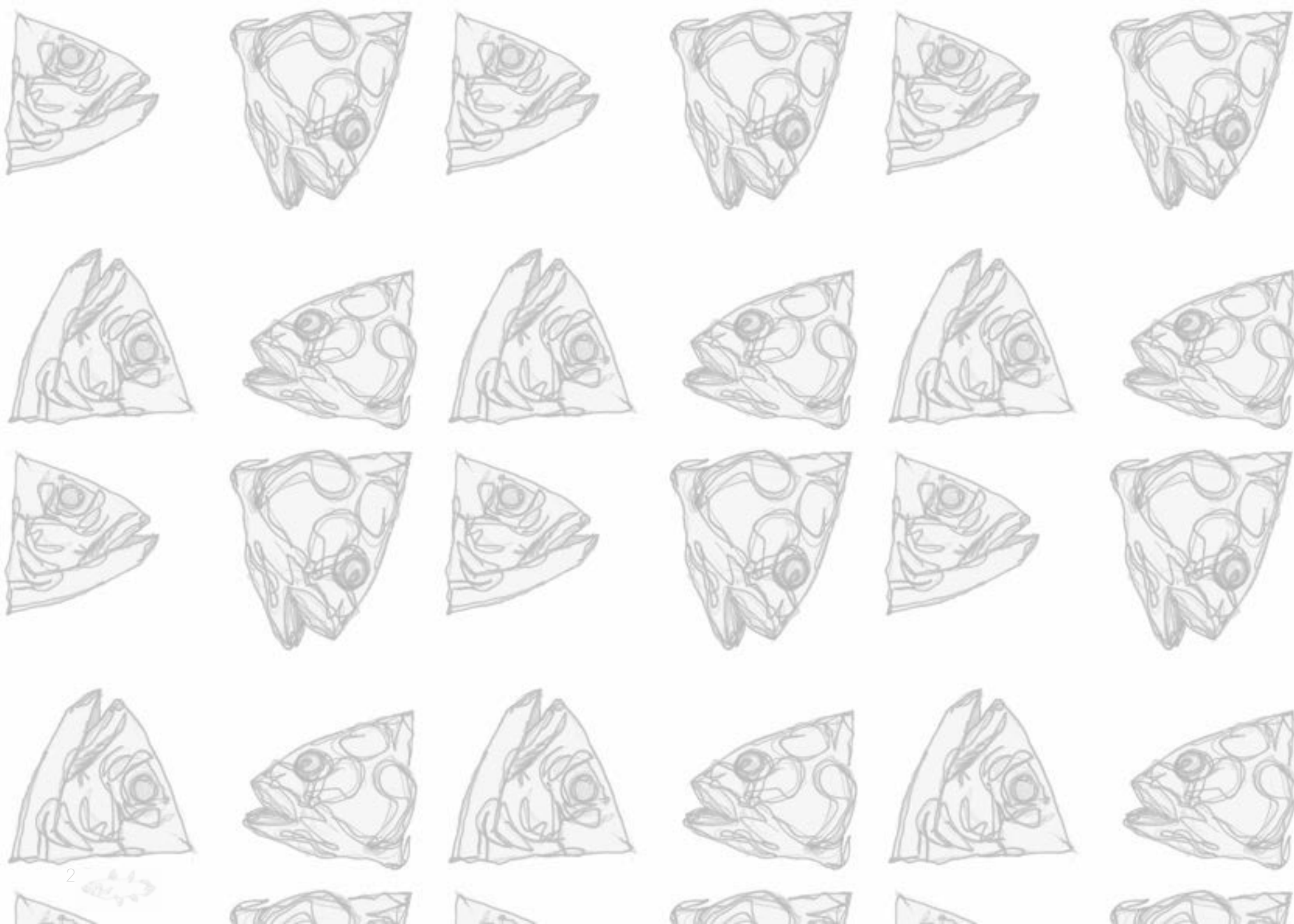


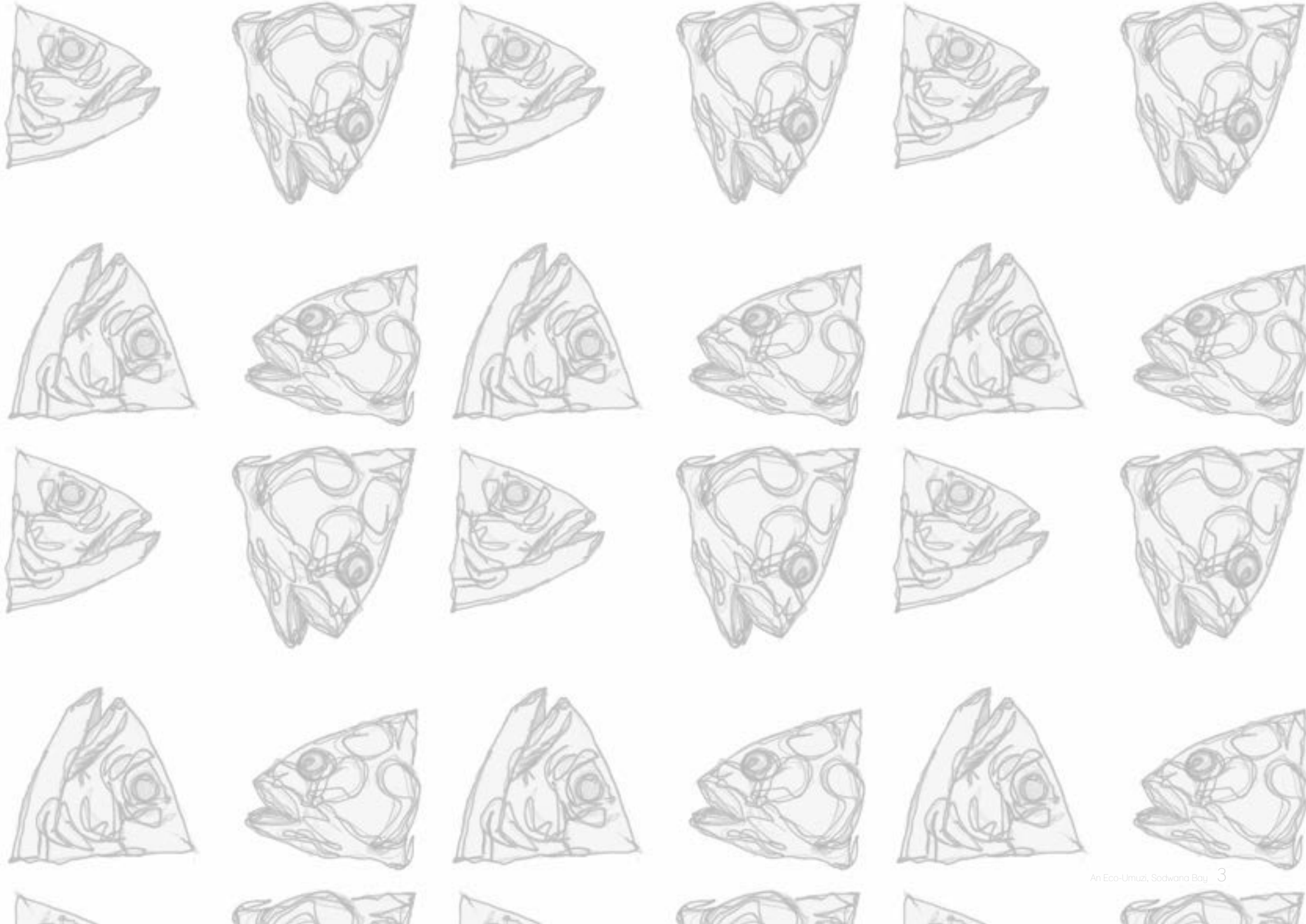


AN ECO - UMUZI

- SODWANA BAY -

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This dissertation is submitted in partial fulfillment of the requirements for the M.Arch Prof degree.

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Declaration of original authorship.

The work contained in this dissertation has not previously been submitted to meet the requirements for a qualification 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 or any other person except where due reference is made.

This document has been proofread and/or edited by:
J.A. Van den Berg



I dedicate this dissertation to my parents, Stefan and Orna Roux, to whom I am eternally grateful for not only supporting me unconditionally but also for instilling a love of art, history, and design. Furthermore, my brother Danco, who inspires me daily to achieve the goals I set out for myself.

My supervisor, professor Jako Olivier, thank you for the enormous support and guidance during this year and always being up for a discussion about philosophy and the condition of life.

“My candle burns at both ends;
It will not last the night;
But, ah, my foes, and, oh, my friends —
It gives a lovely light”
- Edna St. Vincent Millay
(First Fig, 1920)

Sodwana Bay has been a tourist attraction since the late 1970's. It is known for its sandy beaches and abundance of marine and wild life. This dissertation is proposing a multi-functional project which includes a crafts market, restaurant, information centre and scuba diving school that will enhance the tourists and locals' experience of the beauty and diversity of the location. This dissertation aims to cater on various levels to different needs in order to ensure their integration, for example: to recognise the fossil-like fish, the coelacanth; to incorporate the existing scuba-diving and tourist industry; and to include the local inhabitants' culture and crafts. Consequently, this project will recognise and respect these different components, it will be inclusive while, simultaneously, working as sensitively as possible on the site.

KEYWORDS: Relationships, Ubuntu, eco-tourism, critical regionalism, weak architecture.







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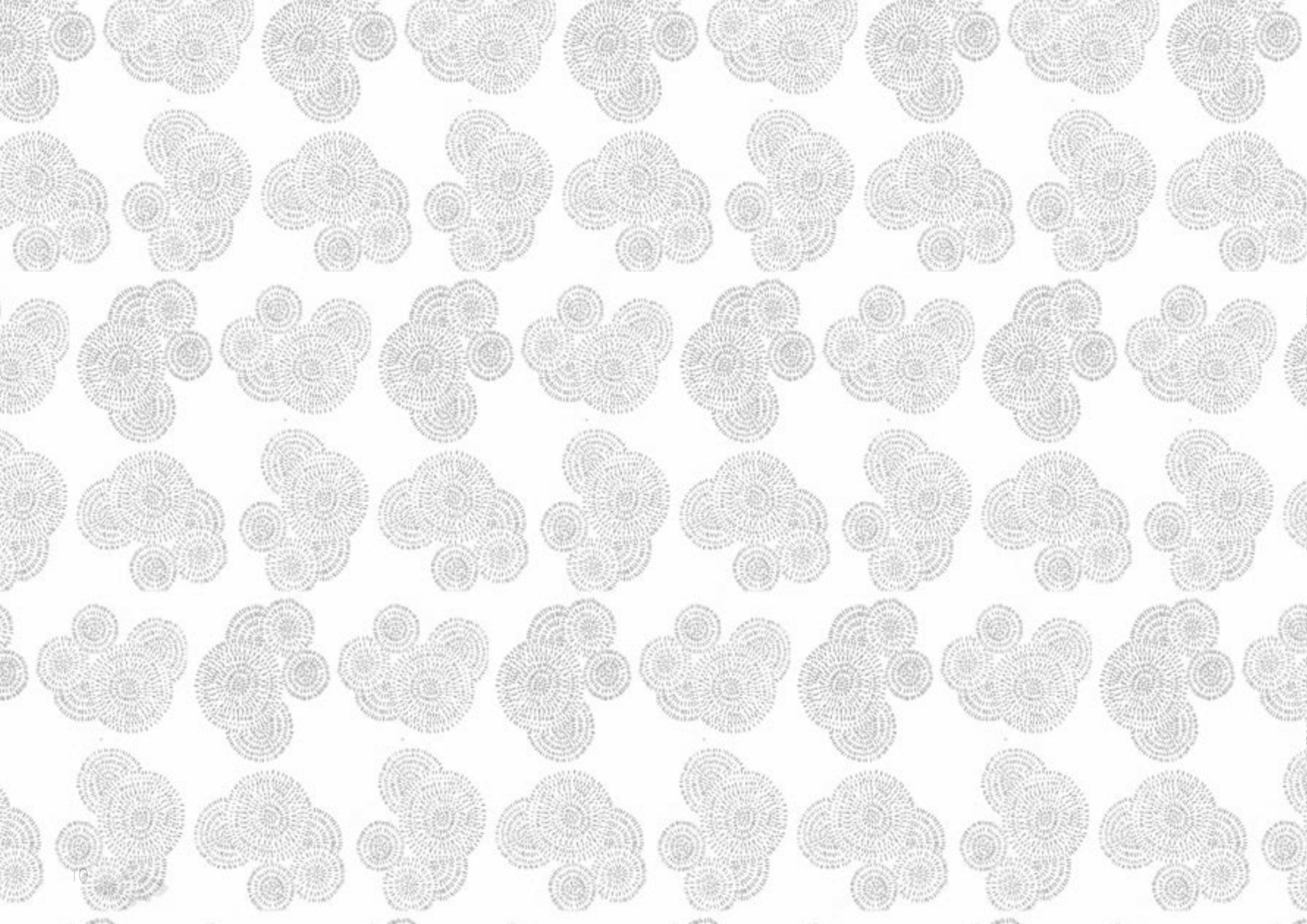
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PART 1



1.1 INTRODUCTION
1.2 CLIENT & USERS



1



INTRODUCTION

The proposed site, iSimangaliso Wetland Park, is situated in Sodwana Bay in the vicinity of Shazibe, Kwa-Zulu Natal. The region has various tourist destinations, of which the best known would be St. Lucia and the site itself. Sodwana Bay is a world-class scuba diving site, a popular vacation spot, and is known as the spot where the coelacanth was rediscovered. It is also a place where locals make a living by selling woven and wooden products. The site is a piece of land where the original market space and ablution facilities have been located, bordering the estuary and beachfront.

The sensitivity of this natural ecosystem, the local traders' economic reliance on the site, and the influx of tourists sparked an investigation into how architecture may become a catalyst for an economic stimulus, and a mediator between cultures and nature. How the built form may become a mediator between the relationships of others. The following relationships are identifiable on site:

Tourist - Nature

Nature - Locals

Ancient (Coelacanth) - New

The architectural aim is to find a way to create ubuntu. The purpose is that humans, nature, and the built form should have the ability to function together in a way that is beneficial to all aspects. Thus, creating a connection between land and sea, reciprocity between the manufactured and nature, respect, and acceptance between the different cultures, and finally, a mutual appreciation for locals and tourists.

This coming together of multiple aspects suggests a place of intersection and symbiosis. Isi-Zulu has a word "umuzi" which means "homestead". It is a place of community and family where they come together to celebrate, support, and build unity. This thesis investigates and proposes creating a ubuntu "umuzi" for all the intertwined identities.

Part 1 consists of the introduction and the establishment of the client.

Part 2 introduces the reader to the site through an investigation of the site and surrounding areas, which included a site analysis of the current state of the site, the climate at the site, the vegetation, as well as the wildlife- and traditional crafts in the area.

Part 3 is the theoretical underpinning of the project where certain literature and theories were studied and interpreted, after which a theoretical approach was established.

Part 4 will take the reader through the design development process, indicating where the design process started, what the final design outcome is, and it includes the technical documentation.

Part 5 will conclude the findings, reflect on the year-long process, and which lessons were learned.

The following tools were used to put together this project: site analysis, historical research, literature review, theoretical interpretation, and precedent studies.

Research Question: How can diverse concepts of social environmental relationships apply to sensitively designing an eco-tourism village in Sodwana National Park?



CLIENTS

The proposed project will be a joint venture between Ezemvelo KZN Wildlife and the iSimangaliso Wetland Park. KZN Wildlife is a provincial agency that is in charge of “biodiversity conservation and associated activities in the province of KwaZulu-Natal” (KZN Wildlife, n.d.; online), in partnership with iSimangaliso who manages the wildlife and ecological systems of the iSimangaliso Wetland Park together with the “commercial activities that include the development of nature-based tourism businesses and associated infrastructure in the Park; and improvements in the social and economic condition of people living in the area” (iSimangaliso Wetland Park, [n.d.]: online).

A management agreement between iSimangaliso Wetland Park and KZN Wildlife states that iSimangaliso Wetland Park’s eco-tourism management and biodiversity conservation falls with KZN Wildlife (iSimangaliso Wetland Park, [n.d.]: online). Ezemvelo KZN Wildlife’s mandate is derived from the KwaZulu-Natal Nature Conservation Management Act (Act No.9 of 1997).

The proposed design will use local craftsmen and women as they are a central part of the building’s users. The local community will be involved with the management and upkeep of the project, and with the conservation of the environment.



Figure 1. Clients,
(iSimangaliso Wetland park, [n.d.]:online)
(Ezemvelo KZN, [n.d.]: online)

BUILDING USERS

The buildings’ main users will be consistent with the site’s users, i.e., the local community and tourists. The local community is divided into three categories, namely: the market vendors, the on-site staff, and the locals who will be patrons of the facilities.

The tourists, who will include leisure-based tourists, will be the main patrons of the facilities. They may include users of the restaurants, market, beach goers, campers, nature enthusiasts, and the scuba dive based tourism, which includes veteran scuba divers and new members as well as snorkellers.

Building Users:



Figure 2. Building users, Author, 2021





PART 2



2. SITE ANALYSIS

- 2.1 THE CHOICE OF SITE
- 2.2 LOCATION
- 2.3 CURRENT STATE OF SITE
- 2.4 HISTORY OF THE AREA
- 2.5 CLIMATE
- 2.6 VEGETATION
- 2.7 BASKET WEAVING
- 2.8 WILDLIFE
- 2.9 SCUBA DIVING
- 2.10 THE COELACANTH



2.1 SITE ANALYSIS

THE CHOICE OF SITE

Located at the southernmost coral reefs in Africa, the site of Sodwana Bay is situated within South Africa's third-largest protected area, namely KwaZulu-Natal's iSimangaliso Wetland Park. This Park connects St. Lucia and Maputaland Marine Reserve that spans 150 kilometres from Cape Vidal to Mozambique. Within this boundary is a paradise for marine life and coral reefs. The Maputaland Marine Reserve is a breeding spot for loggerhead and leatherback turtles. The site of Sodwana Bay is also a scuba diving hub, as well as boating, angling, hiking, and snorkelling. The area is home to a variety of lush vegetation and essential ecosystems.

The proposed site is situated in an area where the original marketplace was located. In 2015 the iSimangaliso Wetland Park got permission to start an R72-million redevelopment project. According to the Parks spokesperson, Siyabonga Mhlongo, the redevelopment should enhance and protect "the ecology of the area and promoting economic development" (Dawood,2015: online).

This project includes upgrading the entrance gate complexes, visitor facilities, ecological rehabilitation, and road upgrades (Dawood,2015: online). The rise in park visitors has led to increased pressure on an already strained ecosystem and aged facilities. As of March 2021, the demolition of existing infrastructure has taken place to facilitate the redevelopment scheme.

The choice of this site was motivated by the following factors: economic upliftment, cultural mid-point (meeting point of different cultures), and ecological awareness within the iSimangaliso Wetland Park area.



LOCATION



SOUTH AFRICA

Figure 3. South Africa, Author, 2021



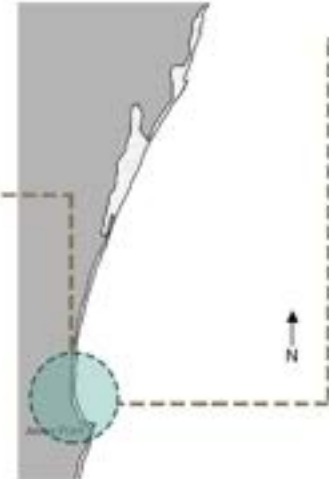
KWAZULU-NATAL

Figure 4. KwaZulu-Natal,



ISIMANGALISO

Figure 5. iSimangaliso,
(Snyman, [n.d.]: online) Edited by Author



SODWANA BAY

Figure 6. Sodwana,
(Celliers, 2004: online) Edited by Author

CURRENT STATE OF THE SITE

Currently, there is a somewhat rundown ablution facility (5) and a temporary structure that houses a small kiosk (4). Storage facilities for boats and tractors are located near the site (6).

The proposed site is where the original marketplace and another ablution facility, which already has been demolished, was located (2). The Park has camping grounds, a lodge, a small shop and a fuel facility situated three kilometres further up the road.

The rehabilitation of the dune at Jesser Point (4), that is required owing to the planting of Casuarina trees in the 1950's which led to "sand starvation" (Dawood, 2015: online), will mean that the kiosk area needs to be removed.



Figure 7. Park (iSimangaliso Wetland park, [n.d.]: online)



Figure 8. Site, (Google earth, 2021: online)

Edited by author

- 1 GATE HOUSE & EXISTING PARKING
- 2 EXISTING MARKET SPACE
- 3 EXISTING PARKING
- 4 EXISTING KIOSK
- 5 EXISTING ABLUTION
- 6 EXISTING STORAGE
- 7 BOAT LAUNCHING



Figure 9. Currents state of site, Author, 2021

HISTORY OF THE AREA

In 1589 the shipwreck survivors of the Portuguese trading ship, Sao Thome, near Sodwana Bay gave accounts of the Thonga clans who traded there (Mthethwa, 2002: 46). Stemming from the earliest recorded oral history, there is already a debate about the lineage of the inhabitants of Maputaland.

On the one hand is a discussion on whether the Mabudu kingdom is part of the Swazi or Thonga, and on the other whether, during the colonial period, it should have been awarded to the British or Portuguese. Even during the Apartheid era, there was a debate about whether a part of the Mabudu kingdom should be incorporated into Swaziland. Today, it is part of the Zulu kingdom of Kwa-Zulu Natal (Kloppers, 2003: 2-62).



Figure. 11 Trade at this border market at KwaPuza (du Plessis, 2003: 54).

BRIEF TIMELINE OF MAPUTALAND

16th-19th CENTURY

PORTUGUESE IVORY TRADE

During the 16th century the Portuguese landed on the East coast of Africa and mainly traded ivory with the local inhabitants. During this period, the British, Dutch, French and Austrians also traded in the area, fighting among each other for a trade monopoly.

In 1557, a Portuguese explorer, Manuel de Mesquita, named Maputaland Terra dos Fumos (Land of Smoke) owing to the slash-and-burn method used by the Mabudu, foreign to the Nguni tribes in the south (Kloppers; 2003: 8).

18th CENTURY

MABUDU CHIEF OF MAPUTALAND

The people of Maputaland belonged to the Mabudu-Tembe chiefdom. Mabudu was the king of Maputaland from 1740-1798 and he established the kingdom and its people to be industrious, artistic and keen on commerce (Kloppers; 2003: 16).



Figure. 10. King Ngwanase Tembe and his secretary, Isaac Tembe. (Mthethwa; 2002: vii).

19th CENTURY

MacMAHON AWARD

In 1875, during the unrest between the British and Portuguese, the matter was referred to the French President, Marshal MacMahon. He drew a straight line and awarded everything above the 26° 30' S to the Portuguese. Known as the MacMahon award.

This division of territories split the Mabudu kingdom in two parts (Kloppers; 2003: 54-62).



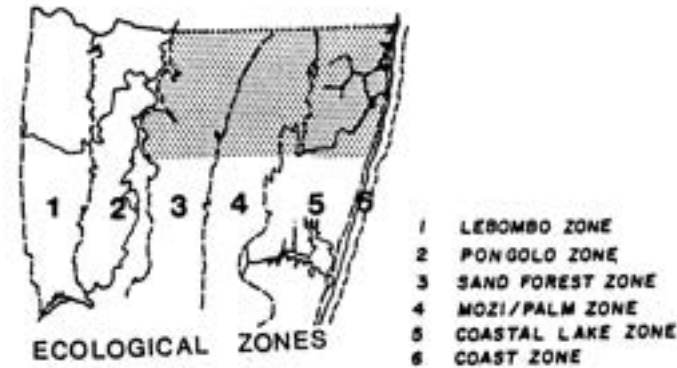


Figure 13. Ecological zones (Cunningham, 1985: 370).

20th CENTURY 1948

BANTUSTAN

In 1948, the National Party separated the country into separate nations, or homelands, also known as 'Bantustan'. "Under the Bantu Authorities Act a tribal authority was instituted for the Tembe 'tribe' on 18 April 1958" (Kloppers; 2003: 73-75).



Figure 12. The Bantustan map (Kloppers; 2003: 74).

1982

SWAZILAND CLAIM

In 1982, the Swazi government, put forth a claim, "based on historical evidence" (Kloppers; 2003: 80), that a piece of Maputaland be ceded to Swaziland. The South African government considered this claim, however Kwa-Zulu Natal was not willing to accept this. This led to a debate about the lineage of the Mabudu people of Maputaland, whether they are part of the Zulu nation or an independent nation (Kloppers; 2003: 80-96).

1999

WORLD HERITAGE SITE

The iSimangaliso Wetland Park was proclaimed South Africa's first UNESCO World Heritage site in 1999. It was inscribed owing to having vital turtle nestings beaches and diverse ecosystems, namely: undeveloped sandy beaches, a forested dune cordon, wetlands, grasslands, forests, lakes and savannah (Fox; 2021: online).

21st CENTURY

COELACANTH REDISCOVERY

Rediscovered in 1938 by Marjorie Courtenay-Latimer, museum curator in East London. It was found again 65 years later by Peter Timm in 2000, owner of Triton Diving, in Sodwana Bay (MacGregor; 2020: online).

The diving site was proclaimed a Marine Protected area in 2016 (MacGregor; 2020: online).



Figure 14. The coelacanth (MPA, [n.d.]: online).



CLIMATE

The iSimangaliso Wetland Park falls within the subtropical to tropical climatic zone of Africa.

The summers are hot, with temperatures rising to 35°C and the winters mild (fig. 15). The relative humidity is high, and for most of the year, exceeds 90%.

About 60% of the rainfall occurs during the spring and summer months (fig.16) (iSimangaliso Wetland Park Authority, 2017; online).

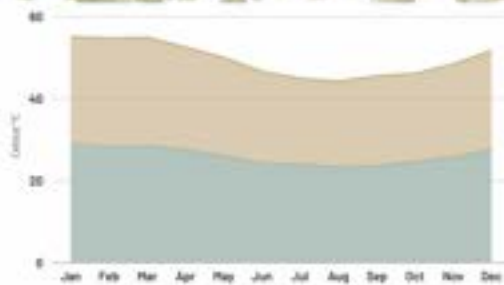


Fig.15 Average min & max temperatures

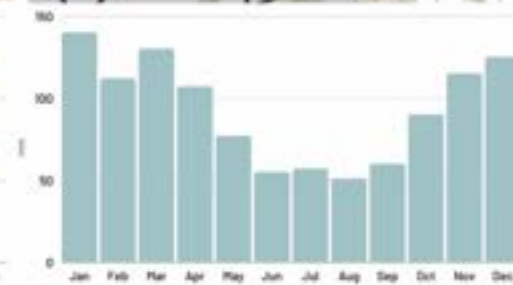


Fig.16 Average rainfall

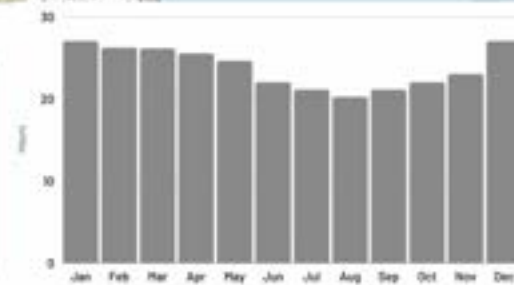


Fig.17 Average sun hours per day



Fig.18 Average water temperatures

VEGETATION

The iSimangaliso Wetland Park forms part of the subtropical KwaZulu-Natal Dune Forest, which develops on and behind the dunes that provide shelter from the salt wind allowing for canopies as tall as thirty metres (WWF, 2008: online). Sodwana Bay is where the Mgobezeleni Estuary system enters the sea at Jesser Point, and this system receives its water from a confluence from Lake Mgobezeleni and Lake Shazibe (Taylor, 2016: 170-178). These freshwater floodplains are the ideal habitat for swamp fig and red mangrove (shown in the figures right). Of these, rhizophora mucronate (red mangrove) is listed as a threatened species (Combrink, Kyle, 2006: 146-158). This freshwater estuary is separated from the sea by tall vegetated coastal dunes (Taylor, 2016: 170-178). Characteristic trees include coastal red milkwood, coastal silver oak and the Natal mahogany (as shown in figure 21), which is used in Maputaland for traditional carved bowls (Natal Mahogany, 2021: online).



Fig.20 *Hyphaene coriacea*
(iLalapalm)



Fig.21 *Trichilia emetica*
(Natal mahogany/ Rooiessenhout)



Fig.22 *Rhizophora mucronata*
(Red mangrove)



Fig.23 *Ficus trichopoda*
(Swamp fig / Moerasvy)

BASKET WEAVING

Weaving is a traditional Zulu skill that is usually considered women's work and they use local materials, such as reeds, grass, or ilala palm fibres (figure 20) and natural dyes. The material requirements for weaving are fibrous, flexible, and durable leaves. These are plant adaptations to nutrient-poor soils in seasonally flooded conditions (Cunningham, 1987: 265).

Different regions make use of specific patterns and styles: Imbenge, Isichumo, Isiquabetho and Ukhamba. Weaving is a skill developed in response to the shortage of hardwood materials for storage containers, forming the basis of trade for mats and baskets. During the early 1800's the Tembe-Thonga traded with beer baskets and sleeping mats (Cunningham, 1987: 264). These baskets have multiple uses and meanings within the culture, for example: The pear-shaped ilala palm baskets, as shown in the figure on the right, were traditionally made to accompany a new bride on her journey of matrimony (Nettleton, 2010: 64).



Series of Diamonds



Checkerboards



Zig-Zag



Figure 24.

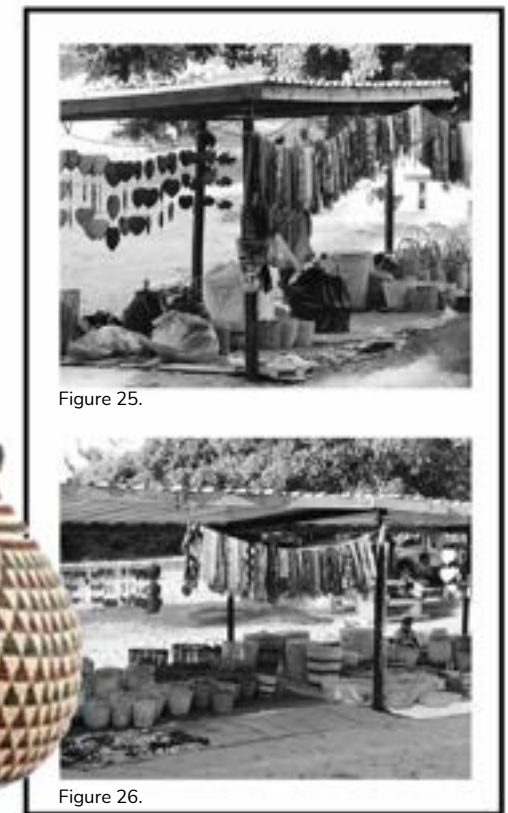


Figure 25.

Figure 26.

Figure 15. Temperature, Author, 2021

Figure 16. Temperature, Author, 2021

Figure 17. Temperature, Author, 2021

Figure 18. Temperature, Author, 2021

Figure 19. Site map, Author, 2021

Figure 20. Ilalapalm, PalmBob, 2009: (online)

Figure 21. Natal Mahogany, [n.d.]: (online)

Figure 22. Red mangrove, iSimangaliso celebrates first World Mangrove Day, 2016: (online)

Figure 23. Ficus trichopoda, McClelland, 20126: (online)

Figure 24. Zulu Baskets, [n.d.]: (online).

Figure 25. Existing market Sodwana, Author, 2021

Figure 26. Existing market Sodwana, Author, 2021

WILDLIFE



Fig.27 Dermochelys coriacea
(Leatherback sea turtle)



Fig.28 Rhincodon typus
(Whale shark)



Fig.29 Cercopithecus pygerythrus
(Vervet monkey/ Bloubaap)



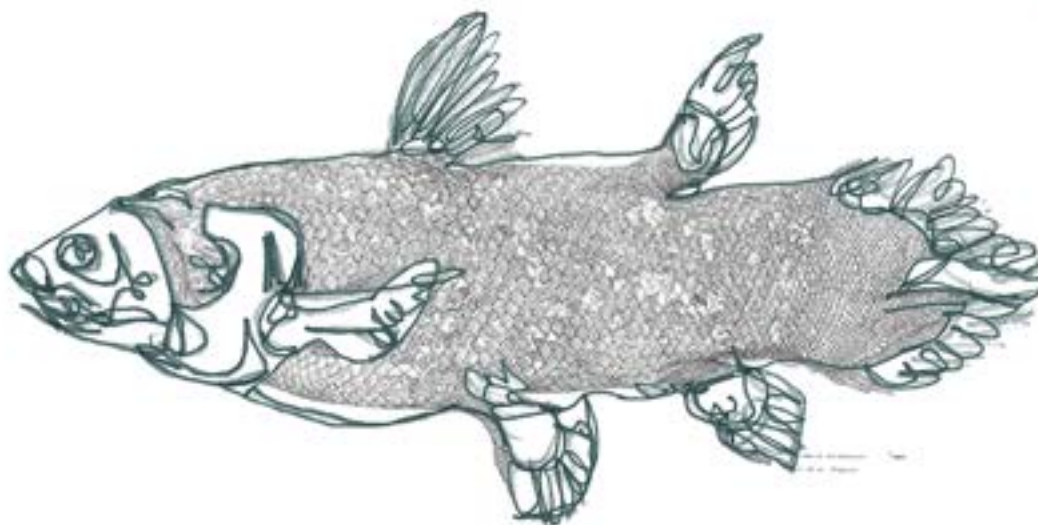
Fig.30 Guttera pucherani
(Crested guineafowl)

The ecosystem of the iSimangaliso Wetland Park supply the habitat of a diversity of threatened and indigenous wildlife. The Park provides a habitat to over 6500 plant- and animal species, of which 521 are bird species: 11 species are indigenous to the Park, 108 indigenous to South Africa, and 467 species are threatened in South Africa (iSimangaliso Wetland Park, [n.d.]: online). The Maputaland Marine Reserve “support 16 species of coral, 1 200 species of fish, five species of marine turtles, 41 species of marine mammal, and 49 species of bird” (Turtle Beaches/Coral Reefs of Tongaland, 1986: online).

Sodwana Bay’s warm ocean, fed by the Agulhas current, allows for dozens of coral reef species brimming with marine life, these include leatherback and loggerhead turtles which breed on Sodwana’s beaches. Divers are regularly treated to the emergence of whale sharks as shown in figure 28. (What makes diving in Sodwana Bay Special, [n.d.]: online).

Wildlife regulars include vervet monkeys and crested guineafowl, whose presence has become a certainty owing to people’s interaction which serves as an assurance of food.

The Coelacanth (pronounced seel-uh-kanth) is an enormous, bottom-dwelling fish that is unlike other living fishes in a number of ways. They belong to an ancient lineage that has been around for more than 360 million years. Coelacanths can reach more than six feet long and weigh about 200 pounds, and they’re covered in thick, scaly armor. It’s estimated they can live up to 60 years or more (Bates,2015: online).



SCUBA DIVING

Sodwana Bay is home to fifty kilometres of underwater habitat which is the most southerly tropical reef system. Known for its visibility, warm water, and the biodiversity of its shallow reefs with more than 1350 marine species, divers can expect to see around 60 species on a dive, with a small chance of strong currents (Macdonald, 2016; online). The reefs of Sodwana Bay are named according to their distance: Two Mile, Five Mile, Seven Mile.

THE COELACANTH

Coelacanths are big, shy, deep-sea creatures, that lives up to 700 m below the ocean surface. They can grow up to 2m and weigh 90kg, can live to 60 years or more (National Geographic, 2015; online).

During the last 50 years, Sodwana Bay has been seen as the place to experience the Coelacanth. Thought to have gone extinct with the dinosaurs, these living fossils were rediscovered by a South African in 1938. This interested scientists as the Coelacanth represent “an early step in the evolution of fish to terrestrial four-legged animals like amphibians” (National Geographic, 2015; online). The marine reserve’s Jesser Canyon is home to the large population of Coelacanth (Macdonald, 2016; online).

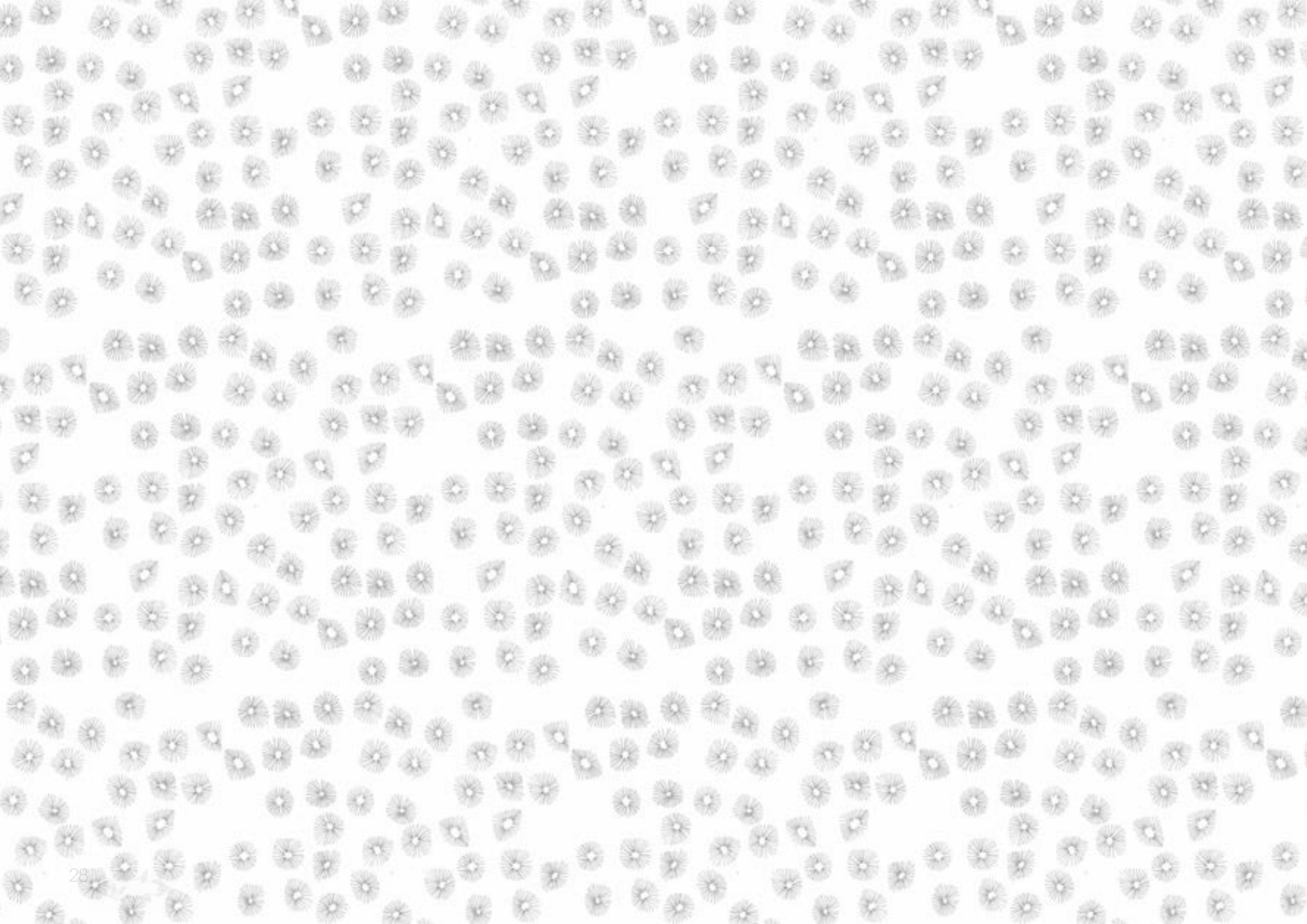


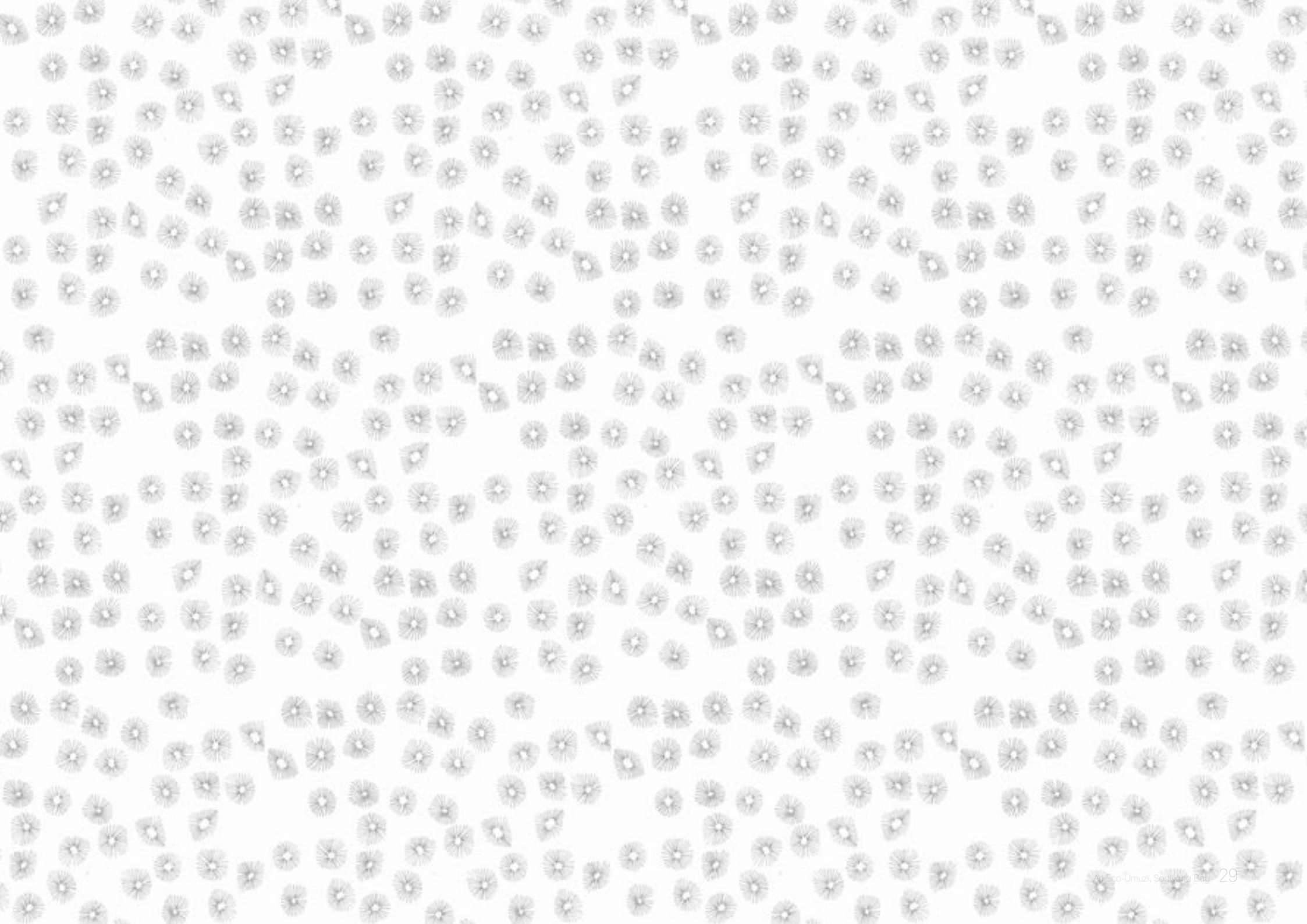
Figure 27. Leatherback, [n.d.]: (online)

Figure 28. Whale Shark, [n.d.]:(online)

Figure 29. Vervet monkey, Author,2021: Sodwana

Figure 30. Duncan, 2011: (online)





PART 3



3. THEORETICAL UNDERPINNING

3.1 ECO- UBUNTU

3.2 UBUNTU

3.3 ECO - TOURISM

3.4 REGIONALISM

3.5 WEAK ARCHITECTURE

3.6 THE WEAK ARCHITECTURAL APPROACH



3



3.0 THEORETICAL UNDERPINNING

During my initial site visit at Sodwana Bay, I was moved by the close relationship between man and nature. My immediate reaction was, how can one build upon these existing relationships in a sensitive manner? How can one introduce new relationships without disturbing the existing balance between man and nature? This led to an investigation into eco-ubuntu.

The investigation of eco-ubuntu serves as the foundation of this research with the aim of connecting tourists with local vendors by recognizing the different participants within the site (Fig. 22). The theme of eco-ubuntu ultimately becomes the umbrella phrase from which to branch out of. Therefore, it will initiate the discourse into eco-tourism, weak architecture, critical regionalism, and the relationships between these theories. Eco-tourism will illustrate the importance of economic upliftment within certain areas and the role tourism plays in this process of recognizing the sensitivity of the site and surrounding eco-systems. This leads to the discussion of critical regionalism and how the building should critically reflect its site and environment while thinking of the future and longevity of the project. The weak architectural approach initiates a thought process of providing a design that recognises and includes all participating identities while integrating the intricacies of the location.

Terms shared between the different theories:

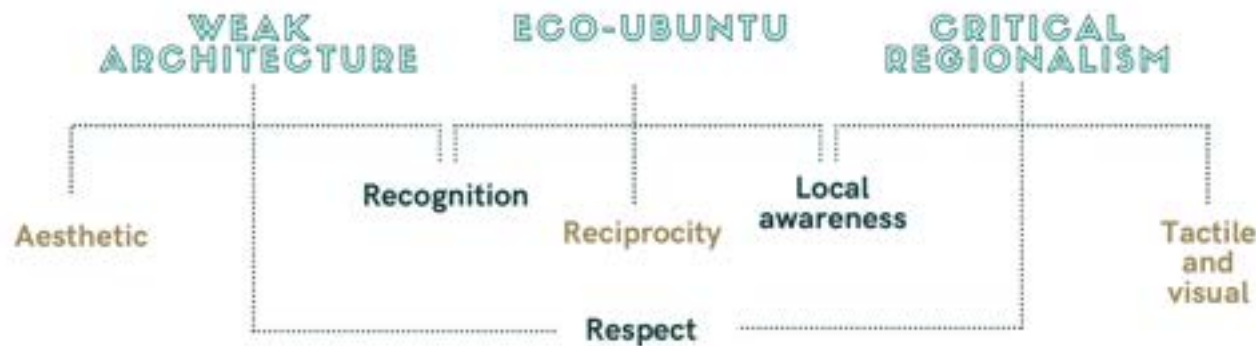


Figure 31. Shared terms diagram, Author, 2021

Figure 32. Eco-ubuntu framework, Author, 2021

ECO-UBUNTU

Recognition of human worth, communal relationships, deep respect for human values, and a strong reverence for the natural environment and the resources it provides.

CLIMATE

Sub-tropical climate of Sodwana Bay

CRITICAL REGIONALISM

An architectural design approach rooted in geographical and cultural context, giving attention to modern tradition. (Frampton, 1985)

WEAK ARCHITECTURE

Architecture that does not offend or fight but fits into its context does not dominate but rather represents a vestige. (De Sola-Morales, 1987)

ECO-TOURISM

Responsible travel to natural areas that conserve the environment and sustains the well-being of the local people.

ECONOMIC UPLIFTMENT AND CONSERVATION

ARCHITECTURAL DESIGN

A cultural and environmental lexicon represented in the Sodwana Bay eco-village



3.2 UBUNTU

'My humanity is caught up, is inextricably bound up, in yours.' We belong in a bundle of life. We say, 'A person is a person through other persons.' It is not, 'I think, therefore I am.' It says rather: 'I am human because I belong. I participate, I share.'

– Desmond Tutu, No Future Without Forgiveness



Ubuntu revolves around recognition of the human worth, communal relationships, a deep respect for human values, and a strong reverence for the natural environment and the resources it provides.

The word “ubuntu” is derived from a Nguni (isiZulu) proverb: “umuntu ngumuntu ngabantu,” which can be translated to: “a person is a person because of other people,” and takes the meaning of kindness, humanity, or personhood. The word “ubuntu” has derivatives in Xhosa, Zulu, Ndebele, and Swati in South Africa and can also be found in Kenya, Botswana, Angola, Congo, Zimbabwe, Tanzania, Uganda, Malawi and in Mozambique (Mutsonziwa, 2020: 28).

The ubuntu philosophy is integrated into the African continent and plays a role in day-to-day life in ethnic groups throughout Africa and indicates group solidarity, which is central to survival (Mutsonziwa, 2020: 28). A person who promotes ubuntu knows that ingrained in each person “is dignity and value, and that each person deserves respect and that a person exists within a cultural setting and a community and that the individual and community shape, influence, and benefit from each other” (Social workers code of ethics, 2012: online).



Figure 33. Ubuntu map, Author, 2021

Ubuntu also refers to relational ethics, the theory that society should not be based on rules but should be subjectively based, without abstract rules, the context of engagement determined by the region. Ethics “which prizes relationships of interdependence, fellowship, reconciliation, relationality, community friendliness, harmonious relationships and other-regarding actions, in which actions are morally right to the extent that they honour the capacity to relate communally, reduce discord or promote friendly relationships with others and in which the material world (horizontal line) and the spiritual world (the vertical line) are fundamentally united” (Ewuoso, Hall, 2019: 101)(Fig.34.).

Ubuntu has also been explored as environmental ethics, where it is not just based on the moral agency between the interrelationships of human community members but also about “non-human life” (Terreblanche, 2018: 181).





Figure 34. Ubuntu framework, Author, 2021

In the article “Developing the notion of ubuntu as African theory for social work” the author, Prof. Van Breda, lists three ways in which ubuntu can be viewed from an ecological perspective. These are:

“First, ubuntu calls us to embrace the whole of humanity as part of our global community or clan, not only those who are related to us or those who are like us.

Second, ubuntu calls us to consider our history (in our ancestors) and our future (in our descendants) and to live our lives in the world in a way that honours the former and ensures the wellbeing of the latter. African worldviews, unlike western worldviews, see both ancestors and descendants as present beings, not merely memories and hopes. They are actual persons, who are permanently present, though not usually visible. Such a view of our lineage inspires greater commitment to the sustainability of human and socioeconomic development.

Third, ubuntu calls us to consider the earth as a member of our community, both because we are made from earth and because earth is a divine being with whom we have a reciprocal relationship. These ideas, which are rooted both in traditional African and in Judeo-Christian and Islamic perspectives, contribute significantly to the requirement that we take care of the earth, not only for future generations, but also for the earth’s own sake, and out of respect for our interconnectedness with earth” (Van Breda, 2019: online).

Thus, it is evident that ubuntu is not just an African turn of phrase, it plays a role not only in the individual, but also in the communal, economic, and ecological spheres.

Communal: people forming communities, being human because of others.

Economic: economic transactions are not just economic, they also create stronger relationships (Mugumbate, Chereni, 2020; 8).

Environmental: natural features: land, oceans and sky should be considered as a member of the community, to honour our ancestors and to ensure the health and wellbeing of our descendants (Mugumbate, Chereni, 2020; 8).

Whilst concentrating on the economic and environmental relationships and the potential within the site, this makes a logical case for an investigation into eco-tourism

3.3 ECO - TOURISM

Eco-tourism's definition as given by Karen Ziffer, a specialist in conservation:

A form of tourism inspired primarily by the natural history of an area, including its indigenous cultures. The ecotourist visits relatively undeveloped areas in the spirit of appreciation, participation, and sensitivity. The ecotourist practices a non-consumptive use of wildlife and natural resources and contributes to the visited area through labour or financial means aimed at directly benefiting the conservation of the site and the economic well-being of the local residents. The visit should strengthen the ecotourist's appreciation and dedication to conservation issues in general, and to the specific needs of the locale. Ecotourism also implies a managed approach by the host country or region which commits itself to establishing and maintaining the sites with the participation of local residents marketing them appropriately, enforcing regulations and using the proceeds of the enterprise to fund the area's land management as well as community development (Ziffer, 1989:6).

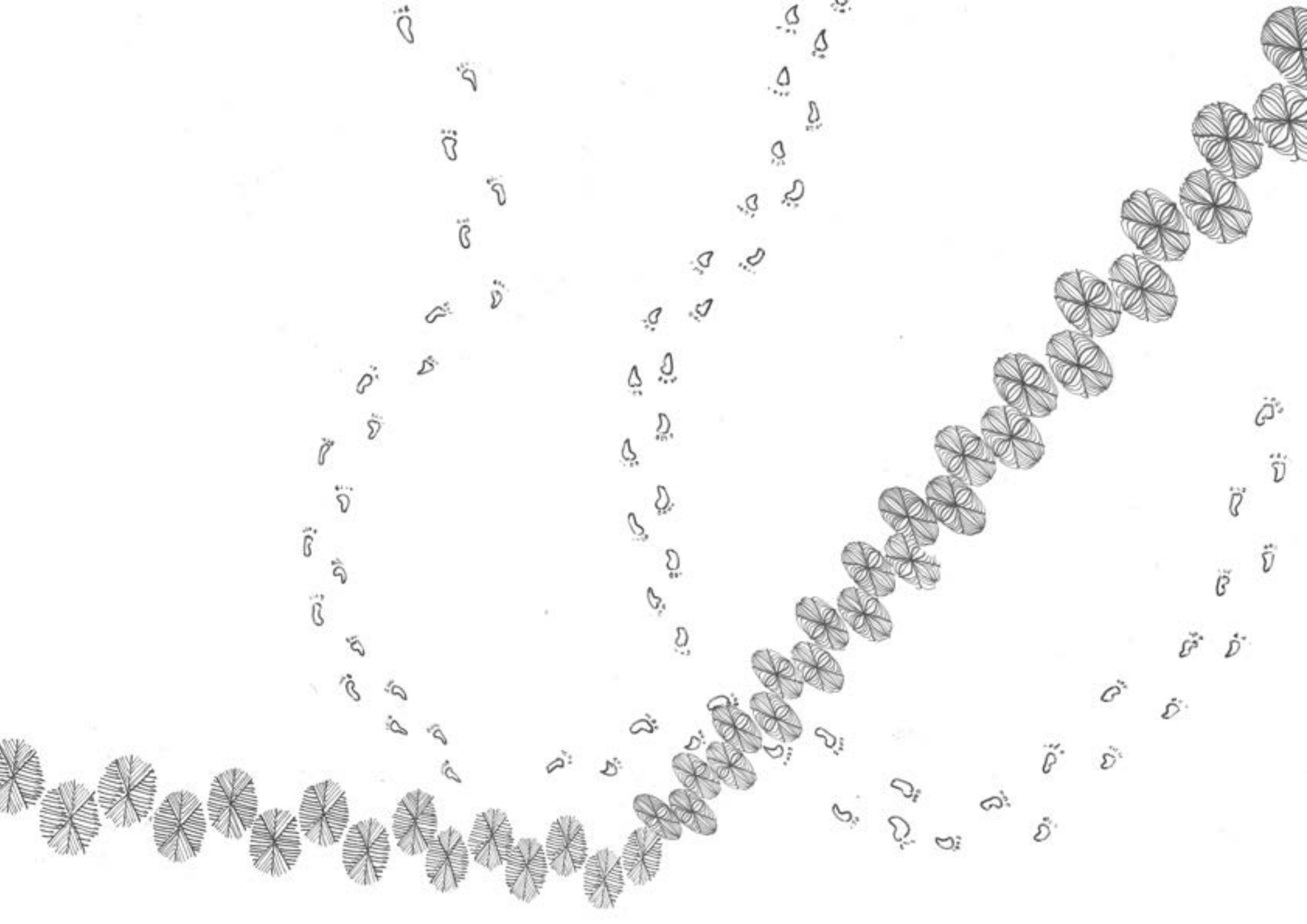
The aim of eco-tourism is to use the global tourism market by attracting visitors, international or local, to natural areas and using this market to fund conservation and to fuel economic development.

Sodwana Bay is situated in a conservation area and, as a vacation destination, it attracts thousands of tourists each year for scuba diving, fishing, and camping. This tourism industry drives the local economy and provides jobs for most of the community. Locals are employed by this industry within the Park as maintenance personnel, scuba diving instructors, or in various related positions, and many women can be seen trading woven items or miniature wooden sculptures around these tourist spots. Therefore, the tourism industry within the area can be described as a life source for the community.

The industry is largely based on the natural resources of the area, therefore, conservation of this area is highly important, and if this resource is not maintained and managed properly, the whole community's livelihood would be in peril.

Eco-tourism is the meeting point between multiple aspects, namely: tourism, local vendors, conservation, and economic empowerment. Tourism relational to society, eco-systems, economics, and local culture.





3.4 CRITICAL REGIONALISM

The word “regionalism” is commonly known as a geographical term. Vitruvius (c. 46 B.C.) described regional architecture as: “If our designs for private houses are to be correct, we must at the outset take note of the countries and climates in which they are built. One style of house seems appropriate to build in Egypt, another in Spain, a different kind in Pontus, one still different in Rome, and so on with lands and countries of other characteristics” (Vitruvius, 1914: 170). In response to the post-modern regionalist movement, critical regionalism was established. It is distinct from vernacular regionalism in that it strives to integrate site-specific knowledge and modern technology.

The British architect and historian, Kenneth Frampton, stated in his document: “Towards a Critical Regionalism, Six Points for an Architecture of Resistance” that “the fundamental strategy of Critical Regionalism is to mediate the impact of universal civilization with elements derived indirectly from the peculiarities of a particular place. It is clear from the above that Critical Regionalism depends upon maintaining a high level of critical self-consciousness. It may find its governing inspiration in such things as the range and quality of the local light, or in a tectonic derived from a peculiar structural mode, or in the topography of a given site” (Frampton, :21).

Frampton identifies six main ideas towards critical regionalism, his so called: “Six Points for an Architecture of Resistance.” In his third point: “Critical regionalism and World Culture,” Frampton emphasizes the differences between critical regionalism and nostalgic historicism. By extracting the uniqueness of the identity-giving culture in a modern method, critical regionalism could create a balance between regional culture and universal civilization. The design should consider elements from the region, such as light, tectonic form, context, topography, as well as the climate at the site (Frampton, 1983: 16-30).





In Frampton's "Ten Points on an Architecture of Regionalism: A Provisional Polemic," he identifies specific points relating to critical regionalism. In the following text, three of these points will be discussed, namely: Information and experience, place, and architectonic/scenographic.

4. Information and experience

In general, we have begun to lose our capacity for distinguishing between information and experience, not only in architecture but in everything else as well. Reality and irreality are deliberately confused and fused together (Frampton, Ten Points: 381).

Frampton explains that there is a loss of experience in the world, "experience with the physical, the real, and the essential in the world" (Carlson-Reddig, 2011: 270). In today's world, social media, video chat and technology, to which Frampton refers to as the "double-edged", alters our sense of connectivity, not only with people but places as well and the "realness of the 'present' and immediate world can be forgotten, and overlooked" (Carlson-Reddig, 2011: 271). To combat this loss of experience a "consistency and authenticity" as described by Rafael Moneo, or "integrity" by Frank Lloyd Wright, must be present in a critical regionalist project. The architecture should not be a vehicle for other subjects, but its own complete subject (Carlson-Reddig, 2011: 271).

5. Place

Frampton asks the question: "How can we belong to a specific place in a generic monotonous architectural world if we cannot recognise 'place'". To answer this, he suggests Martin Heidegger's "dwelling" and Christian Norberg-Schulz's developed theory of place-form'.

"What, then, do we mean with the word 'place'? Obviously, we mean something more than abstract location. We mean a totality made up of concrete things having material substance, shape, texture, and colour. Together these things determine an 'environmental character,' which is the essence of place" (Norberg Schulz, The Phenomenon of Place: 414).

For us to recognise place, to dwell and experience it Norberg-Schulz cites "orientation" and "identification" as two psychological necessities (Carlson-Reddig, 2011: 272).

To orientate oneself, one needs contrast and distinction in the environment and to identify, one needs "a sense (of) emotional familiarity—of belonging and being at home" (Carlson-Reddig, 2011: 273). Orientational points are based on what is already there, in other words, architecture accentuating the natural elements: estuary, sea, forest.

7. Architectonic/Scenographic

Frampton proposes the architectonic as a counter to scenographic, to resonate with "experience," with "architectonic" being how buildings associate with nature and "scenographic" being merely representational of nature (Frampton, Ten Points: 383).

He continues with how, through hiding the joints of a building, it deprives the building of its expressiveness, making the architectonic significance obsolete. He indicates that the tectonics should not merely represent the technical but that "its materiality, its joinery, its structure, construction and detailing—are raised to the level of 'art form'. Such transformation results from the addition of energy, artistry, invention, and intention, applied to reveal a salient joint, the meeting of two materials, or a transfer of forces. The conscious intention toward re-presentation is proposed as the significant characteristic of tectonics" (Carlson-Reddig, 2011: 273). This implies that aspects of tectonics, such as materiality, and the use of local materials even if hybridized by refinement or physical transformation, can act as a method of defamiliarization (Carlson-Reddig, 2011: 274). By showing joints and other structural details in the design, and by using locally sourced, even refined materials, i.e., by using the tectonics of an architectural approach can ensure a poetic design.

In conclusion, to create a critical regionalist design, one cannot mimic the past or only use elements thereof, but an architectural approach should be taken that combines the local place-specific understanding with the capacity of current technology to engage the natural environment, reinvigorates local character and reclaims the experiential potential of architecture (Carlson-Reddig, 2011: 274).

3.5 WEAK ARCHITECTURE

"It is not necessary for the true always to take on material form, it is enough that it should flutter to and fro, like a spirit, promoting a kind of accord; as when the companionable pealing of a bell rings out, bringing us some little measure of peace" (Heidegger, 1969: 8).

Weak architecture is the brainchild of Ignasi de Solà-Morales, a Spanish architect, historian and philosopher. Weak architecture is a term that developed from the philosophical style of "weak thought" coined by the Italian philosopher Gianni Vattimo. It aimed at creating an ethic of "weakness," which is an attempt to understand the postmodern condition (Harris, [n.d.]: online). The idea of a profound separation between language and reality, how language can only describe the interpretation of reality and never the real thing itself, thus "weak" ontology, and not "strong" ontology. Ignasi Solà-Morales uses this theory of weak thought to try and "unravel the complexities of the modern experience" (Kong, 2005: 4). Morales argues that the strength of architecture becomes known through "potent visceral exchange and not a strong conceptual base" (Kong, 2005: 2), thus through participating and relationship building.

The theory of weak architecture does not prescribe established steps to follow but leaves it open to interpretation, making the reader the interpreter of the connection of this theory and its "built expression" (Kong, 2005: 5).

Its purpose is not to suggest formal intervention, but to trace a weak line of thought through the diverse terrain of architectural experience, which may lead a reader to interpret the built world in a way that is personal (Kong, 2005: 9).

Solà-Morales identified two characteristics of weak architecture, namely: decoration and monumentality.

Morales places weak architecture in the same category as decoration, he calls it "inessential." He is not advising architects to be bothered by taste; but he indicates that if architecture is the study of the corporeal that everything that is concrete should therefore be equal: "Architecture is the inessential element of the concrete that forms our experiences, that enhances and embellishes reality, without at any moment turning into a fundamental truth or meaningless form" (Kong, 2005: 18).

The monument usually depicts power, placed to order space "hieratically." Morales refers not to this monumentality but the "term monitu; that is to say, of recollection" (Solà-Morales, 1996: 623). Owing to a universal meaning not being able to be embedded in the built form. The monumentality of weakness refers to the experience between the object and the subject and the memory that is recollected (Kong, 2005: 19). Morales states: "the notion of monument that I have sought to put forward here is bound up with the lingering resonance of poetry after it has been heard, with the recollection of architecture after it has been seen" (Solà-Morales, 1996: 623).



In the 21st century, Japanese architects, Kengo Kuma and Sou Fujimoto, have their own philosophy of weak architecture. To them, architecture is meant to show humility before nature, calling it the “architecture of defeat”, “architecture that is not imposing on the environment but rather one that complements the surroundings” (Vergis, 2020: online). Sou Fujimoto integrates weak architecture into his design by creating architecture that blends into its surroundings and not impose upon it, to blur the boundaries between built form and nature. Their designs mainly use natural materials, such as timber and stone to emphasize the building’s ephemerality. The “weakness” of the design is in its vagueness, creating “rich spatial experiences instead of static ones” (Vergis, 2020: online). With this theory of “weak architecture,” Kengo Kuma promotes an architectural language where there is no false sense of strength in the structure, where the structure is built from a seemingly “weak” material, such as timber, and ambiguous elements are used “wall yet not a wall, a door yet not a door.” This contradiction and complexity of structure creates an air of ephemerality.

Weak architecture asks one to think about multiple relationships that would impact the design wherein all relationships are equal. Therefore, one identity does not connect on a higher level than another, but they all blend to identify an aesthetic of pleasure, something that one can experience which would evoke memories without being perceived as a cultural aesthetic.

Weak architecture is a product of conflict, conflict between order and chaos. It is not grounded as an absolute but “traced within the sands of subjective experience” (Kong, 2005:14). Weak architecture is not prescribing a single way of engaging in a spatial relationship but is grounded in the notion that built-form cannot instigate experience, but that visceral exchange can only transpire through a “self-reflective encounter” (Kong, 2005: 2).



Figure 35. Serpentine Pavilion, Stephenson, 2013: (online)

Figure 36. Serpentine Pavilion metal grid, Stephenson, 2013: (online)

Figure 37. GC Prostho Museum and Research Center facade, Ano, 2010: (online)

Figure 38. Exterior of the GC Prostho Museum and Research Center, Ruiz, 2018: (online)

3.6 THE WEAK ARCHITECTURAL APPROACH

Reflecting on these theoretical subjects establishes a link between them:

Ubuntu declares that a relationship between nature and others allows a person to become.

Eco-tourism establishes and builds upon existing relationships between multiple partners.

Critical regionalism expects architects to be objective towards a specific context and to illuminate how to design a building that is in a relationship with its site-specific context.

Weak architecture does not prescribe a single way of engagement in a spatial relationship.

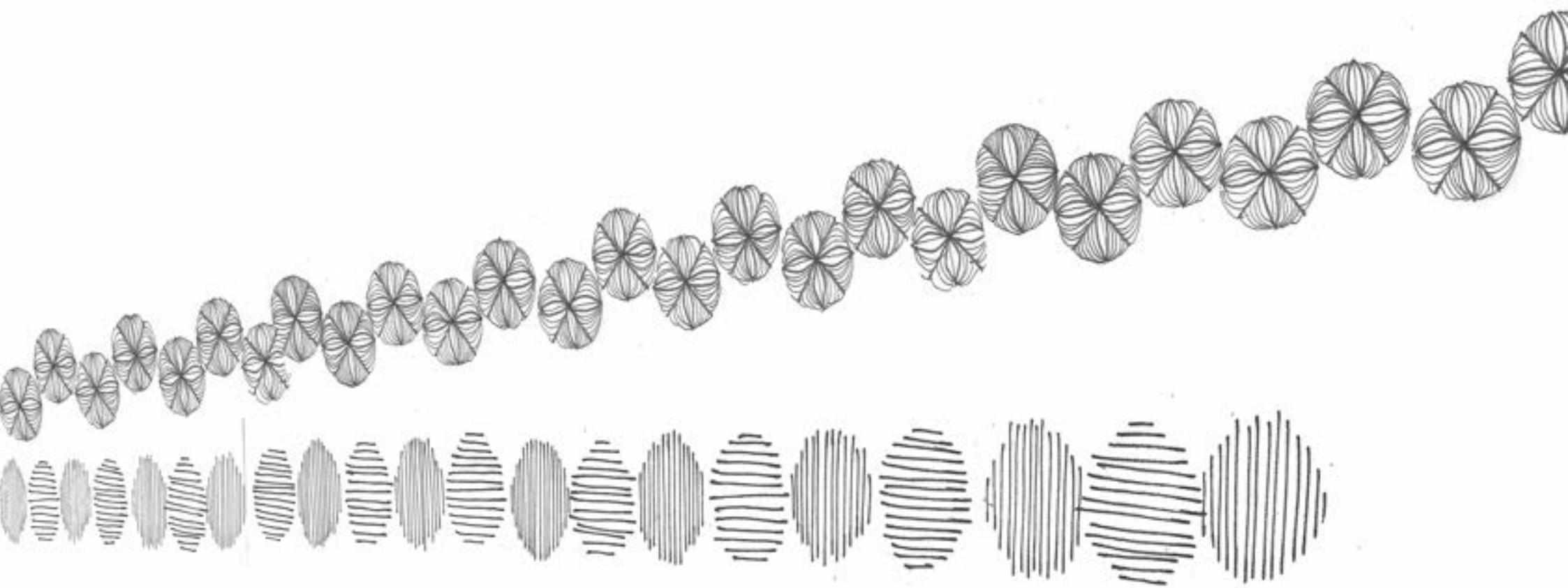
The investigation into eco-tourism, weak architecture, and critical regionalism leads to an architectural approach where the aim is to create a building that does not impose upon its surroundings, it works with nature and its occupants, and it changes and adapts with the times.

And in the words of Michael Hays: "This is the strength of weakness; that strength which art and architecture are capable of producing precisely when they adopt a posture that is not aggressive and dominating, but tangential and weak" (Hays, 1998: 623).

Design tools:

- Make use of standard size timber components, allowing the procurement thereof and buildability to be facile.
- The structure could be raised from the ground, thereby not only lessening the impact of the building on the environment but ensuring that it will be safe during floods owing to its proximity to the estuary flood plains.
- Owing to the proximity to the ocean, the issue of rust on steel profiles must be taken into consideration.
- The tendency of building users to personalize vendor spaces must be taken into consideration when thinking about galvanised steel elements.
- The sensitivity of the environment plays a big role in the number of artificial materials that should be used on site; thus, concrete will be used sparingly.
- Cross ventilation should be easily achievable, owing to the impact of the sub-tropical climate.





PRECEDENT STUDY: SINGITA LEBOMBO LODGE

Relevance:

- + MATERIALITY
- + DESIGN TOOLS
- + SITE AND CONTEXT

SITE & CONTEXT

The lodge is located against a rhyolite ridge within the Lebombo mountains, forming part of the Kruger National Park (Baker, 2009: 46 - 49).

The site required a sustainable approach, with minimal impact on the environment, and with elements being easily removable due to the concession period of 20 years (Baker, 2009: 46 - 49).

The architects used a critical regionalist approach, using elements inspired by "local condition and through rich historical referencing" (Baker, 2009: 46 - 49).

Architects: Designworkshop

Year: 2006

Location: Kruger National Park, South Africa

MATERIALITY

The architects made use of locally sourced materials, integrating low- and high-tech solutions. Owing to the area's climate, passive design principles were used, such as shade screens and large overhangs (Baker, 2009: 46 - 49).

The site's sensitivity influenced the type of structure. To ensure that the site was not disturbed and that the indigenous flora and fauna were protected, the structure was designed, in the most sensitive areas, to be demountable and on stilts (Baker, 2009: 46 - 49).



Figure 39. Lebombo diagram, Author, 2021





DESIGN TOOLS

The precedent becomes relevant in terms of the site and context, and materiality. This site and context are like the proposed site's as both are in isolated locations and have similar sensitive context. The materiality of the precedent informs the materiality which the proposed design can use, namely: mainly local materials, easy accessibility, and locally sourced.

Figure 40. Hillside, Designworkshop, 2006

Figure 41. Shaded entrance, Designworkshop, 2006

Figure 42. Shared space, Designworkshop, 2006

Figure 43. Placed on a hillside, Designworkshop, 2006

Figure 44. Between vegetation, Designworkshop, 2006

Figure 45. Zoomed, Designworkshop, 2006

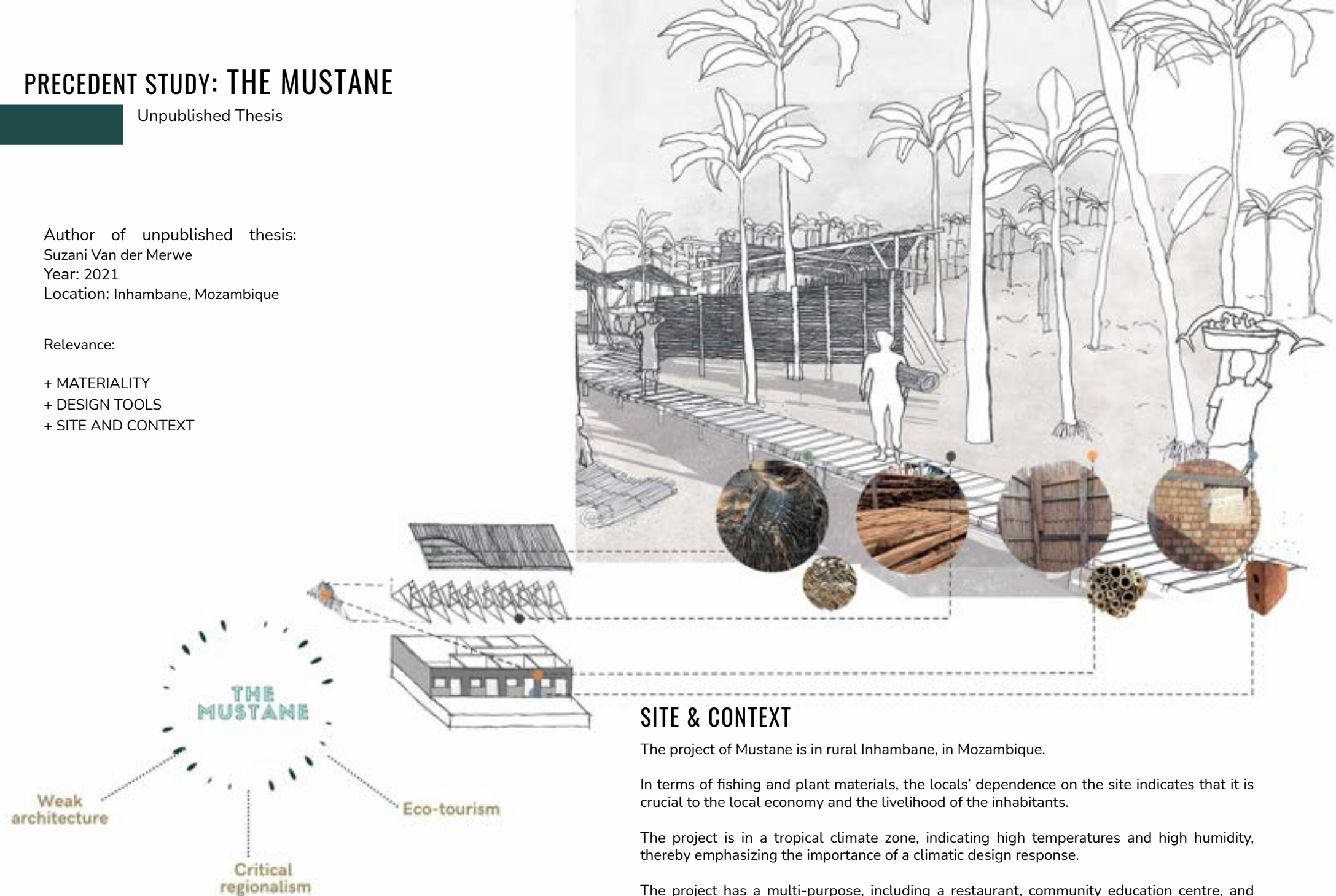
PRECEDENT STUDY: THE MUSTANE

Unpublished Thesis

Author of unpublished thesis:
Suzani Van der Merwe
Year: 2021
Location: Inhambane, Mozambique

Relevance:

- + MATERIALITY
- + DESIGN TOOLS
- + SITE AND CONTEXT



SITE & CONTEXT

The project of Mustane is in rural Inhambane, in Mozambique.

In terms of fishing and plant materials, the locals' dependence on the site indicates that it is crucial to the local economy and the livelihood of the inhabitants.

The project is in a tropical climate zone, indicating high temperatures and high humidity, thereby emphasizing the importance of a climatic design response.

The project has a multi-purpose, including a restaurant, community education centre, and conservation centre (Van der Merwe, 2021: 85).

Figure 46. Mustane diagram, Author, 2021

Figure 46. Mustane diagram, Author, 2021

Figure 47. Perspective, Van der Merwe, 2020.

Figure 48. Materials, Van der Merwe, 2020.

Figure 49. Spatial diagram, Van der Merwe, 2020. edited by author

DESIGN TOOLS

The precedent site and context are like the proposed site and context regarding the locals' dependency on the site.

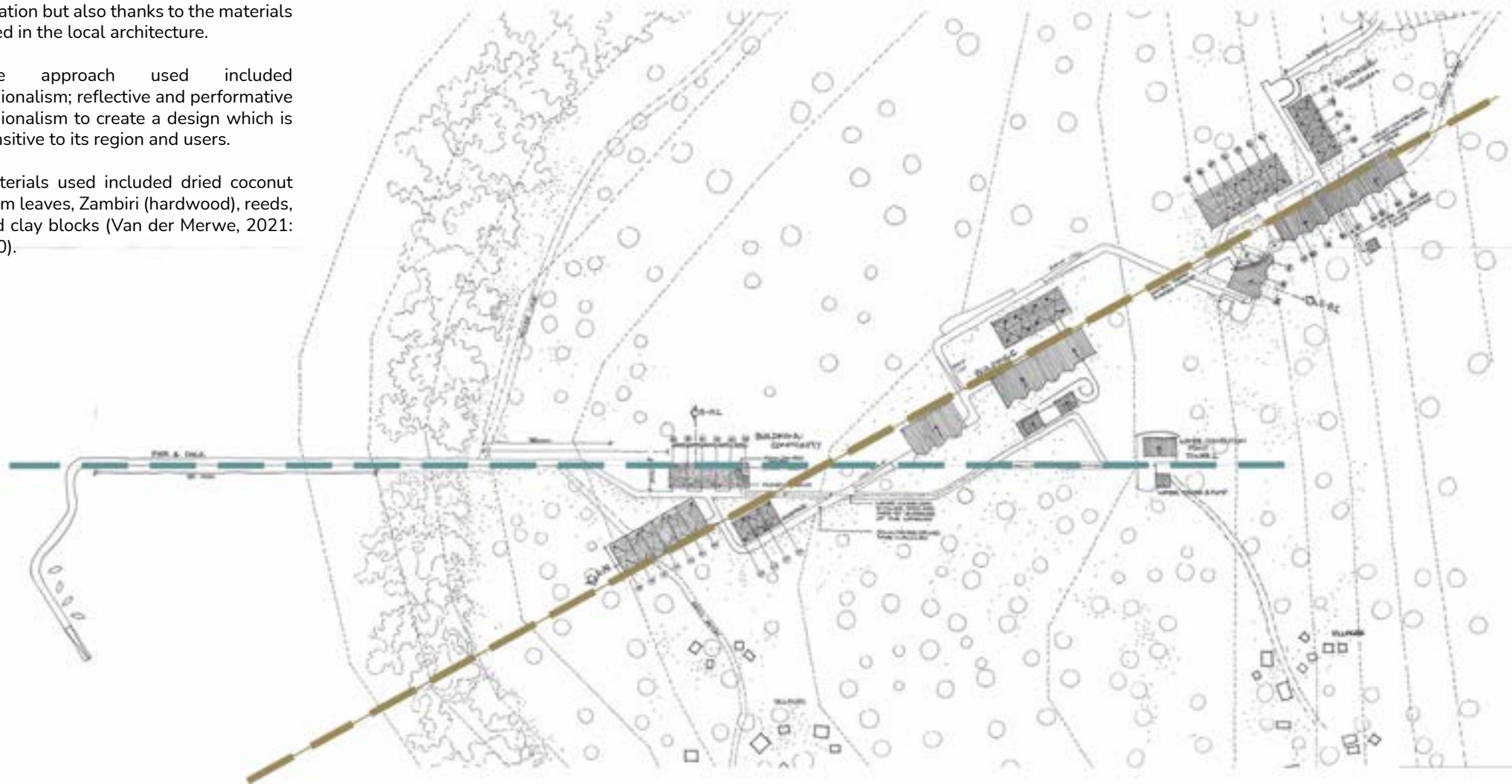
The materiality of the precedent informs the method of sourcing materials in the proposed project, owing to the site's rural and sensitive nature. The precedent indicates how multiple building-uses can be integrated into a project to facilitate economic upliftment within a community, similar to the proposed project's goal.

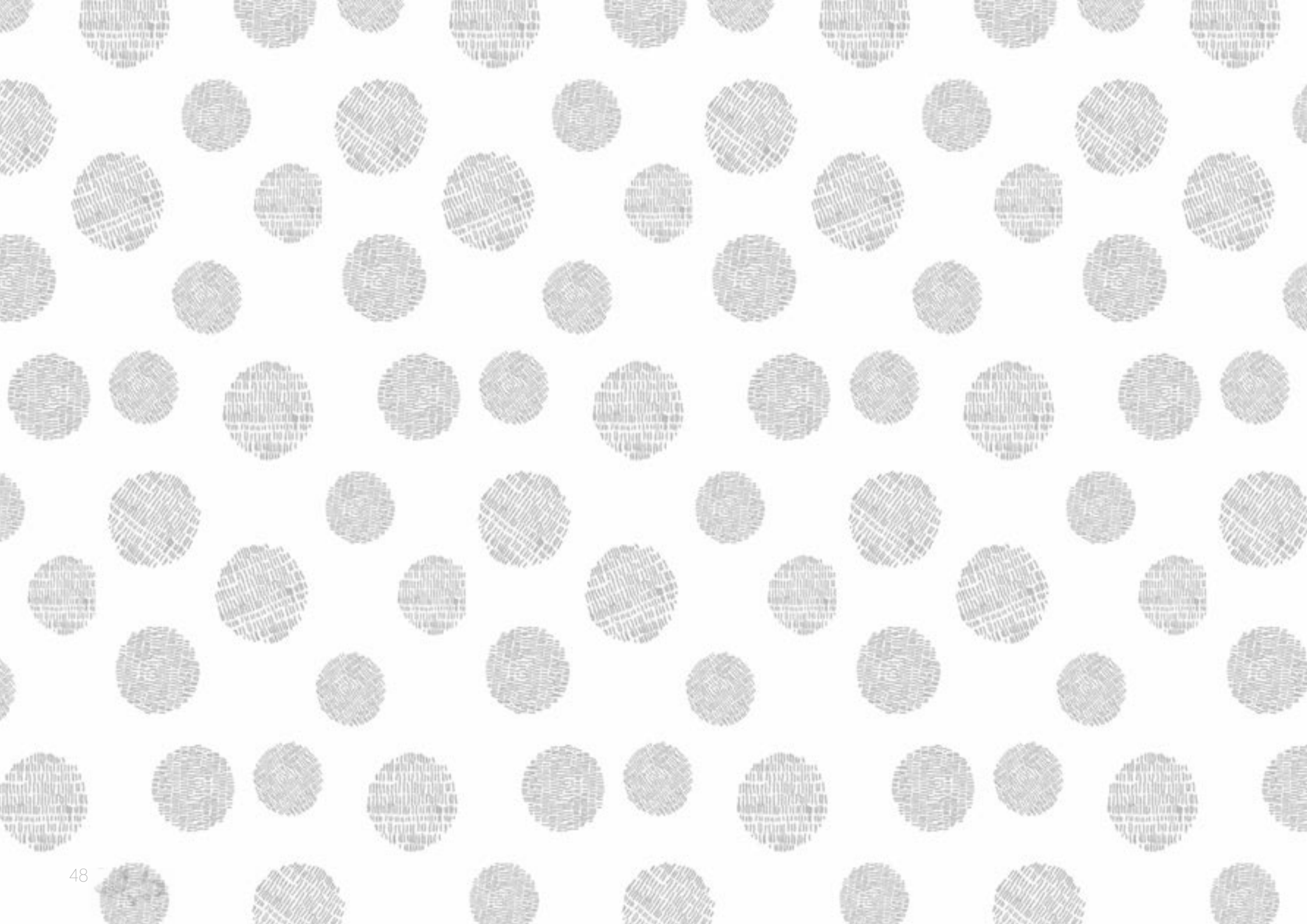
MATERIALITY

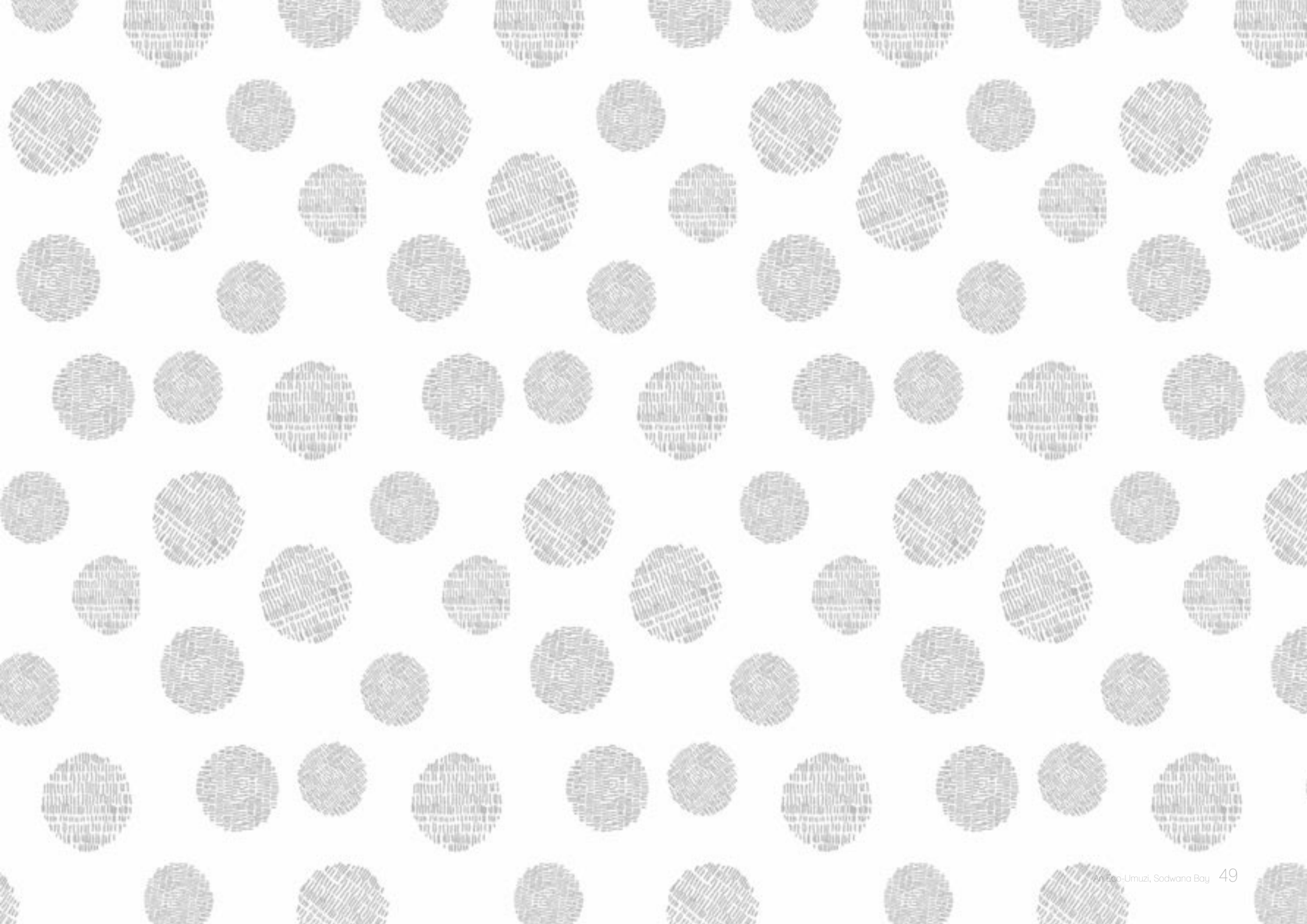
The project focused on using local materials, not only because of the rural location but also thanks to the materials used in the local architecture.

The approach used included regionalism; reflective and performative regionalism to create a design which is sensitive to its region and users.

Materials used included dried coconut palm leaves, Zambiri (hardwood), reeds, and clay blocks (Van der Merwe, 2021: 100).







PART 4



- 4.1 PROGRAMME
- 4.2 CONCEPTUAL DEVELOPMENT
- 4.3 CONCEPTUAL PLANNING
- 4.4 DESIGN DEVELOPMENT
- 4.5 STRUCTURAL EXPLORATION
- 4.6 THE FINAL DESIGN



4



4.1 PROGRAMME

The programme is loosely based on a document received from the iSimangaliso Wetland Park, but not with permission to publish. From the received document together with the existing functions on site the following was developed.

CRAFT MARKET

- Vendor cubicles
- Communal space
- Kitchenette
- Unisex WC
- Watch point

RESTAURANT

- Seating area
- Kitchen
- Dryroom
- Cold room
- Staffroom
- Staff WC
- Office
- Unisex Wc
- Outside seating area
- Delivery & service area



SCUBA DIVE SCHOOL

- Reception
- Boardroom
- Office
- Equipment storage
- Equipment washing area
- Divers ablution & lockers

DIVE SHOP

- Retail space
- Pay point
- Staff area
- Staff WC
- Storage

BEACH ABLUTION

- Female ablution
- Male ablution
- Outside showers

INFORMATION CENTRE

- Reception
- Office
- Exhibition space
- Watch point
- Security
- Medical -examination room
- Unisex WC



4.2 CONCEPTUAL DEVELOPMENT

- + MEDIATOR
- + LINEAR VS. ORGANIC
- + MAN VS. NATURE
- + COMBINATION

CONCEPT: Contrasting Convolution

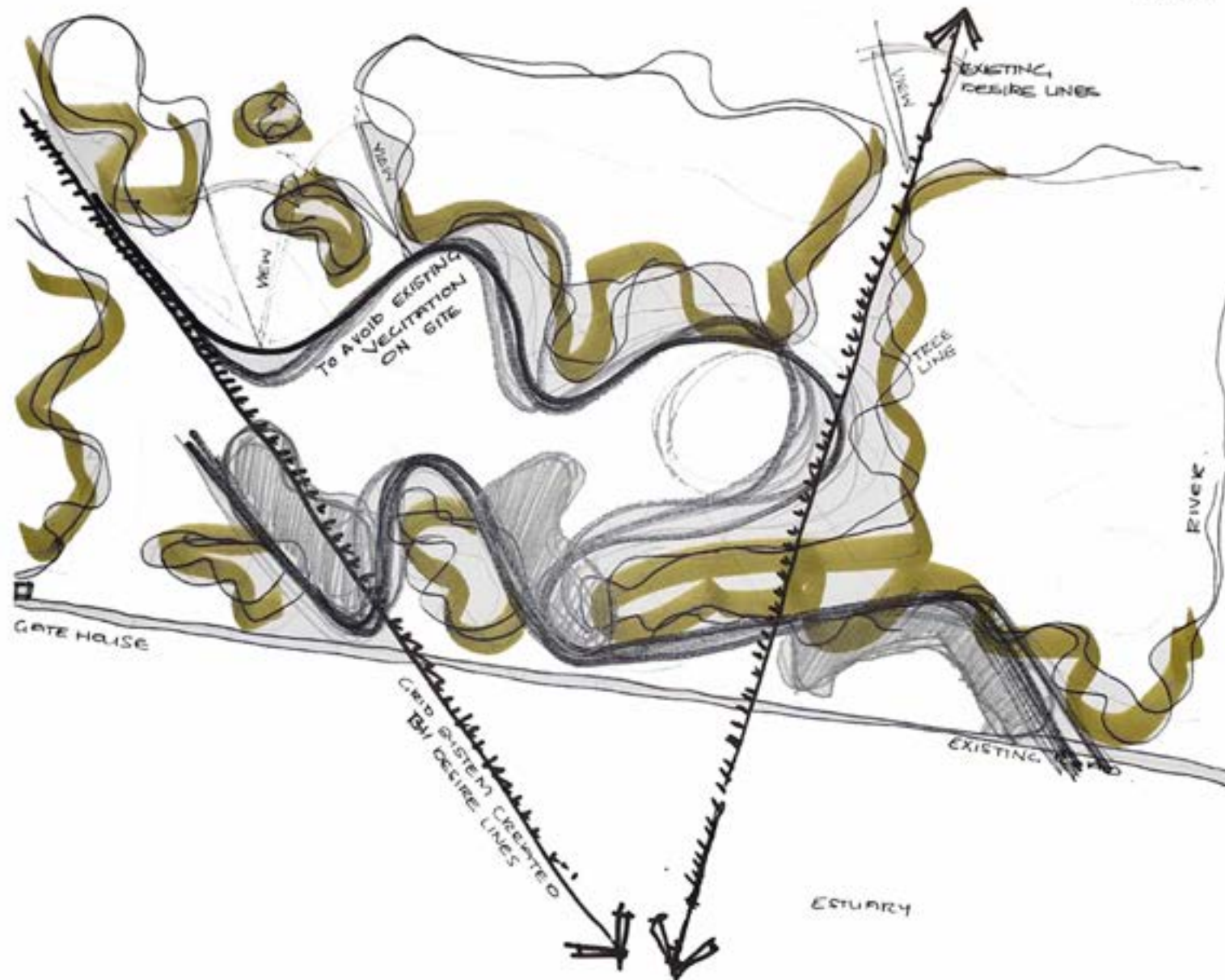
Based on the idea of built form acting as the mediator between man and nature, the concept of contrasting convolution forms a link between the two bodies of water, the ocean and the estuary. The concept combines linear and organic forms, thereby becoming an integration of the opposite components.



Figure 50. Concept contrasting convolution, Author, 2021



CONCEPTUAL PLANNING 4.3



The first conceptual sketch, illustrated in Figure 41, was based on the concept of contrasting convolution. The sketch represents the site, the existing desire lines, and how a meandering walkway travels through the site, placing buildings in open pockets on-site to ensure minimal disturbance to the existing vegetation.

Figure 51. Conceptual sketch, Author, 2021

4.4 DESIGN DEVELOPMENT

Figures 52 and 53 illustrate the development from the initial conceptual sketch by using the existing desire lines on site and axis, such as the road, to create a grid which was used to set out spaces.

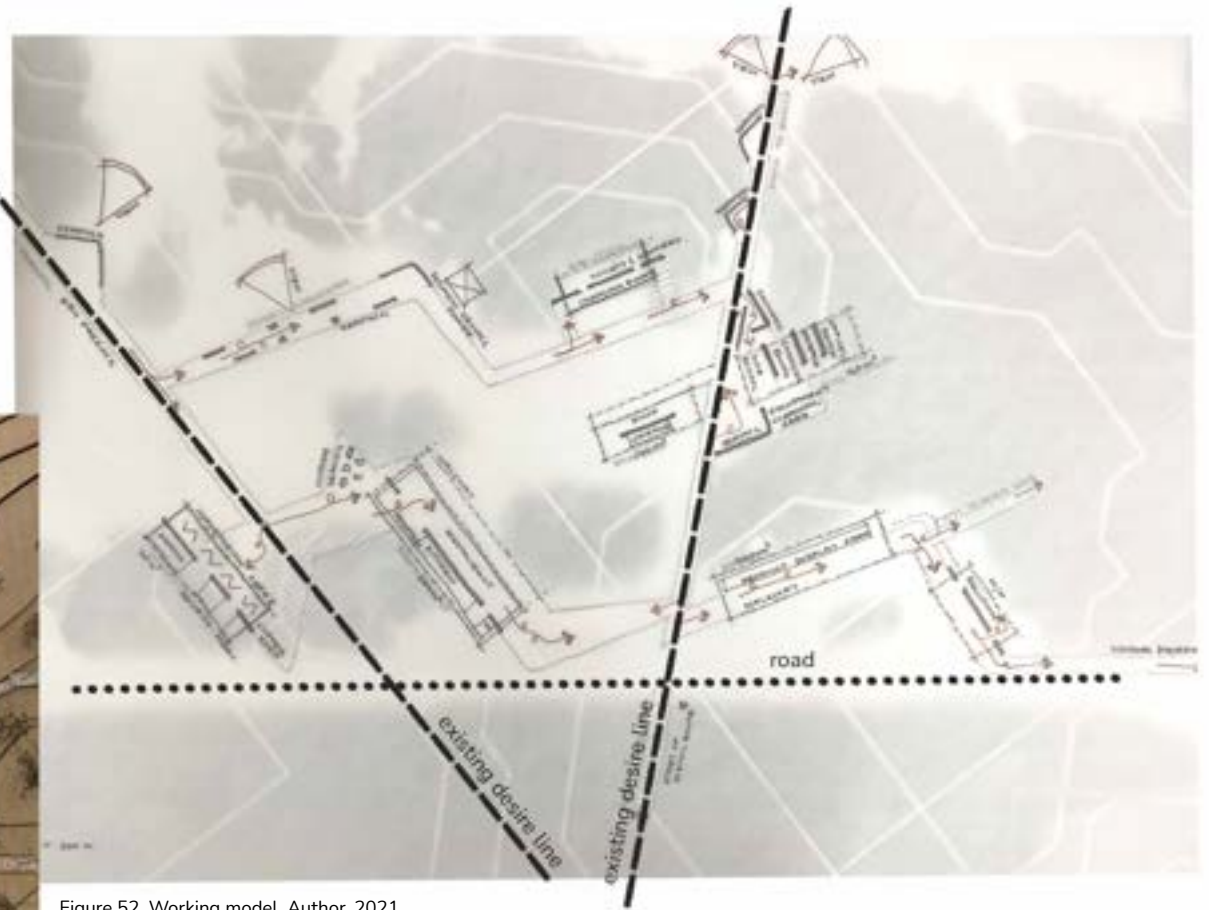


Figure 52. Working model, Author, 2021

Figure 53. Spatial development, Author, 2021

Figure 54. Sectional development, Author, 2021

Figure 55. Sectional development, Author, 2021

Figure 56. Sectional development, Author, 2021

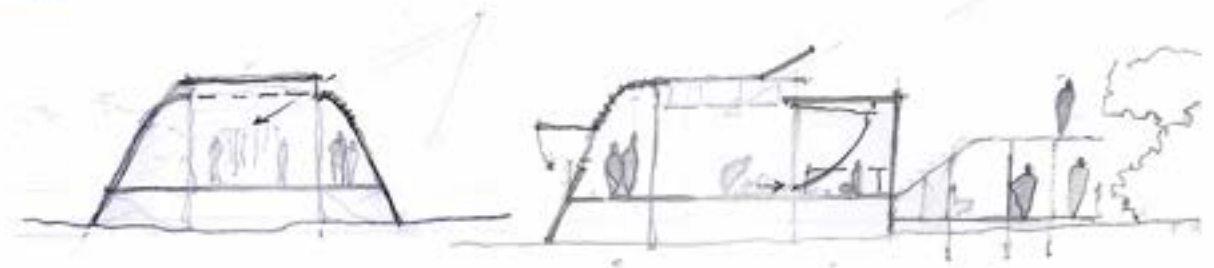


Figure 57 illustrates how the theory of orientation and identification (pp.39) is used in the design as watchtowers to create orientational and identifiable points on site. The tower elements are inspired by the historic local fishing method using a thrust basket, referred to as iSifonyo (Fig. 58), as seen in the render of the craft market on page 68.

Figure 58. Thrust basket (isifonyo)
(Natal Museum acc. no. 6945. Ingwavuma district.)



Figure 57. Working plan, Author, 2021

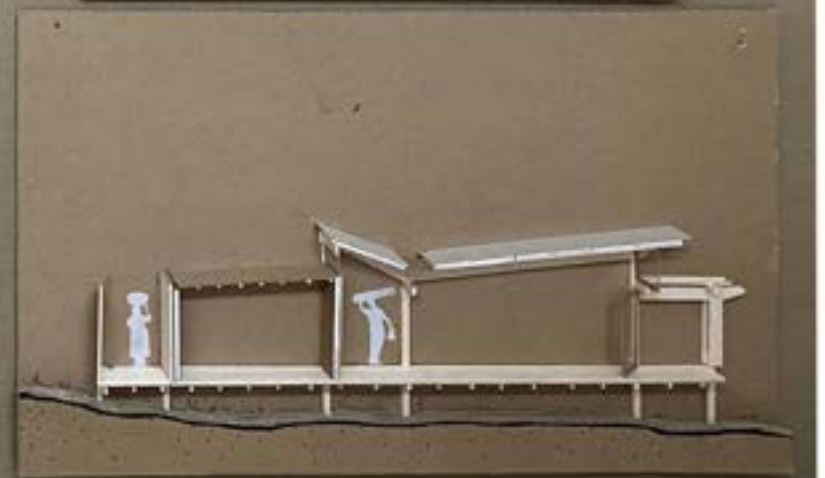
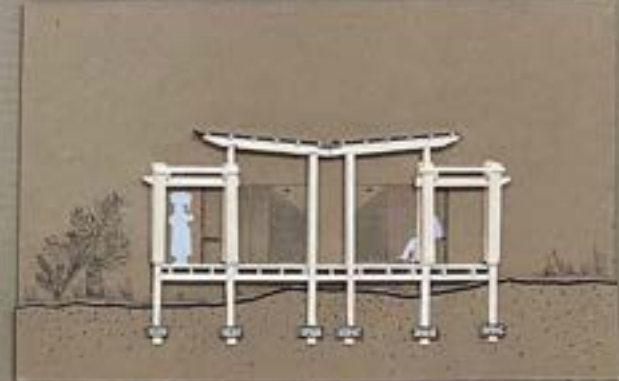
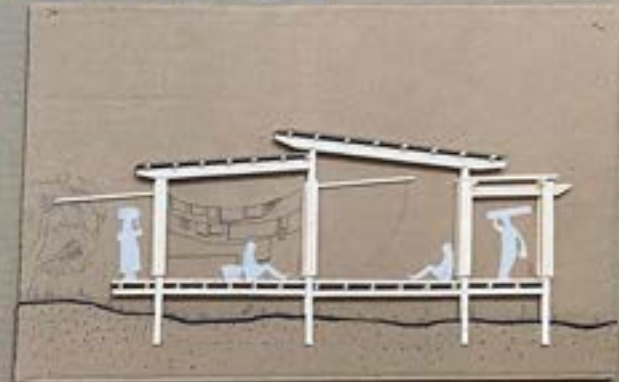
SITE MODEL



SECTIONAL EXPLORATION



SECTION MODELS



4.5 STRUCTURAL EXPLORATION

The following figures illustrate the development of the structure. The entire project is constructed from a timber structure, sourced from the local lumber plantations of Richards Bay. After investigating local hardwood types, Saligna (eucalyptus saligna) was identified as a suitable option.

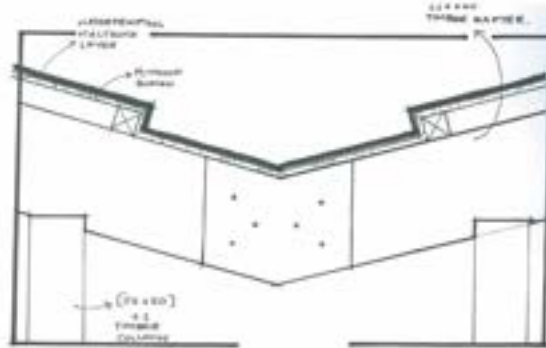


Figure 60. Development section of gutter in ablution block, Author, 2021

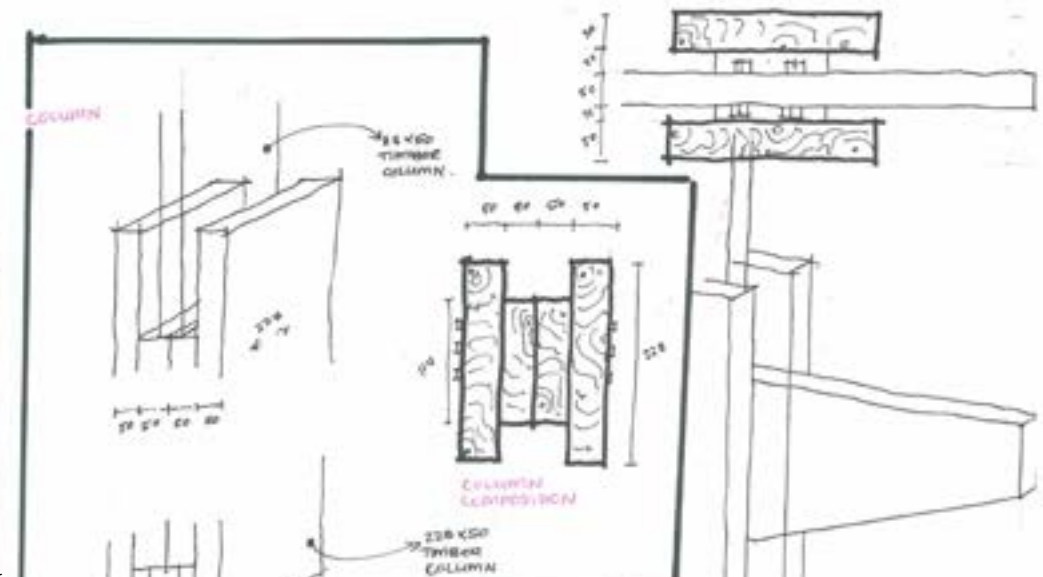


Figure 62. Development sketch of timber column, Author, 2021

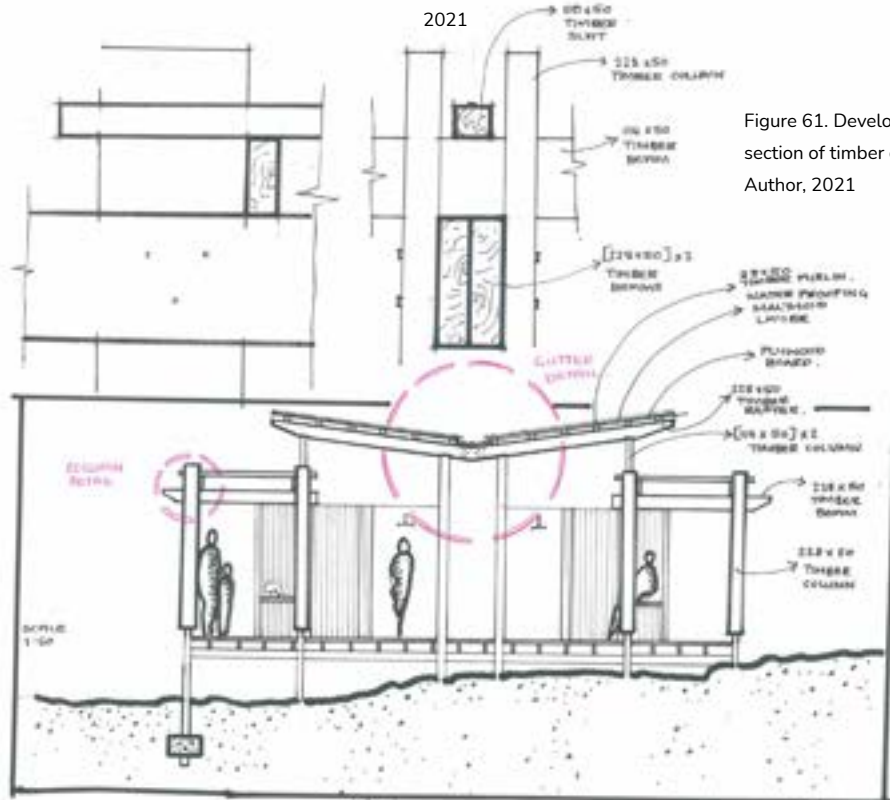


Figure 61. Development section of timber column, Author, 2021

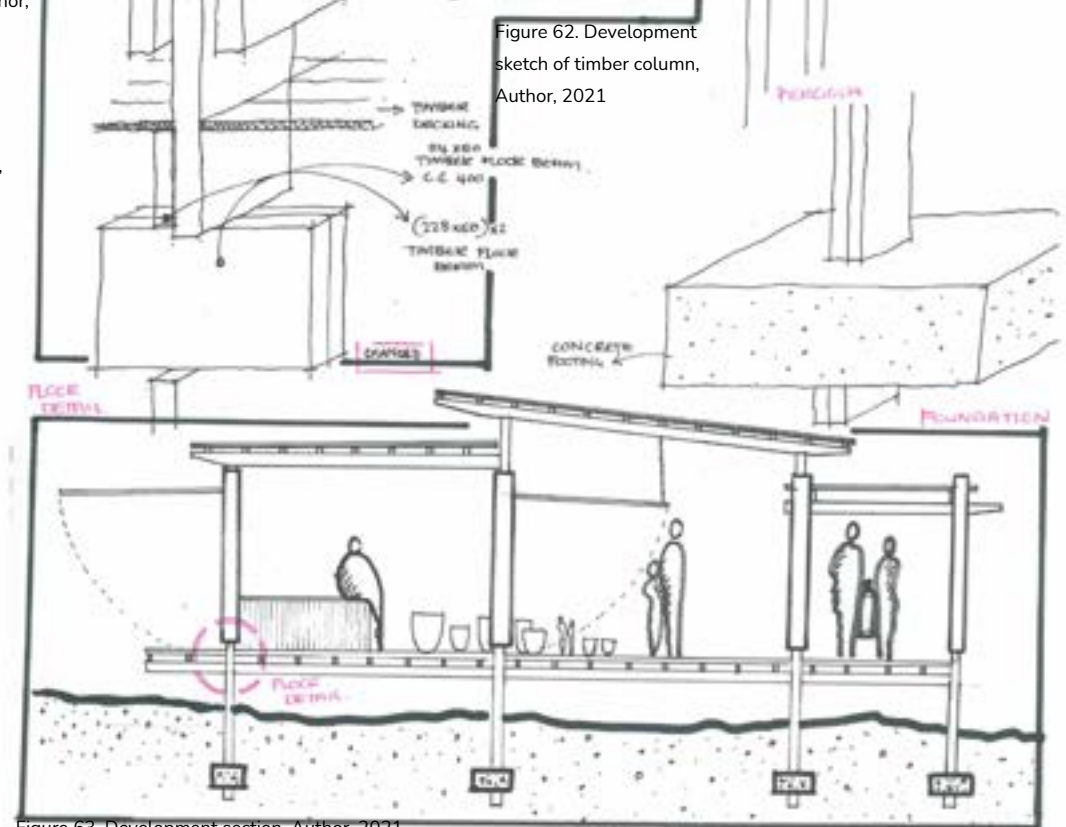


Figure 63. Development section, Author, 2021

Figure 59. Development section, Author, 2021

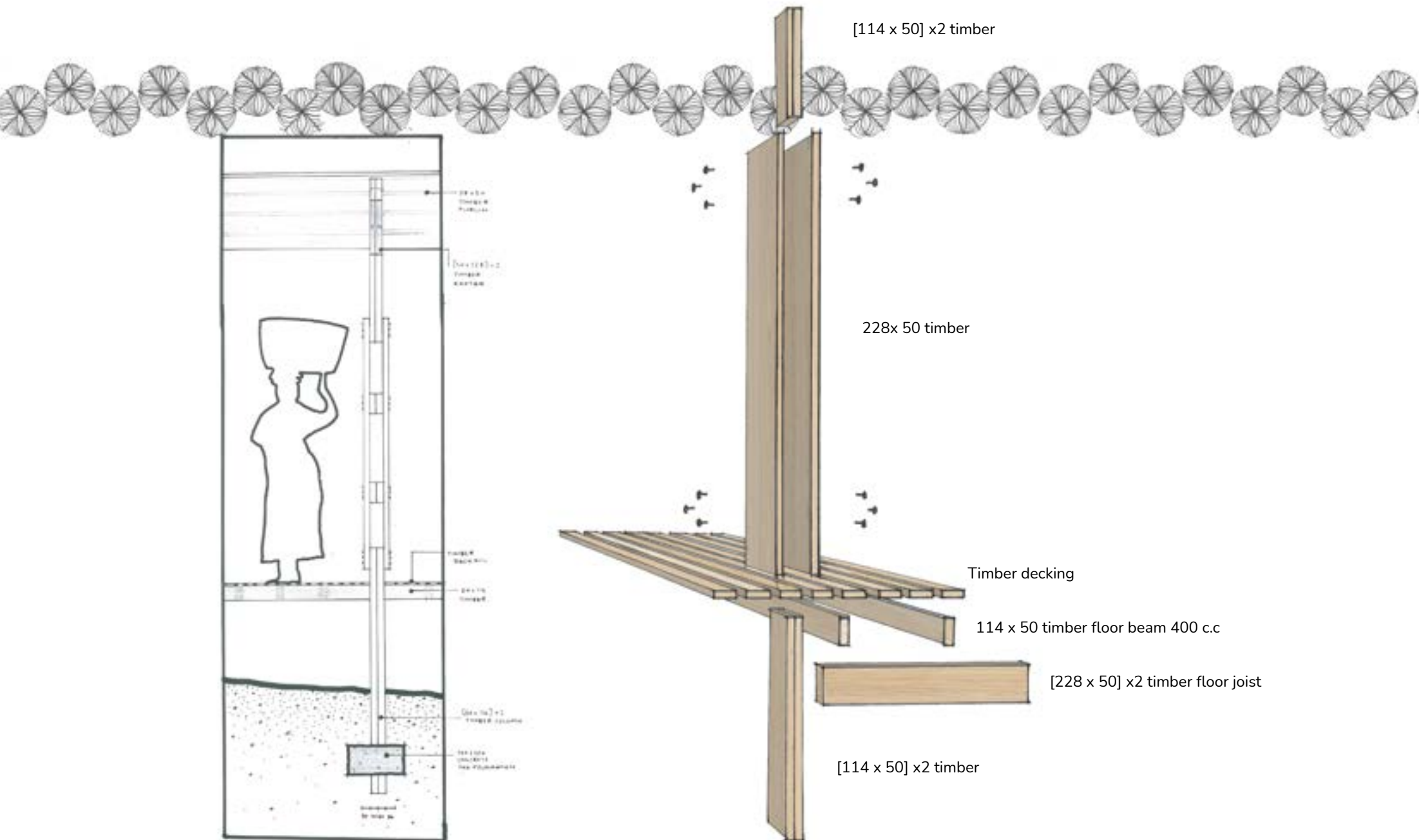


Figure 64. structural sectional exploration, Author, 2021

Figure 65. Exploded axonometric of timber structure, Author, 2021

4.6 FINAL DESIGN

Locality Plan

1. Site
2. Estuary
3. Ocean
4. Road to Shazibe
5. Jesser Point
6. Day visitor parking
7. Resident parking
8. Camping terrain

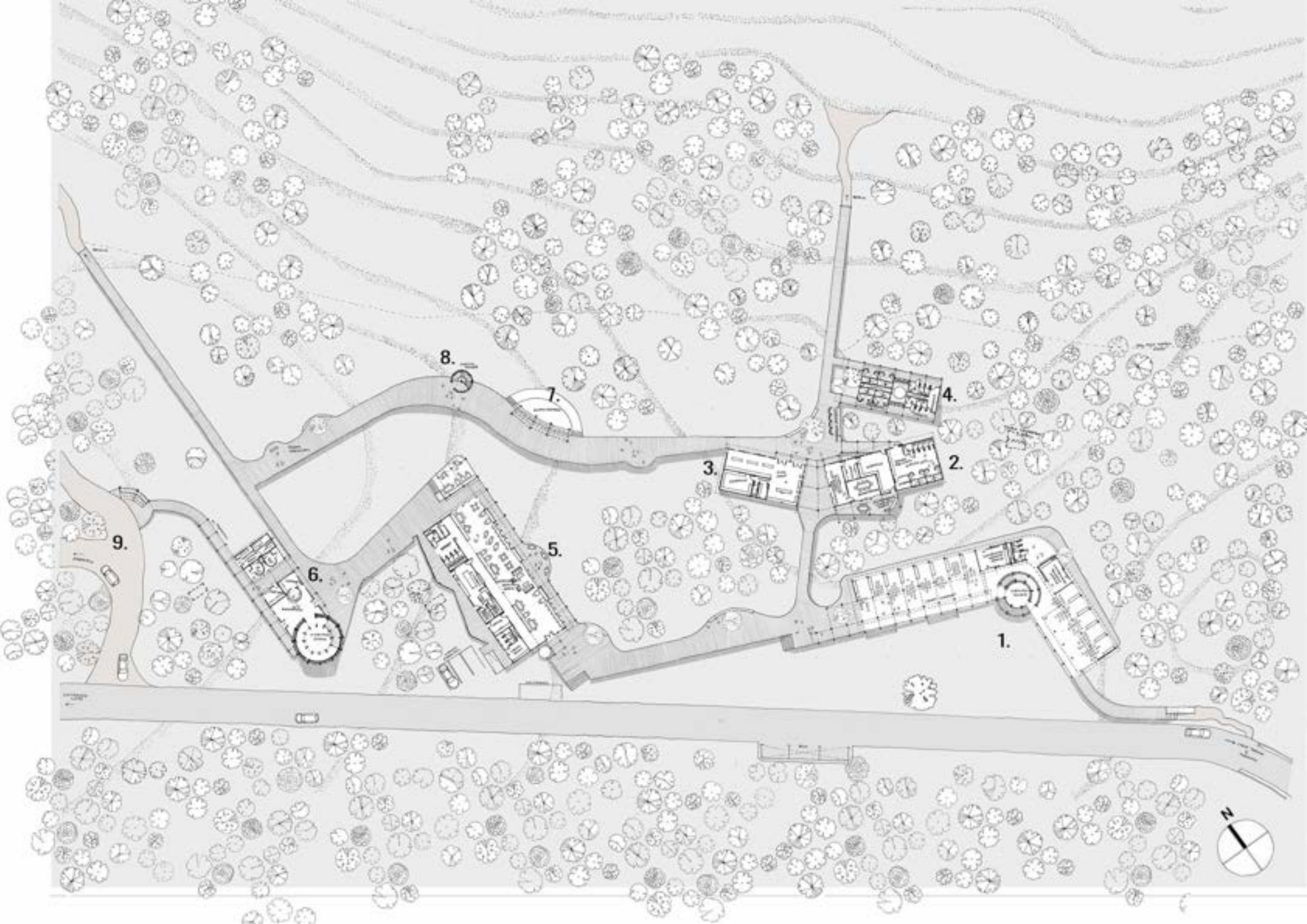




Master Plan

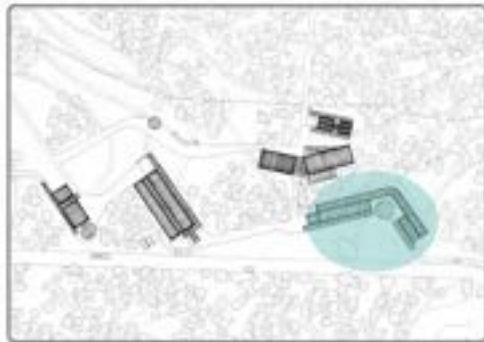
1. Craft market
2. Dive school
3. Dive shop
4. Beach ablution
5. Restaurant
6. Information centre
7. Amphiteater
8. Watch tower
9. Day visitor parking

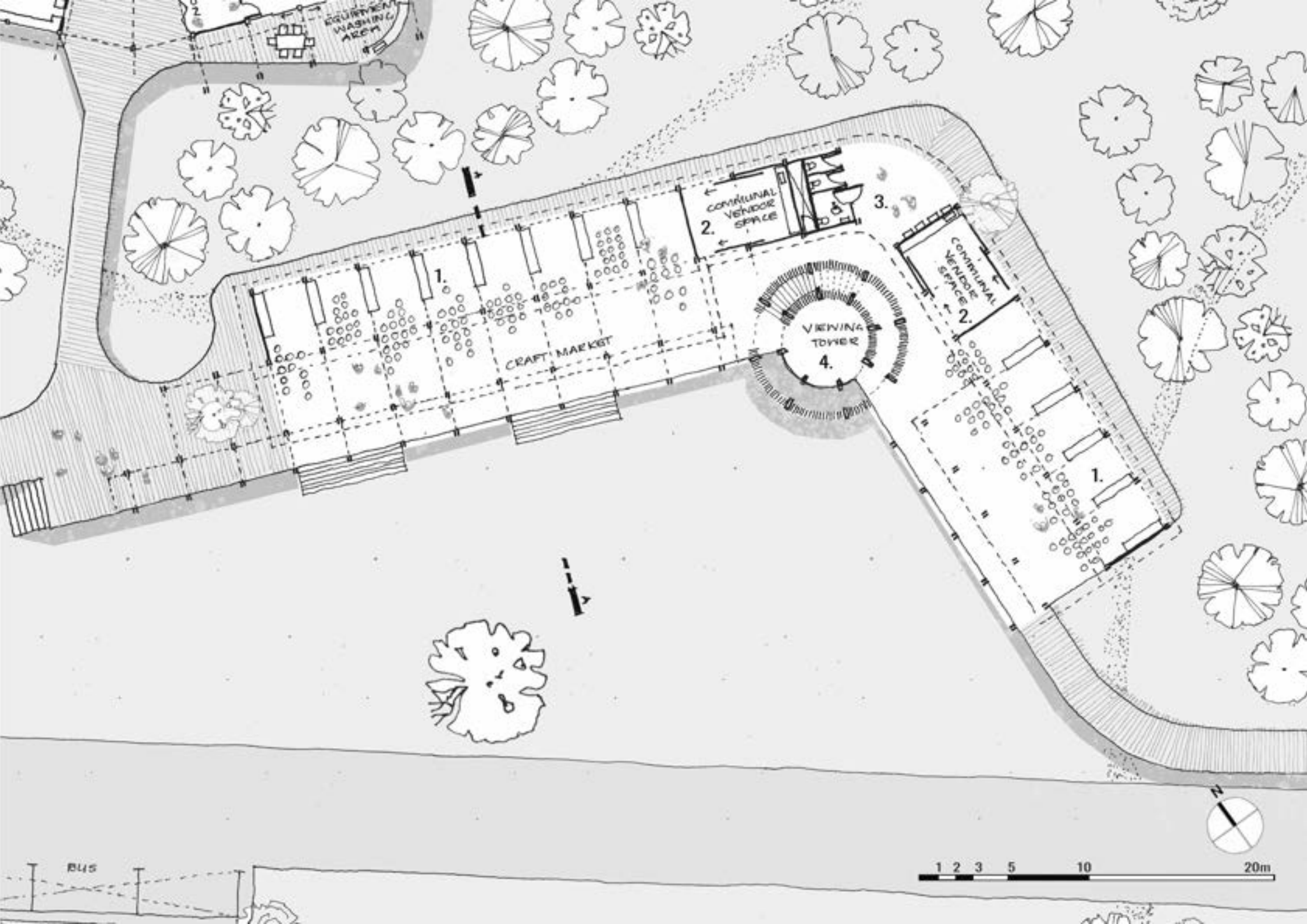




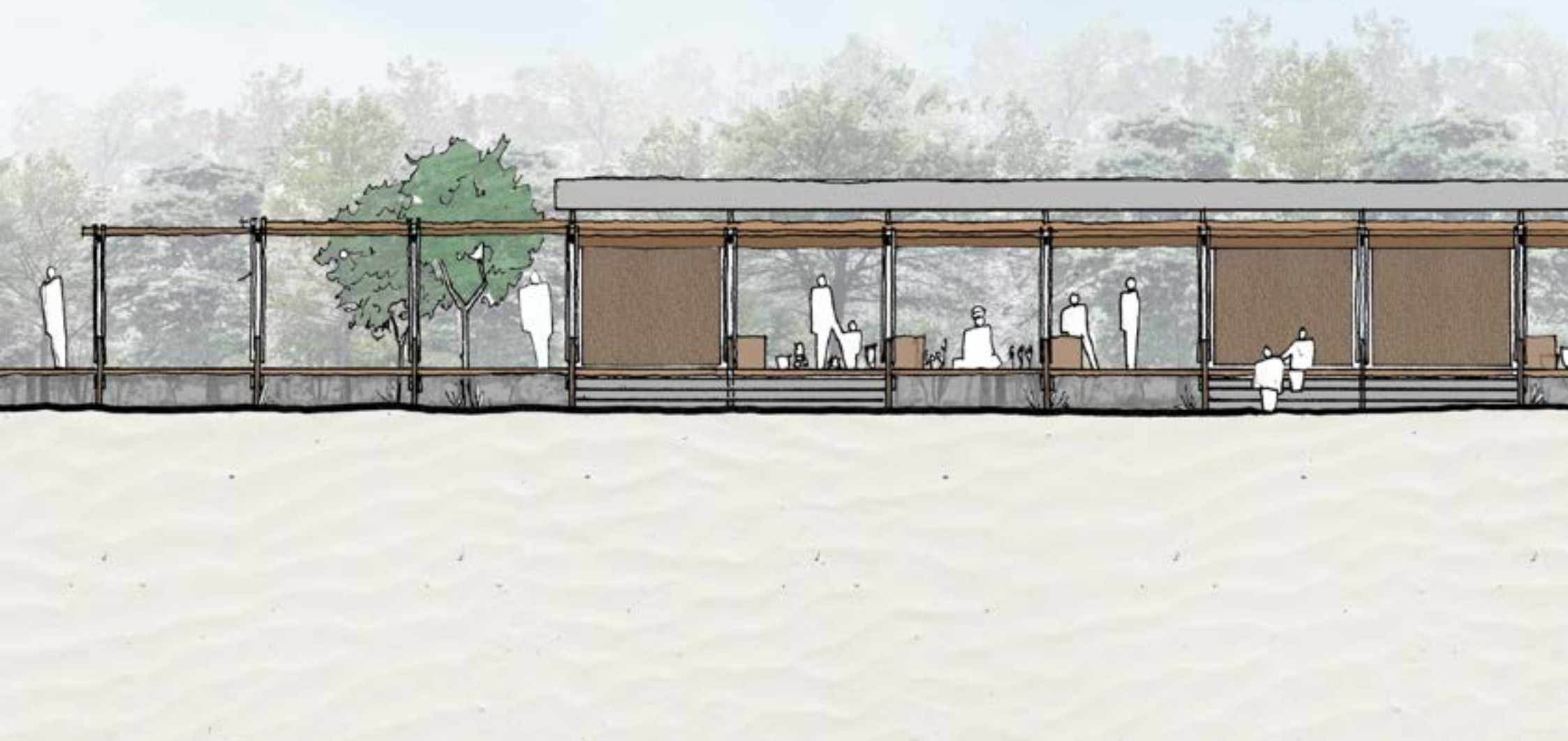
Craft Market Plan

1. Vendor Space
2. Communal Vendor Facilities
3. Unisex Ablution
4. Disabled WC



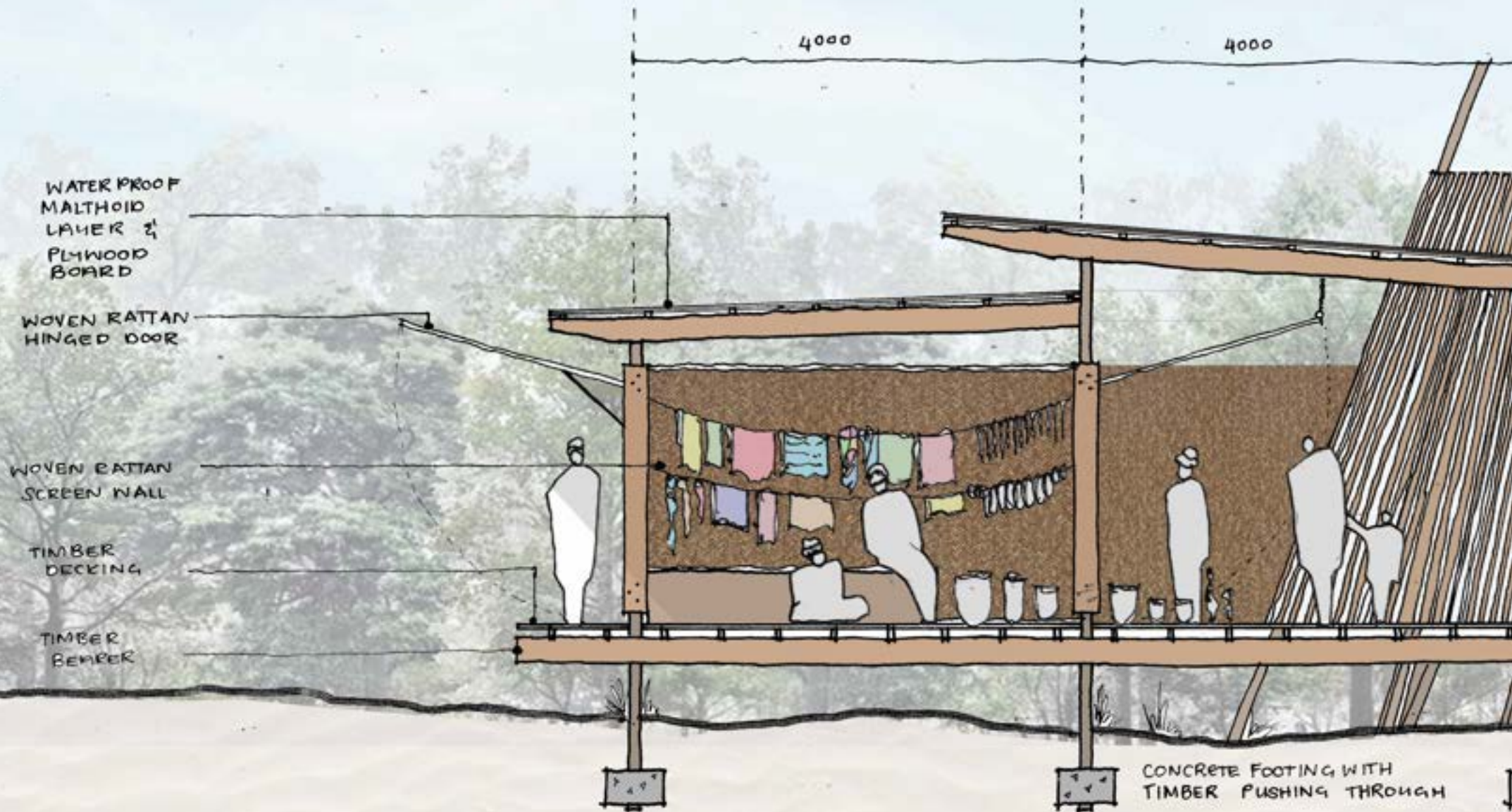


Craft Market
Elevation
Scale 1:100





Craft Market
Section A-A
Scale 1:50





VIEW OF CRAFT MARKET



VENDOR SPACE IN CRAFT MARKET







Restaurant Plan

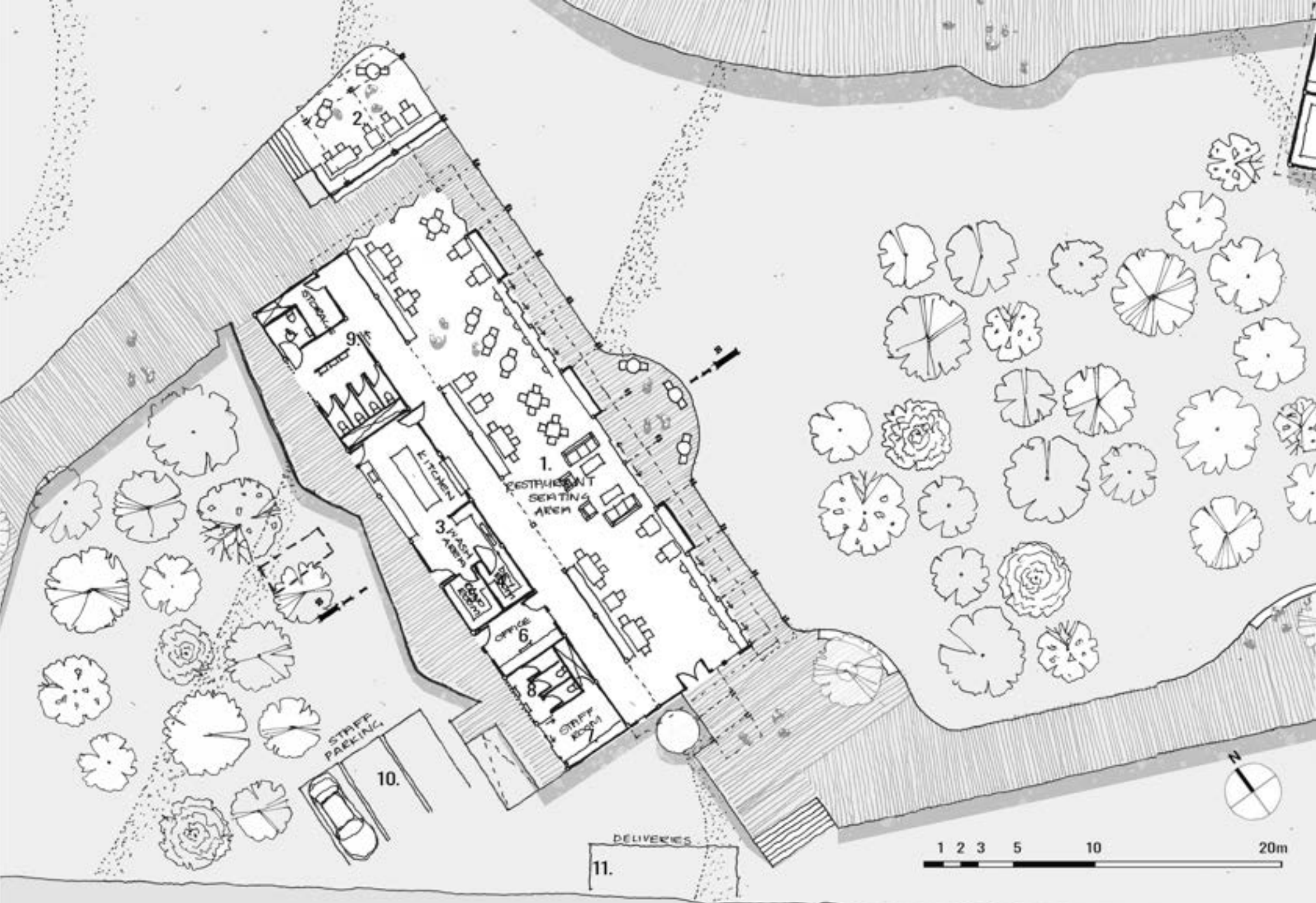
SERVED SPACE

1. Seating area
2. Outside Seating area

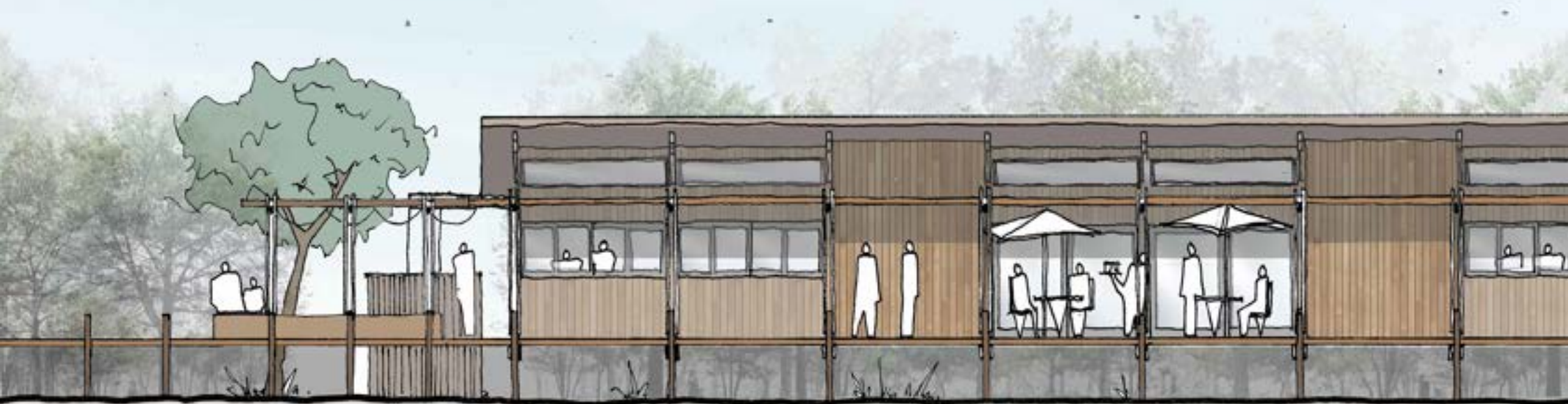
SERVICE SPACE

3. Kitchen
4. Dry Room
5. Cold Room
6. Office
7. Staff Room
8. Staff WC
9. Unisex WC
10. Staff parking
11. Delivery parking



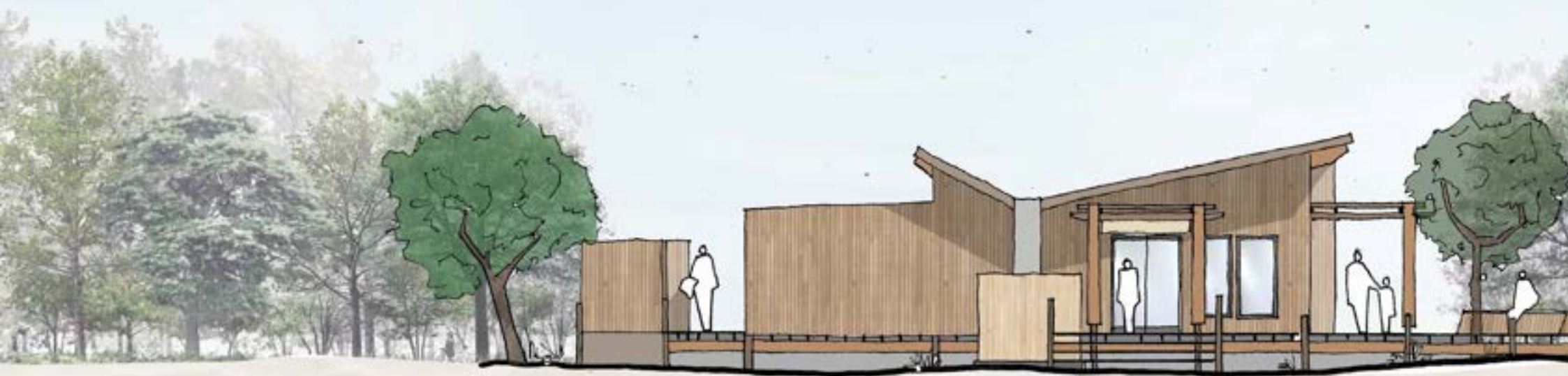


Restaurant
Elevation
Scale 1:100





Restaurant
Elevation
Scale 1:100





Restaurant
Section B-B
Scale 1:50





RESTAURANT





RESTAURANT DECK AREA



RESTAURANT INTERIOR







Dive School Plan

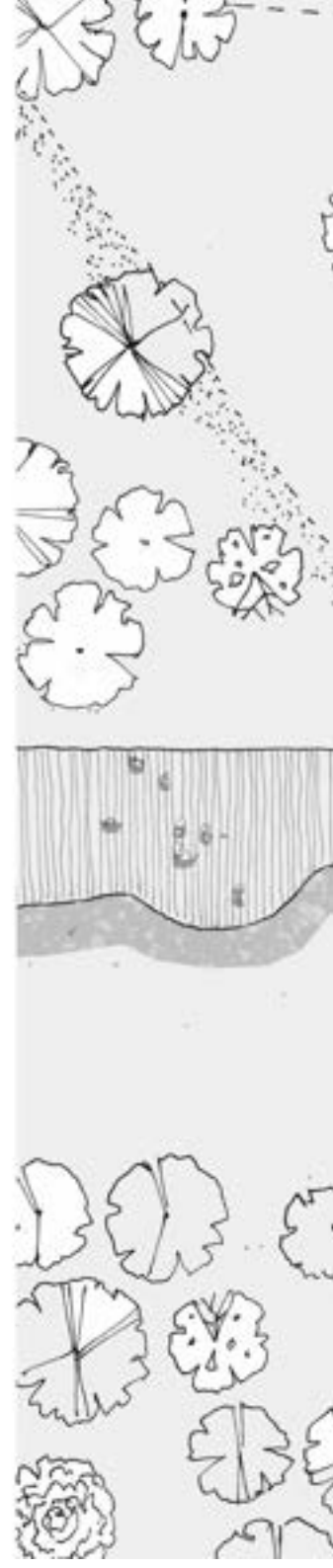
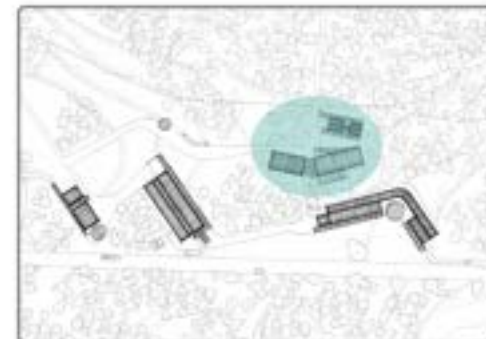
1. Reception
2. Office
3. Boardroom
4. Storage
5. Equipment washing area
6. Showers
7. Unisex WC
8. Locker Space

Dive Shop Plan

9. Retail Space
10. Reception
11. Staff area
12. Storage

Ablution Plan

13. Showers
14. WC
15. Disabled WC
16. Storage





ENTRANCE TO DIVE SCHOOL



BEACH SHOWERS



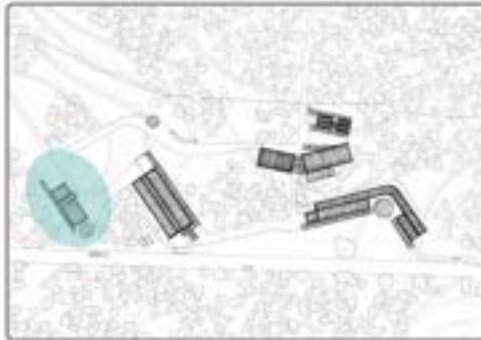
BEACH SHOWERS

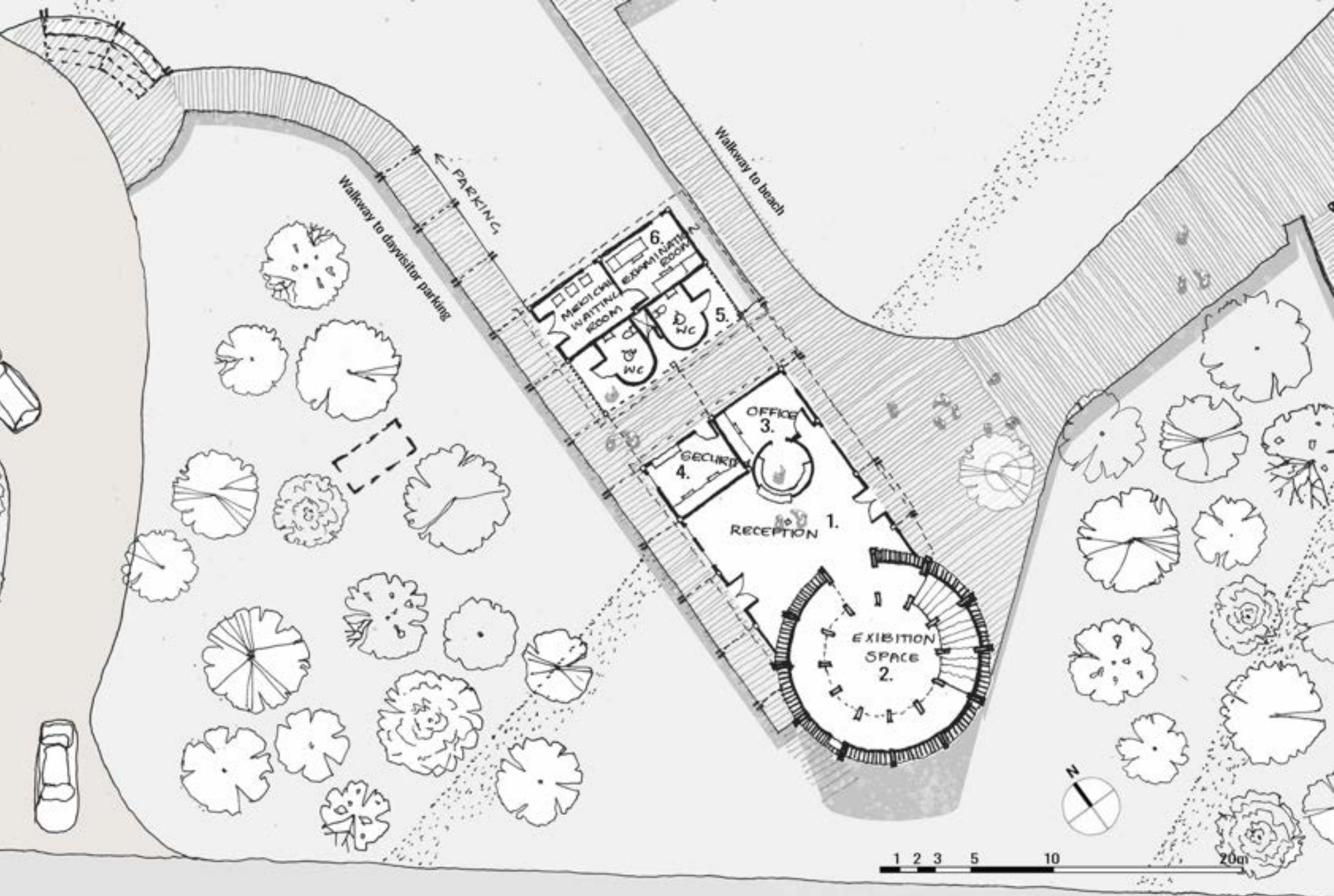


An architectural rendering of a modern outdoor walkway. The walkway is paved with light-colored wooden planks and runs alongside a building with a light-colored wooden pergola roof. On the left, a large, dark, abstract sculpture of a man carrying a surfboard stands on a circular base. The background features lush green trees and a blue sky with clouds. The text "DIVE SHOP" is visible in the top right corner.

Information Plan

1. Reception
2. Exhibition Space & lookout point
3. Office
4. Security Office
5. Unisex WC
6. Medical Consultation Room





Information centre

Elevation

Scale 1:100





Information centre

Section

Scale 1:100





INFORMATION CENTRE



INFORMATION CENTRE



FINAL MODEL EASTERN VIEW

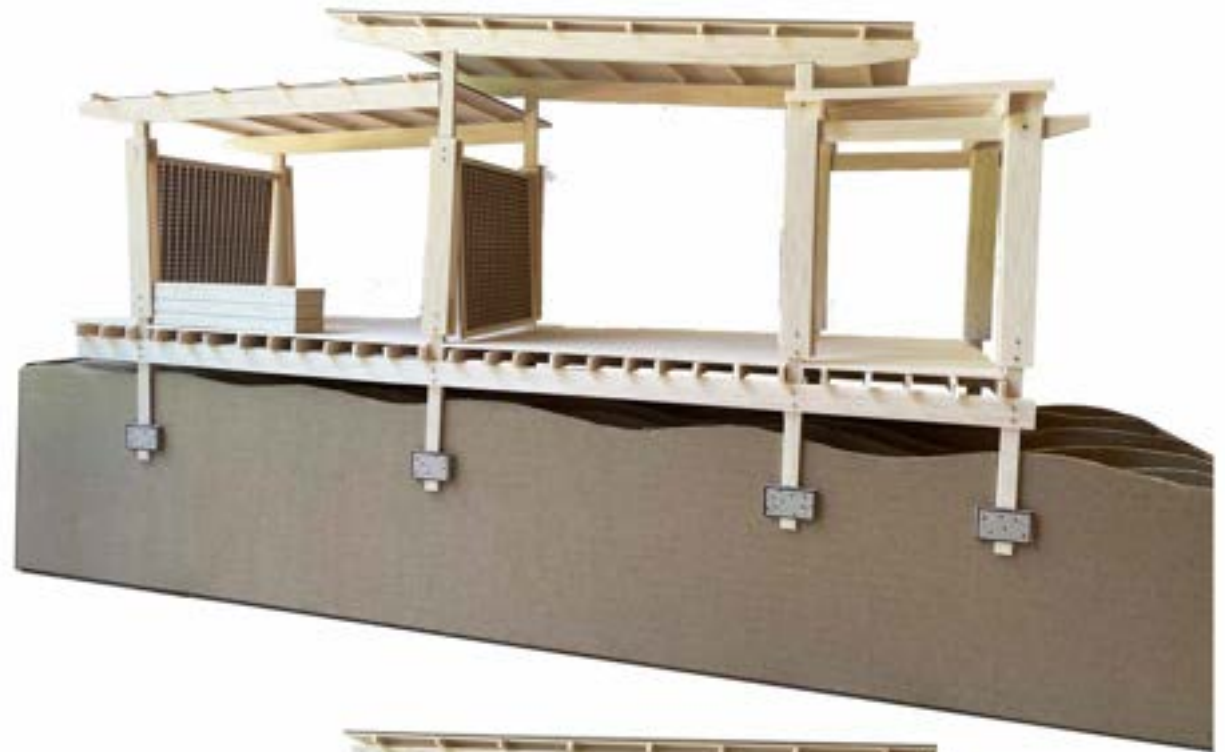




FINAL MODEL WESTERN VIEW

MARKET SECTION MODEL

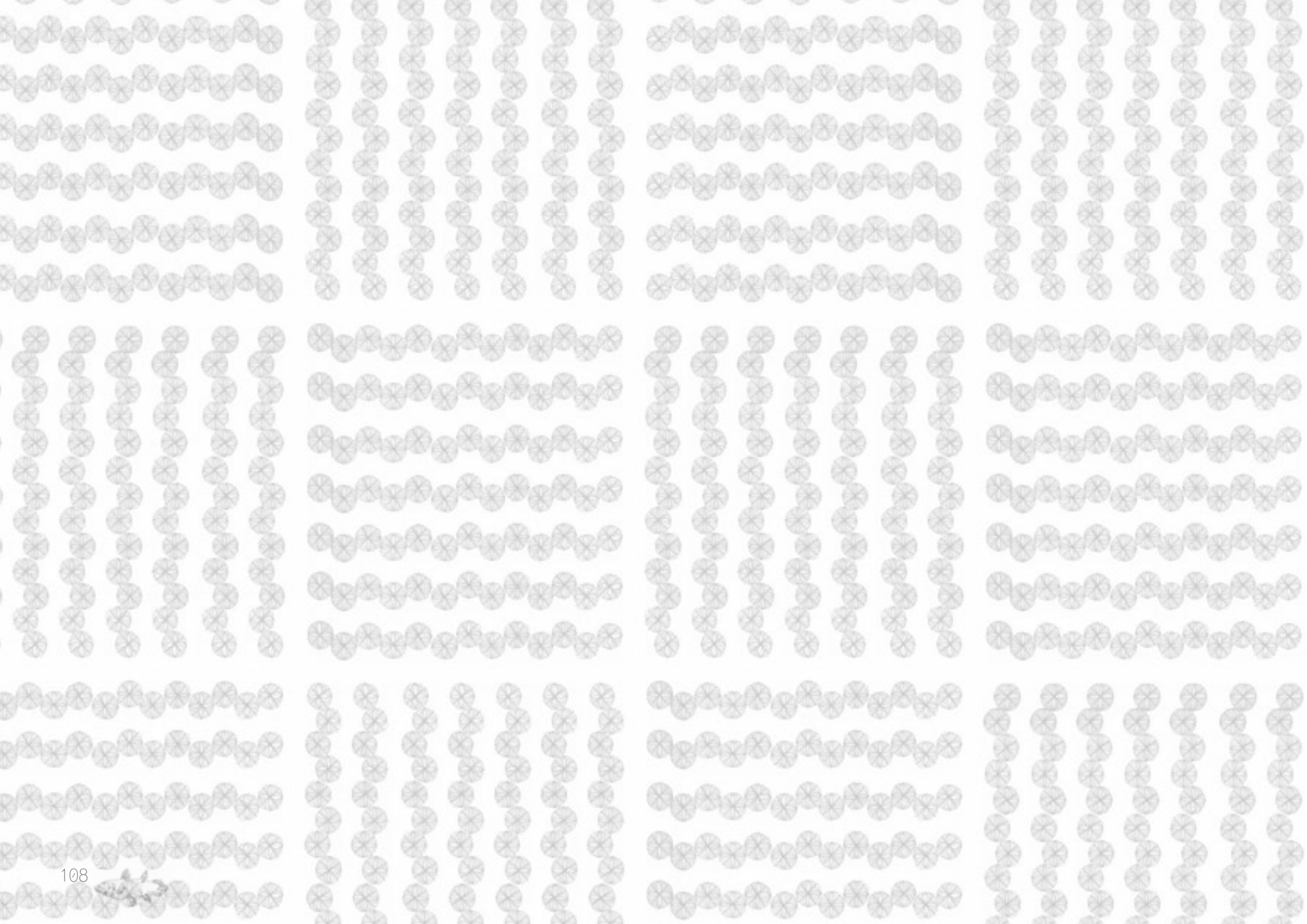
SCALE 1:20

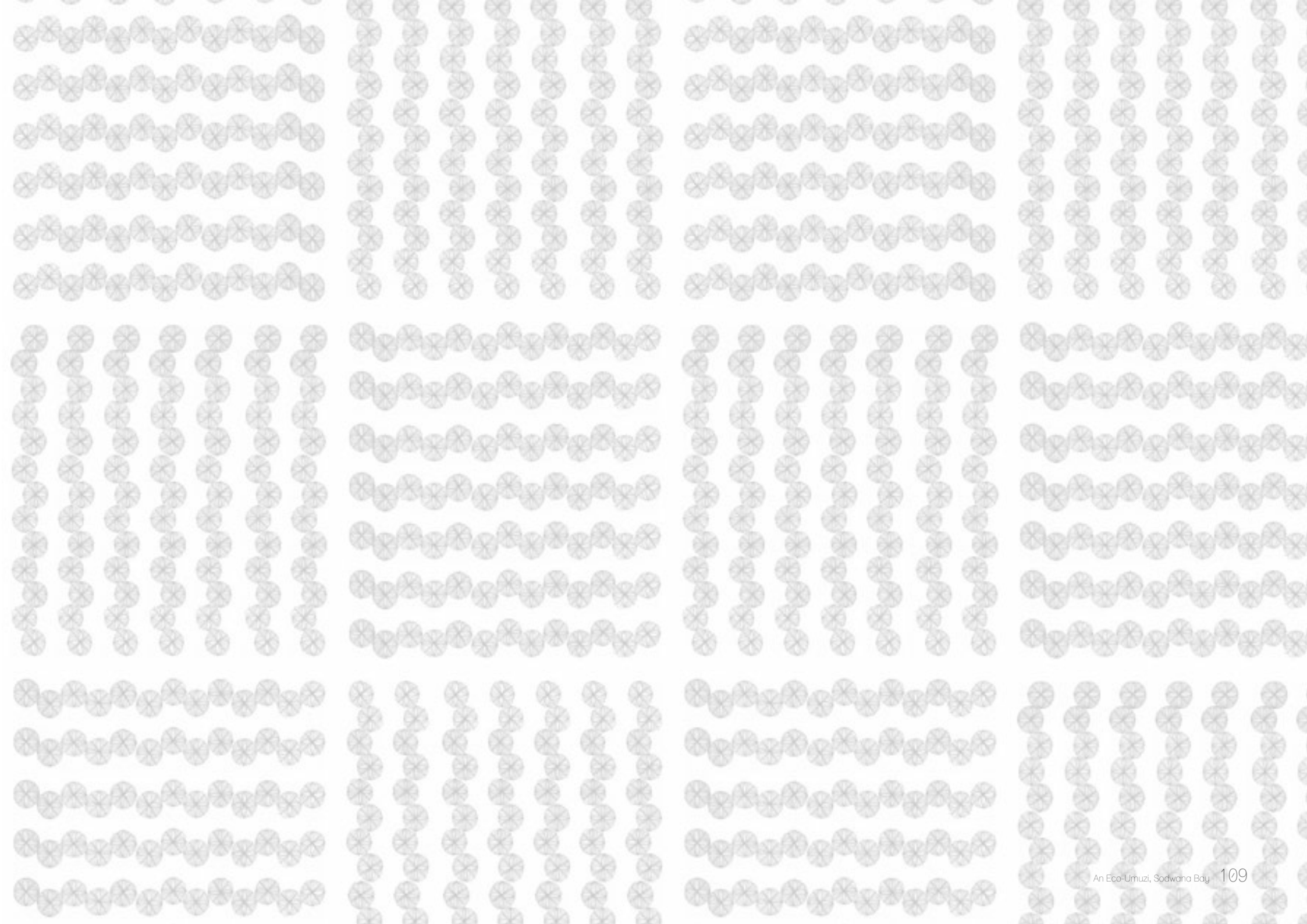


STRUCTURAL MODEL

SCALE 1:20







PART 5

+

5.1 REFLECTION
5.2 REFERENCES



5



The past year with its new and unusual difficulties, online crit sessions, and not being in daily contact with fellow students and lecturers proved to be challenging. Despite this, I believe the design developed into an inclusive and sensitive project. The project scale might be small and the programme straightforward, but it possesses its own intricacies, such as the different cultures and identities intertwined in the location, the economic reliance on the site, and the sensitive nature of the ecosystem. I aimed to create a project that engages with the region, its people, skills, and products and would provide a place of interaction, as mentioned in the research question. I hope it will build relationships between people, nature, and buildings and resonate on some level with the abovementioned aims.

During this time of reflection, I realised that throughout the year I have gained a greater admiration for the people and appreciation for the location and wildlife, which I previously thought I was knowledgeable about. I am proud of what I have achieved, not only during this past year, but also during the last five years. With this project, I believe I have acquired knowledge about design, construction, and theory which I have not previously possessed while enormously enjoying the process of researching, designing, and applying the knowledge. I am very excited about what is to come.



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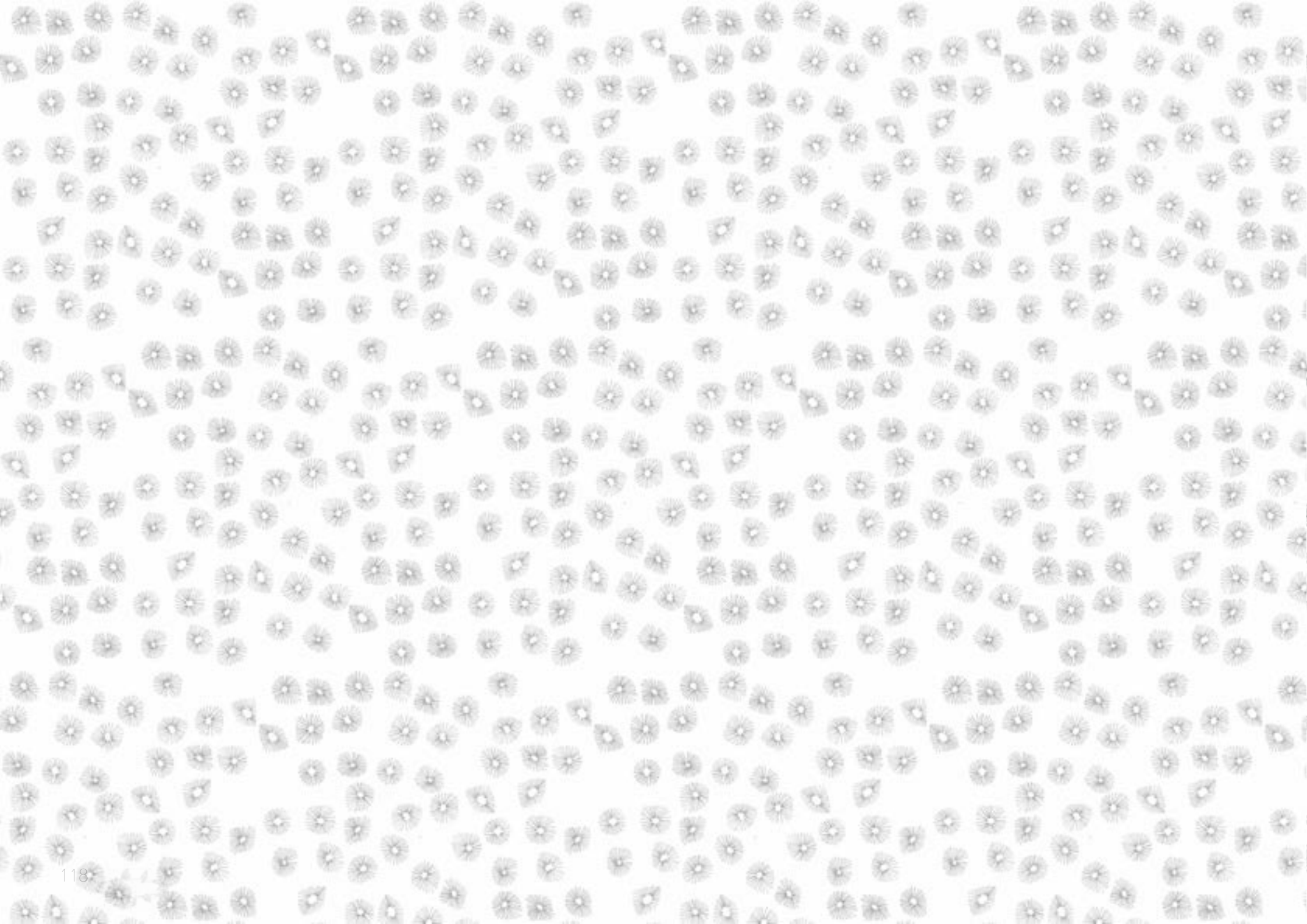
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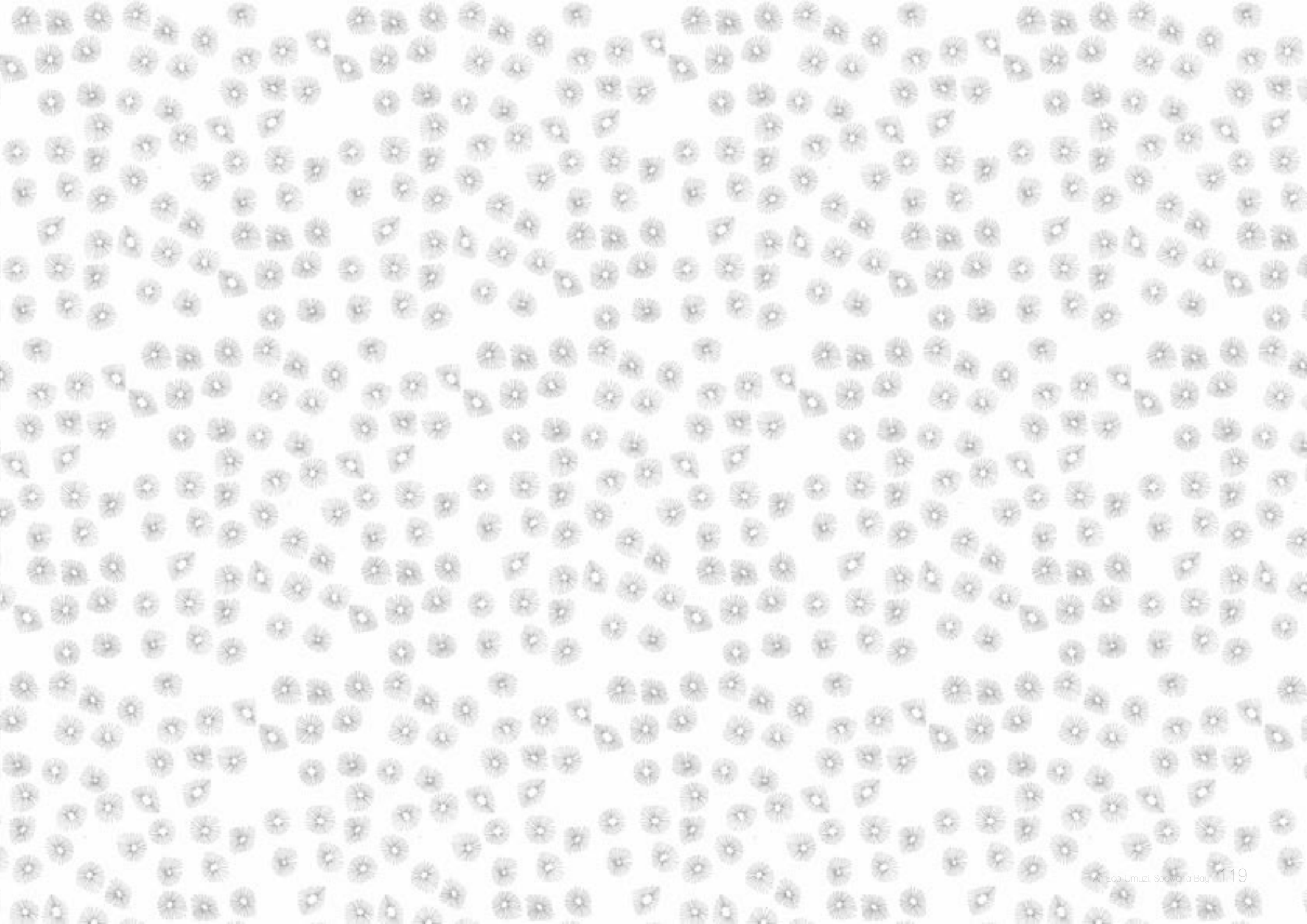
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PART 6



6.1 DOCUMENTATION



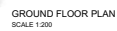
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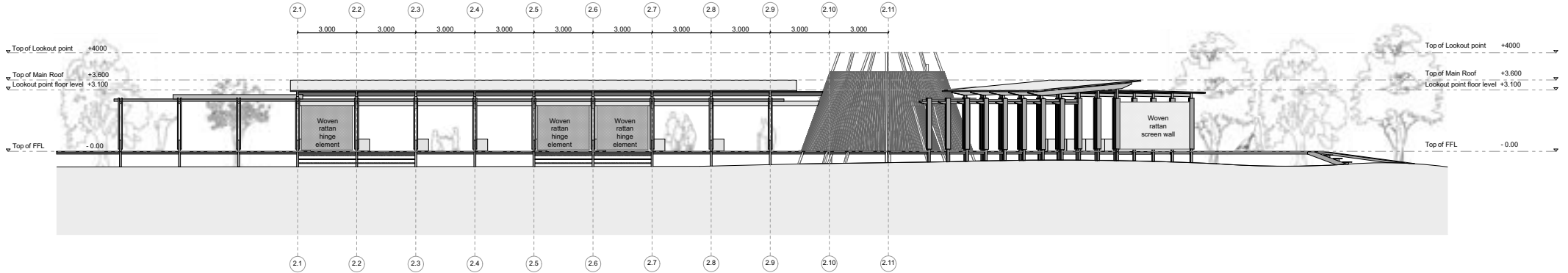




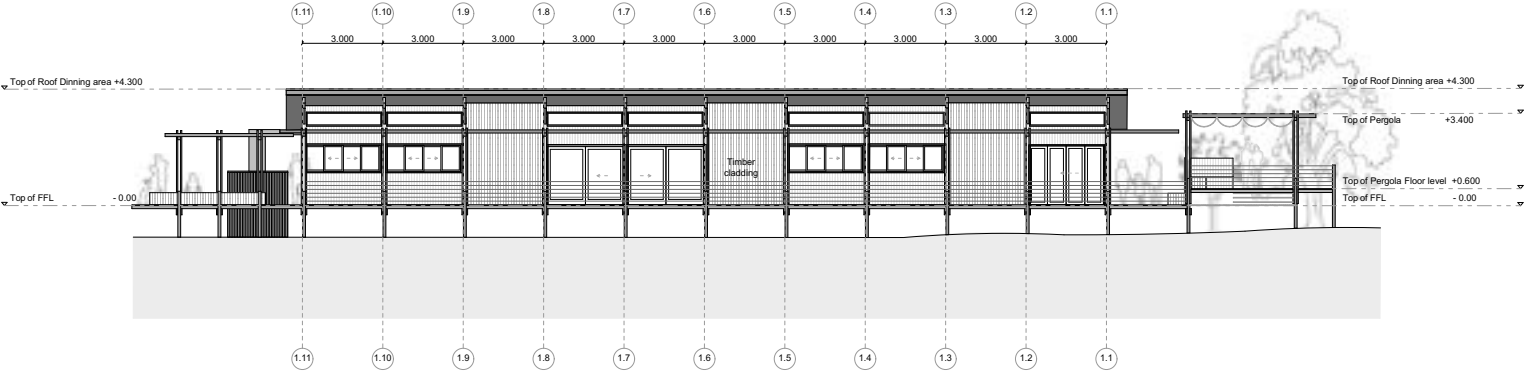
SITE PLAN
SCALE 1:500



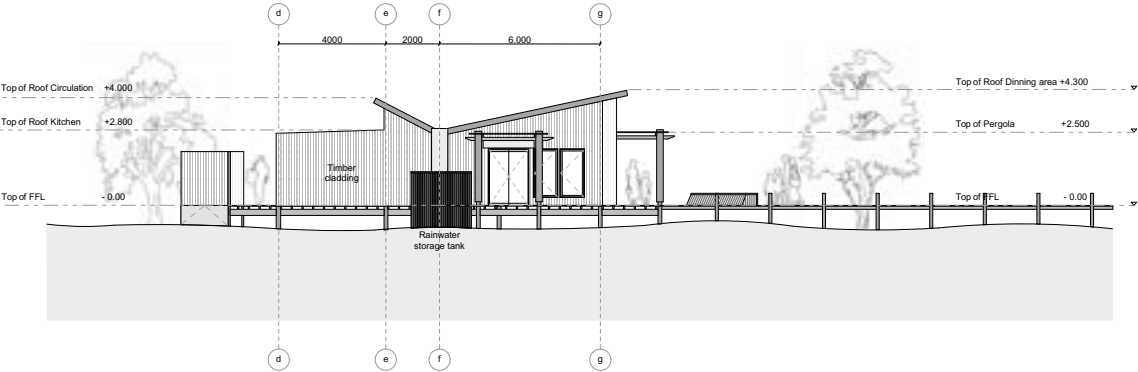




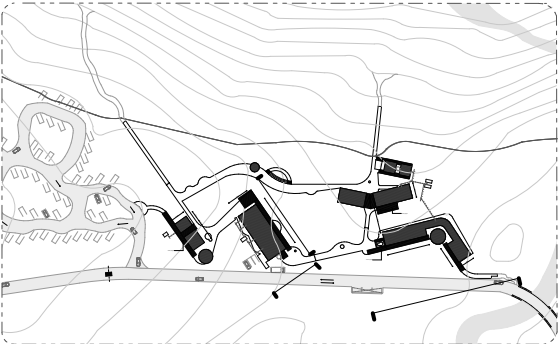
CRAFT MARKET
SOUTH ELEVATION
SCALE 1:100



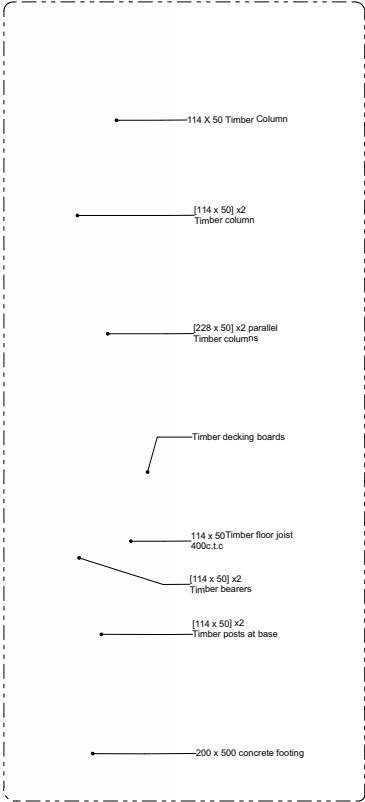
RESTAURANT
EAST ELEVATION
SCALE 1:100



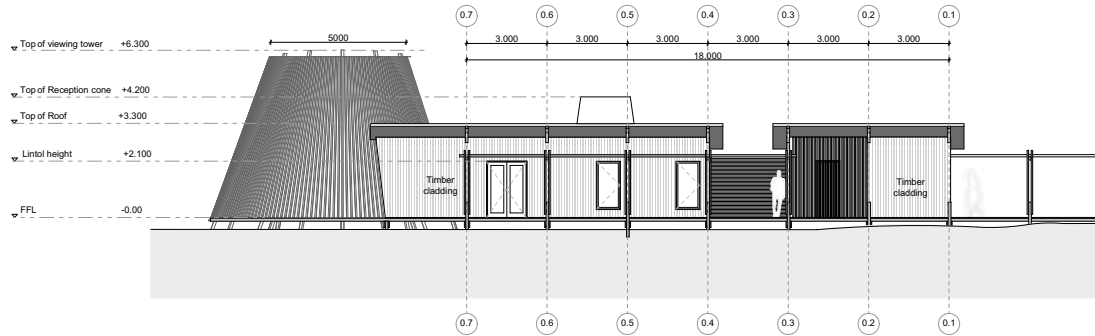
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SOUTH ELEVATION
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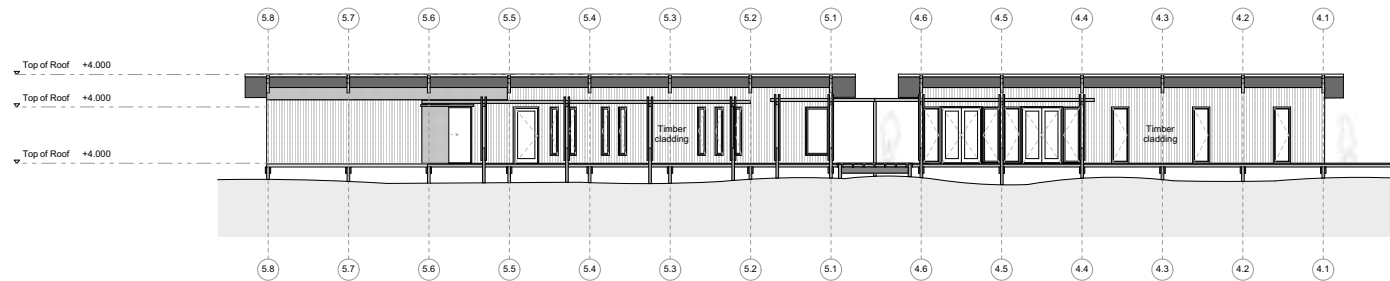
REFERENCE PLAN
NTS



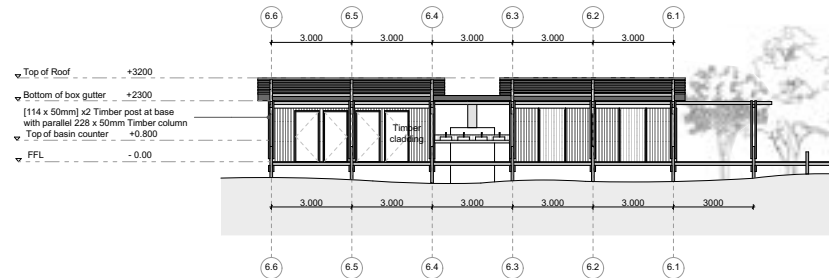
EXPLODED AXONOMETRIC
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NTS



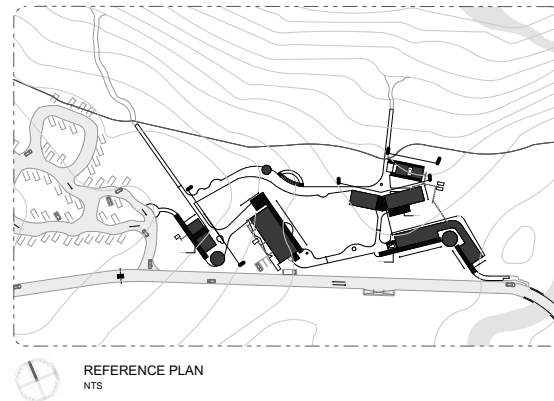
INFORMATION CENTRE
EAST ELEVATION
SCALE 1:100



DIVE SCHOOL & SHOP
NORTH EAST ELEVATION
SCALE 1:100



BEACH ABLUTION
NORTH EAST ELEVATION
SCALE 1:100



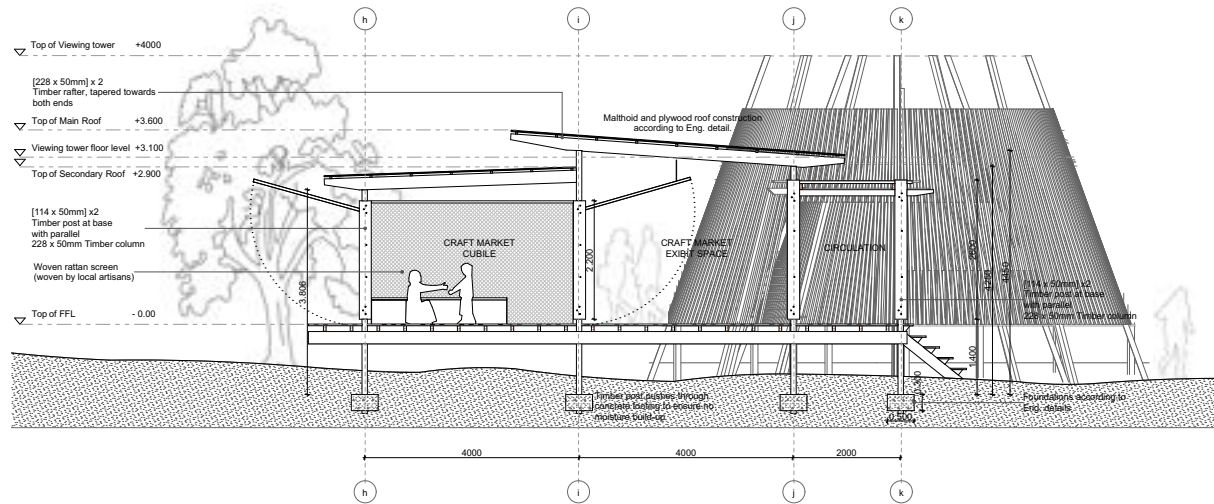
RENDER
INFORMATION CENTRE
NORTH EAST FACADE



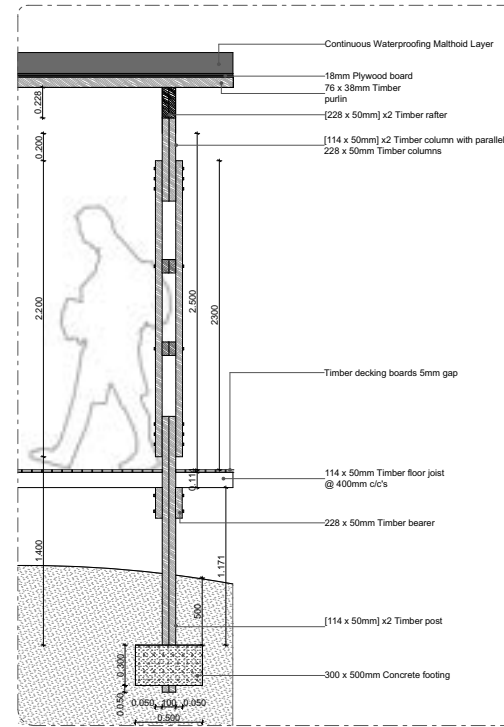
RENDER
DIVE SCHOOL & SHOP
SOUTHERN APPROACH



RENDER
DIVE SCHOOL & SHOP



SECTION A-A
CRAFT MARKET
SCALE 1:50



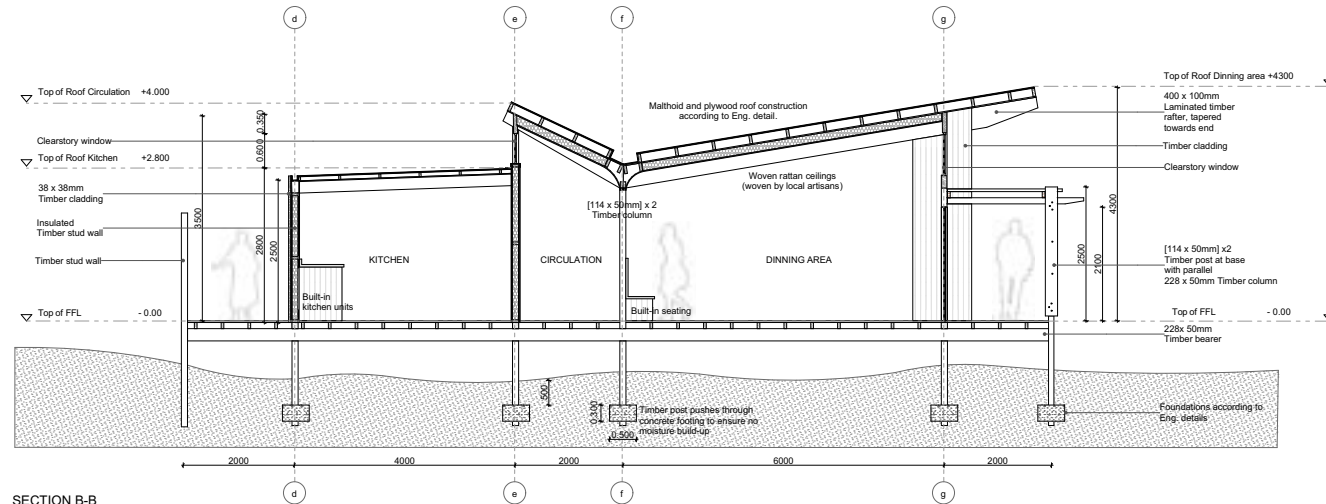
COLUMN DETAIL
CRAFT MARKET
SCALE 1:20



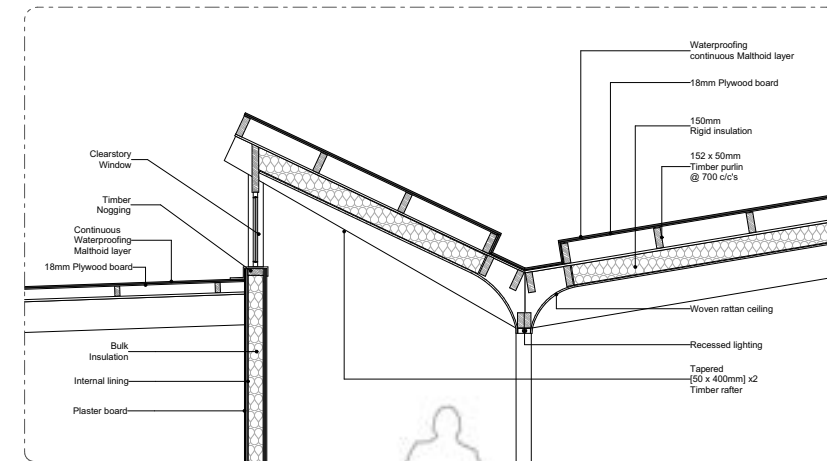
RENDER
VENDOR CUBICLE
CRAFT MARKET



RENDER
CRAFT MARKET



SECTION B-B
RESTAURANT
SCALE 1:50



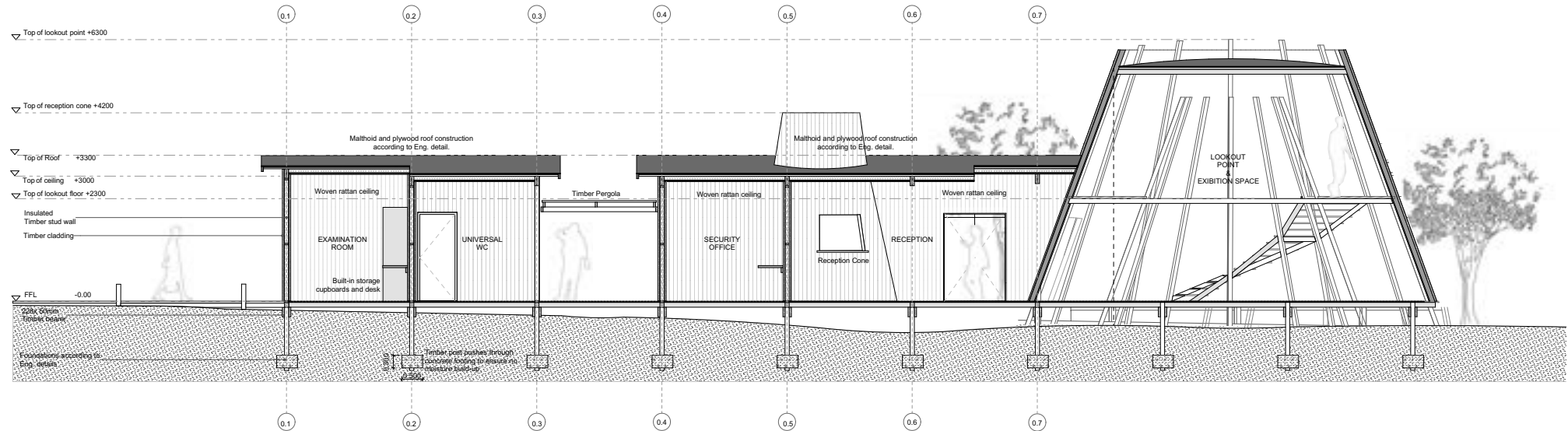
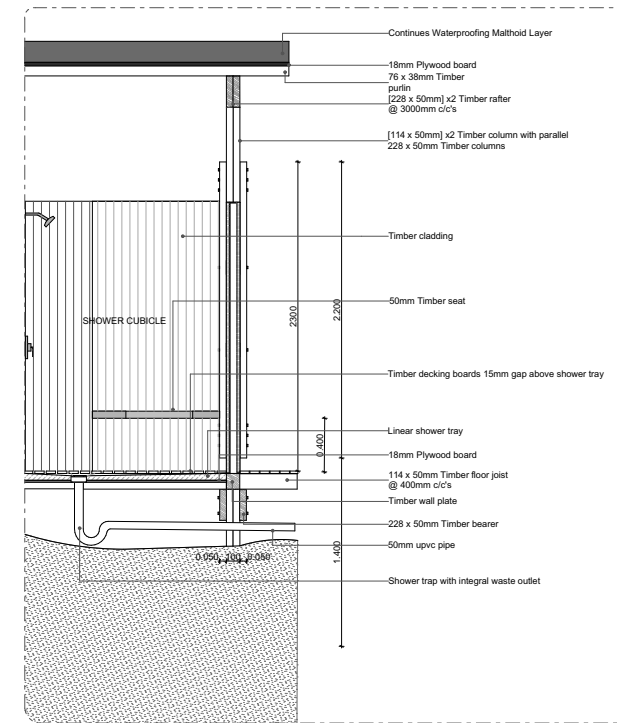
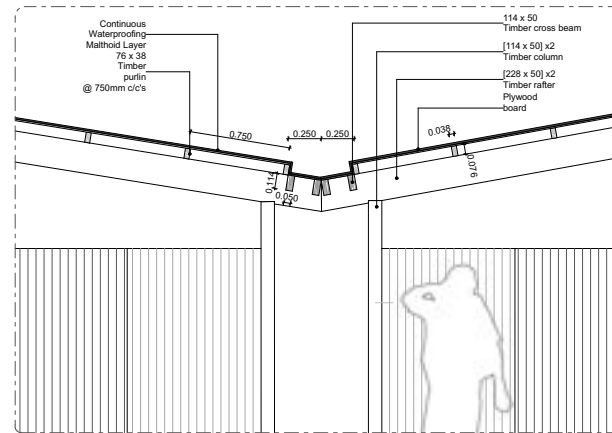
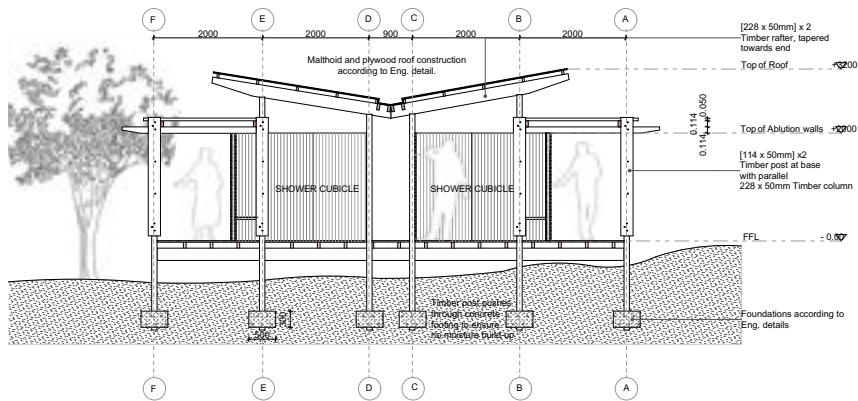
BOX GUTTER DETAIL
RESTAURANT
SCALE 1:20

PROJECT:
ECO - UBUNTU
CONSTRUCTION DRAWINGS

DRAWING: SECTIONS & DETAILS
DRAWING NUMBER: 05.

STUDENT NAME & STUDENT NUMBER:
DANIELLE ELIZABETH ROUX
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University of the Free State M.Arch (Prof) 05.11.2020









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