

JUXTAPOSING KNOWLEDGE + MAKING:

DECOLONISING STAGNANT MUSEUM TYPOLOGIES INTO DYNAMIC CULTURAL REPRESENTATION
ALONG THE SWAKOPMUND PROMENADE, NAMIBIA

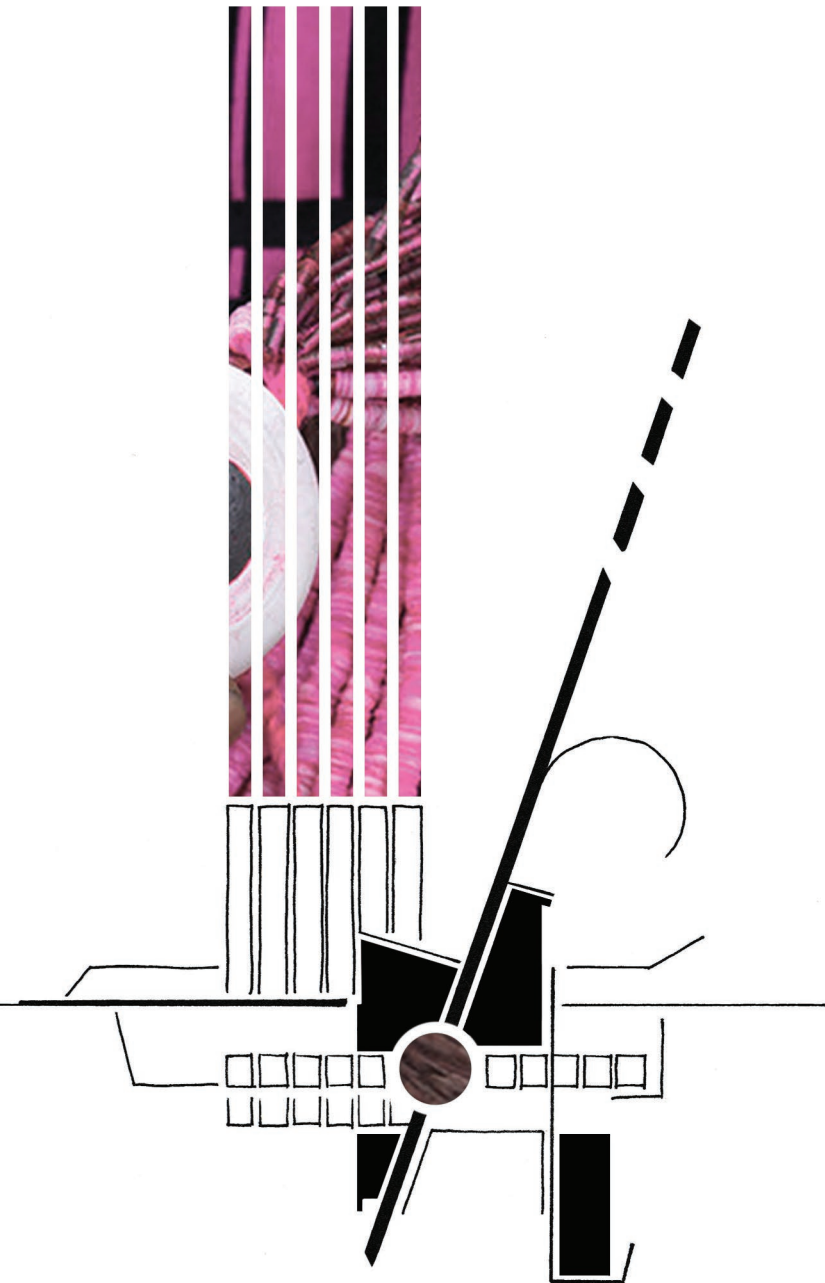
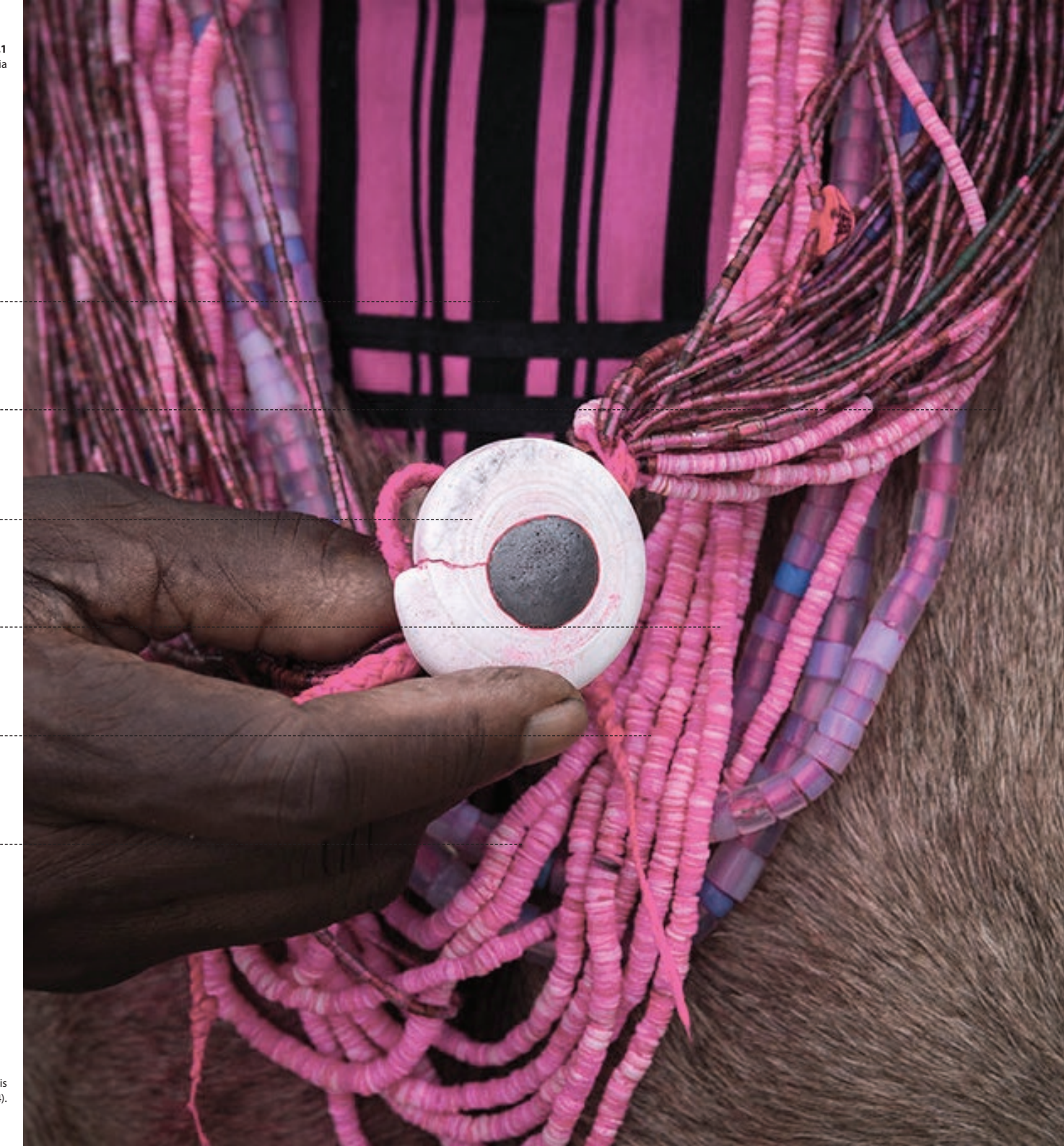


Figure 0.1
The Queen Of The Okwanyama Shell, Omhedi, Namibia

Juxtaposition can be found in the black, white, brown and shades of pink revealing a rich interaction between conflict and coherence. The black and white represent forces sharp in visual hierarchy, while the brown bonds with natural warmth. Grounding the palette, the pink hues extracted from the Onyoka necklace of the Queen displays calmness and cultural heritage, softening the contrast of the bolder shades.



Note. An Oshiwambo Queen holds an Oomba in her hand while it is attached to an Onyoka necklace (Lafforgue, 2014).



DECLARATION

This dissertation is submitted as partial fulfillment of the requirements for the Master of Architecture degree. The work contained herein is entirely my own, except where properly acknowledged.

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This dissertation is my original work and has not been submitted in any form for an award at this or any other institution. All sources and materials from the work of others are appropriately cited and referenced.

ACKNOWLEDGEMENT

Firstly, I would like to thank the Lord, Jesus Christ, for the strength He has given me from the beginning of my first year of studies until the end. I would also like to thank my parents, brother, and sister for their patience, support and for giving me the privilege of completing my studies.

Another big thanks to my classmates who motivated and guided me through the years, strengthening me in the most challenging times.

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I regard this as a privilege and a once-in-a-lifetime opportunity.

ABSTRACT | The town of Swakopmund is a key tourist destination in Namibia, well-known for its colonial German architecture and cultural heritage. However, its history is filled with juxtaposition of colonial and precolonial influences. Before the Germans arrived, the Nama and Herero tribes would use the Swakop River to demarcate their territories. The river also functioned as a colonial boundary between the German port of Swakopmund and the English harbour of Walvisbay, with the establishment of the town in 1892 by Captain Curt von Francois to assist with trade in Southwest Africa. Colonial structures, such as the Mole (pier wall) and Zollhaus (customs shed), predominantly represent a static colonial perspective of the area’s history (making of knowledge), overshadowing dynamic indigenous knowledge systems (knowledge of making).

Indigenous practices, such as the Herero’s harvesting of mussels before the 1750s at the Swakop river mouth, also known as Otjizondji (place of mussels), and the making of Onyoka necklaces (fig. 01) by the Oshiwambo people, reflect a vibrant precolonial knowledge of trade and making. These activities, rich in cultural significance, are often marginalised in favour of colonial narratives. In recent decades, Swakopmund has attempted to recreate a “little Germany”, often at the expense of dynamic indigenous identities and practices. The ongoing traditional Onyoka manufacturing contrasts sharply with the museum’s static representation of knowledge.

Thus, how can a proposed museum typology be designed that juxtaposes dynamic Indigenous knowledge systems, particularly that of Onyoka-making, with the stagnant colonial representation of knowledge to foster inclusive, dynamic cultural representation along the Swakopmund Promenade, Namibia?

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Figure 0.2
The Whalebone House

Note. A historic image of a house for indigenous people in Swakopmund constructed from local materials, such as whale ribs, and juxtaposed with imported materials from Germany (n.d.).

The research employs a qualitative approach to investigate the factors that contribute to the lack of dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, in stagnant museum typologies along the Swakopmund Promenade, Namibia. It will provide an in-depth understanding of complex social phenomena and respect the existing cultural representation by prioritising social experiences within the investigation. It is particularly well-suited for studying indigenous knowledge systems, which are often dynamic and challenging to quantify. The approach will include a theoretical lens of juxtaposition, as discussed by Tschumi (1994), to foster an inclusive, dynamic cultural representation that integrates both stagnant colonial knowledge of artefacts and the dynamic practice of indigenous knowledge systems through making.

Research Aim and Objectives

The project aims to reimagine cultural exhibition spaces in Swakopmund, mainly concentrating on the Swakopmund Museum and the coastal promenade, through juxtaposition to foster an inclusive cultural representation of stagnant colonial and dynamic indigenous knowledge systems. It seeks to promote discourse regarding the current imbalance where colonial history within the town predominates the underlying layers of dynamic indigenous practices, such as making the Onyoka necklace and other artefacts. The research, furthermore, focuses on identifying and analysing the factors that contribute to the lack of dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, in stagnant museum typologies along the promenade. It also explores juxtaposing design strategies that can be implemented into stagnant museum typologies to promote dynamic cultural representation of knowledge systems, particularly Onyoka-making. Lastly, it proposes a museum typology that juxtaposes dynamic indigenous knowledge systems, particularly that of Onyoka making, with the stagnant colonial representation of knowledge, to foster inclusive dynamic cultural representation along the Swakopmund promenade, Namibia.

Study Area

The primary study areas to which the research approach will be applied include the town of Swakopmund in Namibia, specifically the coastal promenade connecting the mouth of the Swakop River (the historical setting of Herero seashell trade) and the Mole (a colonial custom shed that facilitated German trade).

Sampling Approach

The sampling approach will focus on local Onyoka artisans. The Onyoka artisans who participate in indigenous knowledge systems, such as Onyoka-making, will provide valuable insights into the dynamic practices and cultural significance.

Data Collection Methods

Five data collection methods will be utilised within the research.

1.

Field work included notes and diagrams taken within the focus area to analyse the factors contributing to the lack of dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, in stagnant museum typologies along the Swakopmund Promenade, Namibia.
2.

Unstructured interviews were conducted with Onyoka artisans in Swakopmund to understand the existing indigenous and colonial perspectives of knowledge on cultural representation.
3.

Precedent studies were undertaken to explore juxtaposing design strategies that can be implemented into stagnant museum typologies to promote dynamic cultural representation of knowledge systems through programme.
4.

Photographs taken and gathered to document and understand the process of indigenous and stagnant forms of knowledge systems.
5.

Model building was explored to test spatial responses to achieve a proposed museum typology that juxtaposes dynamic indigenous knowledge systems, particularly that of Onyoka-making, with the stagnant colonial representation of knowledge along the Swakopmund promenade to foster inclusive dynamic cultural representation along the Swakopmund Promenade, Namibia.

Data Analysis

The data collected was synthesised through a thematic approach to identify themes and patterns relating to the representation of both Indigenous and colonial perspectives of cultural representation. The fieldwork diagrams and notes were reviewed to identify factors that contribute to the lack of dynamic cultural representation, particularly of Onyoka-making, within the stagnant museum typologies along the Swakopmund Promenade. The unstructured interviews with the Onyoka artisans was transcribed to categorise relevant themes of indigenous and colonial approaches to knowledge systems. Precedents were studied to learn about successful design strategies that integrate juxtaposing methods of cultural representation. Photographs were investigated to contrast the representation of dynamic indigenous knowledge systems and stagnant colonial perspectives on knowledge. It provided a visual narrative to assist the thematic findings. Model building outcomes were used to assess and refine spatial responses, confirming that the proposed museum typology juxtaposes dynamic indigenous knowledge systems with stagnant colonial representations.

PART 01 | RESEARCH

CHAPTER 01 - DEBEADING THE ONYOKA AND CONTEXT

This chapter aims to uncover the significance of the Onyoka necklace and its historical background. It breaks down the Onyoka necklacinto individual parts to analyse and interpret it into architectural elements. Furthermore, the chapter will uncover the climatic, historical, and physical layers of the site and its surrounding context. It will also discuss a device made as an abstract reinterpretation of the site.

CHAPTER 02 - KNOWLEDGE SPACES

This chapter aims to understand the significance of the Kavita Craft Market and the Swakopmund Museum’s juxtaposing exhibition spaces. It examines the market’s importance for cultural representation and how the two exhibition spaces can be integrated. Furthermore, it explores precedent studies to investigate the integration and distribution of the four knowledge spaces in an exhibition context.

CHAPTER 03 - UNRAVELLING OF THE THEORETICAL POSITION

This chapter aims to explore juxtaposition in architectural theory and its relevance to shape dynamic relationships between users, events and spaces. The discussion will delve into how juxtaposition influences form, function and perception of the built environment and also investigates the coexistence of colonial and indigenous knowledge systems in the quest to foster an evolving national identity.

PART 02 | DESIGN

CHAPER 04 - EXPLORATION OF URBAN BEADS

This chapter aims to develop a project brief by identifying the client, user and programme. It examines clients who would take advantage of the proposed museum typology and investigates users ranging from Onyoka artisans to museum curators. It also establishes appropriate accommodation facilities and discusses the four knowledge spaces. Lastly, an urban framework is developed to enhance the coastal promenade and integrate the proposed museum typology into the urban fabric of Swakopmund.

CHAPTER 05 - FRAGMENTED MAKING PROCESS

This chapter aims to develop an alternative museum typology guided by the Onyoka and its making process as concepts. The development is initially challenged by integrating disorderly forms and floor plan layouts into a very rigid and orderly building structure. However, through sketching and model-building exercises, appropriate architecture is made using juxtaposition.

CHAPTER 06 - FINAL DESIGN

This chapter aims to present the research findings in an architectural form depicting a proposed museum typology that juxtaposes dynamic indigenous knowledge systems, particularly that of Onyoka-making, with the stagnant colonial representation of knowledge along the Swakopmund promenade to foster inclusive dynamic cultural representation along the Swakopmund Promenade, Namibia.

PART 03 | CONCLUSION

CHAPER 08 - REFLECTION

CHAPER 09 - CONCLUSION



Figure 0.3
Making of the Onyoka necklace

Note. The Onyoka artisans use several tools and techniques to manufacture these crafts, whereby their knowledge is transferred to the next generation through oral tradition (Author, 2024).



Figure 0.4
The Swakopmund Museum

Note. Static exhibits can be seen displayed within the museum, however, they are non-contextual and without dynamic representation of indigenous knowledge systems (Author, 2024).

BACKGROUND

Swakopmund is one of Namibia’s key tourist destinations, recognised for its colonial German architecture and rich German cultural heritage. The town features scenic desert landscapes and offers a variety of recreational activities, attracting visitors from around the world, especially Germany. Despite its value in the tourism industry, Swakopmund presents a complex history of segregation that reflects both its colonial past and precolonial traces. Historically, the Swakop River functioned as a geographical boundary between the Herero region to the North and the Nama territory to the South. The river demarcated the divide between different indigenous communities. During the colonial period, it was a legal boundary separating the British Harbour of Walvis Bay from the German port of Swakopmund.

In 1892, Curt von Francios, a German schutztruppe captain, strategically founded Swakopmund to facilitate access to the central interior regions of South-West Africa. The Mole, a protective seawall and the Zollhaus (Colonial German customs shed) were essential to this plan, assisting the trade between inland territories and the broader world beyond the Atlantic Ocean. While the shed played a pivotal role in colonial trade, it has now been repurposed as a museum, which predominantly convey a static colonial perspective of Namibian history through artefacts. This representation often overshadows the dynamic indigenous knowledge systems that predate colonial influences. Before the establishment of colonial rule, Herero Chief Tjiponda and his people engaged in harvesting activities at the mouth of the Swakop River, known historically as Otjizondji (place of mussels). The gathered seashells were traded among tribes, including the Oshiwambo, in southern Angola to make valuable jewellery. One mussel was traded for as much as one ox, highlighting its significance (Rautenberg, 1967). These practices, rich in cultural importance, showcases a dynamic precolonial trade system often overlooked in the common narratives presented by the Swakopmund museum.

Today, Swakopmund is a living example of typical colonial urbanity, attempting to recreate a “little Germany” while simultaneously overshadowing the indigenous identities and practices inherent to the area. This tension is visible in the continued practice of traditional ¹Onyoka manufacturing, an indigenous knowledge system of making that thrives informally and through oral tradition, contrasting sharply with the method of documenting history portrayed in the museum. Now, the challenge is to reimagine these museum spaces to integrate better and celebrate indigenous practices and knowledge systems, transforming them from static repositories of artefacts into dynamic venues that fully represent both the historical and contemporary performances of making within Swakopmund. These two juxtaposing knowledge systems evident along the Swakopmund Promenade will be investigated, that of stagnant museum typology (fig. 0.4) and artefact (colonial making of knowledge) as opposed to the process of making (dynamic indigenous knowledge of making), particularly that of the Onyoka necklace (fig. 0.3).

Due to its relevance in this quest, the Swakopmund museum will be investigated as the ‘site’ together with the surrounding coastal promenade linking the two historical trades areas, the Swakop River mouth and the Mole Basin.

Footnote:

- 1. Onyoka** is a traditional piece of jewellery worn in the form of a necklace. It is made of seashells and sometimes dyed pink to match the Ondelela dress of the Oshiwambo women worn during festive occasions or placed around a newborn’s neck when welcoming them into the world.

Figure 0.5
Historic photograph of the Swakopmund Museum



Note. The museums consists of high wall and limited visual connection to the interior (Namibian Scientific Society, n.d.).

PROBLEM STATEMENT

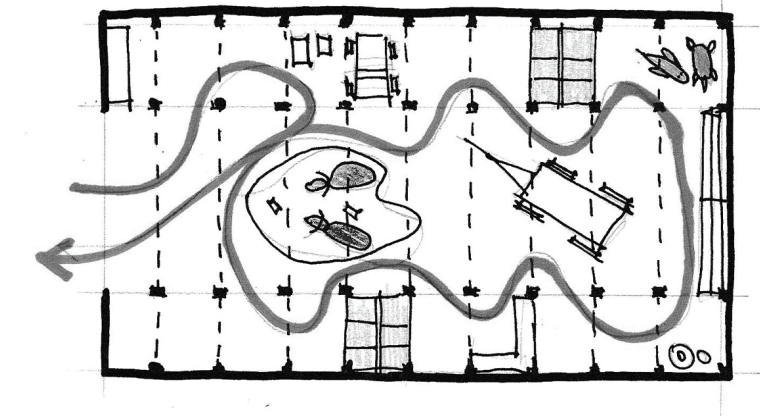
In Swakopmund, notable inequality exists in the representation of colonial and indigenous knowledge systems, more specifically along the coastal promenade and in the Swakopmund Museum, which predominantly showcases a colonial perspective of history and cultures through static exhibits of artefacts, architecture and literature (Schildkrout, 1995). This approach neglects to represent the dynamic process of indigenous practices, particularly that of Onyoka necklace making and the associated performative practices (fig. 0.3). The lack of indigenous representation in the museum and along the promenade diminishes inclusive, diverse cultural exchange and deprives cultural makers of economic opportunities.

The Onyoka necklace is a traditional piece of jewellery significant in the cultural heritage of the Oshiwambo people, embodying a knowledge system that thrives through oral and performative traditions (Nampala & Shigwedha, 2006). Through continuous adaptation of making to contemporary needs, it opposes the static and non-contextual representation of artefacts(knowledge) from a colonial perspective within the isolating walls of the Swakopmund museum (fig. 0.5). However, the Onyoka necklaces are displayed in the Kavita Craft Market at the Swakopmund Mole in a less desirable space with minimal tourist activity (Johannes, 2024). This placement leads to a predominant representation of colonial artefacts and structures in popular tourist areas, marginalising dynamic cultural artefact-making processes.

The challenge is found in reimaging these existing exhibition spaces (fig. 0.6) along the Swakopmund promenade to bridge the divide between the opposing knowledge systems. Creating an alternative typology that celebrates the static historical perspective of artefacts and dynamic cultural performances through making within Swakopmund results in inclusive and interactive user-event driven spaces. Therefore,

the juxtaposition between the two knowledge systems of dynamic making and static representation should be investigated to enhance the interaction between local artisans, tourists, and artefacts, fostering richer cultural exchanges and economic benefits in a competitive tourist market.

Figure 0.6
Plan of the Swakopmund Museum

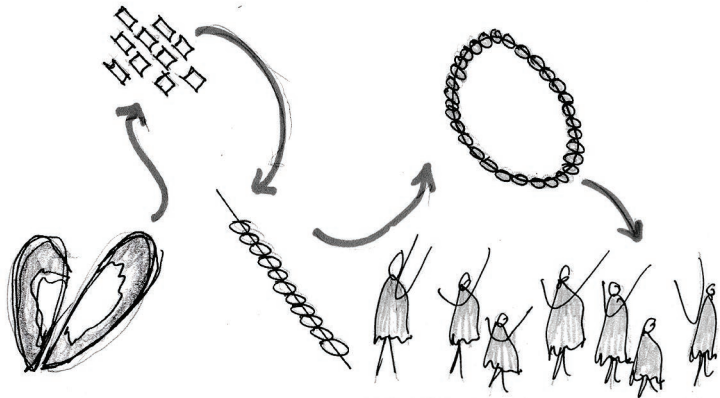


Note. A map drawn by the author of the Swakopmund museum depicting how visitors circulate around static displays of artefacts (Author, 2024).

The project aims to reimagine exhibition spaces in Swakopmund, mainly concentrating on the Swakopmund Museum and the coastal promenade, through juxtaposition to foster an inclusive representation of stagnant colonial and dynamic indigenous knowledge systems. It seeks to promote discourse regarding the current imbalance where colonial history within the town predominates the underlying layers of dynamic indigenous practices, such as making the Onyoka necklace and other artefacts.

Through this juxtaposition between static displays and performative knowledge expressions, the project attempts to create interactive public spaces that not only showcase but celebrate the coexistence of historical artefacts and living indigenous traditions, contextualising these static artefacts (fig. 0.7). Furthermore, enriching the interactions between local artisans, tourists, and exhibitions to enable cultural exchange and stimulating economic opportunities within a competitive tourist market and bridging the segregation between contrasting knowledge systems, promoting a more equitable and dynamic cultural narrative within Swakopmund through juxtaposition.

Figure 0.7
The process of Onyoka making



Note. Mussels are first collected from the beaches, then process for Onyoka necklaces to be made and lastly, it is used in festivities and celebrations (Author, 2024).

Research Question:

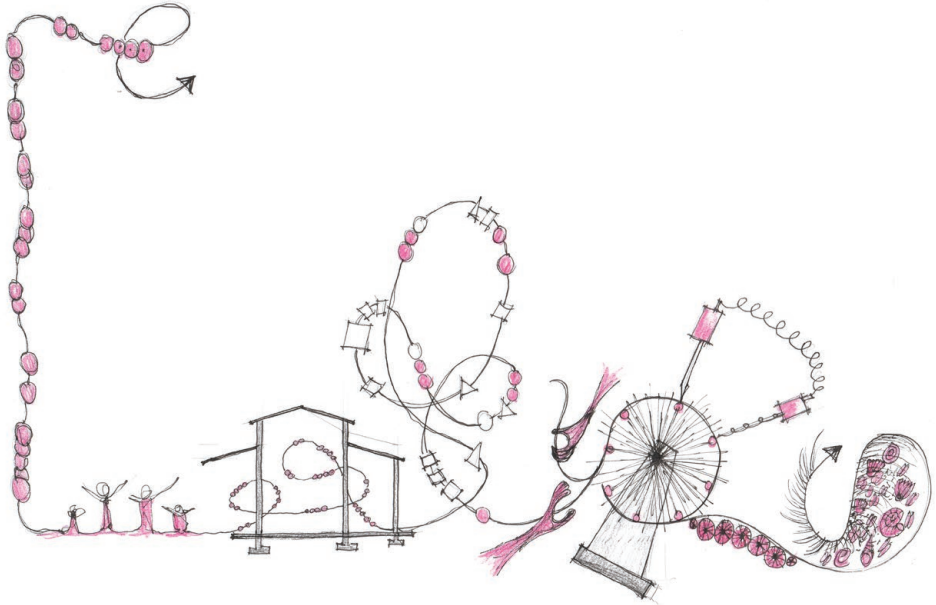
1. What factors contribute to the lack of dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, in stagnant museum typologies along the Swakopmund Promenade, Namibia?
2. What juxtaposing design strategies can be implemented into stagnant museum typologies to promote dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, along the Swakopmund Promenade, Namibia?
3. How can a proposed museum typology be designed that juxtapose dynamic indigenous knowledge systems, particularly that of Onyoka-making, with the stagnant colonial representation of knowledge to foster inclusive dynamic cultural representation along the Swakopmund Promenade, Namibia?

Research Objectives:

1. To identify and analyse the factors that contribute to the lack of dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, in stagnant museum typologies along the Swakopmund Promenade, Namibia.
2. To explore juxtaposing design strategies that can be implemented into stagnant museum typologies to promote dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, along the Swakopmund Promenade, Namibia.
3. To design a proposed museum typology that juxtaposes dynamic indigenous knowledge systems, particularly that of Onyoka-making, with the stagnant colonial representation of knowledge along the Swakopmund promenade to foster inclusive

The research addresses the unequal representation of indigenous knowledge systems within Swakopmund, whereby stagnant colonial knowledge of artefacts is predominant. From a global perspective, the research would provide valuable insights into the decolonisation process of museums and exhibition spaces by emphasising the integration of indigenous knowledge systems, paving the way for worldwide inclusive representations of history and culture. The research would inform future museums by providing design strategies to make these exhibition spaces more engaging and interactive for visitors and users, whereby the interest rates in museums globally are declining (Dawson, 2014). Local Onyoka artisans and exhibition curators would benefit from the research, whereby their integrated display would result in better economic opportunities and a richer cultural exchange with tourists. The increased awareness and appreciation for these underlying indigenous knowledge systems can lead to a greater demand for locally crafted Onyoka necklaces and other artefacts, thus leading to the sustainable livelihood of these performative and precolonial traditions (fig. 0.8).

Figure 0.8
Stages of Onyoka



Note. The Mussel shells are extracted from the ocean, it is processed, then made by the touch of hand, it is beaded, sold in the market and traditionally used in celebrative occasions. (Author, 2024).

Figure 0.9
Collection of Black Mussel Shells

RESEARCH OBJECTIVES	RESEARCH QUESTIONS	APPROACH	METHODS	EXPECTED OUTCOME
To identify and analyse the factors that contribute to the lack of dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, in stagnant museum typologies along the Swakopmund Promenade, Namibia.	What factors contribute to the lack of dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, in stagnant museum typologies along the Swakopmund Promenade, Namibia?	The research will employ a qualitative research approach to investigate the factors that contribute to lack dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, in stagnant museum typologies along the	1. Field Work 2. Unstructured Interviews 3. Photographs	The field work will be reviewed to identify factors that contribute to the lack of dynamic cultural representation. Unstructured interviews will provide insight to indigenous and colonial views of existing cultural representation. Photographs will provide information on process of knowledge systemes.
To explore juxtaposing design strategies that can be implemented into stagnant museum typologies to promote dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, along the Swakopmund Promenade, Namibia.	What juxtaposing design strategies can be implemented into stagnant museum typologies to promote dynamic cultural representation of knowledge systems, particularly that of Onyoka-making, along the Swakopmund Promenade, Namibia?		1. Field Work 2. Precedent studies 3. Model Building	The field work will be reviewed to identify factors that contribute to the lack of dynamic cultural representation. Precedent studies will provide methods to integrate contrasting knowledge systems. Model building will test spatial responses to achieve a proposed museum typology.
To design a proposed museum typology that juxtaposes dynamic indigenous knowledge systems, particularly that of Onyoka-making, with the stagnant colonial representation of knowledge along the Swakopmund promenade to foster inclusive dynamic cultural representation along the Swakopmund Promenade, Namibia.	How can a proposed museum typology be designed that juxtapose dynamic indigenous knowledge systems, particularly that of Onyoka-making, with the stagnant colonial representation of knowledge to foster inclusive dynamic cultural representation along the Swakopmund Promenade, Namibia?		1. Field Work 2. Model Building 3. Precedent Studies	The field work will be reviewed to identify factors that contribute to the lack of dynamic cultural representation. Precedent studies will provide methods to integrate contrasting knowledge systems. Model building will test spatial responses to achieve a proposed museum typology.

Note. A photograph of Black mussel shells used in the Onyoka necklace making process (Author, 2024)



CHAPTER 1 / DEBEADING THE ONYOKA AND CONTEXT

This chapter aims to uncover the significance of the Onyoka necklace and its historical background. It breaks down the Onyoka necklace into individual parts to analyse and interpret it into architectural elements. Furthermore, the chapter will uncover the climatic, historical, and physical layers of the site and its surrounding context. It will also discuss a device made as an abstract reinterpretation of the site.

Figure 1.0
Traditional Oshiwambo Dance



Note. Tradition Oshiwambo dance performed while wearing Onyoka necklaces (Shikemeni, 2018).

In the Aawambo culture, beads play a significant role in key changes in a woman’s life, including marriage, motherhood, and mourning. Weddings were important ceremonies that gave a rite of passage and signalled a journey from girl to adulthood. Not only was a behavioural attitude change expected, but also in her attire, where beads are essential in representing her life stage and status.

For example, in the Uukwanyama tribe, the use of beadwork, such as the Omushambe, provides a visual reference to a woman’s progression into marriage and motherhood (Nampala & Shigwedha, 2006). When married, women can not wear an Ondjeva, a skirt symbolizing virginity, and, instead, has to use Omushambe beads to adorn her skirt, which indicates readiness for marriage. As life progresses, the meaning of the beads evolves: a pregnant woman would not wear the Omushambe around her waist, but rather as a necklace made by her mother around her neck. Other beads, such as the Onyoka, would be removed from her neck to make space for the Omushambe beads. The beads are worn until she gives birth to signify her pregnancy. This specific bead would become an important symbol of hope, endurance, fortune and prosperity in the Aawambo woman’s life. Furthermore, it holds importance in events, such as a daughters wedding, whereby the mother would also wear the Omushambe beads to celebrate her role in nurturing her child to adulthood.

However, the Omushambe beads also carry meanings of death and sorrow. During the mourning period, a woman would use the Omushambe beads in a particular manner to signal that she was grieving the loss of a close family member or her husband. In this case, the beads are loosely tied without decoration compared to when worn for celebrative occasions. The Omushambe beads represent the stages of life while they tell the story of a woman’s life and her role in the community.

The Aawambo used a wide range of beads with unique materials and significance. Beads produced locally include iron/nickel beads (viola), ostrich eggshell beads (rihanna), mussel shell beads (onyoka) and other beads made from seeds and grasses. Glass beads, known as Oondjenje, were historically the most popular among young girls due to their rarity and appearance. However, they were not produced in the region; they were only introduced to Owamboland in northern Namibia by European explorers who traded the glass beads for ivory and cattle. Only wealthy kings and senior headsmen could afford to own glass beads.

Family lineage is represented through the wearing of beads made with unique patterns. Individuals wearing these beads to associate with their clans and reinforce their cultural identity. Furthermore, the Aawambo’s use of juxtaposition in the design of their beads and jewellery with the implementation of new materials, such as glass from European traders, can also be appreciated, which showcases their flexibility in knowledge while still acknowledging their cultural heritage.

THE ONYOKA NECKLACE

After marriage, the woman receives an Onyoka necklace with a single Oomba bead to symbolise her marital status. The husbands’ wealth is represented by the design, quality and amount of Onyoka strings worn by the woman, as the men are responsible for providing their wives with the jewellery (Nampala & Shigwedha, 2006). Wearing at least one Onyoka string is essential, and it would be immoral to be seen in public with a bare neck. A wife without jewellery could also signify that the husband has passed away and his family has returned the jewellery because it belongs to the man.

Oshiwambo women make the Onyoka necklace in Swakopmund and other parts of Namibia to earn income and sustain their livelihoods (Johannes, 2024). From generation to generation, intricate and labour-intensive bead-making knowledge is required and passed down from the elders to younger women to keep the culture and artefact alive (Nampala & Shigwedha, 2006). It is not uncommon for a newborn child to receive an Onyoka necklace around their neck to welcome them into the world. However, receiving Onyoka necklaces from other clans or stealing them is taboo as it is believed to bring misfortune to the entire family. In recent decades, these necklaces have also entered the tourist market, where plastic and silver beads are added next to them and juxtaposed with the mussel beads sold to Europeans and other tourists as jewellery.

Unfortunately, cultural traditions, such as the making and wearing of Onyoka necklaces, are becoming less relevant in Oshiwambo communities as people gravitate away from their cultural heritage. Such traditions are practised mainly by elders or Oshiwambo people still residing in Owamboland in Northern Namibia (Johannes, 2024) or they are sold to tourist (fig. 1.1).

Onyoka wristband that juxtaposes black mussel shell and ostrich-egg shell. The ostrich eggshell is sometimes boiled in water to give it a brownish colour.

A wristband made of ostrich egg shells and plastic beads in between. A rhythm is created by juxtaposing the beads in a certain pattern.

Figure 1.1
Examples of contemporary handcrafted necklaces sold at the Kavita Craft Market, Swakopmund.

Onyoka necklace that juxtaposes black mussel shell and ostrich-egg shell. Brass threaded connectors can be identified on each end.

A typical Onyoka necklace with black mussel shells and tiny plastic beads at the ends. Undyed.



Note: Necklaces sold to tourist in Swakopmund are made of different beads and materials. (Author, 2024).

According to Nampala and Shigwedha (2006), the Aawambo culture has an intricate dress code, with each worn piece symbolising a specific narrative (fig. 1.2). Most of these meanings have to do with birth, marriage and womanhood.

Ondiwi beads are provided to a newborn baby by the father’s clan as a symbol of acceptance and approval by the clan.

Oomba is a precious piece of jewellery women wear, made of hard oyster shell.

Omwiya is a sacred belt worn only by the leaders of the clan.

Onghanda is a significant traditional dress worn for ceremonies and as a baby carrier. An infant’s calf is slaughtered to make the customer.

Okahanambonga is a squirrel’s animal skin, indicating that the woman is a twin.

Eembanba is an artificial hair plait decorated in cowry shells.

Oshilanda is a traditional dress worn every day by a married woman.

Oshingombe stripe is a piece of cattle skin decorated with cowry shells that indicates that an Ombalantu woman is married.

Figure 1.2
Women from Ombalantu

Ondiwi

Omba

Omwiya leather belt

Ondjendja/oyikwalali

Onghanda

Eevilondo

Note. An undate photograph of women from Ombalantu. (Basler Afrika Bibliographien, n.d.).



A historical version of the Onyoka necklace can be found in the Swakopmund Museum; however, it only provides a visual reference. The display does not appreciate the making process and the celebrations it is involved in. The static exhibit does not showcase how the artefact has evolved over the years and how its cultural significance has transformed into a tourism attraction bought by international tourists and taken to Europe.

Most interesting is the roughness of the historical Onyoka in fig. 1.3. With today’s advanced machinery, the Onyoka is much smoother and rounder than before. Initially, the Onyoka beads were strung on animal hair in contrast to the fishing line used recently. Initially, the Onyoka was not dyed pink either; it is a Finnish approach adopted through the years.

Figure 1.3
Onyoka



Note. An Onyoka necklace displayed in the Swakopmund Museum. (Author, 2024).

Figure 1.4
Woman wearing an Onyoka necklace



Note. Woman wearing Onyoka necklaces (Basler Afrika Bibliographien, n.d.).

Figure 1.5
A young woman from Ombalantu after marriage

Okahanambonga

Eembanba cowry

Olupitakano beads

Oshilanda glass beads

Omba

(Basler Afrika Bibliographien, n.d.)



Figure 1.6
A young woman from Ombalantu after marriage

Eembamba cowry

Oshingombe stripe

Oshingombe

(Basler Afrika Bibliographien, n.d.)



/ DESHELLING THE BEAD

Adding an Oomba to the back of an Onyoka necklace increases its value. Oombas are intricate seashells scientifically called the *Conus Betulinus*, commonly known as the Betuline Cone. They are a species of gastropod mollusc that is predatory and venomous, capable of stinging humans. The Oomba was historically very rare and costly as it was not sourced locally but found in rivers in southern Angola (Nampala & Shigwedha, 2006).

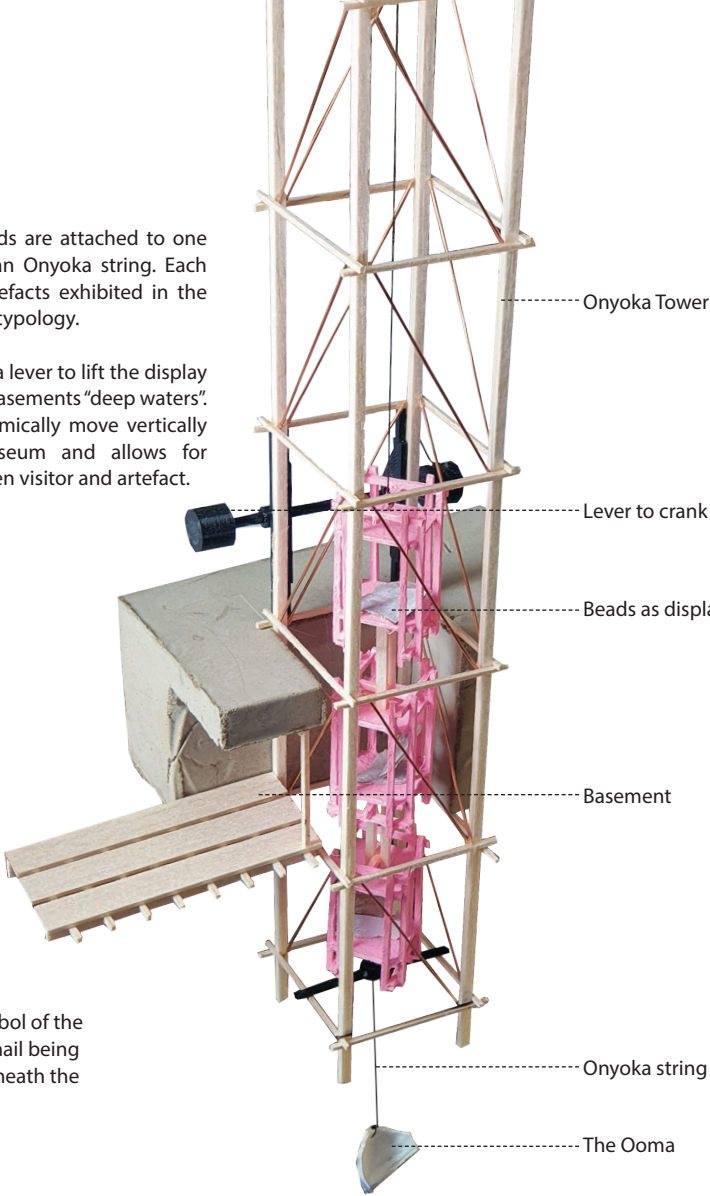
The Aawambo would go on expeditions to catch these shells in the rivers at the king’s command. The group would take a cow with them not to be eaten but to be slaughtered and used as bait. The cows’ stomach with the dung in the intestines and belly is placed in the shallow water of the river. The Betuline Cones would feed on the stomach. As the intestines are covered in sea fish, the men remove the stomach from the water and place the Oomba in baskets called Onghu, made from mopane trees and palm leaves.

Sacrificing a cow to catch a *Conus Betulinus* makes it worth the same as a cow. Thus, a woman dressed in Onyoka necklaces with multiple Oombas symbolizes that she is from a very wealthy family.

Figure 1.7
Onyoka Tower

Three display beads are attached to one another to form an Onyoka string. Each bead contains artefacts exhibited in the proposed museum typology.

Visitors can crank a lever to lift the display beads out of the basements “deep waters”. The exhibits dynamically move vertically through the museum and allows for interaction between visitor and artefact.



The tower is a symbol of the *Conus Betulinus* snail being extracted from beneath the surface.

Note. A model constructed to interpret the Oomba extraction process into an exhibition tower (Author, 2024).

STEP 01

A cow is brought to the river or beach by the Aawambo in an expedition to be slaughtered and used as bait to catch the *Conus Betulinus* snails from which the Oomba shell is made.

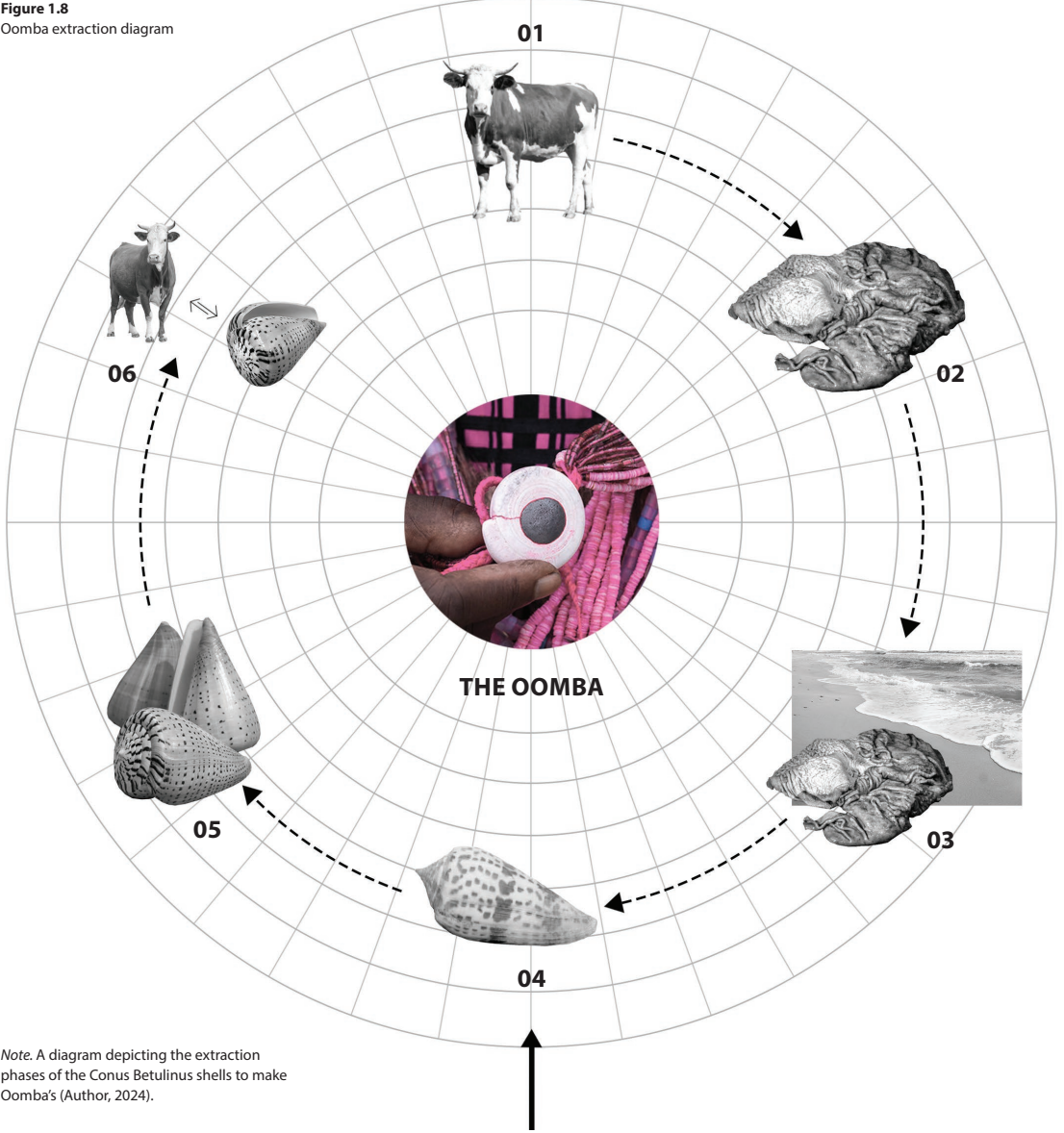
STEP 06

The collected *Conus Betulinus* cones are traded to other clans for cows to replaced the one slaughtered . Afterwards, the Oomba jewellery piece is made.

STEP 05

The Aawambo catches and removes the snails feeding to the intestines. The intestine is again placed in the water to catch more snails until all the dung is eaten.

Figure 1.8
Oomba extraction diagram



Note. A diagram depicting the extraction phases of the *Conus Betulinus* shells to make Oomba's (Author, 2024).

STEP 02

The cow is slaughtered on the beach of the river and its intestines with the dung still inside removed.

STEP 03

The intestine with the dung is placed in the shallow water to attract the *Conus Betulinus* snails.

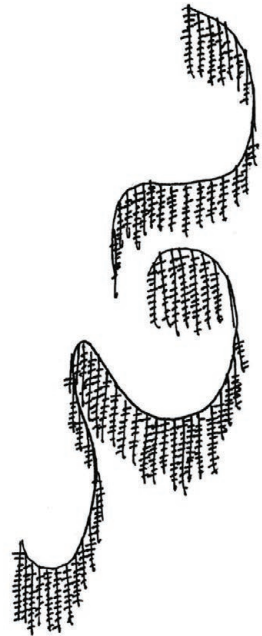
STEP 04

The *Conus Betulinus* snail move out of the deep water to feed on the dung in the intestines of the cow. Fig. 1.7 showcase an architectural reinterpretation of this process.



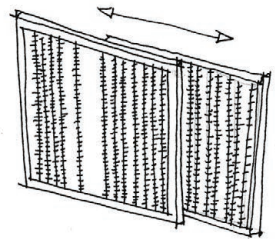
Figure 1.9
A cluster of Black mussel shells

Figure 1.10
Onyoka beads as a ceiling feature



Note. Onyoka artisan become part of the construction of the building by making Onyoka strings to create a ceiling feature. This fosters employment and provides income. Cultural representaion in the architecture can then also be observed (Author, 2024).

Figure 1.11
Onyoka string used as shading screens



Note. Onyoka strings made by the artisans can be used in shading devices (Author, 2024).

(Author, 2024).

ARTEFACT BREAKDOWN

Although Onyoka necklaces can be decorated and constructed to the artisans' liking, this analysis will focus on the typical Onyoka necklace sold at the Kavita Craft Market in Swakopmund.

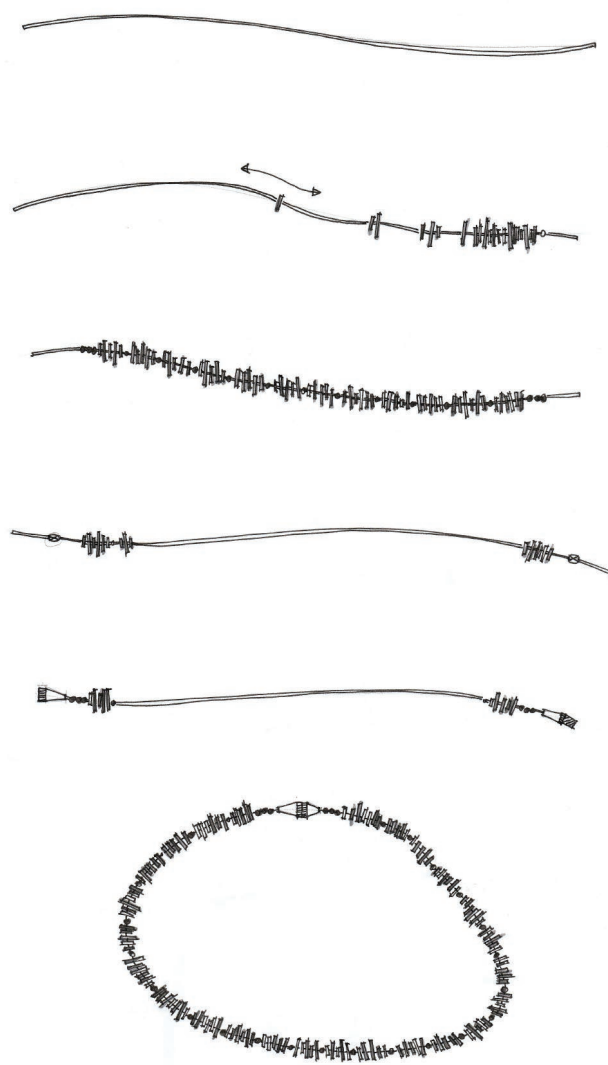
The necklace consists of several parts and materials that could inform architectural elements and structural approaches (fig. 1.12). Most commonly, a fishing line forms the basis of the Onyoka necklace. Due to its tensile strength, the fishing line can be architecturally interpreted as a steel cable providing structural support to beams and columns.

Each Onyoka bead, made from Black mussel shell (fig. 1.9), is slid onto the fishing line one by one. In this phase, the artisan can be creative and add their own flare to the necklaces by introducing alternative beads, such as coloured plastic beads or glass beads. This forms new patterns and fosters juxtaposition between the differing beads. The beads can architecturally inform rhythm by repetitive placement of spaces adjacent to one another.

After all the mussel beads have been added, the necklaces are ended with tiny plastic beads to articulate the meeting point between the Onyoka beads and the brass connector. The fishing line is stretched under tension, and a knot is tied on both ends. Two brass connectors are inserted, and the Onyoka necklace is completed. The connectors are the anchor points essential in creating a closed loop.

It is similar to the juxtaposition between the formal exhibition spaces of the Swakopmund Museum and the semi-formal exhibition spaces of the Kavita Craft Market. Integrating the two can foster an inclusive cultural representative hub through an alternative museum typology.

Figure 1.12
Onyoka analysis



Note. A sketch of an Onyoka and the parts that form part of it. (Author, 2024).



01 | HARVEST

Black mussel seashells are collected twice a week by the women who make the Onyoka necklaces along the beaches of Swakopmund, Walvis Bay, and Henties Bay (Collins, 2018). They fill 20 or 50 kilogram bags and carry them on their heads as they travel long distances by foot or taxi.



02 | DRYING

After collecting the seashells, they are placed on a flat surface in the open sun to dry (Johannes, 2024). It is preferred to collect these shells more frequently in the summer months as they are usually drier. The processes hereafter are very labour-intensive and require a delicate approach.



03 | FRAGMENTING

The dry black mussel shells are then fragmented into smaller parts by hand, smashing them with beach rocks or pebbles. The shells are mostly brittle, but the harder white parts are kept, and the thinner pieces are discarded. The desired pieces are stored in a container.



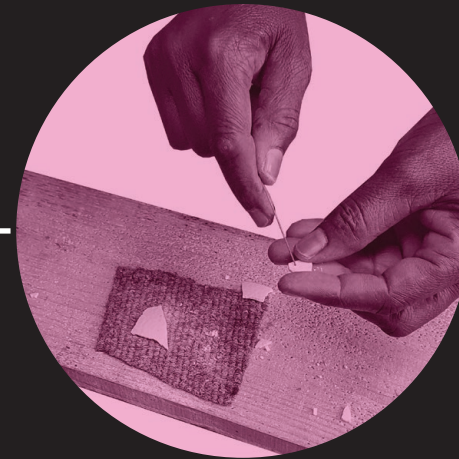
04 | SNIPPING

The remaining white parts of the shell are thicker and thus less brittle. These pieces are cut into smaller parts with pliers. The pieces are snipped to the required size and into a round disk-like shape as they start to morph into an Onyoka bead. This is a slow process (Collins, 2018).



05 | DRILLING

An essential part of every bead is a hole through which a string is threaded. Onyoka artisans use a handle drill to puncture a hole into each individual piece (Johannes, 2024). A cloth is placed below the shell piece to prevent it from fragmenting further.



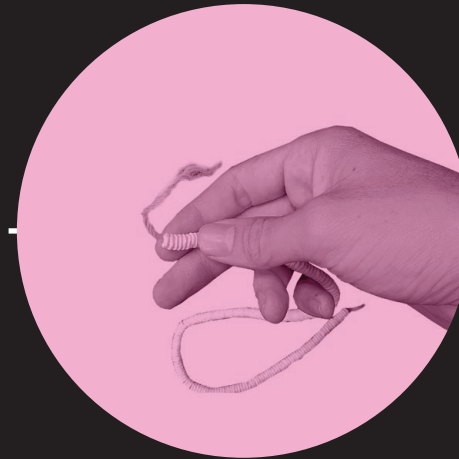
06 | BEADING

A wire is threaded through the individual beads to create a toughened necklace for grinding. After grinding, the wire is removed and replaced by a softer and more flexible thread or fishing line. The wire is sometimes salvaged from burning vehicle tyres.



07 | ROUNDING

With the rough Onyoka beads on the wire, they are pushed into a bench grinder to sand the rough and angular edges of each piece into soft and smooth edges to create a circular disk-like shape. After the grinding process is completed, the beads are removed from the wire.



08 | THREADING & DYEING

Lastly, the Black mussel seashell beads are inserted on a fishing line and juxtaposed with other contemporary beads, such as plastic and coloured glass beads. Sometimes, the necklace is dyed pink to match the pink Ondela dresses worn by the Oshiwambo people.

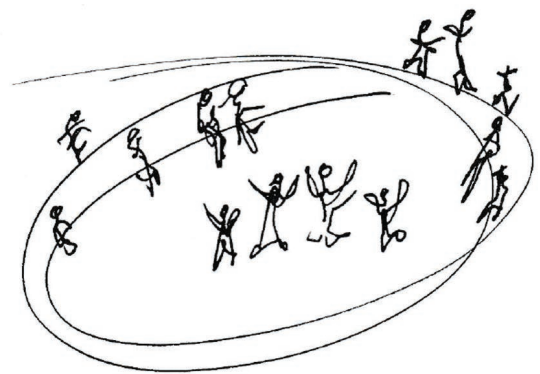
Figure 1.13
The making Process of Onyoka Necklaces

Note. Black Mussel shells are processed and transformed into Onyoka Necklaces (Author, 2024).



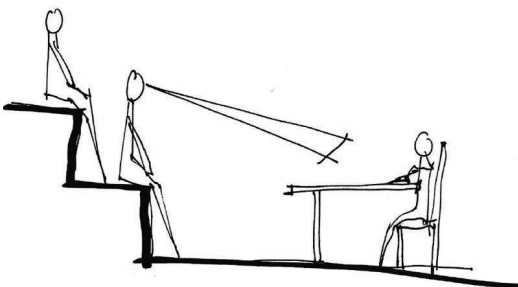
Figure 1.14
Traditional Oshiwambo dance

Figure 1.15
Cultural gathering space as place for representation



Note. A amphitheatre could be proposed for cultural performance and expressions (Author, 2024).

Figure 1.16
Observation of making Onyoka



Note. Tourist could observe and appreciate the making processes of the Onyoka necklace. This would provide context to the static displays found in the museum exhibition (Author, 2024).

Note. Knowledge is transferred from the adult to the child through the making and performance of a dance (Nela Shikemeni, n.d.).

The Onyoka necklace carries crucial cultural value to the Aawambo people. It symbolises wealth, identity and a woman's journey through life (fig. 1.14). Initially worn by a married woman, its meaning evolves to mark significant juxtapositions from motherhood to mourning. It is carefully crafted from a Black Mussel shell with the addition of an Oomba shell to signify heritage and cultural tradition. Despite its cultural beginnings, the Onyoka necklaces have been adapted for modern markets, emphasising their enduring relevance in Namibia.

The Onyoka necklace is not a static artefact but a dynamic facilitator of cultural expressions and architectural interpretations (fig. 1.17). From tensioned cable structures to shading screens and amphitheatres (fig. 1.15), much can be learned and appreciated from Indigenous artefacts.

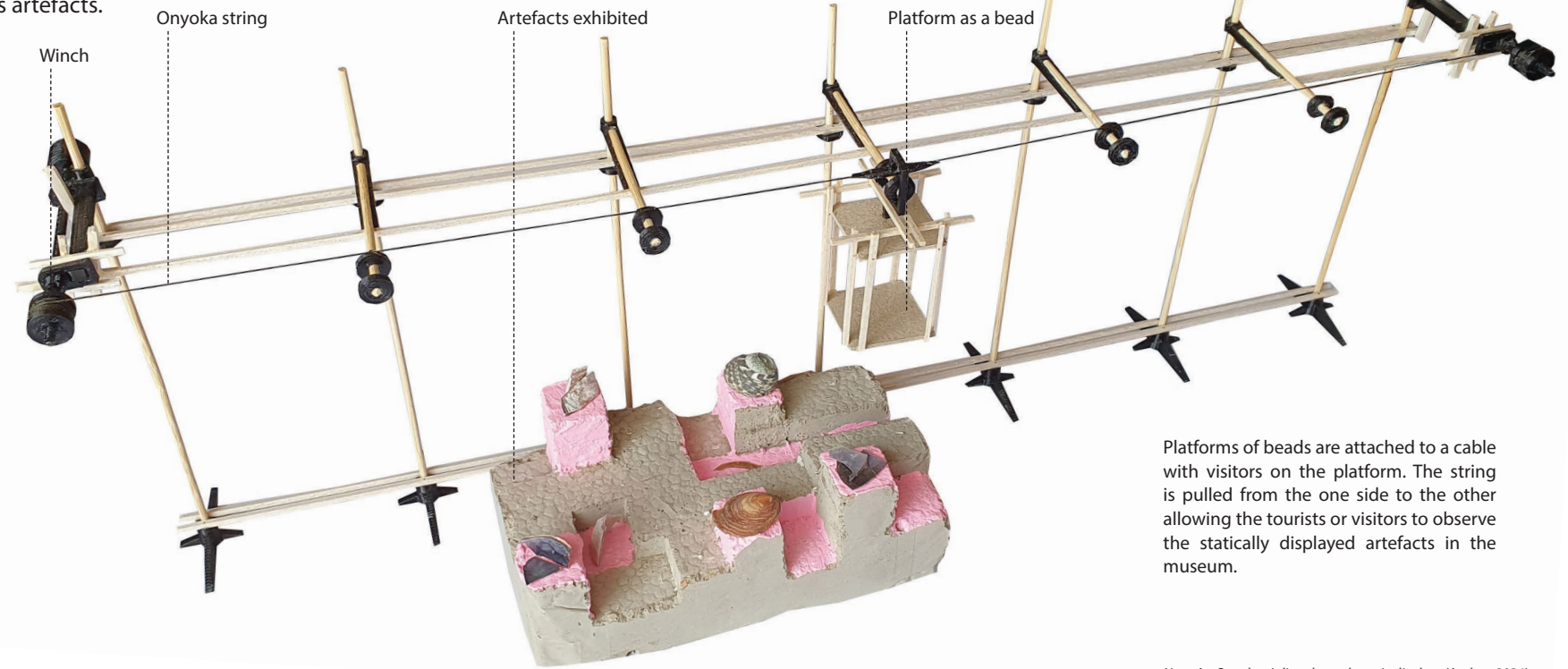


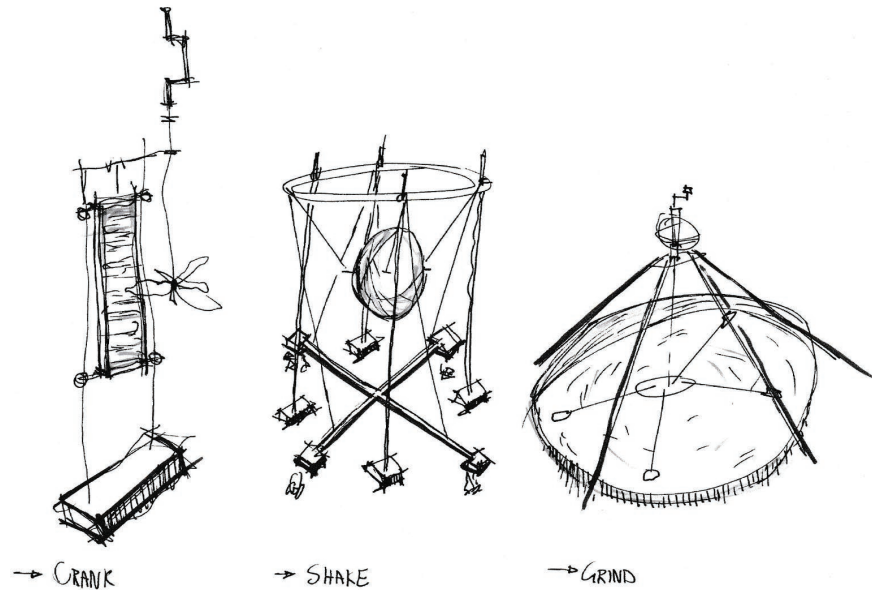
Figure 1.17
Architectural interpretation of an Onyoka string

Platforms of beads are attached to a cable with visitors on the platform. The string is pulled from the one side to the other allowing the tourists or visitors to observe the statically displayed artefacts in the museum.

Note. An Onyoka zipline through static displays (Author, 2024).

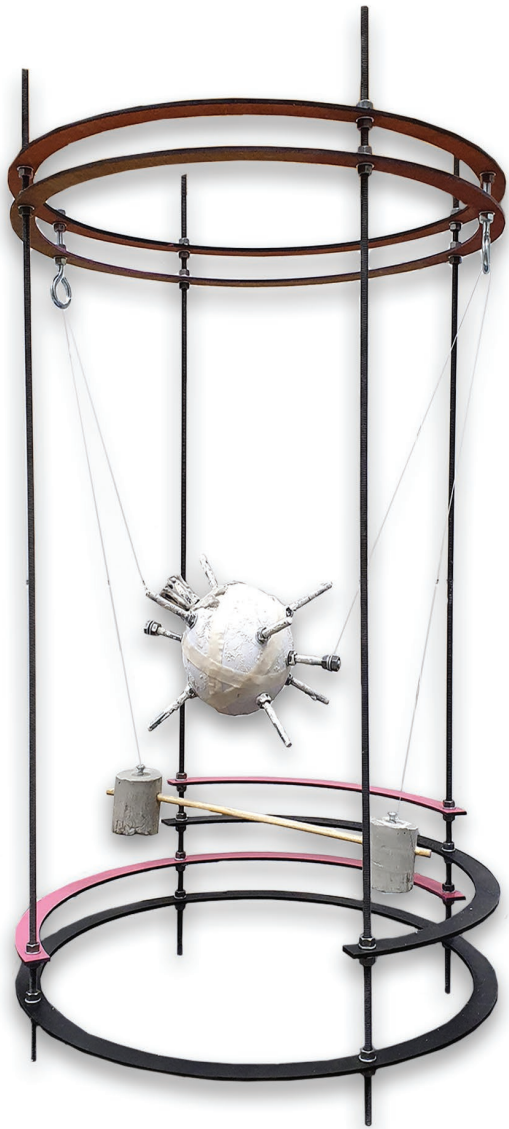
Within Swakopmund, indigenous knowledge systems are predominated by static colonial perspectives of knowledge (Schildkrout, 1995). This imbalance mirrors the violent fragmentation seen in the Onyoka necklace-making process, where the force of stone shatters beads. The aim of reimagining the Swakopmund Museum and promenade is to amplify indigenous voices by allowing the mussel shell, an artefact of knowledge, to narrate its story and reclaim its cultural significance.

Figure 1.18
Conceptual Approaches to
Device making



Note. Conceptual drawing explore different devices that could empower the [Muscle] shell (Author, 2024).

Figure 1.19
Device



Note. Photographs of the device empowering [Muscle] shells to form stone. (Author, 2024).

Mussel shells are fragile when introduced to the force of stone and cannot speak. According to Francis (2002), during the making process, "...each bead tells a story of patience, creativity, and cultural significance.", which is usually from a stone's perspective. The device attempts to empower the mussel shell by providing it with the ability to be expressive by forming a stone (fig. 1.19). The shell of a mussel exists to protect its treasure; however, through the device, it will be in the position to attack and make an imprint.

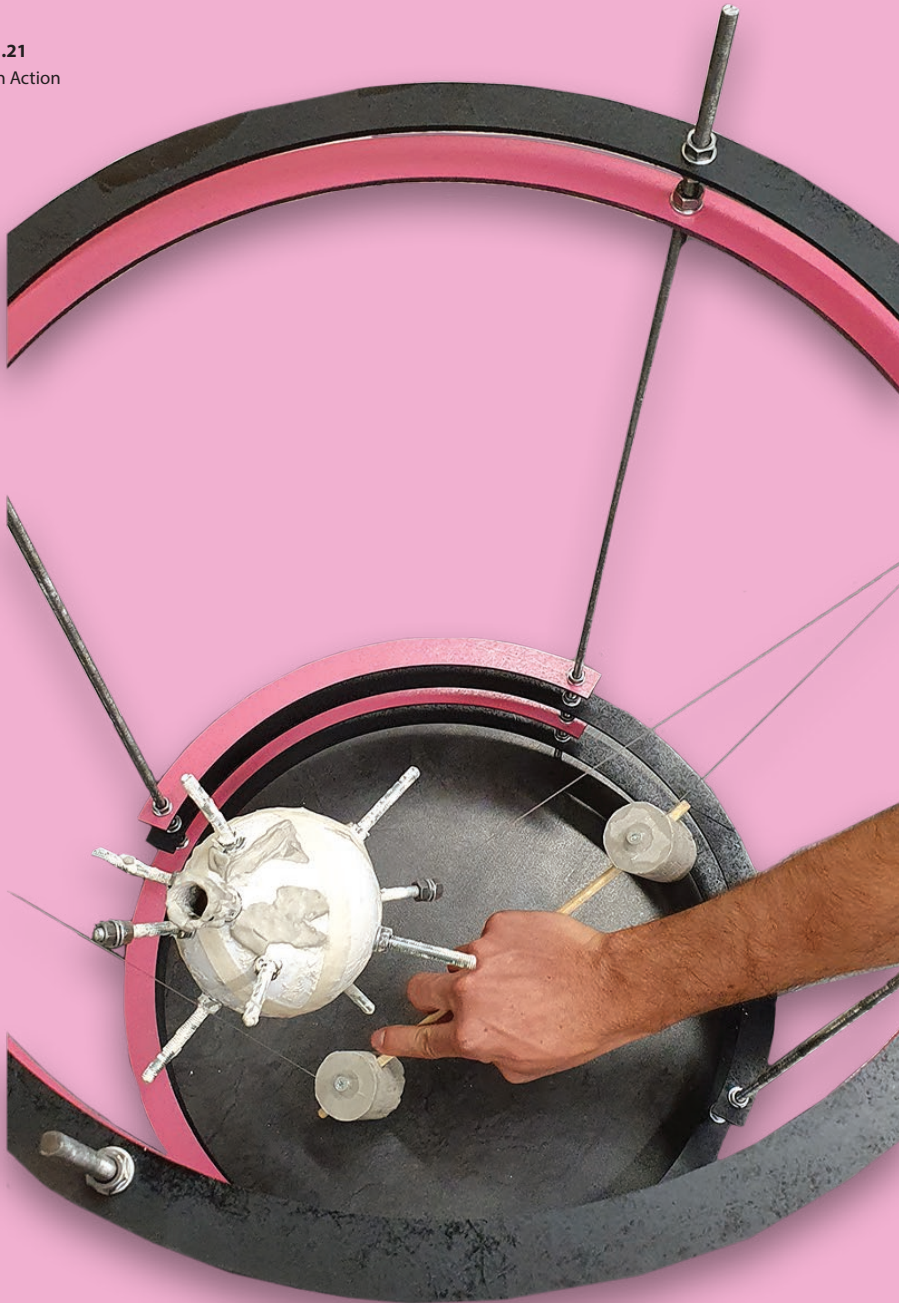
The device consists of a cylindrical structure with beaded rings around it. Attached to it is a ball mould, lined with clay on the inside and filled with loose mussel shell pieces. The ball is strung from the device by a fishing line and is connected to a two-headed hammer at the bottom (fig. 1.21), symbolizing a forceful process of shattering and domination. The hand-held hammer swings back and forth, striking the surface below. Similar to the striking action in the fragmenting process of Onyoka making. The strike symbolises the conflict between static colonial representation of knowledge and the dynamic indigenous knowledge of making. This action causes the ball mould to shake violently, pressing the mussel shells into the clay lining (fig. 1.20).

Figure 1.20
The Mould



Note. Photograph of the mould providing power to the shell. (Author, 2024)

Figure 1.21
Device in Action



Note. Photograph of the two headed hammer in violent motion. (Author, 2024)

The concrete poured into the mould takes the form of the mussel shell expressions and imprints on the clay. The shells' perspective of the Onyoka-making process is set in stone. The mussel shells are allowed to form the stone, juxtaposing the predominant colonial forces and narratives acting upon the site (fig. 1.22). The concrete stone forms part of the necklace as a single bead, telling the story of the mussel shell and its cultural significance.

MAKING SENSE

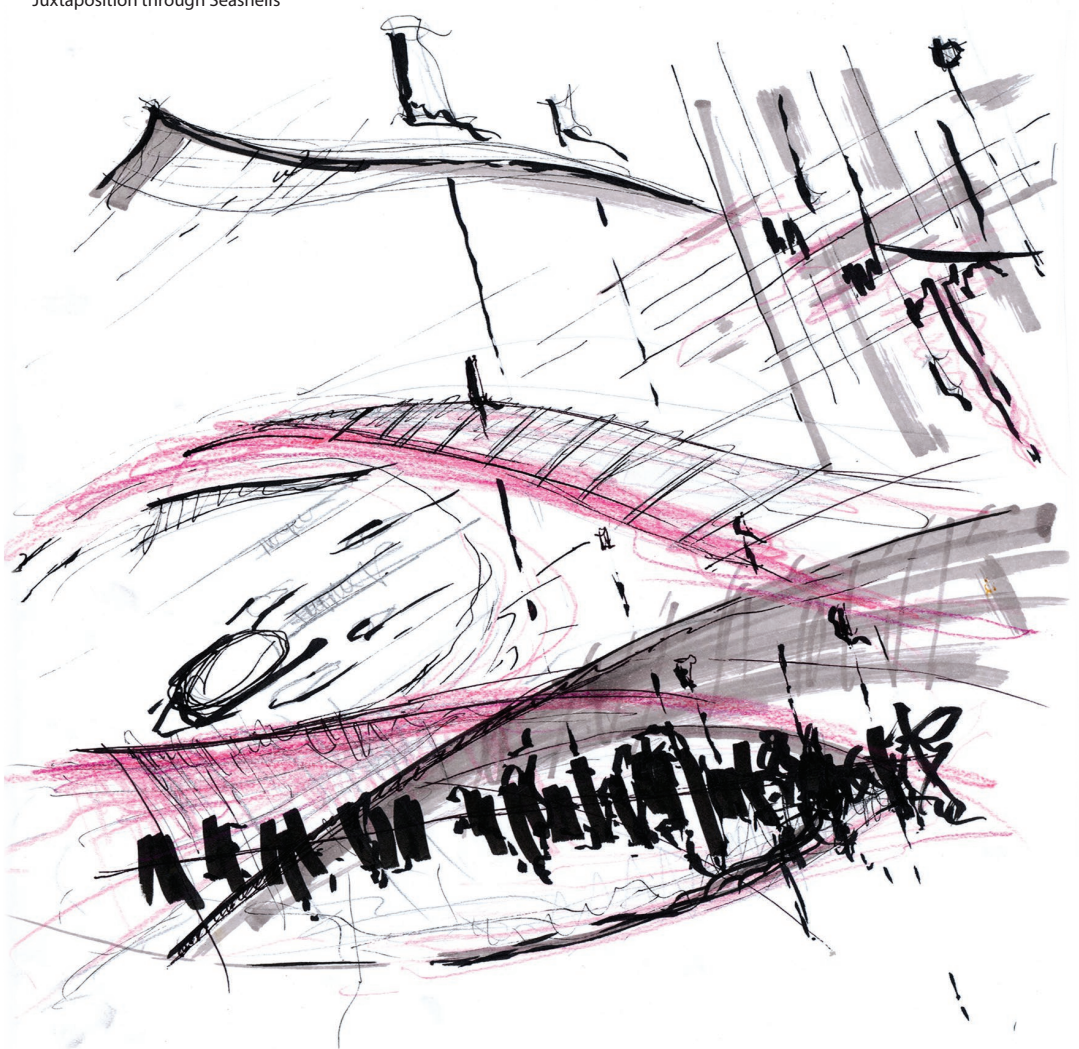
It is not about the mussel shell versus the stone but the integration and juxtaposition. According to Tschumi (1994), there is "...no architecture without violence." This results in conflict, impact and change created by the interactions between user, event and space. Within the [muscle] stone, the shell protrusions can be observed forcing their way out of the concrete ball and bringing life to the unheard. The shell introduces flow and dynamism to a static, hardened stone. Juxtaposition is celebrated (fig. 1.23).

Figure 1.22
The Muscle Stone



Note. Photographs of the [Muscle] Stone formed by seashells. (Author, 2024)

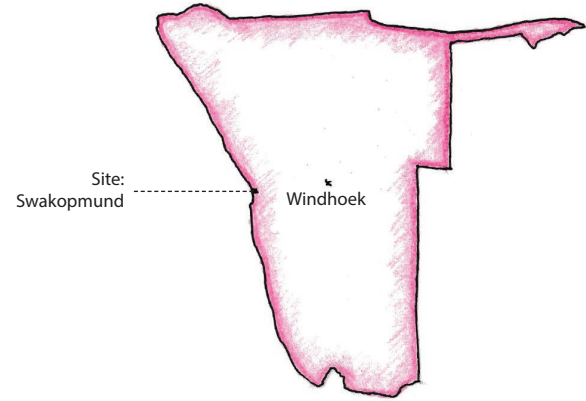
Figure 1.23
Juxtaposition through Seashells



Note. Interpretative sketch of the [Muscle] cast in stone. (Author, 2024)

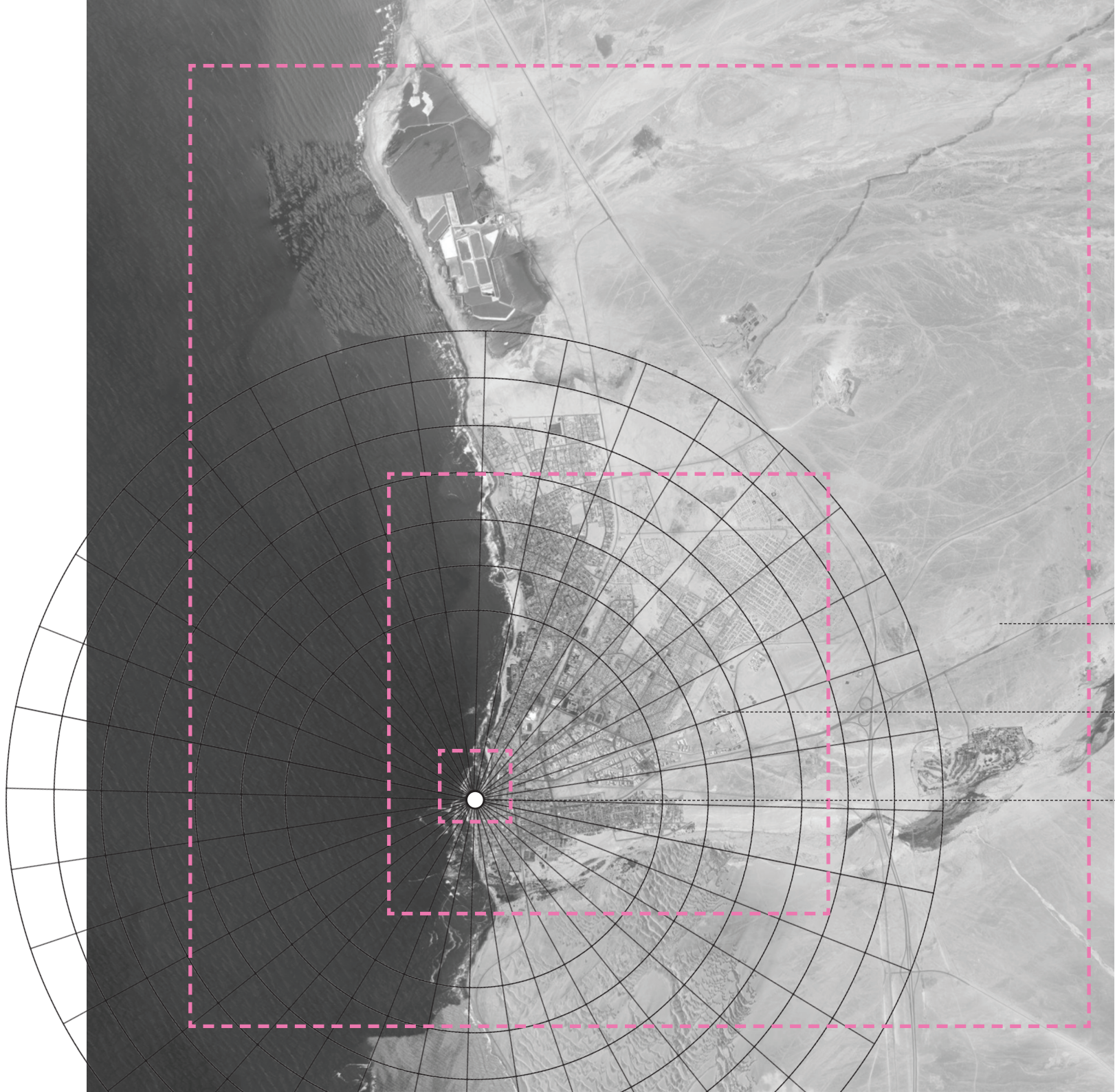
The site analysis will investigate the town of Swakopmund, Namibia (fig. 1.24). It is located on the central western coastline of the country, surrounded by the Namib Desert and the Atlantic Ocean. The site is analysed on three scales (fig. 1.25): the Seashell Landscape, the Onyoka Trail, and the Bead. The Seashell landscape focuses on the larger context, considering the natural landscape, climate, and positioning of the urban environment within this desert landscape. The Onyoka Trail investigates the urban environment, emphasising the historical context, points of interest and the coastal promenade. The Bead is analysed at a site scale, identifying the surrounding context, movement and heritage.

Figure 1.24
Site location within national context



Note. A sketched map of Namibia indicating the location of the site within the boundaries of the country (Author, 2024).

Figure 1.25
Identified areas of site analysis



THE SEASHELL LANDSCAPE

THE ONYOKA TRAIL

THE BEAD

SWAKOPMUND, NAMIBIA

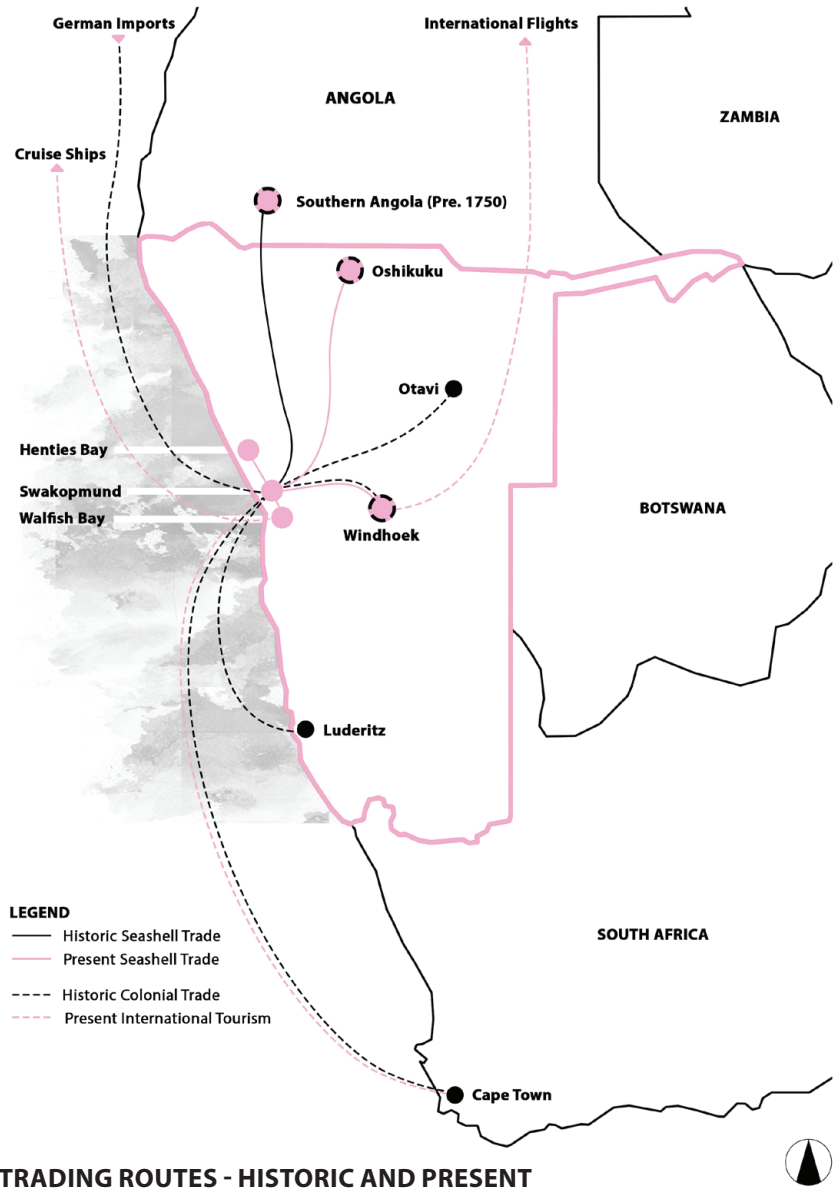
Note. A satellite image, adapted by the Author, of Swakopmund and its surroundings with identified areas of site analysis at different scales (Google Earth, 2024).

FOCUS AREA

The tradition of seashell harvesting and Onyoka-making finds its roots along the Namibian coastline, but more contemporarily, the stretch of beach between Walvis Bay, Swakopmund and Henties Bay (fig. 1.26). Mussels and other seashells have historically been collected and taken to southern Angola where they were traded with indigenous tribes to make jewelry and other artefacts. Similar to the Onyoka trade, the German Colonial authority established their point of trade in Swakopmund for ease of access to central South-west Africa. They made use of ox wagons and travelled along the Swakop River to reach places such as Otjiimbingwe and Windhoek. In later years, railway lines were introduced for faster and more effective transport of people and goods. Today, Onyoka trade is still ongoing, however, these artefacts move less to the North of Namibia, but rather as souvenirs bought by tourist back to Europe and Germany. German trade at the Mole ended after the colonial period, but strongly developed in the form of tourism to which it is today.

The research focuses around the area of the mouth of the Swakop River, where seashell collection took place before the colonial era, and the Swakopmund Mole, where the existing museum is located, and the history of colonial trade is evident (fig. 1.27). The two sites are connected be an existing coastal promenade, which takes visitors on a scenic route to points of interest, such as the Swakopmund Museum (where Onyoka is statically exhibited), Kavita Craft Market (where Onyoka necklaces are sold), Arnold Schad promenade, the jetty and aquarium. The idea is not to focus only on the one site, but the in between as well and the location of extraction as a point of juxtaposition.

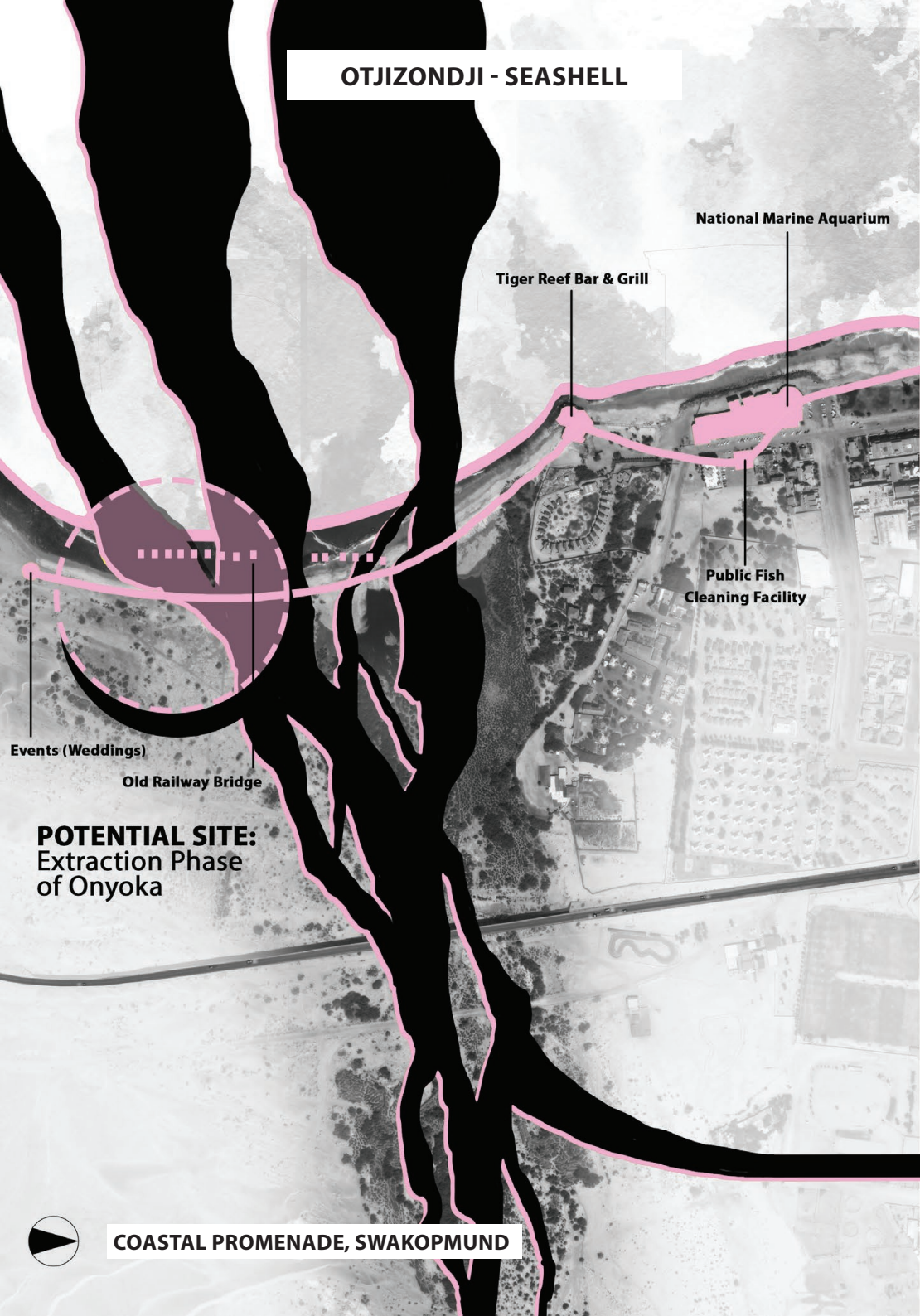
Figure 1.26
Trading routes in Namibia



TRADING ROUTES - HISTORIC AND PRESENT
NAMIBIA

Note. A map of Namibia displaying the present and historic trade routes of Onyoka and German goods (Author, 2024).

OTJIZONDJI - SEASHELL



COASTAL PROMENADE, SWAKOPMUND

ZOLLHAUS - COLONIAL GERMAN TRADE

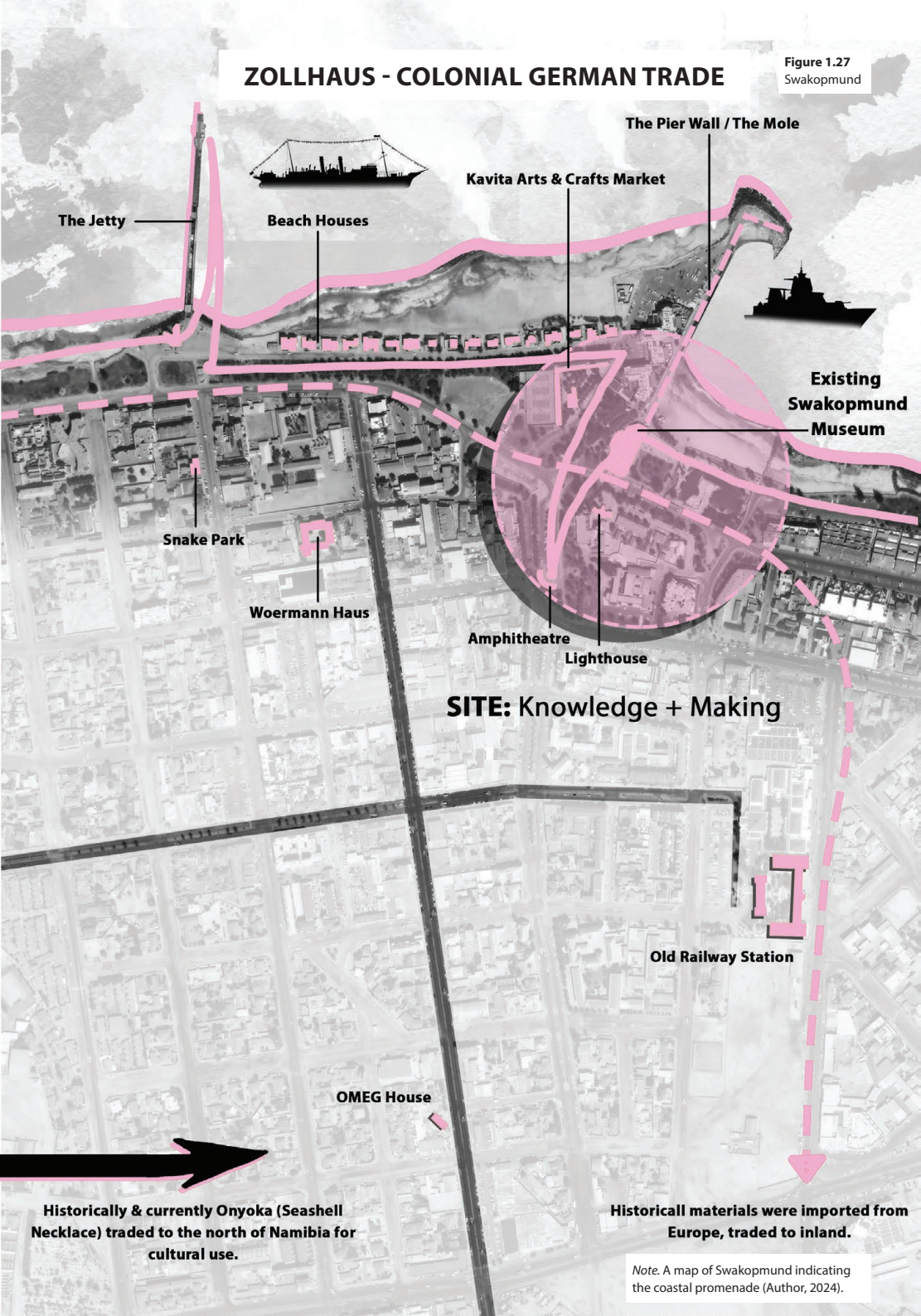
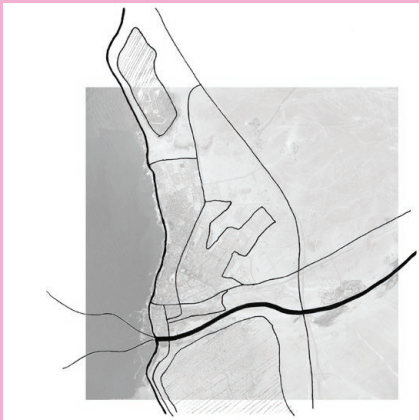


Figure 1.27
Swakopmund

Historically & currently Onyoka (Seashell Necklace) traded to the north of Namibia for cultural use.

Historicall materials were imported from Europe, traded to inland.

Note. A map of Swakopmund indicating the coastal promenade (Author, 2024).



/ THE SEASHELL LANDSCAPE

Swakopmund is located in the central coastal region of Namibia, juxtaposing the Atlantic Ocean with the vast Namib desert. This isolated region shapes the town's character, climate, and urban development. Founded in 1892 (fig. 1.28), the town blends German architecture from the colonial era with modern developments, attracting tourists who want to experience a contrasting natural and urban landscape (Rautenberg, 1967).

The Namib Desert, the oldest in the world, dominates the inland landscape and creates an alienating backdrop to the town (fig. 1.32). It is characterized by dunes, gravel plains and minimal vegetation due to extreme temperatures, low rainfall and sand movements. The Benguela current generates fog that cools the coastal line and provides moisture to the flora and fauna (Robertson et al., 2012)ww. The climate can be harsh, and thus, architecture should be able to withstand strong winds, salt, and sand.

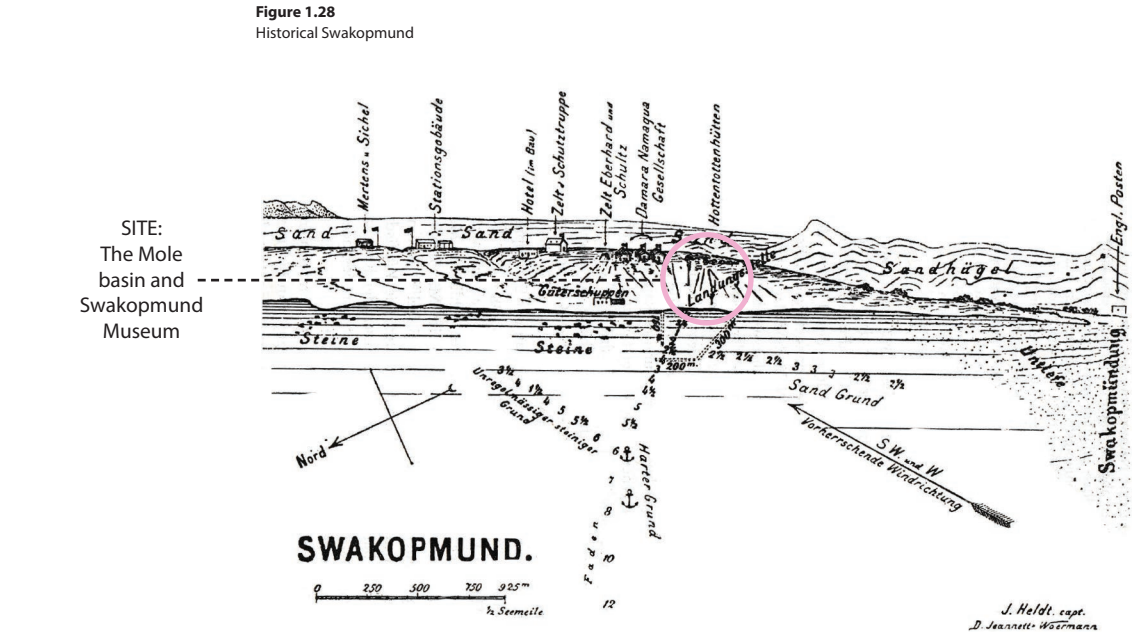
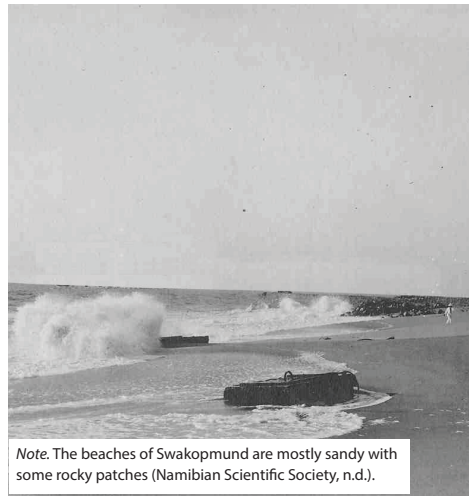


Figure 1.28
Historical Swakopmund

SITE:
The Mole
basin and
Swakopmund
Museum

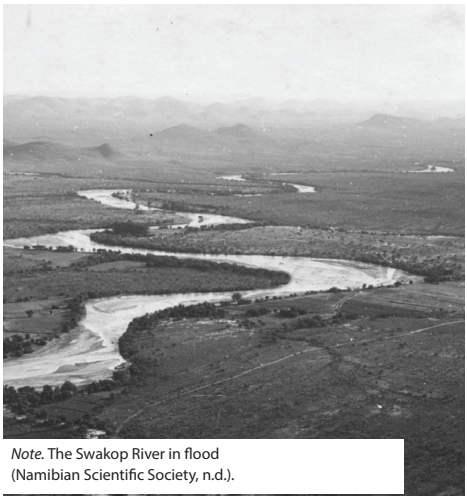
Note. An elevational sketch with a view from a ship indicating the buildings constructed by German soldiers along the Swakopmund Coastline in 1895. (Heldt, 1895).

Figure 1.29
Beaches near Swakopmund



Note. The beaches of Swakopmund are mostly sandy with some rocky patches (Namibian Scientific Society, n.d.).

Figure 1.30
Swakop River



Note. The Swakop River in flood (Namibian Scientific Society, n.d.).

Figure 1.31
Whale bones on the beaches



Note. Whale ribs were frequently found along the coastline (Namibian Scientific Society, n.d.).

REGIONAL MAP



- Towards the holiday town of Henties Bay
- Salt Works on the outskirts of Swakopmund
- The vast Namib Desert
- The Atlantic Ocean
- Winter Berg Winds blowing from the east causing high temperature and sandy air.
- Urban environment of Swakopmund
- Towards the mining town of Arandis
- Airport
- Predominant South Western winds brings cool air to the coastline
- SITE: The Swakopmund Museum
- Swakop River
- Swakop River mouth
- Sand dunes shaped by the predominant South Western Winds
- Towards the town of Walvis Bay

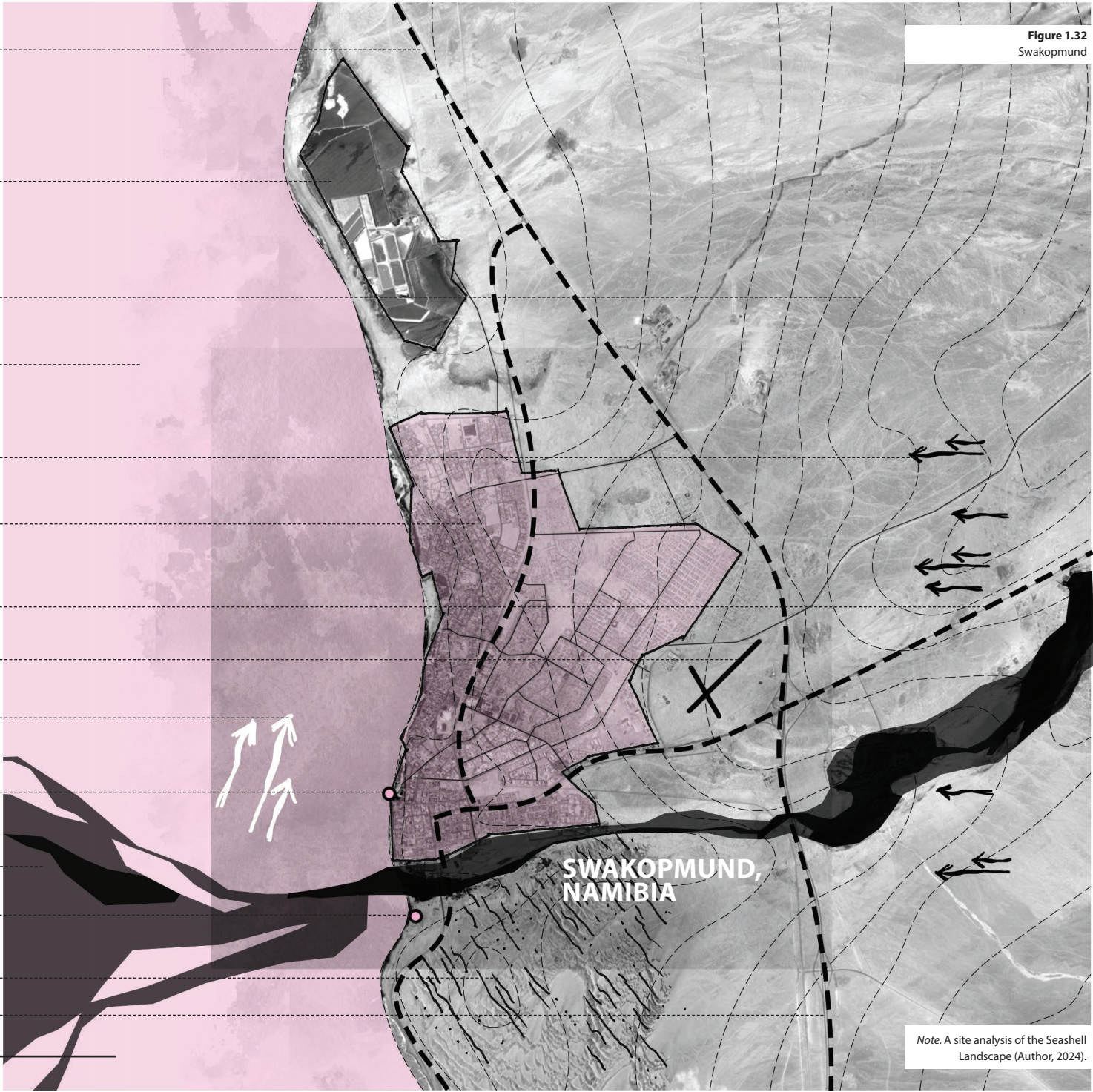


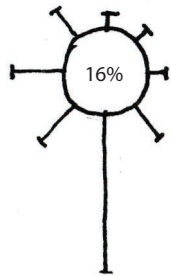
Figure 1.32
Swakopmund

Note. A site analysis of the Seashell Landscape (Author, 2024).

WIND

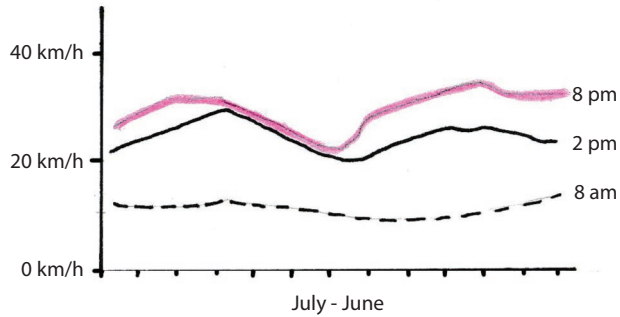
The South Atlantic Anticyclone directs coastal winds, mostly from the south. Winds peak in summer afternoons due to land-sea temperature contrasts. Winter Berg wind blows heat air from the interior of the country create heat surges and sandy conditions.

Figure 1.33
Wind Rose for Swakopmund



Note. The arms of the wind rose indicates the frequency of wind from each direction, while the percentage inside displays the amount of time calmwinds are experinced (Author, 2024).

Figure 44
Wind Speed in Swakopmund

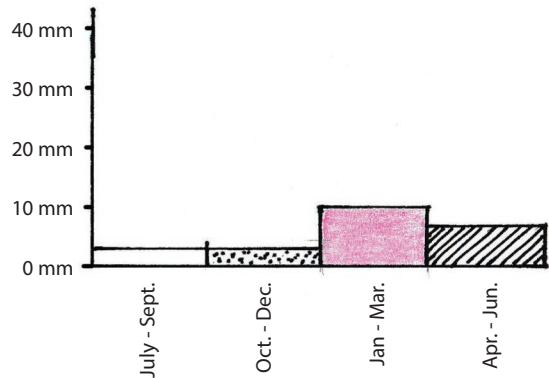


Note. The graph indicates the average wind speed during the years at 8am, 2pm and 8pm. (Author, 2024)

RAINFALL

Swakopmund experiences extremely low and variable rainfall, often less than 20 mm annually as discussed by Robertson et al. (2012).

Figure 1.35
Rainfall in Swakopmund

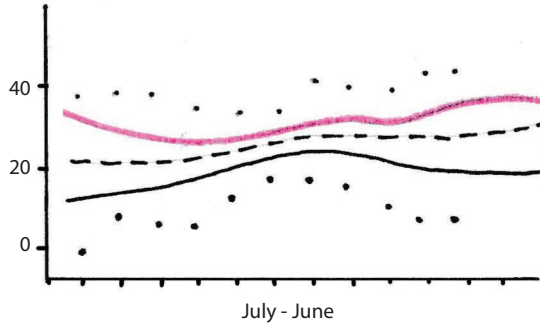


Note. A bar graph depicting the average rainfall annually (Author, 2024).

TEMPERATURE

The town of Swakopmund experiences mild, foggy, and cool temperatures, typically below 20°C with temperatures being the warmest in February and coldest in August. Winter Berg (eastern) winds cause coastal heat spikes, reaching up to 43.5°C (Robertson et al., 2012).

Figure 1.34
Temperatures in Swakopmund

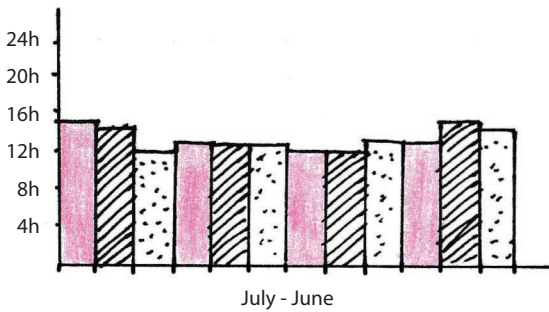


Note. A graph showing the average temperatures each month. Small dots are highest temperature recorded, pink line is average highest temperature during the day, dashed line is the average temperature, solid line is average lowest temperature during day and large dots lowest temperatures recorded. (Author, 2024).

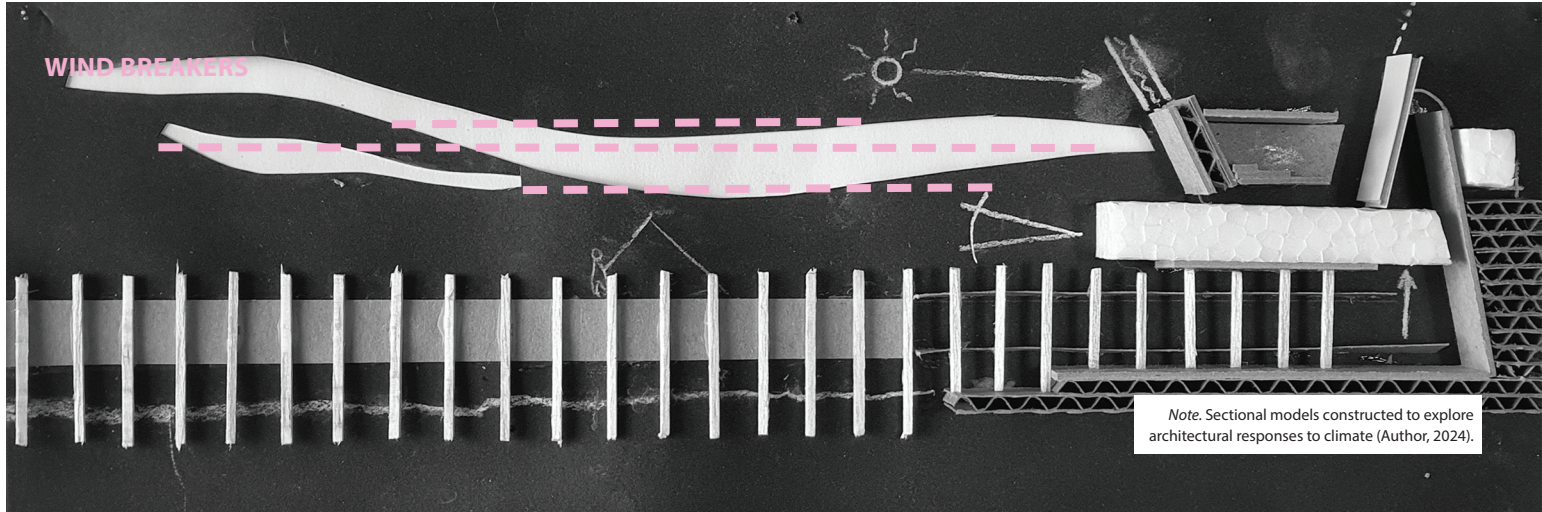
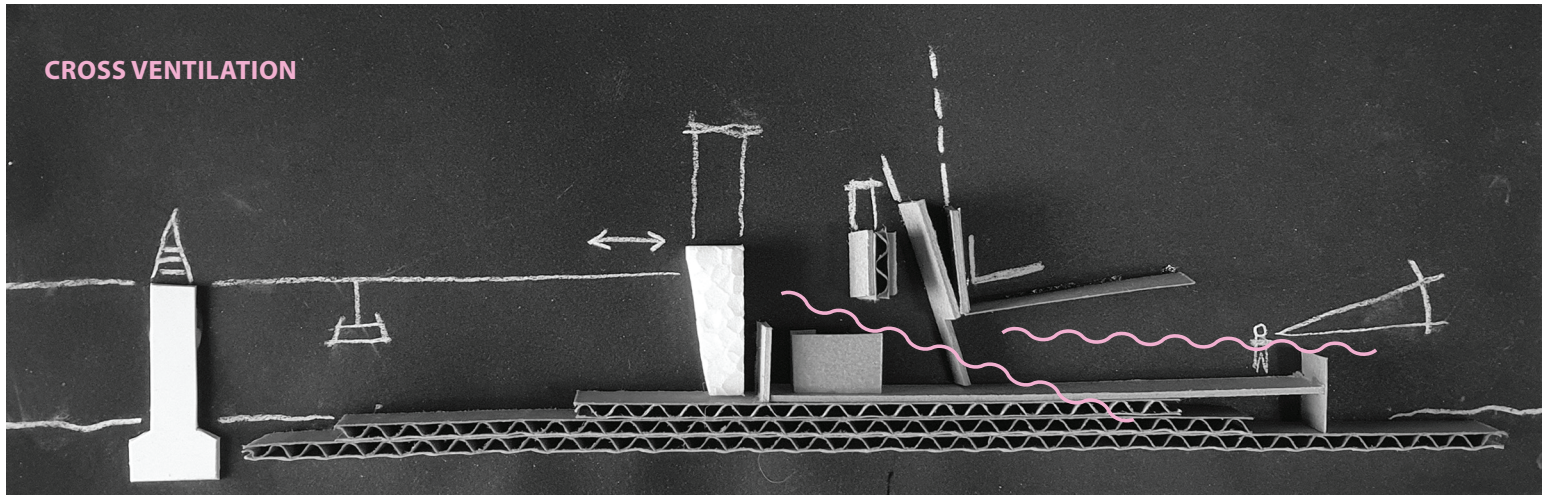
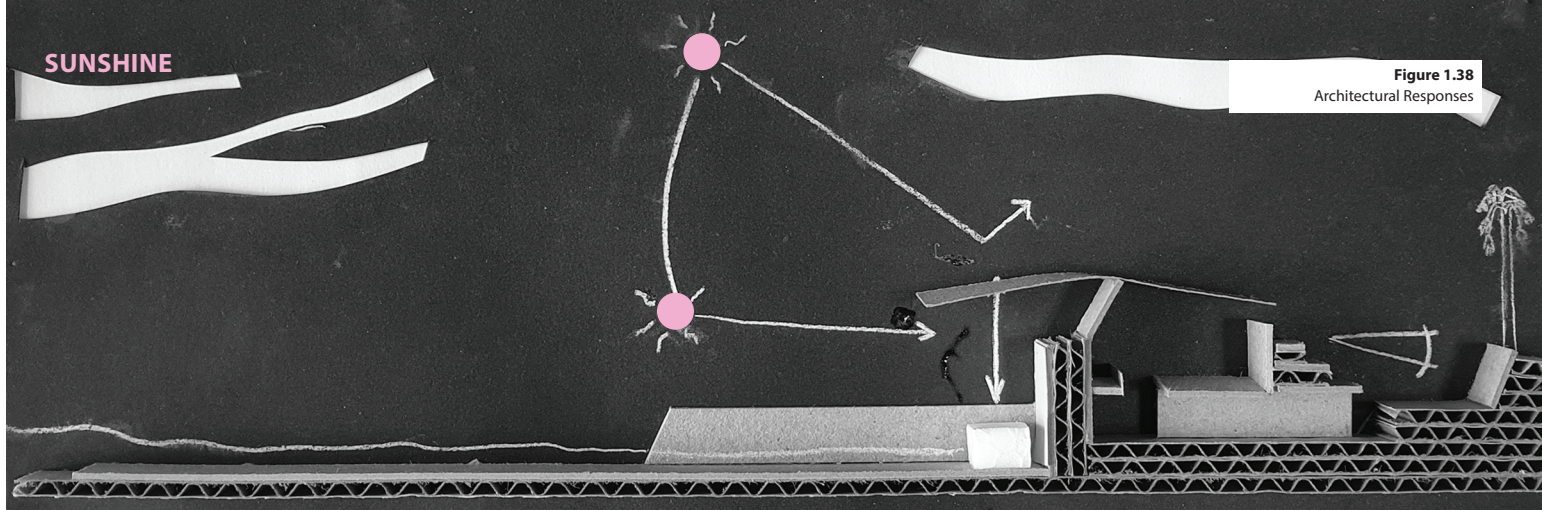
SUNSHINE

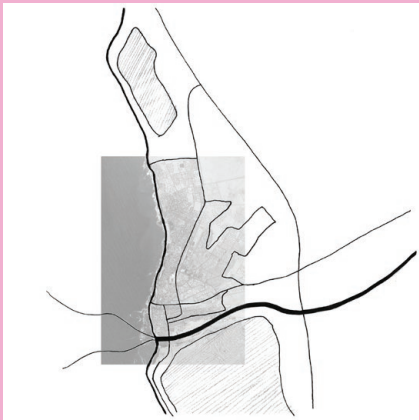
The town receives significantly less sunshine than inland areas due to frequent fog and clouds. Sunshine hours average between 8 to 10 hours daily with lowest in winter, and increase slightly during Berg wind events.

Figure 1.36
Sunshine along Swakopmund



Note. A bar graph depicting the average hours of sunshine during the day for each month. (Author, 2024).





THE ONYOKA TRAIL

The Central Business District of Swakopmund boasts iconic German buildings from the colonial era, including the Woermannhaus and Old State Railway Station. The town gradually expanded by integrating historical elements, such as the hierarchical towers found on several historical buildings, with new developments that foster juxtaposition to mimic the identity of colonial buildings.

The coastal promenade is a crucial element in fostering connection in the town. It stretches from the Swakop River mouth to the northernmost point and includes food trucks, gardens, public spaces, and access to the beaches. This embodies the town as a leisure-focused urban centre with open spaces for social and cultural gatherings framed by ocean views.

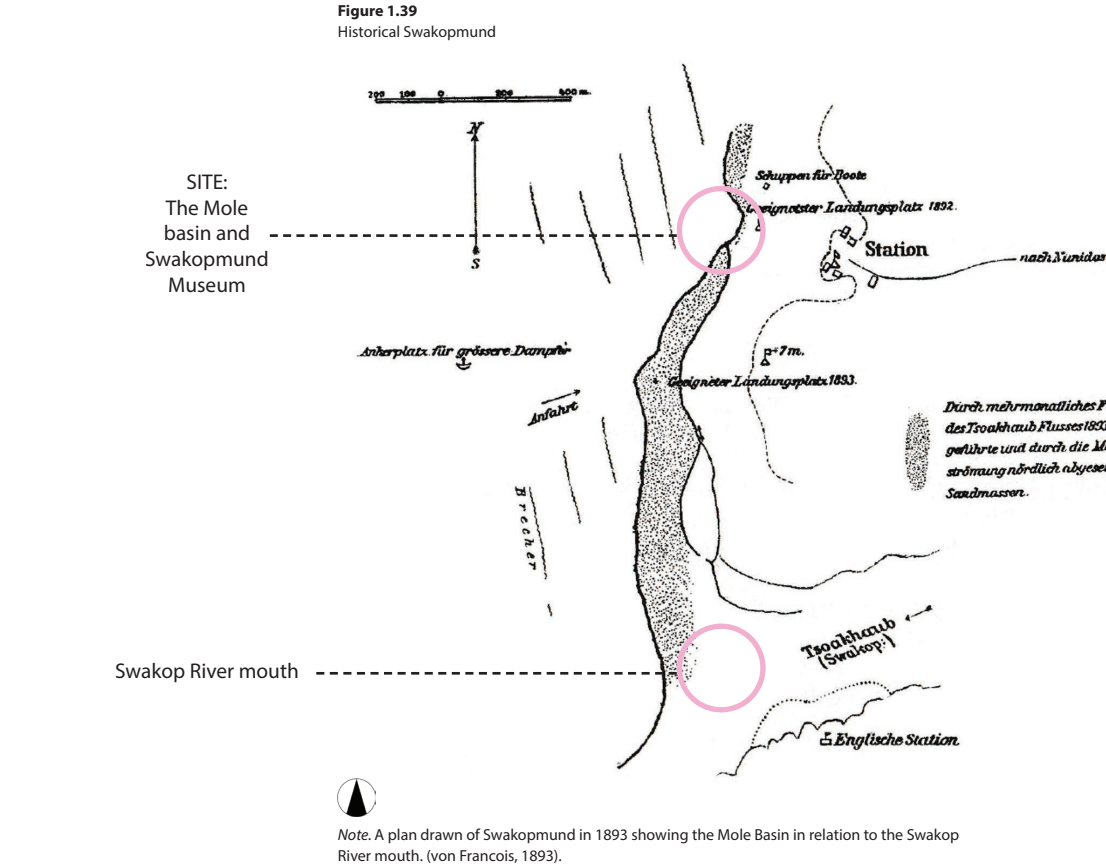
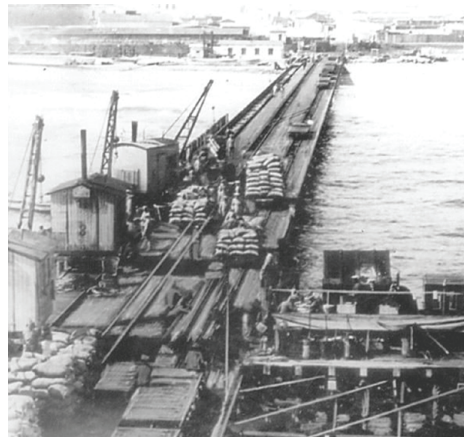


Figure 1.40
The Iron Jetty



Note. The iron jetty in Swakopmund replaced the mole basin as harbour point (Namibian Scientific Society, n.d.).

Figure 1.41
Swakopmund Beaches



Note. Beach houses being constructed in Swakopmund (Namibian Scientific Society, n.d.).

Figure 1.42
Swakopmund

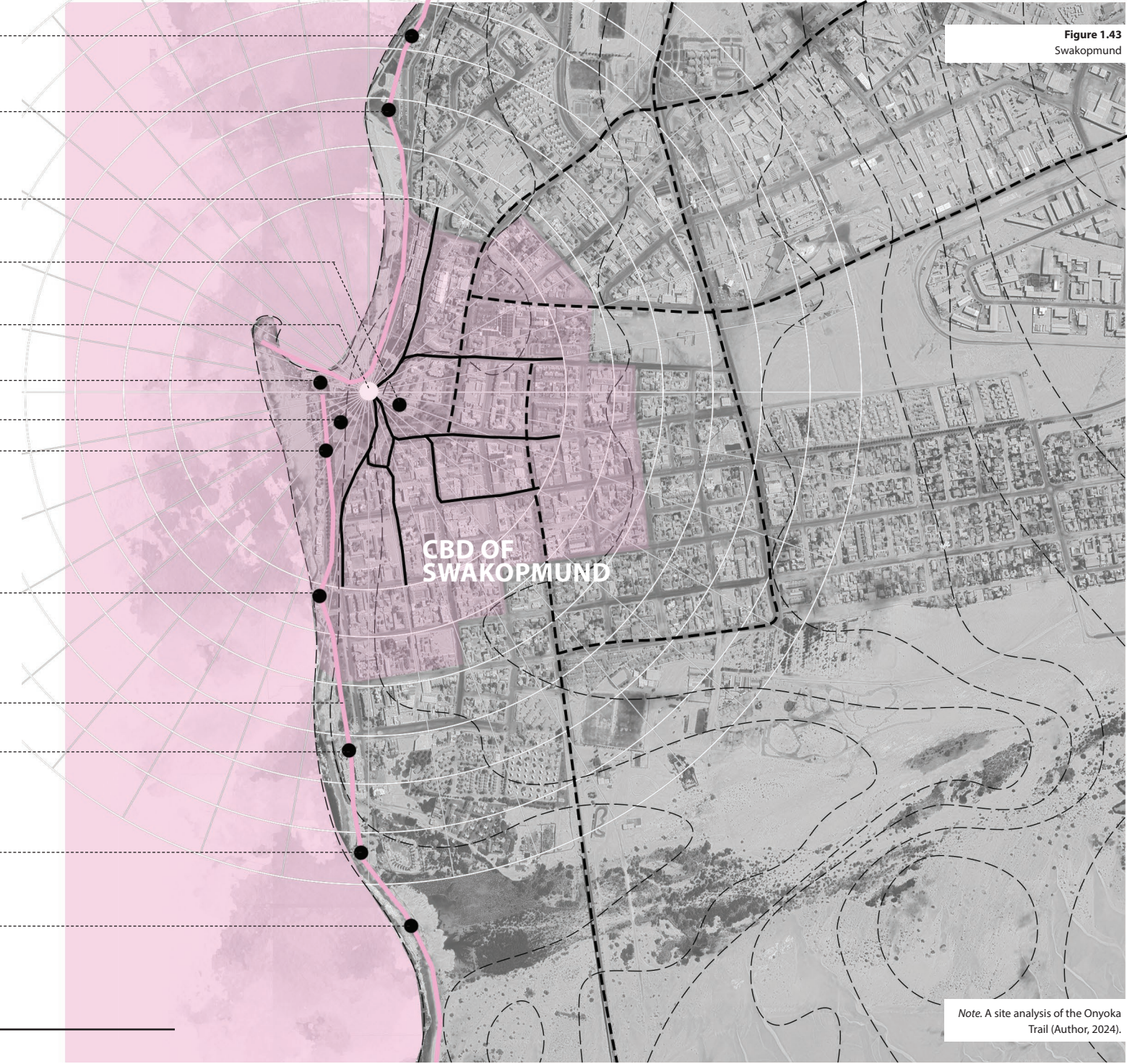


Note. Aerial image of Swakopmund in the 1940's (Namibian Scientific Society, n.d.).

URBAN PLAN



- Parking lot appropriated by food trucks
- Playground along the coastal promenade with lush green gardens.
- Coastal promenade leading North to the Platz am Meer Mall.
- Lighthouse
- SITE: Swakopmund Museum
- The promenade leads into a dead end privatized by the Strand Hotel.
- Kavita Craft Market
- Arnold Schad Promenade
- The iron jetty that replaced the Mole Basins harbour function after silting up.
- Coastal promenade leading South towards the Swakop River mouth.
- Aquarium
- Tiger Reef Restaurant
- Swakop River Mouth



BEADS OF INTEREST

Lighthouse
Constructed in 1903, it replaced a smaller light tower that was washed away by the rough seas (Vogt, 2004).

SITE: Swakopmund Museum
Initially constructed in 1902 as the German Colonial Customs Shed. Rebuilt in 1960 into a museum by Kock and Orsmond.

War Memorial
Constructed in 1963 to commemorate the soldiers that died in the two world wars.

Kavita Craft market
Initially an informal market that developed near the Mole with artisans selling indeginous crafts.

Ritterburg
Accommodation for the Knights family, constructed in 1905 when the communication cable was laid at sea.

Woermann House
Constructed in 1904 by architect Friedrich Hoft. It was built for the Damara and Namaqua Trading company (von Dewitz, 2009).

The jetty
Iron jetty constructed in 1911 south of the pier wall for easier loading and offloading of ships. It replace the pier wall which constantly silted up.

Aquarium
Constructed in 1995 by Erhard Roxin architects, the aquarium houses a wide selection of sea creatures found along the Namibian coastline.

Figure 1.44
Points of Interest in Swakopmund CBD



Note. A satellite image, adapted by the Author, highlighting areas of interest to tourists (Google Earth, 2024)

Crystal Gallery
The Gallery was constructed in 1998 by architect Erhard Roxin, housing a wide selection of crystals and stone found in Namibia.

Altes Amtsgericht
Constructed by Otto Ertl in 1906 to become a school, however funds ran out and it was used as a magistrates office (von Dewitz, 2009).

Railway Station
Constructed in 1901 by architect Carl Schmidt, connecting Swakopmund with Windhoek.

Marine Memorial
A memorial to commemorate the soldiers that died in the German-Herero war of 1908.

Roman Catholic Church
Constructed in 1958.

Otavi Railway Station
Built in 1907 to export copper from Tsumeb.

Hotel Kaiser
Constructed in 1904 as a hotel. Today it functions as a commercial bank.

House Hohenzollern
Built in 1905 by architect Hermann Dietz. Initially functioned as a hotel, but was converted to flats in 1912.

Figure 1.45
Woermann House



(Author, 2024)

Figure 1.46
Crystal Gallery



(Author, 2024)

Figure 1.47
Railway Station



(Author, 2024)

Figure 1.48
Hohenzollern House



(Author, 2024)

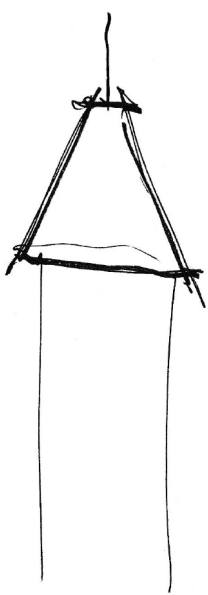
Figure 1.49
The Jetty



(Author, 2024)

TOWERS OF SWAKOPMUND

Figure 1.50
Towers in Swakopmund



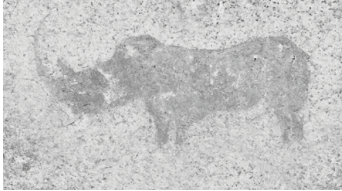
Note. Tower as a market in the landscape(Author, 2024)

Old colonial German buildings are easily identifiable in Swakopmund due to their towers (fig. 1.50). The tower of the Woermann house (fig. 1.45) was initially constructed as a reference point for incoming ships, as well as a lookout tower to see where the ships were located on sea. These towers represent a point of hierarchy and dominance similar to the predominance of static colonial representation of knowledge found in the Swakopmund museum.

STONE AGE
BUSHMEN

The bushmen roamed the desert plains temporarily or for longer periods if there was good rains, with their marking still visible at the Spitzkoppe and Messum mountains.

Figure 1.51
Bushmen Rock Paintings



Note. Rhinoceros rock painting at Spitzkoppe. (Gray, n.d.).

AROUND 1726
WHALE HUNTERS

Whale hunters would explore rivers, such as the Swakop River, in search of drinkable water. Temporary shelter would be constructed with whale ribs within the rivers along the coast.

PRE. 1750
HERERO CHIEF TJIPONDA

The Herero people temporarily lived at Nonidas (6km up the Swakop River). They would collect seashells at the river mouth and trade them with Angolan natives. One shell for one ox (Rautenberg, 1967).

Figure 1.52
Seashell



Note. Typical seashells collected along the Namibian coastline to make Onyoka (Author, 2024).

1892
FIRST BUILDINGS

Two beacons were placed by the gunboat “Hyäne” to indicate a landing spot close to the Swakop River. Five men were dispatched to Swakopmund to construct storage facilities and accommodation.

1893
THE CRUISER “FALCON”

Eleven crew members and a landing craft were brought from Monrovia by the cruiser “Falcon” in preparation for the landing mission. This included 120 Schutztruppe soldiers, 40 settlers, and cattle breeders.

1903
LIGHTHOUSE

After the light tower at the end of the pier wall was destroyed by ocean waves, a new lighthouse was constructed with an initial height of 11m.

Figure 1.55
The First Lighthouse of Swakopmund



Note. The first lighthouse at the head of the Mole. (National Archives of Namibia, 1903).

1904
HERERO UPRISING

The Herero uprising broke out on January 12th.

1910
EXTENSION OF LIGHTHOUSE

The height of the existing lighthouse was extent to a total height of 35.5 m.

1911
IRON JETTY

A new iron jetty was constructed and planned to be 640 m long, however the project was halted due to the start of WW1. The jetty only reached 200 m and functions as part of the Swakopmund promenade today.

1920
SEASIDE RESORT

Swakopmund was mostly used for recreational purposes with Strand Cafe, music pavilion, public changing cabins and a beach supervisors office were constructed up along the beach.

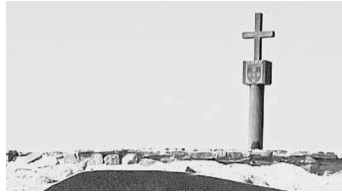
600 BC
EGYPTIANS

The Phoenicians circumnavigated Africa on purpose, setting sail from the Red Sea. Only to pass by the Namib desert to return to the Mediterranean after more than 2.5 years.

1484
PORTUGUESE

A knight of the Portuguese King sailed around Africa to reach India. He noted a herd of seals at Cape Cross where he erected a cross in the name of his king.

Figure 1.53
Replica of the Cape Cross



Note. The Intriguing tales of Cape Cross (Goldbeck, 2020).

1793 EXPLORATION
OF SWAKOP RIVER

The Dutch government send hunter Pieter Pienaar and others to search for gemstones in the Swakop River. They discovered the river to be full of wildlife including finding 300 Rhinoceros of which they killed 20.

1884
GERMAN GUNBOAT “WOLF”

In an indication that the German Reich had taken control of the region, the German flag was hoisted north of the Swakop river on August 14, 1884 by the German gunboat “Wolf”.

Figure 1.54
German Gunboat named Wolf



Note. German Gunboat Wolf (Bacon ,n.d.).

1897
RINDERPEST

In January, Rinderpest outbreaks occured. The devastation caused ox cart traffic to stop altogether. Construction of the state railway started in September.

1900 CONSTRUCTION
OF PIER WALL

Friedrich Ortloff, the government architect, arrived in Swakopmund with four labourers and three civil servants. The pier walls building preparations got underway.

1904
SILTING OF MOLE, NEW JETTY

A timber jetty was constructed due to the silting of the mole. The jetty was 300 m long, but was later replaced by iron jetty due to destruction by bore-worm.

1905
THE BATHING HOUSE

Bathing facilities had warm water and baths were installed. It was used for hygienic and recreational reasons due to the limited water supply to the town. Only a few buildings had water connections.

1914
DAMAGE TO CUSTOM SHED

Customs shed was completely destroyed in World War 1 by British battle ships and stood in ruins until 1960 when it was converted to a museum.

Figure 1.56
Demolished Customs Shed



Note. The customs shed after the shelling (National Archives of Namibia, n.d.).

AFTER WWI
FUTURE IN RECREATION

Swakopmund lost its harbour function to Walfish Bay. And the two were connected by rail along the beach. Economic survival hinged on education and recreation.

Figure 1.57
Swakopmund Mole used for recreation



Note. The mole pool in Swakopmund. (Namibian Scientific Society, n.d.).

1927
RAILWAY TO WALFISH BAY

A railway bridge was constructed over the Swakop River, however it was washed away in 1931. Its pylons are still visible today. A new bridge was built in 1934.

Figure 1.58
Railway Bridge crossing Swakopmund River



Note. Demolished Swakopmund bridge after heavy floods (Namibian Scientific Society, n.d.).

1960
MUSEUM

Museum opens in the customs shed housing Dr. Alfons Webers collection.

Figure 1.59
Museum in Swakopmund



Note. Swakopmund Museum at the Mole (Namibian Scientific Society, n.d.).

AROUND 1960
DEMOLITION OF STRAND CAFE

Strand Cafe was demolished, construction of initial Strand Hotel starts.

1976
THE MINING INDUSTRY

Economic uprising due to Rossing Mine opening near Arandis.

1982
NONIDAS HOTEL

Fritz and Renate Stierner open the Burghotel Nonidas on Swakop River. With their own hands, the two of them spent eighteen years remodelling and refurbishing the old police and post office.

2007
EXTENSION TO MUSEUM

The official inauguration of the museum extension.

2008
DEMOLITION OF OLD HOTEL

The old Strand Hotel along the pier wall was closed. The hotel was demolished in November. In 2015, the new Strand Hotel was constructed.

2023 KAVITA ARTS & CRAFTS MARKET

Reopening of phase 1 of the Kavita Market behind the Strand Hotel at the Mole.

Figure 1.61
Kavita Arts & Crafts Market



Note. Phase 1 of the relocated Arts & Crafts Market. (Author, 2024).

1940
LAPPIESDORF

The town administration provided the first twelve tents to accommodate guests.

1959
CELEBRATION AT MOLE

Roof wetting party for centre comprising museum, library and reading room.

1971
SWIMMING POOL

The indoor swimming pool at the pier wall opened on January 8th, 1972. It is the first all-weather swimming pool with heated fresh water outside of Europe.

Figure 1.60
The Blue pipe of Swakopmund



Note. Public swimming pool located at the Mole. (Swakopmund Municipality, n.d.).

1972
A-FRAMES

Construction of the A-framed bungalows to accommodate more tourists and visitors.

1990
INDEPENDENCE

After Namibia's independence on March 21st, a border post on the road bridge to Walvis Bay was established. The enclave formed part of South Africa.

POST INDEPENDENCE
UPMARKET DEVELOPMENT

The town became more tourism and mining based. Development of upmarket condominiums, such as Am Meer etc., new restaurant (Rafters), new Strand Hotel and demolition of old heated swimming pool.

2010
CLOSURE OF SWIMMING POOL

Lighthouse Property Group Trust closed swimming pool at the mole and built a new pool elsewhere that is more accessible to all residents.

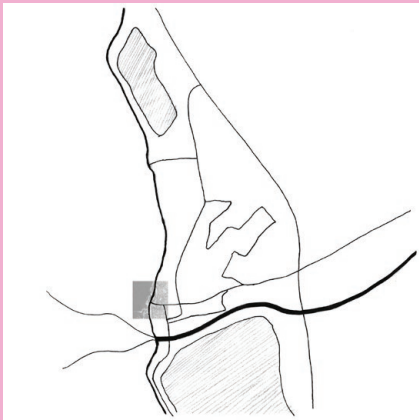
2015
OPENING OF NEW HOTEL

Opening of new Strand Hotel at the Mole.

Figure 1.62
The New Swakopmund Strand Hotel



Note. The Strand Hotel constructed along the Swakopmund Mole. (Author, 2024).



THE BEAD

The Mole Basin in Swakopmund is a historical and recreational site initially constructed by architect Ortloff in 1899 as an artificial harbour for cargo vessels (fig. 1.63). However, the architect's ambitious sea project was resisted by the strong Benguela Current, which silted up the basin, transforming it from a harbour to a beach.

Today, the Mole Basin is a focal point of Swakopmund's identity as a holiday destination. The main beach area and surrounding amenities attract locals and tourists alike. The Mole is also located within the town's architectural conservation zone, which requires approval from the council for new developments or renovations. New developments are required to align with the surrounding characteristics of the area and respect buildings of heritage value. Only a few buildings of heritage value exist in the area, which includes the lighthouse, pier wall and museum building (fig. 1.66).

Figure 1.63
Historical Plan of Swakopmund

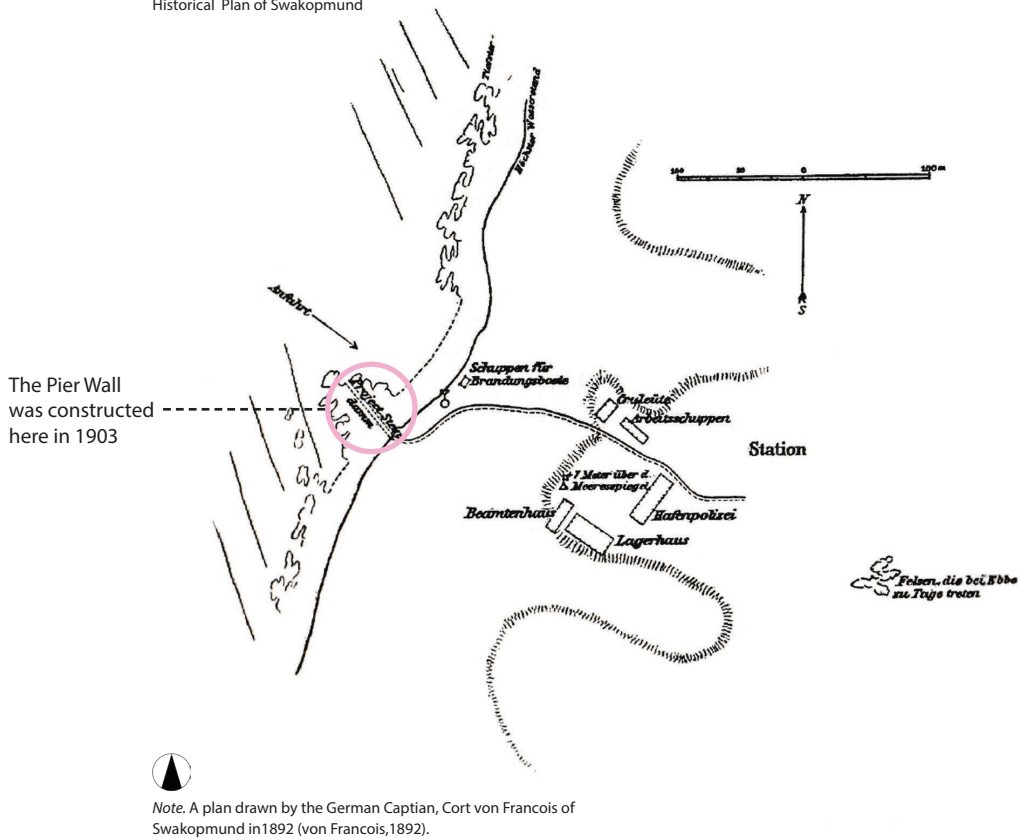
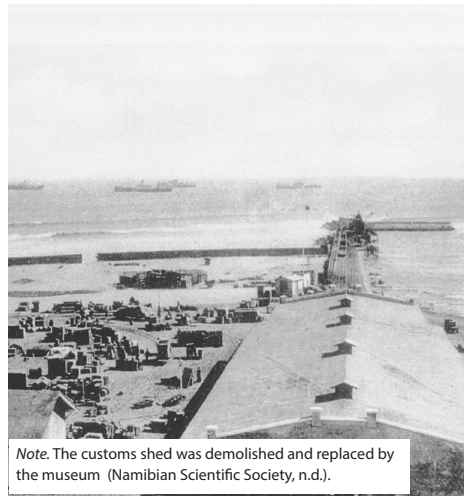


Figure 1.64
German Colonial Customs shed



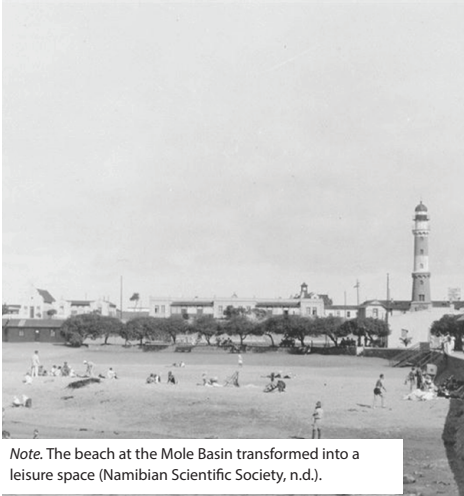
Note. The customs shed was demolished and replaced by the museum (Namibian Scientific Society, n.d.).

Figure 1.65
Unloading livestock at the Mole



Note. Cattle being loaded and offloaded from the Mole Basin (Namibian Scientific Society, n.d.).

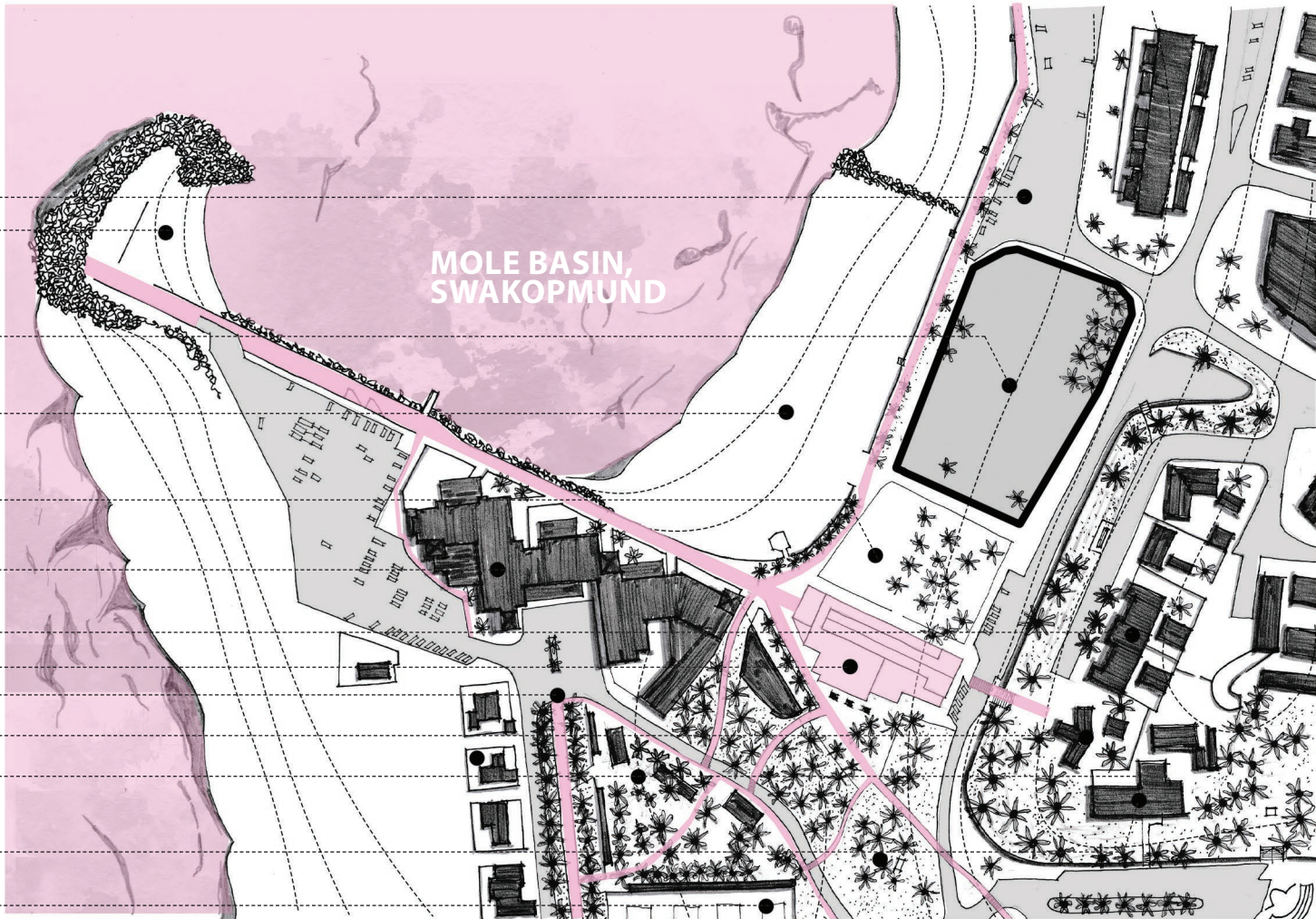
Figure 1.66
Beach at the Mole



Note. The beach at the Mole Basin transformed into a leisure space (Namibian Scientific Society, n.d.).

Figure 1.67
Mole Basin, Swakopmund

- Parking lot appropriated by food trucks.
- Fishing vessel launch point.
- Erf of demolished public Olympic-sized swimming pool.
- Beach
- Playground
- Strand Hotel
- Government Housing
- SITE: Swakopmund Museum
- End of Arnold Schad Promenade
- Lighthouse
- Kavita Craft Market
- Presidential House
- Tennis courts



SITE PLAN

Note. A site analysis of the Bead, at the Mole basin, Swakopmund (Author, 2024).

HERITAGE SIGNIFICANCE

Swakopmund’s Central Business District is well known for its colonial-era German architecture, resulting in a juxtaposed environment where buildings seemingly have been copied from Germany and duplicated in an African setting. An exciting atmosphere attracts tourists worldwide to experience a ‘little Germany’ in Namibia. However, new developments within the conservation zone (fig. 1.69) have to ensure that they relate to the surrounding context as guided by the predominant colonial representation of knowledge.

Swakopmund Mole, where the Swakopmund Museum is located, is a site of great historical importance of colonial German trade. According to Vogt (2020), the area has a limited heritage value despite its location within the historic harbour area. The only structures with significant value from the colonial era are the Badehaus, the lighthouse, and the former customs shed (fig. 1.68). The Badehaus was a bathing facility that was eventually demolished and replaced with a public Olympic-sized swimming pool, which, like its predecessor, held minimal heritage value and was also demolished without any backlash from the community. Furthermore, the colonial-era customs shed was demolished, and a museum was constructed in 1958 on the remaining foundations. The remaining structures that can be argued to have heritage value are the existing Swakopmund Museum building and the lighthouse. The lighthouse, however, is non-functional with the introduction of GPS technology communicating with ships, while the museum building has severely been adapted and manipulated through the years.

According to Vogt (2020), new developments constructed in the area would have a minimal impact on the surroundings due to the transformation the area has undergone and ultimately losing much of its aesthetical identity. Despite the low historical value of the Mole Basin area, it remains one of the most popular recreational settings in Swakopmund, with beaches, tourist attractions

scenic ocean views that hold strong community attachment. As the town developed, it maintained a low and unobstructed skyline to preserve its identity as a seaside resort and avoided visually intrusive developments (fig. 1.68). Vogt (2020) stressed that future developments should align with this aesthetic requirement rather than creating exclusive and private recreational sites. Architectural sensitivity to building height is essential to ensuring the development complements the surroundings.

While respecting the town’s heritage value is essential, this project aims to juxtapose the colonial representation of knowledge, especially in static historical architecture, with the dynamic nature of Indigenous knowledge representation through making. Through this making process alternative forms are found as a result of this juxtaposition.

Figure 1.68
Mole Basin, Swakopmund



Note. Historic photograph depicting the Badehaus, custom shed and lighthouse (n.d.).

Figure 1.69
Conservation Zone



Note. A zoning scheme of Swakopmund CBD marking the Conservation zone (Swakopmund Municipality, n.d.).

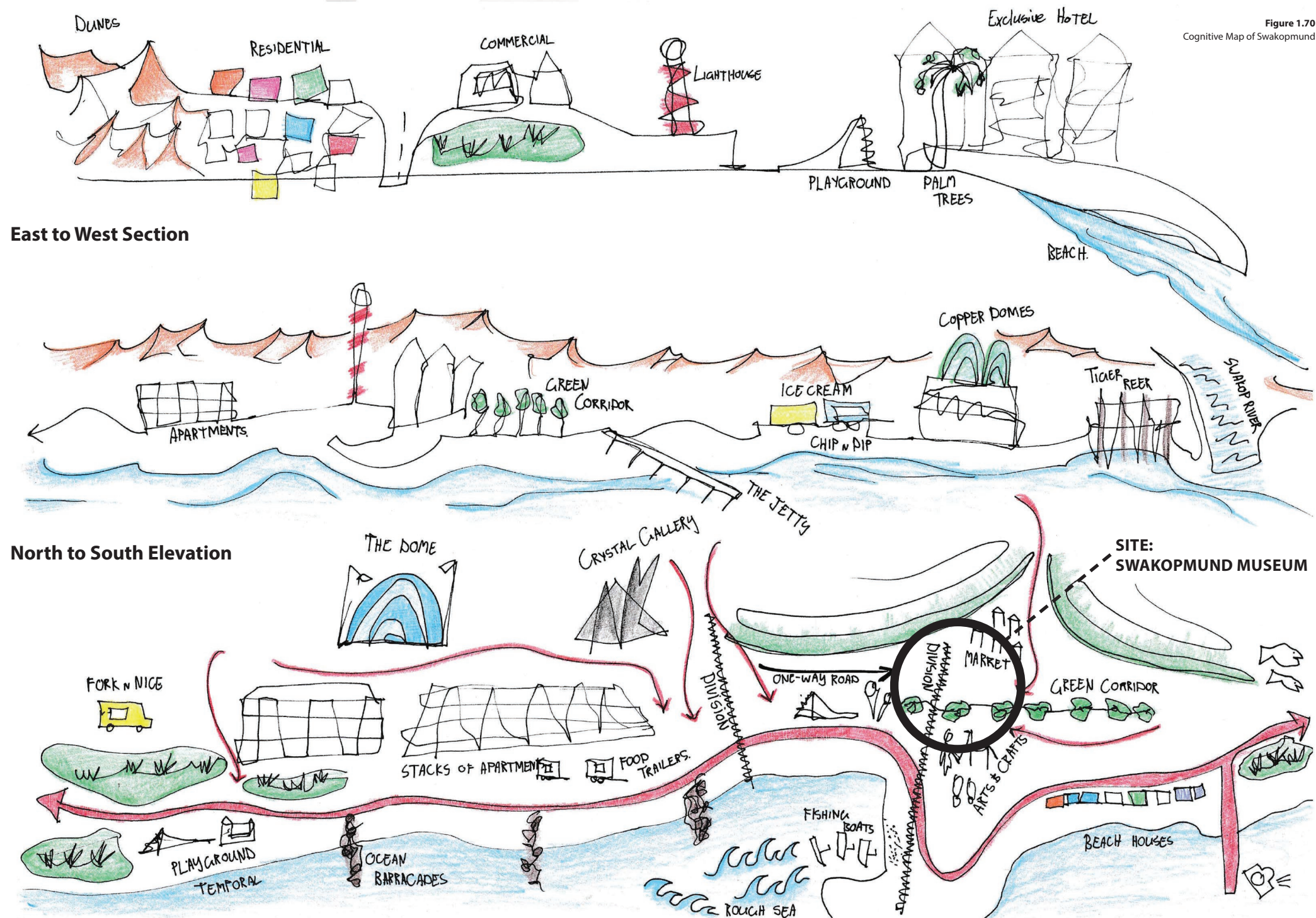


Figure 1.70
Cognitive Map of Swakopmund

COGNITIVE MAP ALONG THE ONYOKA TRAIL

A cognitive map (fig. 1.70) was made as a method of site investigation by moving along the coastal promenade and into the town's Central Business District. The map indicates areas and characteristics that stood out and how the site is experienced with boots on the ground.

The East to West section displays how visitors from the country's interior travelled into Swakopmund. One filters through the Namib desert through the dunes and into low-scale residential or industrial neighbourhoods. As the proximity to the ocean closes, the traveller moves past the commercial area in the CBD and into the Mole basin. The mole is identifiable by the lighthouse serving as a marker in the landscape, a popular playground, exclusive hotel development and the beach. The mole is scattered with tall palm trees. More interestingly, the Swakopmund Museum was not sketched. This could be due to its lack of identity and introversion with its lack of permeability.

The North to South elevation will be a typical view if one takes a boat tour along the coastline. From the North, the mole is bordered by low-rise apartment buildings. The lighthouse is a point of hierarchy guiding your eye to the Mole Basin. The coastal promenade is famous for its lush green gardens and large palm trees. The colonial jetty punctures the ocean and facilitates the juxtaposition between land and sea. Furthermore, street food can be acquired from food trucks dispersed along the promenade. Finally, the journey ends at the Swakop River mouth, where the story of Onyoka making begins as a place of extracting seashells.

On plan, the coastal promenade meanders along the coastline past the beach houses and the Mole basin, where the Swakopmund Museum is located. However, a stark boundary is found blocking the way in the form of an exclusive hotel called the Strand Hotel. After navigating one's movement around the hotel, you get to the only safe beach to swim in. The mole provides a launching ramp for fishing boats and other vessels to be placed into the water. Through all this meandering, one might walk past the Kavita

Craft Market located behind the hotel in its own corner. The mole basin is well framed by the hotel to the South and the large apartment complexes to the North. Moving past the mole and a couple of kilometres North to the Platz am Meer Mall, one filters through a beautiful green garden juxtaposing the harsh desert landscape.



Swakopmund Lighthouse: Initially constructed in 1903 to a height of 11m, it was extended in 1910 to 28m. It formed part of a beaded string of lighthouses along the African coastline marking the harbour and warning ships about their proximity to the deadly Skeleton coastline.

Playground: The playground is very popular among children of all cultural backgrounds, especially on weekends and holidays. However, with the intensive use over the years, some of the play structures have fallen into disrepair, and the overall playground has become dilapidated.

Palm Gardens: Similar to the Onyoka necklace, the palms found along the pathways of Swakopmund create a rhythmic experience as one moves from one space to another. The palms create cohesion between juxtaposed spaces.

Swakopmund Museum: The museum was first opened on 17 December 1951 and is popular among international tourists while displaying artefacts ranging from industrial machines, colonial firearms to wild life and static, non-contextual indigenous exhibits.

Kavita Craft Market: Onyoka necklaces can be bought here, however they are made at the homes of artisans due to the lack of facilities and tools to facilitate the making process. Other crafts are also sold here ranging from textiles, wooden sculptures, stone artefacts and more. Unfortunately, the market is found behind the Strand Hotel and with little tourist activity.

Swakopmund Promenade: The coastal promenade functions similar to the fishing line found in the Onyoka. It stretches from the Swakop River mouth in the South to the Platz am Meer mall to the North of the town and connected different beads (points of interest). The museum is situated along this route which is popular among tourist, joggers, school learners or visitors.

Retail: On the ground floor of the Strand Hotel can be found souvineer shops, icer cream and a selection of several restaurants. These shops open up to the promenade, selling to tourist or locals passing by.

Strand Hotel: The initial Strand Hotel was a lot smaller. The new Strand Hotel opened in 2015, and serves local visitors and international tourists.

Beach: The is popular among local residents and visitors from the interior of Namibia, especially during the hot summer months. Volley ball and other sports events are frequently hosted in the beach.

The Pier Wall: The pier wall was constructed in 1900 to create a calm harbouring point for colonial ships. The Mole is one of the only safe swimming areas in Swakopmund.

Atlantic Ocean: The Namibian coastline borders againsts the Atlantic Ocean to the West. The water is mostly cold and famous for the Beguela current which is rich in nutrients, attracting fish.

Public Seating: Public seating can be found along the pier wall, however the benches have recently been removed to deter homeless people from sleeping there.

View Point: At the end of the pier wall is a beautiful view point that overlooks the ocean and creates a visual connection to the sand dunes to the South of the town.

Boat Launch: Scenic boat tours or fishing vessels launch from this point. Tourist or local can book a fish tour with one of the companies and experience Namibian fishing on the sea. Crowds usually gather to observe how the boats operate in the rough seas.

The Mole, Swakopmund

Figure 1.71
The Mole basin, Swakopmund

Note. An elevational photograph showing the site and surrounding context (Author, 2024)

CONCLUSION

Analysing Swakopmund at the three scales, namely Seashell Landscape, Onyoka Trail, and the Bead, showcases the complex cultural, historical and environmental layers that juxtapose the past and present identity of the town. Swakopmund's positioning between the Namib Desert and the Atlantic Ocean influences its architectural response to the harsh environment and tests its resilience and adaptation. The setting holds significant cultural value to not only the German population, but the Oshiwambo people and the artisans who make the Onyoka strings, as well. From the historic expeditions to the harvest of the rare *Conus Bertulinus* shell, the Oomba and Onyoka necklace's making and its modern interpretation as a souvenir highlights the evolving nature of cultural artefacts. The Onyoka necklace symbolises more than artisanal skill and craft; it represents the Aawambo woman's life stages, from marriage to motherhood and mourning. Each Bead tells a story parallel to the town's historical and architectural elements layered with the juxtaposition between static colonial knowledge and contemporary developments, resulting in a transformation of heritage which should acknowledge colonial architecture and indigenous knowledge of making.

The static displays at the Swakopmund Museum and the dynamic semi-formal exchanges at the Kavita Craft Market could inspire an inclusive architectural approach that integrates formal and semi-formal modes of cultural representation.

Figure 1.72
Drilling the beads



Note. A photograph of an Onyoka maker hand drilling holes through the beads to be threaded onto a string. (Author, 2024)

Figure 2.1
Wooden Souvenirs



Note. Wooden artefacts sold at the Kavita Craft Market (Author, 2024)

CHAPTER 2 / KNOWLEDGE SPACES

This chapter aims to understand the significance of the Kavita Craft Market and the Swakopmund Museum's juxtaposing exhibition spaces. It examines the market's importance for cultural representation and how the two exhibition spaces can be integrated. Furthermore, it explores precedent studies to investigate the integration and distribution of the four knowledge spaces in an exhibition context.



The juxtaposition of the Swakopmund Museum exhibition spaces (fig. 2.3) and the Kavita Craft Market (fig. 2.2) results in a dynamic contrast between formal and semi-formal curation. The museum exhibition is carefully regulated and designed by a small group of curating staff to ensure the protection and presentation of sensitive and historically valuable artefacts. However, the biases of these curators can influence how these displays are represented and ultimately, how cultures are experienced. In contrast, the Kavita Craft Market provides a more inclusive and flexible approach whereby artisans can curate their own spaces, resulting in ever-changing displays of contemporary artefacts and keeping the exhibition spaces exciting.

The proposed museum typology juxtaposes both exhibition spaces. It recognises the need for formal displays of historic artefacts while encouraging the craft market's dynamic hands-on approach to exhibiting and selling contemporary crafts. This method of integrated exhibition creates a deeper and more meaningful visitor experience and allows all of Namibia's cultures the opportunity to be represented.

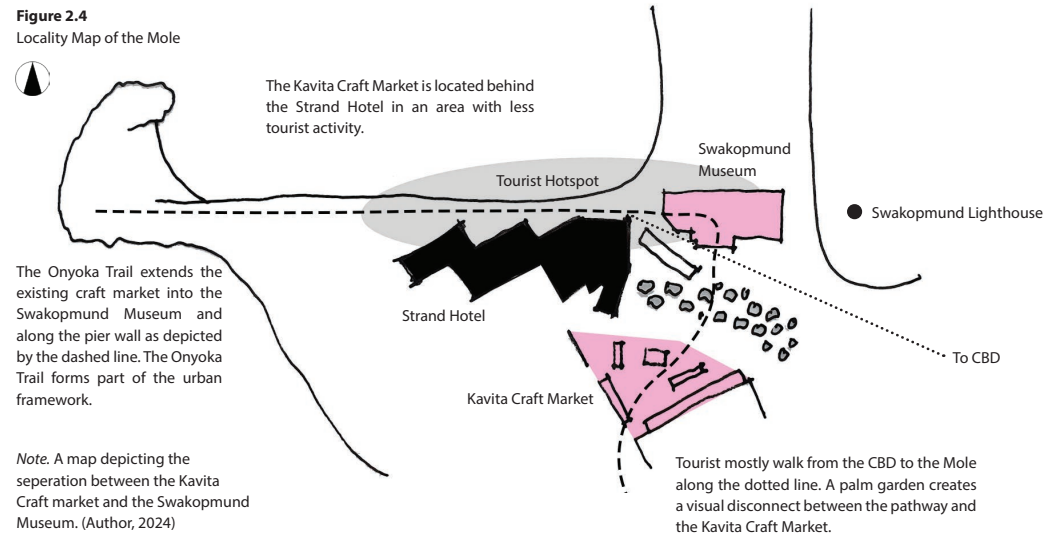


Figure 2.2
Kavita Craft Market as Exhibition



Note. Artefacts exhibited and sold by traders and artisans at the Kavita Craft Market (Author, 2024).

Figure 2.3
Swakopmund Museum as Exhibition



Note. Historical knowledge displayed in the Swakopmund Museum in a static and removed from context (Author, 2024).

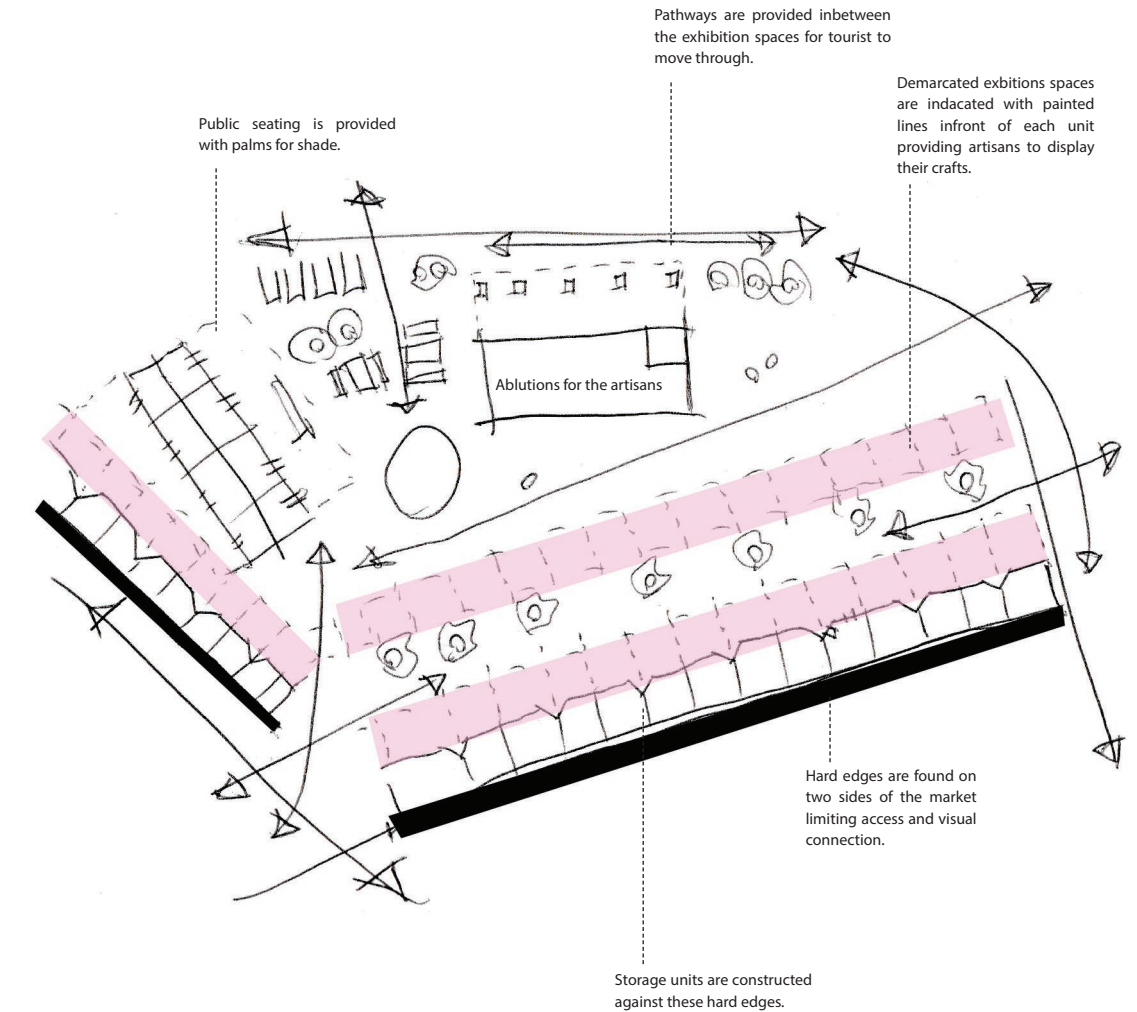
KAVITA CRAFT MARKET

The Onyoka necklace can be bought from the Kavita Craft Market in Swakopmund (fig. 2.4). However, wooded items, stone crafts, textiles and other artefacts can also be acquired here. The traders had always been in conflict with the towns residents as they illegally appropriated space at the Mole to sell their crafts to tourists. They have always been moved from one sidewalk to another and never found a place. A dedicated space was recently constructed for the artisans (fig. 2.5), but there is less tourist activity in the back-of-house space of the Strand Hotel. Some artisans still set up their stalls closer to the museum building by appropriating the space to be closer to the tourists.

The Swakopmund Municipality did invest in the constructed market space. Thus, the idea is not to demolish the space but rather extend the existing market into the museum building and along the pier to create a market promenade called the Onyoka Trail (fig. 2.4).

The market consists of storage spaces for each artisan and a demarcated space in front of each unit where they place all their craft on the paved surfaces in the act of exhibition. All their items are moved back to the storage unit in the evening for safekeeping.

Figure 2.5
Plan of the Kavita Craft Market



Note. A plan drawing by the author to explain the market space. (Author, 2024).

In 1950, Dr Alfon Weber, a dentist, won a local competition to establish a museum in Swakopmund. He used the £5 prize money to buy coffee and send it to a former resident, Lieutenant Paschasius, in Germany in exchange for memorabilia (Swakopmund Scientific Society, n.d.). Paschasius enthusiastically sent the first artefacts that initiated the museum. Dr Weber continued collecting items through advertisements and visits across Namibia, acquiring more historical artefacts. It was challenging to gain investments, but he creatively raised money by participating in theatre. The museum was initially opened in December 1951 in Dr Weber’s shed but quickly grew and moved into the former German Colonial Customs Shed (fig. 2.6), where it is today.

The Customs shed was constructed to import and export goods into and out of Namibia (formerly known as South West Africa). A crane would move on a rail track along the pier wall and to the shed. Here, the goods would be unloaded, checked and distributed throughout the country. 1914, the Customs shed was severely damaged when a British battleship bombed it (fig. 2.7). It stood in ruins until 1960, when it was converted into the Swakopmund Museum (Louw, 2024). The ruins were demolished, and the museum building was newly constructed on the existing foundations of the Customs shed. The museum displayed Dr Alfons Weber’s collection, which consisted of a reading room, a writing room, and an exhibition space (fig. 2.8 and 2.9).

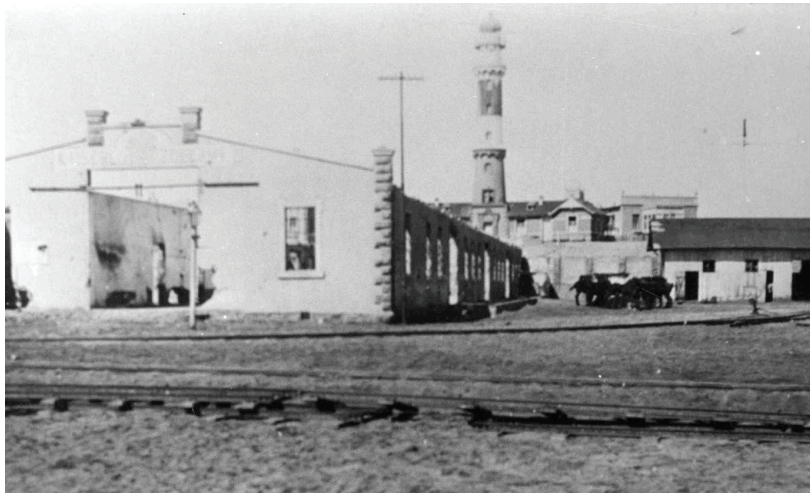
A large portion of the museum is used to display Namibia’s natural landscape, cultural history, and ethnic groups. However, these artefacts are removed from their contexts and frozen in time. The Onyoka from the 1900s is not the same as the Onyoka from today, and thus, it is important to create a dynamic museum environment that allows artefacts to evolve and cultures to be represented through time.

Figure 2.6
German Colonial Customs
Shed



(Namibian Scientific Society, n.d.).

Figure 2.7
Shed in Ruins



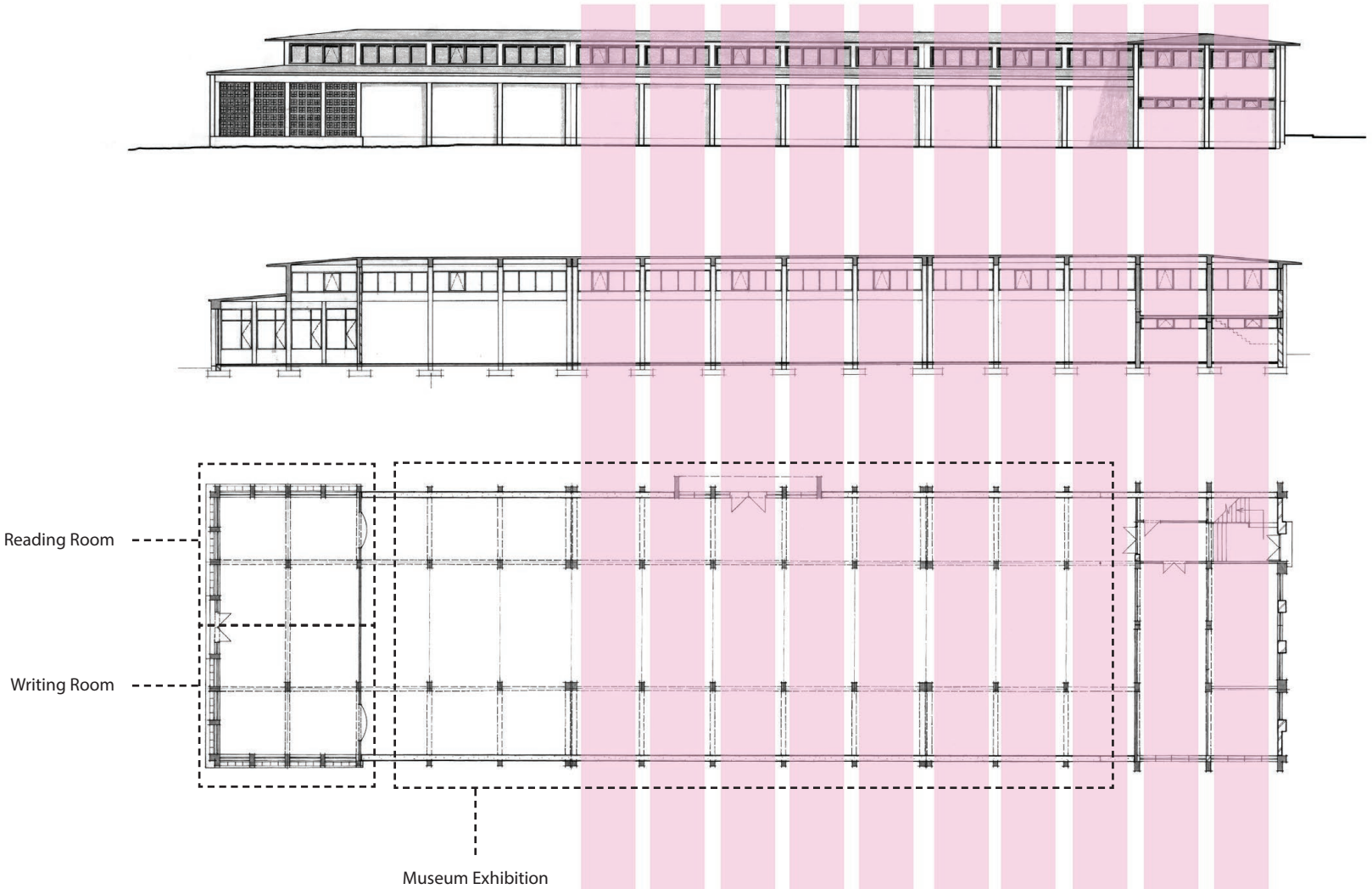
(National Archives of Namibia, n.d.).

Figure 2.8
Swakopmund Museum of 1960

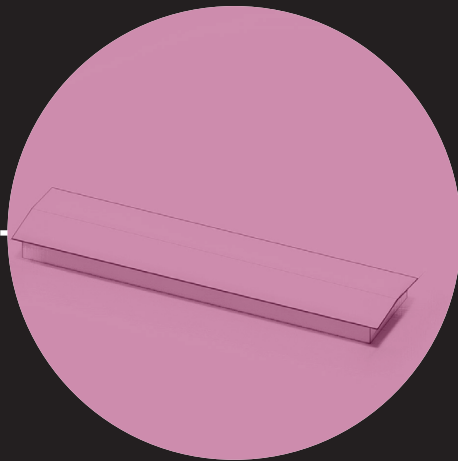


(Namibian Scientific Society, n.d.).

Figure 2.9
Plans of the Museum building
as constructed in 1960

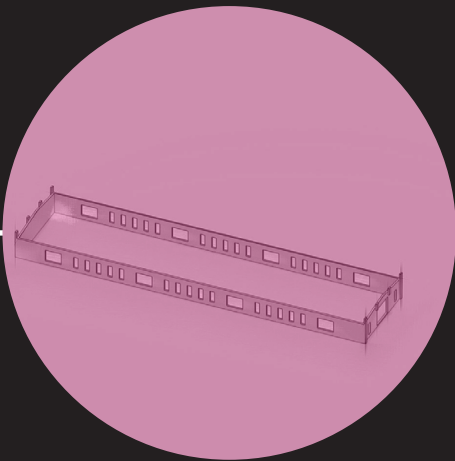


Note. The plans depict the structural layout of the initial museum building similar to the rhythm of the Onyoka necklace. (Swakopmund Municipality, 1981).



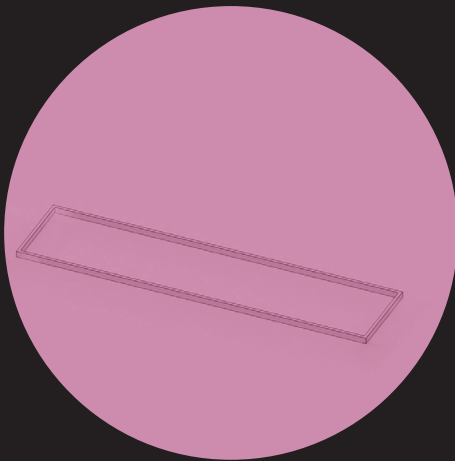
01 | COLONIAL CUSTOMS SHED

The German colonial customs shed was constructed at the Mole Basin with the pier wall in the early 1900's to process goods imported and exported at the harbour by the Germans.



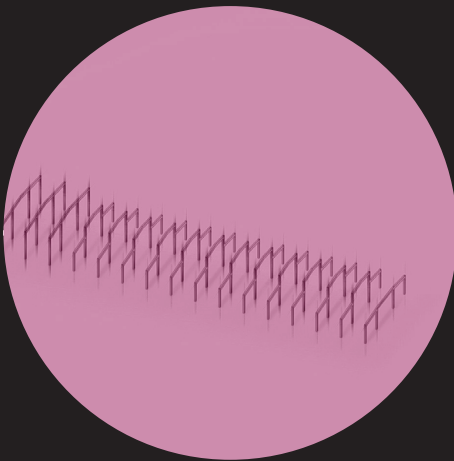
02 | RUINS

After the Custom Shed was bombed by a British Battleship in World War 1, it stood in ruins for years. Later it was demolished with only the foundations remaining.



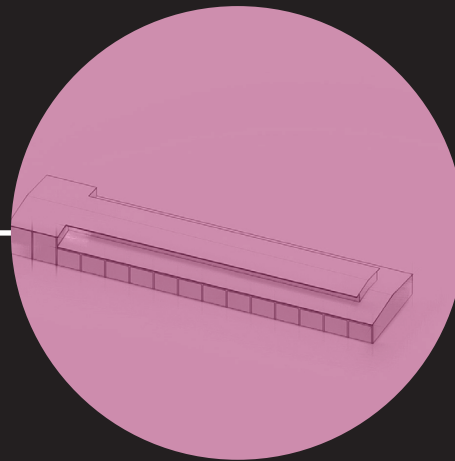
03 | DEMOLISION

The remaining foundation of the Customs Shed was not demolished, but later became the footprint for the initial museum building.



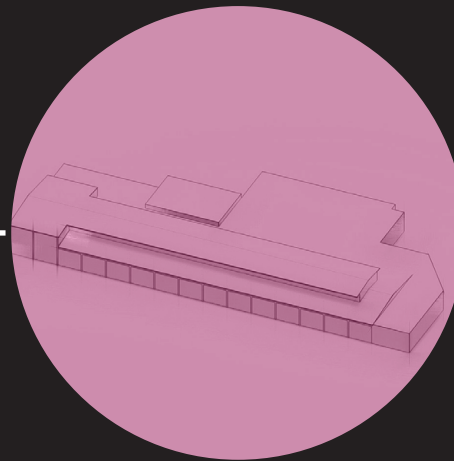
04 | REBUILDING

In 1958, a new museum was constructed on the remaining foundations of the former Customs Shed. Concrete portal frames provide structure to the building.



05 | INITIAL MUSEUM

The initial museum was linear in form with only one entrance at the side of the building. It housed a reading room, writing room and exhibition space.



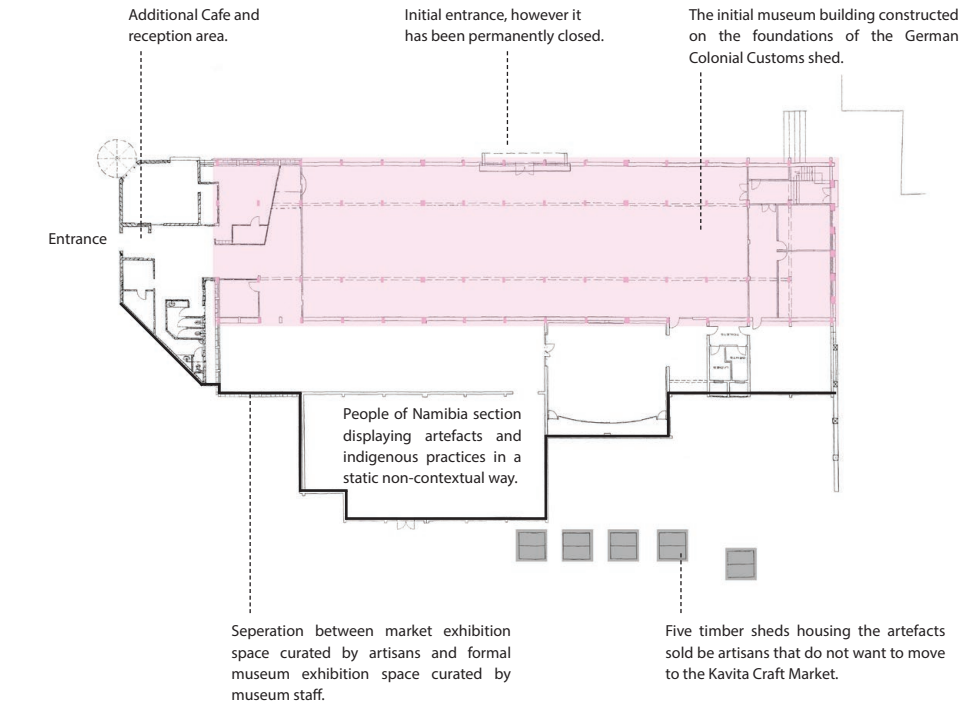
06 | ALTERATIONS

As the years moved on and the Museum needing more space and facilities it was extended into a form that reduced much of the identity from the initial museum building.

Figure 2.10
The evolution of the German Colonial Customs Shed

Note. Images showcasing the phases of the museum buildings transformation through the years (Author, 2024).

Figure 2.11
The Existing Museum building
of 2024



Note. The museum building has evolved over the years with the additions of spaces (Swakopmund Municipality, 2005).

Over the years, the Swakopmund Museum transformed from a once rhythmic structure similar to the repetitiveness of the Onyoka necklace (fig. 2.11) to an amalgamation of spaces attached to it like parasites. After Namibia's independence, a "People of Namibia" section was added to satisfy the new post-apartheid government (Schildkrout, 1995). As required, a cafe, toilets, shop, hall, and offices were added to the existing structure. Today, the museum buildings stand unrecognisable from their former heritage of being an Imperial Colonial Customs shed (Louw, 2024). More interesting is the juxtaposition of the five artisans' stalls clinging next to the museum building in hopes of attracting some tourists on their way to the museum exhibition. Why the separation of different exhibition spaces? The proposed museum typology aims to integrate both and create a unified Namibia identity.

Figure 2.12
Swakopmund Museum in
2024



Note. The western facade of the Swakopmund Museum in 2024 (Author, 2024).

Figure 2.13
German Colonial Customs
shed after bombing



Note. The western facade of the German Colonial Customs shed after bombing (National Archive of Namibia, n.d.).

PRECEDENT STUDIES

The following precedent studies will provide insights into using and distributing the four knowledge spaces. Namely, displayed, performed, shared, and stored knowledge. The study will investigate three projects that include these four spaces that are integrated and function together. The juxtaposition between the different types of exhibition spaces is also studied, and the overlapping of workshop spaces with sensitive exhibition spaces explored. The precedent selection is worldwide to get a holistic understanding stretching from the Global North to the Global South with a local precedent within Namibia. These precedents should provide insights into developing the proposed alternative museum typology.

Displayed Knowledge - Knowledge is represented through the display of static artefacts.

Performed Knowledge - Knowledge is represented through the performance of making, either artefacts or other cultural expressions.

Shared Knowledge - Knowledge is represented through oral or visual instructions.

Stored Knowledge - Knowledge is represented in mediums encapsulated in a certain time for future use.

Four user types will be used to investigate and compare these precedents: makers, exhibitors, sharers and observers. The makers are composed of people crafting artefacts or performing cultural expressions. They share their knowledge through performances and use spaces such as workshops, studios and theatres. The exhibitors display their knowledge through static artefacts, which can be found in exhibition spaces or markets. The sharers present their knowledge orally or visually showcasing their knowledge. They make use of spaces such as amphitheatres or cultural gathering spaces. The observers are the people moving through these knowledge spaces, absorbing the knowledge of artefacts or other cultural expressions.

MUSEUM OF MAKING AT DERBY SILK MILL

Architect: Bauman Lyons Architects
Location: Derby, England
Date: 2021

The Museum of Making is facilitated within the old Derby Silk Mill, which is widely regarded as the first modern factory in England. It attempts to tell a 300-year history of making to inspire future innovations and creations. The building consists of exhibition spaces, workshops, and maker spaces and hosts activities and events.

Historically, the old factory was strategically positioned along transport networks, including the Derwent River and major highways. Although the factory is not operational anymore, its central position in the urban context is connected well to pedestrian pathways which make it convenient for observers to visit (fig. 2.14). What makes this museum more dynamic than other museums is its making spaces and workshops, as depicted in fig. 2.15, where visitors can also engage and learn about making via application. However, exhibitions of static artefacts are essential as these display the evolution of making through time and the innovations that come with it (Fig. 2.16). In fig. 2.18, the horizontal distribution of knowledge space along the plan can be understood. These spaces are sequenced linearly, one after the other, and each separated from the other. This separation can also be seen in the sectional diagram (Fig. 2.17), whereby the maker spaces are isolated from the exhibition spaces. This could be due to safeguarding sensitive artefacts from the dynamic-making process in the workshops. It also prevents noise and dust pollution from entering the exhibition spaces.

Four user types of the museum can be identified in fig. 2.19. First are the makers who only use the maker spaces and are excluded from the rest of the programme. The administrative staff have access to all spaces, while the observer (visitors) can enter exhibited and shared knowledge spaces but are excluded from the maker spaces for safety reasons. This, unfortunately, disconnects the performed (making) knowledge from the exhibit knowledge (artefacts). Lastly, there are the sharers, who again only use the shared knowledge spaces detached from the performed and exhibited knowledge spaces.

Figure 2.14
Locality Map of the Museum of Making, England

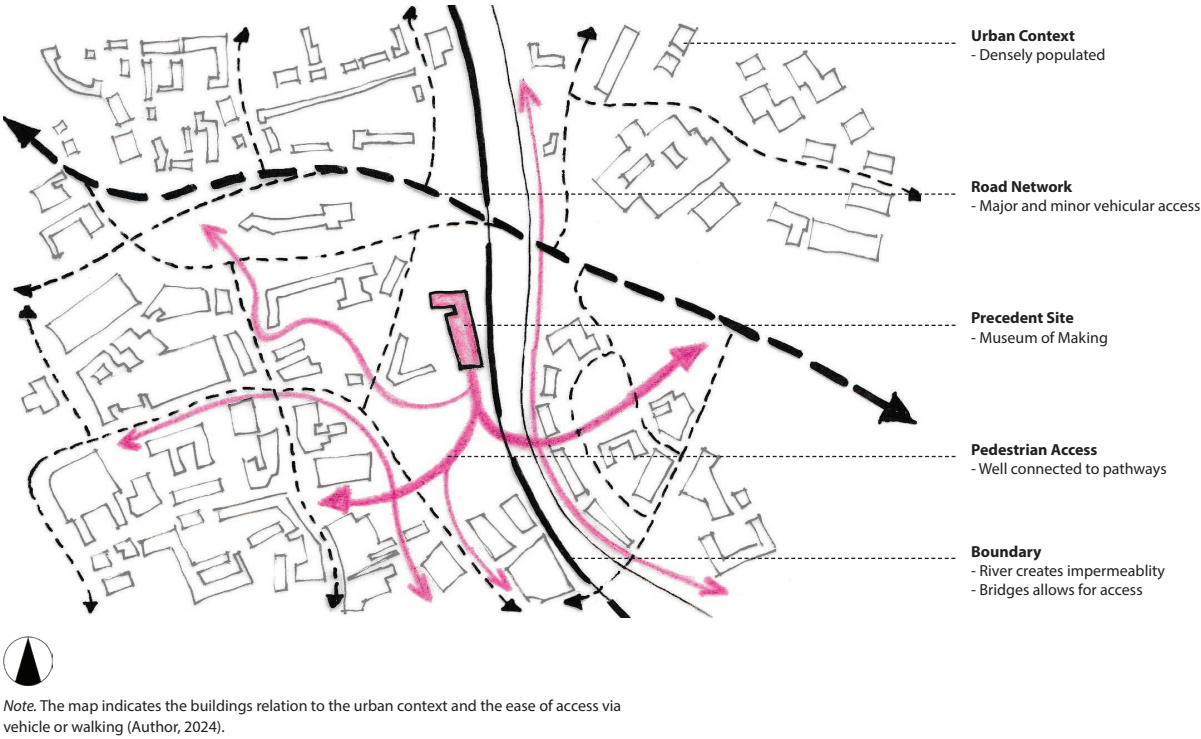


Figure 2.15
Makerspace found within the Museum of Making, England



Note. The photograph displays a workshop environment where children and adults can engage in making and sharing of knowledge (RIBA, 2023).

Figure 2.16
Static exhibition space found within the Museum of Making, England

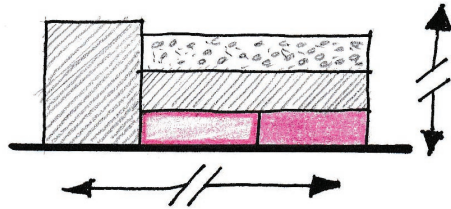


Note. The photograph reveals an exhibition space displaying static artefacts (RIBA, 2023).

The contemporary museum is enclosed by the envelope of the historic Silk Mill building; thus, the aged face brick material shows a beautiful and evolved patina of the building through time. An additional extension to the existing building features a glass envelope that contrasts starkly to the existing (fig. 2.20).

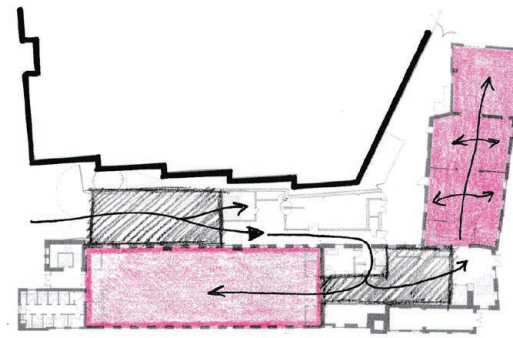
Overall, the museum attempts to be more dynamic and interesting to visitors by including makerspaces and workshops but fails to integrate the different knowledge spaces to contextualise the artefacts, making process and the stories of making.

Figure 2.17
Sectional diagram of the Museum of Making, England



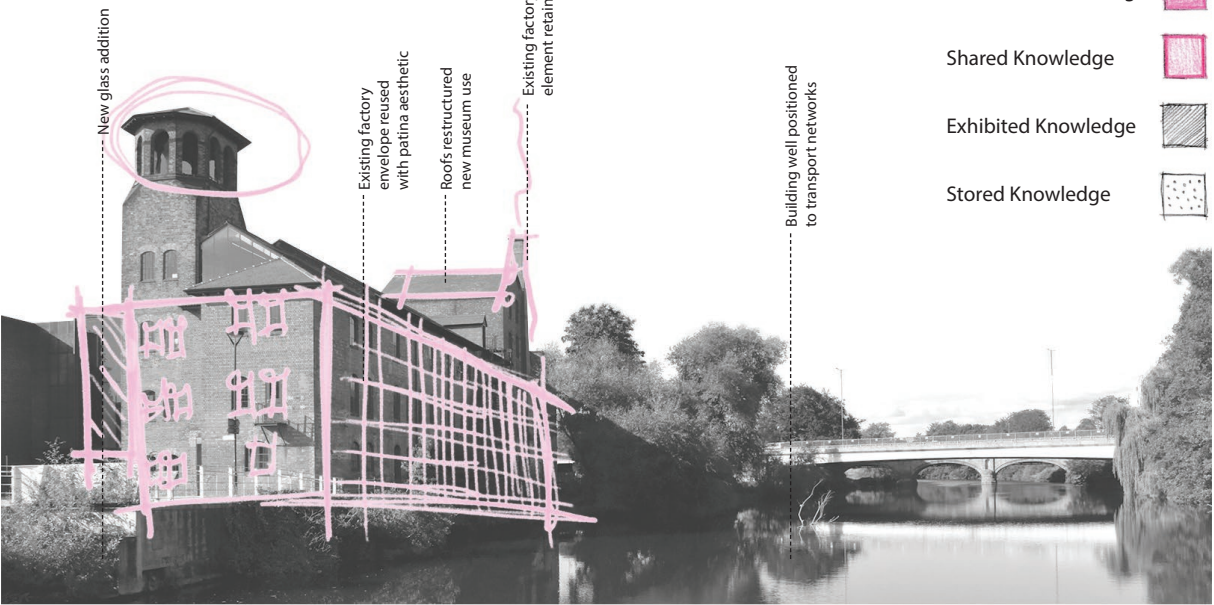
Note. Sketch depicting the horizontal and vertical distribution of knowledge space and their segregation (Author, 2024).

Figure 2.18
Plan of the Museum of Making, England



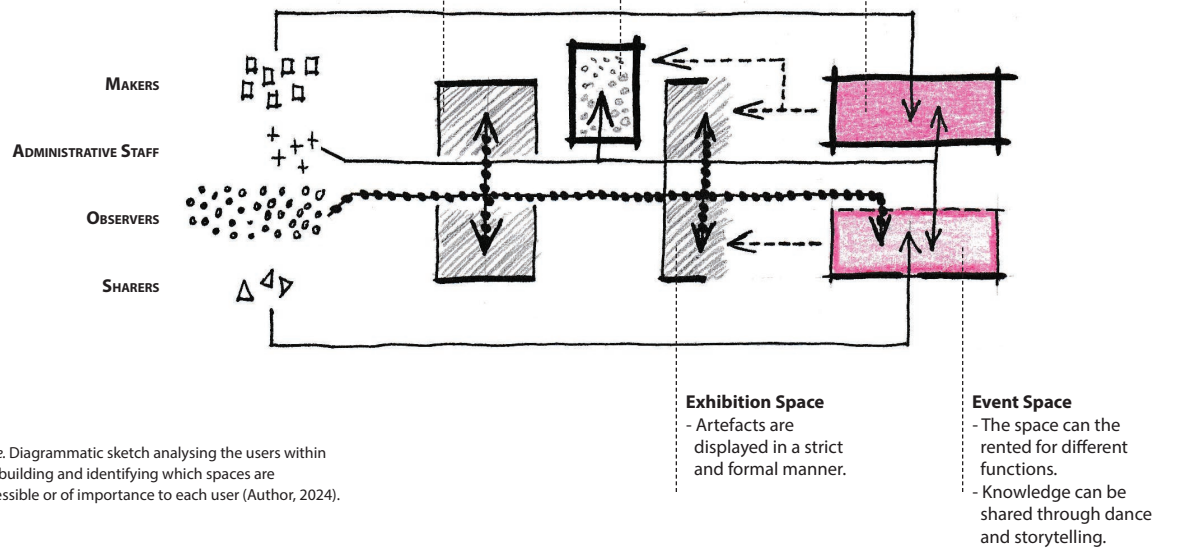
Note. Plan drawing depicting the horizontal distribution of knowledge space and their sequencing (Author, 2024).

Figure 2.20
Mass and materials forming part of the Museum of Making, England



Note. An analytical sketched overlaying an exterior photograph identifying and analysing the structure and materials that make up the construction of the building. (RIBA, 2024).

Figure 2.19
Analysis of knowledge spaces within the Museum of Making, England



Note. Diagrammatic sketch analysing the users within the building and identifying which spaces are accessible or of importance to each user (Author, 2024).

THE WATERSHED

Architect: Wolff Architects

Location: Cape town, South Africa

Date: 2014

The Watershed in Cape Town is a business hub incubator established within an old industrial shed. The architect provided public space to visitors by turning the inaccessible shed into a street market. The building consists of numerous small flexible market stalls on the ground floor and rentable office spaces and workshops on the upper floors.

The old shed was positioned along the ship docks for industrial purposes; however, it fell into disuse and was considered for adaptive reuse as the waterfront developed into a public space. The shed runs along the docks and connects the pathways on each end to create a prominent pedestrian pathway with stalls adjacent to it (fig. 2.21). The market stalls, as depicted in fig. 2.22, can be understood as a form of artefact exhibition. The observers can freely move through these exhibition spaces, engage with the displays, or acquire some. Fig. 2.23 displays the connection between different levels through voids. The architect intended for small and large businesses on these levels to observe and learn from one another through this vertical Shared knowledge space. The sectional diagram (fig. 2.24) indicates the distribution of knowledge spaces vertically and how the voids create visual connections; however, still physically separate the spaces through levels. On plan (fig. 2.25), the horizontal distribution of knowledge spaces on the ground floor is analysed. Vendors displaying their items can reconfigure their space to display their exhibitions best.

Three user types are identified within the Watershed (fig. 2.27). The Makers in this business incubator can be seen as the people of the different enterprises “making” business. The Makers can also be Observers learning from other Makers to improve their business. The Exhibitors are found on the ground displaying their artefacts to be sold. At the same time, the Observers are tourists or locals visiting the Watershed and engaging with businesses and markets on different levels.

Figure 2.21
Locality Map of the Watershed, Cape Town

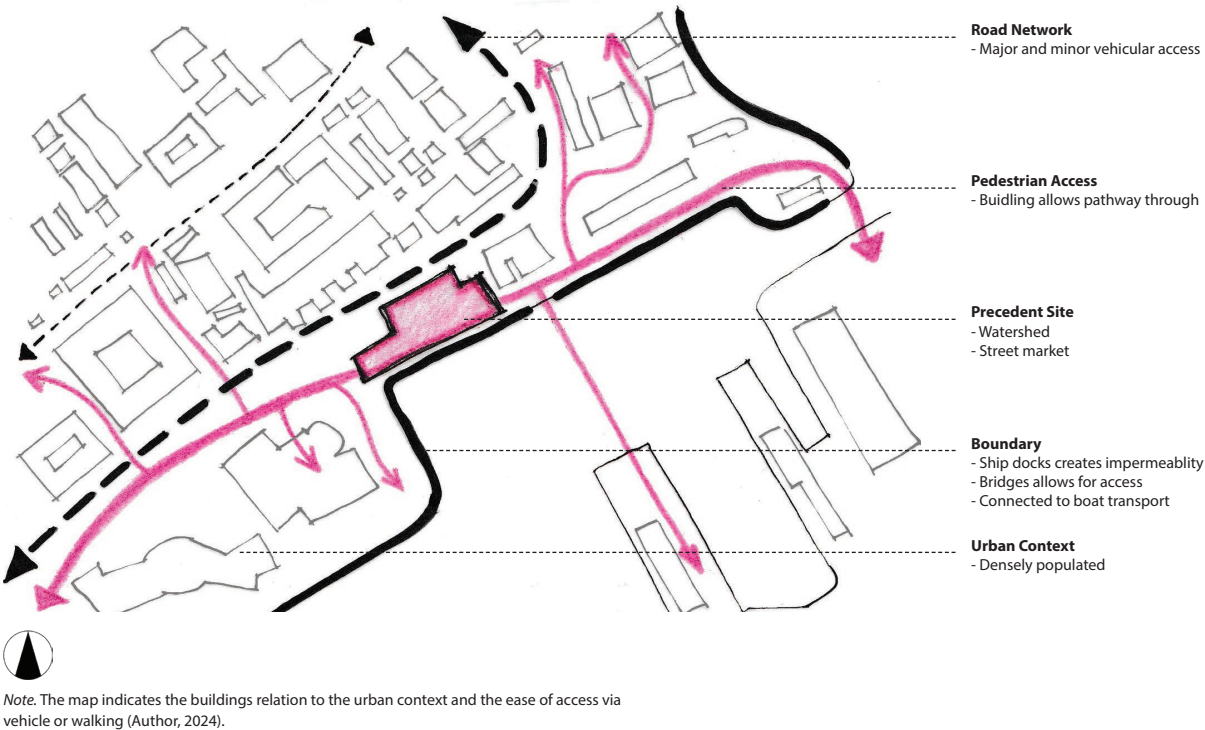


Figure 2.22
Promenade through the Watershed, Cape Town



Note. The urban promenade stretches through the building with flexible market spaces along it (Wolff Architects, n.d.).

Figure 2.23
Levels above the ground floor of Watershed, Cape Town

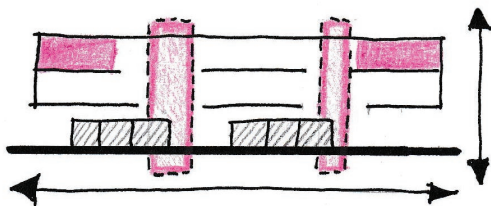


Note. All levels are connected with voids stretching vertically (Wolff Architects, n.d.).

The new business incubator takes an adaptive reuse approach whereby (fig. 2.26) the existing steel structure is kept in place, and new cladding is wrapped around the structure. New steel floors are hung from the existing gantry in the shed to use the double-volume space. The ends of the shed are left open to invite Observers.

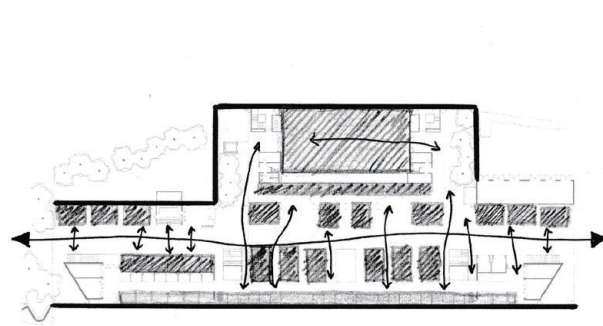
Overall, the Watershed successfully engages with the surrounding urban context and connects different pathways by creating a “street” through the building. Exhibitors can appropriate flexible exhibition spaces, which provide them with a sense of ownership, while the visual connection between different floors provides an educational and inclusive economic environment.

Figure 2.24
Sectional diagram of the Watershed, Cape Town



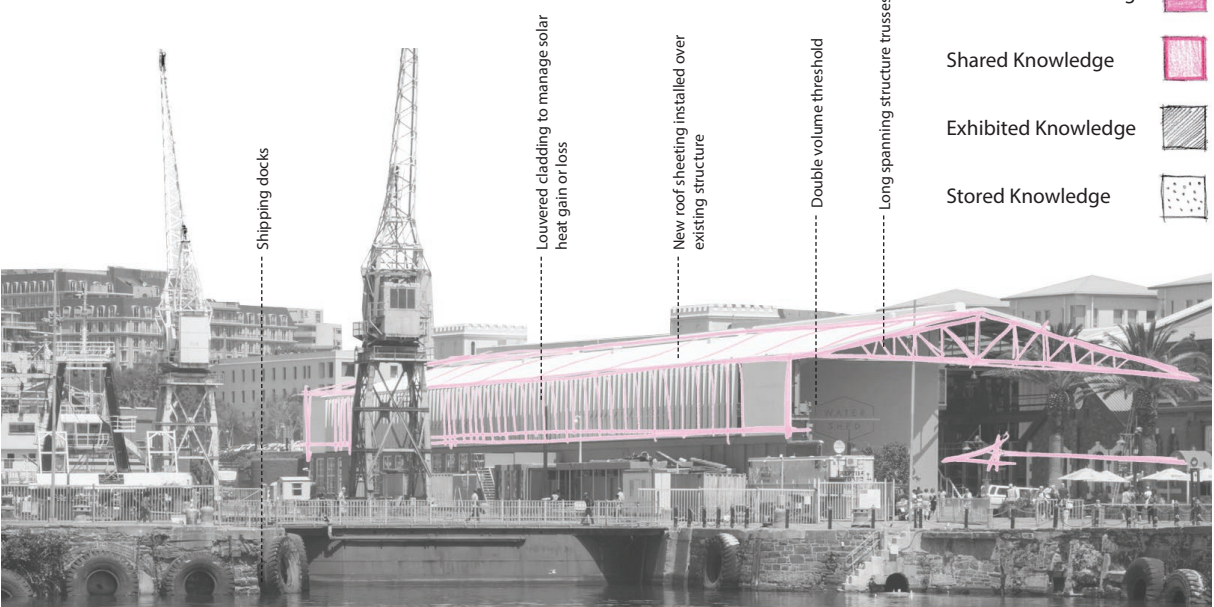
Note. Sketch depicting the horizontal and vertical distribution of knowledge space and their connections (Author, 2024).

Figure 2.25
Plan of the Watershed, Cape Town



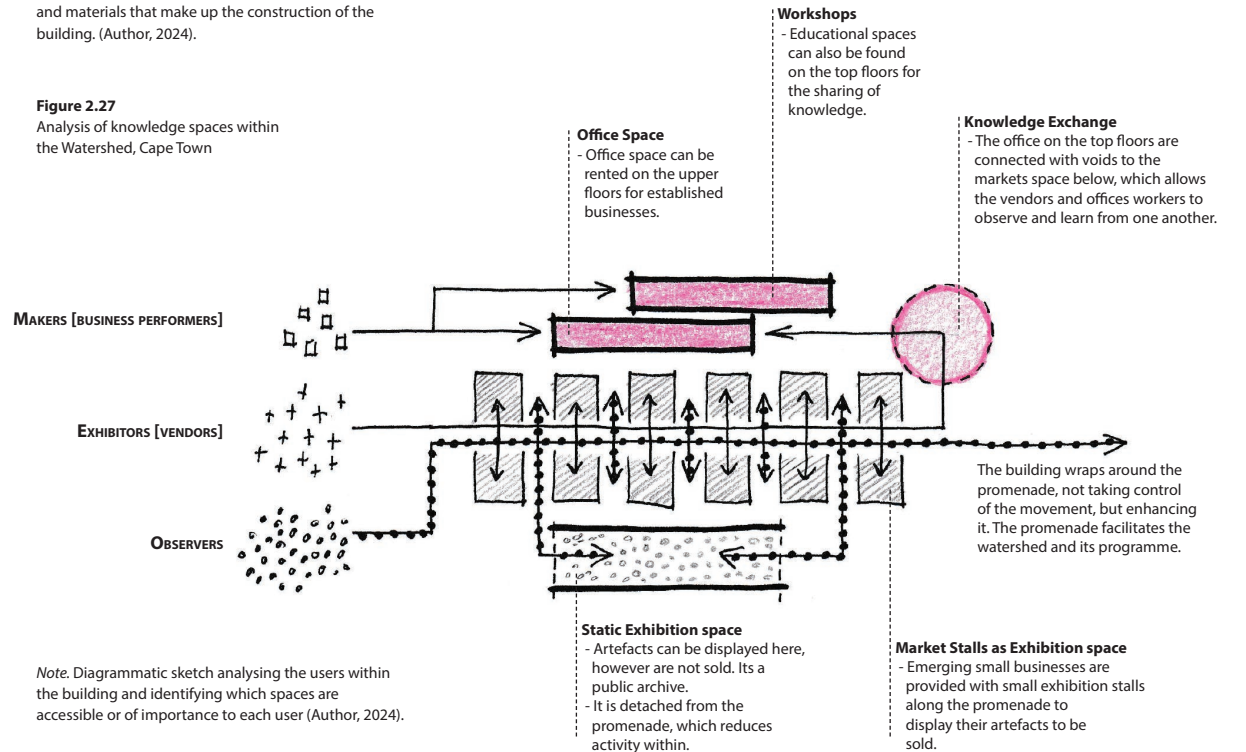
Note. Sketch depicting the horizontal distribution of knowledge space and their connections (Author, 2024).

Figure 2.26
Mass and materials forming part of the Watershed, Cape Town



Note. An analytical sketched overlaying an exterior photograph identifying and analysing the structure and materials that make up the construction of the building. (Author, 2024).

Figure 2.27
Analysis of knowledge spaces within the Watershed, Cape Town



Note. Diagrammatic sketch analysing the users within the building and identifying which spaces are accessible or of importance to each user (Author, 2024).

COSDEF ARTS AND CRAFTS CENTRE

Architect: Hugo Scheepers Architects
Location: Swakopmund, Namibia
Date: 2013

The COSDEF Arts and Crafts Centre is a skills development facility that provides training to people without a formal education background. With the skills gained, students can create their own economic opportunities. The centre accommodates training studios, an open market space, rentable workshops, an amphitheatre, and other retail spaces.

The centre has a great purpose. However, there is one major flaw. It is located on the outskirts of the town and within the industrial area where little to no tourists or other Observers visit (fig. 2.28). The building is also observed to be very impermeable, but this is due to its location within the open desert where sand blows from all directions. Interestingly, the facility has educative studios where skills are transferred through a practical method within the Shared knowledge space (fig. 2.29). These skills include leatherwork, jewellery, welding, etc. The centre also includes space for Performed knowledge, such as an amphitheatre (fig. 2.30) for dance and storytelling and rentable workshops where students can use their skills to make artefacts to be sold. In the sectional diagram (fig. 2.31), knowledge spaces are distributed horizontally only, which results in an appropriate human scale. While the building is very impermeable from the exterior (fig. 2.32), it is very open and inviting on the inside.

Four user types can be identified within the centre in fig. 2.36. The Exhibited knowledge space in the middle of the facility binds all the other knowledge spaces together. Observers, such as tourists and local visitors, pass through this central space and spread out into the maker spaces, perform knowledge spaces or acquire made artefacts displayed in the exhibition space (market). Sharers (educators) only use the studios to transfer their knowledge. Makers use the rentable workshops to make artefacts, while the Exhibitors use the open market to sell artefacts. Dances and stories can also be made and performed to transfer cultural knowledge.

Figure 2.28
Locality Map of the COSDEF Arts and Crafts Centre, Swakopmund

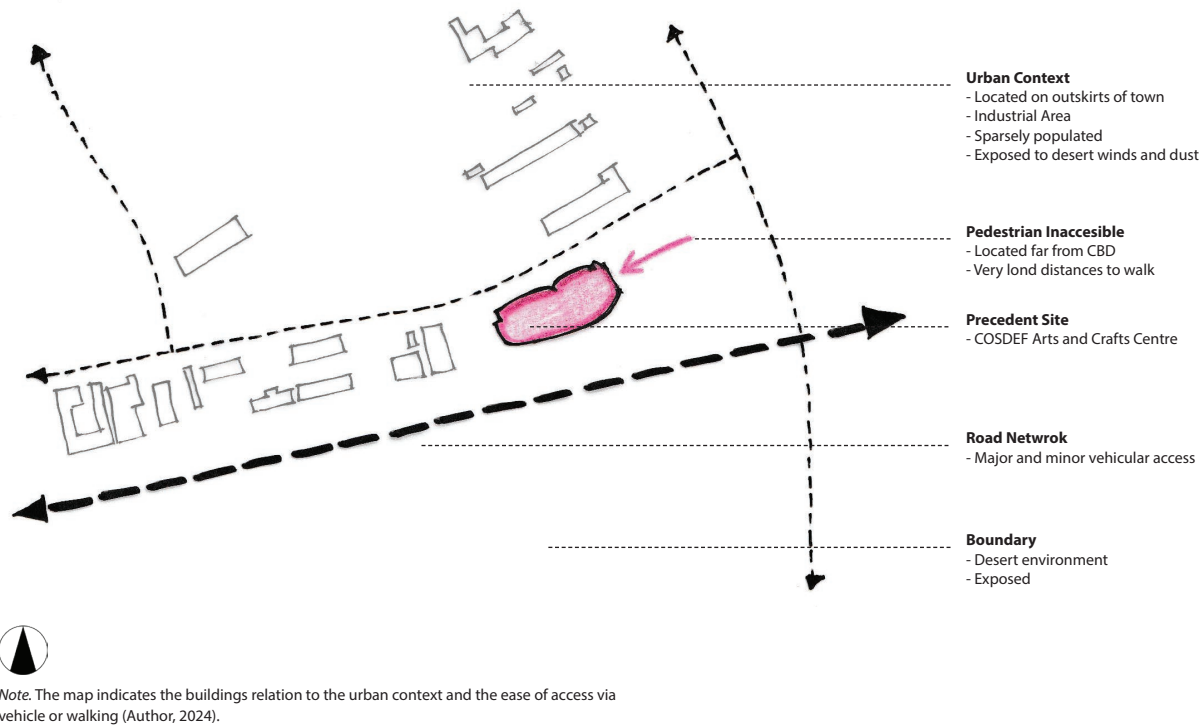


Figure 2.29
Knowledge studio at the COSDEF Arts and Crafts Centre, Swakopmund



Note. Students can enroll to gain knowledge about making, such as leather work etc. (Namibia Archaeology of the Future, n.d.).

Figure 2.30
Knowledge performances at the amphitheatre

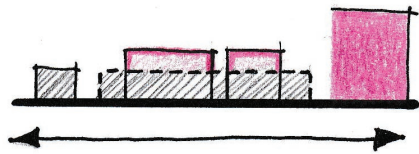


Note. Knowledge can be performed through dances or storytelling at the amphitheatre (Namibia Archaeology of the Future, n.d.).

The building is constructed from durable brick construction and pitched corrugated roofs to resist the harsh desert temperatures and sandblasting (fig. 2.35). Ceilings are clad with timber for their insulative properties. Drought-resistant vegetation forms part of the landscaping, while open spaces are paved to facilitate flexible market spaces.

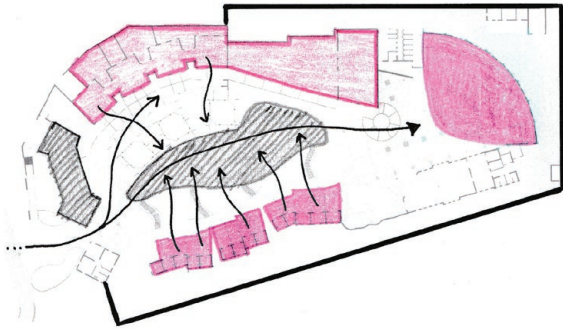
Overall, the centre successfully links all the knowledge spaces through a central exhibition space where Observers can move to other spaces in any sequence they desire. Providing open space for appropriation by exhibitors is also ideal for creating a sense of ownership.

Figure 2.31
Sectional diagram of the COSDEF Arts and Craft Centre, Swakopmund



Note. Sketch depicting the horizontal distribution of Knowledge space and their connections (Author, 2024).

Figure 2.32
Plan of the COSDEF Arts & Crafts Centre, Swakopmund



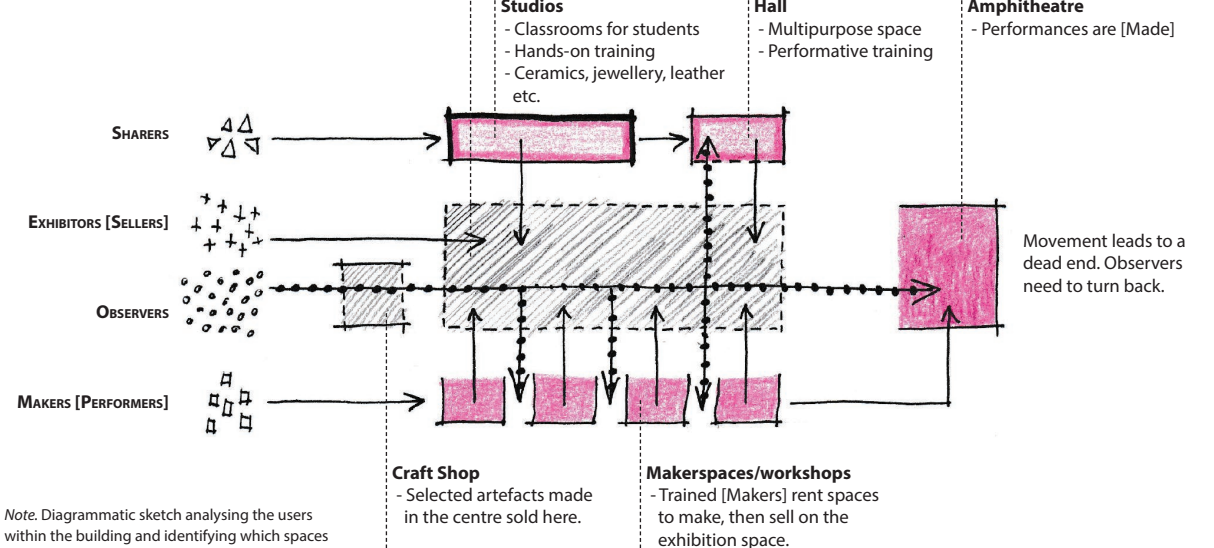
Note. Sketch depicting the distribution of Knowledge space and their connections (Author, 2024).

Figure 2.35
Mass and materials forming part of the COSDEF Arts and Craft Centre, Swakopmund



Note. An analytical sketched overlaying an exterior photograph identifying and analysing the structure and materials that make up the construction of the building. (Author, 2024).

Figure 2.36
Diagrammatic analysis of Knowledge spaces within the COSDEF Arts & Crafts Centre, Swakopmund



CONCLUSION

Significant contrast is emphasised in the juxtaposition of exhibition spaces between the Swakopmund Museums, formally curating artefacts, and the Kavita Craft Markets, allowing artisans to curate their space dynamically. The proposed museum typology creates an inclusive and representative cultural experience by integrating the two exhibition spaces. Exhibition spaces are provided for the display and preservation of sensitive historical artefacts. At the same time, the evolving nature of the crafts, such as the Onyoka necklace, is encouraged, ultimately resulting in cultural continuity. Extending the existing Kavita Craft Market into the newly proposed museum, as part of the Onyoka Trail urban framework, strengthens the linkage between informal and semi-formal exhibition space to create a unified knowledge space to represent Namibia's diverse cultures.

In the precedents investigated, a contrast emerges in the distribution and integration of knowledge spaces. Although the Museum of Making successfully preserves and displays its collection, it lacks the integration of makers and exhibitions. This results in non-contextual artefacts being removed from the making process. The Watershed in Cape Town creates a market promenade that allows vendors to exhibit knowledge curated by vendors. It also integrates small and medium-sized businesses to create a hub of information sharing between the groups. In contrast to the linear approach by the Watershed, the COSDEF Arts and Crafts market juxtaposes all the knowledge spaces around a central exhibition space. These studies are essential in juxtaposing static and dynamic exhibition spaces to create an alternative museum typology that allows contemporary cultural expressions and historical artefacts to coexist.

Figure 2.37
Cutting beads



Note. A photograph of an Onyoka maker cutting smaller shell pieces to make individual Onyoka beads(Author, 2024)

Figure 3.1
Swakopmund Lighthouse



Note. A historic photograph of the lighthouse before it was extended (National Archives of Namibia, n.d.)

CHAPTER 3 / UNRAVELLING THEORETICAL DISCUSSION

This chapter aims to explore juxtaposition in architectural theory and its relevance to shaping dynamic relationships between users, events, and spaces. The discussion will delve into how juxtaposition influences form, function, and perception of the built environment and also investigate the coexistence of colonial and indigenous knowledge systems in the quest to foster an evolving national identity.

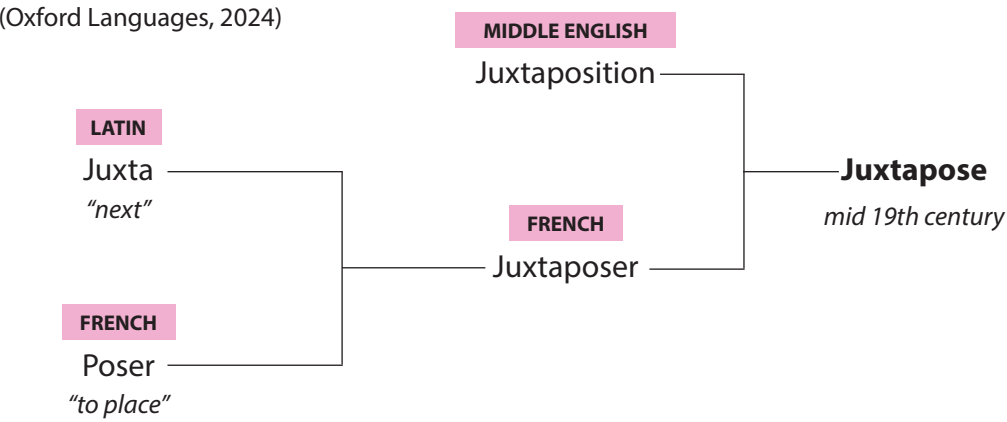
JUX • TA • POSE

Verb
Noun: juxtaposition; Plural noun: Juxtapositions
Pronunciation: [juh-k-stuh-pohz]
Synonyms: contact, nearness, proximity, touching

Meaning
Verb
1. to place close together or side by side, especially with an arresting or surprising effect, or in a way that invites comparison or contrast.

Noun
1. an act or instance of placing close together or side by side, especially for comparison or contrast.
2. the state of being close together or side by side.

Origin
First recorded in 1655–65, from Latin *juxta* “near, bordering, side by side” and French “position”.



The term juxtaposition (fig. 3.2), which is often explored in the arts and writings, refers to the positioning of multiple elements next to one another to emphasise contrast, explore new meanings and establish relationships. Applying the concept of juxtaposition between users, events, and spaces can influence not only the form or function of the built environment but also the experiences and perceptions of the inhabitant (Tschumi, 1994).

The layering of user, event and space provokes a dynamic aspect of architecture that can be effectively explored through juxtaposition. As the differing users interact within spaces, their diverse needs, cultural contexts, and expectations result in a spectrum of spontaneous layers of meaning in a space. Juxtaposing these events in a physical setting allows the making of balanced, multipurpose spaces that surpass static uses (Pallasmaa, 1996). The built environment should facilitate the interplay of different activities to promote user dialogue through interaction or symbolic meaning.

The placement and coordination of spatial structures influence how users engage with events and spaces; for instance, the juxtaposition of open and enclosed spaces can result in social interaction or solitary reflection. This can also encourage or discourage flexible or adaptable spaces. Furthermore, placing contemporary architecture in a historical setting, such as the Swakopmund Mole, can provoke discussion between history and the present, allowing users to experience and reflect on space through time. The representation of knowledge is another example where juxtaposition can create depth in the meaning of making through the representation of knowledge (displaying Onyoka artefacts) placed next to the knowledge of making (making Onyoka artefacts). Overall, juxtaposition is not only about aesthetics but also encourages a deeper interaction between users, events, and spaces.

Figure 3.2
Juxtaposed Landscape



Note. A watercolour painting expressing the natural juxtaposition along Namibia’s coastline. (Author, 2024).

The interrelationship between space, its use and events has long fascinated philosophers, architects and urban planners alike. A central figure in this discourse is Bernard Tschumi (fig. xxx), famous for confronting traditional architectural norms. Juxtaposition is one of the principles that Tschumi (1994) advocates, which explores the meaning and experience of contrast rather than celebrating the effect for its own sake. It relates to the philosophical movement of deconstructivism, closely associated with Jacques Derrida, an Algerian-born French philosopher who fragmented the traditional boundaries of thought and language. Deconstructivism in architecture aims to challenge and dismantle conventional concepts and systems, producing architecture that resists simple interpretation and conventional aesthetic standards (Wigley, 1993).

Furthermore, the theoretical intention of juxtaposition as a design strategy and the influence of deconstructive philosophy are considered for their implications in the context of Swakopmund, whereby the interaction of static colonial knowledge of artefacts and the dynamic Indigenous knowledge of making artefacts, such as the Onyoka necklaces, provides an opportunity for such an investigation.

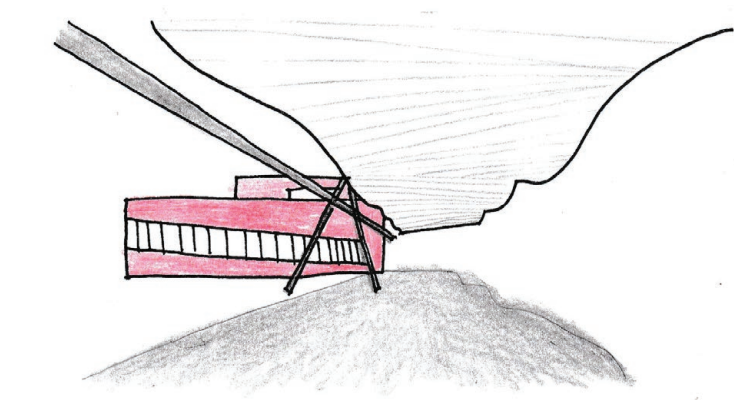
**“THERE IS NO ARCHITECTURE
WITHOUT ACTION, NO
ARCHITECTURE WITHOUT
EVENTS, NO ARCHITECTURE
WITHOUT PROGRAM.”
(BERNARD TSCHUMI, 1994)**

Figure 3.3
Portrait of Bernard Tschumi



(Bernard Tschumi Architects, n.d.).

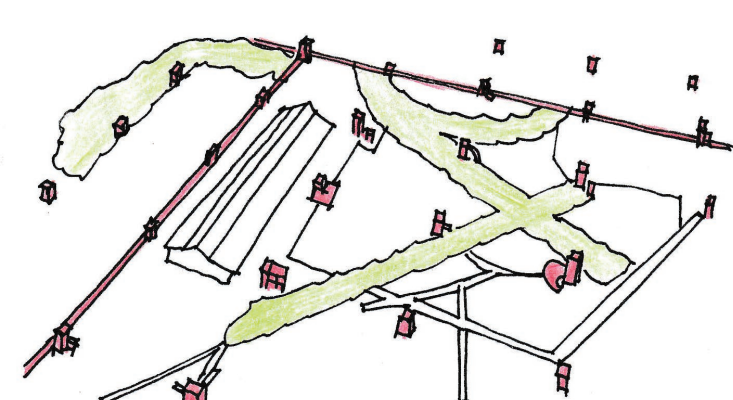
Figure 3.4
Follie in Parc de la Villette



Note. An perspective sketch of a follie in Parc de la Villette (Author, 2024).

Tschumi approached the Parc de la Villette in Paris, France, with a conceptual strategy that articulates the interaction of opposing elements to design a non-hierarchical spatial arrangement where differing events overlap to distort the lines between everyday life, culture and social interaction (Diamond, 2012). Thus, encouraging diverse interpretations and experiences of space (fig. 3.4).

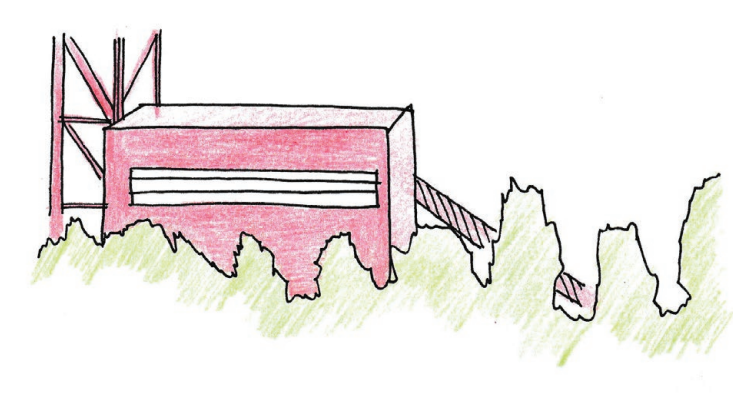
Figure 3.5
Parc de la Villette



Note. An aerial sketch of the Parc de la Villette (Author, 2024).

The public urban park is constrained to three main design elements (fig. 3.5): points, surfaces and lines. Bright red follies representing the points are spread over the site to function as interaction spaces and markers. Promenades and pathways act as lines intersecting the park to sequence users through and create connections (Ayiran, 2011). And lastly, the surfaces provide space for appropriation to invite different events and activities. A layered experience is produced through juxtaposition for users to explore according to their needs.

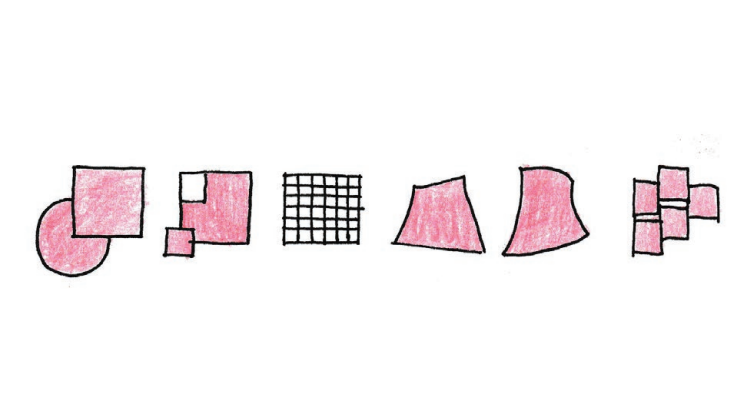
Figure 3.6
Parc de la Villette



Note. A perspective sketch of the Parc de la Villette (Author, 2024).

Juxtaposition is not only addressed through physical elements but also includes the overlapping of the programme. The park does not integrate the tradition of zoning (fig. 3.6); instead, it provides space for multiple events, including leisure, performances and exhibitions, to share space and interact in unexpected ways (Tschumi, 1994). This act of juxtaposition results in a dynamic environment that evolves with its users and their actions.

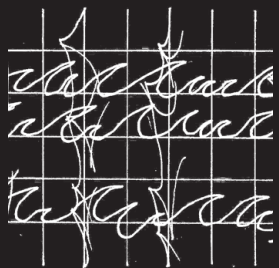
Figure 3.7
Design Approach



Note. A diagrammatic sketch of design principles found in Parc de la Villette (Author, 2024).

Through the implementation of juxtaposition as a design approach, Tschumi reimagined the understanding of a park into an urban construct, where superimposition and difference produce alternative opportunities for cultural expression and social interaction (fig. 3.7). The built environment should entice users through experiences, events and activities rather than conforming to rigid and static forms.

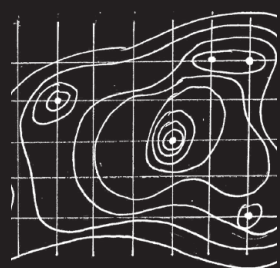
Figure 3.8
Diagrammatic Exploration



RHYTHM | The meeting points of energy.



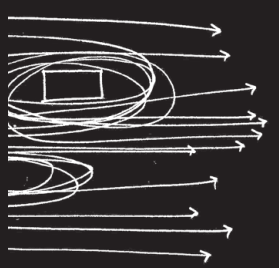
DENSITY | Breaking through tension.



RELATIONSHIPS | Moving towards and apart.



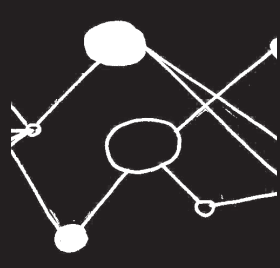
WEB | Everything is always in conflict.



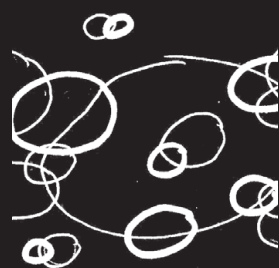
ANCHOR | A point of reflection.



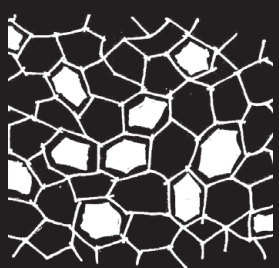
DANCING | Dynamic placement of flow.



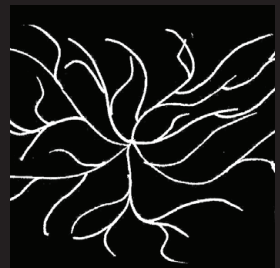
PROXIMITY | Force of dominance.



OVERLAP | Threshold in position.



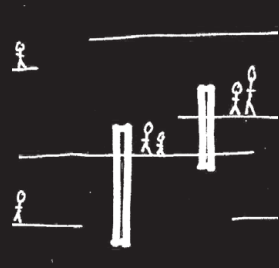
CIRCULATION | Observation in effect.



CENTRALITY | The vortex of conflict.



EXCLUSION | Anti-juxtaposition.



LAYERED | Mirages of contrast.

Note. Diagrammatic exploration of dynamic architecture (Author, 2024).

/ ARCHITECTURE IS NOT STAGNAT



In “Architecture and Disjunction” (1994), Tschumi argues against the traditional idea of architecture by framing it as an act rather than an object. He further describes architecture as an inseparably linked event and action that simultaneously challenges the observation of architecture as an autonomous form. Buildings are not merely successful by existing but rather by the effectiveness of interactions taking place within them.

This idea is fundamental in the context of Swakopmund, whereby one perspective encourages the static preservation of colonial knowledge, while the other attempts to introduce a dynamic approach of cultural interaction through process and the making of artefacts. By deconstructing the existing spatial narratives of the museum and representation, a continuous process of questioning and redefining the meaning and purpose of the space could be investigated (Wigley, 1993). Deconstruction is not a one-time critique of design but constantly challenges the process of what a building represents and means. Deconstructivism aims to challenge the traditional ideologies and assumptions made in architectural practices, which involves questioning the norms regarding the function of structures and what they mean within a cultural and historical context (Wigley, 1993). However, the meaning of a structure or space is never static but changes with cultural perceptions, societal shifts, or the very use of the building. Buildings and their interpretations should be “...inexhaustible plasticity of a dynamic and contextual space” (Salzstein, 2018).

As explored in the diagrams in Fig. 3.8, buildings should encourage a dance through the juxtaposed overlap of users, events and spaces to foster flow and passage. Where the dance and event converge, energy spikes would be present to encourage “...planned and unplanned performances...” (Hensel, 2013) by pulling and pushing users, events and spaces apart or together, influencing the spatial dynamics. Tension is produced within this web

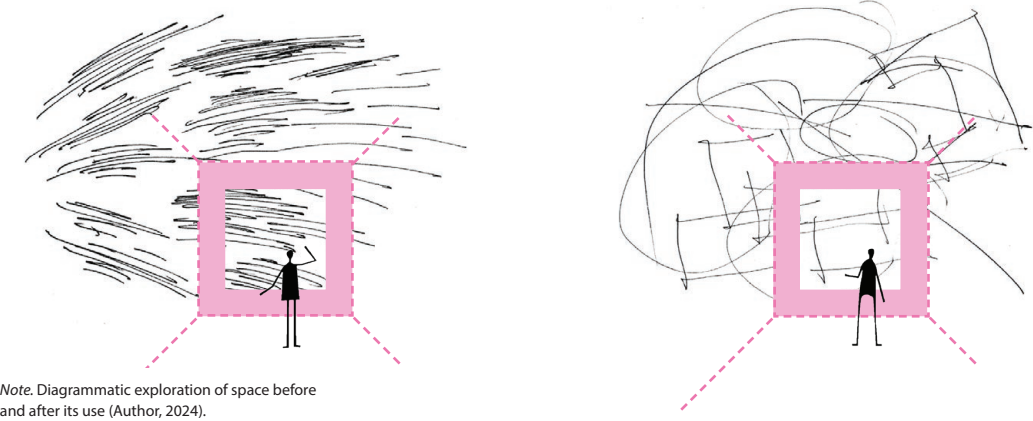
of conflict; thus, an anchoring feature is required to serve as a point of reflection to ground users amidst the chaos of amalgamated events and spaces. The proximity of juxtaposed elements plays a crucial role in dominance, whereby a selected substance can gain prominence due to its nearness to others. Is it possible to give all elements in the group an equal share of dominance? Anti-juxtaposition can be the unwanted alternative to resisting integration and maintaining separation, thus resulting in unfortunate exclusion. A layered approach should be investigated where multiple meanings coexist (Holl, 1996) and shift based on the perception of architectural interpretation, adding meaning and depth.

In line with the necessity of promoting communication between differing agendas, the idea that “...space before its use...” (Tschumi, 1994) is politically neutral raises the question of how spaces might be used as tools for knowledge representation within Swakopmund (fig.3.9). However, the town, especially the conservation zone, is not neutral at all, whereby the static preservationist approach to knowledge of artefacts is taken, hindering the ability of indigenous knowledge systems to be represented. It is beneficial to have an objective view of a site to create environments which are not only physically accommodating but also ideologically flexible. This entails creating areas that are adaptive enough to preserve the town’s existing colonial knowledge while also serving as a foundation for dynamic and accessible developments that integrate the cultural practice of making artefacts, such as the Onyoka necklace, dating back to the pre-colonial era. However, tension was found between static preservation and dynamic cultural exhibition. Critical thought should be given to integrating dynamic, making-based traditions within static historic artefacts stored in a museum setting (Rita and Doratti, 2015).

“There is no architecture without action, no architecture without events, no architecture without program... no architecture without violence.” (Tschumi, 1981). For architecture to exist, violence should be present. This view of architecture is somewhat confrontational and dynamic. Architecture is seen as the stage where social, political and bodily forces interact and contest within the built environment. Violence is a metaphor for conflict, impact, and change created by the interactions between the user, the event, and the space. Tschumi (1981) argues that discipline of architecture involved with these dynamics as opposed to serving as a backdrop for human activity that is impersonal or passive. Architecture does not stand alone as a static sculpture but is constantly disrupted by human activity.

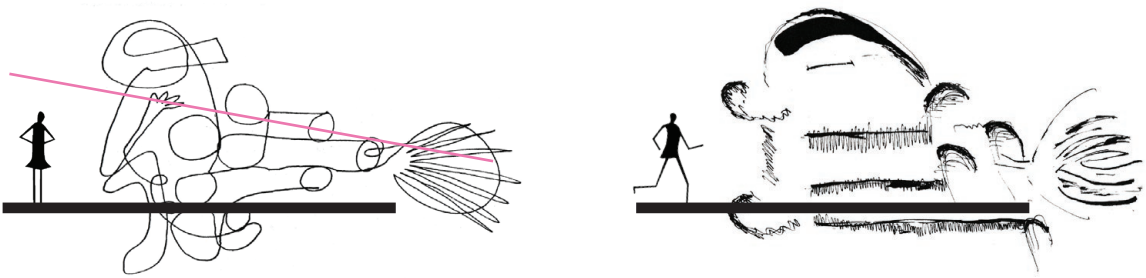
A building is in ongoing ‘intercourse’ with its users. The danger of architecture is its ability to force its users into a state of violence (fig. 3.10). For example, pushing large crowds through a narrow corridor could be one way. Another issue with architects is their “...dream of purifying this uncontrolled violence” (Tschumi, 1981). Users make irrational and rational decisions within architecture, which result in chaotic and unpredictable events. Architects should not be entitled to direct behaviour and movement through design. Implying that architecture can bring about change through disruption. “...(P)rogrammatic violence...” (Tschumi, 1981) expresses the adverse effects that specific architectural programs and functions, whether deliberate or not, may have on users and society (fig. 3.11). It is a reminder that architects carry ethical responsibility in creating spaces that affect people’s lives.

Figure 3.9
Neutrality in Architecture



Note. Diagrammatic exploration of space before and after its use (Author, 2024).

Figure 3.10
Force on User



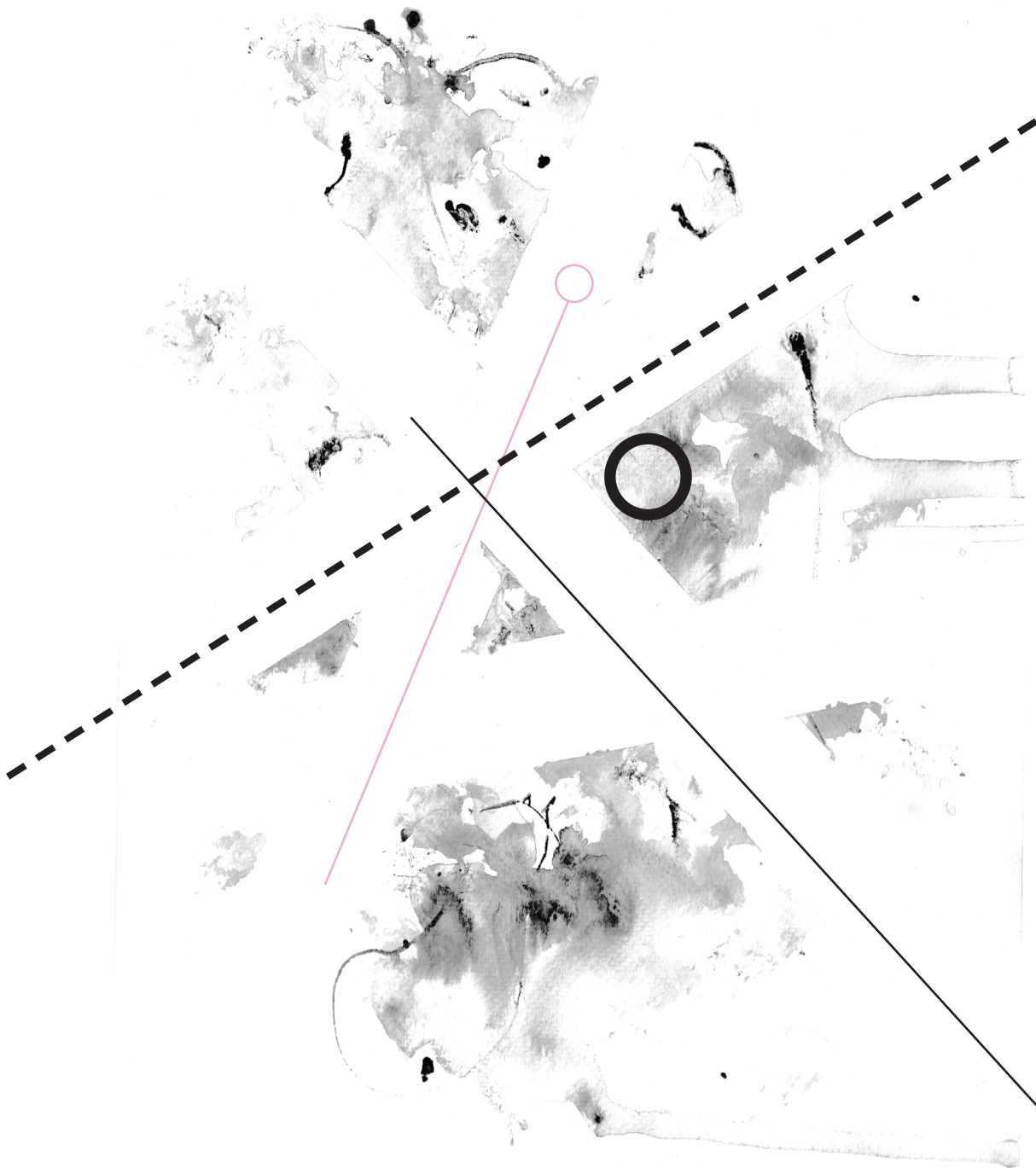
Note. Diagrammatic exploration of architecture manipulating the user (Author, 2024).

Figure 3.11
Programmatic Violence



Note. Diagrammatic exploration of a programmes effect on user if planned or not (Author, 2024).

Figure 3.12
Juxtaposition



Note. A watercolour painting expressing the dialogue created as a result of juxtaposition. (Author, 2024).

INTEGRATING DYNAMICS INTO A FRAGILE LANDSCAPE

Urban planning faces the challenge of maintaining the static colonial knowledge of artefacts within the built environment and, at the same time, providing infrastructure and facilities that meet the needs of the dynamic performance approach to artefacts and cultural exchange. There is a difference between juxtaposition and an individualistic cultural integrative approach. Thus, it is essential to assess new developments' impact on the sense of place, which includes tangible and intangible elements, such as personal experiences, history and culture. Riza and Doratli (2015) also stress the importance of differentiating between "...contextually juxtaposed or non-contextual/freestyle..." interventions within historically sensitive sites. The juxtaposed approach refers to the positioning of new, contrasting structures alongside older spaces and buildings to create a dialogue between the two.

This juxtaposition is also evident in the historic trade space of the Germans at the mole and customs shed (now the museum) and the Swakop river mouth, where the Herero tribes gathered seashells to be traded with natives in southern Angola. In this case, the contrast highlights the unique qualities while still appreciating the existing urban fabric, although it is from a colonial background. On the other hand, non-contextual or freestyle integration could result in new structures that do not respect the historical area's established scale and character. These experimental innovations may overshadow the historical background, which could weaken or change the feeling of place. "Too much diversity will destroy any sense of coherence in the local context." (Tiesdell, et al., 1996). While juxtaposition creates diversity within an area, it should be used in proportion to the richness of the existing backdrop or context. Diversity could result in the dilution of the existing context. Rogers (1988) argues that the oversimplification in modern architecture creates a social and ethical dilemma that may result in the identity struggle of a sensitive context.

Furthermore, Rogers (1988) cautions designers not to fall into the trap of historical mimicry but instead use the concept of juxtaposition to achieve contextual harmony. Historic architectural mimicry, especially the Strand Hotel building located at the Mole in Swakopmund, is used to create a visual connection with the historical context. However, it can be seen as inauthentic and merely a reduction of historic architectural language for decorative purposes rather than understanding the deeper meaning of the language. Rogers (1988) also advocates for juxtaposition to create a dialogue between different spatial approaches, whether static preservation of knowledge or dynamic artefact-making.

Harmony can also be created through contrast by juxtaposing appearances through materials, shapes, forms or height (Tiesdell, et al., 1996). Architecture actively shapes human existence and understanding of the world through these means. "The temple, standing there, first gives things their look..." (Wigley, 1993).

Furthermore, "...and to men their outlook on themselves..." (Wigley, 1993) suggests that architecture not only influences the context around it but also how humans see themselves within that space. It allows the user to find their identity as a marker or reference point within the environment (fig. 3.12). "The building makes the ground possible." (Wigley, 1993), giving the architecture the power to define what is possible on site. The ground is more than simply a physical place; it is a platform for possibilities, actions, and purposes that the built environment either permits or prohibits.

THE MUSEUMS INFLUENCE ON NATIONAL IDENTITY

Namibian museums have the power to develop a national identity through their role in preserving cultural heritage and historical narratives. As platforms for cultural knowledge exchange, they offer the opportunity to explore and understand Namibia’s precolonial, colonial and post-colonial identity. The juxtaposition between static colonial knowledge of artefacts (3.13) and dynamic indigenous knowledge systems, such as the making of Onyoka necklaces, provides the potential for the Swakopmund Museum to foster a unified national identity. Schildkrout (1995) emphasises the significance of shaping narratives of knowledge that reflect and influence the nation’s collective memory. Kaarina (2022) discusses the decolonisation of museum exhibits to enhance their relevance to local communities and contribute to an inclusive representation of Namibia’s cultural heritage.

Similarly, Gwasira (2023) critiques ethnographic exhibits in Namibian museums while advocating for more accurate displays of the impact of colonialism on cultural heritage. The evolution of the Swakopmund museum is already noticeable with the addition of its “People of Namibia” section attempting to represent indigenous knowledge, although through a static approach, which does not display the complexities of these practices. Museums should allow indigenous knowledge systems to be exhibited through dynamic performances whereby the national identity is continually negotiated and reshaped.

By including participatory exhibits (fig. 3.14), museums can encourage a deeper connection between the nation’s diverse communities and shape its heritage. Thus, museums can contest the colonial remains of representing cultures as fixed in the past and promote a narrative of adaptation and resilience (Kautondokwa, 2012). This will allow museums in Namibia to form a cohesive yet pluralistic national identity, allowing visitors to see cultural representations as an ongoing dialogue rather than a historical endpoint (fig. 3.15).

Figure 3.13
German Colonial Building, Swakopmund



Note. Colonial knowledge preserved as architecture (Markovina, 2019).



Figure 3.14
Himba women with souvenirs
in Swakopmund

Note. Craft markets as exhibition spaces of artefacts that constantly evolve and adapt. (Maly, 2014).



Figure 3.15
Crafts at Kavita Craft Market, Swakopmund

Note. Contemporary cultural crafts as dynamic artefacts (Panther Media, 2015).

CONCLUSION

Tschumi (1996) made a controversial argument that architecture is an event-laden act that cannot be reduced to a simple form or static artefact. His observations are particularly relevant to Swakopmund’s efforts to both provide space for the tangible and the intangible. The difficulty is prevalent in the continuous deconstruction of spatial strategies to guide the meaning and purpose of architecture relevant to the cultural and historical milieu. Swakopmund’s history layers the politically neutral concept of “space before its use”, addressed by Tschumi (1996). Navigating this tricky terrain, where juxtaposition and non-contextual interventions can either enhance or undermine the existing sense of place, is the duty of architects.

Rogers (1988) advised that juxtaposition shows promise as a balancing tactic that promotes variation without sacrificing consistency. Swakopmund’s static exhibition of colonial knowledge must be balanced with the competing demands of the dynamic culture of Onyoka, making a means of cultural exhibition in the quest to find a post-apartheid National identity (Schildkrout, 1995). Tschumi’s (1996) discussion about the inherent violence of architecture highlights the discipline’s significant influence on social change and human interaction. The essence of architecture is located in the action and the event it houses, provoking consideration of the town’s plans for urban growth.

Swakopmund’s architecture will continue to be a monument to its capacity to adjust, develop, and respond to the community’s changing identity and goals as the dialogue between the old and the new re-configures the town’s urban fabric.

Figure 3.16
Fragmenting of seashells



Note. A photograph of an Onyoka maker smashing the seashells with a rock to create smaller workable pieces(Author, 2024)

Figure 4.1
The Onyoka Trail



Note. The urban framework takes inspiration from the Onyoka necklace and beads (Author, 2024)

CHAPTER 4 / EXPLORATION OF URBAN BEADS

This chapter aims to develop a project brief by identifying the client, user and programme. It examines clients who would take advantage of the proposed museum typology and investigates users ranging from Onyoka artisans to museum curators. It also establishes appropriate accommodation facilities and discusses the four knowledge spaces. Lastly, an urban framework is developed to enhance the coastal promenade and integrate the proposed museum typology into the urban fabric of Swakopmund.

PROBLEM STATEMENT

+

HISTORY

+

CULTURE

+

PHYSICAL

+

THEORY

=

The project aims to fragment the inequality in the representation of colonial and indigenous knowledge systems. It attempts to spotlight the dynamic cultural expression of knowledge and contextualise the static artefacts found in the Swakopmund Museum. It juxtaposes static artefacts with dynamic knowledge of making.

Swakopmund’s history is rooted in the German Colonial era since it was established in 1892. However, pre-colonial Indigenous practices have existed in the area but have been overshadowed by the representation of colonial knowledge through static artefacts in architecture, literature, and museum exhibitions (Schildkrout, 1995).

The making of Onyoka necklaces along Namibia’s coastline plays a vital role in the culture of the Oshiwambo people residing in the northern parts of the country. Artisans engage in the lucrative tourism market in Swakopmund to make a living while keeping their cultural traditions alive through souvenirs.

Swakopmund’s town is surrounded by a harsh environment composed of the Namib Desert, the oldest desert in the World, and the cold Atlantic Ocean. The terrain is sandy, foggy, and very windy, especially when the Winter Berg wind conditions pick up. The juxtaposition of the desert and ocean meeting in Swakopmund fosters an conflicting atmosphere.

“There is no architecture without action, no architecture without events, no architecture without program... no architecture without violence” (Tschumi, 1981). The conflict between static colonial knowledge of artefacts and dynamic Indigenous knowledge of making is what makes architecture a user-event-driven space.

SWAKOPMUND SCIENTIFIC SOCIETY

Figure 4.2
Swakopmund Scientific Society



(Swakopmund Scientific Society, 2024).

The client, Swakopmund Scientific Society, is responsible for developing and maintaining the Swakopmund museum. Due to the research’s aim to reimagine static knowledge of artefacts and promote indigenous knowledge systems of making, the museum would be a central stakeholder in this intervention. The museum would benefit from the research by utilising design strategies that would increase public interest in exhibition spaces and better represent the diverse cultures of Namibia.

MINISTRY OF EDUCATION, ARTS AND CULTURE

Figure 4.4
Ministry of Education, Arts and Culture



(Ministry of Education, Arts and Culture, 2024).

The Ministry of Education, Art and Culture (Directorate of Heritage) was founded to offer inclusive training and education for the country’s development. The Ministry wants to be sure that shared commitment to advancements in the arts, culture, and education is focused on ensuring that collective resources and efforts have the most significant possible impact in areas that matter, such as the cultural practice of Indigenous knowledge systems and the exhibition of artefacts.

COMMUNITY SKILLS DEVELOPMENT FUND

Figure 4.3
COSDEF



(COSDEF, 2024).

The Community Skills Development Fund (COSDEF) establishes and oversees various practical courses that provide competency-based skill training to communities, particularly young people and previously disadvantaged groups. The Arts and Crafts Centre aims to improve the community by establishing creative routes to self-sustainability through business and technical training.

SWAKOPMUND MUNICIPALITY

Figure 4.5
Swakopmund Municipality



(Swakopmund Municipality, 2024).

The Swakopmund municipality takes great pride in maintaining and developing public spaces in Swakopmund and along the coastal promenade. Thus, it could benefit from the intervention stretching along the promenade, which would provide equal opportunity for locals, visitors, and artisans to benefit from the space. This fosters an environment that promotes learning, respect, support, and engagement in order to develop an inclusive community.

ONYOKA AND OTHER ARTISAN

Artisans making the Onyoka necklaces are among the key users of the proposed intervention. They will play a significant role in exhibiting and performing their cultural knowledge of making artefacts. The intervention would also allow them to sell the artefacts to tourists and locals for an income (fig. 4.6). It should be noted that other artisans who make timber, stone, textile, and wire crafts will also benefit from the proposed architecture. Incorporating workshops and a market space would give artisans the space and tools to craft and sell their artefacts effectively.

Figure 4.6
An Onyoka Artisan



Note. An artisan selling Onyoka necklaces at the Kavita Craft Centre, Swakopmund (Author, 2024).

EXHIBIT AND MARKET CURATORS

Two types of exhibit curators will be present. Museum curators will be responsible for designing cultural exhibition spaces and performative events in a formal manner. To juxtapose this rigid and static way of knowledge representation, artisans will have the ability to curate their market space with artefacts of their liking. This would allow the museum to be dynamic and keep up with the evolution of artefacts while the making process contextualises the pieces.

NATIONAL VISITORS

Local visitors can engage in the market space, gain knowledge from the library, or develop their skills in making from the course offered by COSDEF in the maker space. They could use the space flexibly for leisure and recreation activities. The Swakopmund promenade is a public space and, thus, should be able to contribute to the needs of the whole community.

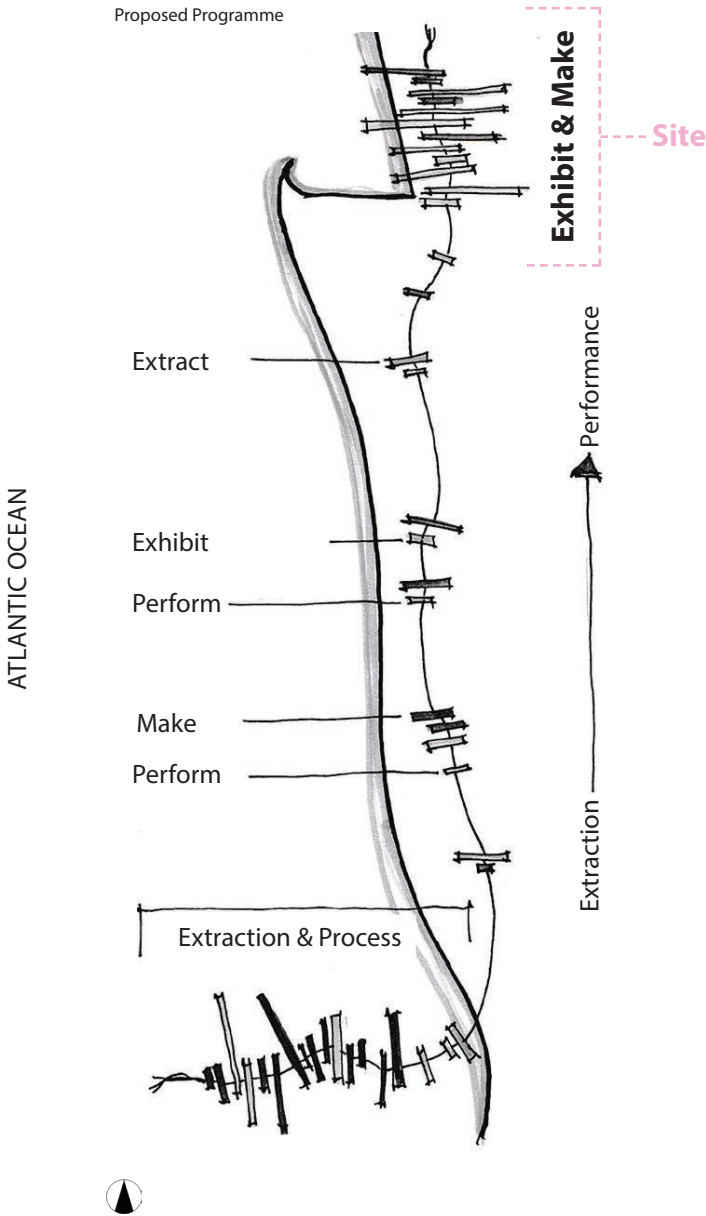
INTERNATIONAL VISITORS

International tourists are one of the main economic contributors to the Swakopmund Museum and to the Onyoka artisans selling their crafts. Tourists can also become part of the making process by learning from the artisans about the phases through observation or making an Onyoka necklace themselves.

PERFORMERS

Onyoka-making does not end at the final product but is further used in festive and performative occasions. The intervention explores performance spaces as a method of indigenous knowledge expression, allowing cultural groups to showcase their knowledge.

Figure 4.7
Proposed Programme



Note. A drawing by the author of the Onyoka necklace depicting the programme as beads along the Swakopmund promenade. (Author, 2024).

The programme takes guidance from the process of making the Onyoka necklace; In the extraction phase, mussels are collected from the beach. The Onyoka necklaces are made. The Onyoka necklaces and other crafts are exhibited and sold in the artefact market. The Onyoka necklaces are used in performances during festivities and celebrations. The whole process is observed directly by the younger generation, learning how to make these artefacts from the older generation, or indirectly by tourists who want to learn and appreciate the process.

It is important to note that all these phases are strung as beads along the coastal promenade as an urban framework (fig. 4.7). This project will only focus on the exhibition and making phase at the Swakopmund Museum. The making phase entails workshops and maker spaces where Onyoka and other cultural artefacts are crafted. A market space for these crafts will be provided where these artefacts are exhibited and sold. A formal museum exhibition space will juxtapose the artisan's market. Here, sensitive and historically valuable items, especially from a cultural background will be displayed. Cultural performance space is provided in the form of a theatre and amphitheatre. Lastly, a library containing an archive will provide access to historical or contemporary literature. All these spaces can be juxtaposed according to four types of knowledge spaces (fig. 4.8). Namely, it includes displayed, performed, shared, and stored knowledge.

DISPLAYED KNOWLEDGE

Artefacts and crafts exhibitions usually represent knowledge showcased in a static manner. Artefacts displayed in the proposed market, including Onyoka necklaces and other crafts, constantly evolve in composition with trade/market trends. In juxtaposition to the dynamism of the Onyoka necklaces, artefacts are also displayed in the museum exhibition more rigidly and statically, freezing the items in their time. Knowledge is represented through the display of static artefacts.

PERFORMED KNOWLEDGE

The art of making is a performance in itself. Each artefact needs knowledge from some cultural background to be made. Displayed artefacts represent static knowledge from a certain period and are usually displayed in a setting removed from their context. Making artefacts or cultural expressions using these artefacts contextualises the pieces and provides a deeper meaning. Knowledge is represented through the performane of making.

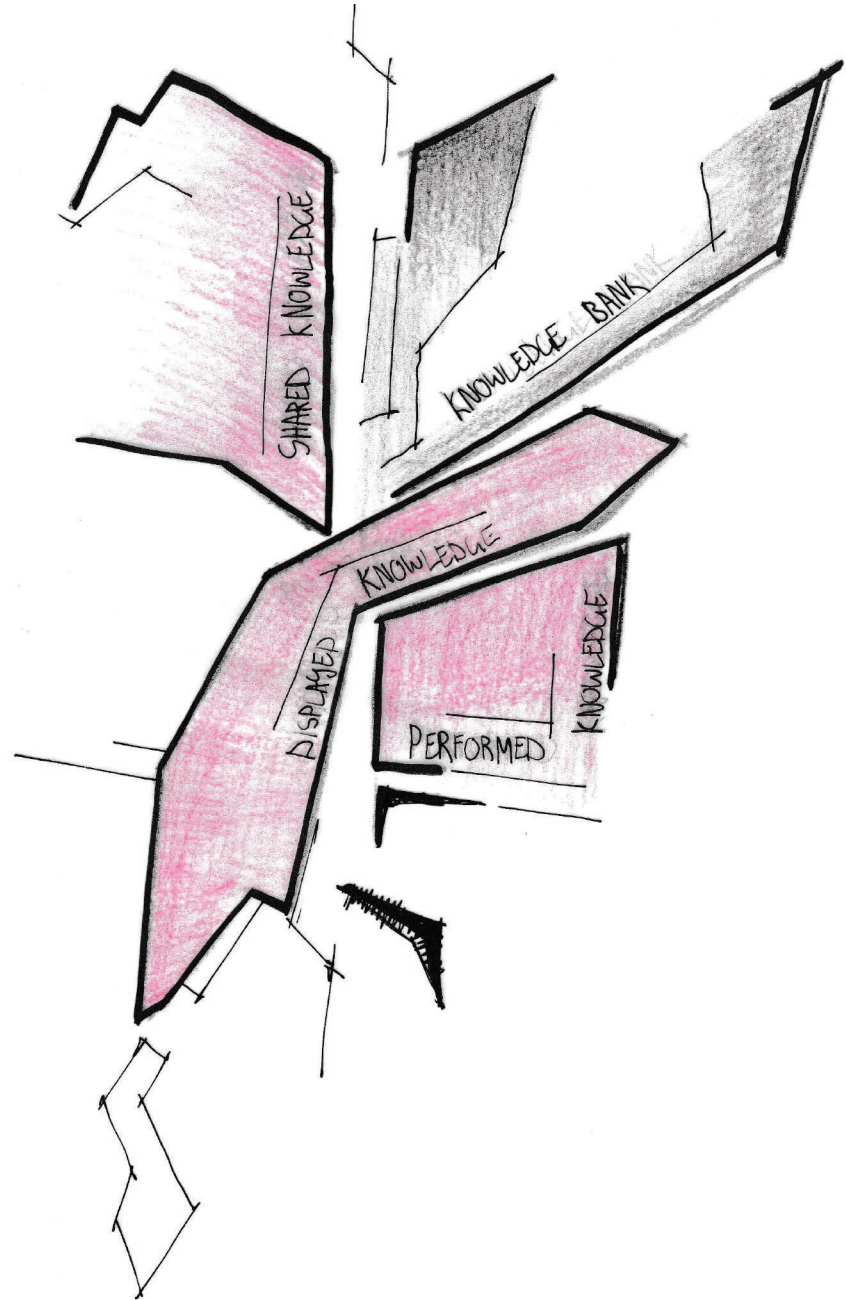
SHARED KNOWLEDGE

The knowledge of Onyoka making is transferred from generation to generation, both orally and visually. Knowledge is shared and evolves through communal experiences. Observation is essential for sharing knowledge. Thus, platforms and observation points create the ideal environment for sharing. Knowledge is represented through oral and visual instructions.

STORED KNOWLEDGE

It is essential to store knowledge via different mediums, be it photographs, audio, video or literature. It provides historical context and guidelines for future evolution. Knowledge is represented in mediums encapsulated it in a certain time for future use.

Figure 4.8
Four Knowledge spaces



Note. A drawing by the author of the four knowledge spaces in juxtaposition on plan (Author, 2024).

ACCOMMODATION FACILITIES

DISPLAYED KNOWLEDGE				
Museum Exhibition A space that showcases curated artefacts, offering visitors educational and cultural experiences through static displays.		Market as Exhibition Market for artisan-made crafts, promoting cultural inclusivity, and economic gains. Allows artisans to curate their own artefacts.		Outdoor Community Exhibition An outdoor community exhibition space allows the public to showcase their creative works in an open public environment.
PERFORMED KNOWLEDGE				
Artisan Workshop The workshop produces space and tools for Onyoka and other craft artisans to perform their knowledge of making.		Makerspace A making studio for learners and the public to foster creativity, learning and innovation, using advanced tools and materials.		Creative Patio An open space for the public or tourist to engage in collaborative artistic activities, such as painting, beading, dance etc.
SHARED KNOWLEDGE				
Theatre A theater serves as a dynamic space for sharing knowledge through performances, storytelling, and cultural expression.		Cultural Gathering Space A cultural gathering space for sharing knowledge orally or through performances, such as dances etc.		Seminar rooms Focused spaces for interactive discussions, presentations, and collaborative knowledge sharing among participants and cultures.
KNOWLEDGE BANK				
Library A public space where knowledge is stored, organized, and accessed through books and other media.		Archive An archive stores and preserves knowledge, recording information through various mediums for future access and research.		Artefact Restoration An artefact restoration space is dedicated to preserving and repairing cultural objects for historical conservation.
OTHER				
Lobby A welcoming space for waiting and interaction.	Ablutions Public toilets with access for disabled persons.	Admin Block A central hub for office operations and management planning.	Playground The Onyoka playground is a fun space for play and cultural interaction.	Cafeteria A casual takeaway space offering food, ice cream and beverages.

/ URBAN FRAMEWORK: ONYOKA TRAIL



The proposed urban framework (fig. 4.9) of Swakopmund's coastal promenade stretches from the Swakop River mouth to the Swakopmund Museum at the Mole. The framework takes inspiration from the unravelling of an Onyoka necklace, with each bead representing a spatial node that provides opportunities for future development. Similar to how the beads of the Onyoka are spread out, the proposed spatial elements are carefully placed to create a rhythm of interaction between the open space and the built environment. Each bead evokes a moment of engagement with the surrounding environment to anchor significant cultural and historical narratives. However, these nodes will be addressed through phases and remain flexible for future architects to contribute to the urban landscape. A dynamic and participatory approach to development reflects the historical and cultural layering of the town to offer a juxtaposition between contemporary design and the colonial representation of knowledge from history architecture.

The proposed spatial programmes within these nodes along the Swakopmund promenade integrate functional and cultural places (fig. 4.18). An aquacultural farm (fig. 4.10) can sustainably produce seashells at the river mouth for Onyoka making. Furthermore, a fish market (fig. 4.13) can provide food security to the community, while dedicated food truck facilities create a vibrant activity space (fig. 4.14), supporting local entrepreneurs. A possible transport interchange (fig. 4.16) connects tourists to the Onyoka Trail to promote movement and explorations through the town. Ablutions and public seating spaces could be provided along the route to create spaces for comfort and reflection (fig. 4.17). All this creates a dynamic community promenade to facilitate economic growth along the coast.

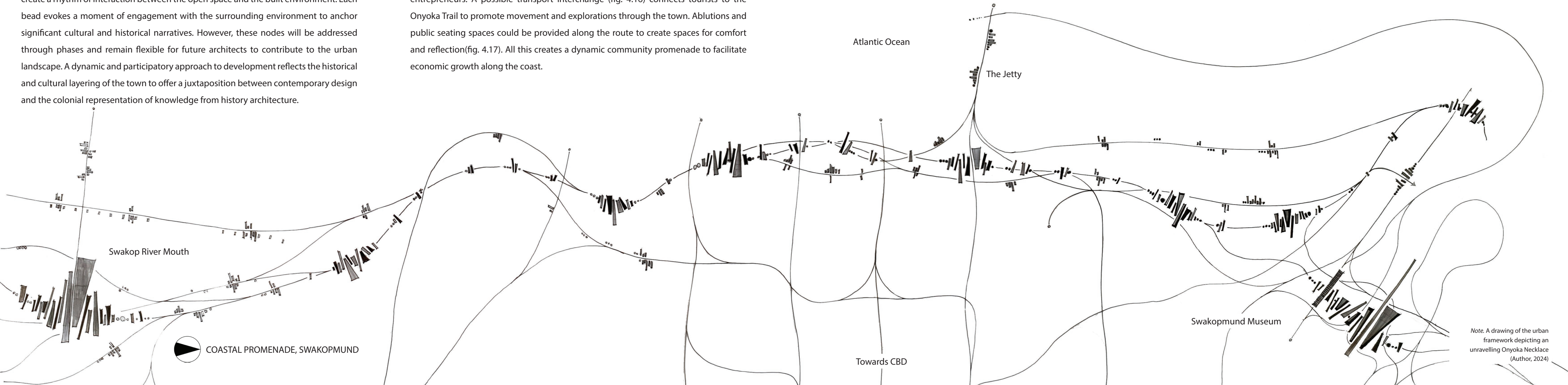
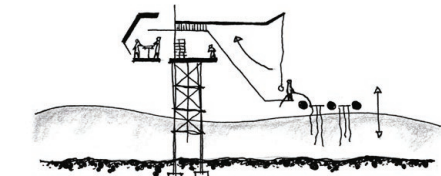


Figure 4.9
Onyoka Trail

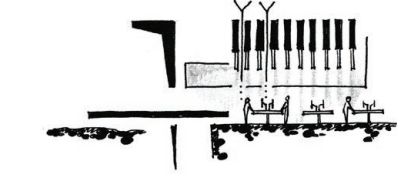
Note. A drawing of the urban framework depicting an unravelling Onyoka Necklace (Author, 2024)

Figure 4.10
Mussel Farming Jetties



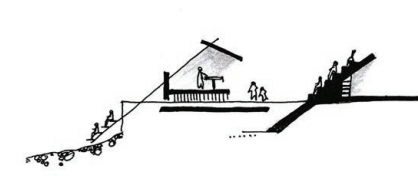
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Figure 4.11
Shellfish Processing Plant



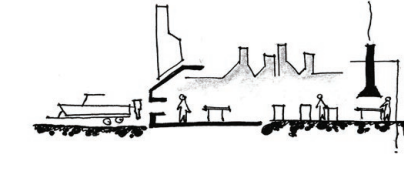
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Figure 4.12
Storytelling Pavilion and View Point



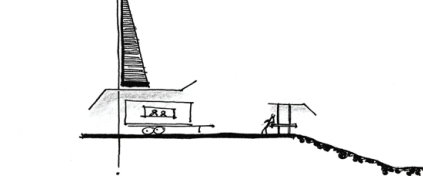
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Figure 4.13
Fish Market and Cleaning Facility



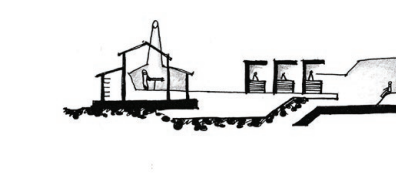
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Figure 4.14
Food Truck Hub



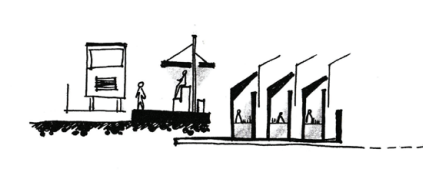
(Author, 2024)

Figure 4.15
Craft Market Stalls



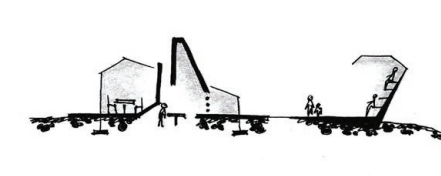
(Author, 2024)

Figure 4.16
Transport Interchange along
the Onyoka Trail



(Author, 2024)

Figure 4.17
Public Seating and Ablutions

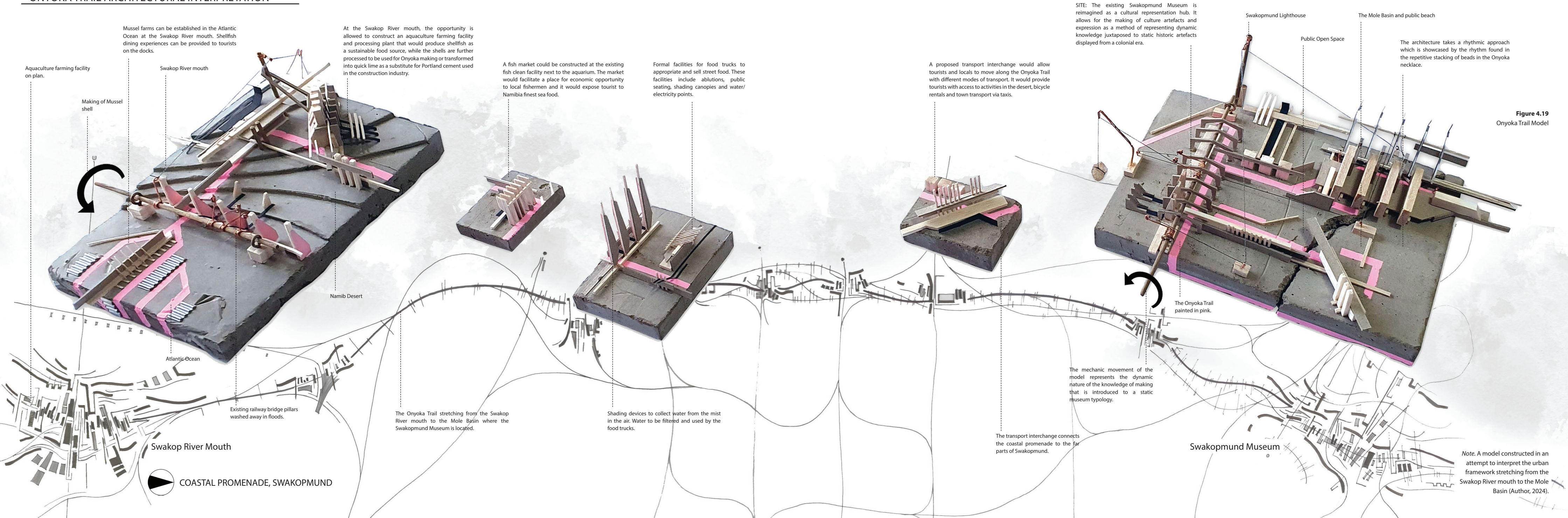


(Author, 2024)

Figure 4.18
Onyoka Trail



ONYOKA TRAIL ARCHITECTURAL INTERPRETATION



CONCLUSION

The project brief addresses the static nature of the Swakopmund Museum and reevaluates an exhibition typology to constantly evolve with cultural identity to provide economic gain and cultural continuation. By identifying the Swakopmund Scientific Society as the primary client, the proposed museum typology places itself in the position of cultural custodian and an active participant in static and dynamic knowledge exchange. The exhibition spaces extend beyond static displays and celebrate cultural making by providing a platform for Namibian artisans to make, exhibit, perform and store their knowledge.

The Onyoka artisans, together with other cultural makers and traders, are significant users of these exhibition spaces. The proposed museum typology not only increases the artisans' visibility and income opportunities with on-site workshops and a market but also celebrates their knowledge of making as a dynamic, non-tangible artefact. This inclusivity deepens the town's social fabric and encourages local visitors and international tourists to engage in Namibian culture and heritage. The programme mirrors the making process of Onyoka strings by integrating stages of extraction, making, exhibition and performance on an urban framework. This approach increases the relevance of the museum by incorporating workshops, a market space, formal exhibition spaces and performance spaces, each reflecting a specific knowledge space, namely, displayed, performed, shared, and stored. The resulting typology allows for static exhibition spaces and a dynamic artisanal market to connect the museum with the indigenous community.

On an urban scale, the proposed urban framework along the coastal promenade draws inspiration from the Onyoka necklace, positioning spatial nodes as beads that activate Swakopmund's coastline through future phases of development.

Figure 4.20
Beads strung on a wire



Note. A photograph of an Onyoka maker inserting the seashell pieces onto a wire (Author, 2024)

Figure 5.1
The German Colonial Customs Shed



Note. The Customs shed in ruins after the bombing
by a British battleship (National Archive of Namibia, n.d.)

CHAPTER 5 / **FRAGMENTED MAKING PROCESS**

This chapter aims to develop an alternative museum typology guided by the Onyoka and its making process as concepts. The development is initially challenged by integrating disorderly forms and floor plan layouts into a very rigid and orderly building structure. However, through sketching and model-building exercises, appropriate architecture is made using juxtaposition.

The concept mirrors the making process of the Onyoka necklace. A very violent stage of the process includes fragmenting Black Mussel shells into smaller pieces (fig. 5.2). This reflects the project's aim to shatter the predominant colonial representation of knowledge of static artefacts frozen in time and non-contextualised. As the Onyoka artisan hits the shell with a stone, it explodes into pieces, flying in all directions. The once singular piece of mussel is split into smaller fragments, which are placed together in an act to juxtapose one another. Angular architectural forms can be interpreted from the pieces, and juxtaposition can be noticed in the spaces between the fragmented pieces. In this way, the Black Mussel shell juxtaposes itself.

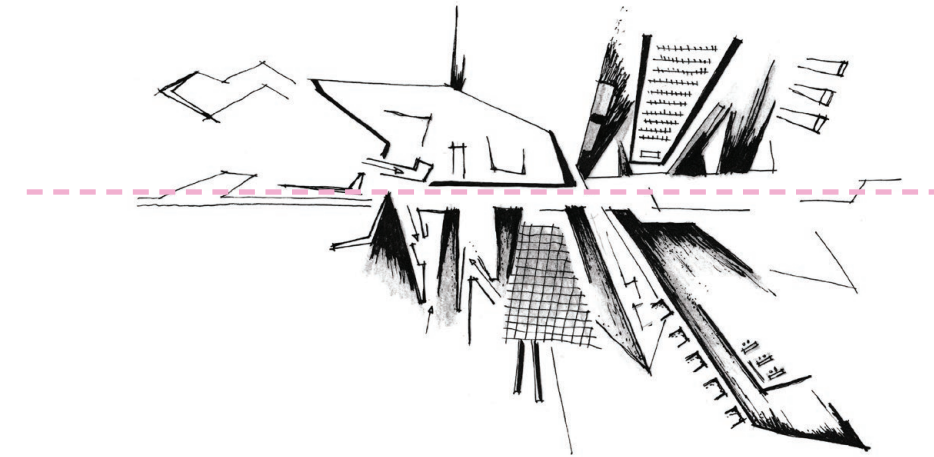
The fragmenting process is chaotic and disorderly; however, the Onyoka is orderly, with a specific rhythm and repetitiveness (fig. 5.4). The concept also draws inspiration from this rhythm and attempts to juxtapose order with disorder when articulating architectural mass and form (fig. 5.5).

Figure 5.2
Concept Model



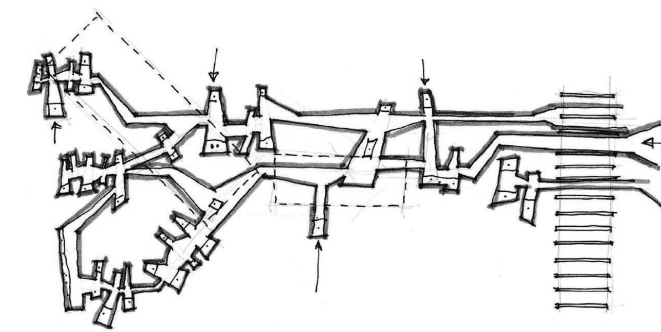
Note. A model constructed to investigate concept. It showcases a seashell exploding into smaller pieces suspended by copper wire and supported by a concrete block. (Author, 2024)

Figure 5.3
Initial Plan Development



Note. A linear axis represents the footprint of the existing museum structure with exploding angular protrusions extending from the axis. Each protrusion represent a specific space including artisan workshops, static exhibition spaces, a knowledge hall and library where knowledge is stored in books and digital modes. (Author, 2024)

Figure 5.4
Initial Plan Development



Note. An alternative plan was developed taking inspiration from the orderly pattern of the Onyoka string. The plan mirrors a cross sectional cut of the string with the pathway reflecting the string and the protruding spacing mimicking the beads. (Author, 2024)

Figure 5.5
Initial Form Exploration



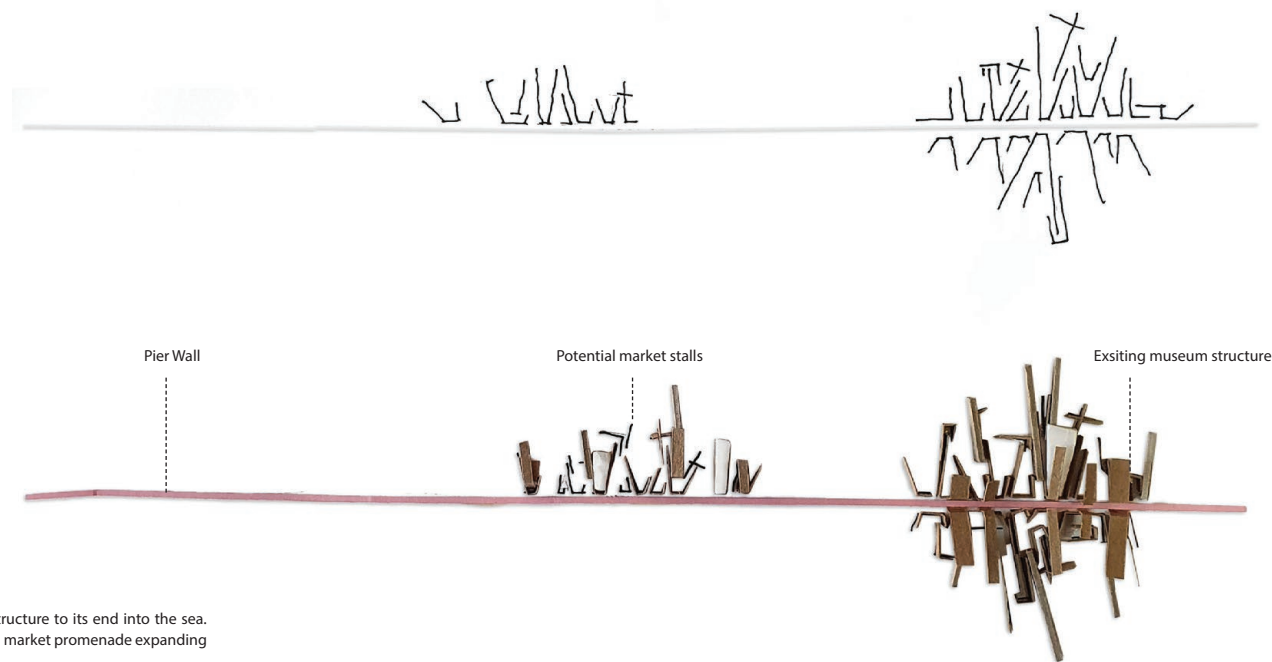
Note. Small models were built to experiment with the juxtaposition between the linearity of the existing museum structure and fragmented mussel pieces overlayed to introduce new wings to the building (Author, 2024).



The Onyoka necklace and its making process were crucial in developing the plan, section, and form. The fishing line found in an Onyoka necklace reflects the site's linear nature, moving along the linear axis of the pier wall at the Mole Basin. The beads of the Onyoka necklaces assisted in the development of spaces along the linear axis that moved through the existing museum structure. The rhythm of the existing museum structures also shares the repetitive pattern found in the Onyoka necklace.

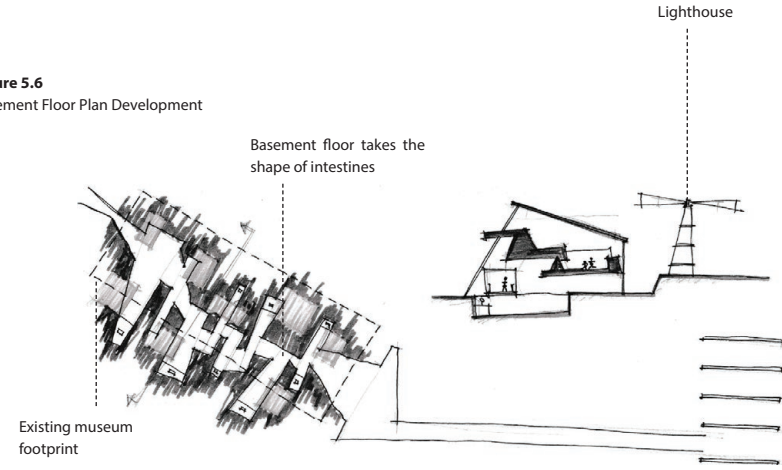
The smashing process of Onyoka making is another concept that provides architectural clues in form making. The shards of mussel shells inform roof shapes and floor plan layouts.

Figure 5.7
Initial Plan Development along the Pier Wall



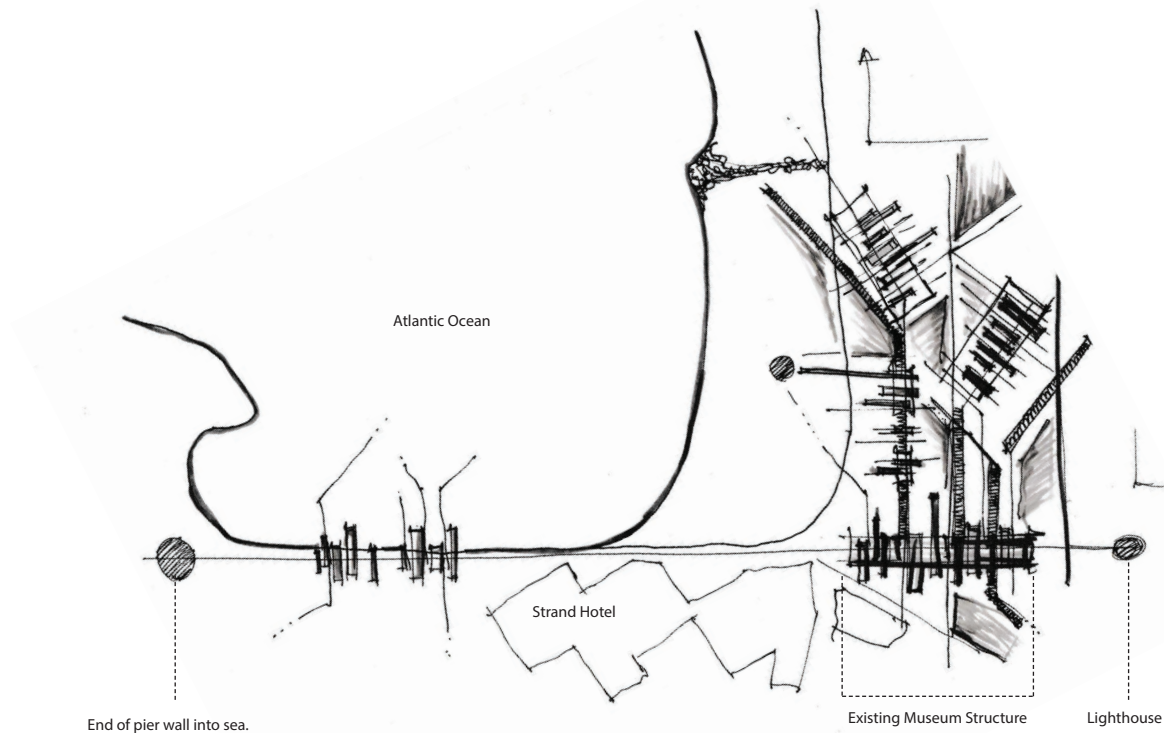
Note. The pier wall is developed from the existing museum structure to its end into the sea. Bead-like spaces are extended from the linear axis to become a market promenade expanding the Kavita Craft Market (Author, 2024).

Figure 5.6
Basement Floor Plan Development



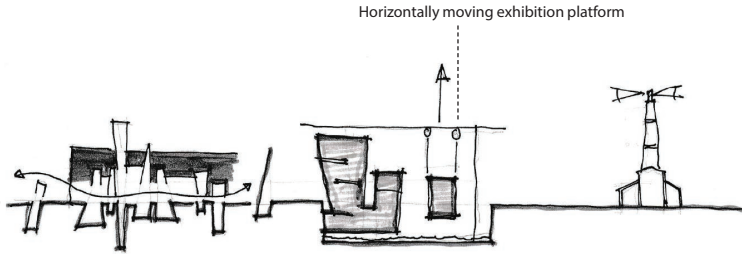
Note. Exploring a basement pathway through the existing museum structure. The shape of the space still aligns with the pattern of the Onyoka necklace, but its organic nature reflects the pathways in the intestines of a cows stomach placed in the shallow water to attract the Conus Bertulinus shellfish for the making of Oomba pieces (Author, 2024).

Figure 5.8
Initial Plan Development into Surroundings



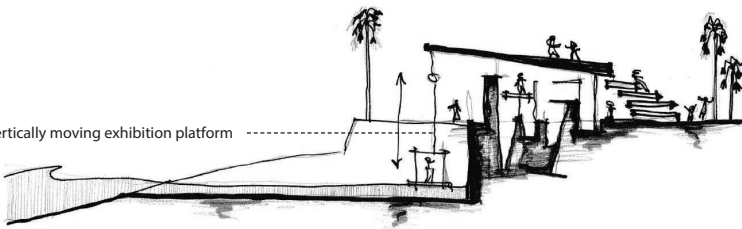
Note. The orderly rhythm is stretched from the Lighthouse in the east to the end of the pier wall in the west. Some of the beads are extended to form their own string from where more beads are strung to form a grid layout to guide the architecture (Author, 2024).

Figure 5.9
Initial Sectional Development



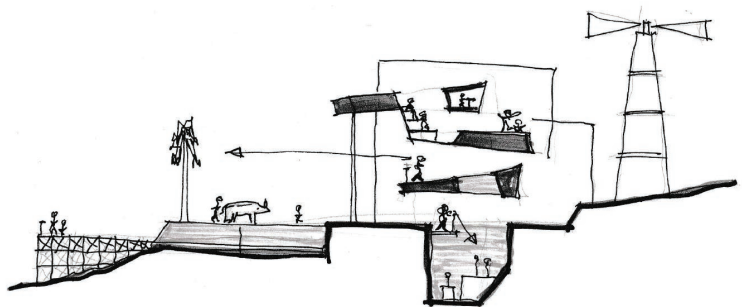
Note. The lighthouse to the end of the axis forms part of the rhythmic string as a starter bead. The beads continue along the pier wall with roofs at varies heights. More interestingly, a zipline-like structure moves an exhibition platforms or bead from side to side, reflecting the beads movement as they are slid onto the fishing line in the making process (Author, 2024).

Figure 5.10
Initial Sectional Development



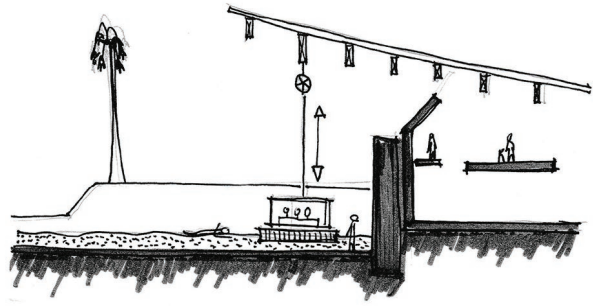
Note. An alternative approach is explored in the section where the dynamic exhibition platform moves vertically between different floor levels. This provides movement to an otherwise static museum typology. (Author, 2024)

Figure 5.11
Initial Sectional Development



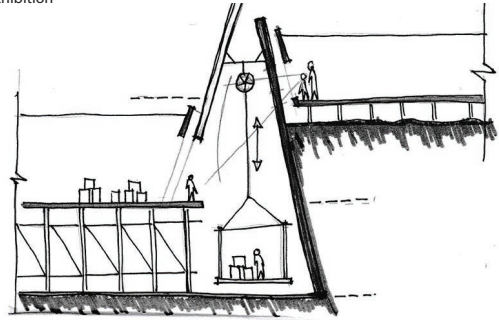
Note. It is not only the plan that is being developed by the rhythm of the beads, but the section as well. Different floor levels each function as a bead with perforations through to create visual connection vertically (Author, 2024).

Figure 5.12
Unconventional Exhibition



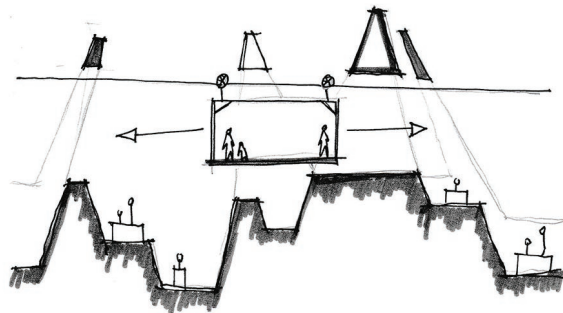
Note. Exhibition spaces can float on water while the tides create a dynamic display (Author, 2024).

Figure 5.13
Unconventional Exhibition



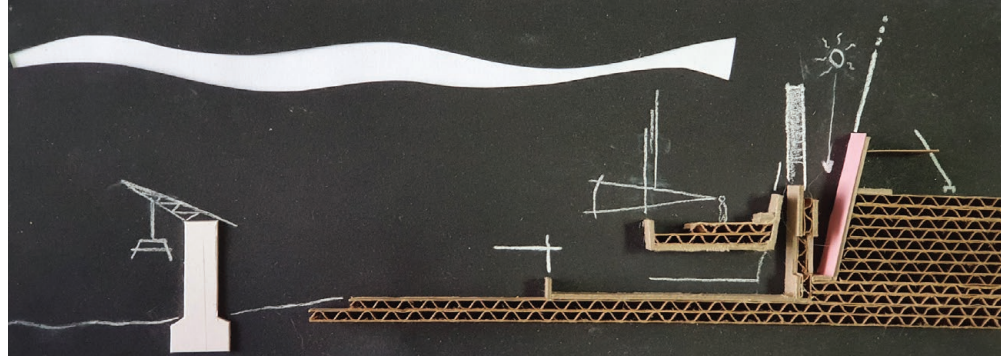
Note. Pulley system used to lift exhibition platforms from the depths reflecting the extraction process of *Conus Bertulinus* shells from the deep waters(Author, 2024)

Figure 5.14
Unconventional Exhibition



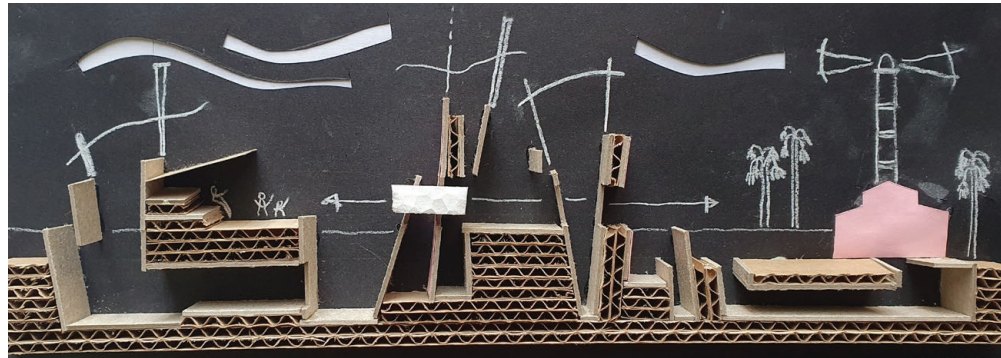
Note. The shifting of exhibition platforms along a cable and over static exhibits creates a dynamic experience for visitors (Author, 2024).

Figure 5.15
Sectional Mode



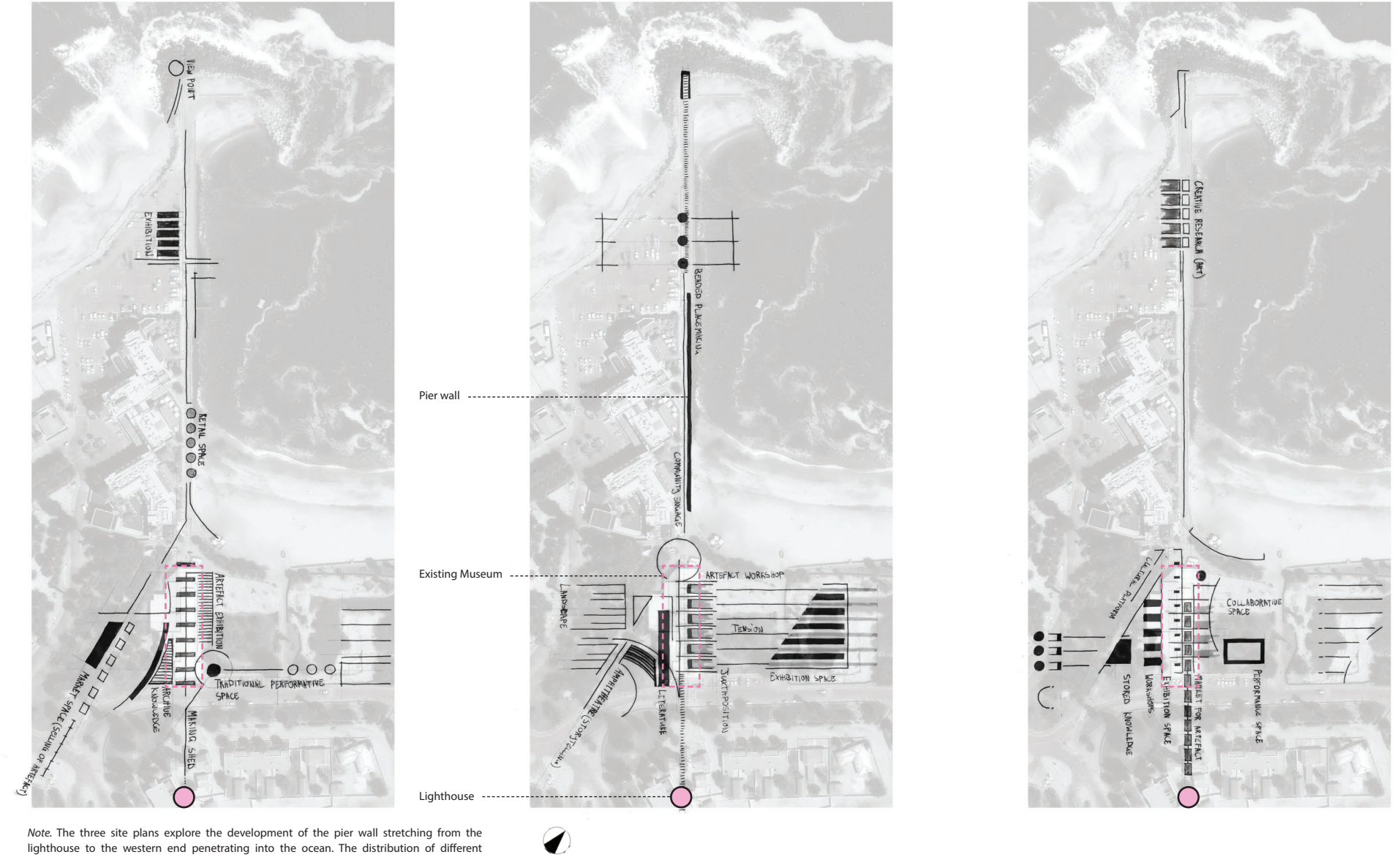
Note. The model explores the possibility for beads to dissect the earth mass into the basement level. This would reduce the footprint of the building in a site located in a conservation (Author, 2024).

Figure 5.16
Sectional Mode



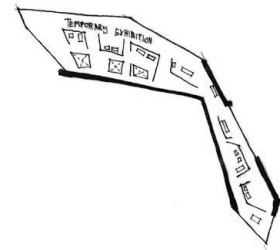
Note. The model explores the rhythm of the Onyoka beads in section creating separated spaces that juxtapose one another. Initially, the idea was to expand the footprint of the proposed museum typology to the neighbouring open land and connect it to the existing museum building with a tunnel which mirrors the intestines of the cows stomach used as bait to capture the Oomba shell. A bead (exhibition platform) can also be seen moving horizontally through the spaces(Author, 2024).

Figure 5.17
Site Plan Development

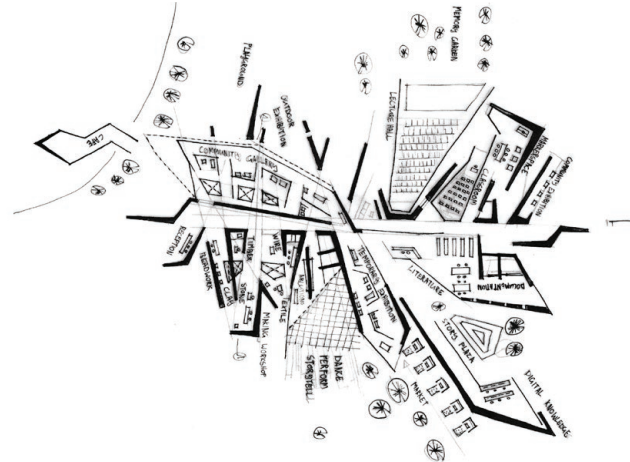


Note. The three site plans explore the development of the pier wall stretching from the lighthouse to the western end penetrating into the ocean. The distribution of different knowledge spaces is investigated while the rhythm of the existing museum structure is repeated along the axis and into the surrounding context. The museum structure is positioned central to this axis. A central point is developed at a converging intersection of different pathways connecting to the coastal promenade (Author, 2024).

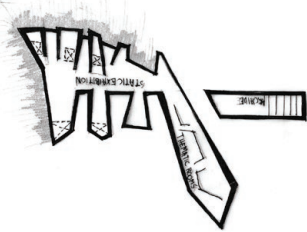
Figure 5.18
Developing Floor Plans



The **FIRST FLOOR** consist of a museum exhibition space displaying cultural artefacts in a static and formal manner curated by museum staff (exhibited knowledge). The floor is visually connected to the ground floor to contextualise the historic artefacts being displayed with the making process that can be observed through the voids at the artisan workshop on the ground floor.



The **GROUND FLOOR** consists of an artisan workshop (performed knowledge) which not only house Onyoka artisans, but other cultural makers as well. A community gallery is provided and a library where literature can be accessed (stored knowledge). A lecture hall is also planned (shared knowledge).



The **BASEMENT FLOOR** reflects the intestines of the cows' stomach used as bait while catching Oomba shells. It also houses formal museum exhibition spaces.

Note. The initial floor plans extended the proposed museum typology over three floors. This was decided to separate sensitive artefacts exhibited in the museum from the artisan workshops making crafts. This separation also juxtaposes the static exhibition space from the dynamic workshop exhibition space (Author, 2024).

Figure 5.19
Site Development Model



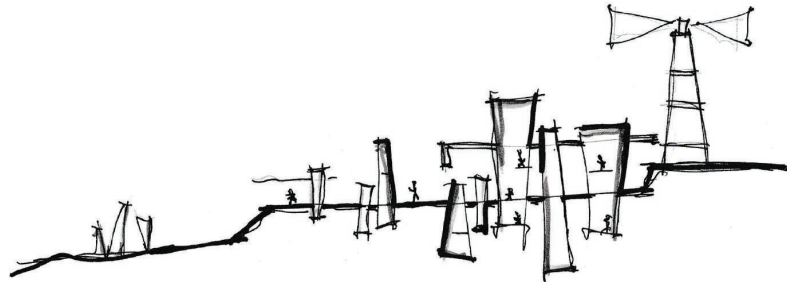
Note. The site model is the initial attempt at developing the form along the pier wall. The form constructed at the existing museum takes guidance from the concept whereby a stone smashes the mussel fragmenting it into shards that protrude from the existing structure. Furthermore, the proposed museum typology extends along the pier wall and provides market space for traders to appropriate. By doing this, the pier wall becomes a dynamic market space. The proposed development also provides connection to the surrounding through pathways (Author, 2024).



The disorderly nature of integrating order and chaos is a difficult challenge to overcome. It is important to respect the existing column structure of the initial museum building while juxtaposing it angular and non-conventional floor plan layouts. However, the design stayed true to the concept of smashing mussel shells. Form is furthermore developed into a more rational mass reduces space being wasted by awkward corners.

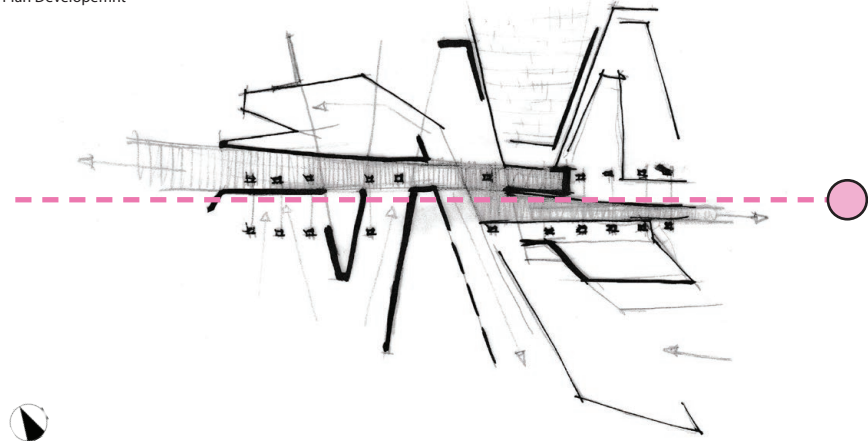
The first semi-resolved plans are produced to investigate the distribution of programme and to explore circulation flows.

Figure 5.20
Sectional Development



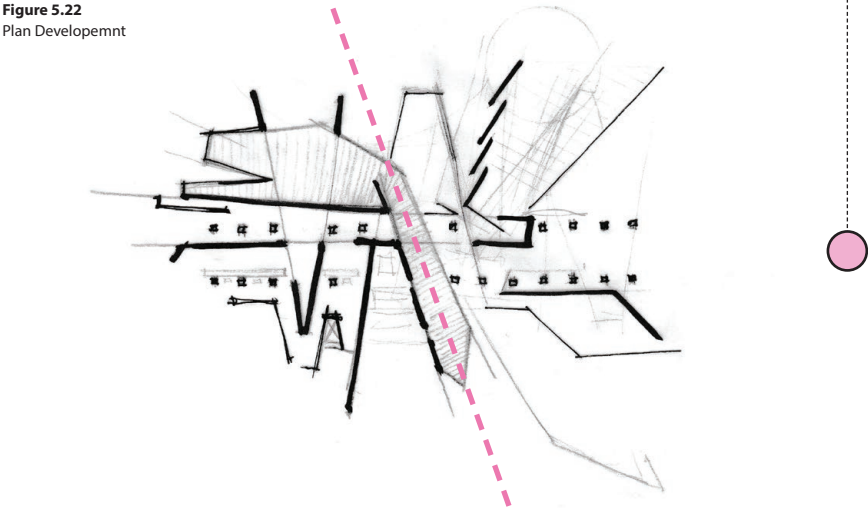
Note. The section displays the levels of the site. The lighthouse is elevated 3.5 meters above the flat land where on the existing museum building is located. Another 3.5 meters drop is found from the museum level to the beach. The lighthouse can also be observed becoming part of the beaded development (Author, 2024).

Figure 5.21
Plan Development



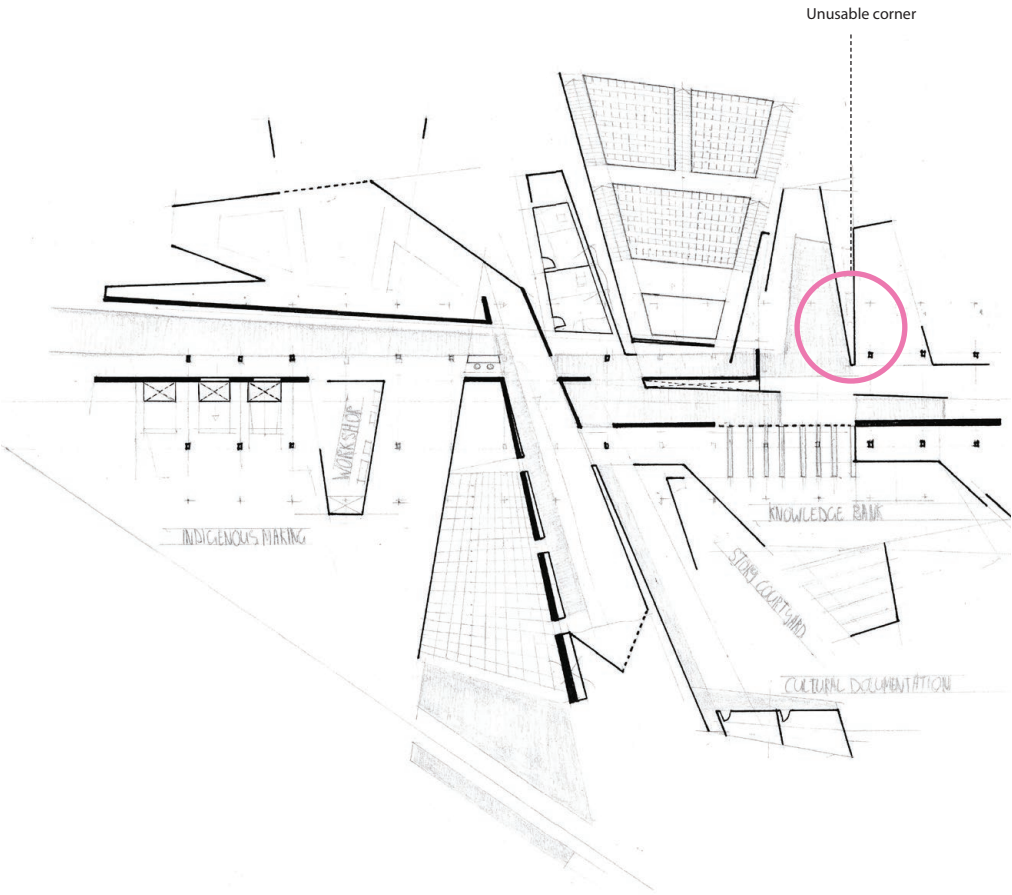
Note. Linear movement is allowed through the new proposed building. This results in the promenade moving along the pier wall and penetrates through the building, creating a connection to the lighthouse. In previous plan developments the portal frame structure of the existing museum has mostly been ignored, however here is the first time that the fragment structure is integrated into the rigid column structure of the existing building. (Author, 2024).

Figure 5.22
Plan Development



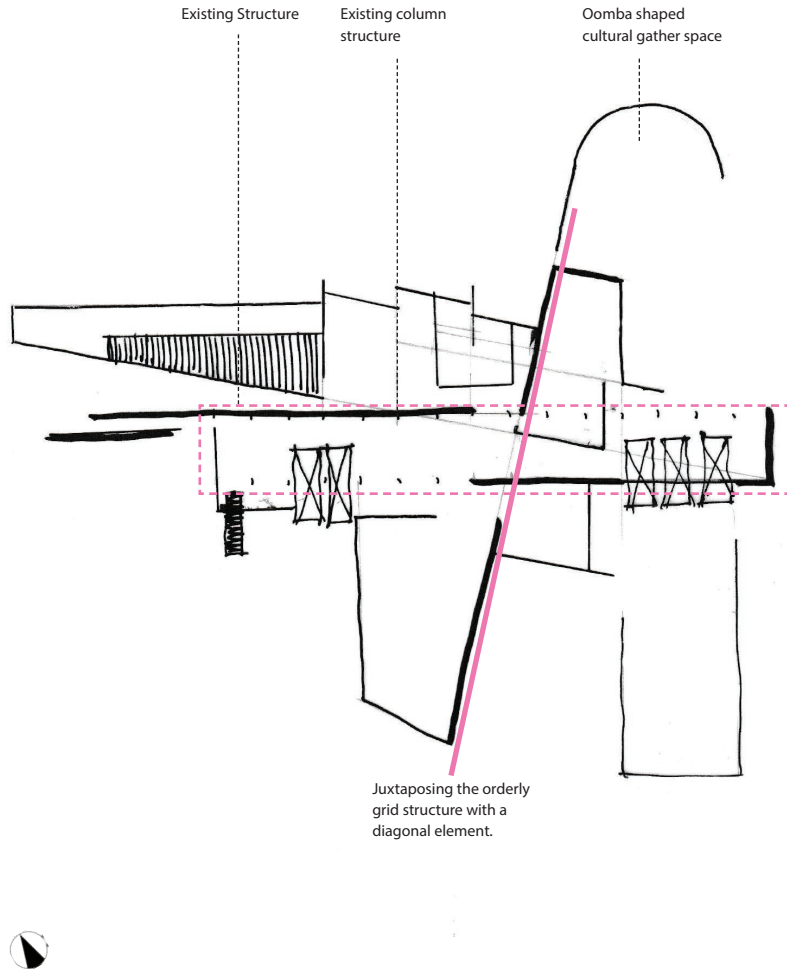
Note. Diagonal movement is also investigated in the plan. This allows users to not only enter the building from the western and eastern ends, but from the north and south as well. (Author, 2024).

Figure 5.23
Floor Plan Development



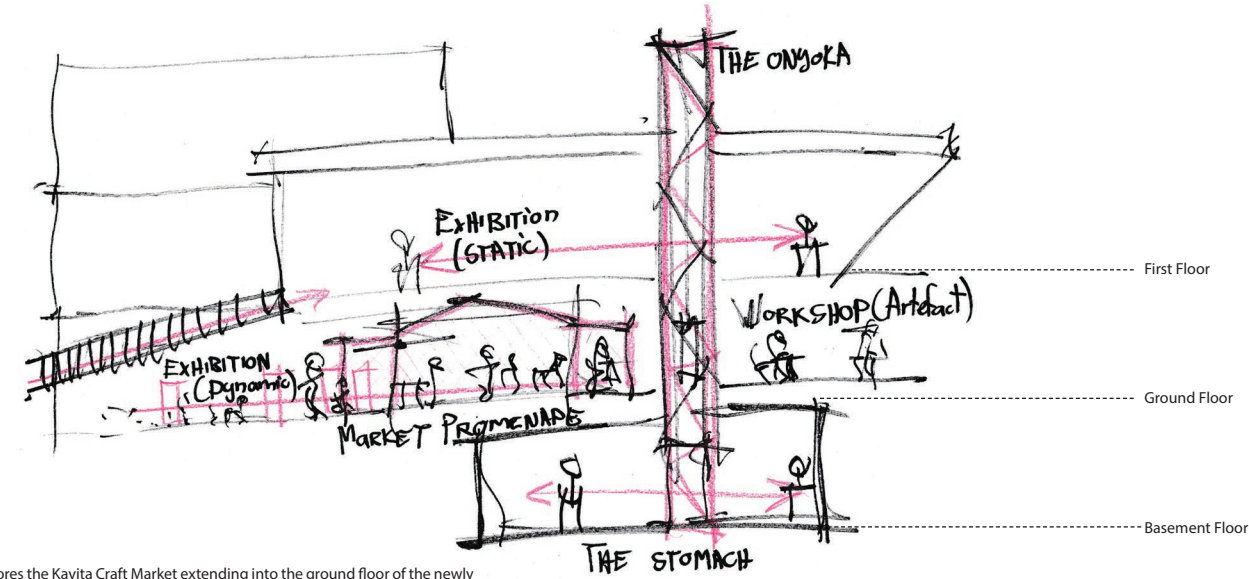
Note. The rationalisation process started at this point to explore how useful spaces can be developed reducing the wastage of space due to unusable spaces found in awkward angular corners (Author, 2024).

Figure 5.24
Floor Plan Development



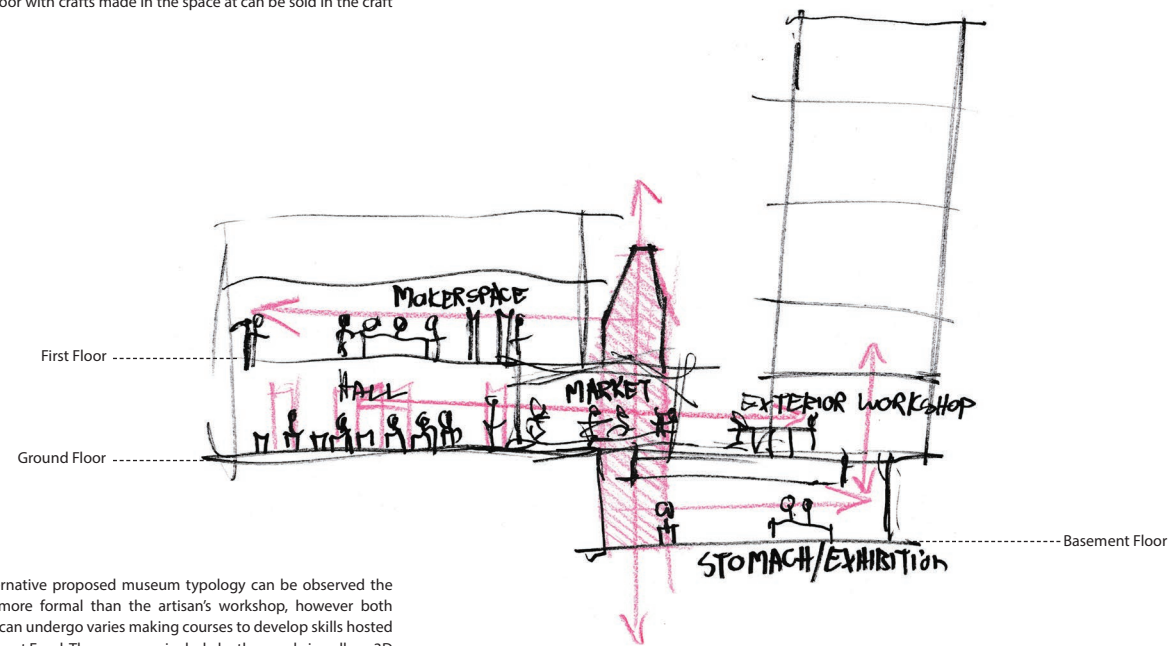
Note. It proved challenging to integrate the disorderly structure into a very orderly existing column structure, thus the new additions were simplified to conform and respect the existing museum structure. However, the fragmenting and beaded concept can still be identified within the floor plan layout. The shape of the Oomba guided the design process for the curved exterior cultural gathering space that can be found on the eastern side of the building (Author, 2024).

Figure 5.25
Sectional Development



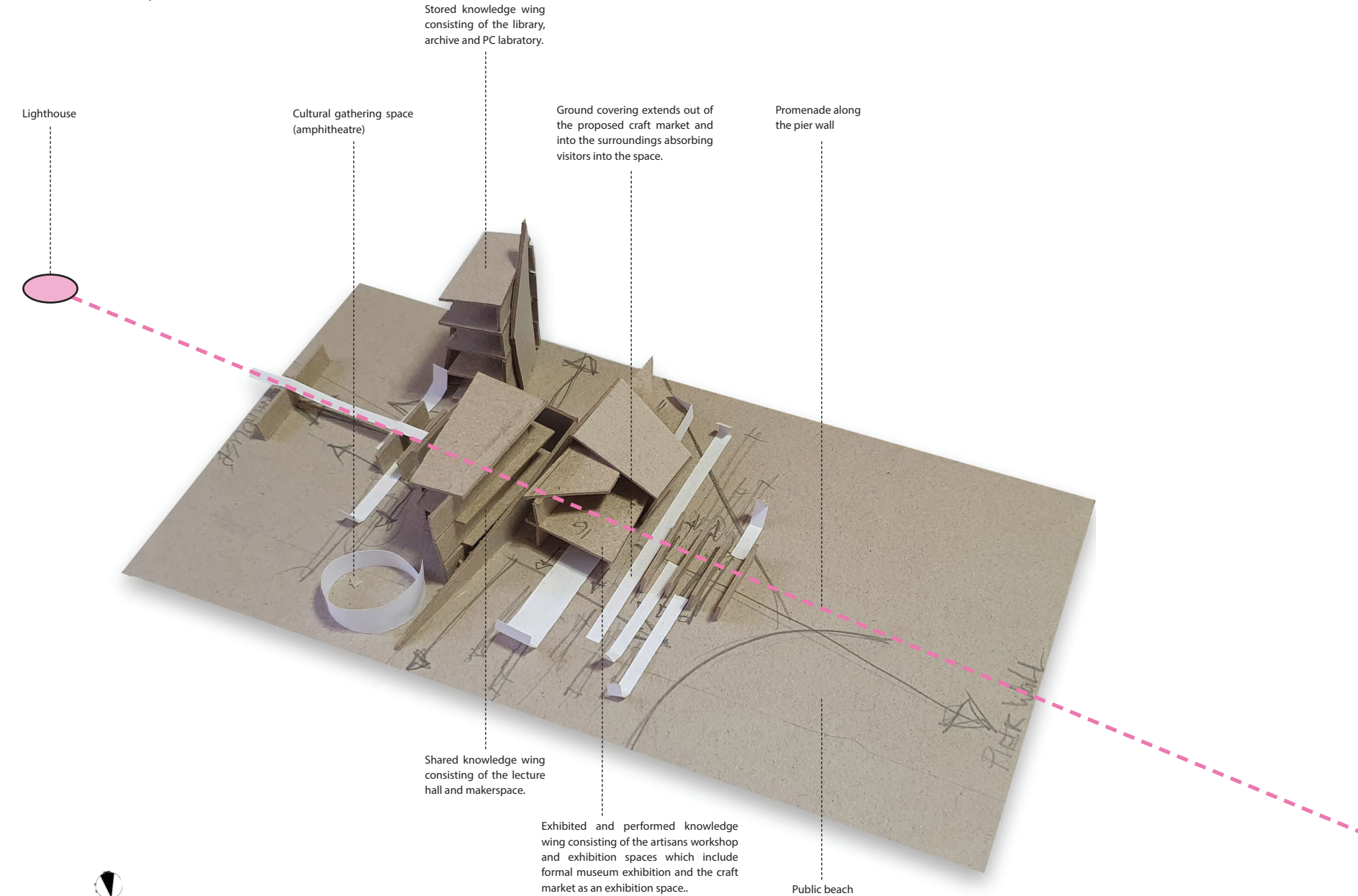
Note. The section explores the Kavita Craft Market extending into the ground floor of the newly proposed museum typology. This would allow the whole ground floor to be accessible from all sides as tourists and visitors filter through. On basement level, the stomach is design as a exhibition space for historic and sensitive cultural artefacts. An Onyoka tower connects the three levels with a display cabinet that can be winched through all the levels. In this way the building can become dynamic, and the display viewed from all levels. The artisan's workshop is also positioned on the ground floor with crafts made in the space at can be sold in the craft market (Author, 2024).

Figure 5.26
Sectional Development



Note. On the first floor of the alternative proposed museum typology can be observed the makerspace. The makerspace is more formal than the artisan's workshop, however both involve making. Locals or scholars can undergo varies making courses to develop skills hosted by the Community Skills Development Fund. These courses include leather work, jewellery, 3D printing, robotics, laser cutting and wood work. With the acquired knowledge, the students can be employed for skilled labour and gain an income (Author, 2024).

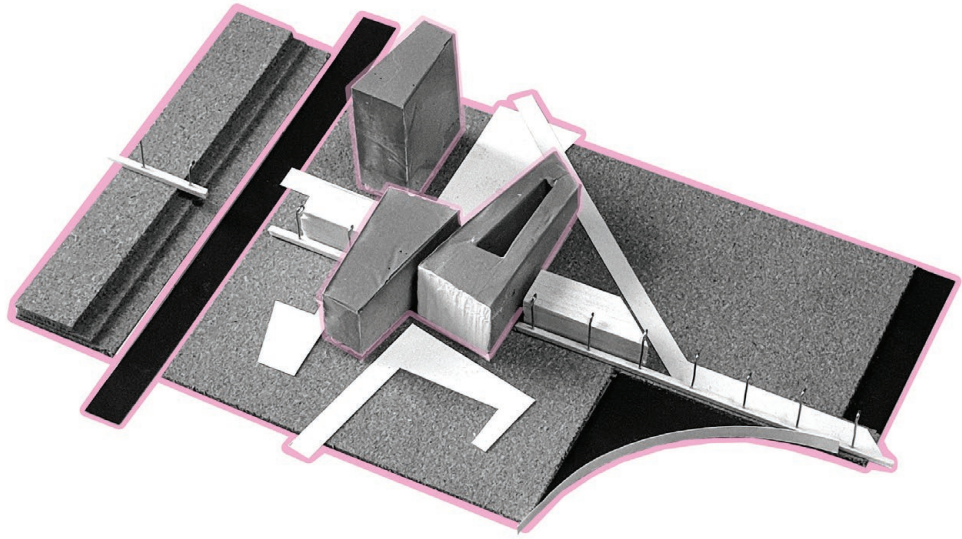
Figure 5.27
Form Development



Note. The model explores three fragmenting masses being exploded from the rigid footprint of the existing structure. The white paper depicts unique ground covering that extends out of the portal frame structure and into the surrounding context. In this way, the existing museum breaks away from its isolated tendencies and become more engaged with the context. This will also allow pedestrians to access the building from all side creating a permeable and inclusive experience. To juxtapose the angular structure, a soft curving gathering space in the form of an amphitheatre can be observed. This is where knowledge is shared through different cultural expression including dancing or storytelling (Author, 2024).

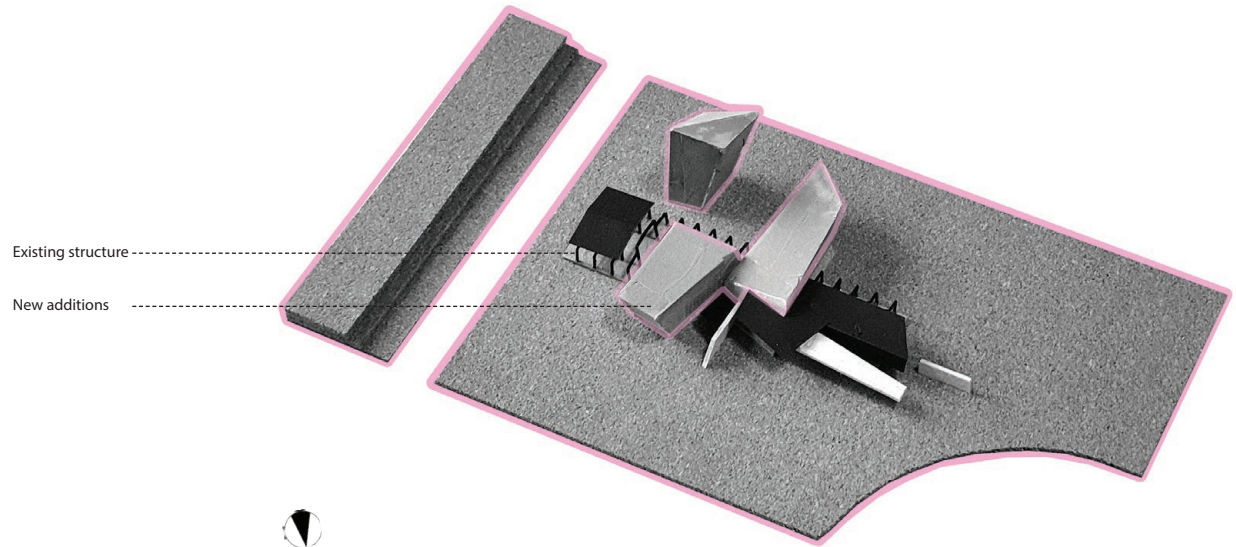
This is the final phase of design development, which explores form, proportion and plan development. Models are constructed to investigate the structural consequence of integrating and juxtaposing the existing tectonic structure with steorotomic mass additions. The phase also investigates the distribution of knowledge space within the proposed museum typology and how they juxtapose one another. The programme is distributed in elevation, and the new structure is developed through model building. Finally, plans are developed to integrate a craft market as an exhibition space into the proposed development.

Figure 5.29
Form Development



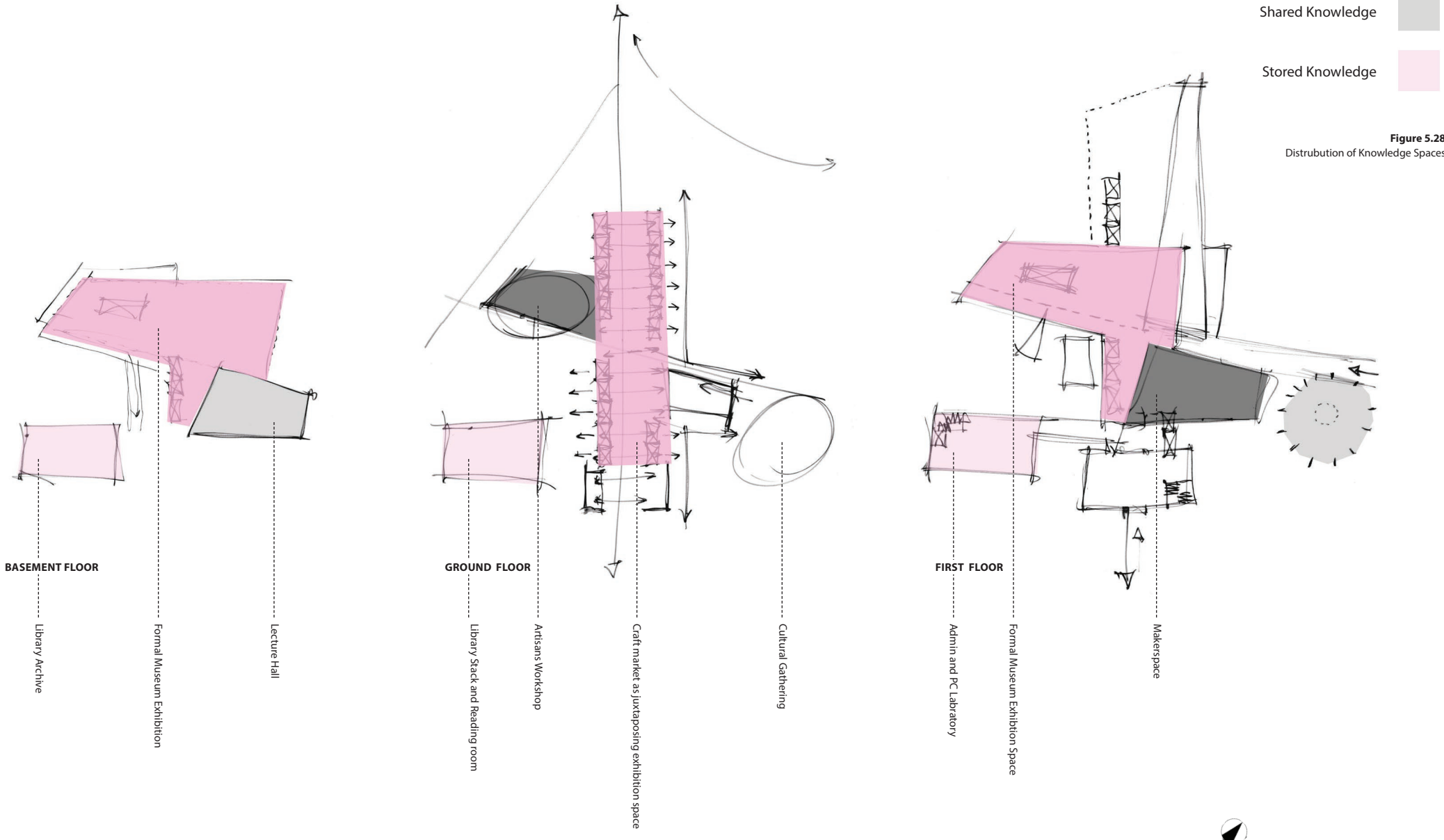
Note. A model was constructed to explore the mass and proportions of the proposed intervention (Author, 2024).

Figure 5.27
Sectional Development



Note. A model was constructed to explore the integration of new additions to the existing portal frame concrete structure of the existing museum resulting in a structural juxtaposition (Author, 2024).

DISTRUBUTION OF KNOWLEDGE SPACES



Note. The diagrams indicate in colours where each knowledge space is located on plan(Author, 2024).

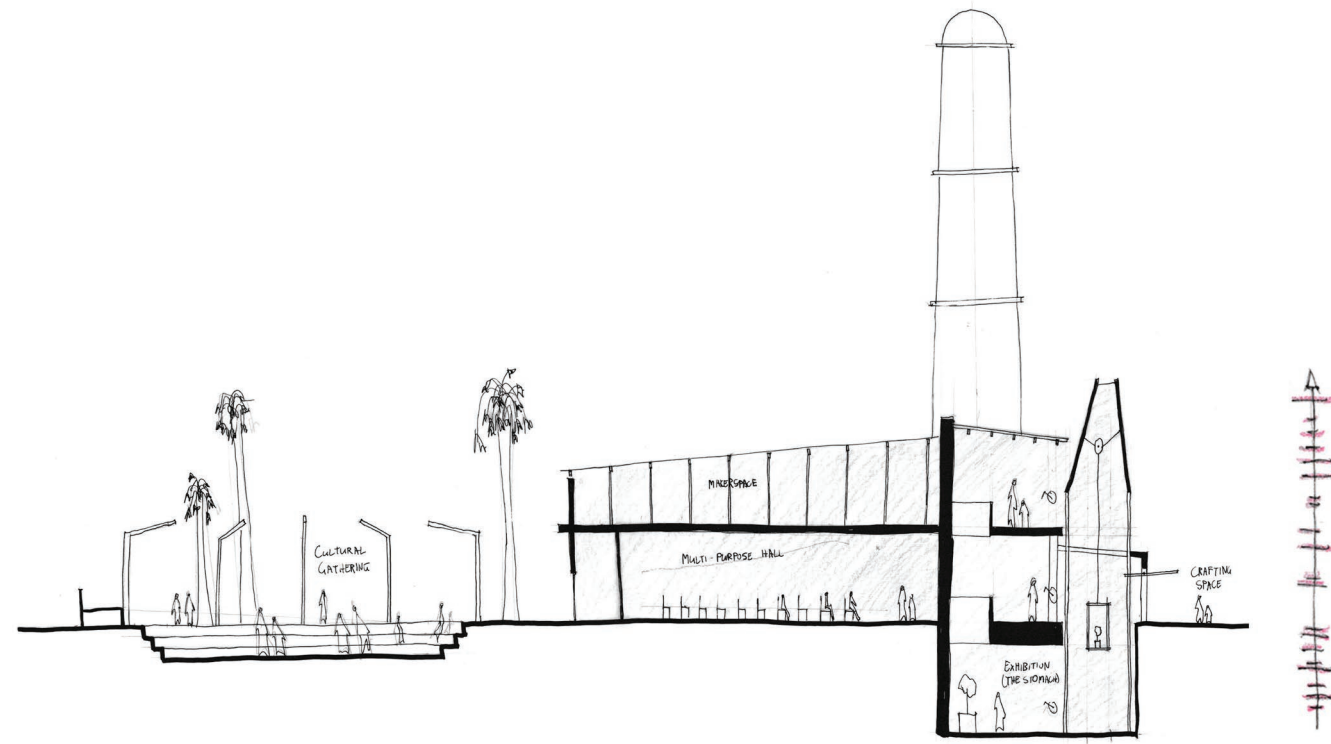
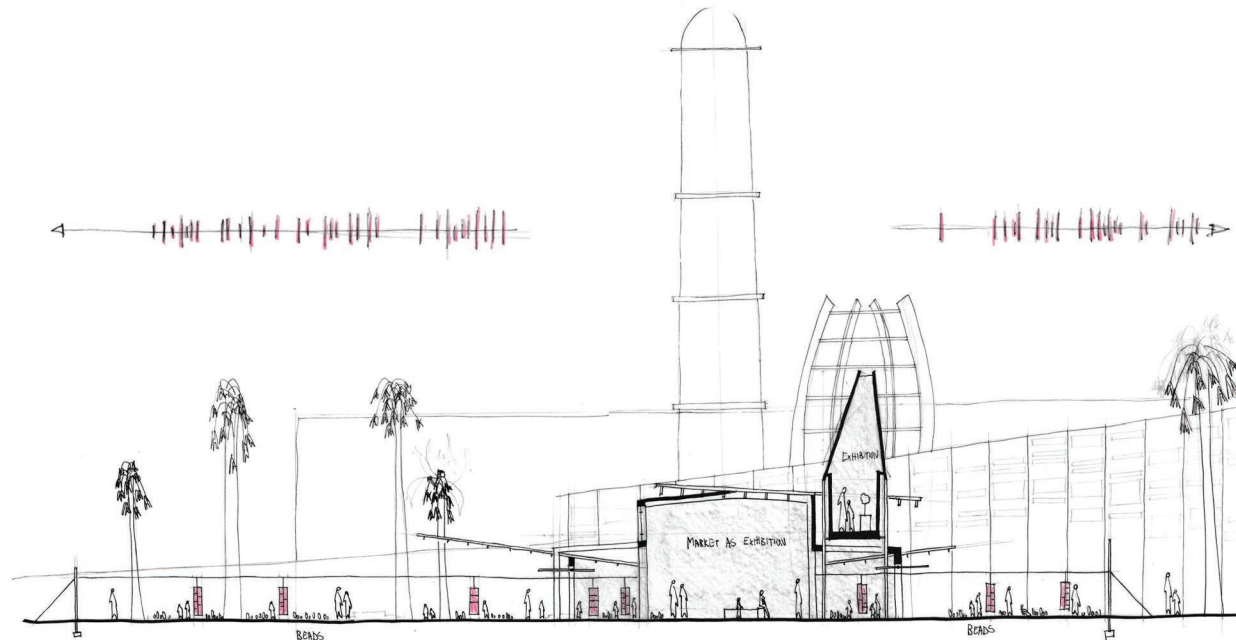


Figure 5.29
Sectional Development

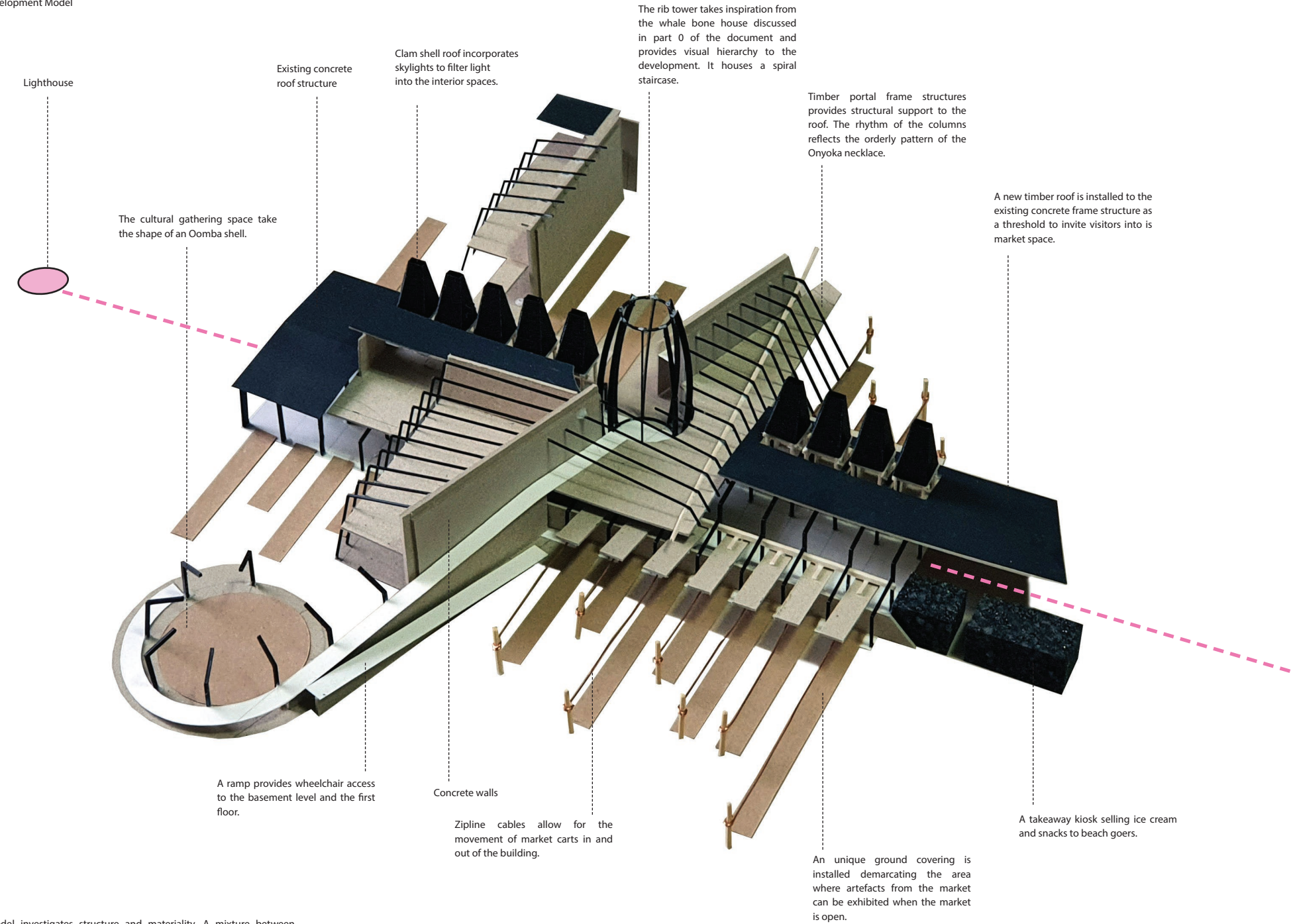
Note. The section depicts the relation between spaces horizontally and vertically. The Display cabinet moves up and down the Onyoka tower as depicted in the diagram on the right side. (Author, 2024).

Figure 5.30
Sectional Development



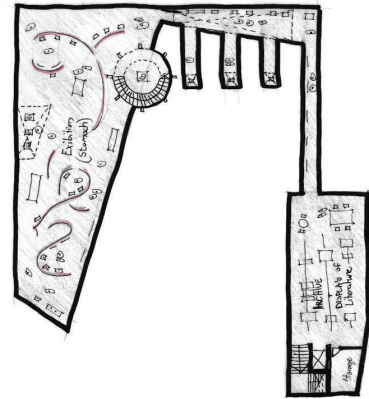
Note. The proposed development relates to the lighthouse by also introducing vertical tower elements creating a beaded skyline. The craft market can be seen moving to the outside of the building when it is open. Each trader has their own storage cart reflecting an individual bead. During the day, the market doors open to the side of the building and the traders move their carts to the outside whereby they unpack their artefacts onto the ground. Tourists can move through and observe or buy some souvenirs. When the market closes, the carts are pushed back into the building and the doors closed. (Author, 2024).

Figure 5.31
Structural Development Model

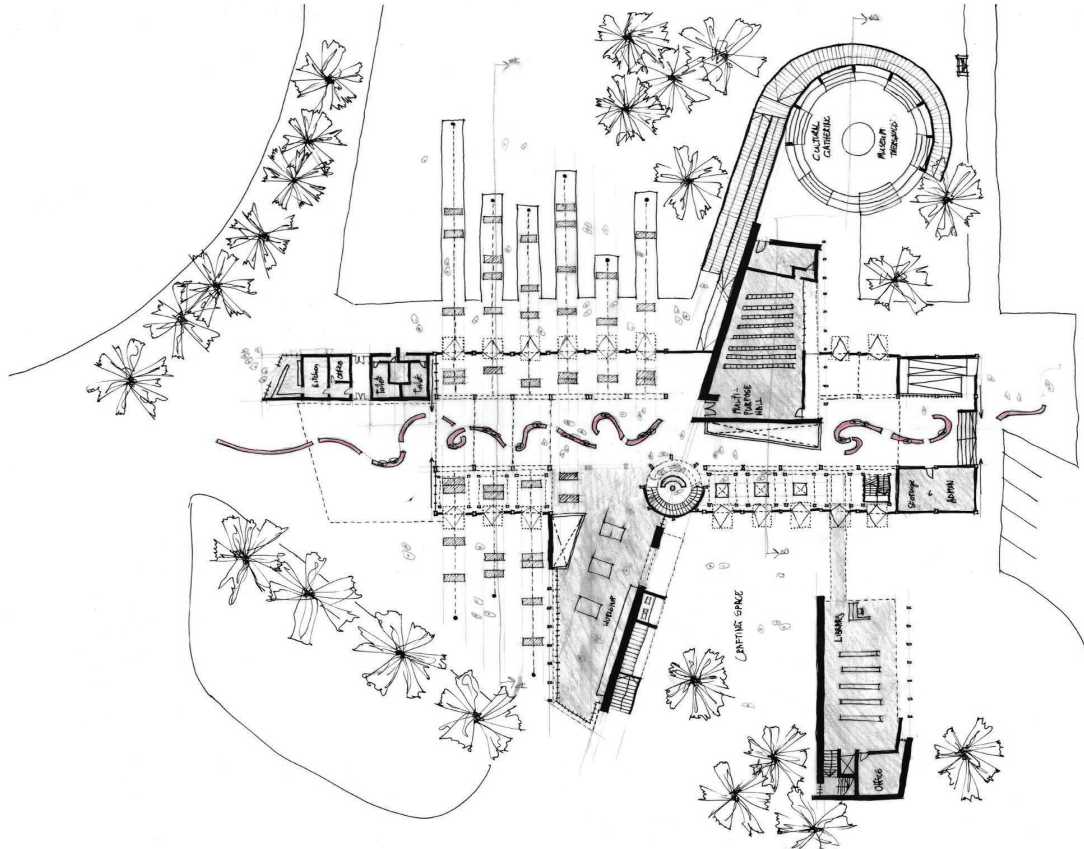


Note. The model investigates structure and materiality. A mixture between tectonic elements and stereotomic walls are juxtaposed to create the newly proposed museum typology (Author, 2024)

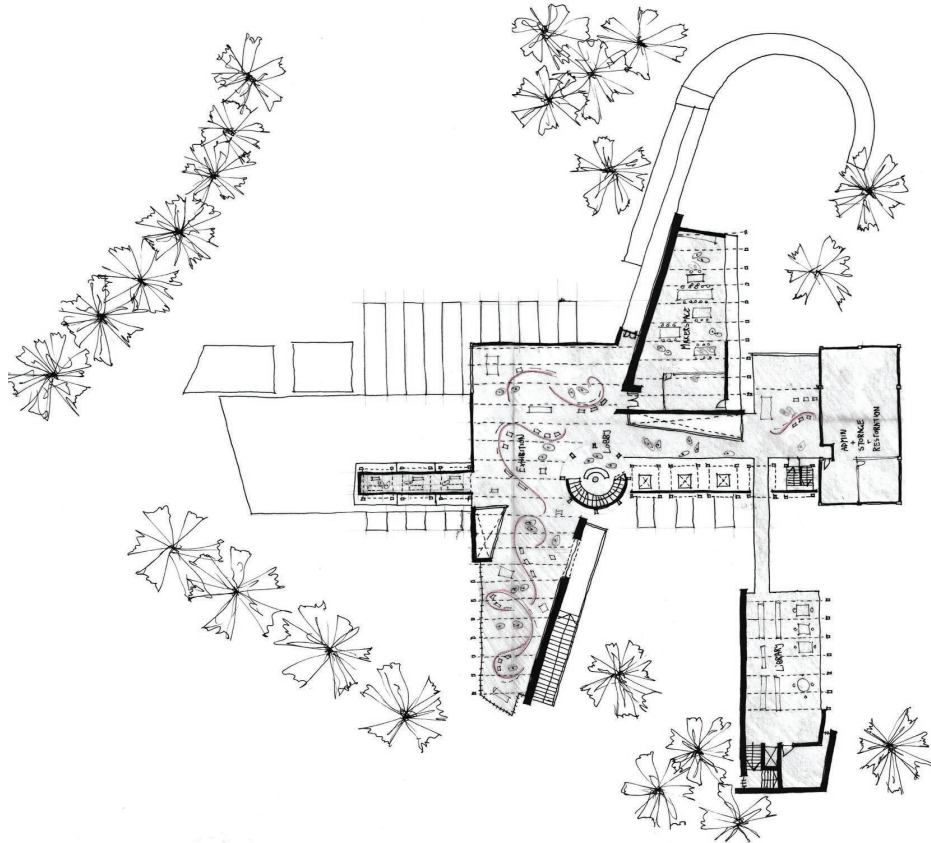
The final floor plan development successfully integrates and juxtaposes dynamic exhibition space in the form of a craft market with the static formal exhibition space of the museum. Voids through the different levels visually connect all the floors and foster juxtaposition between the different knowledge spaces. This visual connection also provides context to static artefacts displayed in formal exhibition spaces when visitors are allowed to observe the making process. To foster greater meaning and appreciation of displayed artefacts by placing a human behind each souvenir bought by tourists.



The **BASEMENT FLOOR** consists of a museum exhibition space and a library archive. Additionally, the Onyoka tower moves vertically through all three floors and into the basement level. The display cabinet reflects a Onyoka bead that moves up and down a string. A museum visitor can winch the display out of the depths below.



The craft market on the **GROUND FLOOR** is reinterpreted as an exhibition space that forms part of the museum exhibition, although curated by traders and flexible in the nature of its artefacts. The market expands to the exterior of the building during the day, whereby traders unpack their artefacts on the ground. This turns the building into a exciting market that expands when it opens and contracts when its closes. A thread-like bench flows through the building providing seating and juxtaposes the harsh angular architecture.



The **FIRST FLOOR** provides museum exhibition space that is displayed on curved room dividers softening the rigid floor layout. The Onyoka tower penetrates through the slab and connects the basement, ground and first floor. Multiple narrow roofs protrude from the building providing shade to the exterior market space below.



Note. The final floor plan developments take place and incorporates a dynamic craft markets space into the museum typology, whereby the market is understood as an exhibition space that juxtaposes the formal exhibition of the museum (Author, 2024).

CONCLUSION

In conclusion, this design phase reflects the transformative journey of making the Onyoka necklace, which integrates the metaphor of fragmenting shells to symbolise the project’s disruption of static colonial knowledge. The design honours the existing museum structure by juxtaposing order with disorder while introducing a dynamic alternative architectural language. Angular forms and rhythmic structural arrangements mirror the fragmented yet labour-intensive assembly of Onyoka beads, creating a dialogue between culture and architectural form.

The final floor plan unites formal and informal exhibition spaces by incorporating a craft market as an active exhibition area where artisans demonstrate their skills and knowledge of making. This creates layered visual connections across levels, allowing visitors to observe the making process and gain a more profound appreciation for Namibian heritage. The project bridges the gap between past and present through these integrated knowledge spaces, contextualising artefacts within a living knowledge of making artefact.

Figure 5.33
Rounding the beads



Note: A photograph of an Onyoka maker grinding the rough seashell pieces into smooth round Onyoka beads (Author, 2024).

Figure 6.1
Onyoka as an Architectural Catalyst



Note. The Mussel shells are extracted from the ocean, it is processed, then made by the touch of hand, it is beaded, sold in the market and traditionally used in celebrative occasions. (Author, 2024).

CHAPTER 6 / FINAL DESIGN

This chapter aims to present the research findings in an architectural form depicting a proposed museum typology that juxtaposes dynamic indigenous knowledge systems, particularly that of Onyoka-making, with the stagnant colonial representation of knowledge along the Swakopmund promenade to foster inclusive dynamic cultural representation along the Swakopmund Promenade, Namibia.



Figure 6.2
Aerial Perspective of the Proposed Building

Lighthouse

Proposed museum typology

Pier wall

Note. An aerial rendering depicting the proposed museum typology in its context (Author, 2024).

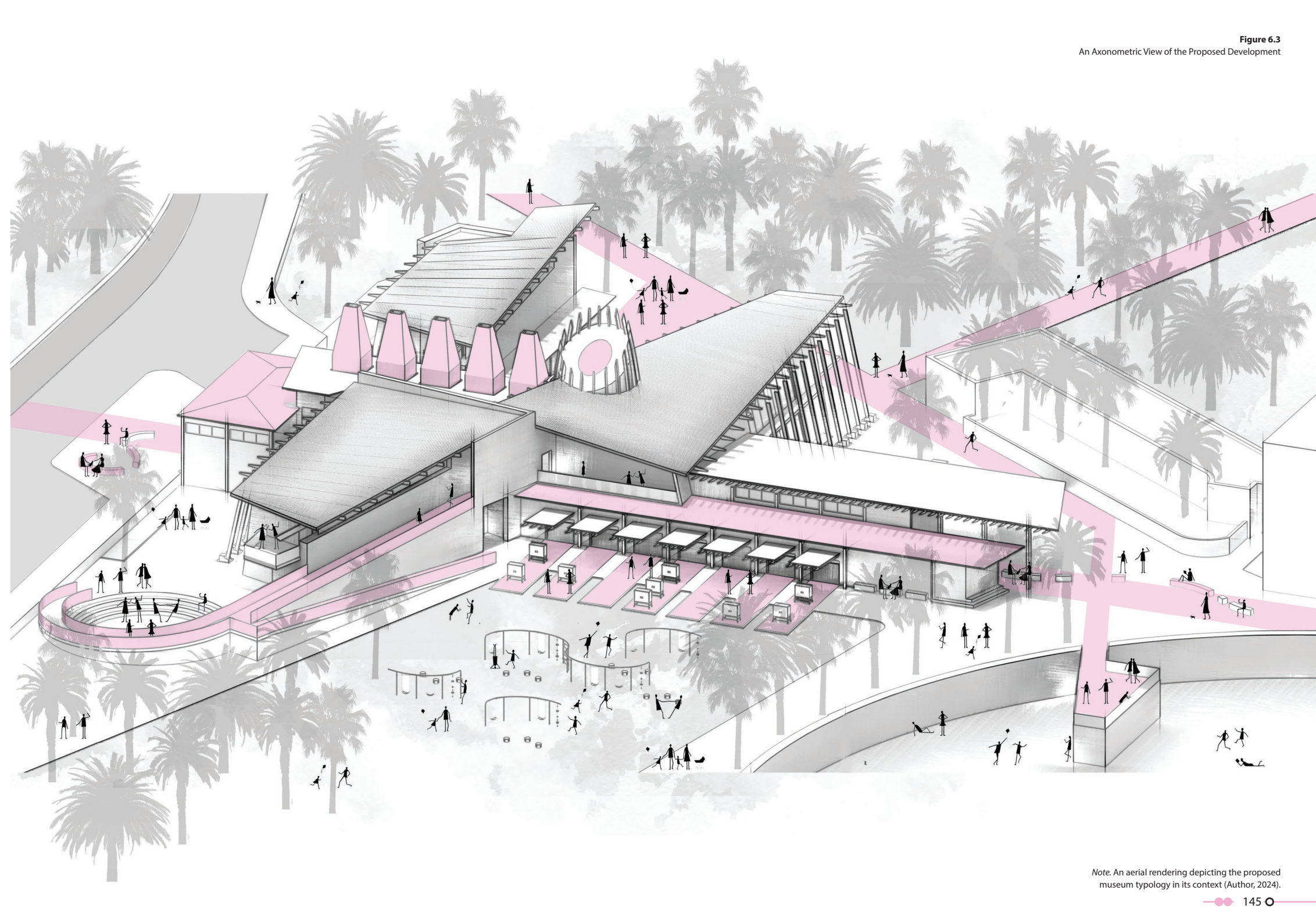


Figure 6.3
An Axonometric View of the Proposed Development

Note. An aerial rendering depicting the proposed museum typology in its context (Author, 2024).

LEGEND

- 01 Pier wall
- 02 Promenade Market Stalls
- 03 Cafe Deck with Dressing room below
- 04 Kavita Craft market
- 05 Playground
- 06 Arnold Schad Promenade
- 07 Lighthouse Restaurant
- 08 Cultural Gathering Space
- 09 Lighthouse
- 10 War Memorial
- 11 Proposed Lifeguard tower
- 12 Strand Hotel
- 13 Proposed Museum Typology

SITE PLAN / SCALE 1:1000

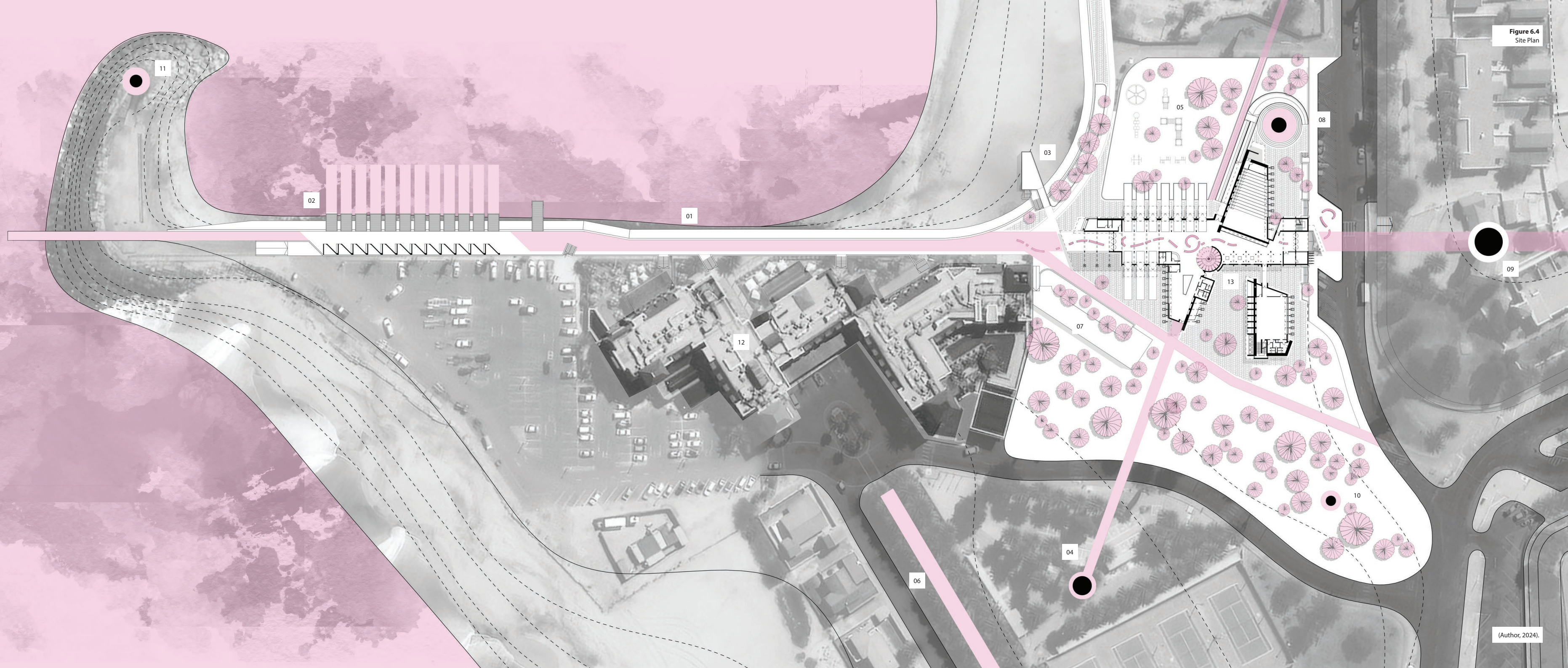


Figure 6.4
Site Plan

(Author, 2024).

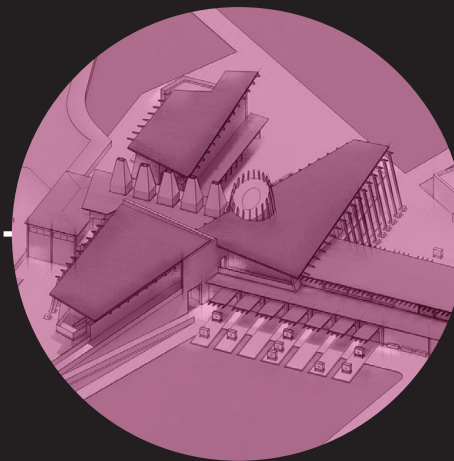
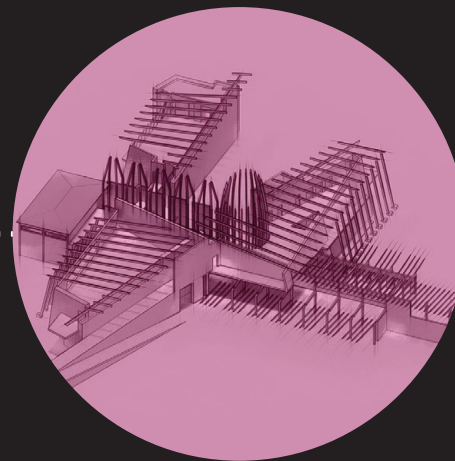
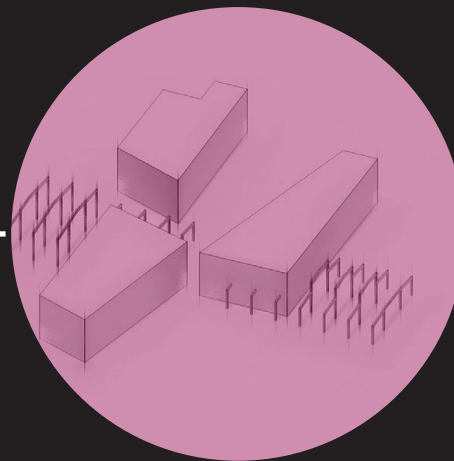
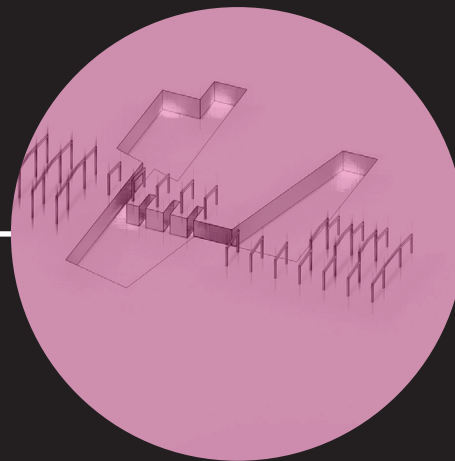
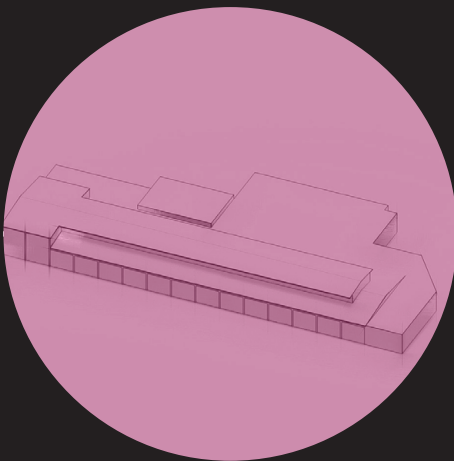
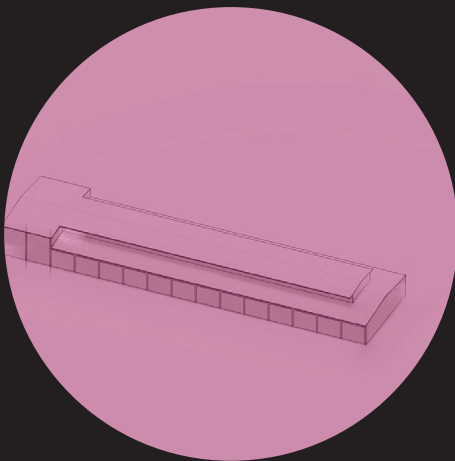
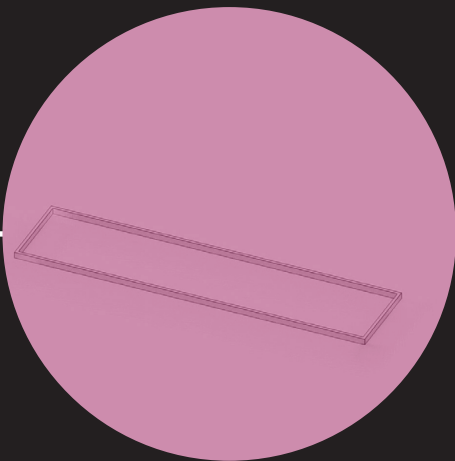
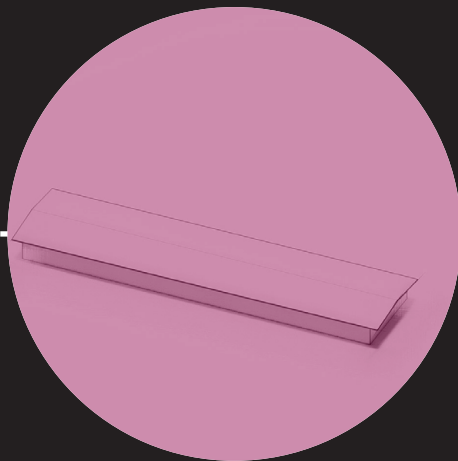


Figure 6.5
Transformation of Museum Typology

Note. Diagrams show the phases of transformation the Colonial Custom shed has undergone (Author, 2024)).

01 | COLONIAL CUSTOMS SHED

The German colonial customs shed was constructed at the Mole Basin with the pier wall in the early 1900's to process goods imported and exported at the harbour by the Germans.

02 | DEMOLITION

After the Custom Shed was bombed by a British Battleship in World War 1, it stood in ruins for years. Later it was demolished with only the foundations remaining.

03 | REBUILDING

In 1958, a new museum was constructed on the remaining foundations of the former Customs Shed.

04 | ALTERATIONS

As the years moved on and the Museum needing more space and facilities it was extending into a form that reduced much of the identity from the initial museum building.

05 | REINTERPRETING

The proposed museum typology strips back the existing museum building to its basic structure being the concrete portal frames. The "stomach" basement level is excavated and some of the portal frames are demolished.

06 | FRAGMENTING THE SHELL

Massing is produced taking the form of three Black Mussel shell shards exploding from the centre of the structure, reflecting the smashing phase during Onyoka making.

07 | TECTONICS

The structure is wrapped in a tectonic timber structure mimicking the rhythm and repetitive nature of the Onyoka necklace.

08 | PROPOSED MUSEUM TYPOLOGY

The final building juxtaposes the existing portal frame structure with the new additional wings housing the four knowledge spaces.

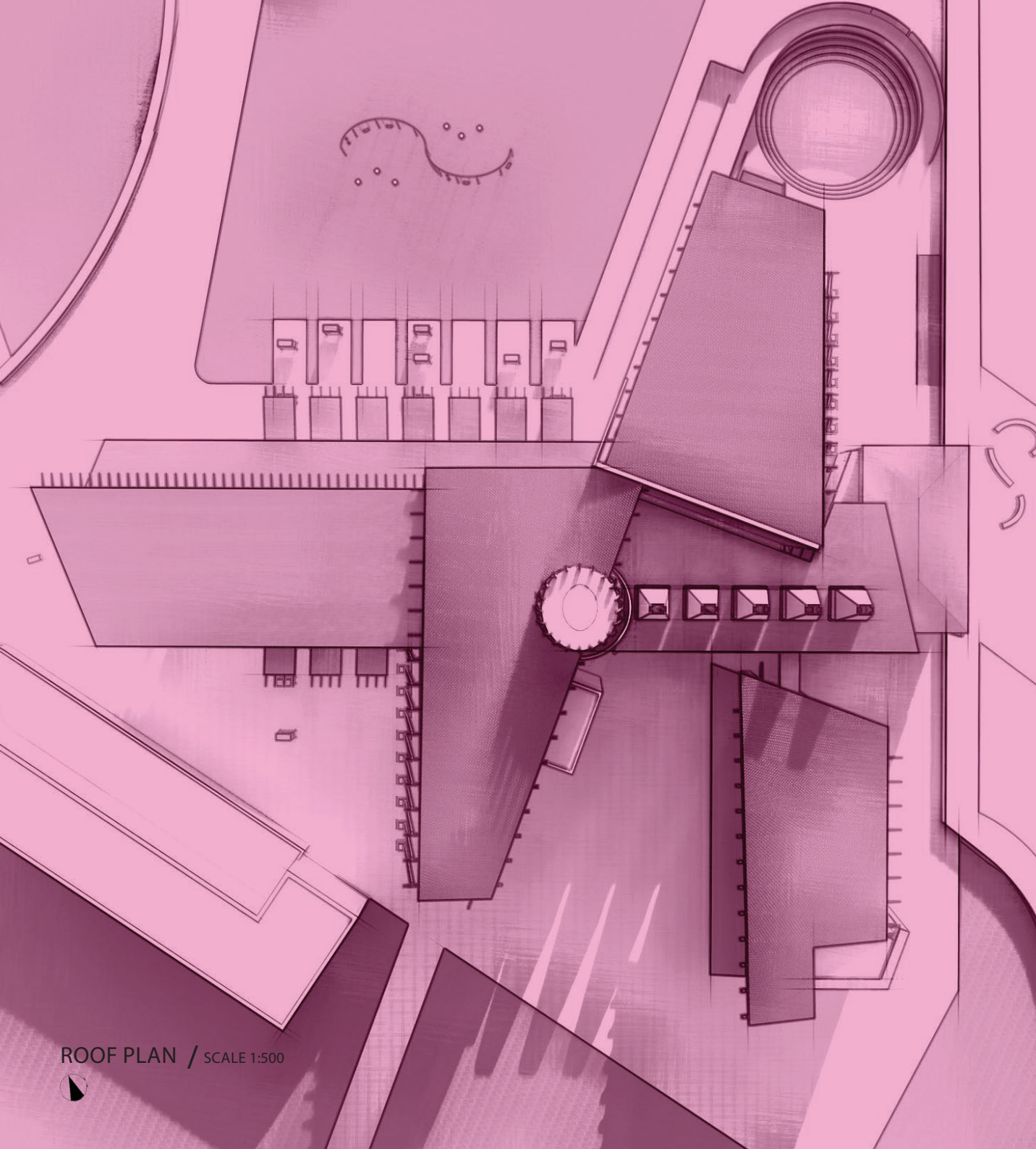
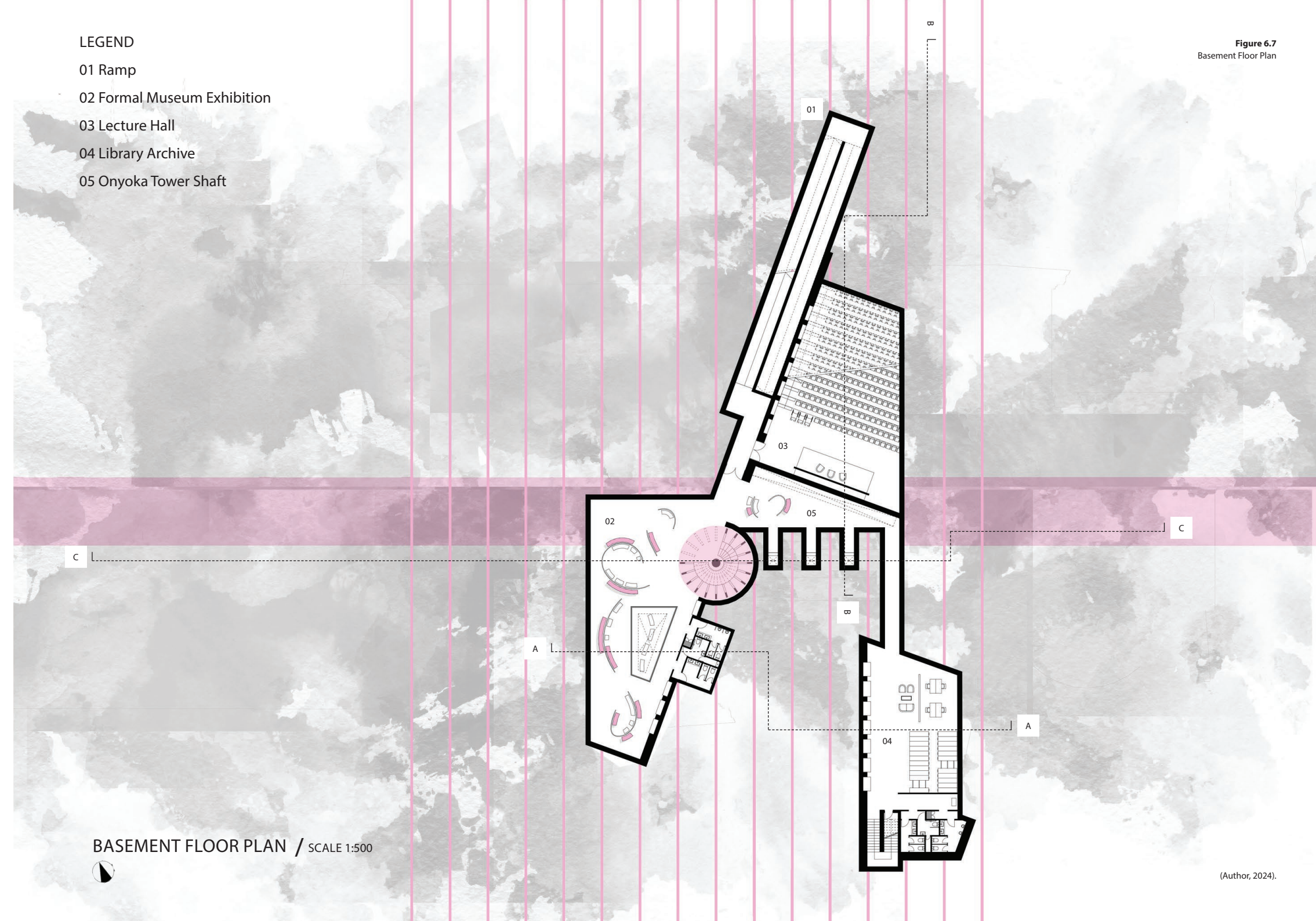


Figure 6.6
Perspective Roof Plan

(Author, 2024).



LEGEND

- 01 Ramp
- 02 Formal Museum Exhibition
- 03 Lecture Hall
- 04 Library Archive
- 05 Onyoka Tower Shaft

Figure 6.7
Basement Floor Plan

(Author, 2024).

LEGEND

- 01 Exterior Artefact Market
- 02 Interior Artefact Market
- 03 Artisan Workshop
- 04 Exterior Artisan Workshop
- 05 Kiosk
- 06 Cultural Gathering Space
- 07 Bicycle Rental
- 08 Towards Lighthouse
- 09 Lecture Hall
- 10 Onyoka Tower
- 11 Playground
- 12 Reception
- 10 Artefact Storage

GROUND FLOOR PLAN / SCALE 1:500

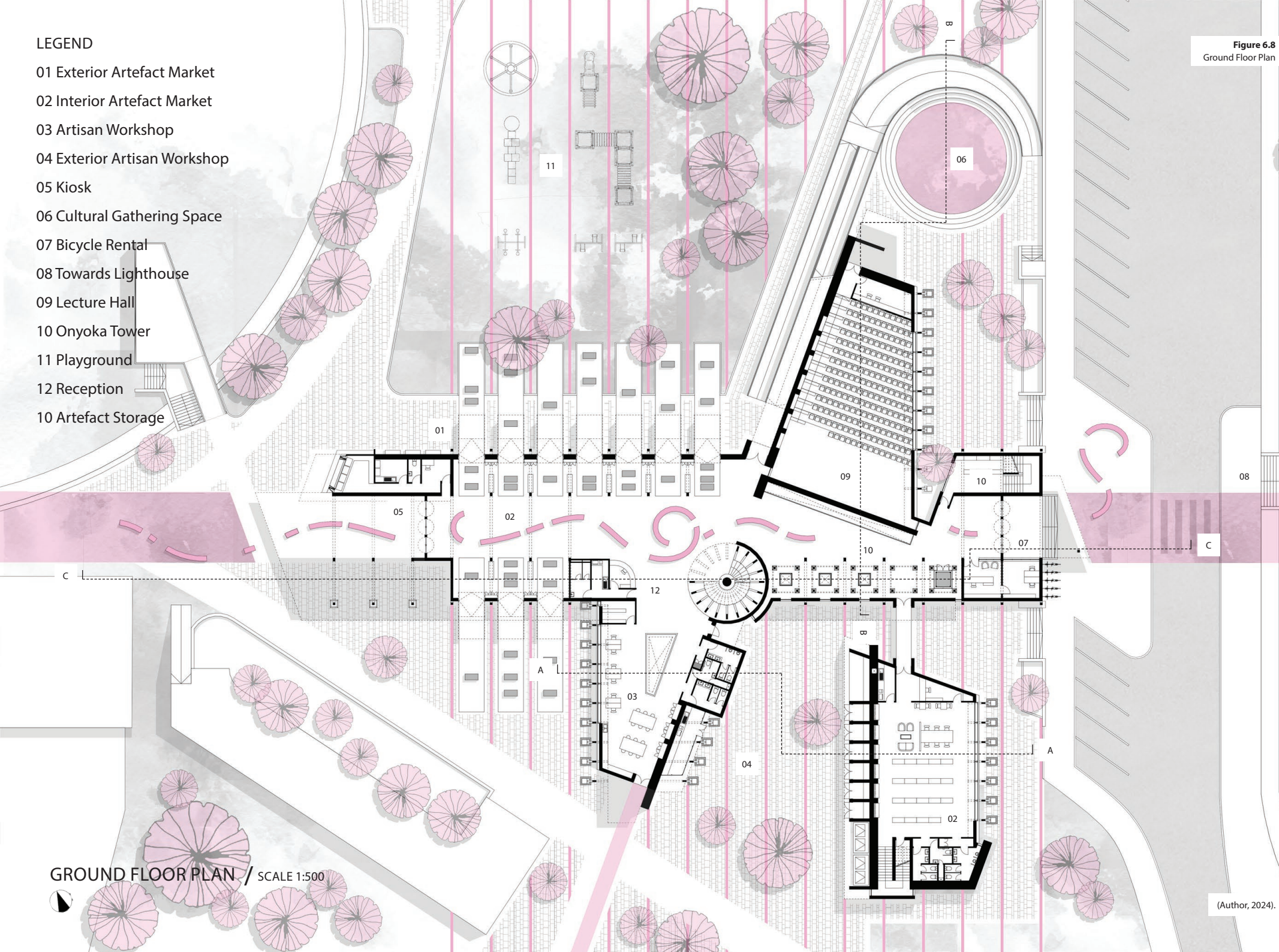


Figure 6.8
Ground Floor Plan

(Author, 2024).

LEGEND

- 01 Formal Museum Exhibition
- 02 Onyoka Tower
- 03 Makerspace
- 04 Administrative Block
- 05 Artefact Restoration and Research
- 06 PC Labratory
- 07 Library Admin

FIRST FLOOR PLAN / SCALE 1:500

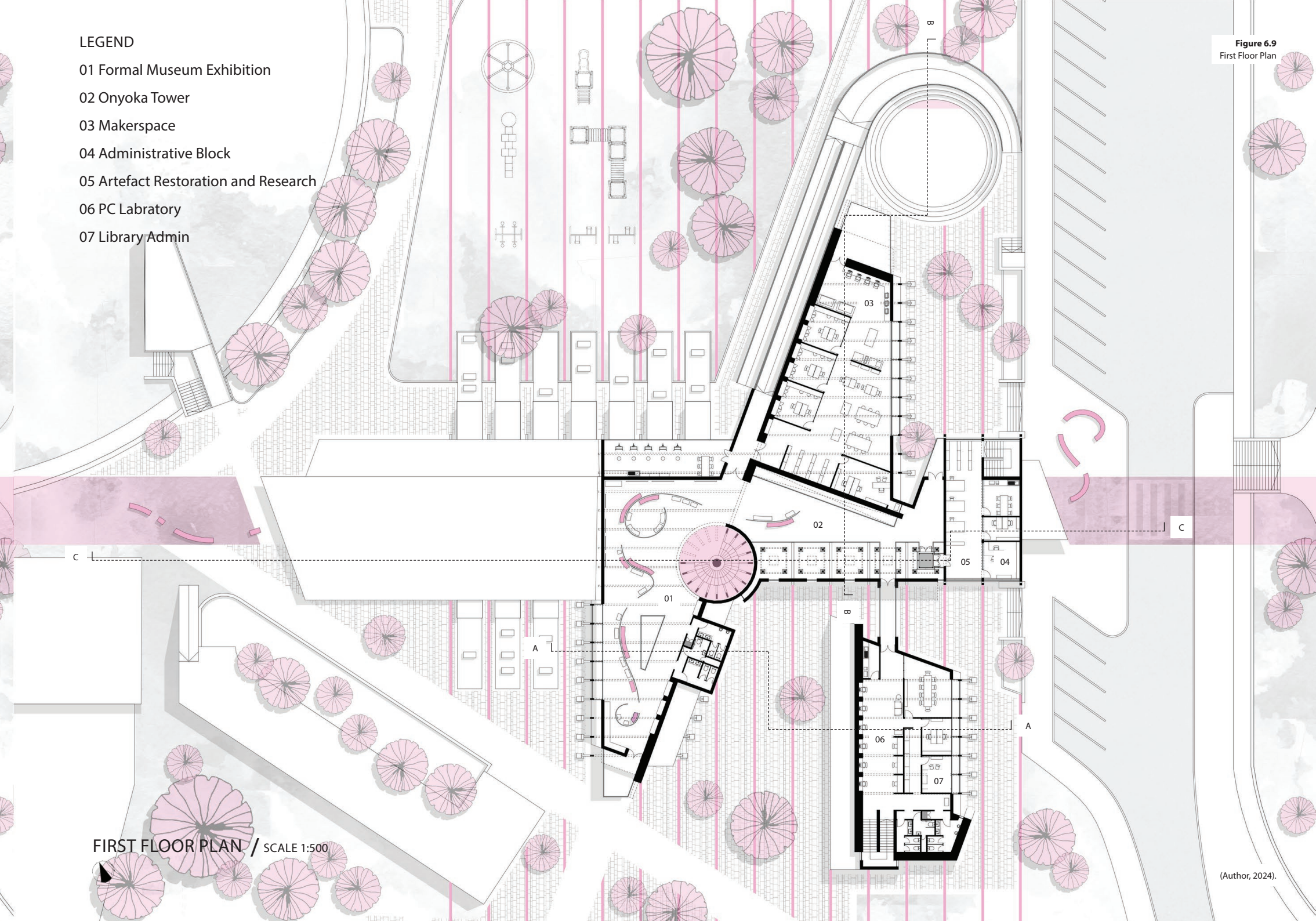


Figure 6.9
First Floor Plan

(Author, 2024).



Figure 6.10
Perspective of the Formal Museum

The formal museum exhibition space depicted in Figure 6.10 showcases sensitive cultural artefacts curated by museum staff. Onyoka strings are suspended from the ceiling to soften the rigid angular form of the building with its curved nature. Onyoka artisans are employed to make the ceiling strings, which provides them with income and allows them to become part of the construction process, resulting in a culturally representative knowledge representation space. Furthermore, visitors can look down the void and observe the making process of artefacts to provide context to the items displayed in the museum exhibition.

Figure 6.11 shows how the artefact market on the ground floor functions. Traders rent a storage cart (bead) from the museum to store their items. When the building opens, they can push their carts to the exterior and unpack their artefacts on the paved floor. Tourists can meander through the market and buy souvenirs. When the building closes, traders push their carts back into the building and close the pivoting door.

In this way, formal museum exhibition spaces are juxtaposed by dynamic market spaces (alternative form of exhibition) curated by traders.

(Author, 2024).



Figure 6.11
Perspective of the Artefact market as Exhibition Space

(Author, 2024).

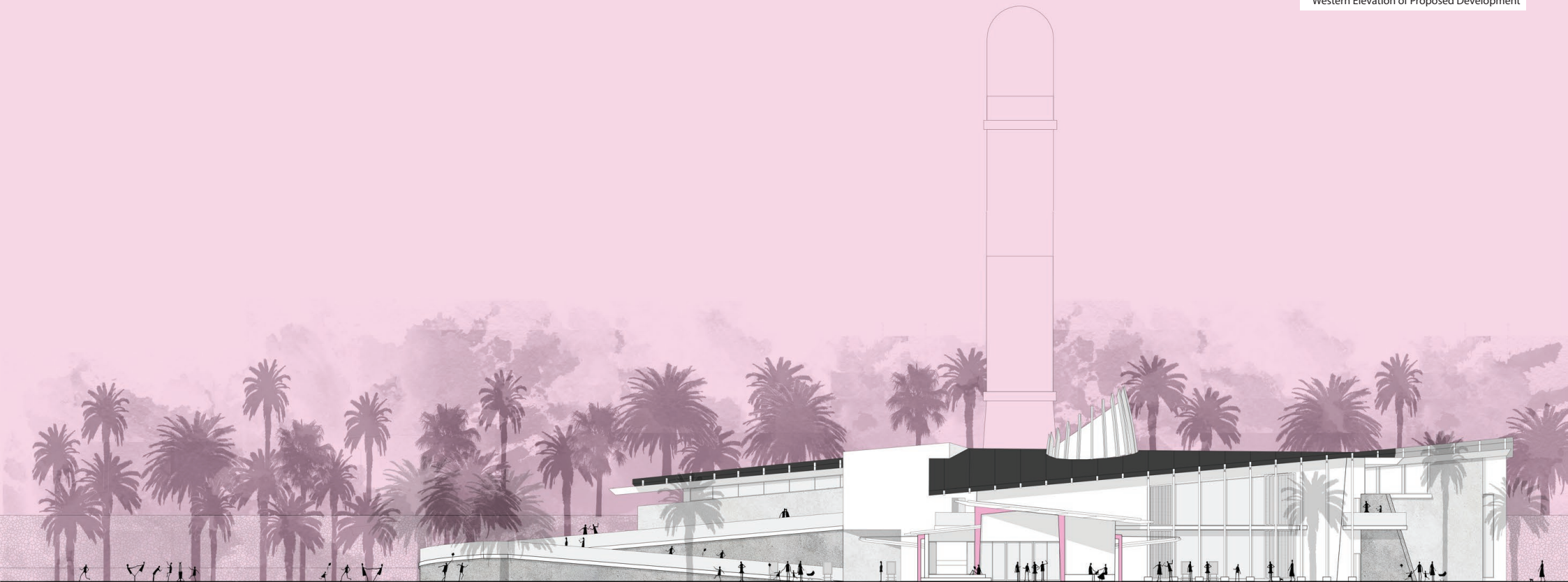
Figure 6.12
Northern Elevation of Proposed Development



NORTHERN ELEVATION / SCALE 1:500

Note. The existing structure
can be observed coloured in
pink (Author, 2024).

Figure 6.13
Western Elevation of Proposed Development

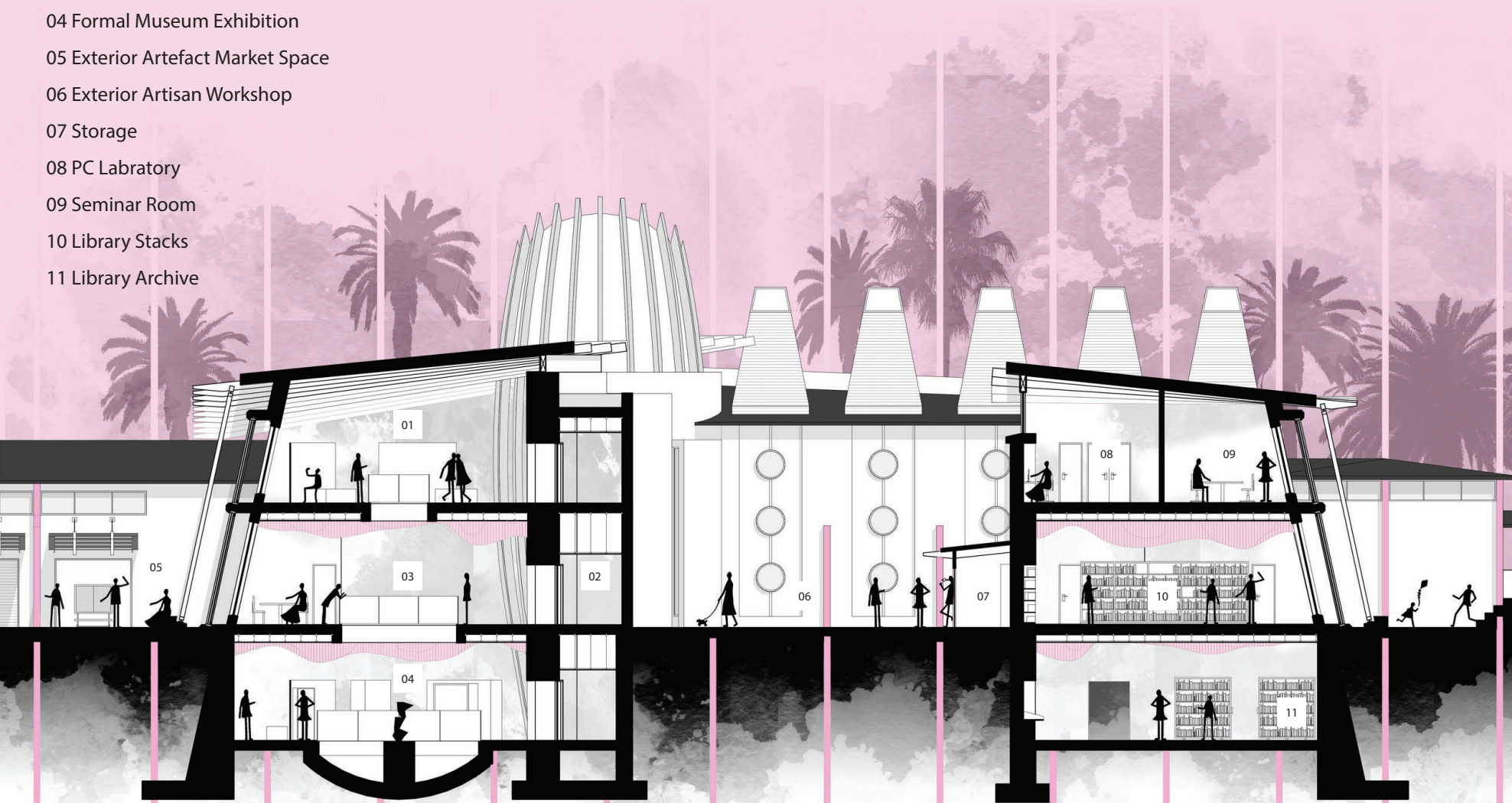


WESTERN ELEVATION / SCALE 1:500

Note. The existing structure
can be observed coloured in
pink (Author, 2024).

LEGEND

- 01 Formal Museum Exhibition
- 02 Public Tiolets
- 03 Artisan Workshop
- 04 Formal Museum Exhibition
- 05 Exterior Artefact Market Space
- 06 Exterior Artisan Workshop
- 07 Storage
- 08 PC Labratory
- 09 Seminar Room
- 10 Library Stacks
- 11 Library Archive



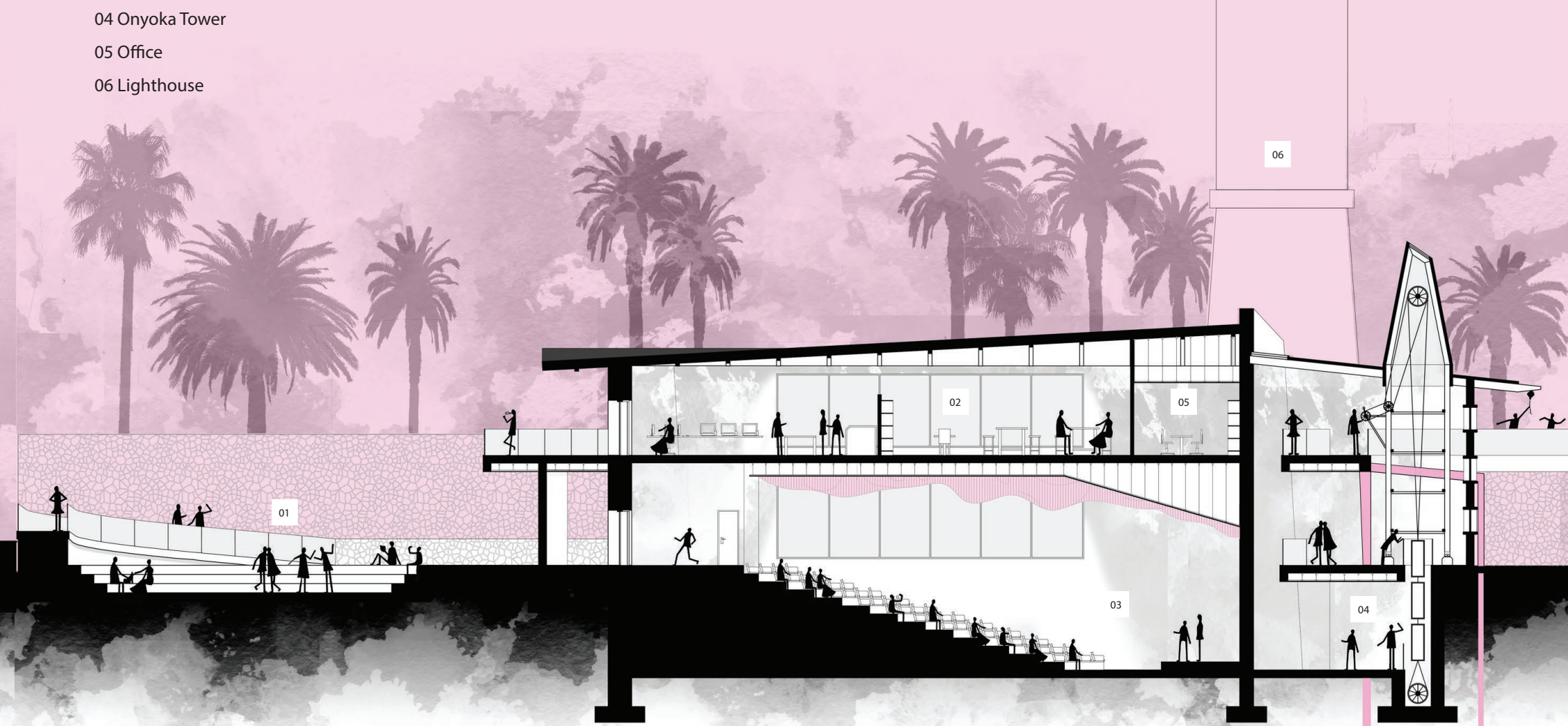
SECTION AA / SCALE 1:200

Figure 6.14
Section AA of the Proposed Development

Note. The existing structure, as well as the Onyoka Ceiling, can be observed coloured in pink (Author, 2024).

LEGEND

- 01 Cultural Gathering Space
- 02 Makerspace
- 03 Lecture Hall
- 04 Onyoka Tower
- 05 Office
- 06 Lighthouse



SECTION BB / SCALE 1:200

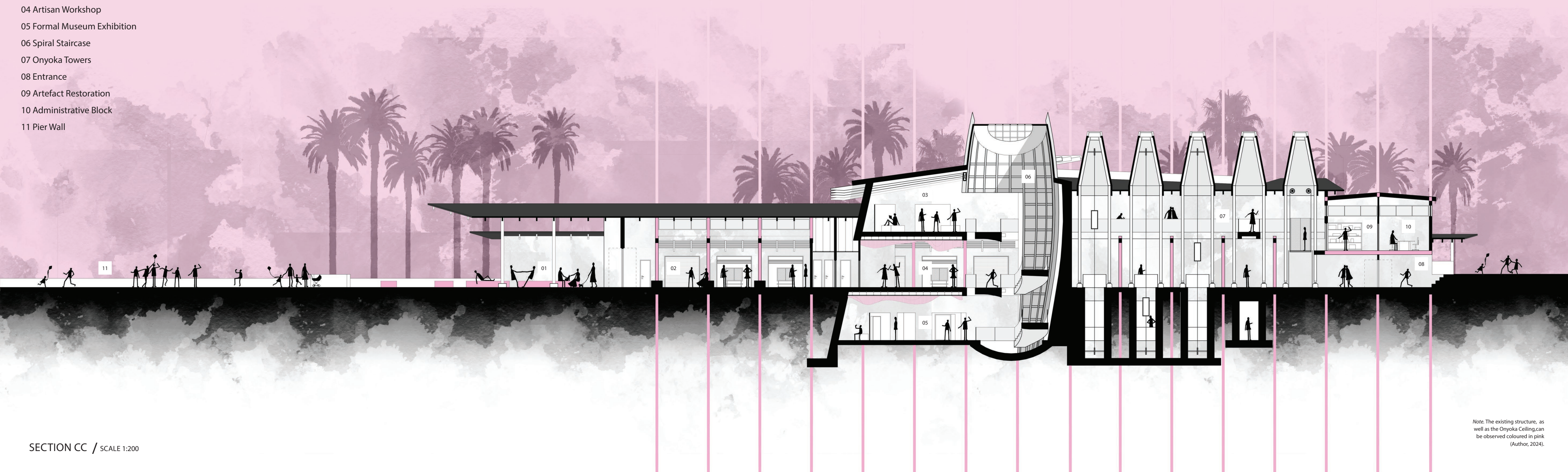
Figure 6.15
Section BB of the Proposed Development

Note. The existing structure, as well as the Onyoka Ceiling, can be observed coloured in pink (Author, 2024).

LEGEND

- 01 Main Entrance
- 02 Exterior Artefact Market Space
- 03 Formal Museum Exhibition
- 04 Artisan Workshop
- 05 Formal Museum Exhibition
- 06 Spiral Staircase
- 07 Onyoka Towers
- 08 Entrance
- 09 Artefact Restoration
- 10 Administrative Block
- 11 Pier Wall

Figure 6.16
Section CC of Proposed Development



SECTION CC / SCALE 1:200

Note. The existing structure, as well as the Onyoka Ceiling, can be observed coloured in pink (Author, 2024).



Figure 6.17
Perspective of the Cultural Gathering Space

Figure 6.17 depicts the cultural gathering space as a place for different cultures to express themselves through dance, storytelling, or other means.

The ramp wraps around the amphitheatre to provide an elevated platform that visitors can stand on if the venue becomes overcrowded, making it difficult to observe the expressions. To provide shading to the building's glass fronts, shading screens are constructed using black mussel shells to block the sunshine.

Figure 6.18 shows how the Onyoka display cabinets move up and down the towers and through the different floors. Winches can be cranked by hand to hoist or lower the displays. This device reflects the harvesting process of the Conus Bertulinus shell from the depths of the waters. Similar to how the shellfish moves up and out of the water, the display cabinets can be hoisted up from the depths of the basement level to the first floor. Three cabinets are fixed to the cable resembling Onyoka beads on a fishing line. Various cultural artefacts are exhibited in the displays. The device allows for interaction between visitors and exhibitions, fostering a dynamic museum environment.

(Author, 2024).



Figure 6.18
Perspective of the
Onyoka Towers

(Author, 2024).

CONCLUSION

Juxtaposing formal museum exhibitions and dynamic artefact market spaces proved to be a real challenge; however, a proposed alternative museum typology was developed, which fostered interactive public spaces that celebrate the coexistence of cultural artefacts and living Indigenous traditions of making to contextualise these static artefacts.

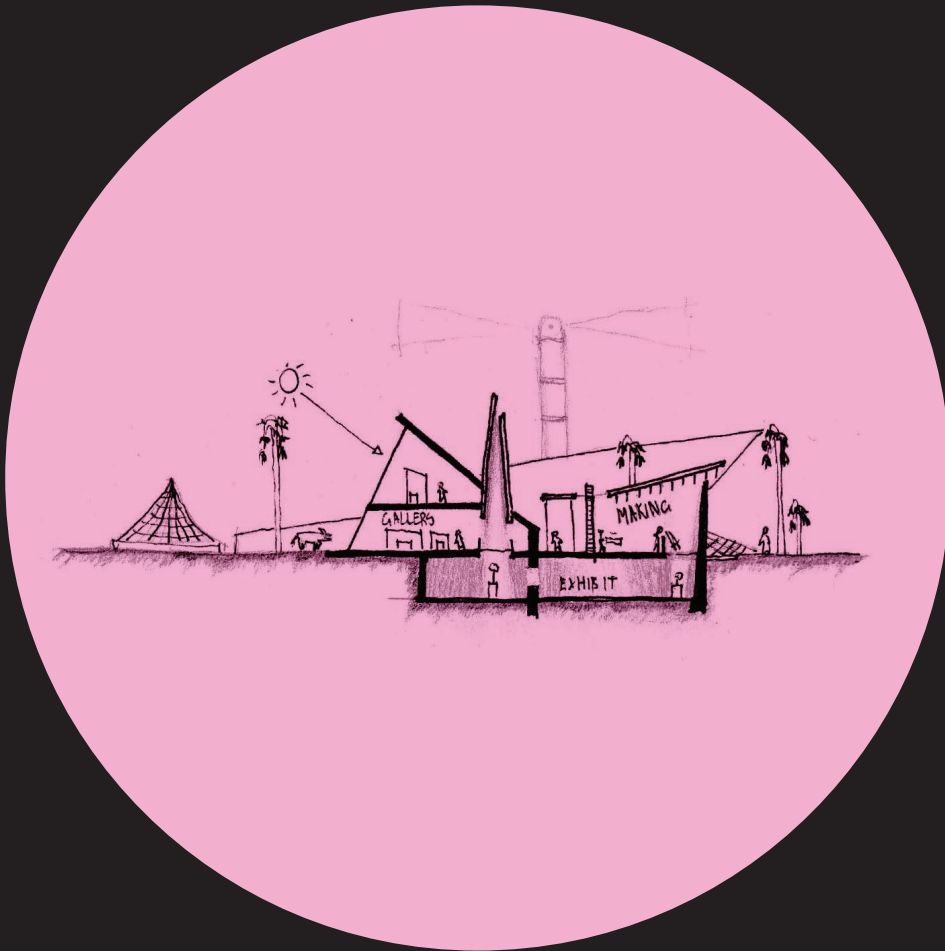
The proposed development further enriches the interaction between local artisans, tourists and exhibitions, enabling cultural exchange and providing economic opportunities to artisans and the Swakopmund Scientific Society while bridging the separation between contrasting knowledge systems, promoting a more equitable and culturally diverse narrative within Swakopmund through juxtaposition.

Figure 6.19
Necklaces sold by Onyoka Artisans



Note. Necklaces made from ostrich egg shell and Black Mussel shell (Author, 2024).

Figure 7.1
Section Development



Note. A sectional sketch exploring structure (Author, 2024)

CHAPTER 7 / TECHNICAL RESOLUTION

This chapter aims to develop a technical guideline for the construction process of the proposed development. The exploration phase uses the Onyoka and Black Mussel shells to provide clues in the detailing and materiality of the building. Sustainable methods of concrete production are also investigated to reduce the building's carbon footprint.

The technical exploration examines a section model constructed from cement and wood, as depicted in Figure 7.2. Timber portal frame structures support the roof, while the ceiling consists of Onyoka strings.

The Onyoka string can be an excellent absorptive feature, especially within the lecture hall, to absorb and prevent echoes. Concrete footings are designed to provide seating on the exterior of the building. Shading screen panels can be filled with black Mussel shells to block harsh sunlight. The roof is enclosed by timber sheeting, malted waterproofing membranes, and mineral wool insulation. It is ideal to use sustainable materials, such as Black Mussel shells, in the construction process to reduce the strain caused by the building industry on the environment.

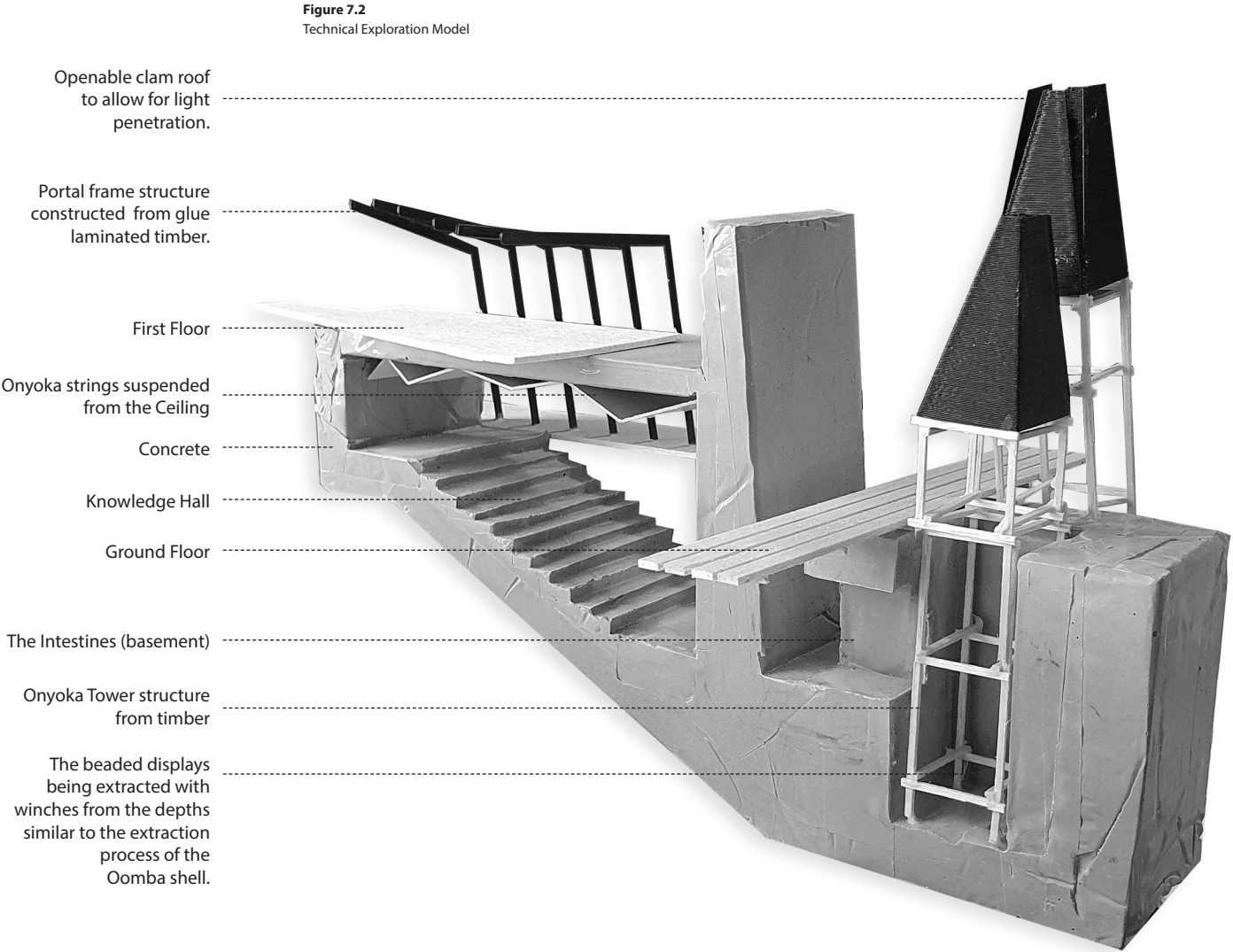
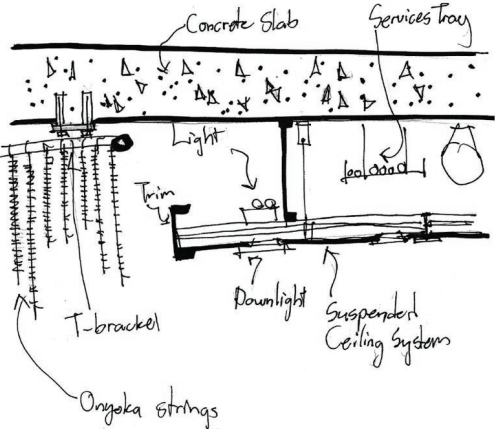


Figure 7.2
Technical Exploration Model

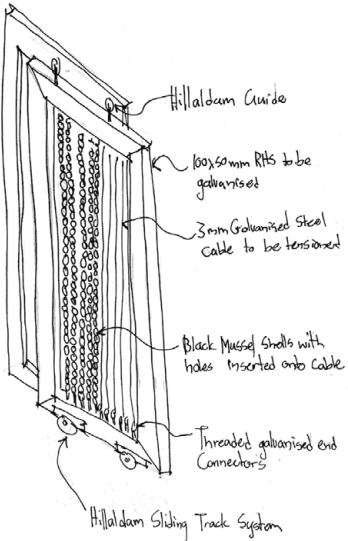
Note. Shade screen to slide on Hillaldam track system with mussel shells threaded onto wire providing shade (Author, 2024).

Figure 7.3
Ceiling Detail



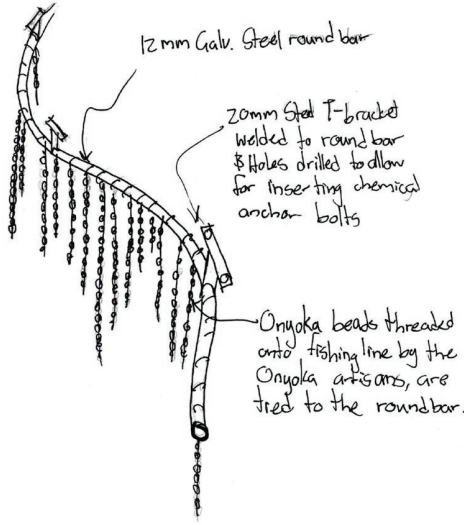
Note. A detail sketch exploring the use of Onyoka strings and suspended ceiling systems (Author, 2024).

Figure 7.6
Shade Screen Detail



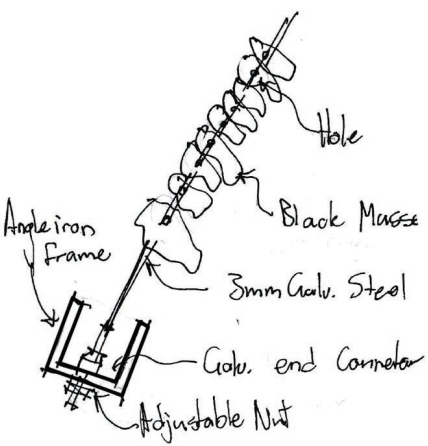
Note. Shade screen to slide on Hillaldam track system with mussel shells threaded onto wire providing shade (Author, 2024).

Figure 7.4
Onyoka Ceiling Detail



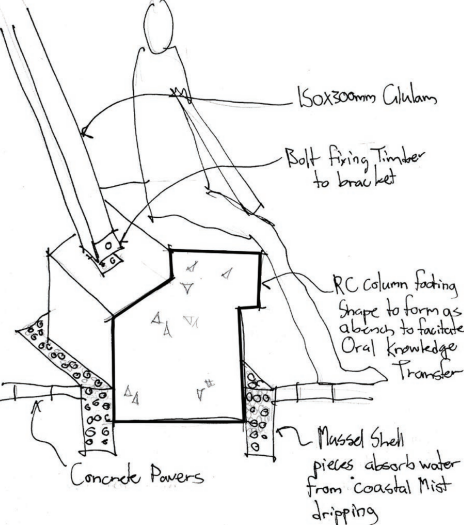
Note. Onyoka string fixed to ceiling (Author, 2024).

Figure 7.8
Mussel shell Wire Detail



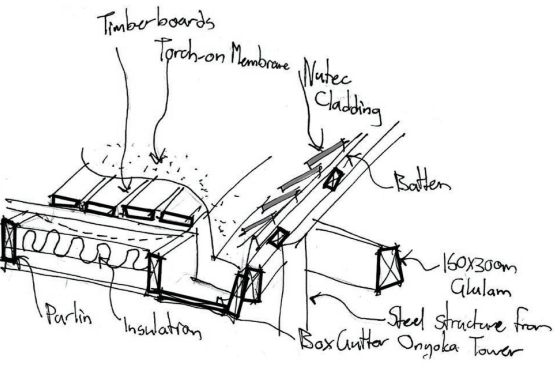
Note. Black Mussel shell inserted into wire to provide shade (Author, 2024).

Figure 7.5
Column Footing Detail



Note. Concrete footing surrounded by mussel shells to absorb moisture dripping from column (Author, 2024).

Figure 7.9
Box Gutter Detail



Note. Timber roof structure with a torch-on waterproofing membrane (Author, 2024).

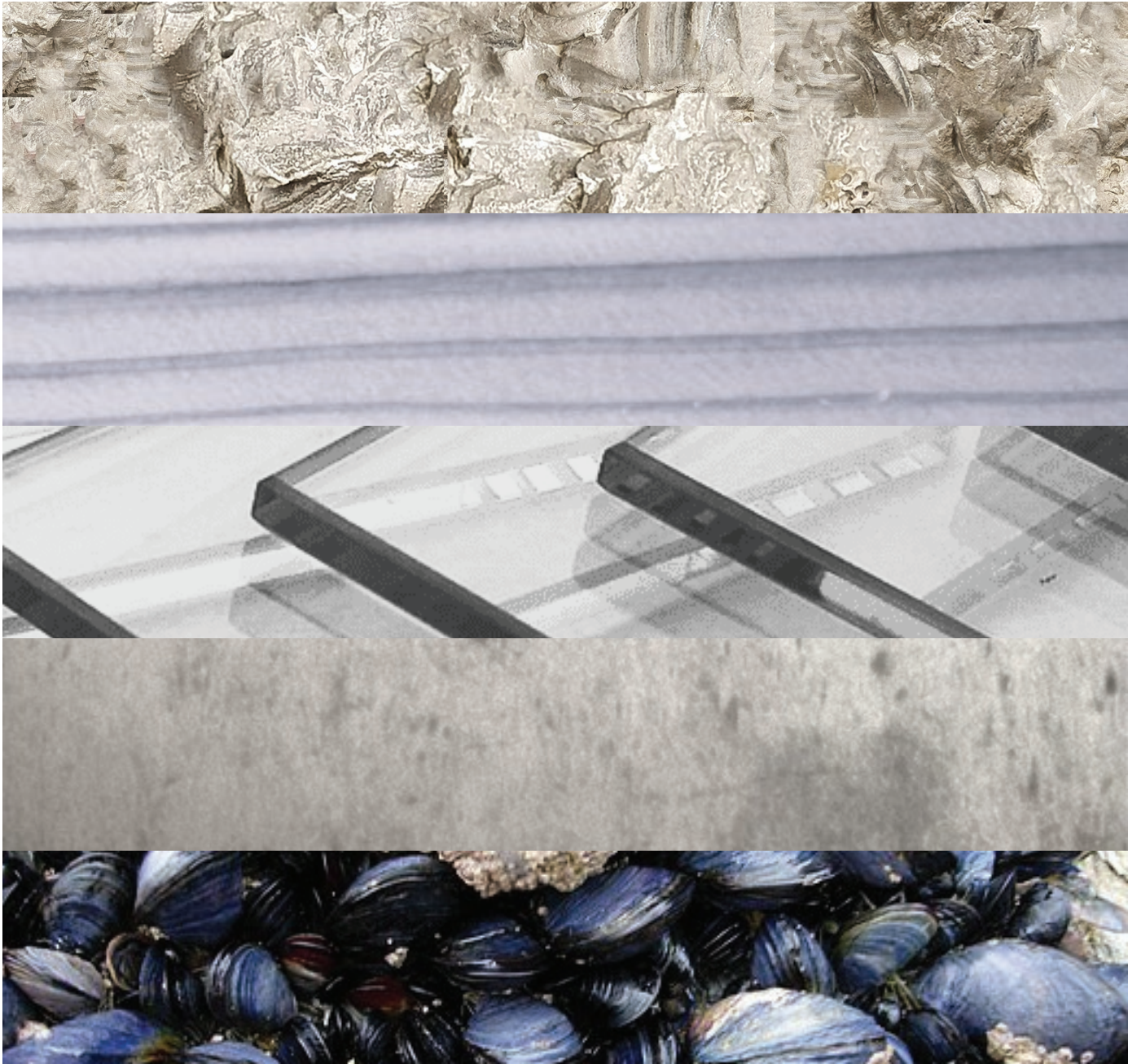


Figure 7.10
Textured Concrete

Note. Roughly textured concrete infused with Black Mussel shell pieces replacing some of the stone aggregate. (Author, 2024).

Figure 7.11
Pine Timber

Note. Pine will be used for ceilings and portal frame structure throughout the building (Author, 2024).

Figure 7.12
Glass

Note. Glazing will strategically introduced onto the building with consideration of solar heat gain or loss (Author, 2024).

Figure 7.13
Steel

Note. Steel is mostly used for structural brackets (Author, 2024).

Figure 7.14
Black Mussel shells

Note. Black Mussel shells will be used in the Onyoka strings in the ceiling and the shade screen devices (Author, 2024).



The technical plan focuses on the library’s ground floor, the eastern entrance, and a partial area of the knowledge hall. Section AA cuts through the artisans’ workshop and the library on the southern side of the building. Section BB cuts through the Onyoka Tower, knowledge hall, and cultural gathering space on the exterior of the building. Details will be extracted from each section.

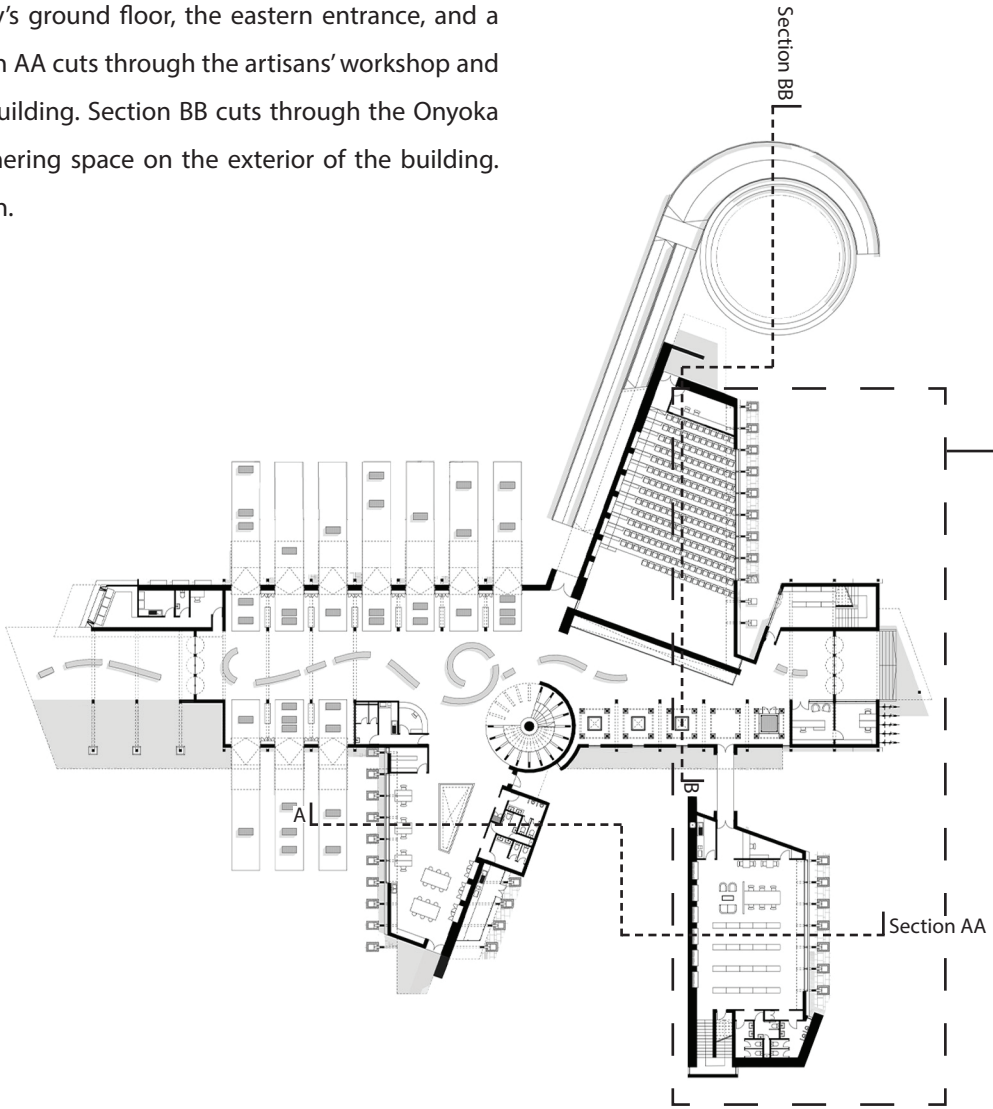


Figure 7.15
Ground Floor Plan

Technical Floor Plan

Section AA

Section BB

Note. Floor plan showing section lines and the portion of plan that is technically resolved(Author, 2024).

GROUND FLOOR PLAN



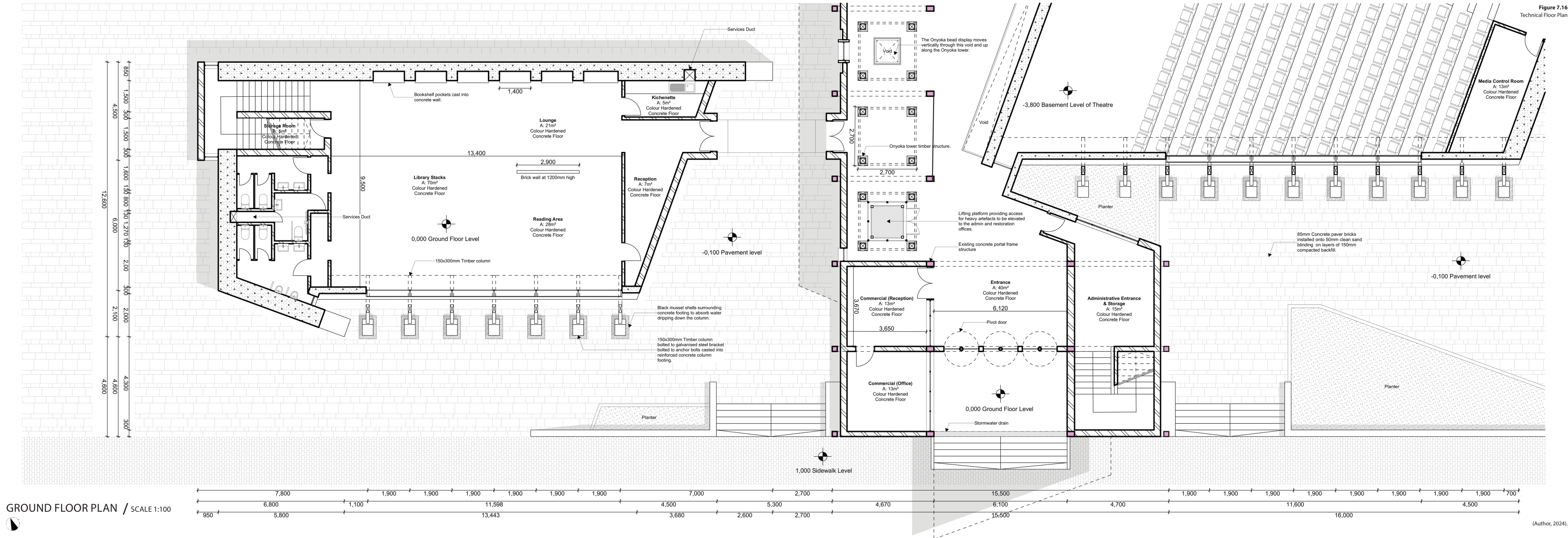
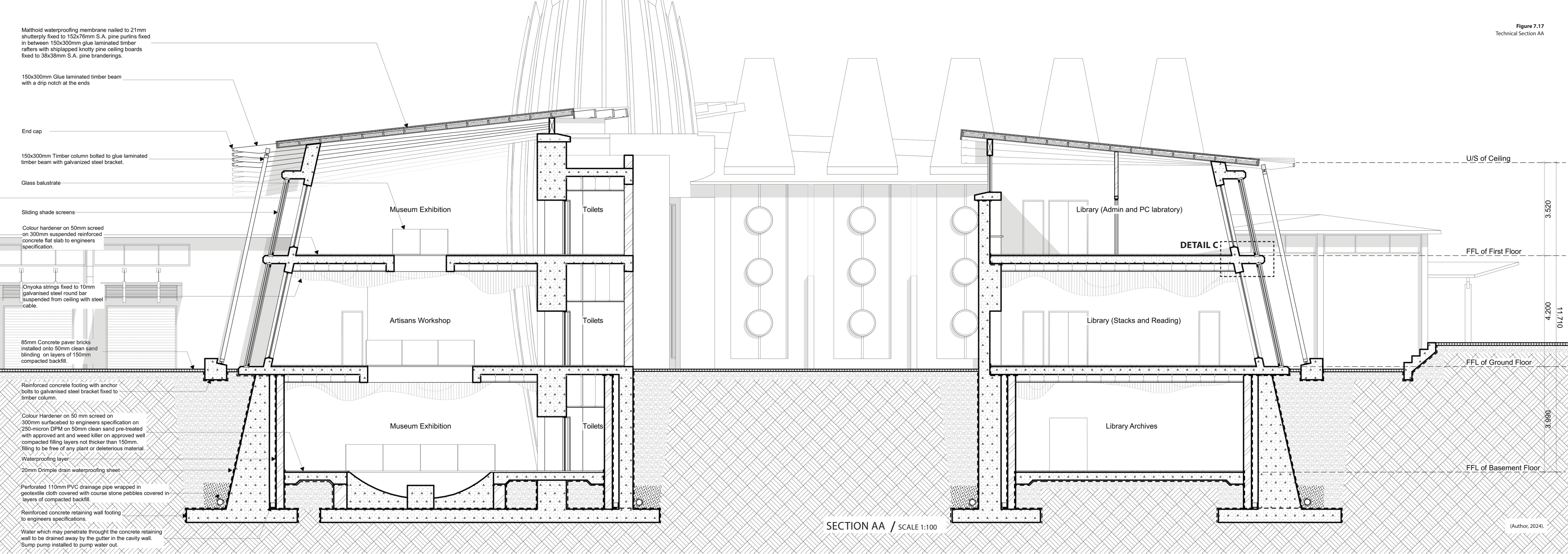


Figure 7.16
Technical Floor Plan

Figure 7.17
Technical Section AA



Skylight according to specialist.

250x12mm Fibre cement boards shiplapped and screwed to 38x38mm S.A. pine counter battens fixed to 76x50mm S.A. pine battens fixed to 250x250mm timber columns.

Winch with 400m diameter pulley wheel hoisting the Bead display cabinet consisting of a galvanised steel frame and glass.

Box gutter

Malthoid waterproofing membrane nailed to 21mm shutterply fixed to 152x76mm S.A. pine purlins fixed in between 150x300mm glue laminated timber rafters with shiplapped knotty pine ceiling boards fixed to 38x38mm S.A. pine branderings.

Ceiling board fixed to suspended ceiling structure.

Colour hardener on 50mm screed on 300mm suspended reinforced concrete flat slab to engineers specification.

85mm Concrete paver bricks installed onto 50mm clean sand blinding on layers of 150mm compacted backfill.

Onyoka strings fixed to 10mm galvanised steel round bar suspended from ceiling with steel cable.

DPM

Onyoka display cabinets

Colour Hardener on 50 mm screed on 300mm surfacebed to engineers specification on 250-micron DPM on 50mm clean sand pre-treated with approved ant and weed killer on approved well compacted filling layers not thicker than 150mm. filling to be free of any plant or deleterious material.

Perforated 110mm PVC drainage pipe wrapped in geotextile cloth covered with course stone pebbles covered in layers of compacted backfill.

DETAIL B

Office

Museum Exhibition

Onyoka Tower

Museum Exhibition

Theatre

DETAIL A

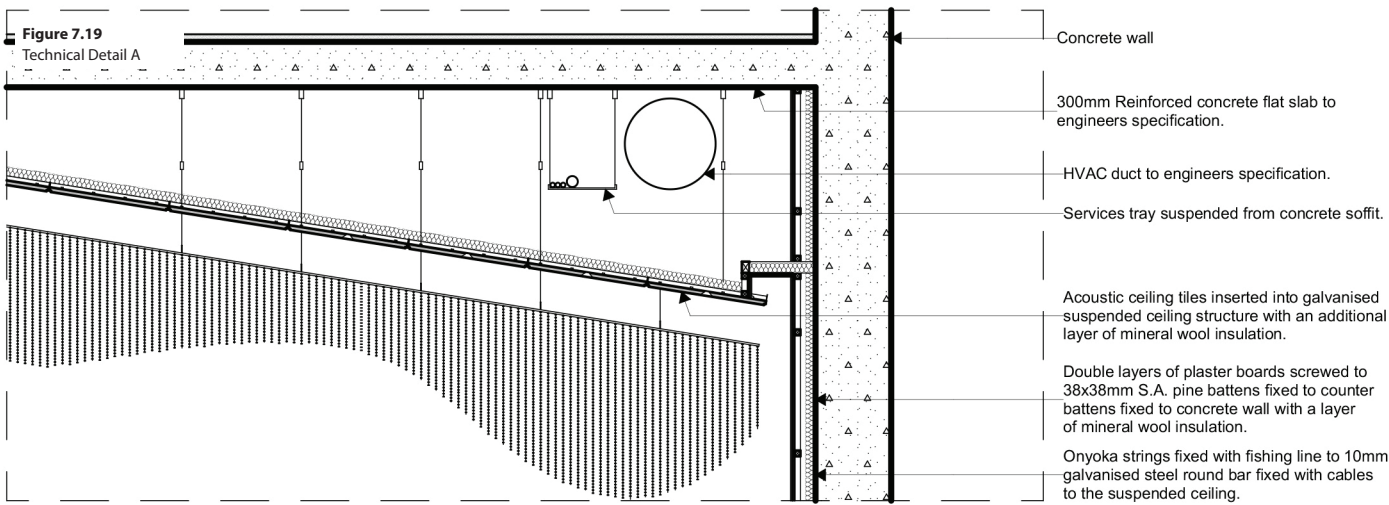
20mm Dripless drain waterproofing sheet

SECTION BB / SCALE 1:100

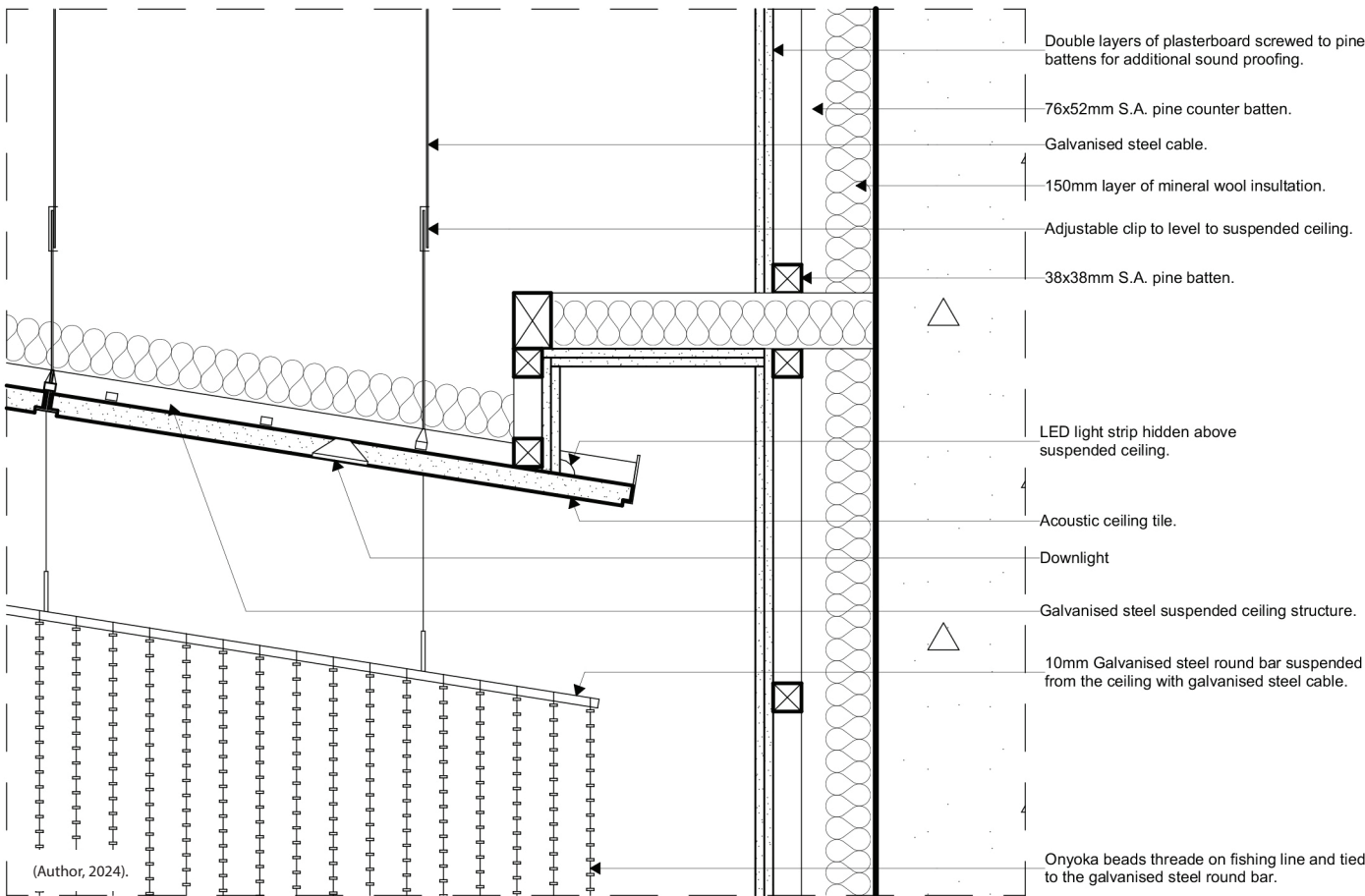
Water which may penetrate through the concrete retaining wall to be drained away by the gutter in the cavity wall. Sump pump installed to pump water out.

Figure 7.18
Technical Section BB

(Author, 2024).



DETAIL A - CEILING DETAIL / SCALE 1:50

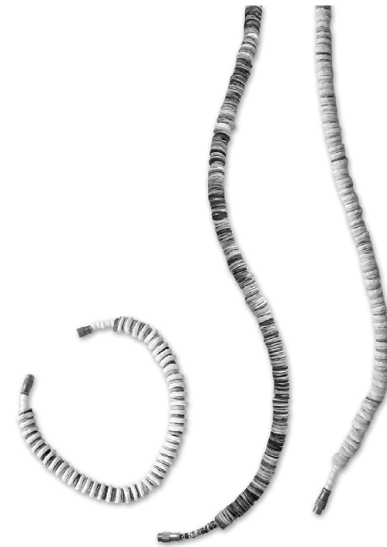


DETAIL A - CEILING DETAIL / SCALE 1:10

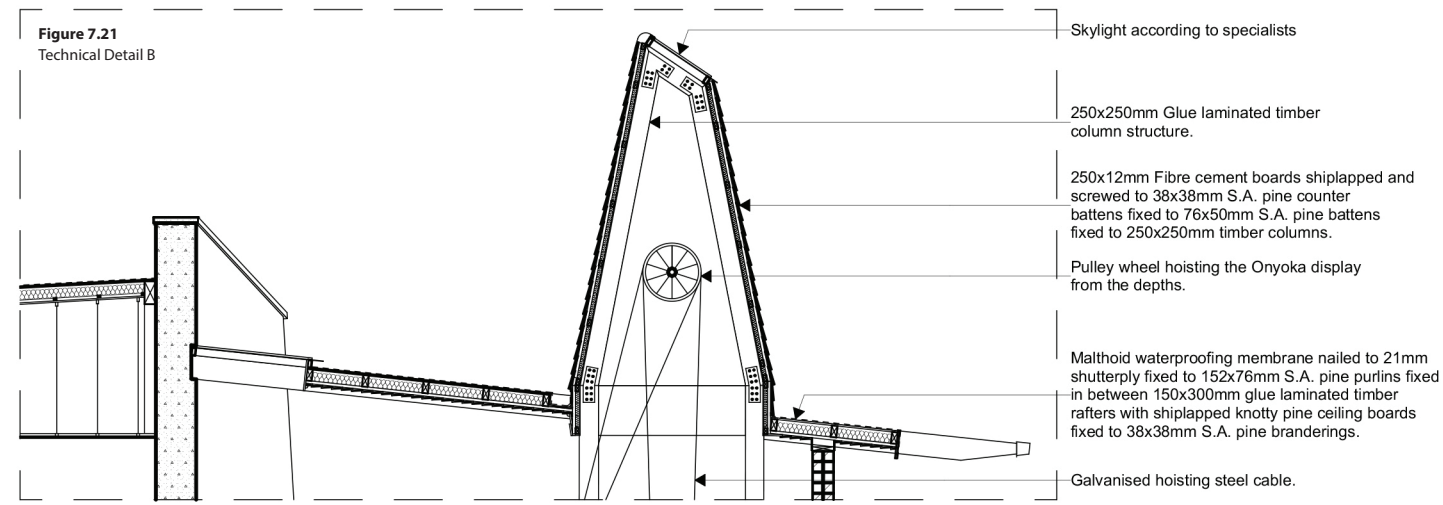
ONYOKA CEILING DETAIL

The ceiling uses Onyoka strings made by local artisans. This provides them with income in the building's construction process. However, most importantly, it allows them to represent their knowledge of making by becoming part of the architecture and leaving their mark behind. The ceiling is soft and curved, juxtaposing starkly with the sharp, angular shape of the building.

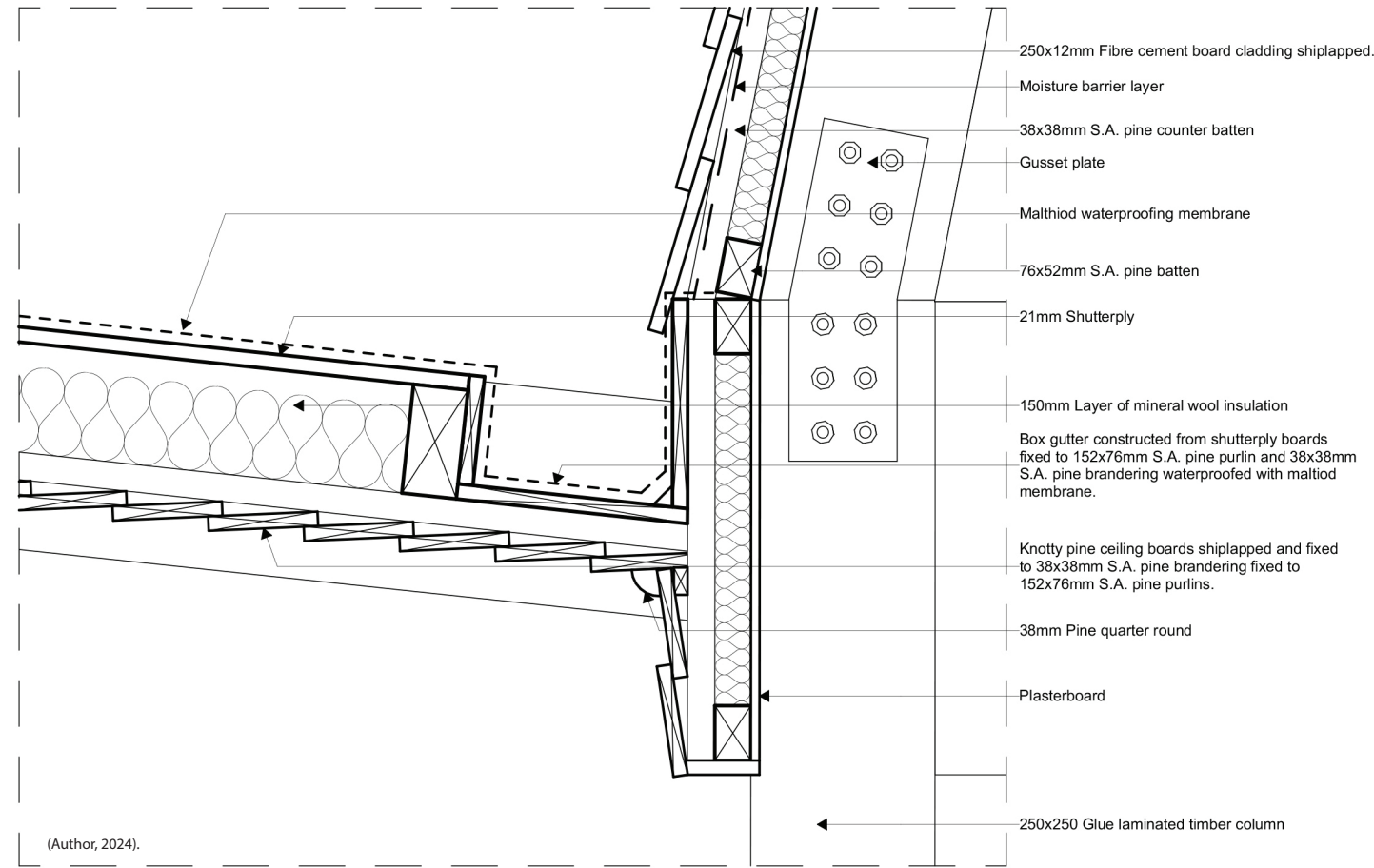
Figure 7.20
Onyoka Strings



Note. Onyoka strings to be hung from the ceiling of the proposed building (Author, 2024).



DETAIL B - BOX GUTTER DETAIL / SCALE 1:50



DETAIL B - BOX GUTTER DETAIL / SCALE 1:10

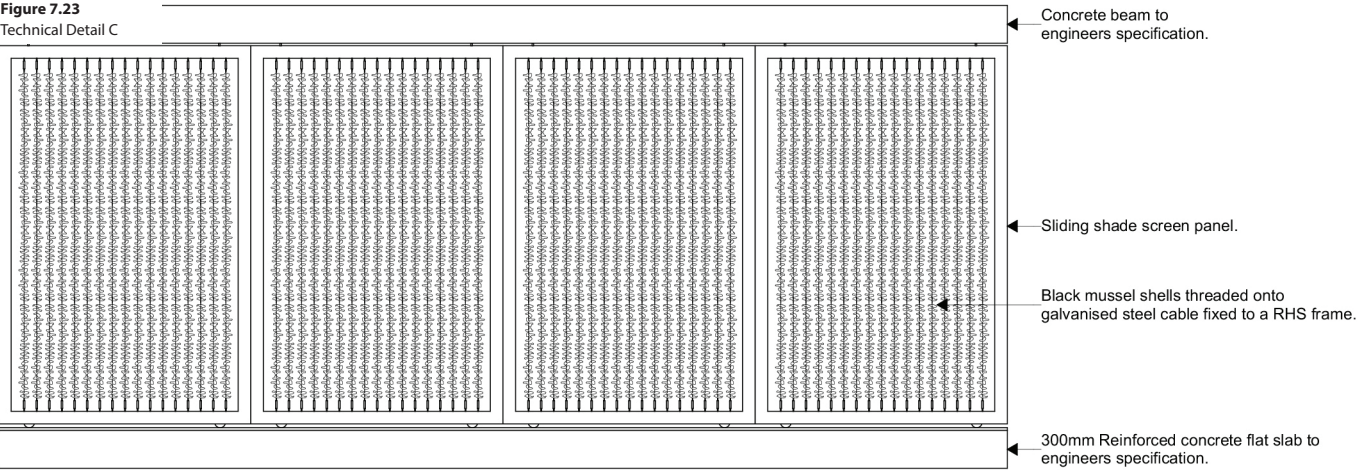
BOX GUTTER DETAIL

The Onyoka Tower uses a winch system that is cranked by the hands of visitors to the museum. Three display cabinets representing beads are being pulled from the depths, similar to the extraction process of the Oomba shell. The clamshell roof relates to the towers found in colonial-era buildings in Swakopmund and filters light through the skylight, symbolizing the filtering action of the Black Mussel shell to clean the ocean water.

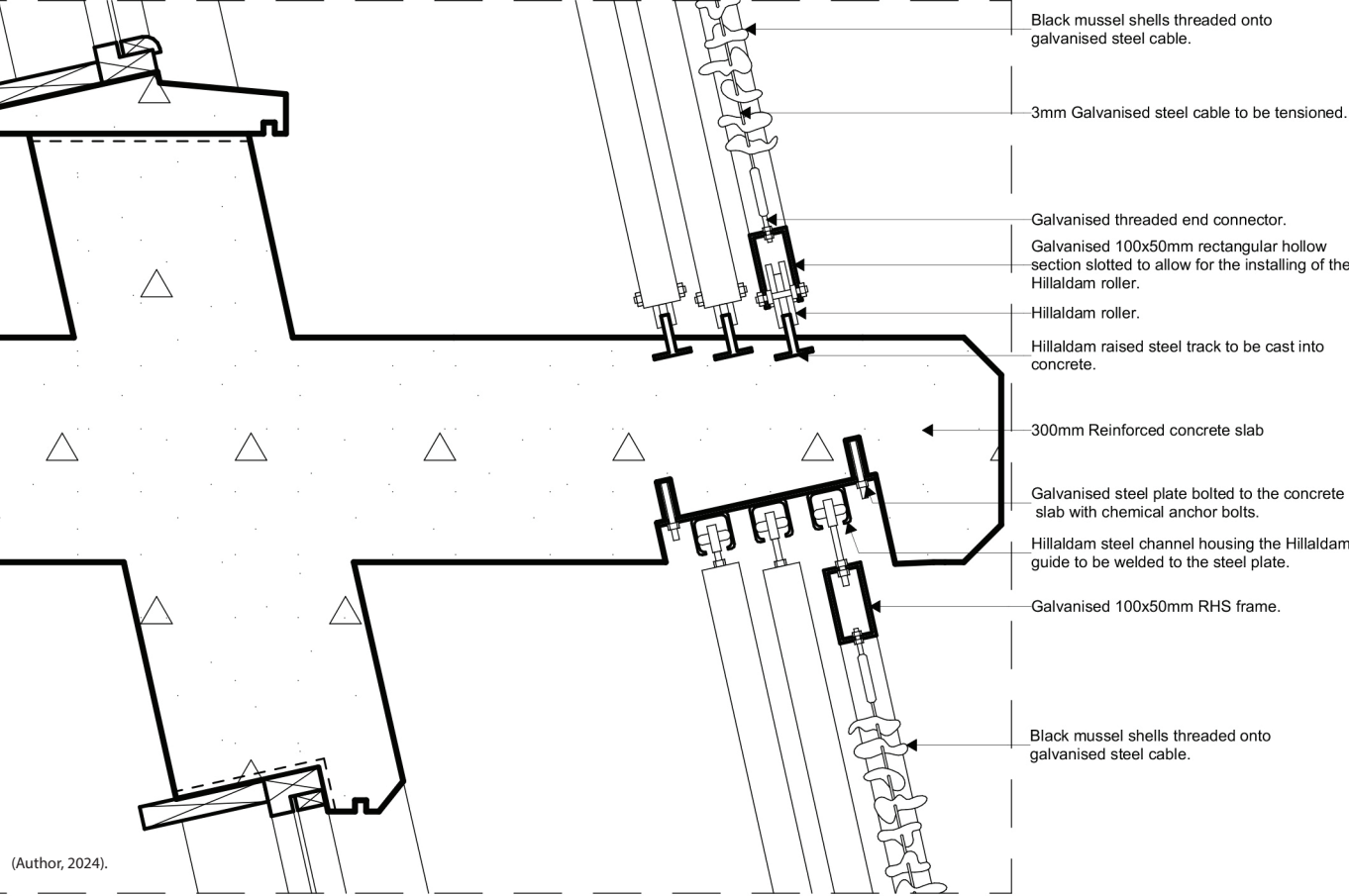
Figure 7.22
Conus Bertulinus



Note. Similar to the extraction of Oomba shells from the depths of the water, the display cabinets can be winched from the depths of the architecture (Author, 2024).



ELEVATION OF SHADE SCREEN PANELS / SCALE 1:50



DETAIL C - SHADE SCREEN DETAIL / SCALE 1:10

BLACK MUSSEL SCREEN DETAIL

The shading screens consist of Black Mussel shells threaded onto a galvanized steel cable and stacked densely. Several strings are fixed to the frame, providing shade to the glass front and keeping the interior cool. These shells can be collected from the beaches with a permit acquired from the Ministry of Fisheries.

Figure 7.24
Black Mussel Shell



Note. Photograph of Black Mussel shells to be used as shading devices threaded on to galvanised steel cable
(Author, 2024)

/ SHELLCRETE: MAKING CONCRETE



The production of cement has disastrous effects on the environment and the globe as a whole. It is found that the cement industry accounts for up to 8% of global carbon emissions (Ellis et al., 2019). Not to mention all the health risks and air pollution. With the demand for concrete rising, finding sustainable and environmentally friendly supplementary materials for the concrete mixture is critical. Seashells are one of the waste products that are rapidly building up along the shorelines of Swakopmund. Using these seashells to aid in concrete production could be the ideal sustainable solution to the construction industry (Bamigboye et al., 2021).

In the experiment conducted by Van Rensburg (2023), ash powder from seashells is investigated as a partial replacement for portland cement together with the use of Penetron Admix (waterproofing agent). Calcium carbonate is the dominant component in seashells and can be classified in cement mortar or concrete as an inert material (Bamigboye et al., 2021). Limestone from seashells could be the ideal supplementary cementitious material to partially replace cement with.



01 | HARVEST

Seashells are collected along the coastline of Swakopmund for the making process of quick lime (Carbon Oxide). The shells are washed and sorted to remove any unwanted materials.



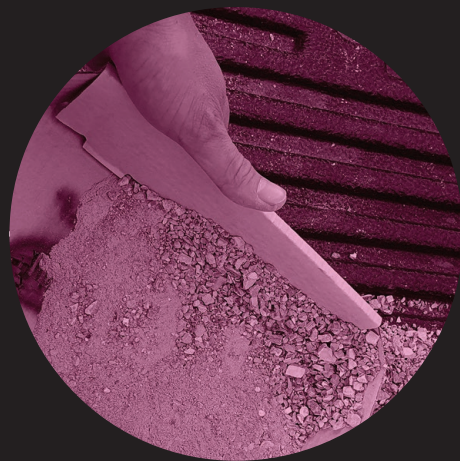
02 | FIRING

The seashells are burned in direct fire to turn them from limestone (CaCO_3) into quick lime (Carbon Oxide) which is ideal for partially substituting Portland cement in concrete.



03 | FRAGMENTING

The burned seashells are crashed with a hammer to turn them into a fine powder to be used as a substitute for Portland cement.



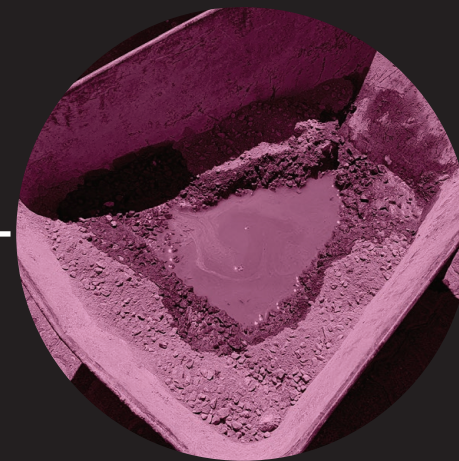
04 | FILTERING

The container with the crushed seashells are vibrated to separate the uncrushed pieces from the powder. The powder is placed in a separate container.



05 | JUXTAPOSING

The quick lime powder is mixed with a decreased amount of portland cement, sand, seashell aggregate and water to produce concrete.



06 | REINFORCING

Penetron admixture is mixed into the concrete for its waterproofing properties. The Penetron grows fine crystal structures in the cracks of concrete preventing the penetration of water.



07 | FORMING

The concrete is casted into a mould to cure.



08 | SHELLCRETE

After 28 days, the concrete is demoulded and the production process is completed. Replacing Portland cement with quick lime from seashell reduces the production of cement which reduces its negative effects on the environment.

Figure 7.25
Concrete Making Process

Note. Cement is partially substituted with quick lime from seashells to make sustainable concrete. (van Rensburg, 2023).

CONCLUSION

The design incorporates locally sourced sustainable materials, such as Black Mussel shells, to reduce the building’s carbon footprint while supporting Onyoka artisans with income as they produce Onyoka strings installed in its ceilings. Using Black Mussel shells in the Shading screens is another sustainable material choice that can easily be replaced if they become brittle. Sustainable concrete production methods, such as integrating seashell-derived limestone as a partial Portland cement replacement, address cement’s environmental impact and foster construction material innovation.

Figure 7.26
Concrete Texture



Note. Concrete walls of the proposed building to be textured by seashell imprints (Author, 2024).

Figure 8.1
Necklaces sold at the Kavita Craft Market



Note. A photograph of Onyoka necklaces
sold in Swakopmund(Author, 2024)

CHAPTER 8 / REFLECTION

PART

3

The following is written from a personal point of view to reflect on the research and design process to understand why the project was developed in the way it did and identify challenges that forced the project in uncontrollable directions. The project started with my interest in the Onyoka-making tradition found in Swakopmund, which is from a perspective practised away from public sight. However, I was pleasantly surprised by the friendliness of Onyoka artists when I searched for them and discussed the intricate-making process with them. They found it very surprising that I am so interested in a tradition that they only practice to gain an income and make a living. At the beginning of the project, I did not expect that something as small as the Onyoka necklace could open a whole new world for me and allow me to discover architecture in a way I could have never imagined. What fascinated me the most was all the interesting stories I discovered being tied to the Onyoka necklace. From the Oombas’ harvesting process involving cow slaughtering to the rich historical background found in Swakopmund, where the Onyoka-making process is practised.

Initially, the idea was to develop the whole coastal promenade in Swakopmund from the Swakop River mouth to the Mole Basin, but I quickly realised that I bit off more than I could chew. I refocused my attention on the Mole Basin and specifically the Swakopmund Museum due to its relevance in the separation between colonial perspectives of knowledge through static artefacts and dynamic Indigenous practices overshadowed by the predominant narratives. It was challenging for me to decide between making the existing Swakopmund Museum my site or if I should juxtapose it by developing a scheme adjacent to it. Due to the conservation zone being strict about new developments in the area, I decided to take an adaptive reuse approach to the existing in a way to respect the heritage value of the setting.

Working within the rigid structure of the existing museum proved to be very difficult, especially due to the angular approach I took to architecture. However, this difficulty to integrate order with chaos is the perfect metaphor of the challenge to incorporate dynamic cultural practice, such as Onyoka making, into an exhibition space full of sensitive and historical artefacts.

I enjoyed how a simple artefact, such as the Onyoka necklace and the Black Mussel shell, can provide clues to the technical resolution of the project by being mixed into concrete to soften the angular form with curvy ceiling features and to shading devices. Much can be learned and appreciated from something as small as the Onyoka beads.

Figure 9.1
Seashells along the Coastline



Note. A photograph of different seashells (Author, 2024)

CHAPTER 9 / CONCLUSION

This dissertation proposes an alternative museum typology in Swakopmund, that aims to juxtapose static colonial representation of knowledge found in museums, conserved in colonial architecture and literature, with dynamic indigenous knowledge systems of making, particularly the making process of Onyoka necklaces. The Swakopmund Museum and coastal promenade predominantly highlights colonial German artefacts, while overshadowing evolving indigenous knowledge systems that are kept alive within local communities. Through the juxtaposition of static artefacts, frozen in time and non-contextualised, with the ever-adapting process-driven knowledge of Onyoka making, the museum typology redefines exhibition space as not only curated by trained staff, but would reevaluate craft markets and artisans workshop as spaces of dynamic representation of knowledge. The making process would also provide context to the intricate and labour intensive craftsmanship that is not fully appreciated when observing artefacts in display cabinets. By allowing tourist and visitors to move through the space gives them the opportunity to interact with Onyoka artisans and meet the faces behind to artefacts displayed in the formal exhibition spaces or craft market.

By allowing the proposed museum typology to facilitate interaction between local artisans, tourist and exhibitions encourages cultural exchange providing the Museum and the traders/makers with income generated by the engagement with visitors and tourist. The alternative typology does not only end with indigenous making, but provides hands-on training facilities that educates the youth and other residents from Swakopmund about making through jewellery, leatherwork, 3D printing and robotics by incorporating a makerspace within the development. The typology becomes a knowledge hub that fosters spaces to perform, exhibit, share and store knowledge.

Ayiran, N. (2012). The role of metaphors in the formation of architectural identity. *Journal of the Faculty of Architecture*, 9(2), 14-15.

Bamigboye, G., Nworgu, A., Odetoyan, A., Kareem, M., Enabulele, D., and Bassey, D. E. (2021). Sustainable use of seashells as binder in concrete production: Prospect and challenges. *Journal of Building Engineering*, 34. <https://doi.org/10.1016/j.jobe.2020.101864>

Collins, D. (2018). Onyoka necklaces a crafty tradition. *New Era*. Retrieved 2024, from <https://neweralive.na/onyoka-necklaces-a-crafty-tradition/>.

Dawson, E. (2014). Not designed for us: How science museums and Science Centers socially exclude low-income, minority ethnic groups. *Science Education*, 98(6). <https://doi.org/10.1002/sce.21133>

Diamond, B. (2011). Landscape Cubism: parks that break the pictorial frame. *Journal of Landscape Architecture*, 6(2), 20–33. <https://doi.org/10.1080/18626033.2011.9723452>

Kaarina, E. (2022). Towards a decolonised archaeology: A case study of the national Museum of Namibia [Master’s Thesis, University of Pretoria]. https://repository.up.ac.za/bitstream/handle/2263/86113/Efrain_Towards_2022.pdf?sequence=3&isAllowed=y

Ellis, L., Badel, A., Chiang, M., Park, R., and Chiang, Y. (2019). Toward electrochemical synthesis of cement an electrolyzer-based process for decarbonating caco while producing useful gas stream *Proceedings of the National Academy of Sciences*, 117(23). <https://doi.org/10.1073/pnas.1821673116>

Francis, P. (2002). Asia's maritime bead trade. *Journal of the Malaysian Branch of the Royal Asiatic Society*, 76(2), 129-132. <https://www.jstor.org/stable/41493507>

Gwasira, G. (2023). Towards a Decolonization of the Ethnographic Displays at the National Museum of Namibia. *Museum Worlds*, 11(1), 192-224. <https://doi.org/10.3167/armw.2023.110116>

Hensel, M. (2013). Performance-Oriented Architecture: Rethinking Architectural Design and the Built Environment. John Wiley and Sons. <https://doi.org/10.1002/9781118640630>

Holl, S. (1996). Intertwining. Princeton Architectural Press.

Johannes, M. (2024). Discussion of Onyoka-making techniques and cultural significance. (J. van Rensburg, Interviewer) [Personal communication].

Kautondokwa, N. (2012). Guideline for German Museums: Care of Collections from Colonial Contets. German Museum Association. <https://www.museumbund.de/wp-content/uploads/2019/09/dmb-guidelines-colonial-context-2019.pdf>

Louw, A. (2024). Discussion of the Swakopmund Museum, its history and context. (J. van Rensburg, Interviewier). [Personal Communication]

Nampala, L., & Shigwedha, V. (2006). Aawambo kingdoms, History and Cultural Change. Schlettwein.

Oxford Languages (n.d.). Juxtapose. <https://languages.oup.com/google-dictionary-en/>

Pallasmaa, J. (1996). The eyes of the skin: Architecture and the Senses. Wiley.

Rautenberg, H. (1967). Das alte Swakopmund. Karl Wachholtz Verlag.

Riza, M., & Doratli, N. (2015). The critical lacuna between new contextually juxtaposed and freestyle buildings in historic settings. *Journal of Architectural and Planning Research*, 32(3), 234-257. https://www.researchgate.net/publication/289607680_The_critical_lacuna_between_new_contextually_juxtaposed_and_freestyle_buildings_in_historic_settings

Robertson, T., Jarvis, A., Mendelsohn, J., & Swart, R. (2012). Namibia's coast: Ocean riches and desert treasures. Directorate of Environmental Affairs, Ministry of Environment and Tourism.

Rogers, R. (1988). Belief in the Future is Rooted in the Memory of the Past. *RSA Journal*, 136.

Salzstein, S. (2018). Juxtaposition, repetition, dance. *ARS (São Paulo)*, 16(32), 73–85. <https://doi.org/10.11606/issn.2178-0447.ars.2018.143438>

Schildkrout, E. (1995). Museums and Nationalism in Namibia. *Museum Anthropology*, 19(2), 65-77. <https://doi.org/10.1525/mua.1995.19.2.65>

Swakopmund Scietific Society. (n.d.). A short history of the Swakopmund Museum.

Tiesdell, S., Oc, T. and Heath, T. (1996) Revitalizing Historic Urban Quarters. Butterworth-Architecture, London.

Tschumi, B. (1996). Architecture and disjunction. MIT Press.

Tschumi, B. (1994). Event-cities. MIT Press.

Tschumi, B. (1981). Violence of Architecture. Deconstruction.

Van Rensburg, J. (2023). Investigating the compressive strengths of concrete containing ash powder (CaCO3) from seashells and seashell aggregate. Namibian University of Science and Technology.

Vogt, A. (2020). Heritage Opinion: Erf 4747, Swakopmund: Tourism activities related to the proposed new Residential and Retail Development.

Vogt, A. (2004). National Monuments in Namibia. Macmillan Education Namibia Publishers.

Von Dewitz, C. (2009). Swakop: Der kleine Stadtfuhrer. Solitiare Press.

Wigley, M. (1993). The architecture of deconstruction Derrida’s haunt. MIT Press.

Figure 0.1: An Oshiwambo queen is hold an Ekipa in her hand while it is attached to an Onyoka necklace. Lafforgue, E. (2014). From Alamy Stock Photo. (<https://www.alamy.com/the-queen-of-the-okwanyama-shell-omhedi-namibia-image69004124.html>). Copyright 2024 by Alamy Stock Photo.

Figure 0.2: A historic image of a house in Swakopmund constructed from local materials, such as whale ribs, and imported materials from Germany. (n.d.) From Facebook. (<https://www.facebook.com/groupsjenny.wells7/posts/6642904332495825/>).

Figure 0.3: The Onyoka artisans use several tools and techniques to manufacture these crafts, whereby their knowledge is transferred to the next generation through oral tradition

Figure 0.4: Static exhibits can be seen displayed within the museum, however, they are non-contextual and without dynamic representation of indigenous knowledge systems

Figure 0.5: The museums consists of high wall and limited visual connection to the interior. Namibian Scientific Society, (n.d.). From <https://www.namscience.com/>

Figure 0.6: A map drawn by the author of the Swakopmund museum depicting how visitors circulate around static displays of artefacts

Figure 0.7: Mussels are first collected from the beaches, then process for Onyoka necklaces to be made and lastly, it is used is festivities and celebrations

Figure 0.8: The Mussel shells are extracted from the ocean, it is processed, then made by the touch of hand, it is beaded, sold in the market and traditionally used in celebrative occasions.

Figure 0.9: A photograph of Black mussel shells used in the Onyoka necklace making process

Figure 1.0: Traditonal Oshiwambo Dance. Shikemeni, N. (2018). <https://gondwana-collection.com/blog/do-you-know-about-this-gorgeous-jewellery-from-namibia>

Figure 1.1: Necklaces sold to tourist in Swakopmund are made of different beads and materials.

Figure 1.2: An undate photograph of women from Ombalantu. (Basler Afrika Bibliographien, n.d.).

Figure 1.3: An Onyoka necklace displayed in the Swakopmund Museum.

Figure 1.4: Woman wearing Onyoka necklaces (Basler Afrika Bibliographien, n.d.).

Figure 1.5: A young woman from Ombalantu after marriage (Basler Afrika Bibliographien, n.d.)

Figure 1.6: A young woman from Ombalantu after marriage (Basler Afrika Bibliographien, n.d.)

Figure 1.7: A model constructed to interpret the Oomba extraction process into an exhibition tower.

Figure 1.8: A diagram depicting the extraction phases of the Conus Betulinus shells to make Oomba's

Figure 1.9: A cluster of Black mussel shells

Figure 1.10: Onyoka artisan become part of the construction of the building by making Onyoka strings to create a ceiling feature. This fosters employment and provides income. Cultural representaion in the architecture can then also be observed

Figure 1.11: Onyoka strings made by the artisans can be used in shading devices.

Figure 1.12: A sketch of an Onyoka and the parts that form part of it.

Figure 1.13: Black Mussel shells are processed and transfromed into Onyoka Necklaces

Figure 1.14: Traditonal Oshiwambo Dance. Shikemeni, N. (2018). <https://gondwana-collection.com/blog/do-you-know-about-this-gorgeous-jewellery-from-namibia>

Figure 1.15: A amphitheatre could be proposed for cultural performance and expressions.

Figure 1.16: Tourist could observe and appreciate the making processes of the Onyoka necklace. This would provide context to the static displays found in the museum exhibition.

Figure 1.17: An Onyoka zipline through static displays

Figure 1.18: Conceptual drawing explore different devices that could empower the [Muscle] shell

Figure 1.19: Photographs of the device empowering [Muscle] shells to form stone.

Figure 1.20: Photograph of the mould providing power to the shell.

Figure 1.21: Photograph of the two headed hammer in violent motion.

Figure 1.22: Photographs of the [Muscle] Stone formed by seashells.

Figure 1.23 Interpretative sketch of the [Muscle] cast in stone.