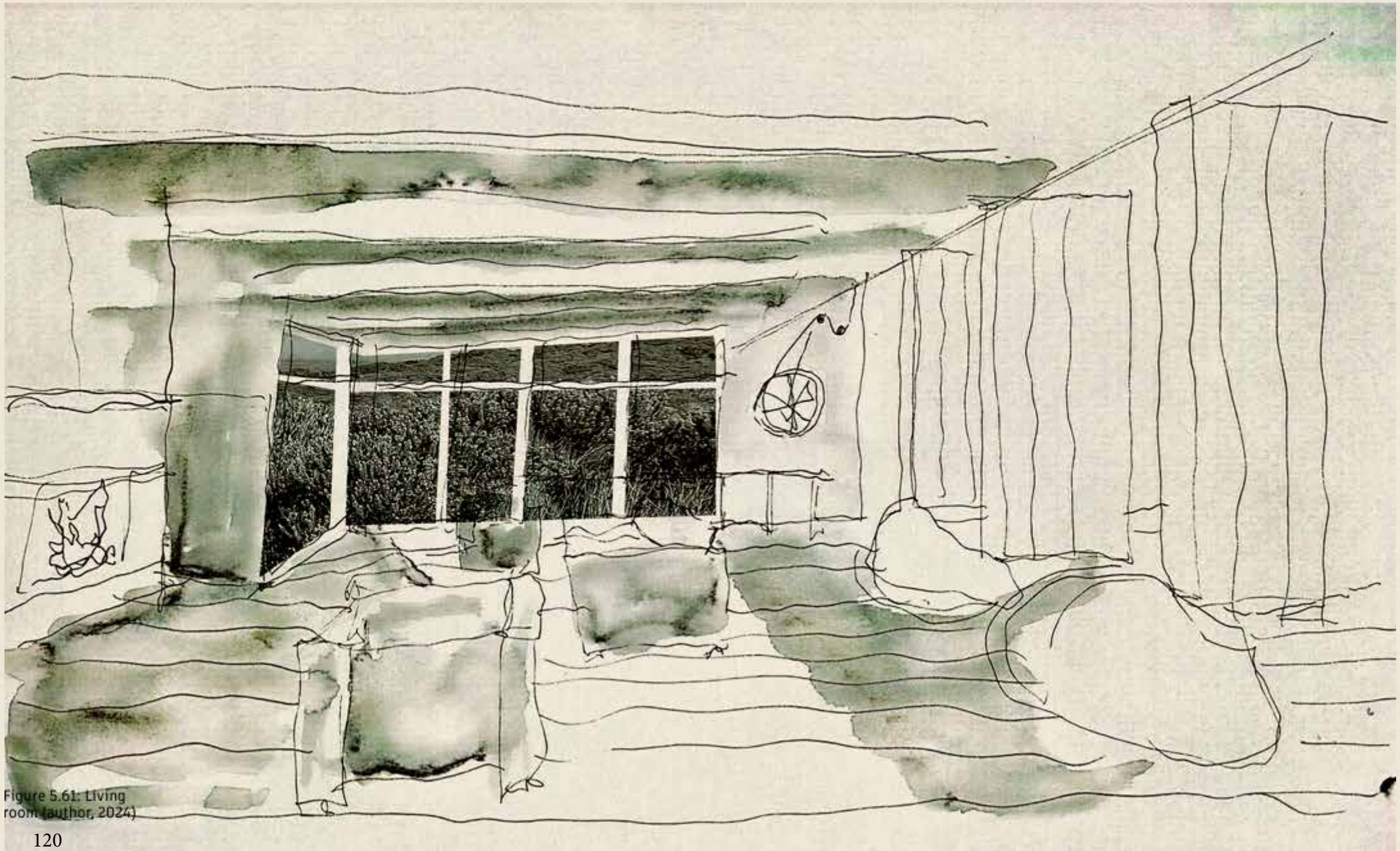


Figure 5.61: Living room (author, 2024)

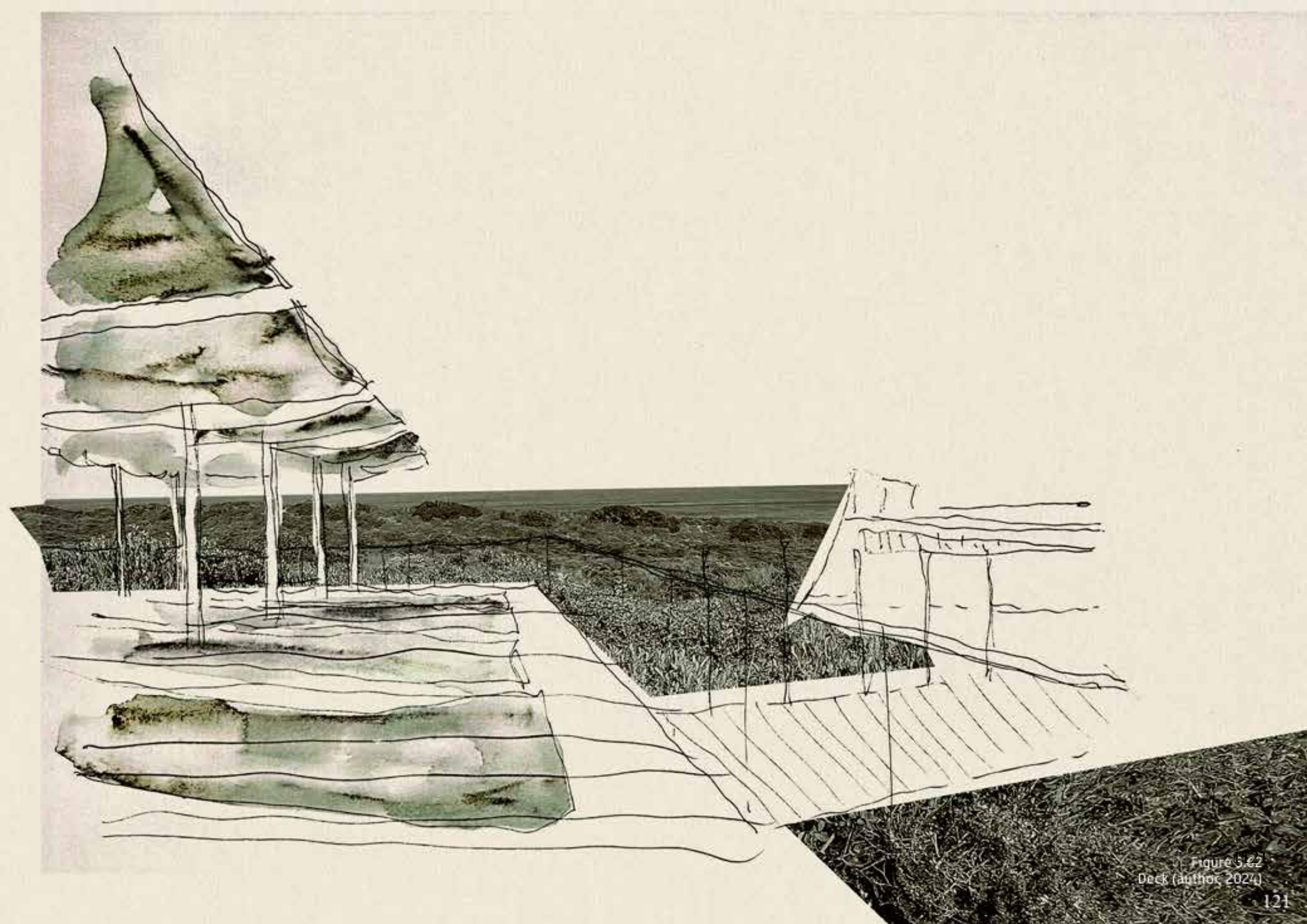


Figure 5.62
Deck (author, 2024)

THE HELM

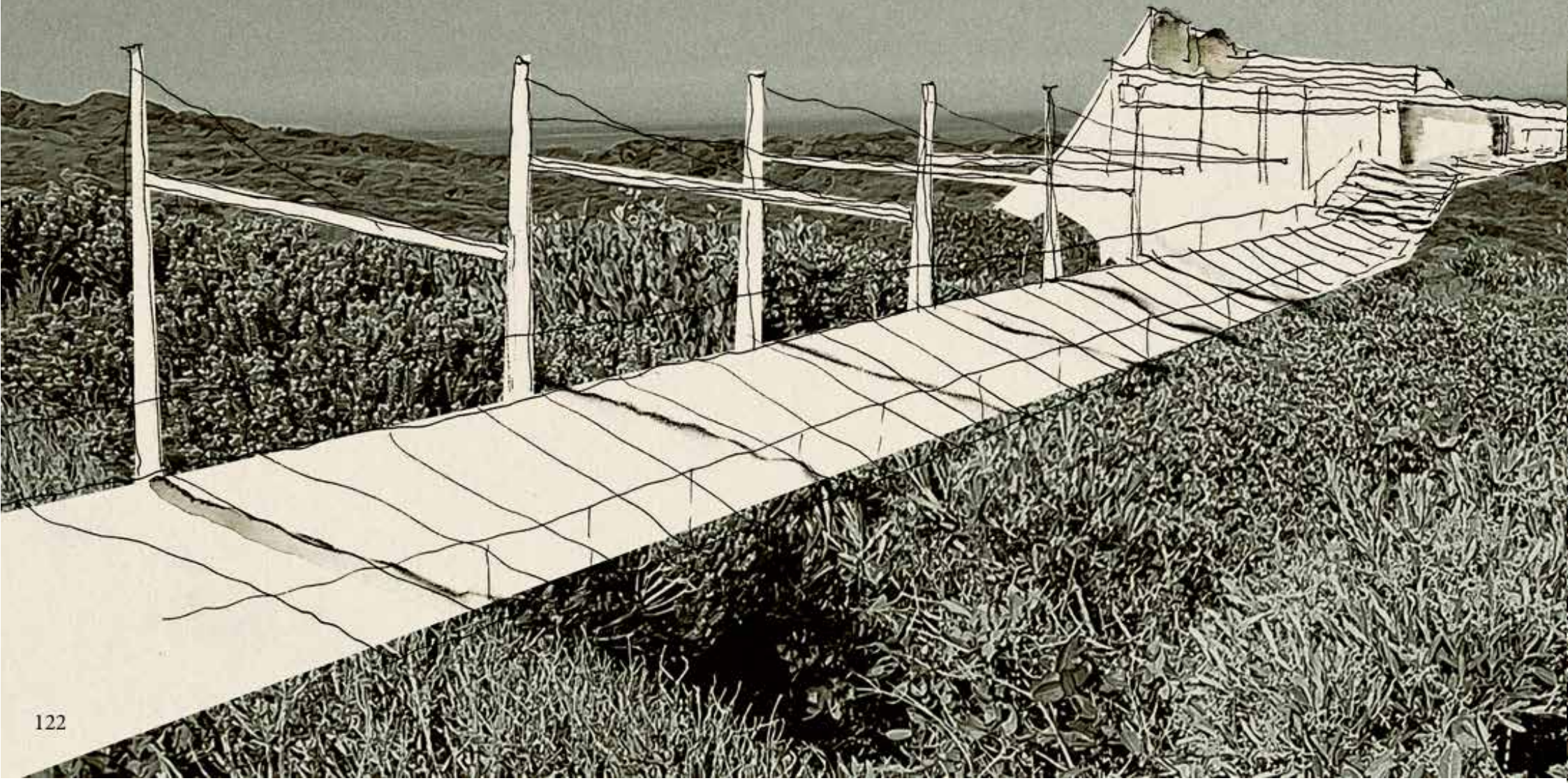
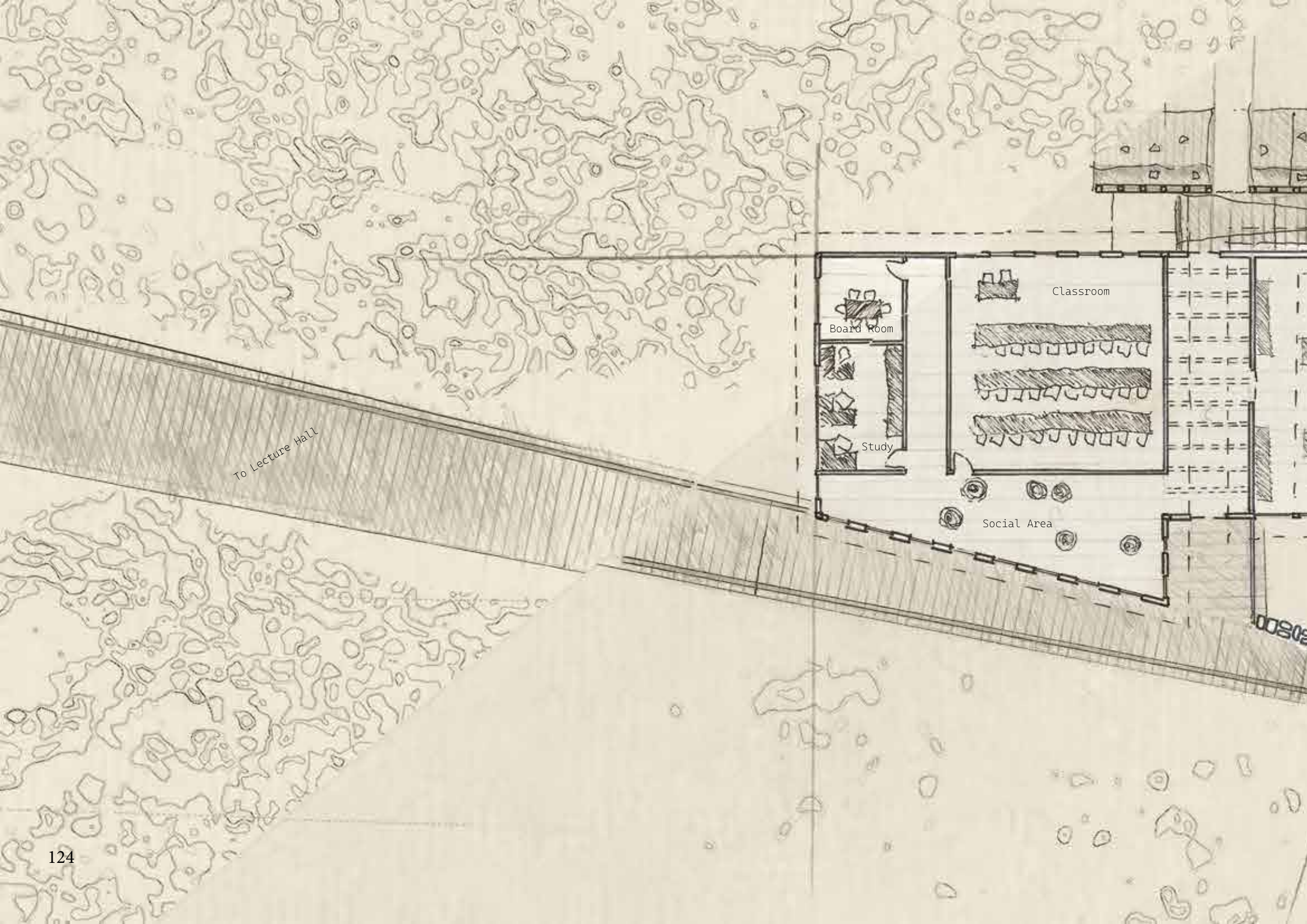




Figure 5.63: Walkway
to Helm Lighthouse



To Lecture Hall

Board Room

Study

Classroom

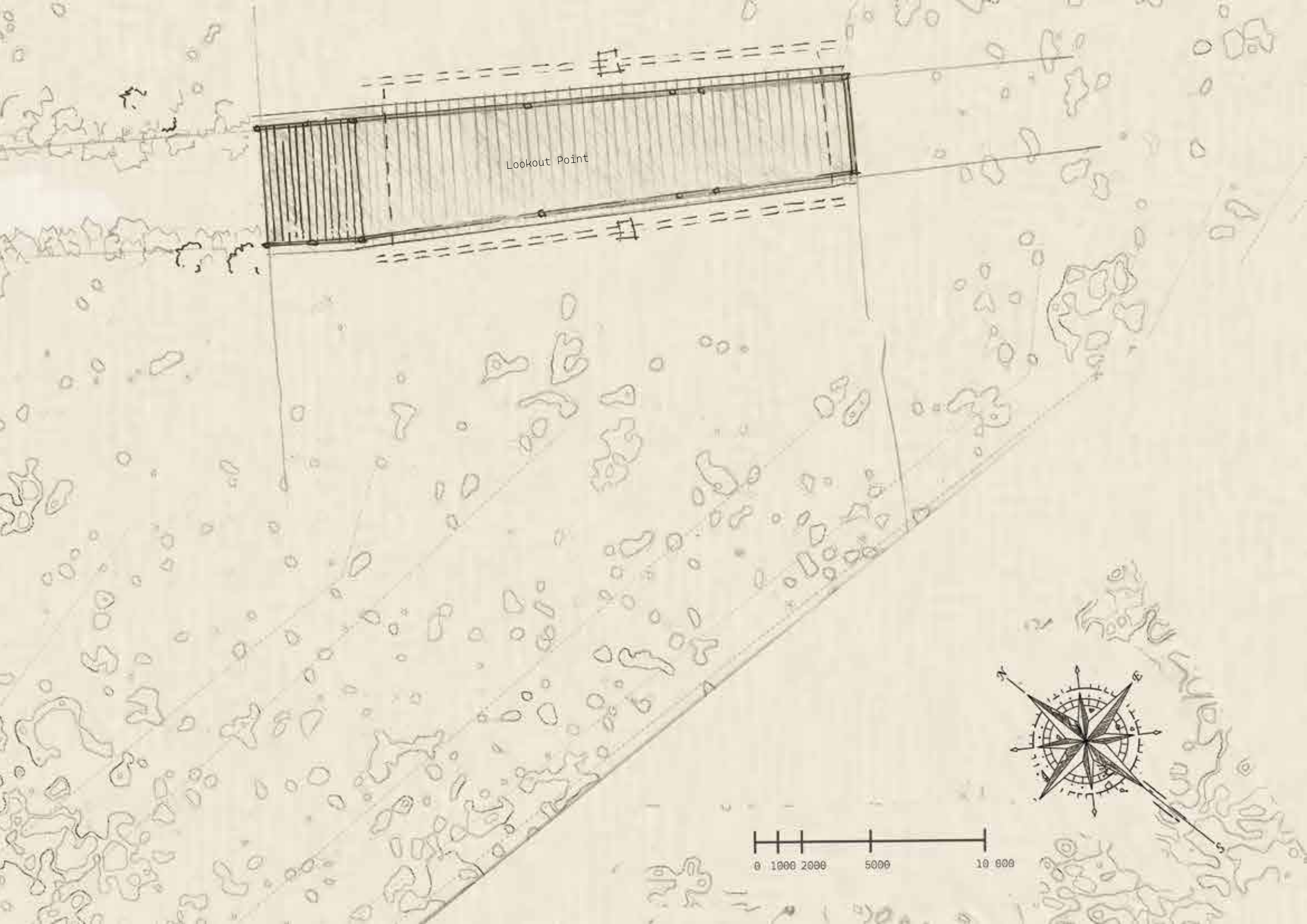
Social Area



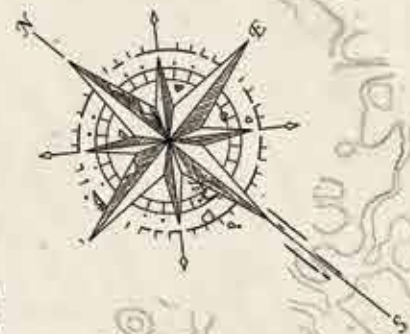
Climbing Walls

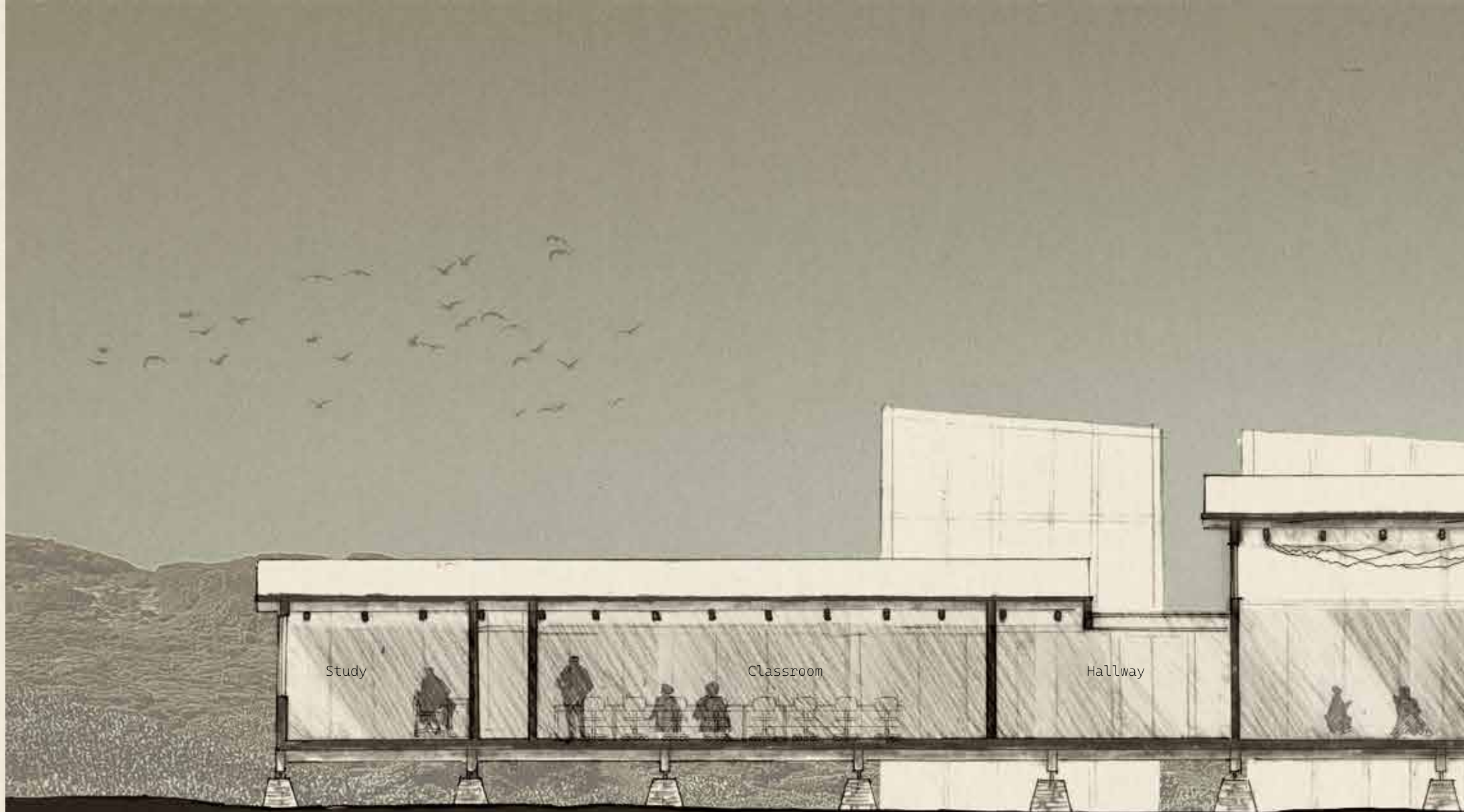
Multifunctional Hall

Figure 5.64 Third
Floor 1:200 (author,
2024)



Lookout Point





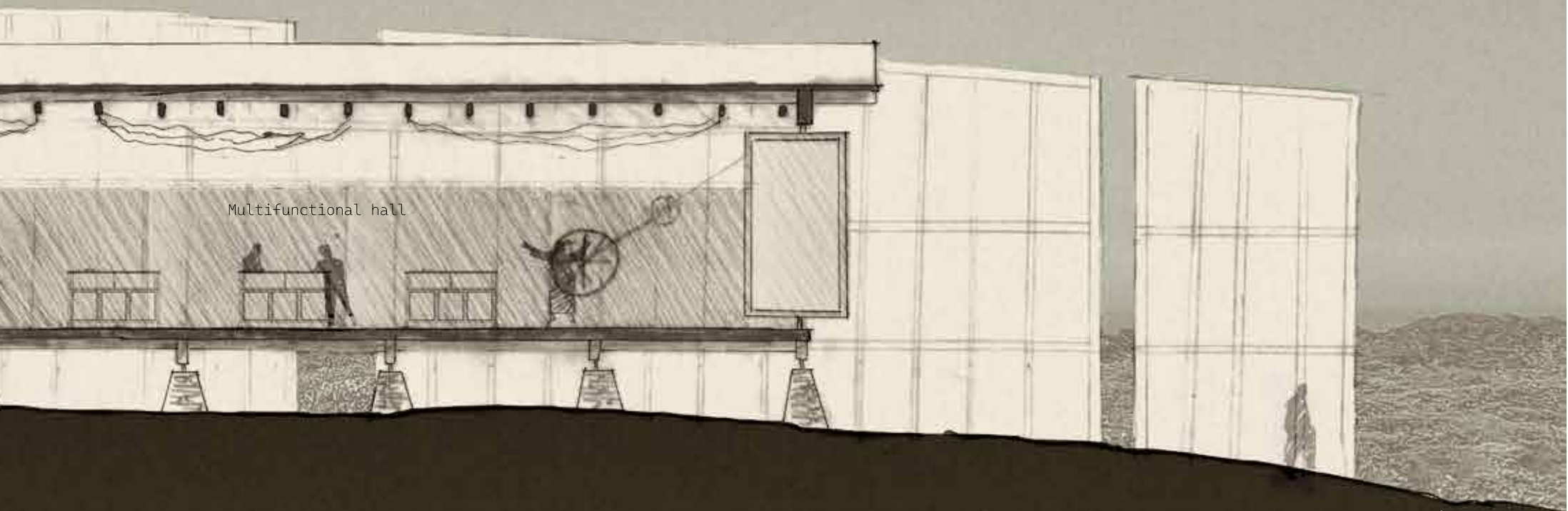
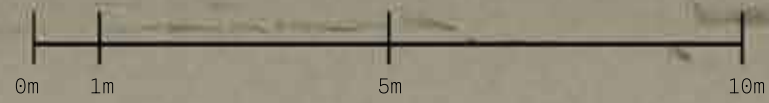


Figure 5.65
Section EE 1:100
(author, 2024)

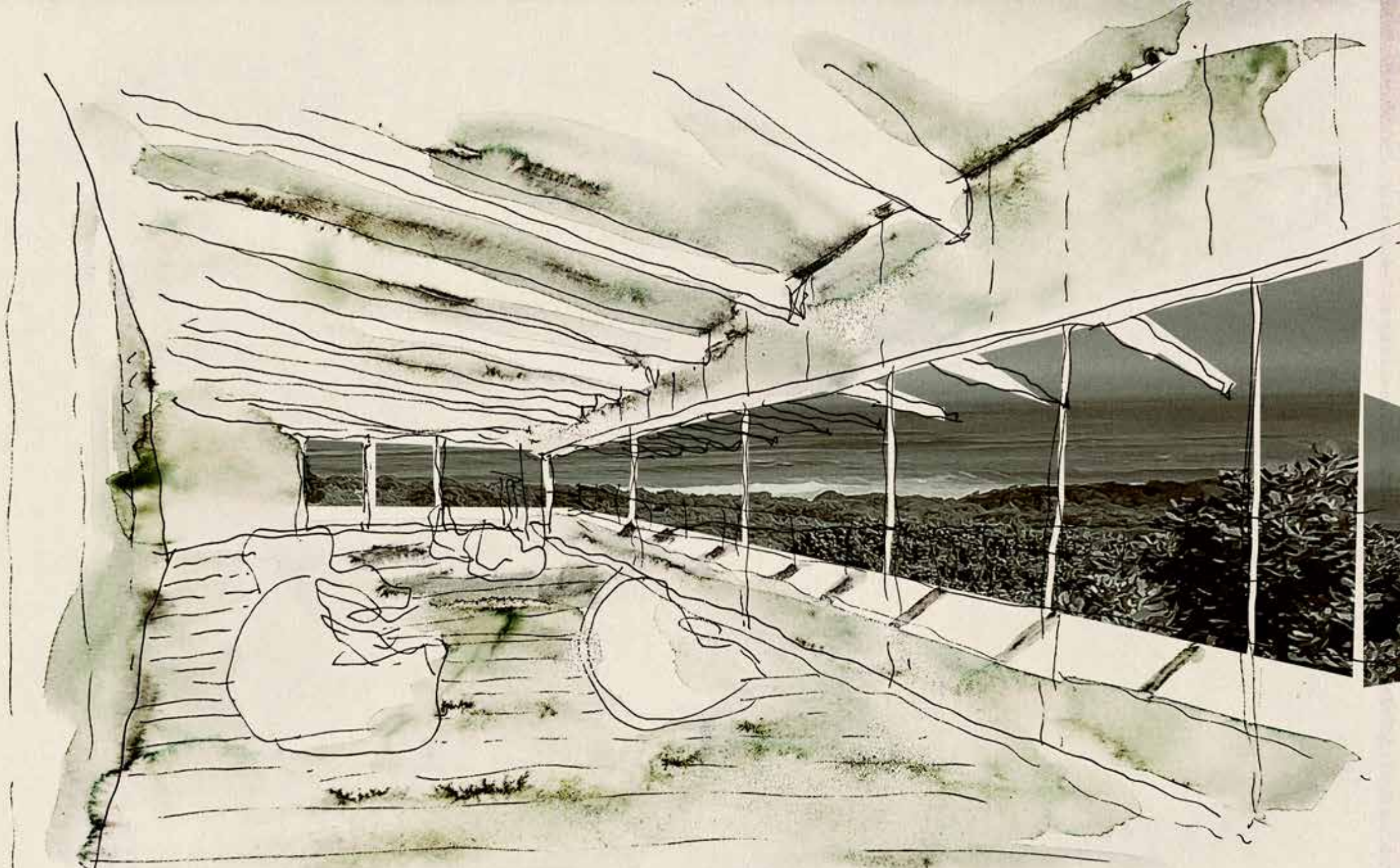


Figure 5.66
Resting area (author,
2024)

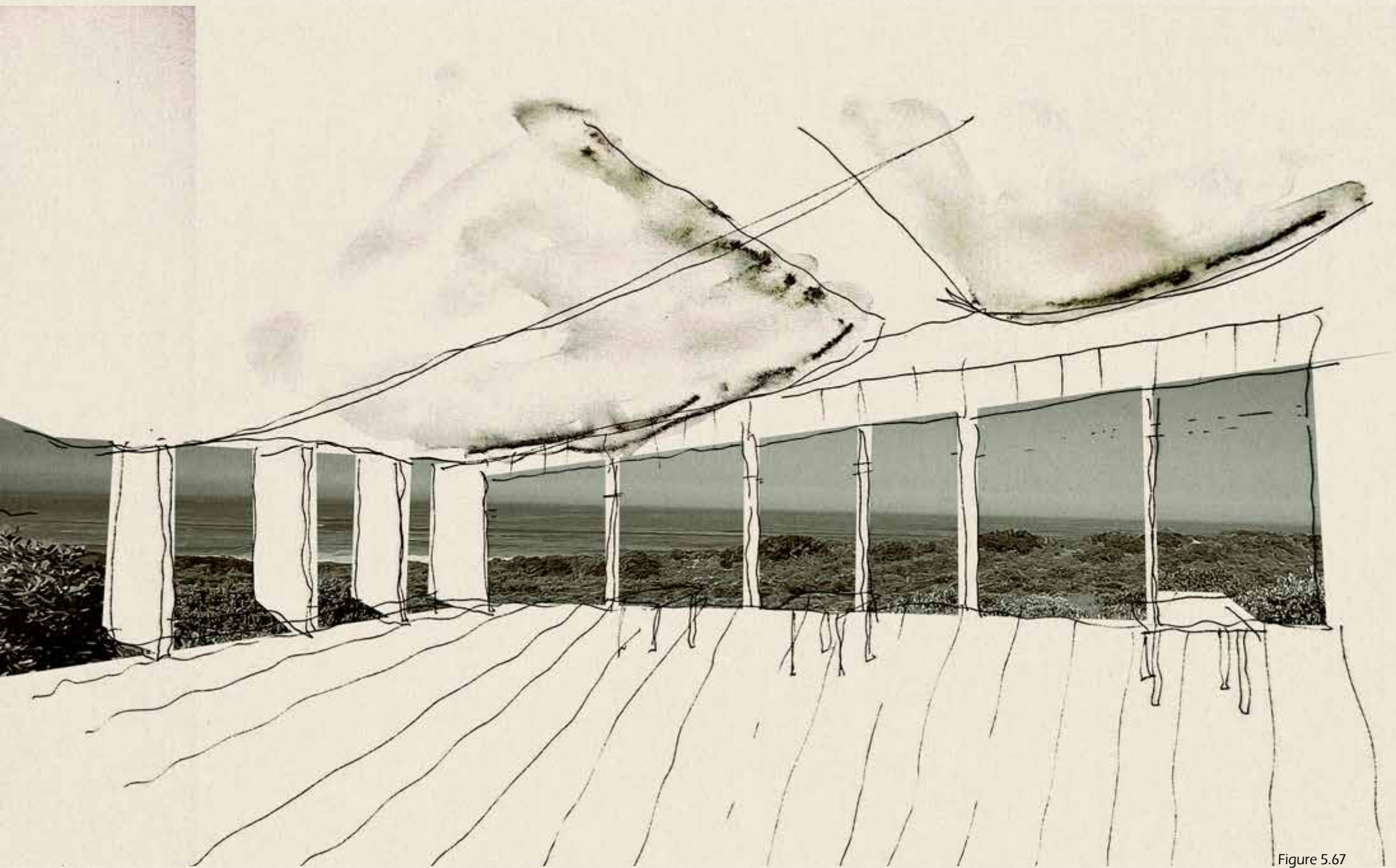


Figure 5.67
Multifunctional
hall(auhor, 2024)



Figure 5.68
Section FF 1:100
(author, 2024)

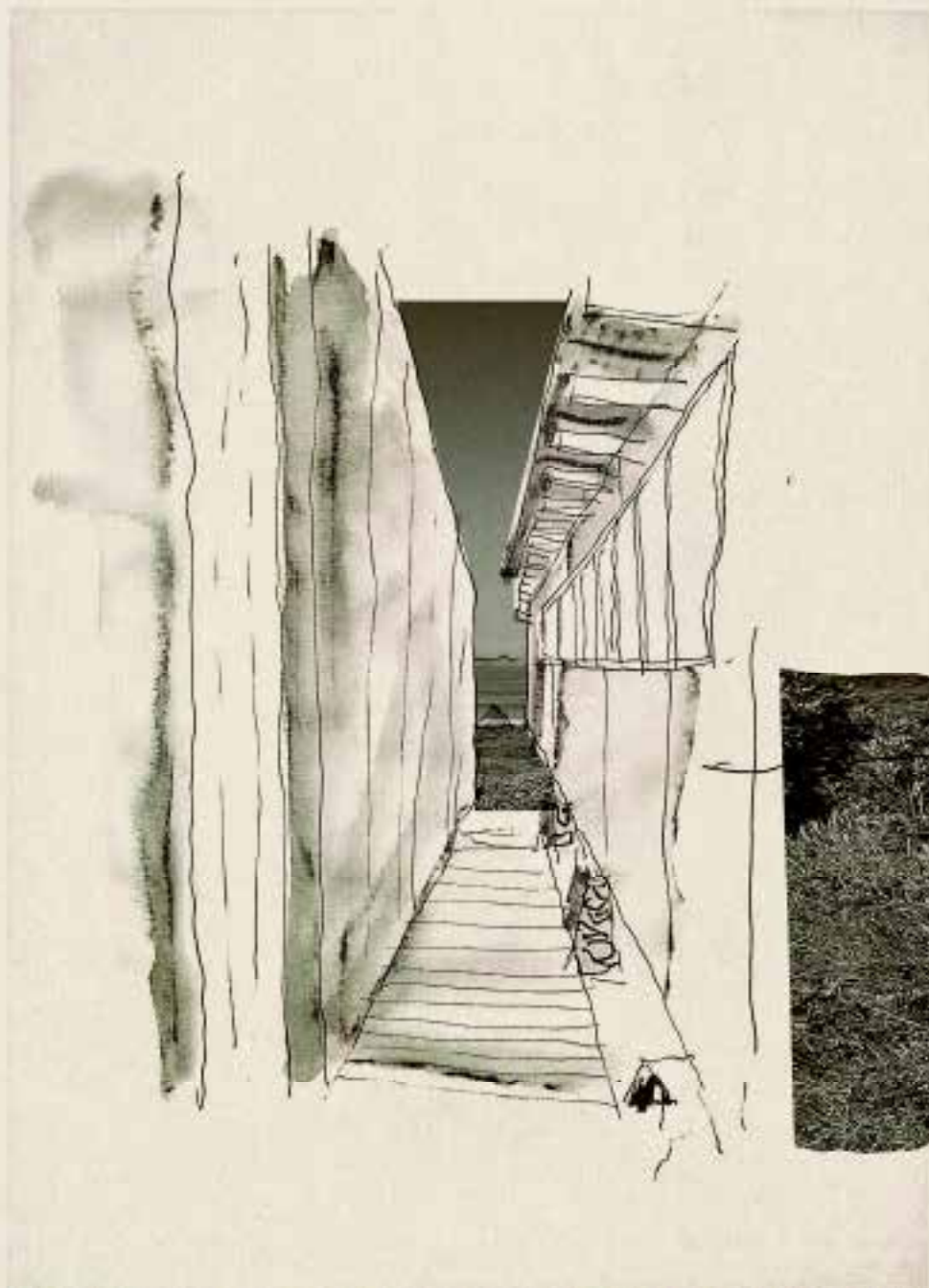


Figure 5.69
Walkway down to
lookout (author,
2024)

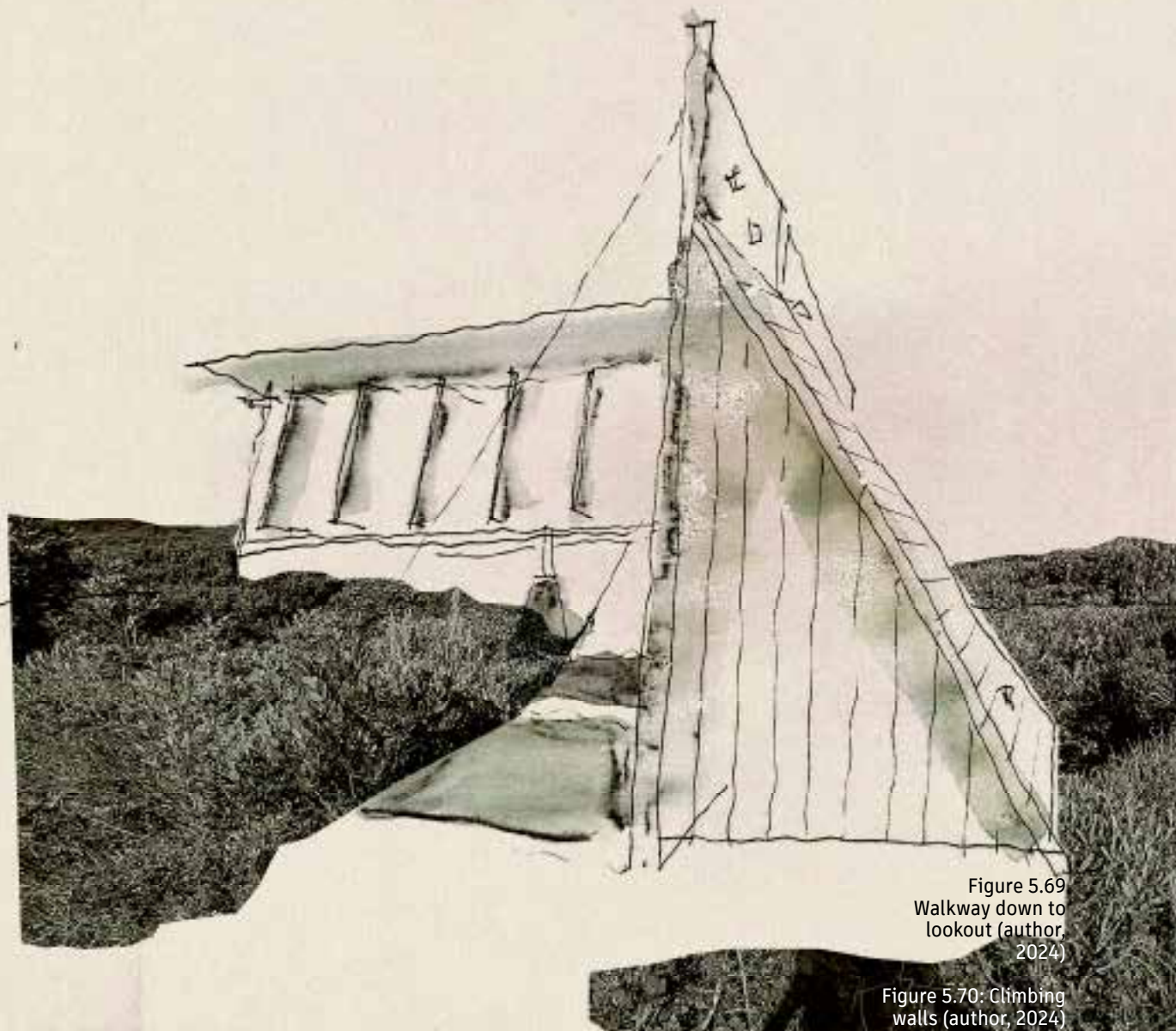


Figure 5.70: Climbing
walls (author, 2024)

THE ADVENTURE

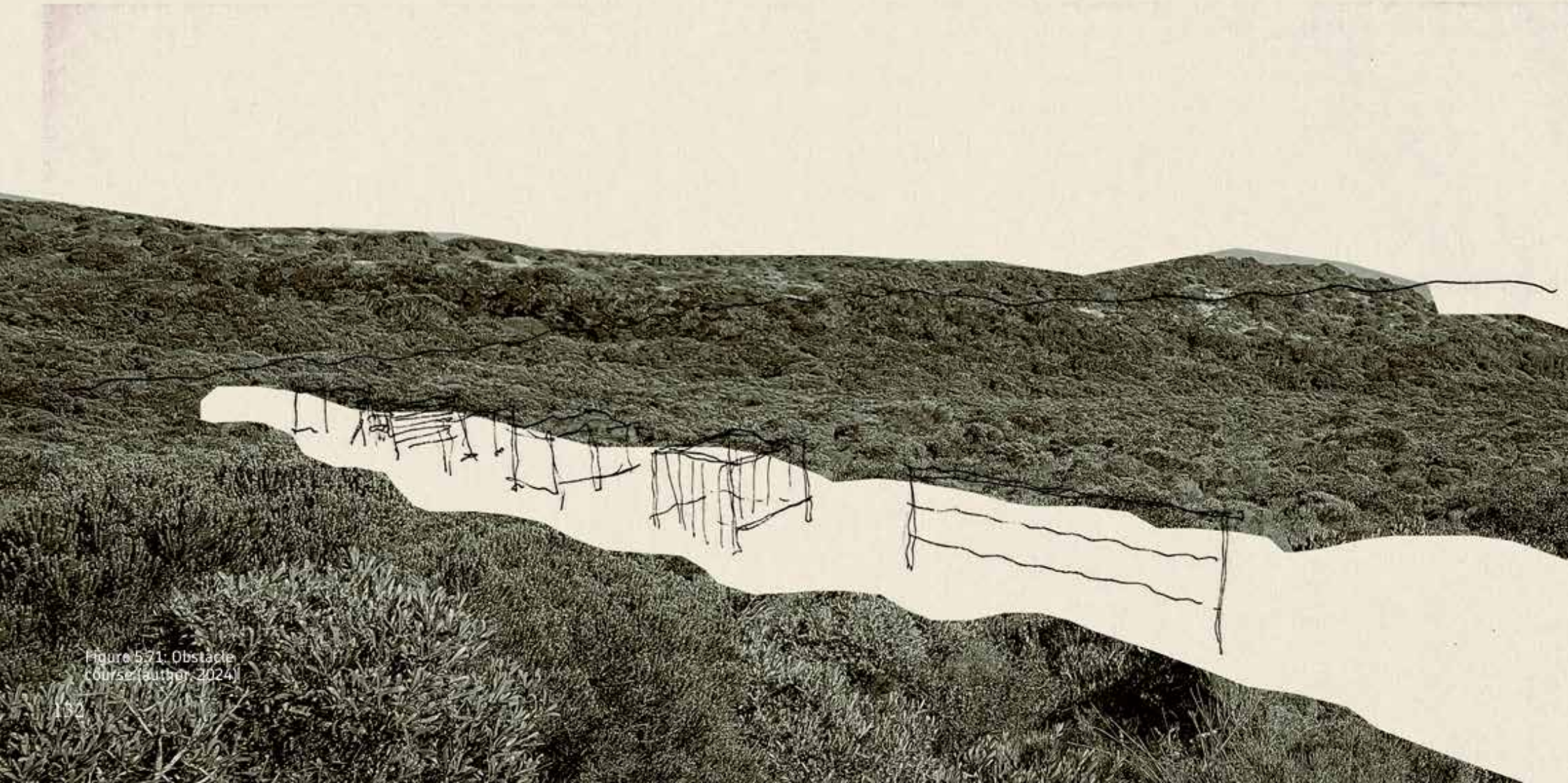
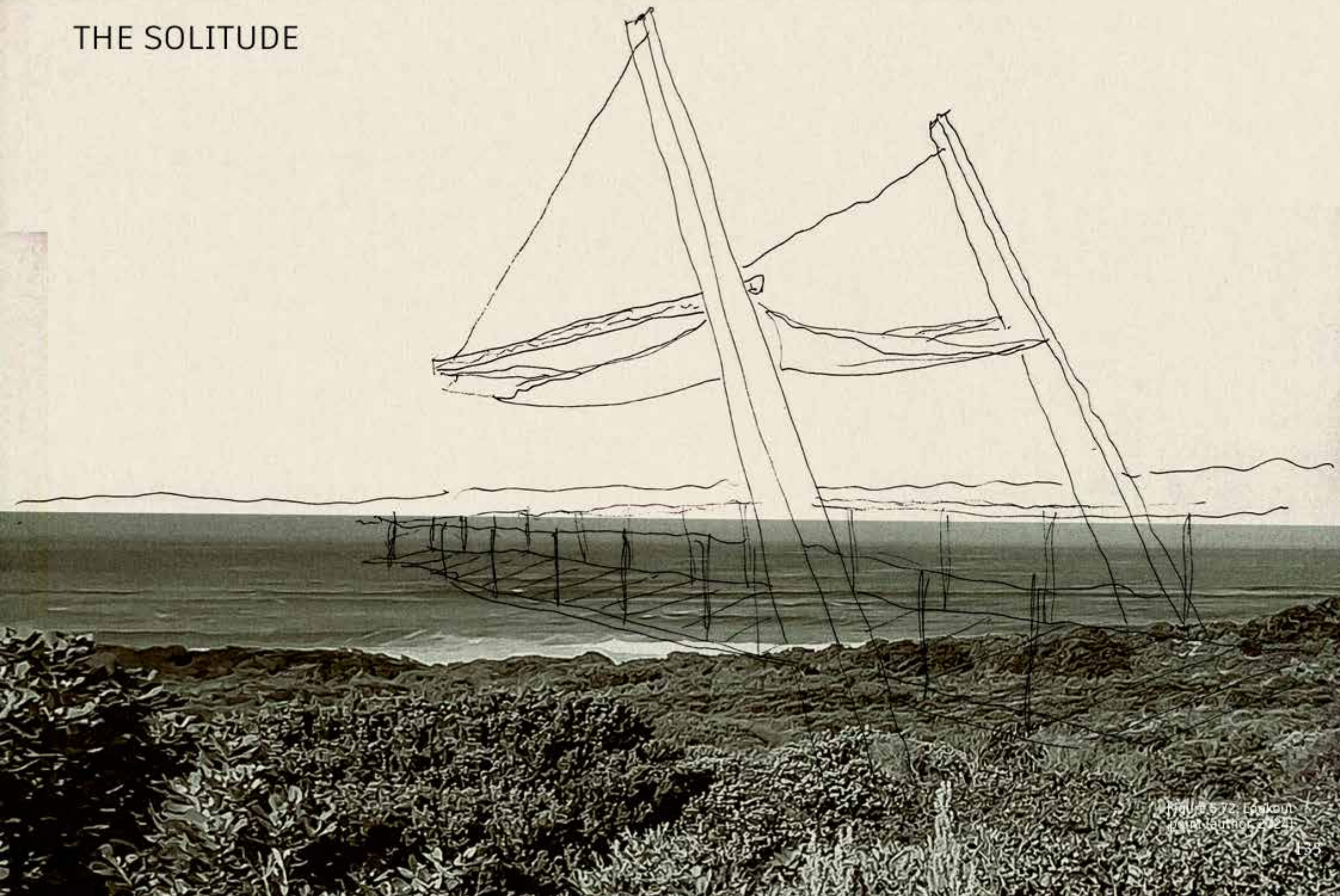


Figure 5.71: Obstacle
course (author, 2024)

THE SOLITUDE





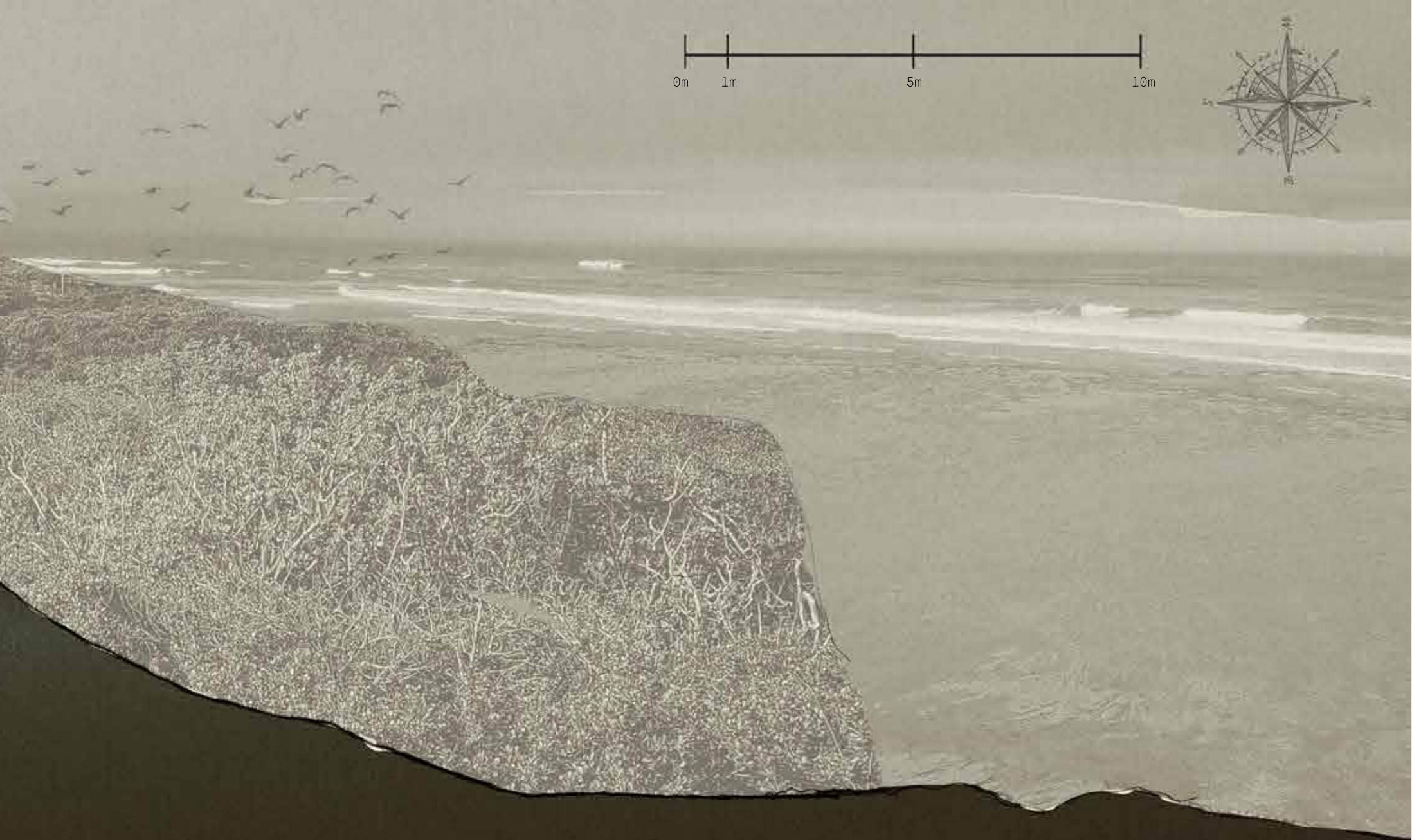


Figure 5.73: Section
FF (author, 2024)

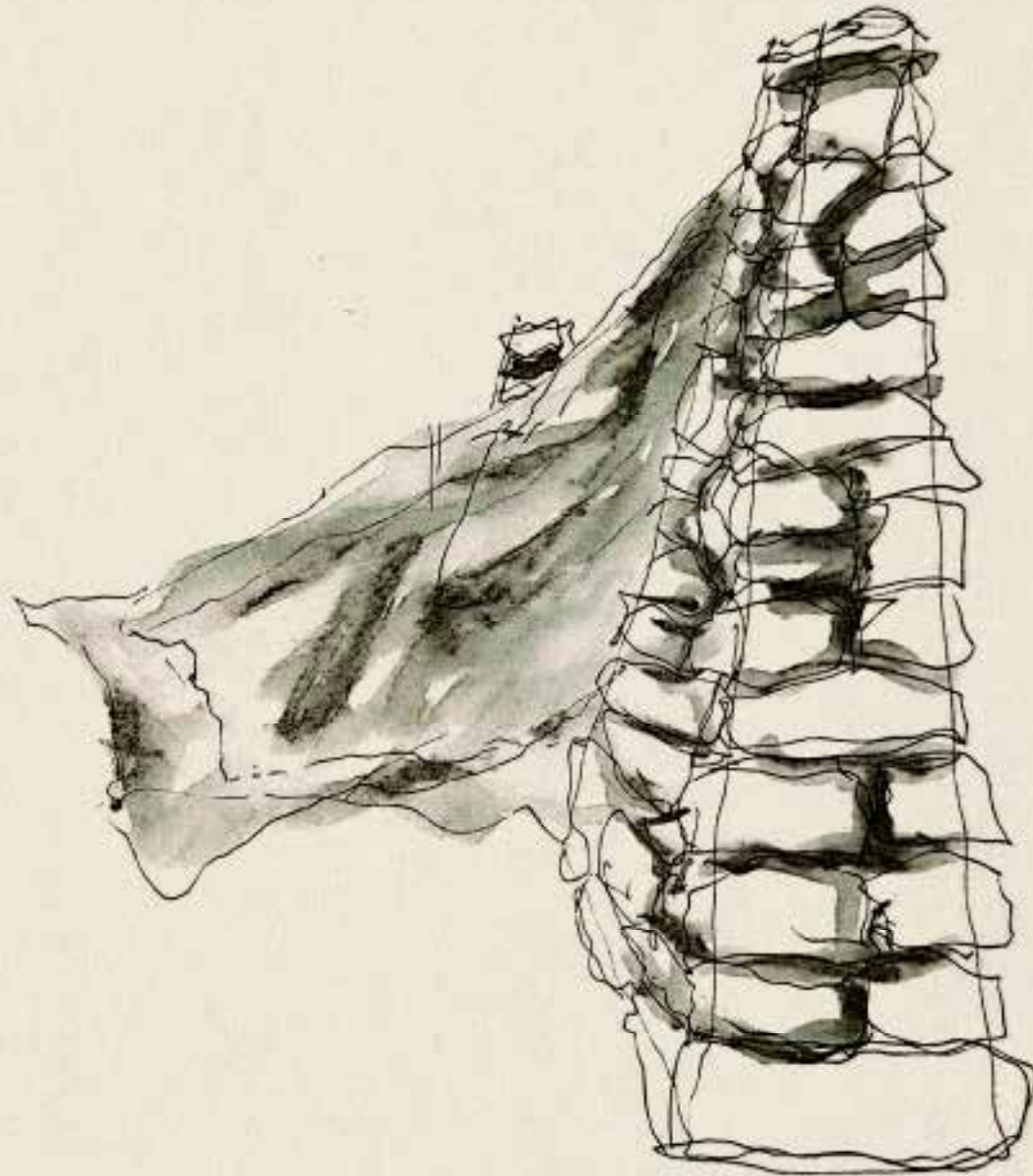


Figure 5.74: Ruins
(author, 2024)

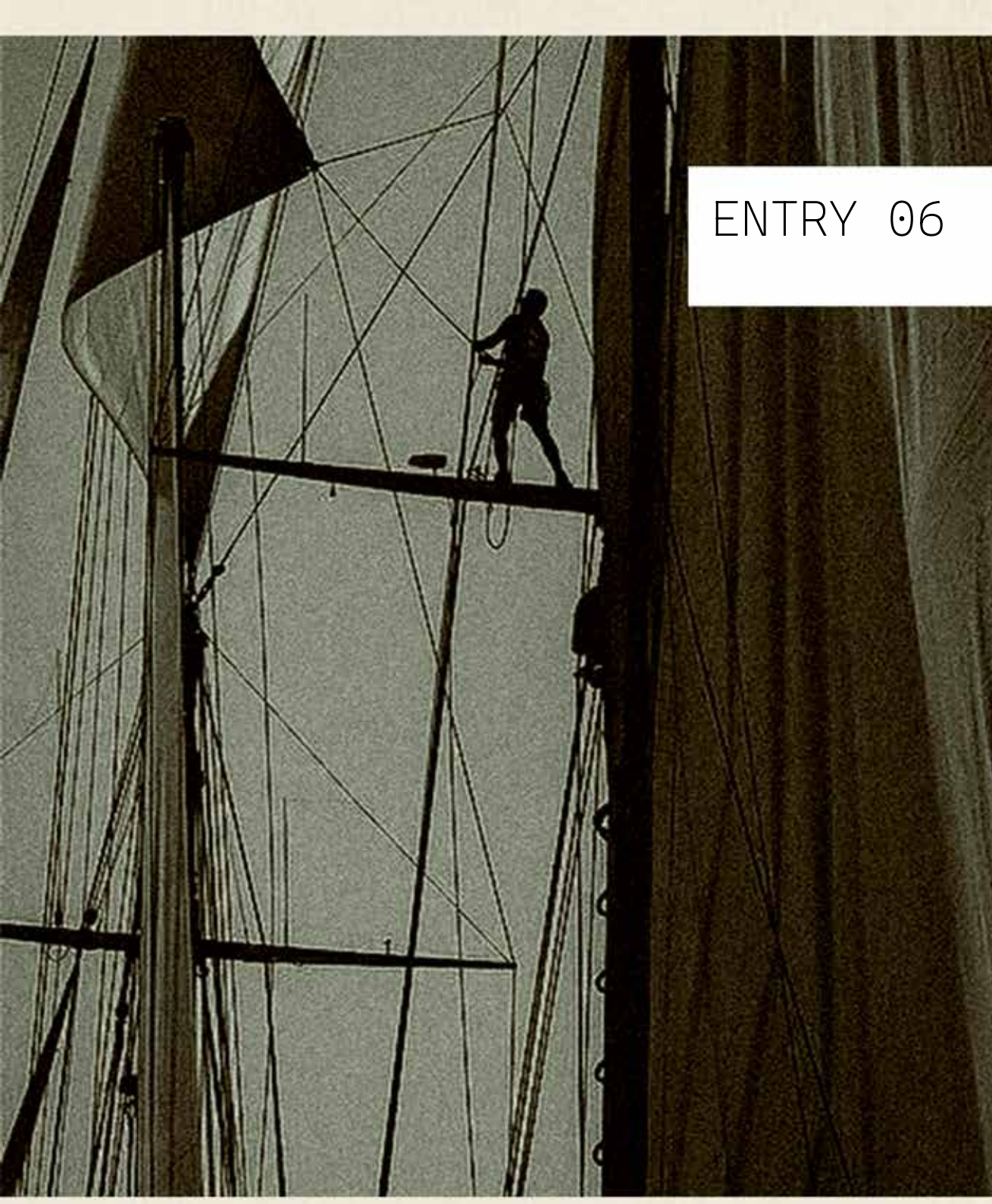
WINDSTIL

(THE SILENCE

5.4. Conclusion

The design process went through multiple iterations to end up with the one that felt right for the scheme of sparring with the wind. In the next chapter, the construction process and technical detailing will be discussed.

Figure 6.1: Tying all the strings of the project together through construction



ENTRY 06

TYING THE MASTS

6. Introduction

6.1. Whispers of the Tied Masts

6.1.1. The Touchstone as Nomad and Settler

6.2. Informing Factors

6.2.1. Conditions on Site

6.2.2. Fybbos Rehabilitation

6.3. Structural Components

6.3.1. Cabin in La Cantera

6.3.2. Material Use

6.3.3. Sensitive Footings

6.4. Construction Process

6.5. Services

6.5.1. Electricity

6.5.2. Water

6.5.3. Drainage

6.6. Interactions Between Site, Explorer and Structure

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6.6.2. Louvres

6.6.3. Textile Shading

6.7. Conclusion

6. Introduction

Throughout the document, the central aspect of the thesis is discussed, namely to design an appropriate setting for a gap-year camp which both exposes and shelters the students against the elements of nature and themselves. The solution has been discussed in the previous chapter, and the plan for how the solution will be performed structurally follows. A central part of the solution is the removal and rehabilitation of the fynbos, as well as how the rest of the structure can cause minimal damage to the site through its construction methods and materiality. This chapter explores the technical solutions to these problems.

6.1. Whispers of the Tied Masts

Through the taking of the different pilgrimages of designing, one has to come to a conclusion. Merely designing where the wind blows you, will not end up in a ship that will be able to sail far onto the waters. Through the design process, a touchstone acting as both the nomad and the settler emerges from the roots of the site, a construction where the Wind whispers through the hallways.

6.1.1. The Touchstone as Nomad and Settler

Light timber frames rest on heavy sandstone footings retrieved from the nearby cliffs. A repetitive timber frame becomes a system of connections between heavy and light elements. A sense of simplicity is key to ensure the spirit of the Nomad lives on within this coastal landscape. The simplicity of the structure comes alive through the explorer inhabiting the building, pulling strings and adjusting sails to interact with the wind. Some day in the future, the timber structure will be removed in order to allow the environment to adjust naturally again and the gap year student as a nomad will move to another site for a season. When these timber structures are removed, the sandstone footings will remain on site, part of its natural environment, yet changed in form due to the interaction between human and nature.

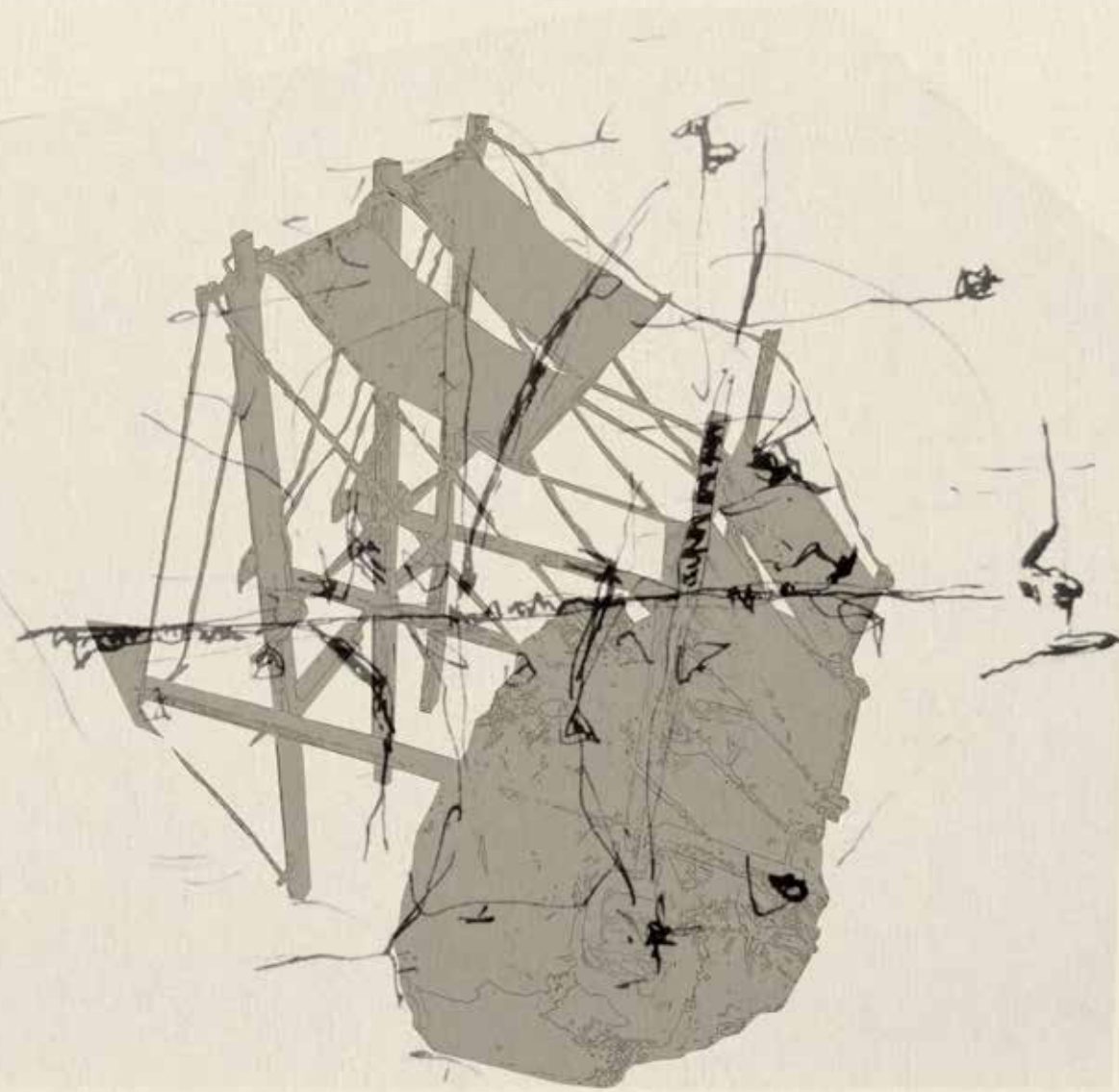
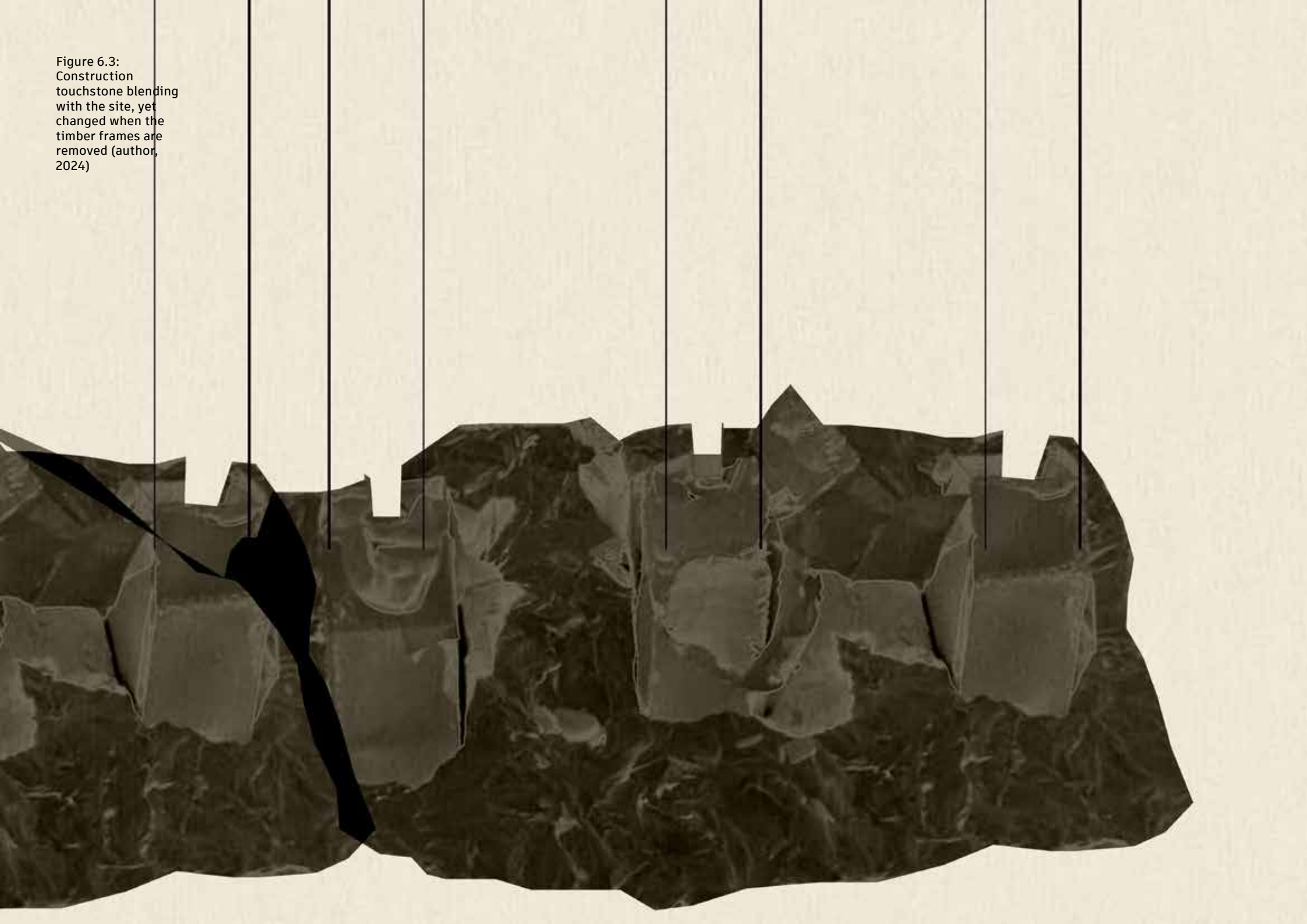


Figure 6.2:
Construction
touchstone of an
interactive timber
structure resting
sandstone footings
(author, 2024)

Figure 6.3:
Construction
touchstone blending
with the site, yet
changed when the
timber frames are
removed (author,
2024)



6.2 Informing factors

6.2.1. Conditions on site

Being remote, the landscape has several challenges when it comes to constructing the building. Limited vehicle access and sensitive plant life prohibit a number of commercial construction methods. The adventure camp will be on ground conditions which consist of sandstone with shallow sand on top. The construction period should be swift to minimise disturbance to the plant and animal life. The fynbos in the construction area will be relocated from Preekstoel to Preekstoel Beach, where a Fynbos rehabilitation program is in place. Year-round rainfall requires that fittings be pre-manufactured and bolted on-site. The need for plant life protection requires the building to be raised above the natural ground level, supported by columns on footings. Dry construction is separated into sections to allow materials to be carried by hand or wheelbarrow, minimising and if possible altogether avoiding the need for heavy machinery.



Figure 6.4: Single road to proposed site (author, 2024)

Figure 6.5: Remoteness of site (author, 2024)



6.2.2. Fynbos rehabilitation

Between 1994 and 1997, a Fynbos rehabilitation program operated next to the Du Toitskloof pass between the Paarl and Worcester. Micky Levitt (1997), the nursery manager for the project, writes about this project saying that rigid guidelines were in place to cover the work done for the project. The engineers (Bruinette, Kruger and Stoffberg, BKS (Pty) Ltd) and the contractors (Group 5 Roads (Savage and Lovemore)) were faced with upgrading the N1 to a double highway without being harmful to the environment, including ensuring that imported building materials were free of invasive weed seeds. According to the article, it would be meaningless to do things the wrong way and then cover it up



Figure 6.6:
Greenhouse for
fynbos rehabilitation
(Levitt, 1997)

Figure 6.7:
Replanting the
fynbos (Levitt, 1997)

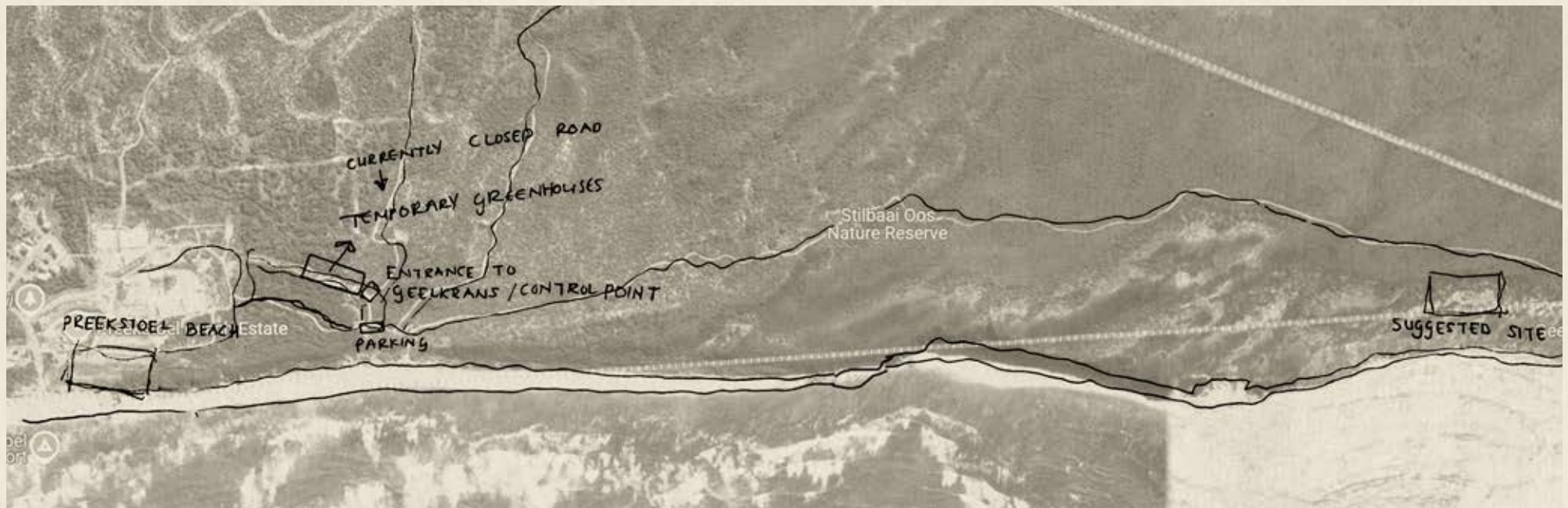
Figure 6.8: Fynbos
fully rehabilitated
(Levitt, 1997)

with a layer of fynbos, in the hopes that no one will notice the destruction. Therefore, they had to be creative in their endeavours. All top material was identified and stockpiled to be used later in the same areas to avoid cross-contamination. Fynbos species endemic to the valley were cultivated at a nursery on the site (managed by BKS) for re-vegetation purposes. When the slopes were completed, they were topsoiled and the fynbos replanted (Levitt, 1997). Similar ways of fynbos rehabilitation will be used to rehabilitate most of the fynbos in their previous environment and a greenhouse will be constructed near to where the construction will take place. Others will be relocated to a nearby site, Preekstoel Beach, where a fynbos rehabilitation is currently run on the dunes.



Figure 6.9: Dune rehabilitation in Preekstoel Beach (author, 2024)

Figure 6.10: Rehabilitating fynbos of Geelkrans (Google Maps, nd)(adapted by author)



6.3. Structural components

Designing with timber structures in mind is not for the faint of heart, I realised. Therefore many explorations and sketches were made to explore the possibilities of timber, as well as exploring a construction precedent study.

6.3.1. Cabin in La Cantera – La Cabina de la Curiosidad, Ecuador

In the town of Banos de Agua Santa, we come upon the two lodgings of La Cantera, hewn from the very heart of the stone quarry. The family who commands this land has envisioned a haven for adventurers. They intend to harness the grandeur of the towering volcanic rock walls for climbing, turning this rugged landscape into a playground for the daring (Archdaily, 2023). The land here is divided into two distinct realms – one, a rugged expanse where the quarry's exploitation occurs, encircling the landscape with its imposing volumes. The other is a realm of untouched vegetation. This duality almost mirrors my own proposed site, where mighty sandstone cliffs face the sea while the inland is cloaked in vibrant fynbos. Steel rods stretch across the site, demarcating space and horizon. They carve a vertical line that anchors the sky to land, much like a kite tethered by steel cables. The craftsmanship of this project is fine and detailed, employing recycled materials to achieve a rugged, unrefined appearance, conversating with the raw grandeur of the volcanic landscape. Natural water systems sustain an off-the-grid existence, ensuring that the experience remains deeply rooted in the spirit of the land (Archdaily, 2023).

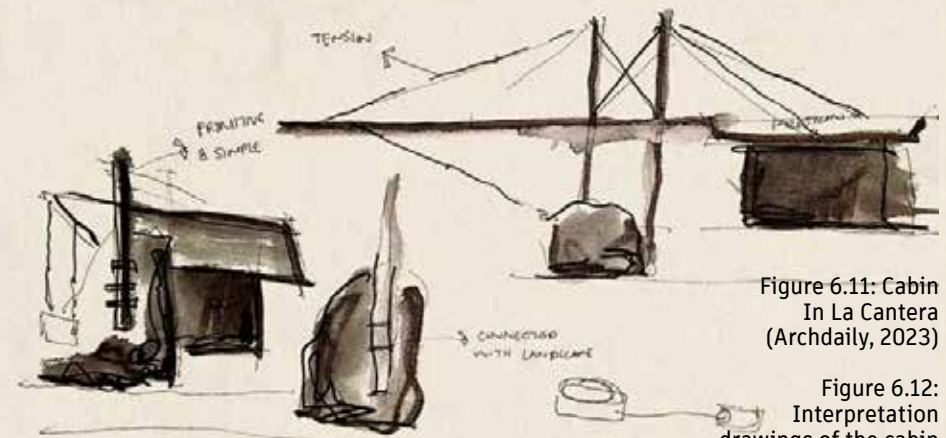
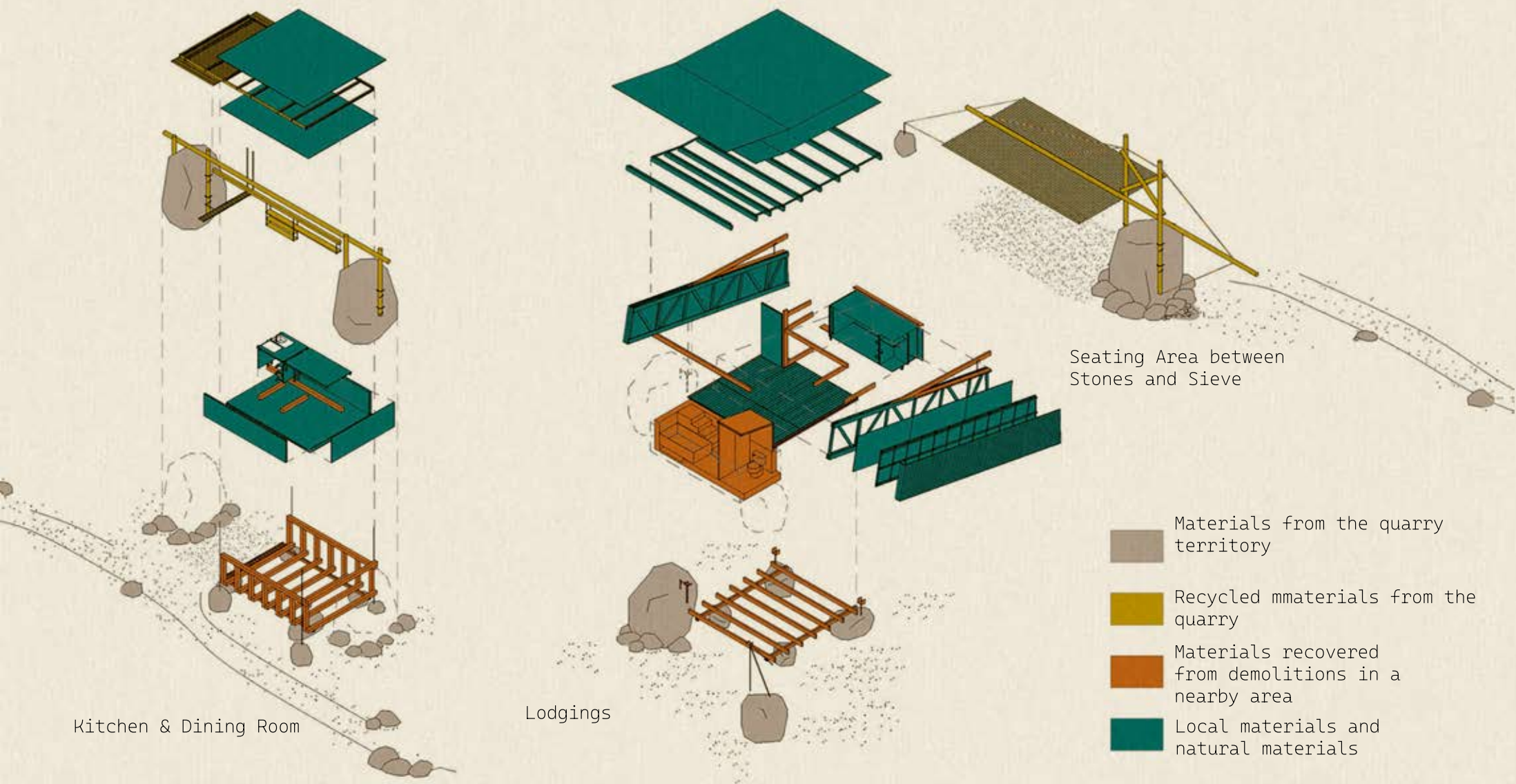


Figure 6.11: Cabin
In La Cantera
(Archdaily, 2023)

Figure 6.12:
Interpretation
drawings of the cabin
materiality (author,
2024)

Figure 6.13 Cabin
in La Cantera
construction
(Archdaily, 2023)



6.3.2. Material use

The scheme used a lot of timber and to ensure construction is as environmentally friendly as possible. A study of the top 10 invasive plant species in the Western Cape that can be used for timber construction (Rooikrans, Black wattle, Port Jackson, Silky hakea, Long-leaved wattle, Stinkbean, Australian myrtle, Spider gum, Cluster pine, Blackwood). According to Cape Nature, these identified invasive plants pose a major threat to biodiversity, disrupting the delicate natural balance in ecosystems. CapeNature encourages the removal of these trees, and anyone can help by joining a hacking team that controls the species (CapeNature, nd). It is advised that the identification and subsequent removal of invasive species be included in the curriculum for the gap year as a sustainability effort. The invasive tree for timber construction chosen was cluster pine. It is a species that came to the Cape before 1800, originating from France. This pine is a maritime timber with its main applications being that of construction wood, furniture, roof shingles, shipbuilding, and poles. This pine is free from insect attacks, which is an important factor to consider when bringing the timber to the sensitive fynbos landscape (Pasiecznik, 2022). To ensure its longevity, the pine will be vacuum-treated before construction. Current South African building regulations require that timber used in constructing a building needs to be treated in a SABS-registered facility to protect the wood from beetles and rot. Chromated Copper Arsenate (CCA) will be used due to the 40-year life expectancy of the wood after CCA treatment. It is odourless and safe, requiring no special equipment during installation. It protects against fungi and can be used for direct transmission into the soil.



Figure 6.14: Cluster Pine (CapeNature, nd)

Figure 6.15: Cluster pine ready for construction usage (Pang, 2021)

Figure 6.16: Sandstone cliff in Geelkrans Nature Reserve (CapeNature, nd)

6.3.3. Sensitive footings

The sensitive landscape requires the building footprint to be minimised. Throughout the buildings, individual timber frames spaced 4000x4000mm are supported on concrete footings supported by chemical rock anchors. Chemical rock anchors are metallic rods inserted into a substrate of rock through adhesion. It is sensitive to the site, as an injection cartridge secures the rod into the ground by hand (Alarcón, 2018). The timber columns are connected directly to the metallic rods with metal strapping that ensures quick and simple assembly. Sandstone structures are built up around these timber frames, allowing for extra support. The sandstone blocks are gathered from the nearby Geelkrans cliffs and the supports will remain on site as ruins once the timber frames are removed.

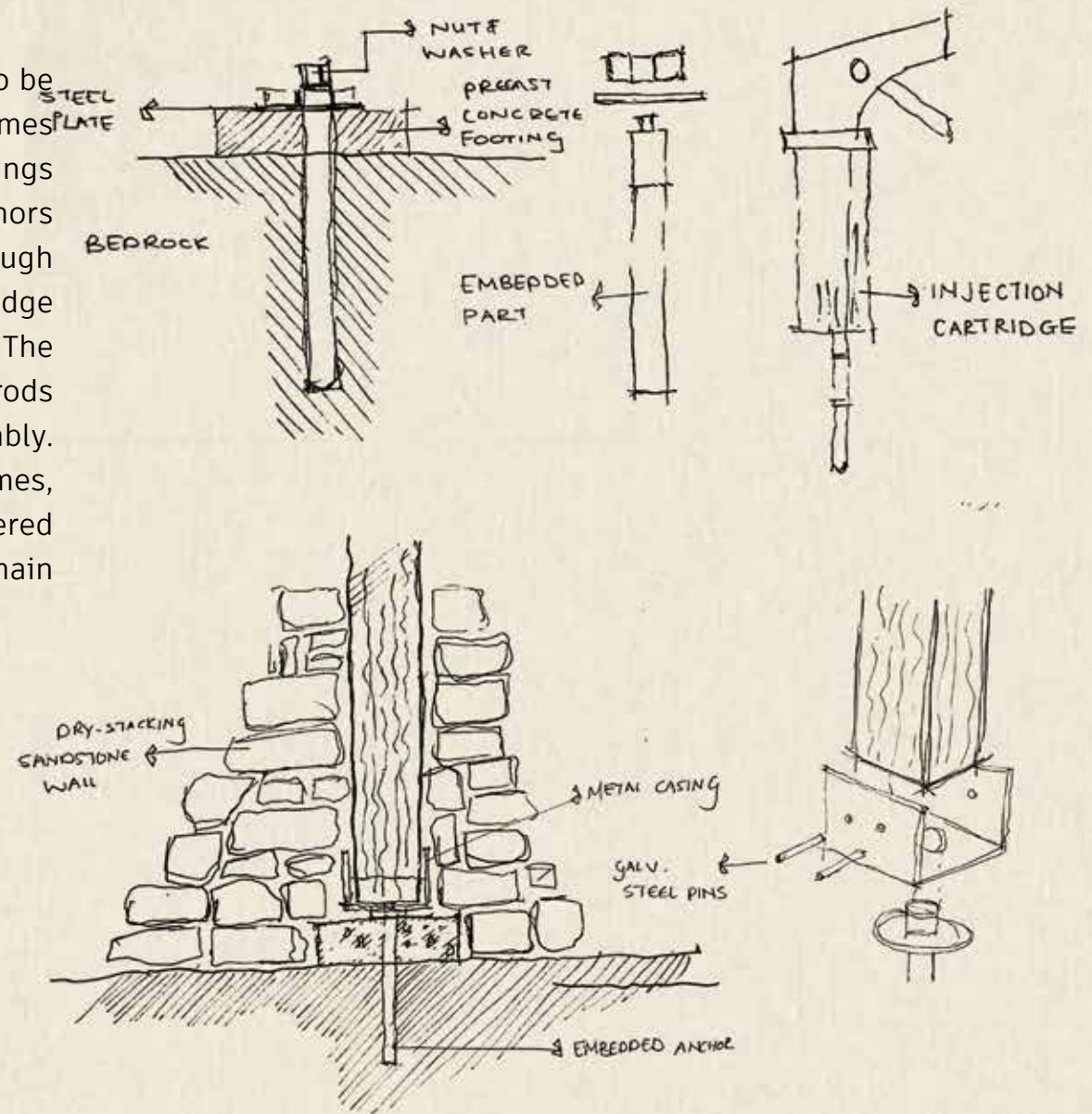
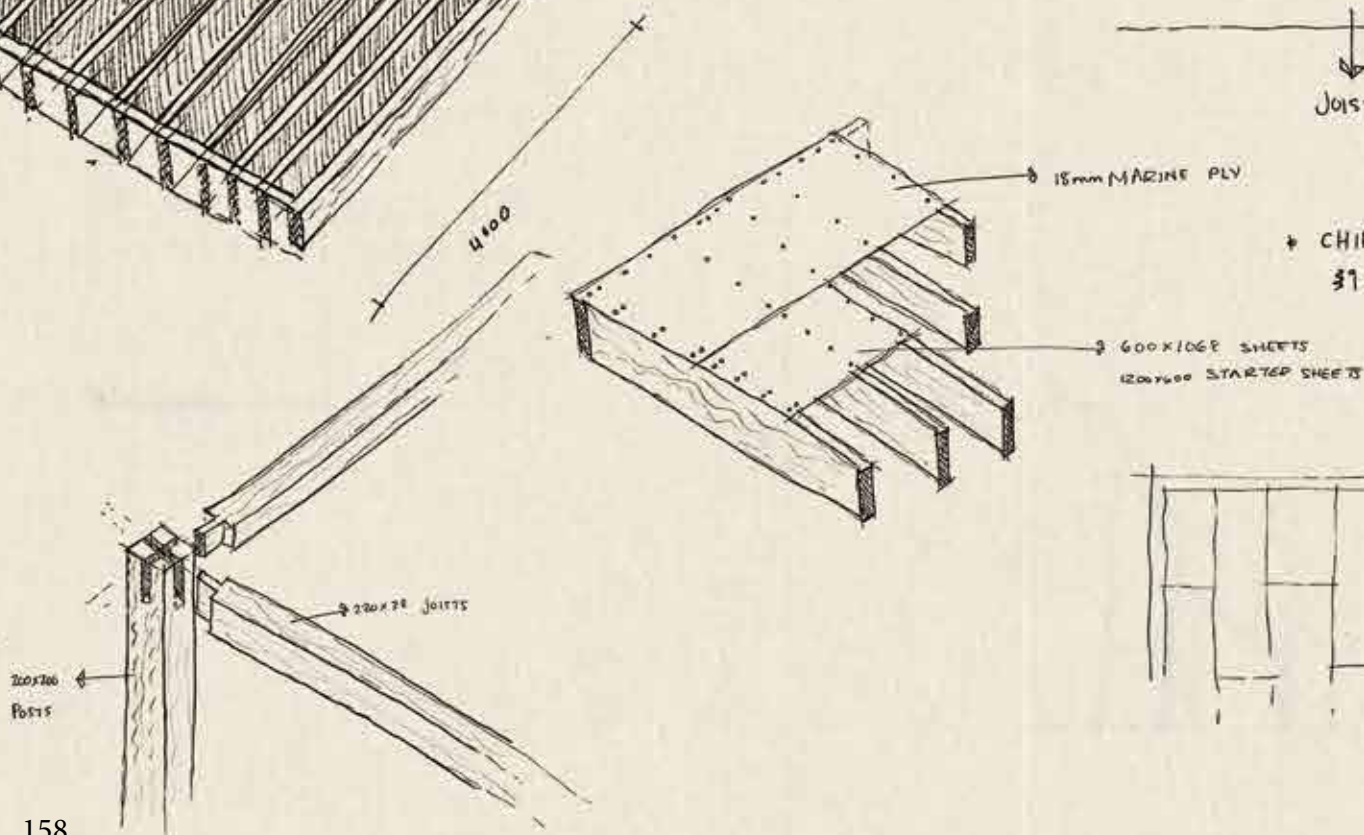
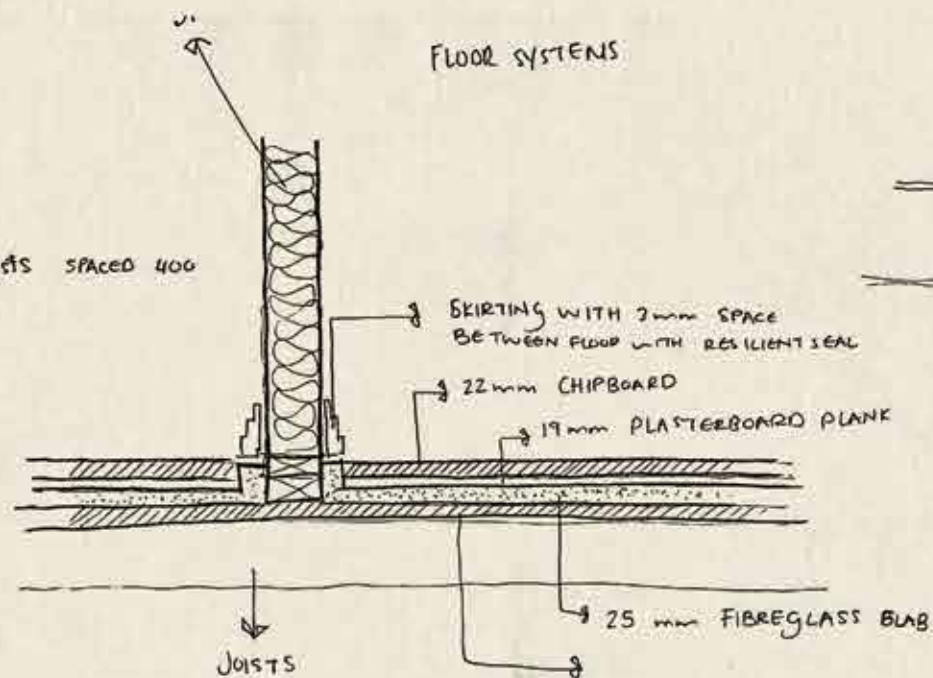
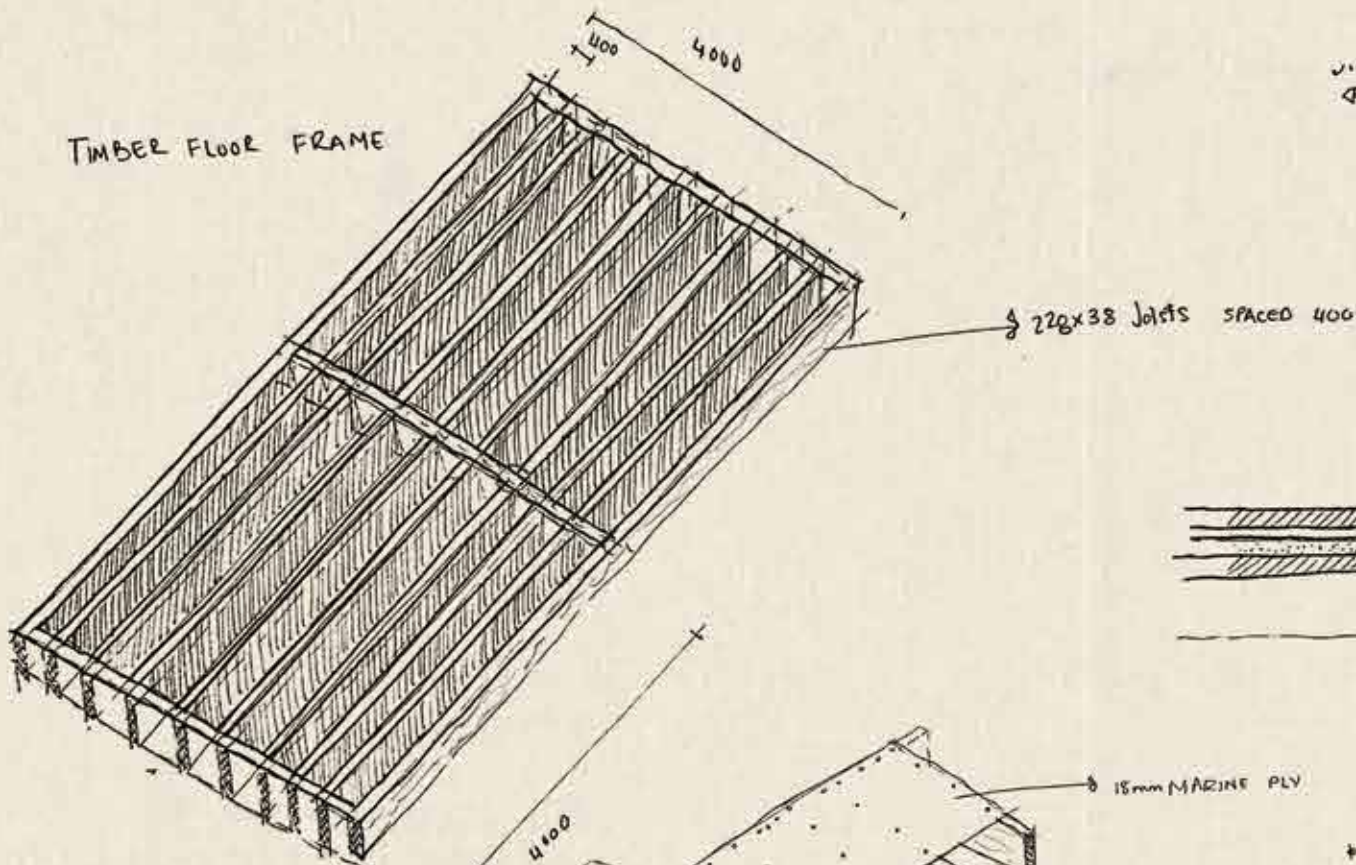
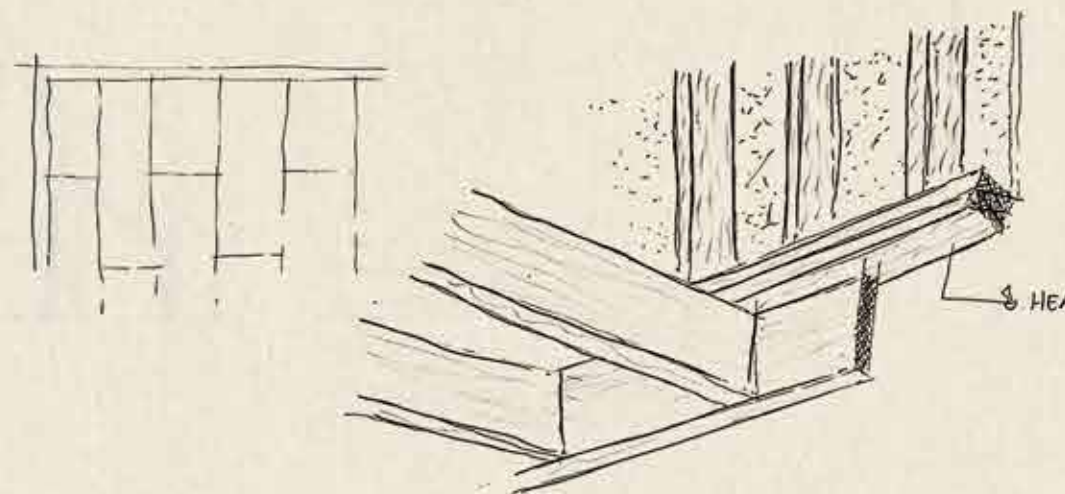


Figure 6.17: Chemical anchor to timber posts construction details (author, 2024)

TIMBER FLOOR FRAME



+ CHIPBOARD BONDED TO PLASTERBOARD PLANK WITH 31mm DABS AT 300 c/s OF GYPROC SEALANT



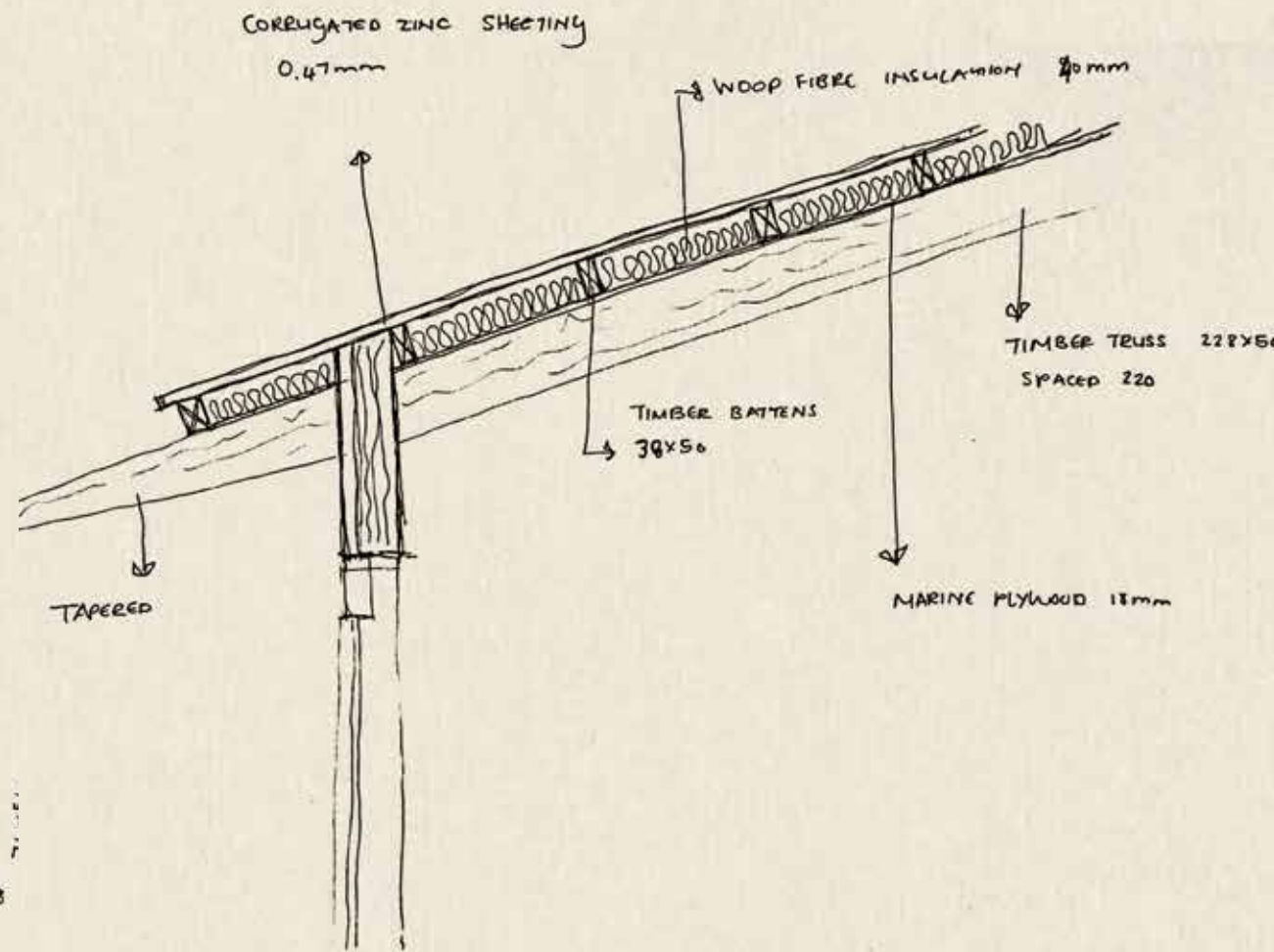
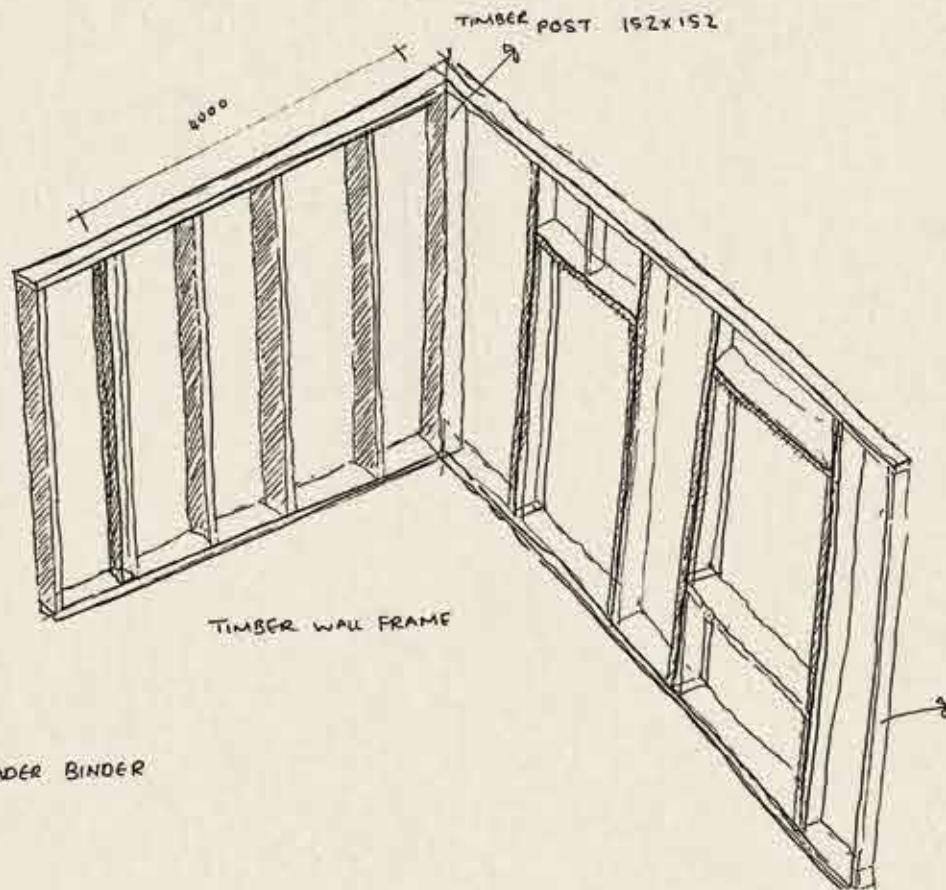
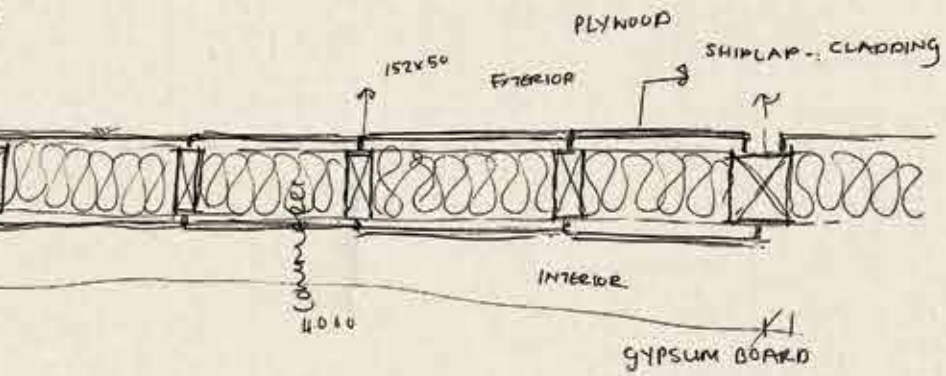


Figure 6.18: Timber assembly construction details (author, 2024)

6.4. Construction process

The construction process will have to be done to limit possible damage to the site. The first step would be to remove and rehabilitate the fynbos in a nearby facility. The construction will be done with manual labour and by hand since the site is inaccessible to large vehicles and machinery. Pre-assembly and cutting are necessary for accuracy and speed. Quick assembly of the shed where the parking will be ensures the usage of the space for the storage of the materials while the building process happens. Organize the pieces for easy erection and assemble the parts. Pieces too heavy to lift by hand can be erected by using a hand crank material lift. The lift is made of two forks attached to a tower. The forks are lifted by a hand crank on the back of the machine while the tower is stabilized by legs that have wheels.

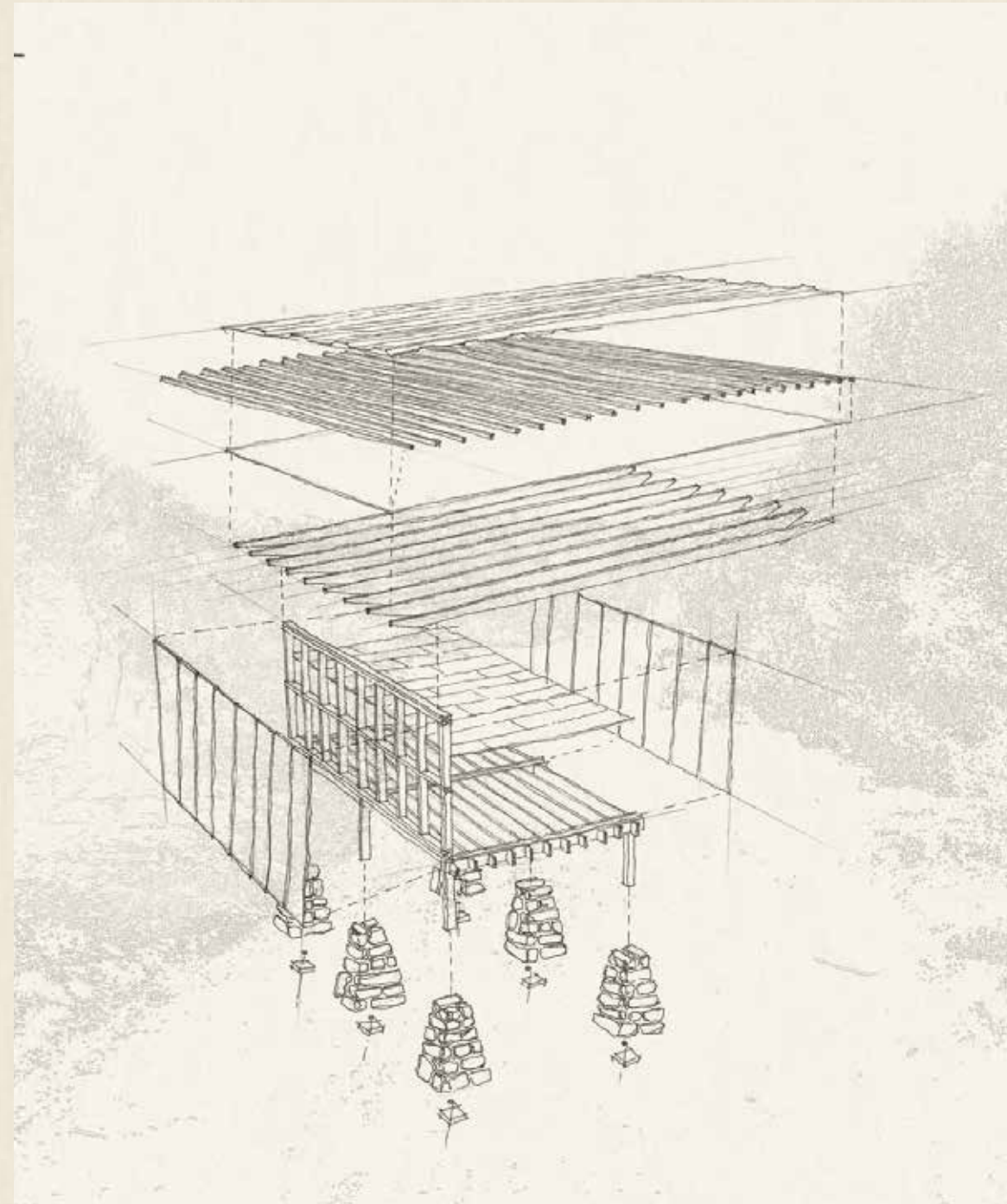
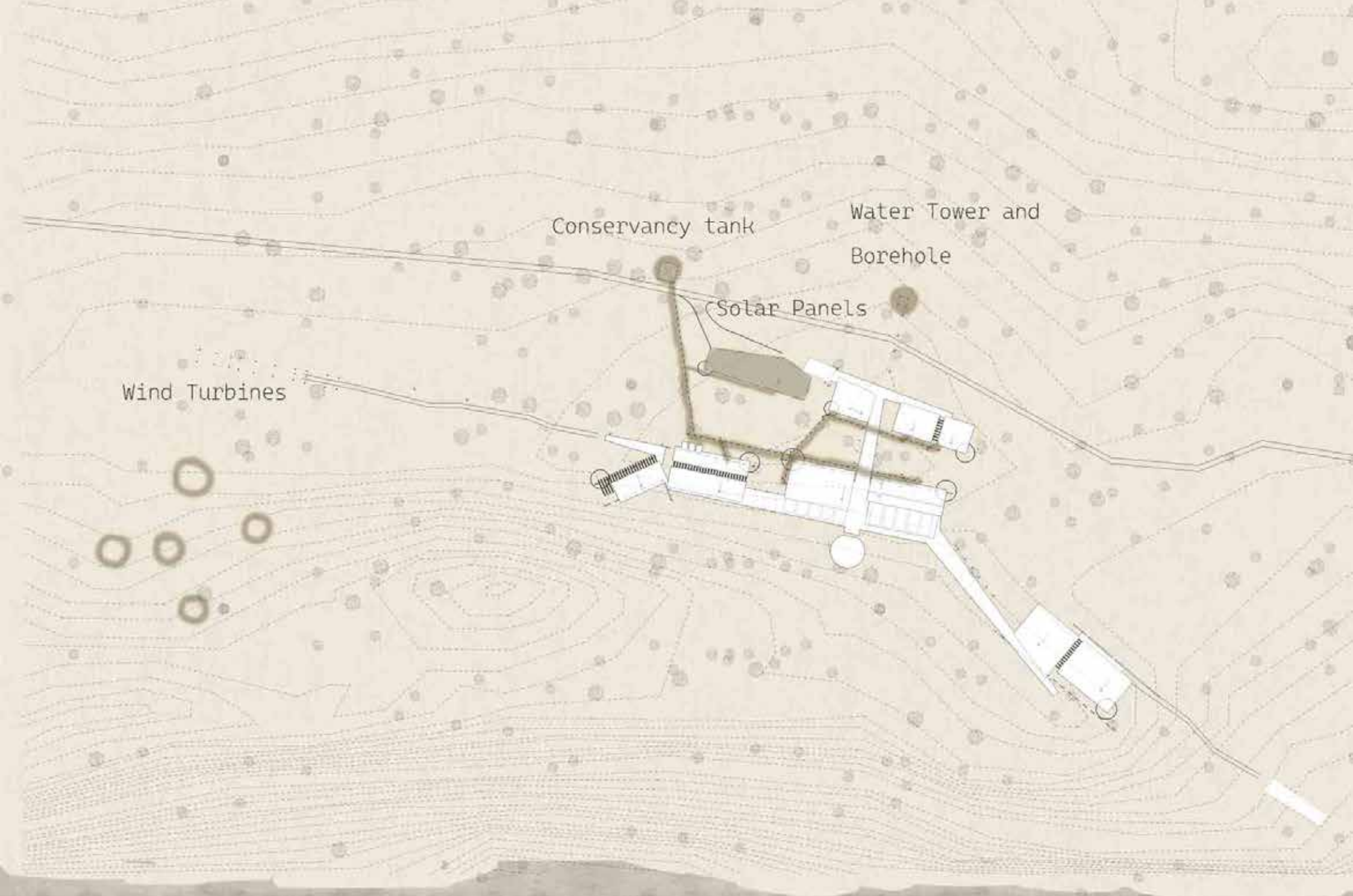


Figure 6.19: Project body (author, 2024)



6.5. Services

The site has no services close by, and off-the-grid solutions will be needed for electricity, water, and drainage to ensure minimal damage to the site.

6.5.1. Electricity

Since the site is coastal, a wind turbine system will be efficient for the site. Pegasus Systems, an international company with a branch in Paarl offers various solutions for off-the-grid turbine systems. Wind turbines are devices that harness the kinetic energy of the wind in order to generate electricity. The blades turn a generator, which feeds into a grid. Since Pegasus turbines offer solutions for smaller turbines, the foundation can be hand-mixed, the size of it according to the experts at Pegasus. For this project, the solar-panel, wind turbine combination will be used to achieve a production of 6770Wh. The most important systems of the project that will use electricity, are washing machines, stoves, fridges, and lighting at night (Pegasus systems, 2024).

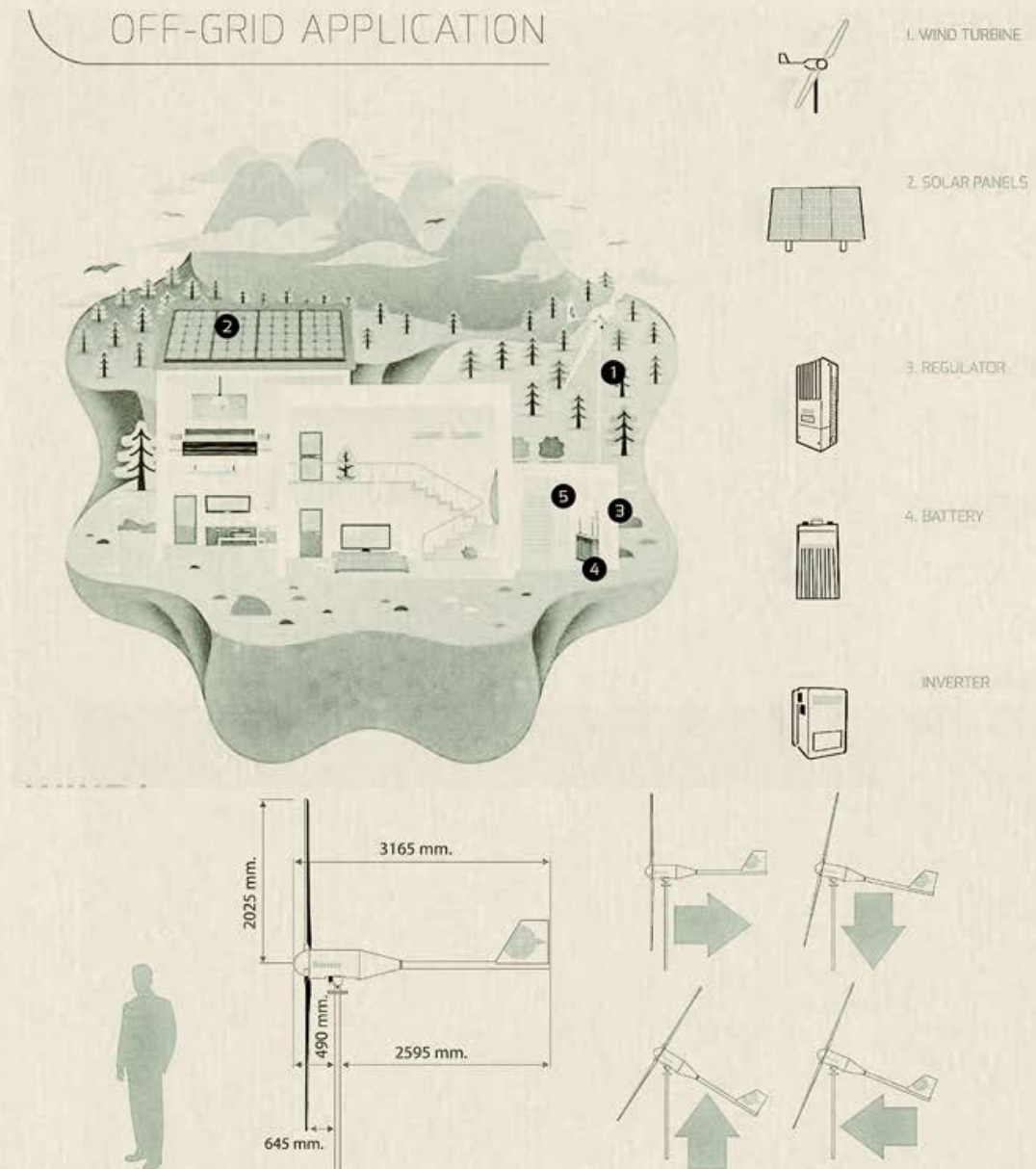


Figure 6.20: Wind turbine information (Pegasus Systems, 2024)

6.6.2. Water

Sandstone is a valuable aquifer, which means that it is a geological formation that can store and provide water. It consists of one or more layers of permeable rocks where groundwater accumulates. The water contained in aquifers is normally of good quality (Ferrovial, 2023) According to a study, done by the Transboundary Waters Assessment Programme (TWAP), the depth of sandstone aquifers from the surface in South Africa ranges from 10 to 20 metres (Transboundary, nd) Since the waterbed is shallow enough, a portable rotary drilling rig can be used to drill a borehole economically up to a depth of 30m. The machine is small and portable, which will cause minimal damage to the site. A solar water system will help distribute the water to the building with a storage tank at 10 metres that will ensure a pressure of 1 bar (MobiDrill.cc, nd).

6.3.3. Drainage

The municipal sewage connection does not stretch as far into the site as necessary for the scheme. A conservancy tank is therefore suggested for the sewage system. 100 diameter sewage pipes at a 1:40 fall divert the black water from the toilets to the tank at the lowest point of the site, more than 3 meters away from the building.

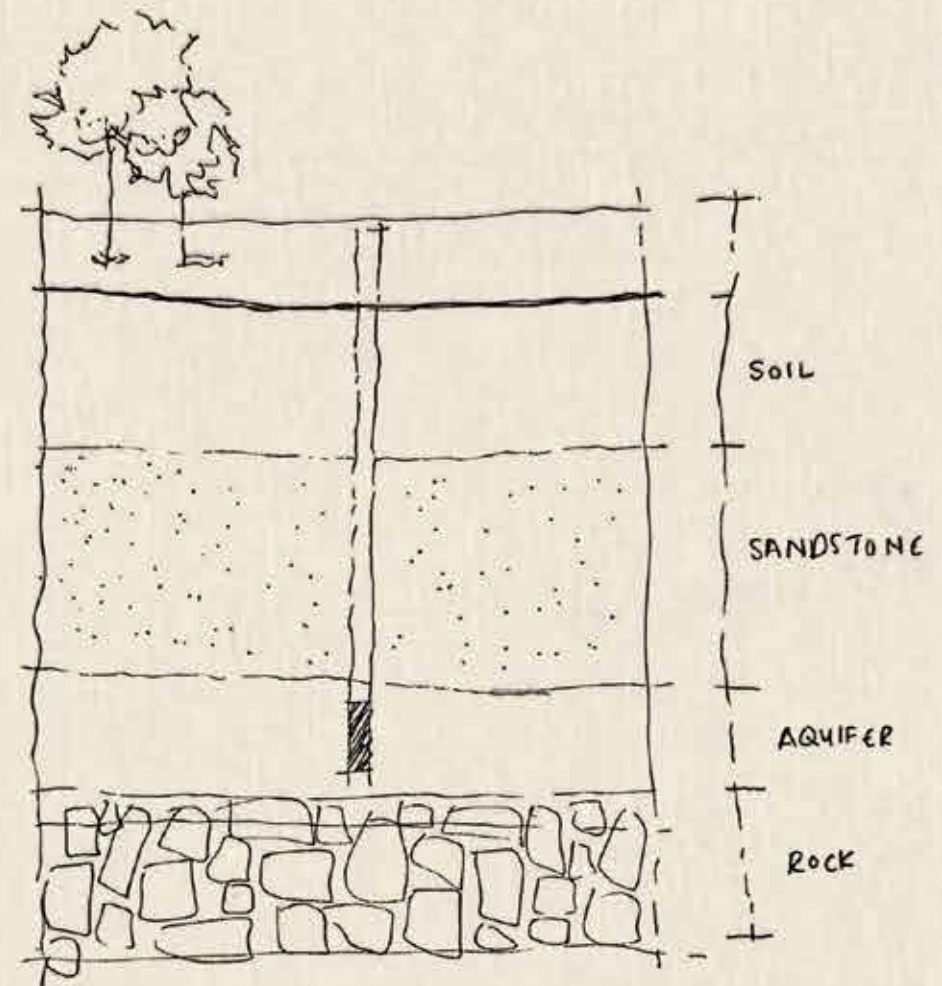


Figure 6.21:
(Sandstone as an
aquifer (author, 2024))

6.6. Interactions between Site, Explorer and Structure

6.6.1. Wind Catchers

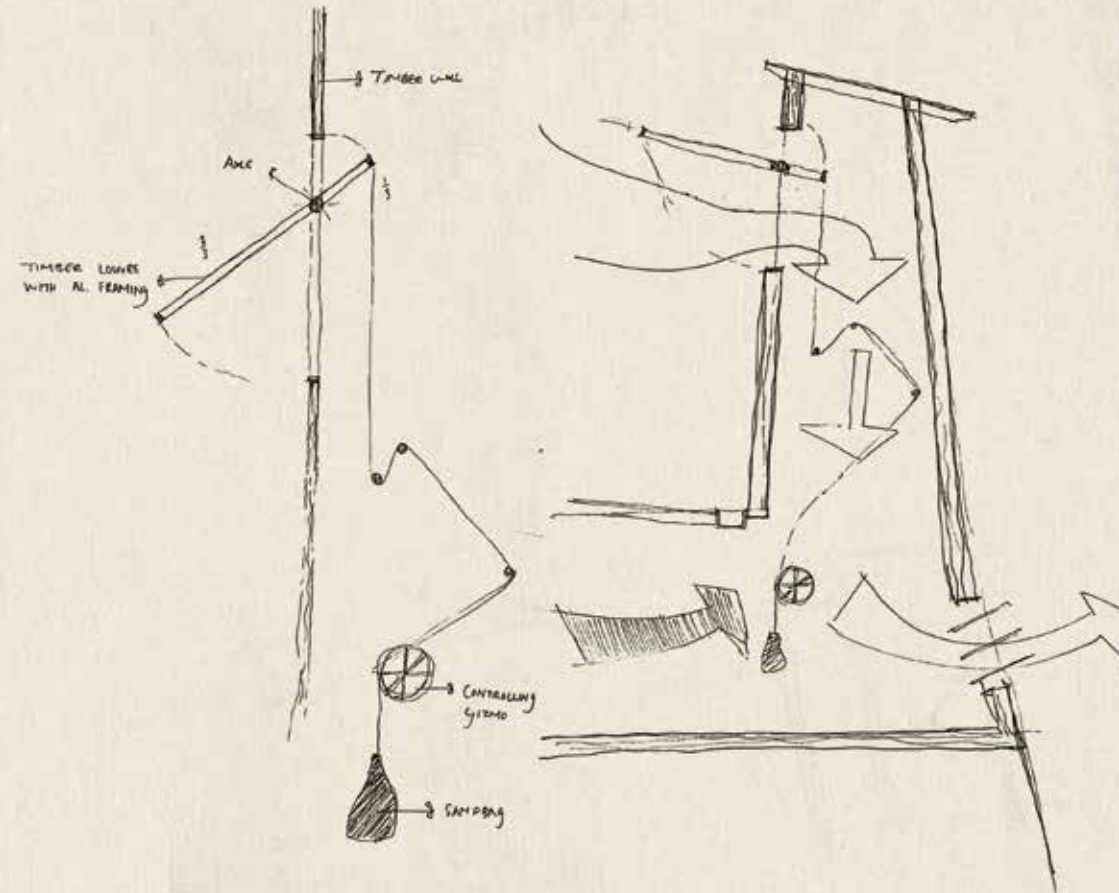
Wind catchers are designed to catch and channel the prevailing wind. As air flows into the tower, it creates a pressure difference that draws air out from the building, facilitating the exchange of indoor air for that of the outdoors (Commons, nd). In the case of this project, the wind catchers are used to create a flow of air within the washing room, and a pulley system is used to open and close shutters both at the top and the bottom.

6.6.2. Louvres

Referring to the precedent of Kundig's Chicken Point Cabin, a louvre system with pulleys can be constructed. A manual hand-crank opens the 6x9m window wall. Supplicating a counter-balance principle through a set of gears like that of a bicycle, allows minimal input force to pivot the steel-and-glass window. In the case of this project, the louvres rotate in place with a cable running throughout. Frames will be steel with either glass or timber insertion.

6.6.3. Textile Shading

To achieve the effect of sails on a ship, textiles are used as shading, as well as embodying the presence of the Wind on the site.



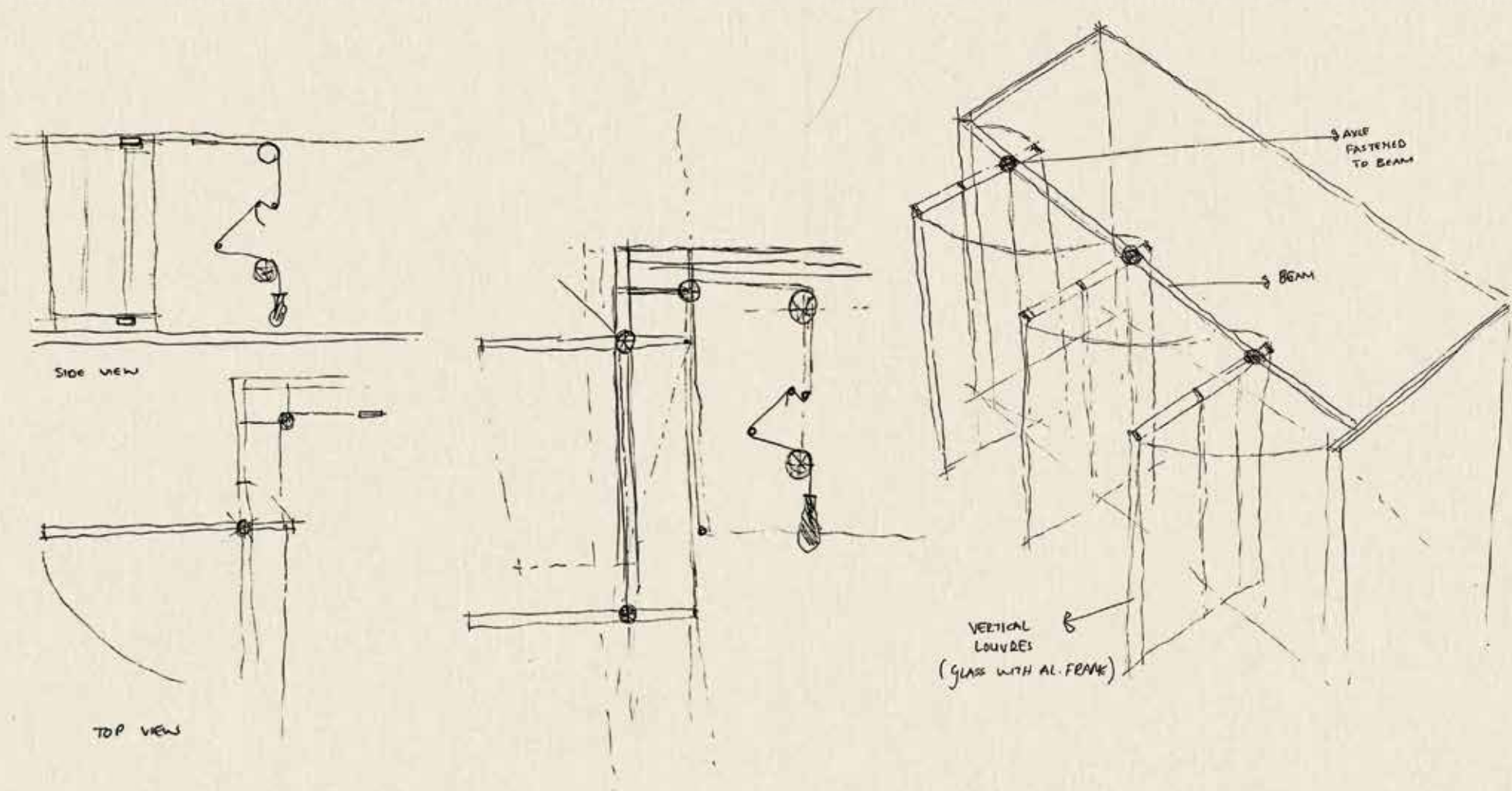
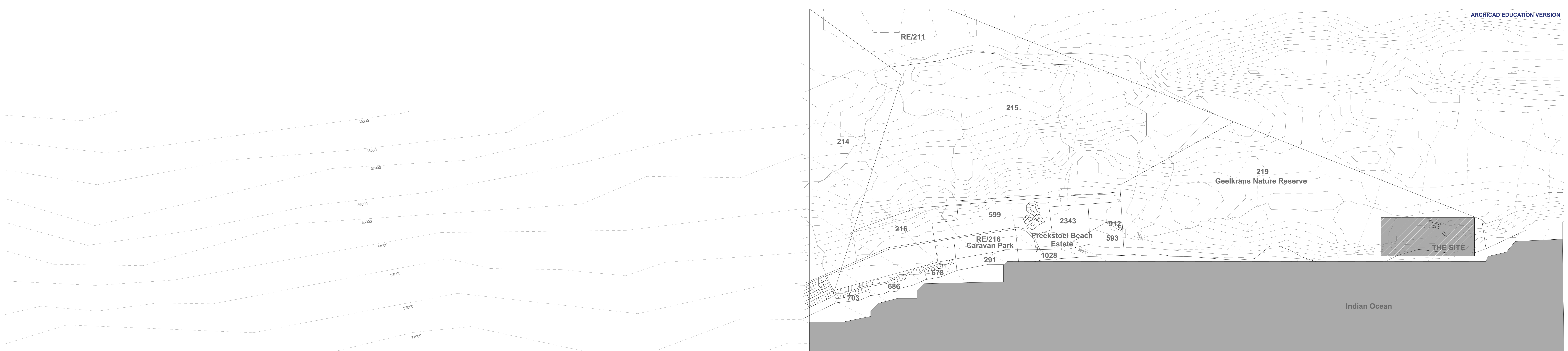
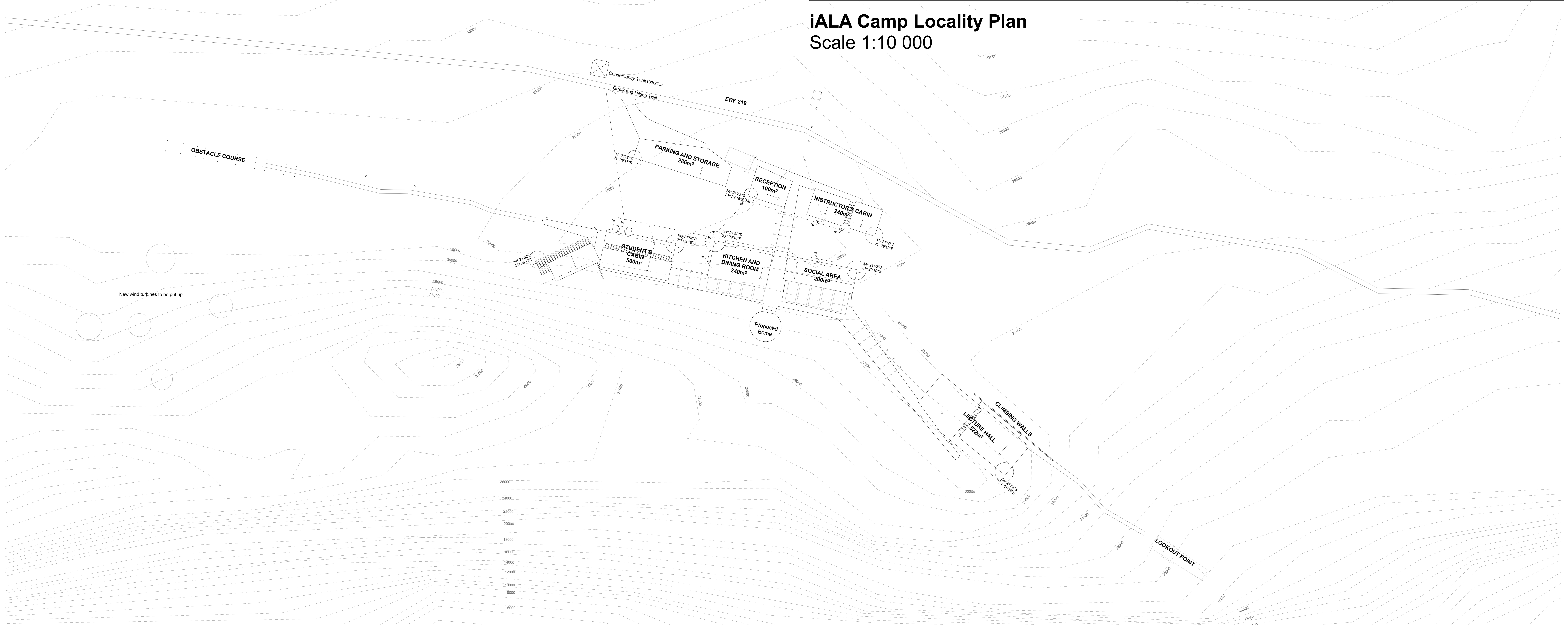


Figure 6.22: Wind catcher details (author, 2024)

Figure 6.23: Louvre system details (author, 2024)



iALA Camp Locality Plan
Scale 1:10 000



iALA Camp Site Plan
Scale 1:500

iALA CAMP

iALA CAMP

iALA Camp Ground Floor B
Scale 1:100

iALA CAMP

Anika Bothma
2019101282

Project Name:
Sparring With The Wind

Project Address:
Geelkrans Nature Reserve, Stilbaai

Date:
October 2024

Drawing Number:
03

Revision:
01

iALA Camp Ground Floor B
Scale 1:100

iALA CAMP

Anika Bothma
2019101282

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iALA Camp Ground Floor B
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iALA Camp Ground Floor B
Scale 1:100

iALA CAMP

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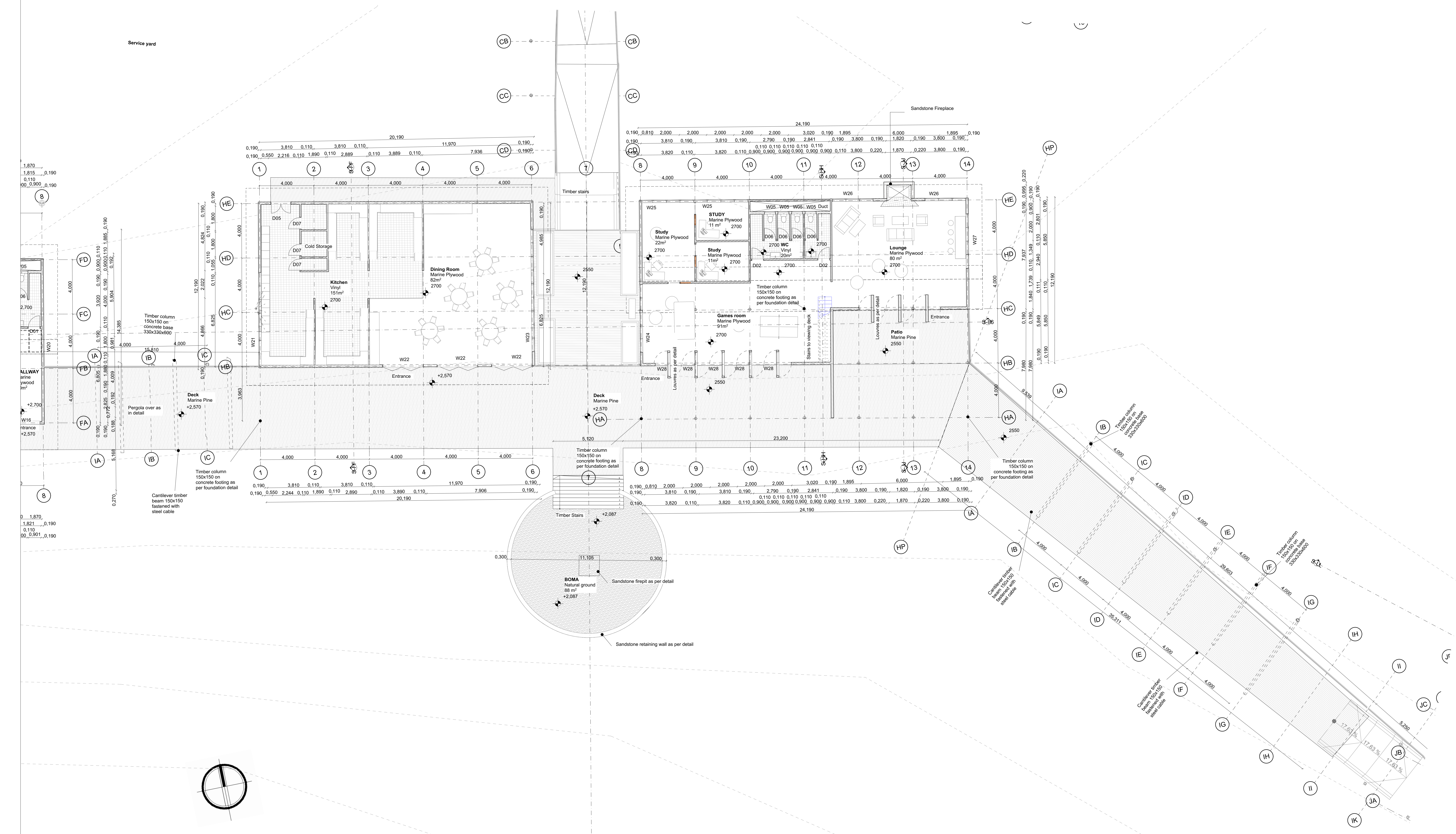
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Sparring With The Wind

Project Address:
Geelkrans Nature Reserve, Stilbaai

Date:
October 2024

Drawing Number:
03

Revision:
01



iALA Camp Ground Floor C
Scale 1:100

iALA CAMP

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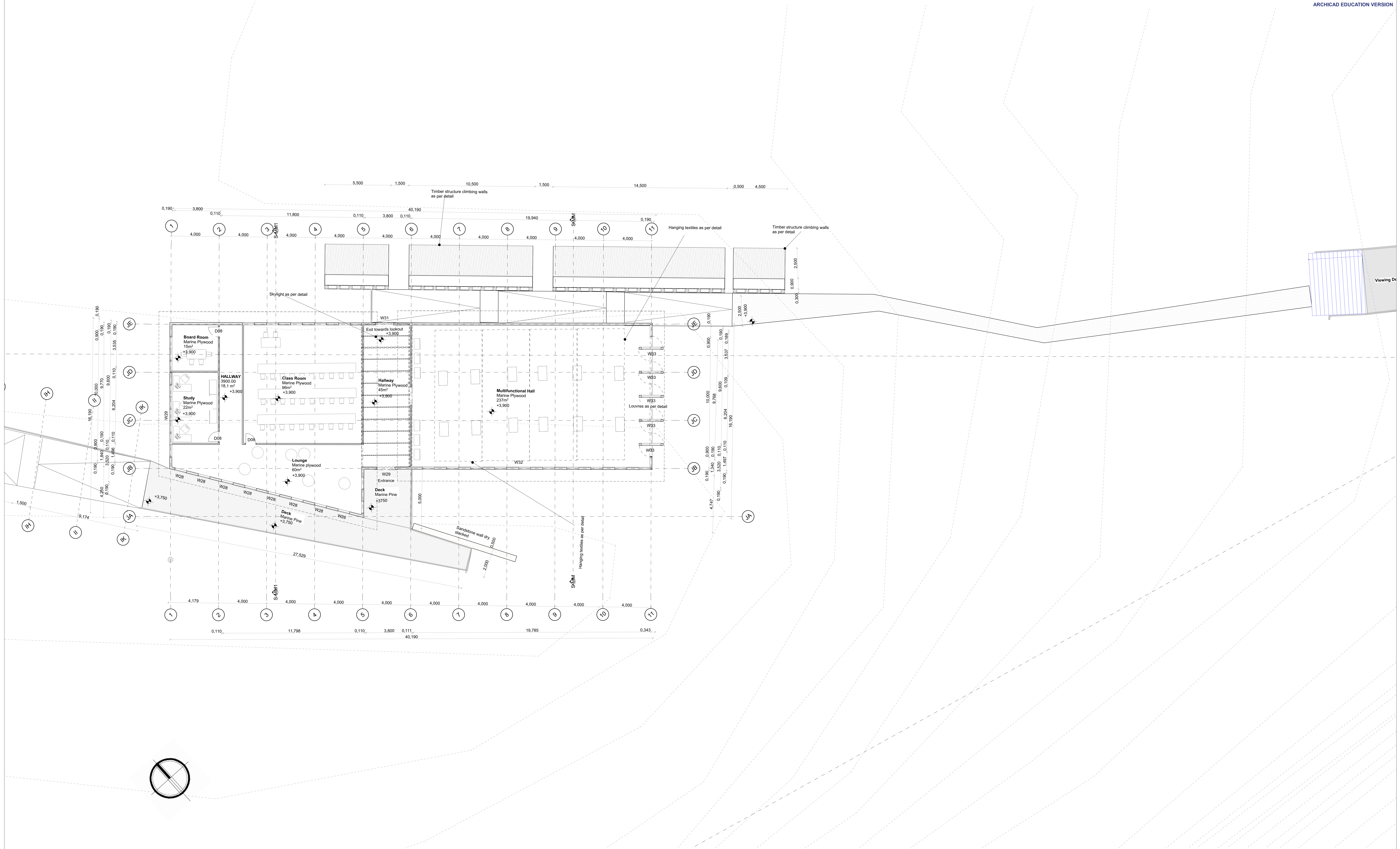
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Project Address:
Geelkrans Nature Reserve, Stilbaai

Date:
October 2024

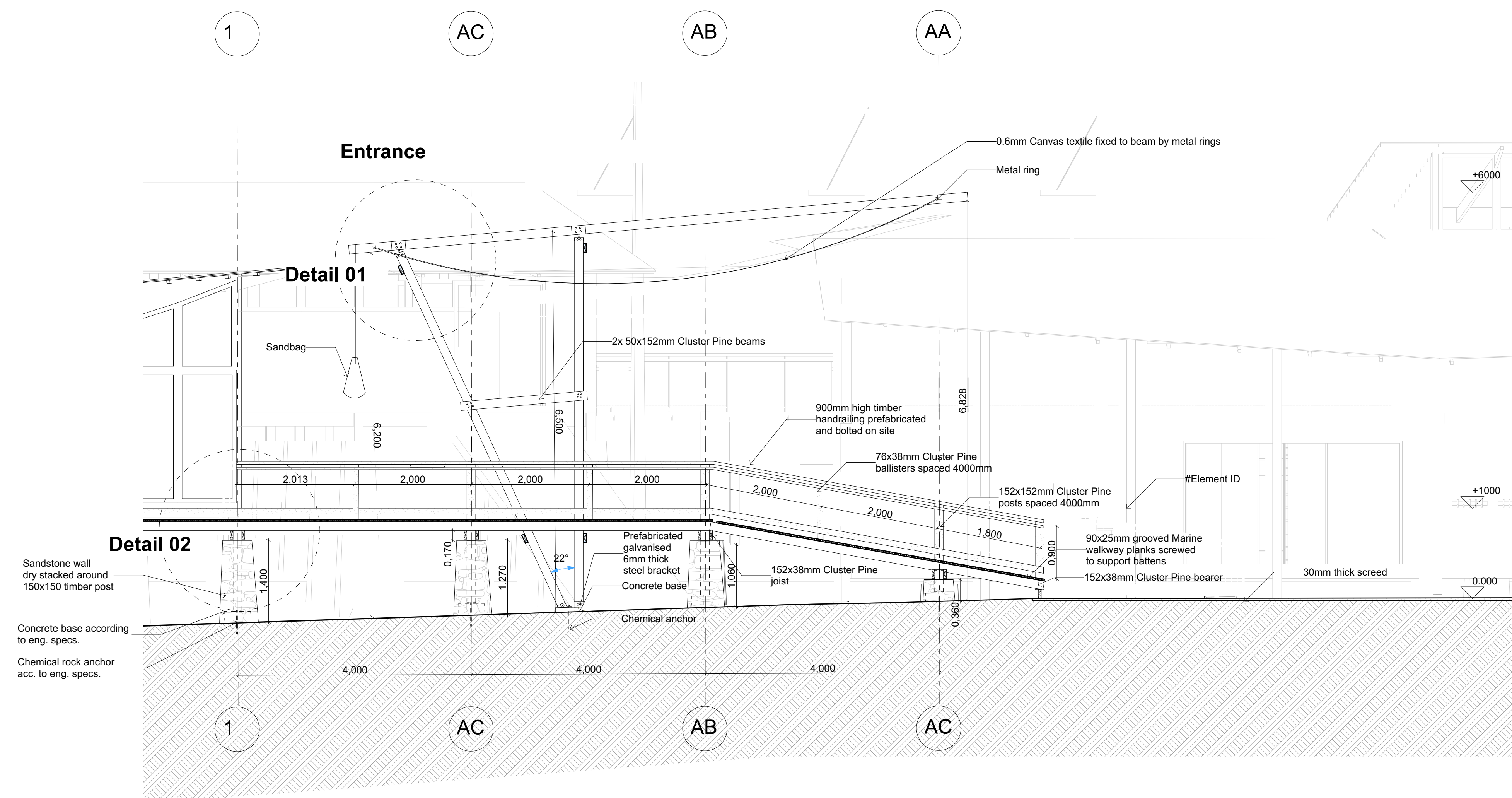
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Revision:
01

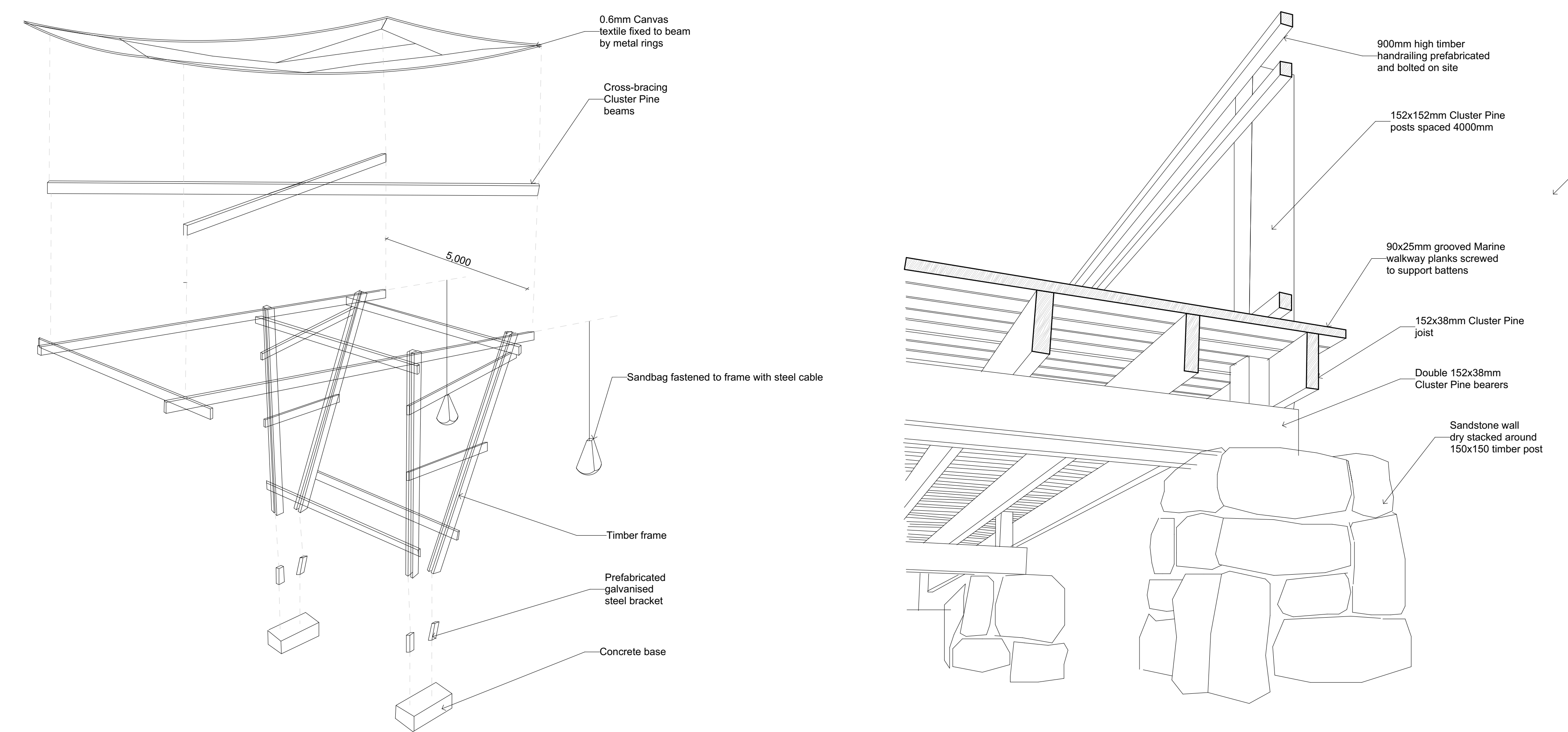


iALA Camp Ground Floor D
Scale 1:100

iALA CAMP

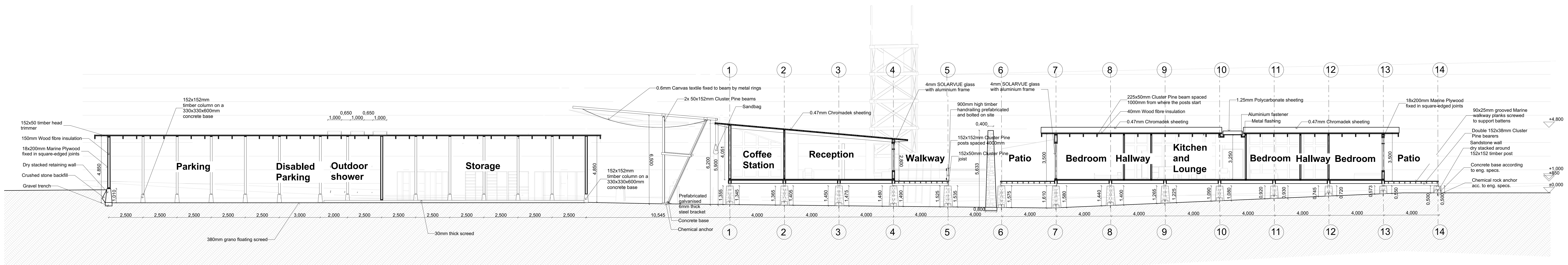


iALA Camp Section AA
Scale 1:50

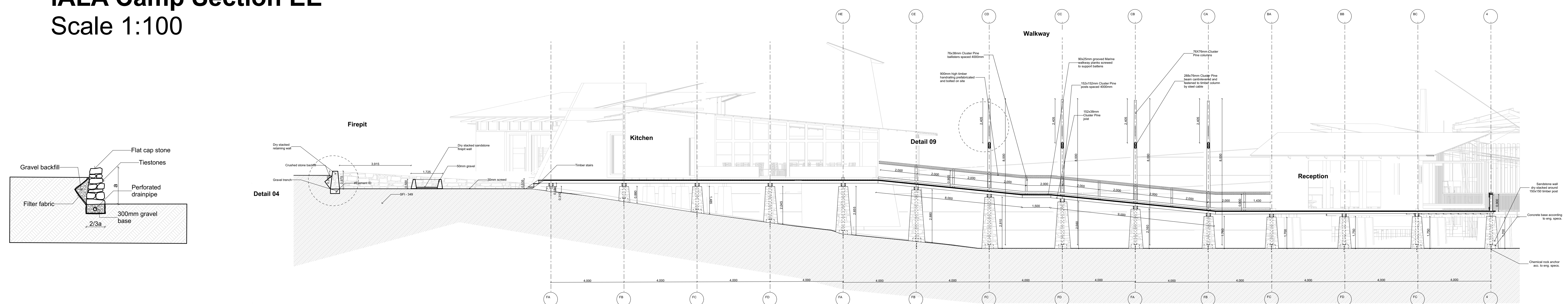


Detail 01
Canopy

Detail 02
Walkway Construction



iALA Camp Section EE
Scale 1:100



Detail 04
Retaining wall

iALA Camp Section FF
Scale 1:100

iALA CAMP

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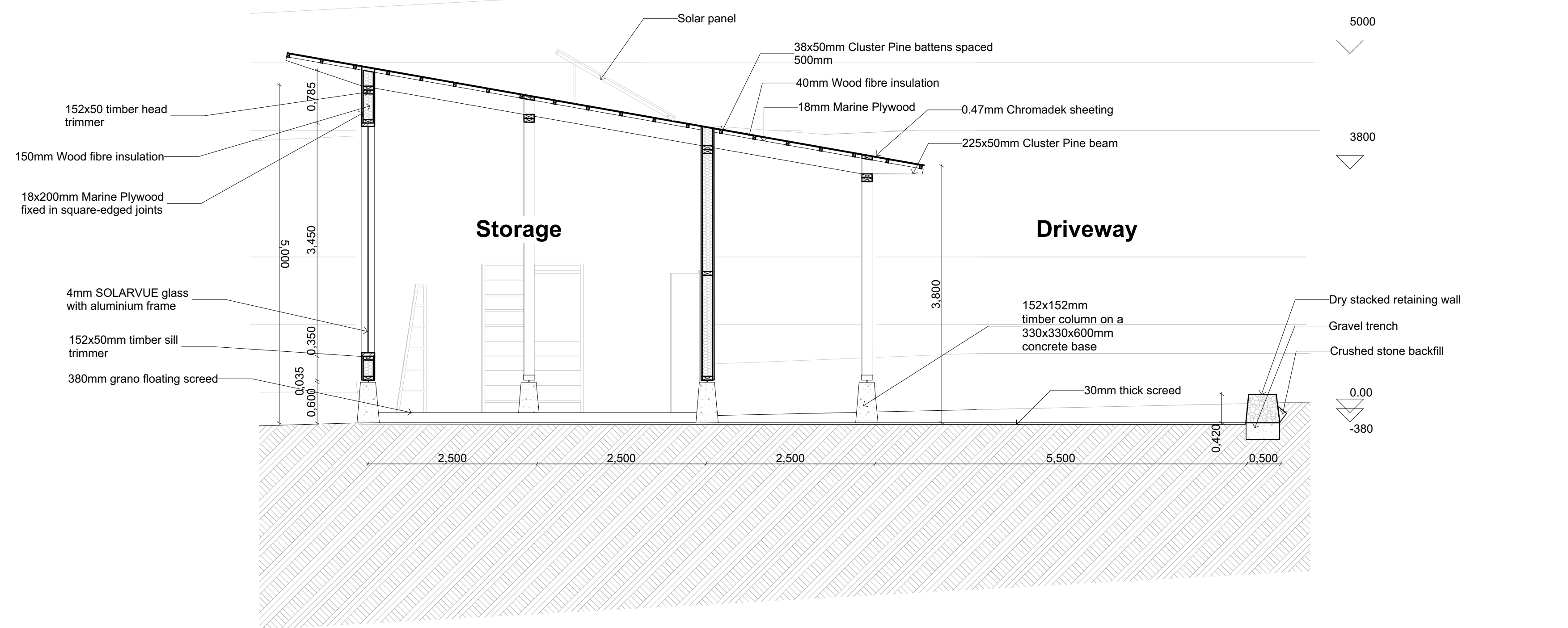
Project Name:
Sparring With The Wind

Project Address:
Geelkrans Nature Reserve, Stilbaai

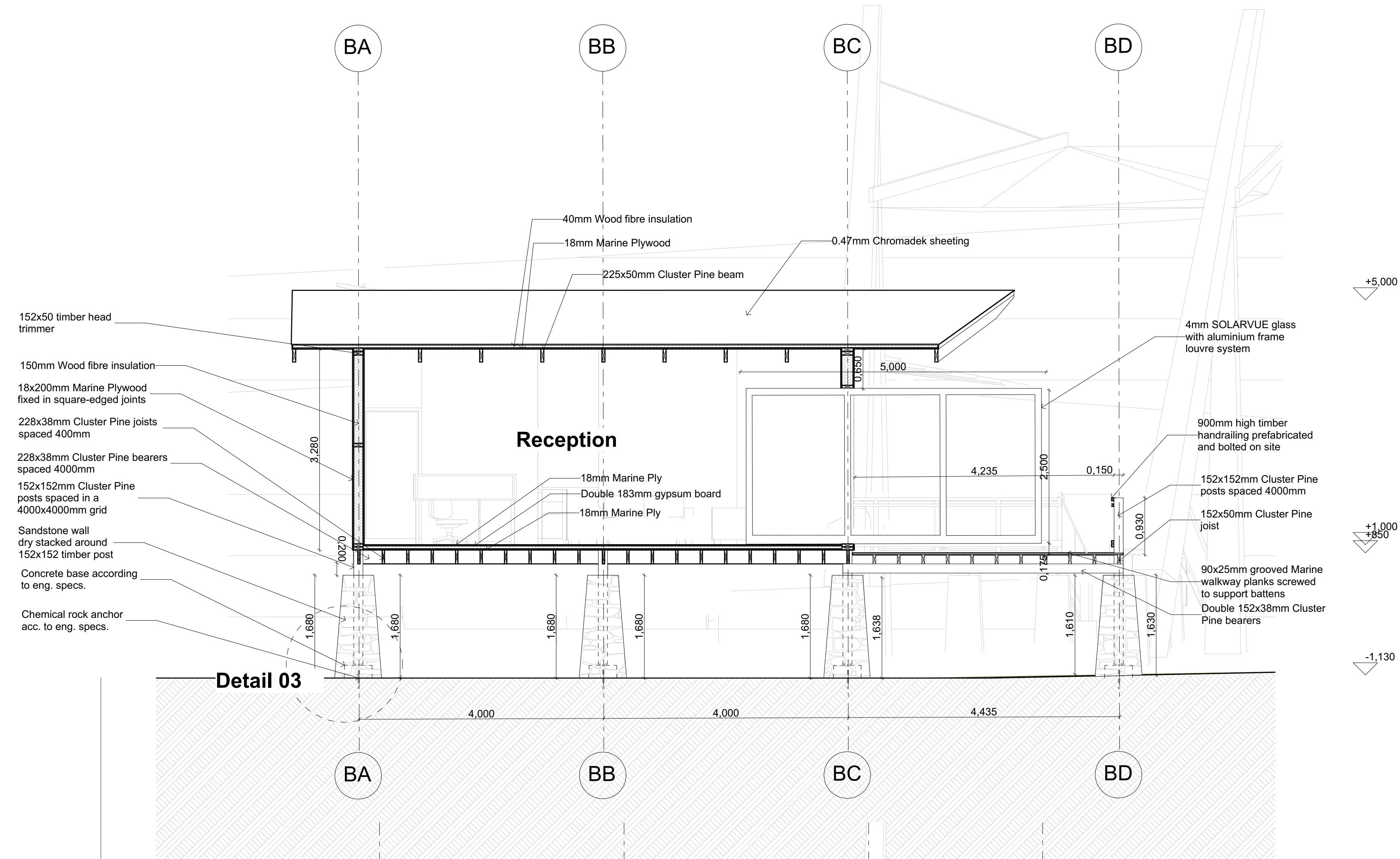
Date:
October 2024

Drawing Number:
06

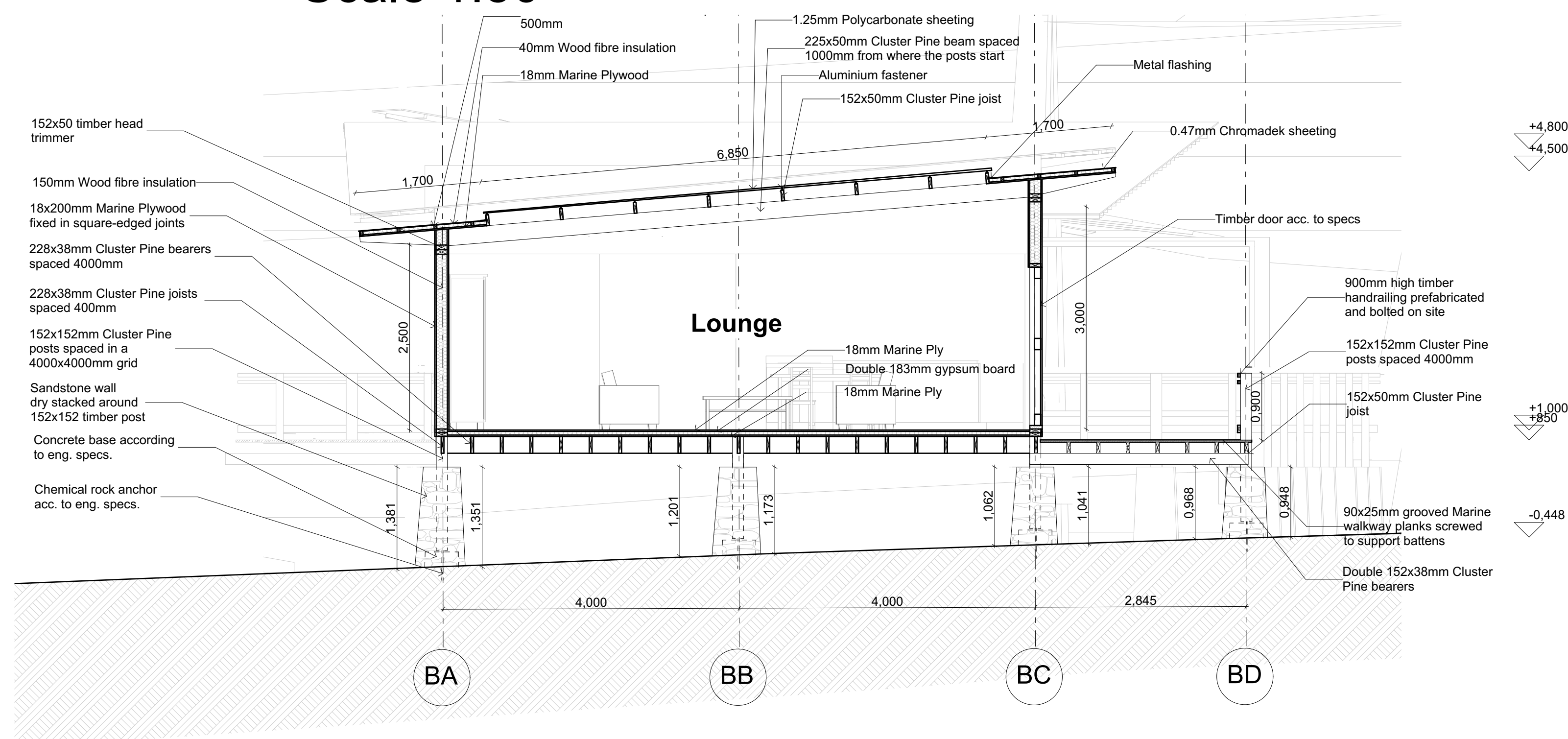
Revision:
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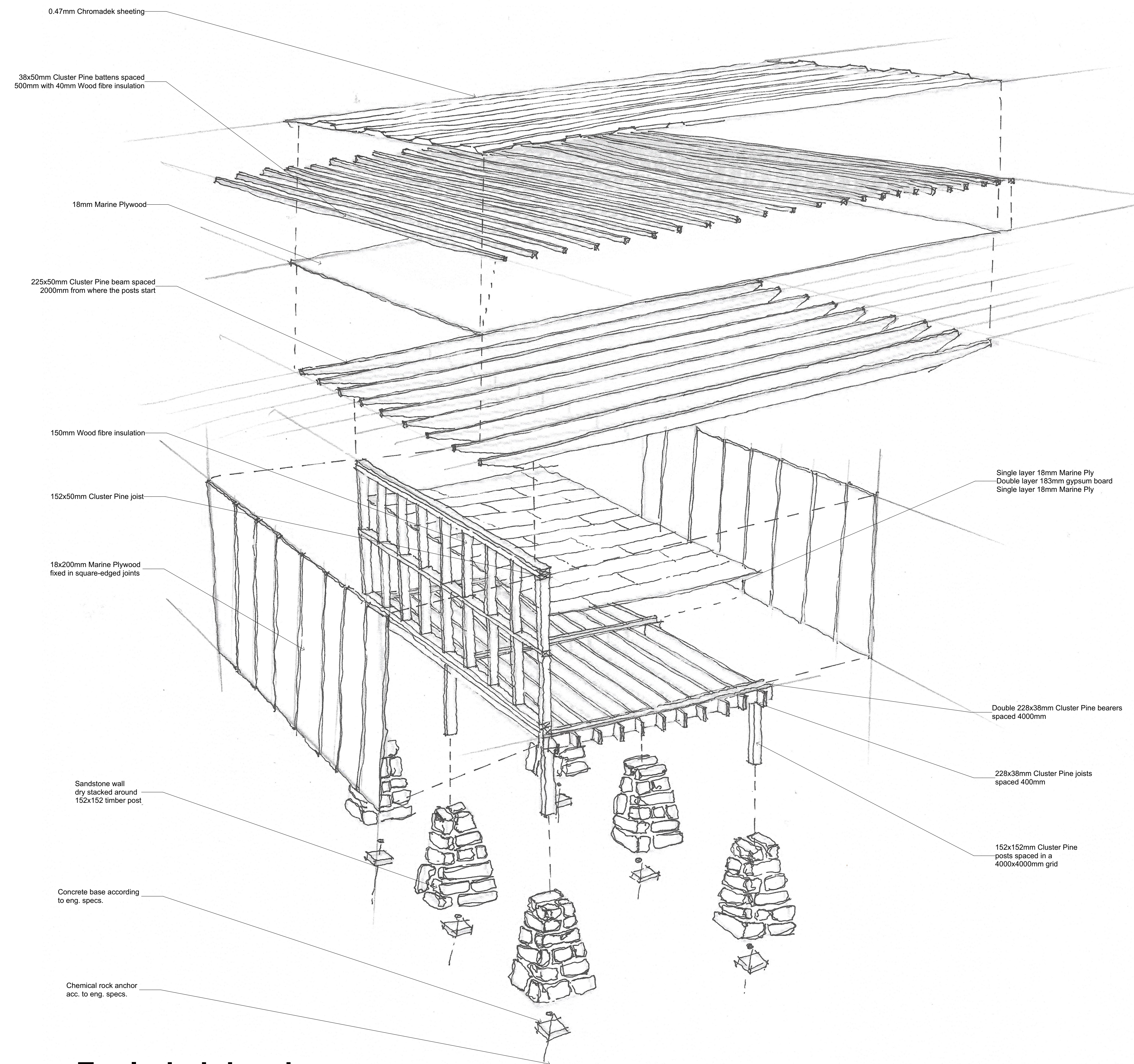
iALA Camp Section BB
Scale 1:50



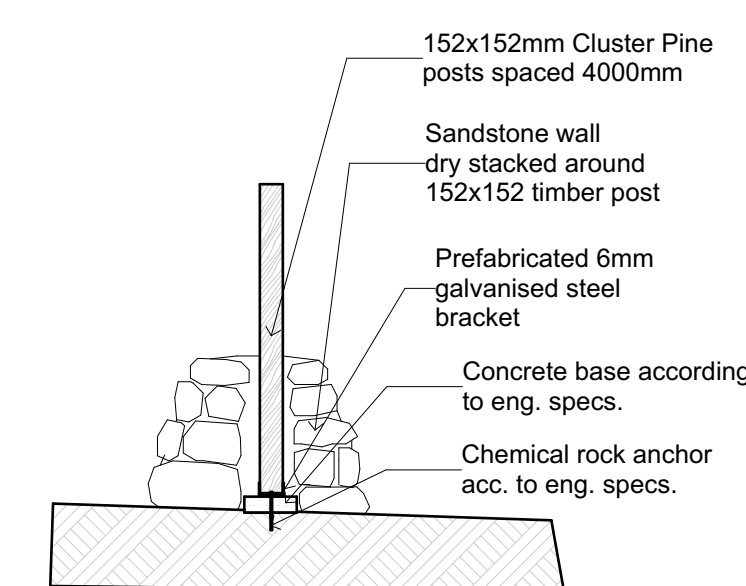
iALA Camp Section CC
Scale 1:50



iALA Camp Section DD
Scale 1:50



Exploded drawing



Detail 04
Foundation Detail

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Project Name:
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October 2024

Drawing Number:
07

Revision:
01

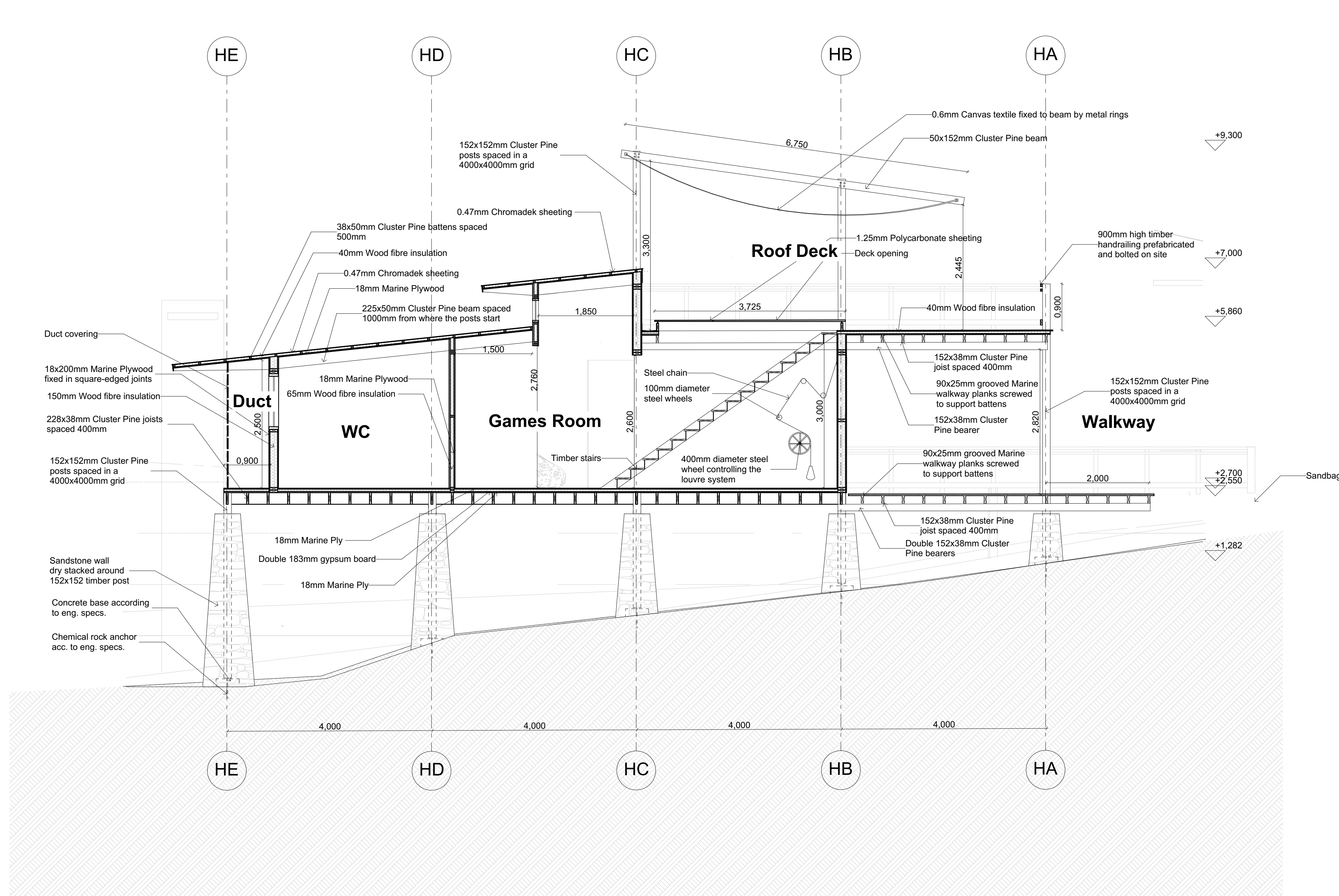
[illegible]

The diagram illustrates a cable railing system. A cable is shown running horizontally across the top of two rectangular posts, labeled 'Adjustable walls'. The cable is also shown extending from the top of the posts to a point labeled 'Cable suspended from roof'. A railing is shown running horizontally across the top of the posts, labeled 'Railing'. A glass panel is shown attached to the side of one of the posts.

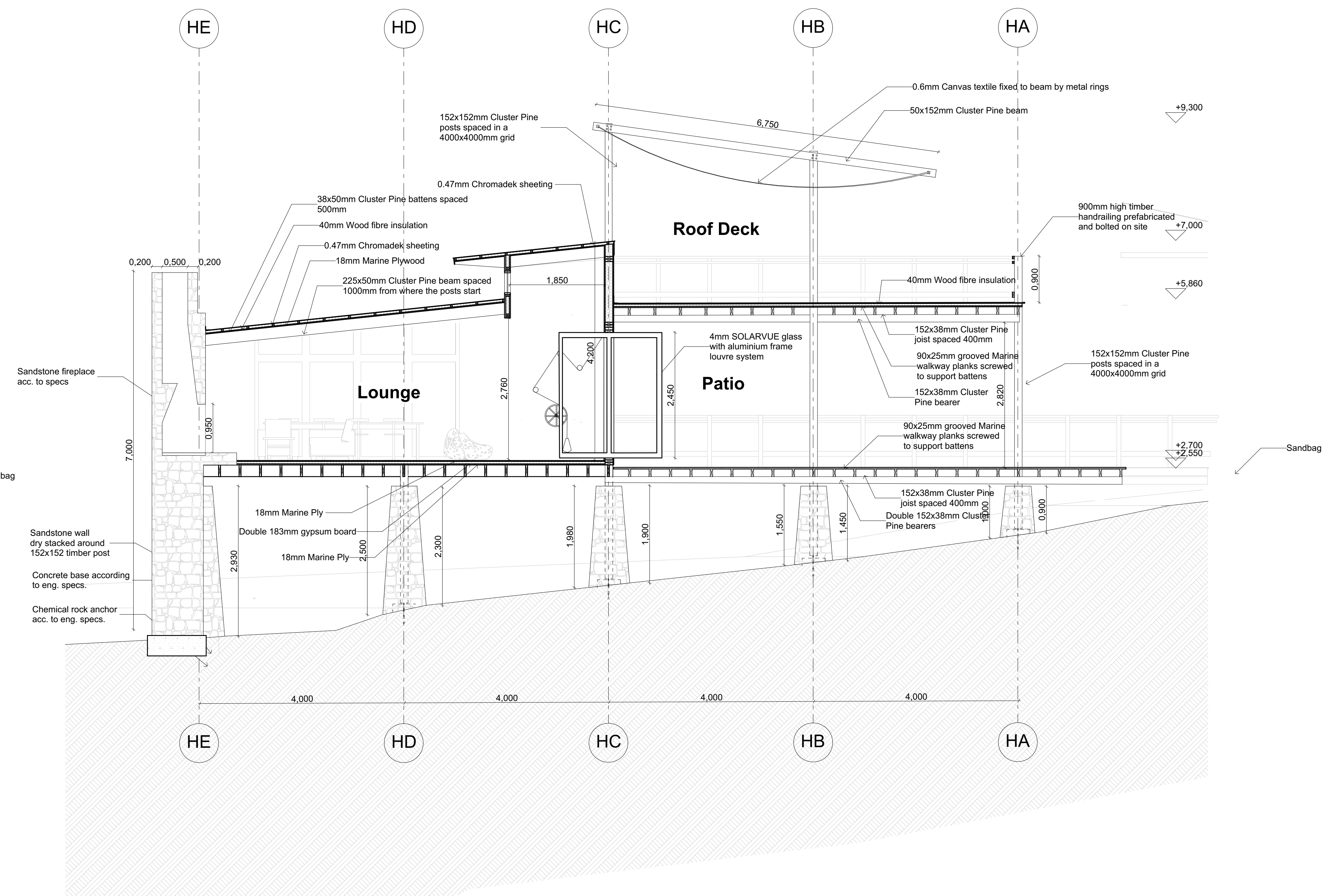
[illegible]

Detail 07

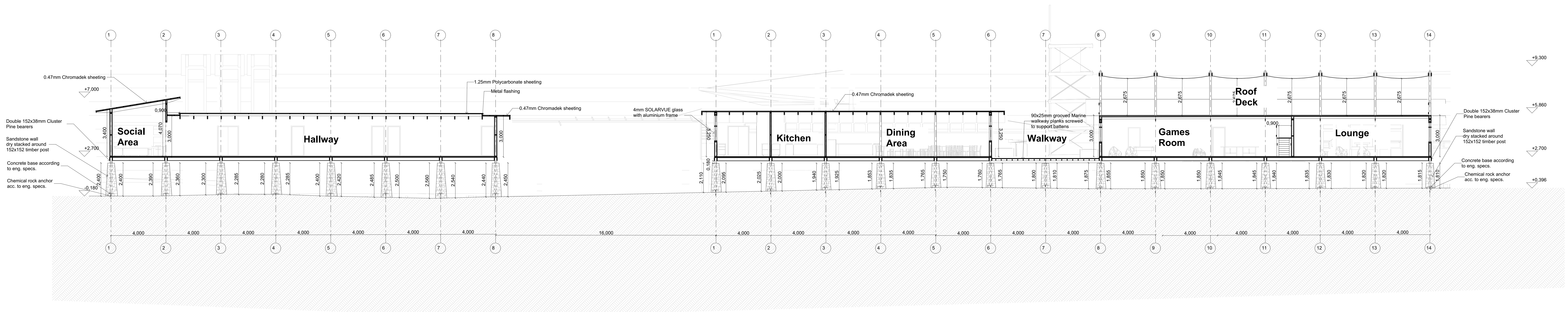
Wind Tower Louvre



iALA Camp Section JJ
Scale 1:50



iALA Camp Section KK
Scale 1:50



iALA Camp Section LL
Scale 1:50

iALA CAMP

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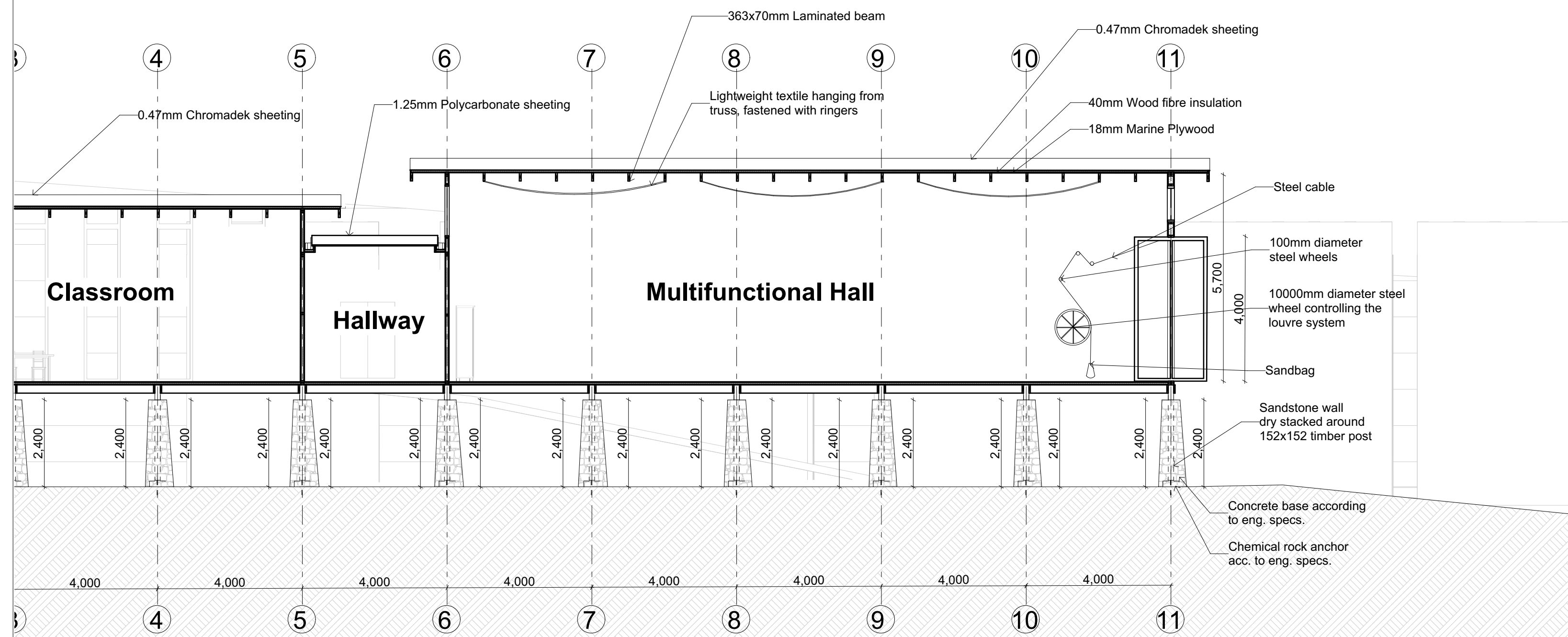
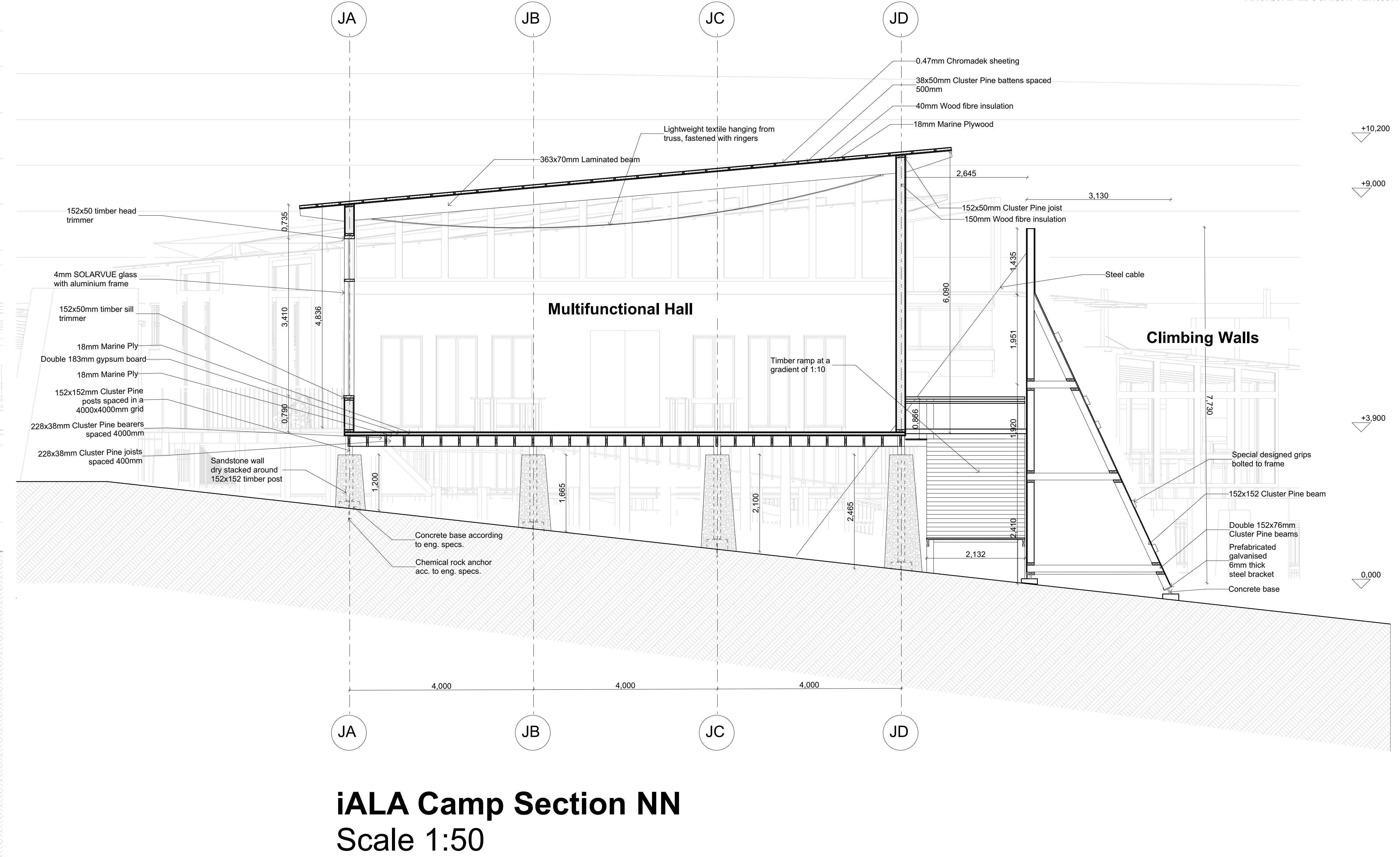
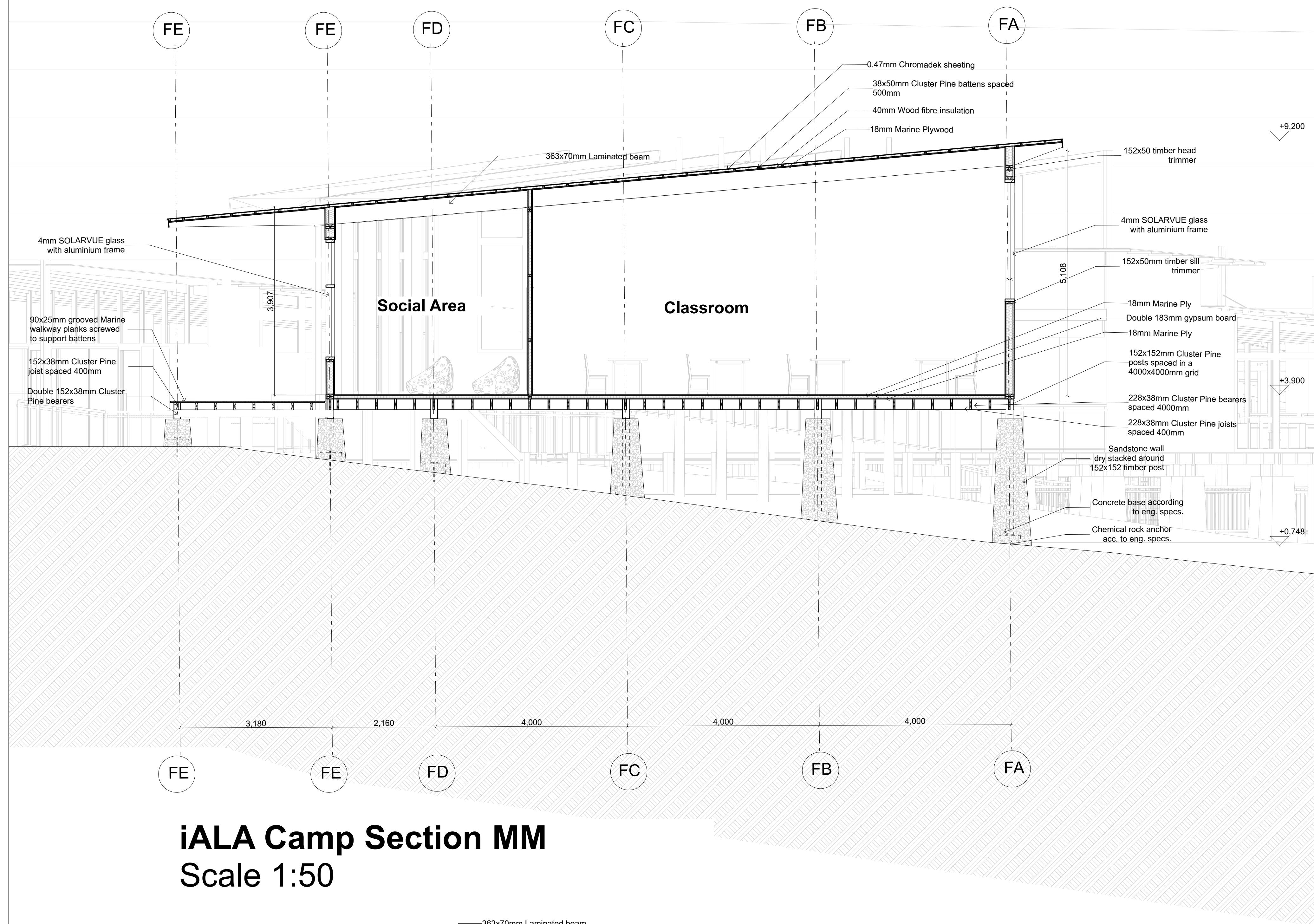
Project Name:
Sparring With The Wind

Project Address:
Geelkrans Nature Reserve, Stilbaai

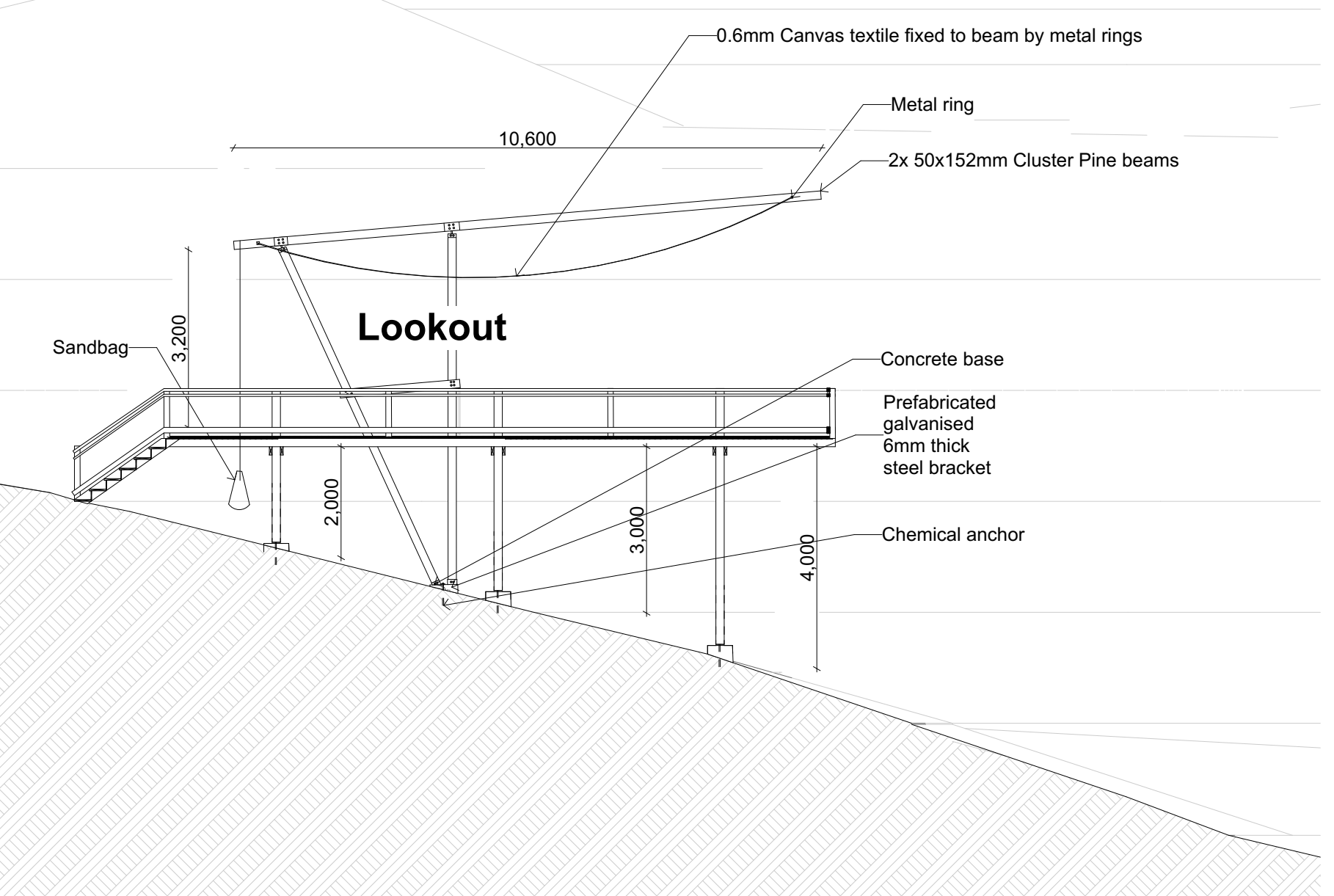
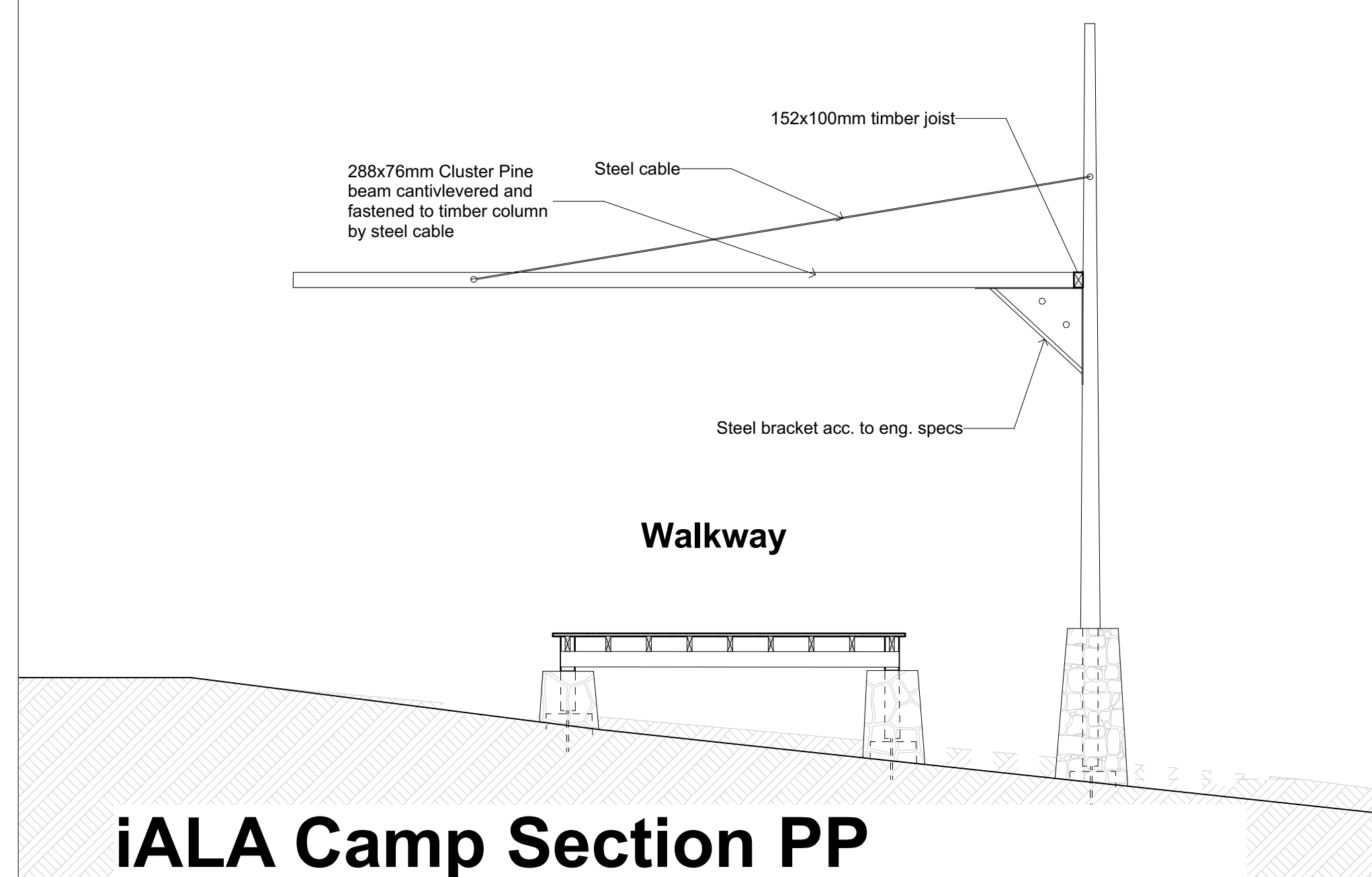
Date:
October 2024

Drawing Number:
09

Revision:
01



iALA Camp Section OO
Scale 1:100



iALA CAMP

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Project Name:
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Project Address:
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Date:
October 2024

Drawing Number:
10

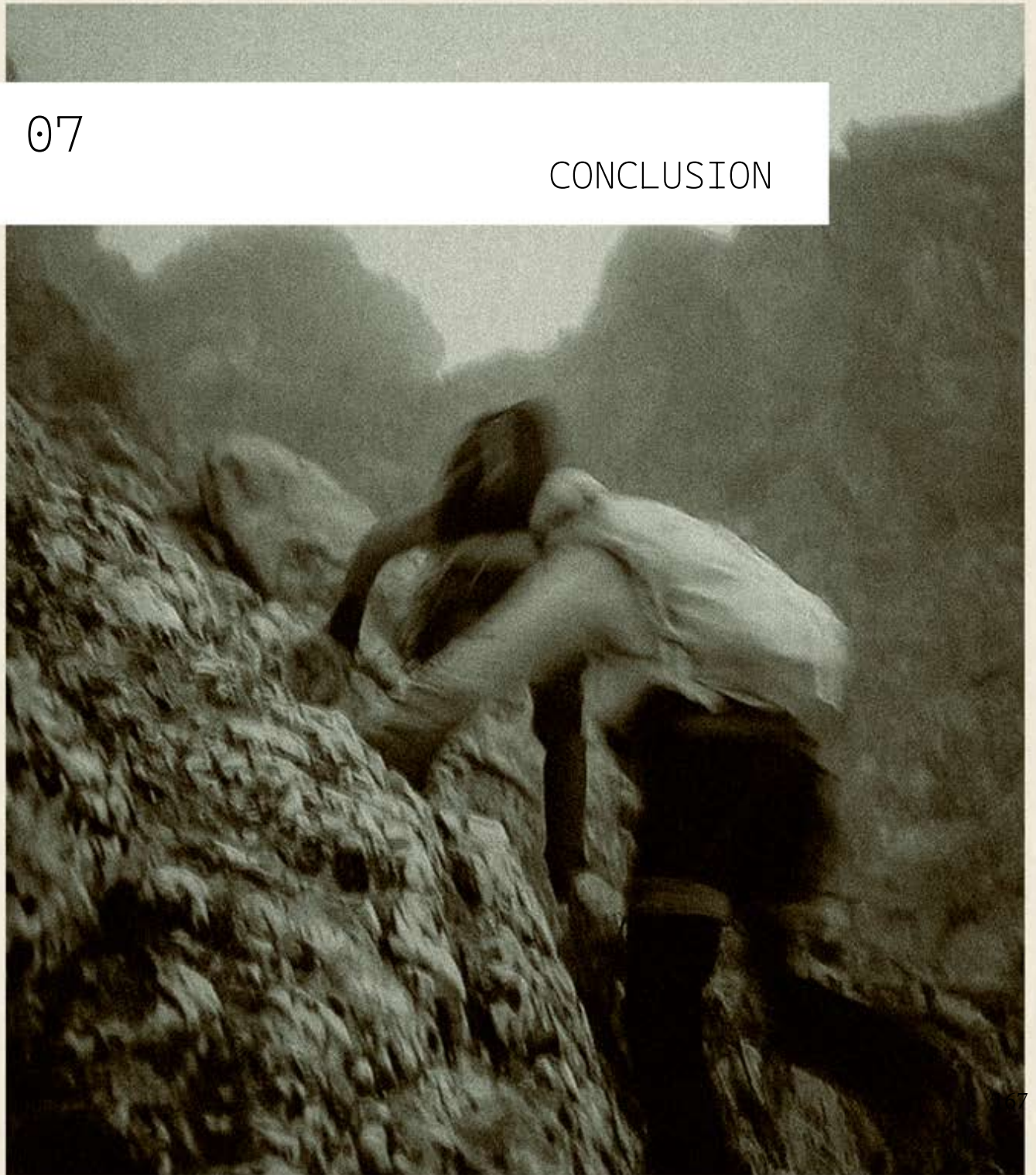
Revision:
01

6.7. Conclusion

In this chapter of my endeavours, I discussed the influences and reasoning behind the technical guide of the design set out in the previous chapter. The most technical component of the design, lies with the enclosed buildings advised as largely premanufactured and crafted to be manually assembled in order to lessen the burden of the construction process on the environment. Working with prefabrication brings both constraint and creativity. This chapter should be viewed together with the added final technical documentation which showcases the systems and approaches in the bigger scheme of the project.

ENTRY 07

CONCLUSION



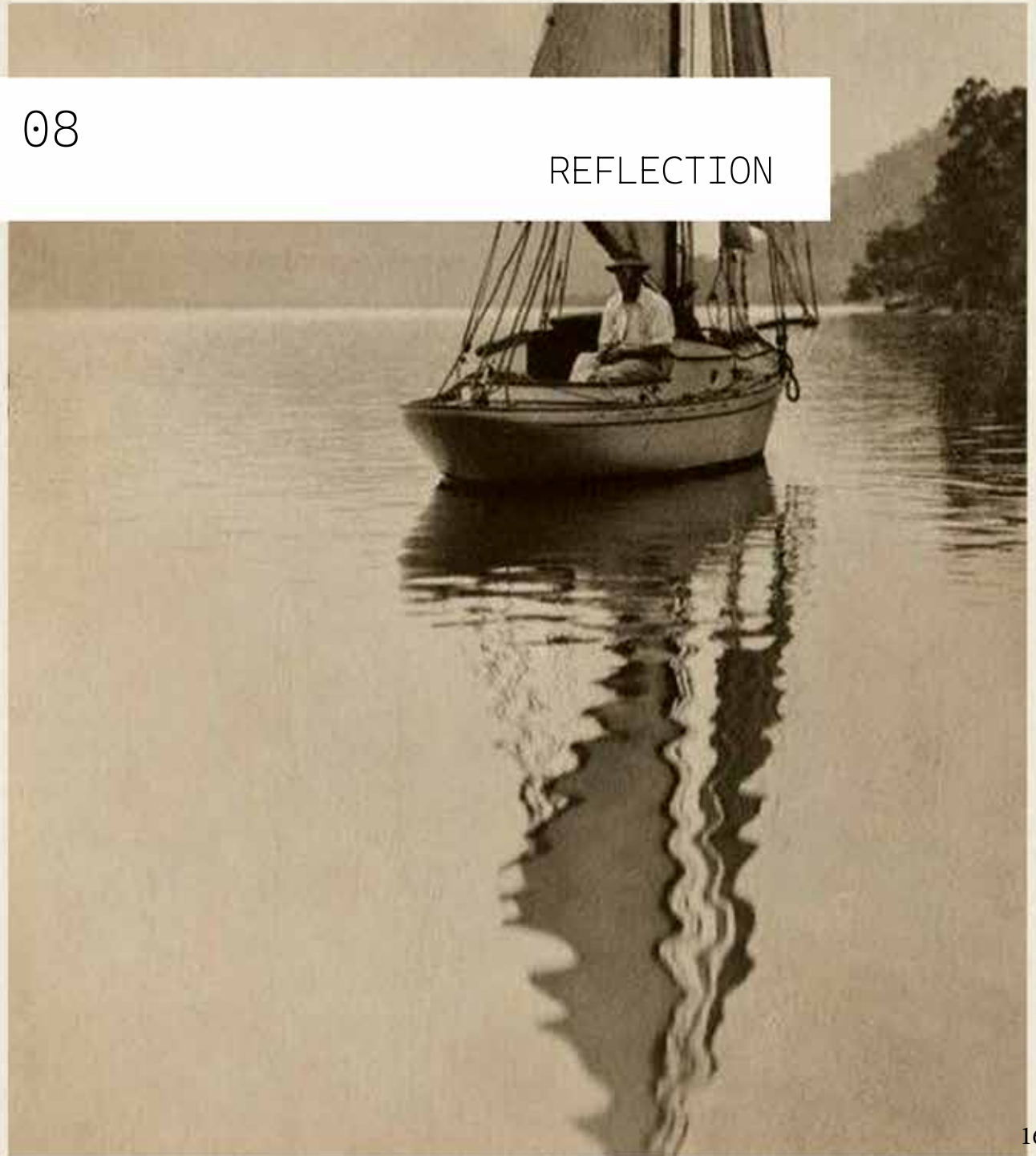
06. CONCLUSION

In the future, a change in environment might be the cause of the gap-year camp need to moved, just like the nomads of old. For now, it will spar with the wind, and provide shelter to its inhabitants arriving from a myriad of adventures along the coast of South Africa. Perhaps other endeavours would advise that it be more embedded in the landscape. In this proposed camp for the students, the encouragement to traverse in the landscape temporarily, was designed with the idea that it might be upheaved soon, in mind. As a designer, I would want a piece of history to stay behind on site in a sustainable and sensitive way. Students are brought together in adventurous and hand-controlled systems to engage with their shelter, almost building it to their comfort. They understand that true engage with the world requires not just a destination but a willingness to engage with the uncertainties and surprises that come with the world. In recognising the duality of Wind and its landscape – its potential for destruction and creation, it becomes a combination of walls and windmills. The Wind, the Explorer, the Nomad, and the Settler becomes a way to understand the building and its landscape. It becomes a vessel for adventures and learning skills, guided by the stars above and the winds beckoning me forward. It becomes the Ship.

Figure 8.1: Sail away to new horizons

ENTRY 08

REFLECTION



07. REFLECTION

As the project unfolded in the initial drawings, I felt a sense of awe for the unknown. I realised how it must feel to be a student in the gap year, with so many choices to be made. I needed to learn how to adjust those sails myself with my pen-and-paper pulley system, guiding my thoughts in one direction or the other. I struggled most with how to portray the power of the wind in the coast in the most appropriate way for this particular scheme of an adventure gap-year camp. Should I focus on its destructive side, the way it erodes and how this erosion and ruin relates to one's body. Or whether to focus on the light-hearted aspects, showing its presence through lighter materials. Only later in the process, it dawned on me that it needed a light-heartedness in the student's already uncertain future. One of the biggest breakthroughs was when I lost the adventurous spirit of the scheme and then when I went and considered my initial drawings and feel, the new technical data, combined with the old ideas aligned. This year was definitely a year where I was tossed around by the Wind. Other times it went so quiet that I heard no answers to my thoughts. But throughout the year, it felt like my own adventure and I truly lived myself into narrative of an ancient explorer. I will strive to keep on exploring, with the hope to never lose the sense childlike joy when I design in the future.



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