PORTALS BETWEEN WORLDS

A place of accustomisation celebrating the Himba cultural identity through a critical regional dialogue between modernity and tradition in the Kunene region.

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Front cover Himba image- Adapted by Author (cultural-explosion, 2012: online)

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DECLARATION

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Declaration of Original Authorship

I declare that the work contained in this dissertation has not been previously submitted for academic purposes. All contributions and quotes published or written by any other persons are acknowledged in the reference list. This dissertation is my own work.

Signature: Chrizelle Loots .....

Date: 11/10/2021

"We are travelers on a cosmic journey, stardust, swirling and dancing in the eddies and whirlpools of infinity. Life is eternal. We have stopped for a moment to encounter each other, to meet, to love, to share. This is a precious moment. It is a little parenthesis in eternity"
(Chopra, 1994: p37)

Fig.01 Himba Women in Namibia (Nelson, n.d.: online)

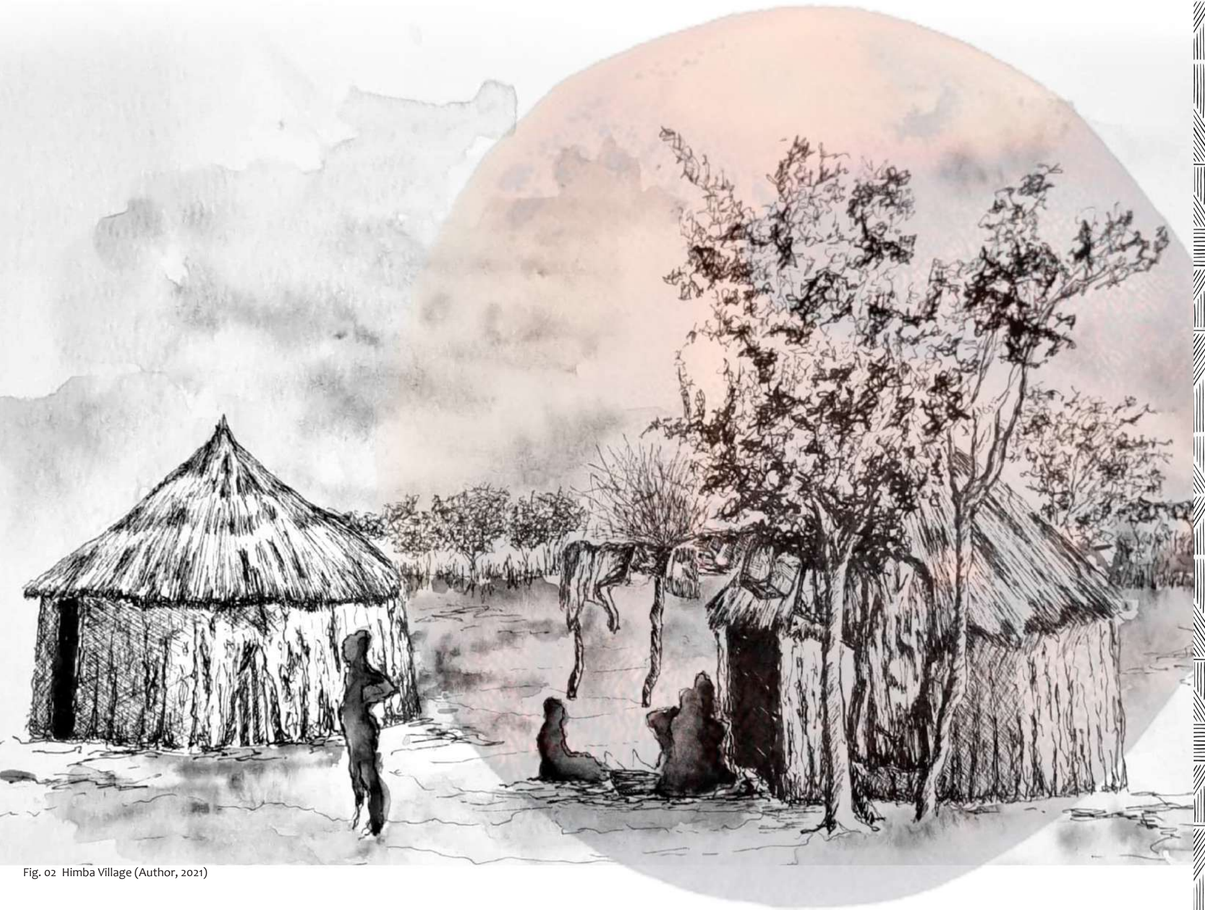


Fig. 02 Himba Village (Author, 2021)

ABSTRACT

This dissertation explores the beliefs, rituals, and vernacular morphology of the Himba culture to discover how architecture can create a place of meeting and accustomisation between the world of the Himba and tourists as a contribution to cultural sustainability.
The Ovahimba is an indigenous group situated in the desert environment of Opuwo in North Namibia. Due to the aesthetic indigenous qualities of their culture, they are one of Namibia's greatest attractions. Over many years of modernisation and a number of other external elements, the Himba people are increasingly exposed to modern/western customs, causing the culture to adopt a hybrid identity, entailing modern and traditional characteristics. In order to preserve the culture in its current state, cultural sustainability should be encouraged in the region through the economic, social and ecological development of the Himba culture.

This essay will present a research proposal on how critical regional architecture can provide a gathering and meeting space for the Himba people and tourists, in which the Himba can benefit economically and socially, while also celebrating and preserving their culture.
The research question of this study can therefore be formulated as follows: How can a critical regionalist approach be used to create architectural spaces of accustomisation, in which foreigners can be introduced to the Himba culture in a respectful yet revelatory way, in order to eventually establish a fruitful dialogue between globalist modernity and indigenous tradition in the Kunene Region? The theoretical theme of critical regionalism assisted with establishing different approaches that are sympathetic to the traditional Himba way of life while, simultaneously defamiliarising potent aspects of the local culture and environment in order to reveal new readings of this ancient way of life. These approaches were implemented to achieve the estrangement of contextual, cultural and regional structural elements to reach the design principles of tactility, defamiliarisation, participation, arrière-garde and the implementation of traditional and landscape practices.

This thesis proposes the merged traditional/modern Himba culture with a scheme suitable to their "project identity". The critical regional implementation of these elements also provides a lens through which tourists can understand and celebrate the Himba culture while contributing to cultural sustainability. Ultimately, the thesis investigates and suggests a ritual Himba Pavilion, intertwining all of the related thematic (community, tourism and cultural conservation) and theoretical (context, culture and vernacular architecture) aspects.

PRELUDE
The Ondjongo dance as a dialogue medium

In an attempt to allow the emergence of a more nuanced dialogue between the world of the Himba and the world of the visiting tourists - between the reader of this text and the concerns raised here - this document has been structured according to the different phases constituting the traditional Ondjongo dance.

According to Mans, a researcher of several African dance practices, dance and music are fundamental in creating an atmosphere of force and energy in most rituals. Within the indigenous cultures of Namibia, one can identify a spiritual sense that is reflected in religious activities, such as a connection with ancestors and the belief in good and evil spiritual forces. Singing and dancing are used as mediums through which these indigenous groups communicate with their ancestors, and pass their "religious-spiritual values and beliefs" to younger members (Mans, 1997:107). Hanna, an ethno-choreologist, states that dance and religion in Africa unite to empower "a semantic system of sensory experiences, diffuse and disorganised emotions, and personal and social conflict" (Mans, 1997:107). The Himba Ondjongo dance can be seen as a dialogue exploration of the contextual and emotional state of the social circumstances and events within the culture (Mans, 1997:107).
The thesis will be structured according to the fundamental elements of the Himba Ondjongo dance.

The Ondjongo dance is a ritual that occurs during social events or gatherings, such as weddings, and is known as the dance of happiness. It is practiced by using only voices and hand claps. The dance entails a group of people standing in a circle. The leader initiates the first action, to which the group then responds. One participant would then enter the central space, followed by energetic dance movements (Mans, 1997:266).

The dance can be categorised into elements which include the build-up, movements related to the context, the meaning, the perceived composition, and the reflection. The Himba dance will be used as the narrative structure in this document. Ultimately, as with any transformative ritualistic engagement, this text is seen as a way to sensitise and accustom the reader to the Himba context, culture, social struggles and structural setting.

The grounding essay will initiate the build-up stage, similar to the start of the Ondjongo dance, where the Himba start clapping hands and singing. During this stage, the Himba people initiate the dance ritual and start to increase their energy input. Therefore, the grounding essay (preparation stage) can be related to this stage of the dance. The study entails the investigation of critical regionalism, which will form the basis of the objectives of the project. Strategies will be identified from precedents utilised in the design process.

The second chapter contains a study on the Story of Place, and includes a review of the Kunene Region, Opuwo, and the site. This chapter includes the region's rich history, climate, topographical characteristics, Opuwo urban fabric, accessibility, and site analysis. These contextual factors have a significant impact on the Ondjongo dance, as they influence several movements. This section is to be represented by the phase where a Himba member commences the dance in the centre of the group, exhibiting specific movements.

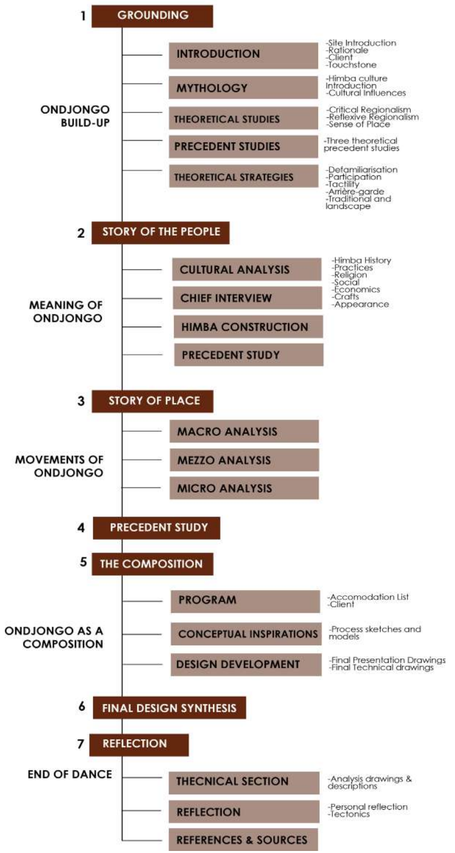
The third chapter, Story of Culture, contains an in-depth investigation of the Himba culture. This includes the Himba history, religion, appearance, economic system, village formation, beliefs and practices. This chapter represents the meaning of the dance, which is exhibited through the movements and especially the singing. During singing, they chant about their social circumstances, emotions and events. Chapter four, The Collaboration, entails the dance phase, where everything is perceived as a vehicle to narrate the Himba story. During this stage, all the elements identified in the previous chapters are synthesised into the spatial narrative and development of the project. This chapter will also include the final design and final models. The technical report will be embedded in this chapter.

The final Reflection refers to the phase where the dancer returns to the circle after the dance has ended. In this chapter, the process will be summarised. It will also give a clear synopsis of what the project set out to achieve, and whether this was accomplished.

Consequently, the thesis will be structured according to the Ondjongo dance elements to describe the culture, context, and vernacular morphology. In this way, the reader will become familiar with the dance and the narrative on which it is built.

Fig.03: Himba Ondjongo dance (Tarli, n.d.: website: online)

CHAPTER LAYOUT



CONTENT

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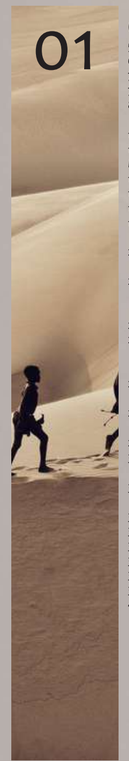


01 GROUNDING

02 STORY OF THE PEOPLE

03 STORY OF PLACE

04 PRECEDENTS

05 THE COMPOSITION

06 FINAL DESIGN SYNTHESIS

07 REFLECTION

01 CHAPTER

GROUNDING
THE ONDJONGO BUILD-UP

Fig.04- Himbas walking in the Kunene region desert (Nelson, n.d.: online)

Fig.05- Himbas walking in the Namibian Desert (Nelson, n.d.: online)

1.1 INTRODUCTION

The Himba people are an indigenous group living in northern Namibia. They are known for their extraordinary red appearance and several ritual practices around life and death, their religious system and their general cultural customs around food production, craftsmanship, the building of clay huts, and their singing and dancing (Living Culture Foundation Namibia, 2021:online). These ritual activities and their unique indigenous culture annually attract numerous tourists. Due to uncontrollable environmental and social elements, the Himba people are subjected to forces of modernisation, which challenges their traditional lifestyle in significant ways, such as schooling, access to electronic devices, clothing, economics, and cultural values. Additionally, the site, situated in Opuwo, known for the many Ovahimba people in the town, does not support the sustainability of the culture. Due to the history of colonisation in the Kunene Region, the urban fabric still supports colonial economics, architecture and identity, despite the aesthetic Himba ethics that inhabit the context.

Even though modernisation is one of the factors threatening the Himba culture, it also forms a significant part of their daily contemporary life. Eliminating the modern world from the Himba culture would therefore lead to catastrophic results, as it already became an integrated part of their life. Adjusting to new situations is their way of responding to the ever-changing external environment and town in order to survive.
However, the cultural adjustment towards modernity can be sustained in a more subtle environment to prevent the destruction of the culture.
In the book “The Power of Identity”, Manual Castells identifies three types of identity building (Castells, 1997: book). His ”project identity” is relevant in this case, as it pursues the transformation of all social structures. Currently, the Himba can be seen as rebuilding their identity in a modern world, while continuing to live according to their traditional way of life. Nevertheless, the Himba people are moving progressively towards total modernity. If cultural sustainability is not implemented, it can lead to the total extinction of the culture. It is therefore of the utmost importance to implement ecological, economic and social development. This situation presents an opportunity in Opuwo for an architectural portal of accustomisation, which foreigners can visit and the Himba people can utilise economically and socially.

The discourse investigates how architecture can accommodate a project identity through the lens of Critical Regionalism. The different approaches of Tzonis & Lefaivre, Frampton, Marcel Duchamp and Timothy J. Cassidy can be analysed to suggest modern solutions towards site issues, use of tactility, using elements in a different context than intended, citationism and syncretism, and meta-statement. A set of design objectives/ principles were identified during the study of critical regionalism, namely defamiliarisation, participation, arrière-garde, traditional and landscape practices, and tactility.

The dissertation will introduce several processes of thought and research that influenced the design of the Ritual Himba Pavilion. It is structured to answer the research question and to explain the aspects and factors that contributed to exploring and resolving the proposal. These processes consist of the first initial stages fueled by the theoretical stance of the Norwegian architect and theorist, Christian Norberg-Schulz. He emphasised that context, culture and vernacular architecture should be studied in order to understand a sense of place. Conceptual approaches and inspiration were identified during this stage, which were carried over into the design process.
Throughout this process, critical regionalist strategies were applied to the conceptual elements and components identified from precedent studies in order to reach the desired principles and objectives. The document concludes with the final design synthesis and technical analysis, illustrating how the design connects all the strings related to the theory, brief, context and culture.

1.1.1 PROPOSED SITE

The proposed site is located in the small rural town of Opuwo in Namibia. The town is the capital and commercial hub of the Kunene Region in the desert environment of north-western Namibia. The town has a population of 20 000, and there are about 50 000 Himba living in the Kunene Region (Government of the Republic of Namibia, 2021:online).

Opuwo is well known for the many Ovahimba people who reside in traditional Himba villages around this settlement. A large number of tourists travel to Opuwo annually to visit these villages and experience the Himba people's aesthetic culture and rituals. It also forms the Gateway to other Kunene Region attractions such as the Epupa Falls (Schoenmaeckers, n.d.: website).

The town is relatively underdeveloped and displays a predominantly colonial urban fabric. Despite the unique context and the culture that inhabits the settlement, no architectural structures significantly suggest the Himba identity or context. This situation provides an architectural opportunity - how can one establish a more representative sense of place as an act of resistance against the ubiquitous adoption of standardised, colonial designs in the settlement?

The proposed site is located on a hillside, overlooking the landscape. It provides the pavilion with the prospect to become an in-between medium, linking the town and the natural landscape and creating a gathering point between the traditional and the modern world.

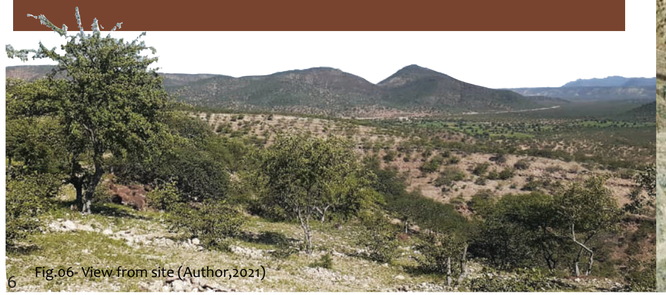


Fig.06- View from site (Author,2021)

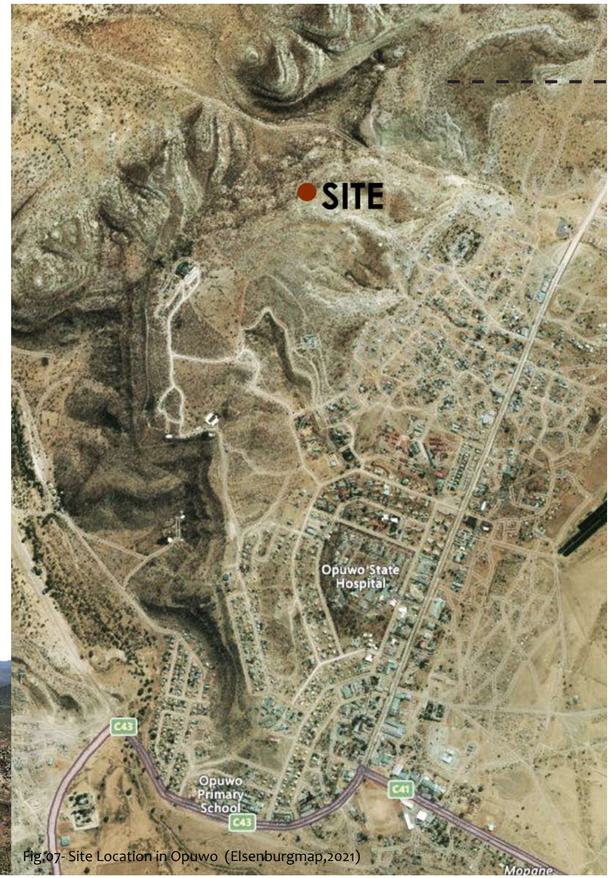


Fig.07- Site Location in Opuwo (Elsenburgmap,2021)

RESEARCH QUESTION

How can a Critical Regionalist approach be used to create architectural spaces of accustomising, in which foreigners can be introduced to the Himba culture in a respectful yet revelatory way, in order to eventually establish a fruitful dialogue between globalist modernity and indigenous tradition in the Kunene Region?

1.1.2 RATIONALE

The project aims to create a portal between the diverse worlds of the tourists and the Himba. The pavilion will create a space for cultural appreciation and accustomisation through architecture as the dialogue medium.

The project will display, support and safeguard the indigenous Himba culture by implementing educational and awareness amenities, and celebrating and motivating the cultural significance within the functions. It will accommodate indigenous organisations and demonstrate indigenous resistance and resilience through architectural interpretation.

The facilities in the project will also provide economic and social opportunities for the Himba people by articulating the space as a tourist destination point. It will also provide them with facilities to practice, display and sell their crafts and ritual activities, and interact with tourists.

At its core, the project seeks to expand and enrich the cultural understanding between these worlds, and thereby undermine the superficial appreciation that much of the world has of northern Namibia and the Himba culture. It will provide a gathering space between the two worlds, and will contribute to the cultural sustainability of the Himba people while also providing them with a space suitable for their project identity.

1.1.3 CLIENT

The client for this project is the Hizetjitwa Indigenous Peoples Organisation (HIPO), a non-governmental organisation (TravelNewsNamibia, n.d.: website).

HIPO is an association that pursues helping native individuals in Namibia and Angola to maintain their way of life, while address the difficulties of contemporary society and improving their day-to-day environments. There are around 2 000 HIPO individuals from 85 enlisted villages around the Kunene Region. The organisation initiated the two-day Hizetjitwa Festival held on the borders of Opuwo in August 2011.

1.1.4 TOUCHSTONE

EXPLORING THE MERGED STAIN OF TRADITION AND MODERNISM.

The Himba people of Namibia face several difficulties such as income, schooling and living strains due to their indigenous way of living. These complications cause the younger generations to submit to modernity as their solution to a better life. Even the older generations have a sense of curiosity towards western/contemporary techniques and devices. Despite the concerns regarding the influence of modernity on the Himba people, one would never be able to halt the modern forces that have already started to encroach on their lifestyle.

The touchstone represents the merged product of tradition and modernity (refer to fig.09). The red liquid represents the traditional unit, as it resembles the red ochre that the Himba women mix with butter to apply on their skin. The wire mechanism represents modern-day influences. Together these two units produce a stain that symbolises a new approach with both tradition and modernism embedded.

The staining process has similar and distinct characteristics of the slow method of medicine administered into the body through a drip - the continuous slow introduction of fluid into the body through gravity. Comparable to this method, the staining occurs through natural forces such as surface tension in materials, gravity and solubility. This occurrence is not forceful but rather a natural infusion.

In a sense, the planned building will itself become the stain. It will provide a medium that celebrates both the contemporary and indigenous aspects, and act as a gathering point between the two worlds. Consequently, it will contribute to both the accustomisation of the tourist and the slow and safe introduction of the global society to the Himba.

Fig.08- Touchstone Detail (Author,2021)

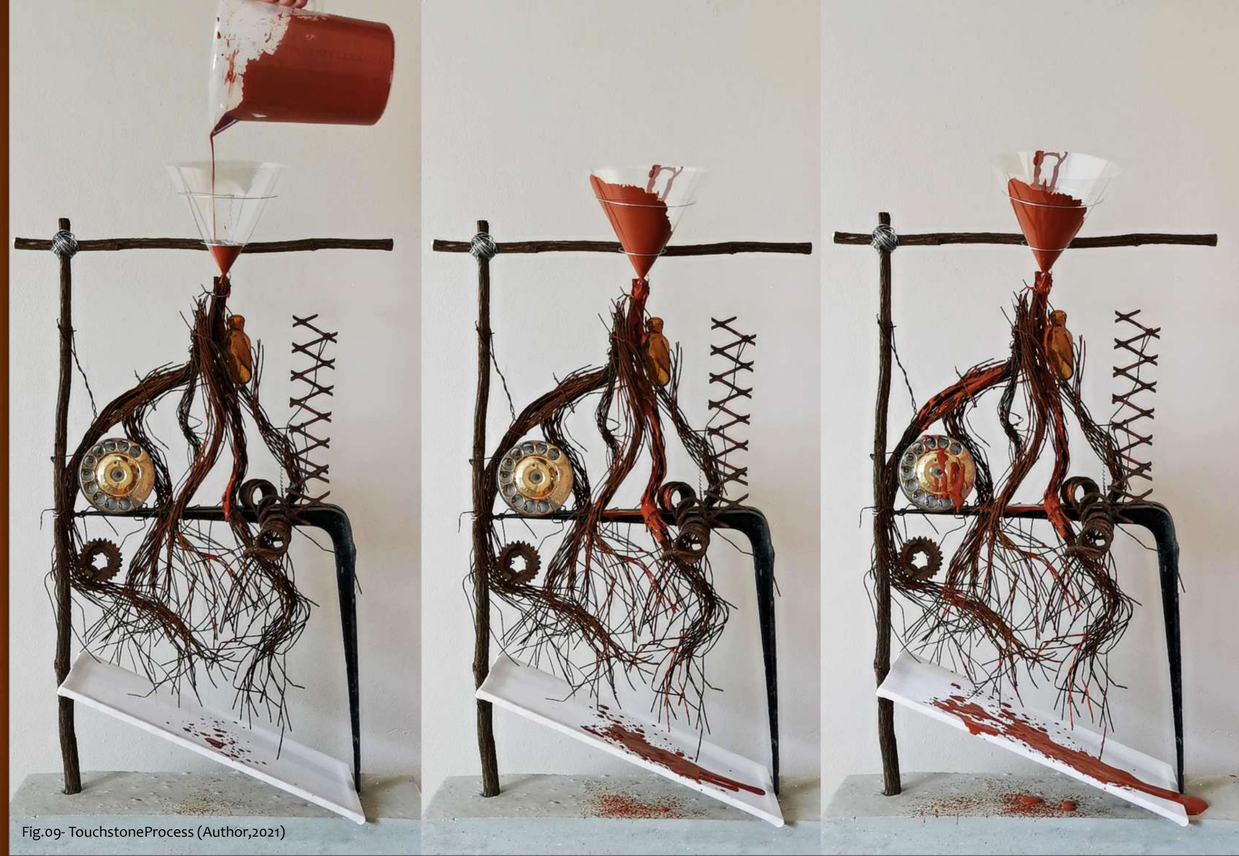


Fig.09- TouchstoneProcess (Author,2021)

The Staining Process

Fig. 10- Himba woman and children in village (Nelson, n.d.: online)

1.2 GROUNDING ESSAY

1.2.1 INTRODUCTION

The grounding essay will further investigate the main topic of concern, namely the traditional and modern aspects of the Himba culture. This study will show how modernity influenced their traditional rituals, and how it continues to affect the culture's economic and social environment. In doing this, it highlights the main influences of modernity, and the fundamental aspects of the culture.

By examining the culture, the theory of Manuel Castells (Castells, 1997:7). was identified to understand the issue from a theoretical point of view. The main aspects in his writing entail the description of two identities: the oppressed identity, switched off from the network of society, and the ruling power identity.
Castells indicates a third identity, namely an amalgamation of both the oppressed and ruling identities. This identity has a solid connection to Critical Regionalism as it also supports the idea of merging two entities to establish a new whole.

An investigation into the writings of Alexander Tzonis and Liane Lefaivre (Tzonis, 1990:489) revealed an important strategy of Critical Regionalism, namely defamiliarisation. Different methods of defamiliarisation were therefore investigated. This included Frampton's writings, the installation work of Marcel Duchamp and the aspects mentioned in the book The Poetics of Order by Tzonis and Lefaivre. This research equipped the research with the design strategies to identify elements and methods of defamiliarisation.

In the theory section, regional aspects of the context, in other words the sense of place, are also identified.
Norberg-Schulz's notion of genius loci (architabanerjee, 2016:online) will be used to recognise the elements regarding a sense of place. These identified characteristics are then further studied within the body of the thesis, leading to the formulation of three concepts during the design process.
The elements will then be defamiliarised in order to design the type of hybrid place that can serve as a portal of accustomisation for the Himba and tourist alike.

Precedent studies will identify essential elements which should be considered within the design. The theoretical and precedent studies also will also provide critical regionalist strategies towards establishing architectural spaces of accustomisation.

1.2.2 INFLUENCE OF MODERNITY (TRADITION VS MODERNISM

In rural northern Namibia, the Himba live in and around the colonial town of Opuwo. After Namibia's independence in 1990, the Himba became subjected to increasingly modern Western influences. This section will discuss a few cultural changes throughout the years due to the ever-changing social and economic environment. This investigation allows the researcher to establish a possible theoretical approach that will lead the project objectives.

Throughout the history of the Himba people, the group maintained their traditions, despite the introduction to foreign cultures and modern elements since the beginning of the 20th century (Cameron, 2013:14). After this period, uncontrollable forces such as war, politics and drought caused brief changes within the daily practices of the culture. However, they would always return to their fundamental traditional values if conditions permitted it.

Currently, the Himba people face the challenge of maintaining their traditions while also gradually integrating with modernity. For many years, the Himba rejected modern influences, but their way of perceiving the world is slowly changing. Due to the tourism industry, which rapidly increased in the Kunene Region over the past few years, the Himba are regularly introduced to modern technologies, systems and customs (Murdock, n.d.:online).

According to Austin Cameron, who did an intense qualitative study on the factors influencing the Himba culture in his master's thesis, there are three main theories that could explain cultural change, namely cognitive dissonance, urbanisation, and mass media and social learning theory (Cameron, 2013:27-37).

1.2.2.1) Cognitive Dissonance

The concept of Cognitive Dissonance refers to the relationships developed through personal experiences, customs of the culture, and thoughts about connections between occasions. If dissonance occurs within these connections, an individual

Fig.11-Himba woman in grocery store (Gupta, 2021: online)


Fig.12-Tourist buying crafts from Himba (Kruger2Kalahari, 2021: online)

applies dissonance remedy tactics, such as selective exposure (avoiding situations where dissonance may occur) and changing behaviour (changing to fit in with the rest). The Himba people experience dissonance in the formal working environment and educational institutions (Cameron, 2013:27-31). According to Jesaja Nghitila Ndimwedi, these traditional people of Namibia struggle to obtain "formal employment opportunities and employment advancement" (Ndimwedi, 2016:2). As Opuwo is a western town, modern clothing and consumer items are seen as acceptable, and they communicate social and economic achievement. The Himba youth, therefore, encounters dissonance due to their dissimilar cultural beliefs regarding success. Traditionally, success is denoted by many heads of livestock, numerous wives, a residence in the village, and a respected position in the village (Cameron, 2013:27-31). According to Cameron, most Himba men would change their behaviour towards western clothing and notions to reduce the Dissonance in Opuwo. Young men would therefore leave the village to obtain jobs in towns and cities to provide for the women in the village. Instead of surviving through traditional ways such as hunting and gathering, the Himba now obtain money through labour and tourism.
Consequently, the Himba who stay in villages relies on tourism for their income (Cimarosti, 2020:online). As the area receives a high number of tourists annually, the Himba would charge an entry fee to tourists to the traditional villages, while they also sell crafts at their homesteads or on sidewalks in town.

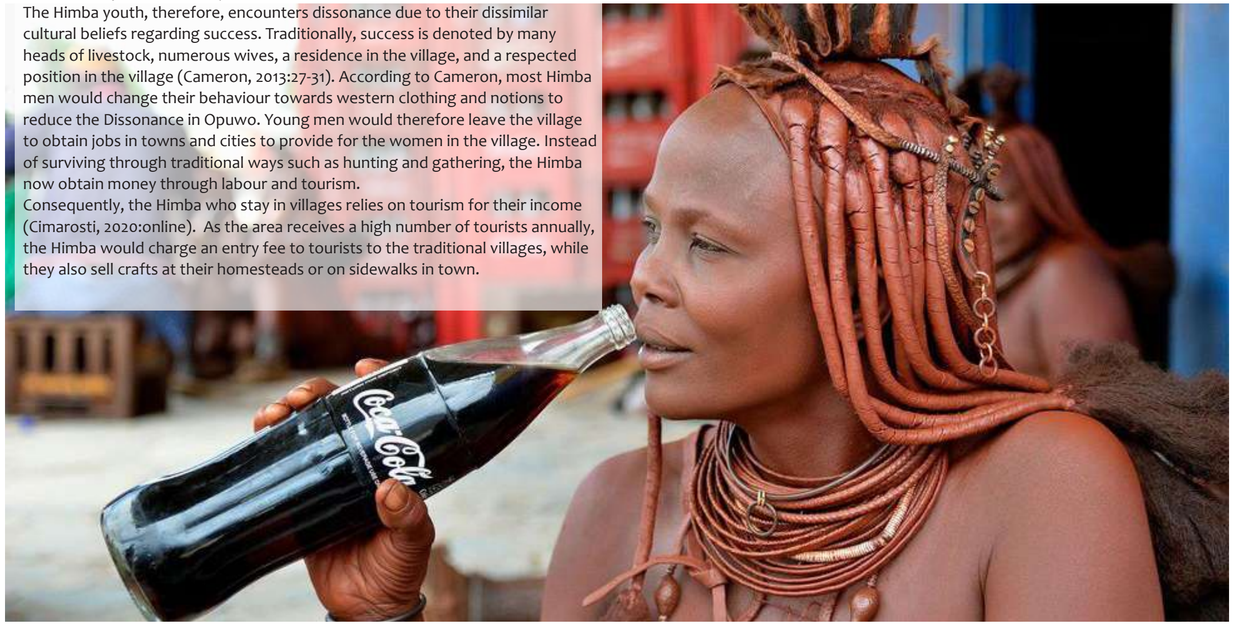


Fig.13-Himba woman drinking soda (Robson, 2021: online)

1.2.2.2) Urbanisation

One of the significant triggers of change in the Himba culture is the urbanisation of Opuwo. Crandall, the author of The Place of Stunted Ironwood Trees, describes Opuwo as "a gateway to the world beyond it. And it is a world that is attractive to the teenage boys ... These men have a leg in the Himba world and have a leg in what they see as a new, hip life in Opuwo" (Crandall, 2000:268).
Modern conveniences such as "hospitals, cell phones, cars and roads" (Crandall, 2000:268) have become integrated into their lives. Those with an interest in the western lifestyle submerge themselves with devices and technology. Today, one would see Himba people walking with cellphones, shopping in grocery stores, drinking in bars, making their food in steel pots and wearing modern clothing.

Several Himba boys are also sent to western-style schools to better their education. An article extraction from BBC News, of the dialogue between an interviewer (Pumza Fihlani) and a Himba chief (Nongaba) (refer to fig.14), illustrates how Himba beliefs towards education have changed over the past years due to modernisation (Fihlani, 2017: online):

"As head of the village, you'd expect him to be fighting to hold on to the past but instead he is preparing his children for a life outside the village walls - by sending them to school.

But Chief Nongaba, who has never set foot inside a classroom, says it is his duty to prepare his children for a life outside the village.

"I want them to become doctors, teachers, work in government. I want them to live a different life to me, I want them to look like you," he tells me.

"Why?" I ask and without hesitation, he responds: "The world has changed."

But one of his wives, Mama Moharerwa, a tall figure with a booming voice, tells me their people belong in the village.

"The best life for us is in the village - it's how we've lived for many years, it's what we know. In the city we cannot survive."

People like Mr Kataparo are caught between the allure of modern life and a desire to save his traditional culture,

"It scares me a lot. I would prefer to die before the traditions of my people finish." (Fihlani, 2017:online).

Fig.14-Chief Nongaba and his children (Fihlani, 2017: online)

From the article, one could argue that the Himba people willingly adopt western ways to improve their way of life in an ever-changing world. However, they are in a constant battle between modernity and safeguarding their cultural heritage.

Fig.15-Himba Todler introduced to cellphone (Arrindell, n.d.: online)

Fig.16-Himba Protests against dam construction (esri, n.d.: online)

Fig.17-Himba Protest against dam construction (esri, n.d.: online)

Fig.18-Himba Graves (ExploringAfrica, n.d.: online)

1.2.2.3) Mass Media & Social Learning

Due the urbanisation of Opuwo, the Mass Media and Social Learning Theory became applicable within the modern town life. Most Himba participants in Cameron's research mentioned that they had been introduced to modern items and ways through media sources such as television, magazines, radio and advertisements (Cameron, 2013:27-31). Additionally, the escalation of tourism in the area opened up a completely new world to the Himba people, with more freedom to pursue opportunities and unaccustomed realities (refer to fig.15) (Schoenmaeckers, n.d.: website). Tourism is one of these realities, as it became integrated in their lifestyle. Himba villages have become tourist destinations. This has resulted in a loss of privacy for those living in the villages, and the general disturbance of traditional village life. Tourists would, for example, familiarise Himba children with technological devices and the mature generation with alcohol. This deprivation of their privacy through tourism led to a curiosity about the outside world, causing several Himba to leave the tribe (Schoenmaeckers, n.d.: website).

1.2.3 BELIEF SYSTEM OF ANCESTRAL WORSHIP

Despite the powerful modern influences impacting on the culture's lifestyle, one finds that most Himba people still believe in ancestral worship (Cameron, 2013:70). This was evident in 2007 when the Namibian Government attempted to build a hydroelectric dam on the Kunene River (Esri, n.d.:online). This proposal would have flooded sacred Himba land, which contained generations of ancestral graves (refer to fig.18). The Himba people began an uprising to stop the construction of the dam, and protested against how the government's actions would violate their human rights (refer to fig.17). Due to the Himba group being a political minority, successive presidents ignored their concerns. Himba groups have protested from 2012 to 2014 (esri, n.d.:online). During this time, James Anaya, a UN Special Rapporteur on the Rights of Indigenous Peoples, visited the Namibian Government where he mentioned: "Certain indigenous peoples — including the San, Himba (Ovahimba), Ovazemba, Ovatjimba, and Ovatue people — are disadvantaged relative to other groups in the country and have not seen the promises and benefits brought by independence fulfilled for them. These groups have expressed a strong desire for greater inclusion in decision-making at all levels..." (esri, n.d.:online). The Government later discontinued the project due to intense political pressure.

The controversy around this dam confirms the importance of preserving a spiritual connection with ancestors. One could argue that the relationship between man and spirit gives the Himba a sense of belonging and identity, as opposed to changing elements such as their appearance and everyday customs.

Even though tourism and modernisation are major role players in the situation of the Himba people, the modern elements mentioned above should not be discarded, as they have already become integrated with the Himba lifestyle and economic structure. Instead of trying to encourage 'what once was', one should embrace the new integration of tradition and modernity. It is the group's own decision to accept it or not, despite external influences.
The objective would therefore be to preserve the cultural ethics within the current hybrid situation and encourage cultural conservation. Even though architecture cannot physically reduce modernisation, it can promote Himba cultural sustainability within the town community and fabric, while exuding pride and creating an opportunity to understand the culture.

Fig.19-Opuwo town scene (Crepaldi, 2018: online)

On the left: Herero women, Westernised descendants from the Himba culture (refer to page 49)

On the right: Traditional Himba women walking in the streets of Opuwo.

1.2.4 CULTURAL SUSTAINABILITY

When considering cultural sustainability, the three fundamental qualities of ecological, social and economic development play a significant role in society's existence and social progress. Per Voetmann, the Director of Nordic Culture Point, states that "creativity, critical thinking, empathy, trust, mutual respect and a willingness to take risks" are the qualities embedded in cultural sustainability (Nordic Culture Point, 2017:6). These elements all link to the focus of the Danish Centre for Culture and Development (CKU) namely "empowering people through active participation in art and cultural activities" (Nordic Culture Point, 2017).
The proposal, therefore, implies the three main aspects, namely ecological, social and economic development, within a gathering space for the community and foreigners that will elevate participation and awareness of the Himba culture. Doing this will possibly provide cultural resistance and acceptance within the modernised town of Opuwo, while contributing to the reduction of negative influences by motivating cultural pride within the Himba people.

Fig.20-Himbas walking in Opuwo (Scarabelli, 2011: online)

In order to understand the issue and formulate a theoretical discourse, the phenomenology of Manuel Castells (Castells, 1997 :8) is utilised, where he discusses the different types of identities in a social network. This study will assist in determining the type of identity of the Himba people, allowing further theoretical direction.

1.2.5 SWITCHING OFF: NETWORKS AND IDENTITY

Manuel Castells focuses on identities in his book, The Power of Identity (Castells, 1997). His view regarding identity is that it is an individual's basis of significance and experience, and should be distinguished from what sociologists call jobs and job sets. Due to the self-development and "individuation" aspects of identity, it is regarded as more significant than roles. He expresses that identity forms meaning, and roles form functions (Castells, 1997:7).

Due to modernisation and capitalisation, a new type of society has emerged, namely the networked society. This social order disregards the element of identity, and only focuses on sources of value that can contribute to this network. Castells elaborates that this is a severe situation, where only parties that subsidise the network through "money-making", are included in the society. Subsequently, those who cannot add value to the network, through providing capital, education, infrastructure, or institutions, are later "switched off" from this social network (Castells, 1997:8).

In the networked society, Castells suggests three types of identity: legitimising identity, resistance identity, and "project identity". Legitimising identity refers to explaining, reproducing, and developing the ruling powers through propagandised logic and meaning. In contrast, resistance identity defines the action where social actors build "trenches of resistance" to oppose the depression and stigmatisation implemented by the dominating powers. Project identity reevaluates the individual's position in society by creating a new identity that pursues the transformation of the overall social structure (Castells, 1997:8).

In the case of the Himba culture, it contributes significant identity value but minor sources of value towards the so-called network society, due to their indigenous, non-capitalist and isolated way of living. This situation has caused them to be switched off from the networked society, which causes conflict and slowly leading them into the world of modernisation. This in turn leads to the concern that they will turn towards the "legitimising identity" of moving toward the dominant identity, leading to a cultural extinction.

Due to the rapid transformation of societies through the years, Castells also mentions that "identities that start as resistance may induce projects, and may also, along the course of history, become dominant in institutions of society, thus becoming legitimising identities to rationalise their domination" (Castells, 1997:8). He therefore indicates that neither one of these should be dominant (Zarzar, n.d.:online). He further suggests that the benefits of each identity within a society should be identified and utilised, rather than arguing about which one is best. This statement of Castells has an undeniable connection to the theory of Critical Regionalism, which supports the idea of using two different identities to form an integrated whole.

In the Himba culture, the two identities have already merged to form a "project identity". Therefore, the aim would be to identify the best possible architectural approach towards accommodating this merged modern/traditional identity. Critical Regionalism focuses on identifying traditional/regional elements and then reinterpreting them in a contemporary way to establish a new component. This theory was therefore explored to classify how a Critical Regionalist approach can help manifest a Project Identity within a place serving as an accustomisation portal.

1.2.6 CRITICAL REGIONALISM : THE WAY FORWARD

The leading theoretical paradigm for the project is Critical Regionalism. This approach offers a way to counter-act "placelessness and lack of identity" within standardised designs. Kenneth Frampton identifies Critical Regionalism as "architecture of resistance". It refers to architecture that responds to the common concern for place and use of vernacular design elements to confront "universalising architecture", which can be seen as "dominating and oppressive" (Tzonis, 1990:486).

According to Alexander Tzonis and Liane Lefaivre, Critical Regionalism can be recognised as the "common concern for place and the use of regional design elements" (Tzonis, 1990:485). This technique obtains regional elements that will contribute to the architectural, spatial and experiential involvement of the context.

The word regionalism implies an extensive understanding of the sense of place of a specific area. This concept is linked to the phenomenology of genius loci, propagated by Norberg-Schulz, where he suggests that architecture should respond to the spirit of the context. Genius loci can be defined as the "sense" of a place, recognised as the totality of the physical and symbolic elements within the natural and human setting, contributing to a comprehensive "engagement of all the senses" (architabanerjee, 2016:online).

Tzonis and Lefaivre prefer Critical Regionalism to Regionalism, due to regional designs often leading to "nostalgic encapsulations of local traditions". The author subscribes to Kenzo Tange's perspective on Regionalism. Tange, a Japanese architect, states that "tradition can be developed through challenging its own shortcomings", in which he implies the same of Regionalism (Tzonis, 1990:488). The authors, therefore, suggest that a suitable approach towards Regionalism is to incorporate the modern method of defamiliarisation, which will represent the regional designs from a different perspective (Tzonis, 1990:489). The word "critical" therefore challenges the established world and the authenticity of the philosophies that "interpret it in the mind" (Tzonis, 1990:488). This approach supports the idea of distinct spaces that emphasises and celebrates individual cultures while fostering social interaction. They do not entirely disregard tradition, but suggest a "critical reevaluation" of those elements. This suggestion is achieved by employing modern strategies to elevate Regionalism beyond a narrow-minded approach.

These authors refer to defamiliarisation to carry out the self-reflective function of poetic Critical Regionalism. This process includes selecting physical or conceptual regional elements related to placemaking, and incorporates them in an unaccustomed rather than a familiar way. Tzonis and Lefaivre mention that doing this will "de-automatise" perception, and disturb the "sentimental embrace" between architecture and its users, leading to thoughtful design. They mention that, "through appropriately chosen poetic devices of defamiliarisation, critical regionalism makes the building appear to enter into an imaginary dialogue with the viewer" (Tzonis, 1990:489). Defamiliarisation will therefore be used to create a dialogue between the contrasting worlds, and offer resistance against the colonial architecture in Opuwo.

1.2.6.1 Identifying the Sense of Place/regional elements

As mentioned previously, Critical Regionalism first focuses on regional elements, according to Tzonis & Lefaivre. It links these to the elements of genius loci, which are then defamiliarised and recomposed. Consequently, the theory of Norberg-Schulz initiated the first approach towards the project, and was used to investigate the essential elements required in conveying a sense of place. Norberg-Schulz recognises the two elements of body and soul (architabanerjee, 2016:online). Body refers to the physical fabric which is situated in a specific environment or setting. In comparison, soul is the totality of the places' "history, traditions, memories, myths, associations and continuity of meaning" related to the inhabitants and use over time (architabanerjee, 2016:online). Together, these elements contribute to the identity and emotional impact of the story of the place.

Four thematic levels can be identified in Norberg Shulz's description of genius loci. These are natural conditions in the context, regional structures, and symbolic and existential meanings in the cultural landscape (architabanerjee, 2016:online). He mentions that the structures and symbols of a community are essential in articulating "society's cultural interpretation of place" (architabanerjee, 2016:online).The thematic levels of genius loci were used as tools to identify those aspects in the context of Opuwo. These elements are represented in three concepts, namely *The Dialogue, The Core*, and *The Mythological Line*. The exploration of these concepts was the first stage of reviewing the regional elements and defamiliarising them to a specific extent.

Fig.21-Namibian Desert (Nelson, n.d.: online)

1.2.6.2 Frampton's Approach towards Critical Regionalism

According to Frampton, the architectural world of modernism is confronted with two major issues. The first is that architecture is seen as mass production (Frampton, 1983:16-29). To increase the speed and productivity of this production line, the integral connection between the site and the local culture is often dismissed. The second issue is that symbolised meaning and media exposure are enhanced within postmodern architecture to force people to accept it. Frampton states that architecture should provide an authentic experience, and unlock meaning from the context through visual and tactile elements. He therefore argues that a critical regional approach should utilise the unique characteristics of the context and culture through a systematic, economic and modern technique (Frampton, 1983:16-29). In this way, Critical Regionalism can pursue the unification of the regional culture and universal civilisation.

Frampton's first method was to challenge the universalising elements of architecture by indirectly exploiting aspects from the specific context. According to Frampton, this process requires a "high level of critic self-consciousness" (Frampton, 1981:1). Possible leading motivations can be identified as the variety and value of local light, and the typography of a specific site or tectonics determined by a specific structural mode. This proposal can be perceived as a much more direct exchange with nature than the formal ethnicities of contemporary avant-garde designs, to which Frampton is opposed. Through these theories, Frampton creates a design structure that partners with the culture of the context and the characteristics of the natural environment. Instead of creating a free-standing object, one should consider both these aspects and merge them to achieve a contextual relationship in the design. Frampton argues that "the geographical characteristics and the cultural legacy will be decisive in the ecology, climate, and the symbolic aspect of place". These actions will lead to the perfect place-form balance between the typical habitat and the social heritage that recognises social orders (Frampton, 1983:16-29).

Frampton's second approach is that both the visual and the tactile senses should play a role during the design. According to him, when these elements cooperate, it leads to unique and meaningful architecture. Frampton believes that Critical Regionalism addresses the tactile range of human perception in the quest to enhance our common visual experience. If this is achieved, "it endeavors to balance the priority accorded to the image and to counter the Western tendency to interpret the environment in exclusively perspectival terms" (Frampton, 1983:16-29). Therefore, this concept encourages the use of materials that will allow a range of emotional responses and target all the senses (Frampton, 1983:16-29).

Frampton provides us with a comprehensive approach to Critical Regionalism. This approach offers us a framework in which cultural ethics is kept alive and provides us with awareness and freedom within architectural design.

Fig.22-The Bicycle wheel (Pintrest, n.d.:online

1.2.6.3 Marcel Duchamp's approach towards defamiliarisation

Marcel Duchamp created installations called "Fountain" and "The Bicycle Wheel" (refer to fig.22 & 23), where defamiliarisation was his primary approach towards creating art. Frampton's process of defamiliarisation is, therefore, different to that of Duchamp. Duchamp takes ordinary everyday objects such as a urinal and a bicycle wheel, and exhibits them with another title to provoke viewers' thoughts on the possibilities of the objects. For him, identifying the specific object, is the first creative step. The second step is to remove the object from the familiar context in which it functions. According to him, this action already transforms the object into art. Furthermore, renaming and signing (in the case of the "Fountain") the object add another layer of interpretation and value, such as retitling a urinal as "Fountain" (Mann, 2017:online).

Fig.23-The Fountain (Mann, 2017: online)

1.2.6.4 Defamiliarising tools, according to Tzonis and Lefaivre

K.M. Zarzar, an architectural theorist, mentions that before making use of:defamiliarisation, one should investigate how designers recollect precedents. In the book Classical Architecture: The Poetics of Order, Tzonis and Lefaivre identify the critical approaches of "citationism, syncretism, and the use of fragments in architectural meta-statement" (Zarzar, n.d.:online). These approaches are used in the process of defamiliarisation.

The strategy of citations refers to creating the feeling of familiarity or over-familiarity in the consumer. It is the fundamental methodology which estranges the tenant from the current truth of contemporary society, especially in the urban context. This approach does not "prick" the "consciousness" of the dweller (Zarzar, n.d.:online). Instead, it avoids conflict and attempts to advance a nostalgic embrace between the structure and the viewer, which is absent in the majority of contemporary architecture. The approaches of syncretism and meta-statement can be recognised as fragments related to the actual or the abstract setting (Zarzar, n.d.:online). During defamiliarisation, the parts may transform and be recombined with various components to create a feeling of alienation.

Implementing these approaches aims to achieve a type of exchange between the structure and the consumer. An identity is created by applying this strategy, which suggests how the setting can be rooted within the building configuration process. Therefore, defamiliarisation can be seen as a contribution towards critical identity, which combines the occupants' local cultural qualities and the overall interaction of modernisation (Zarzar, n.d.:online).

1.2.7 REFLEXIVE REGIONALISM

The sub-theme of Reflexive Regionalism allows one to identify the contradictions of Critical Regionalism. One can argue that this concept has a distant connection with the approach of citationism (mentioned in the previous section) - referring to the more sentimental approach towards an element by retaining a sense of familiarity.

Eggener focuses on the theoretical construct of resistance that unintentionally minimises and conflates the various architectural tendencies of Critical Regionalism. He states that Critical Regionalism, as an intellectual construct, can become problematic (Eggener, 2002:228). He compares Critical Regionalism with postcolonial architecture: "Just as postcolonialist tendencies have always been produced by colonialism, so colonialist tendencies necessarily inhabit often optimistically designated postcolonial formations" (Eggener, 2002:228). Eggener identifies Critical Regionalism as architecture that serves its locality, but is supported by a framework implemented by authoritative opinions. According to him, Critical Regionalism has strong connections to the movement it opposes, namely postmodernism. The process of indiscriminately abstracting local and regional characteristics, and combining them with contemporary techniques and practices, can hardly be understood apart from postcolonialism (Eggener, 2002:229). Due to this inadvertent tendency towards postmodern pluralism, acknowledging different subjectivities and its attack on the modern global scope, Eggener believes that it is just another form of imperial nostalgia. He suggests that the Regionalist concept of "state of mind" is lacking in Critical Regionalism. This idea refers to the attention towards "particular intellectual and cultural landscapes" (Eggener, 2002:235). He believes that if the "state of mind" is attended to directly, by noticing the opinions of those building a particular culture rather than forcing formulas upon them, then we might come to realise the richness of internal, local discourse in its full complexity (Eggener, 2002:235).

Cassidy holds a similar view. He understands Critical Regionalism as a strategy to resist the "assimilation and commodification" of regionalism and modernism (Cassidy, 2000:411). However, Cassidy debates that in the quest to reduce the "apocalyptic thrust of modernization", all regional indications and identities honouring traditional sentiments are disregarded. He believes that it concretises the perception of a region by regarding it as predetermined characteristics, instead of recognising the collective experience of a particular landscape - the sense of place. Consequently, he believes that one cannot design a building to be architecturally regional, but rather "design a building that has the potential to become regional over time" (Cassidy, 2000:417). Cassidy emphasises the idea of architecture that fully interacts with traditions intertwined with the landscape. When landscape practices are necessitated in the construction of architecture, the goal of the building is immediately apparent. Therefore, architecture's role within the landscape clarifies the purpose over time and gives meaning to the architecture.
Consequently, Cassidy believes that a building becomes regional through its engagement with the region, and not through the "mechanics of abstraction", as suggested by Frampton (Cassidy, 2000:417). He states that one should not be afraid to "embrace regional architectural traditions. Why shouldn't a barn look like a traditional barn?" (Cassidy, 2000:417). Through this statement, one can argue that Reflexive Regionalism as a sub-theme provides greater freedom, allowing the architecture to be informed by the direct interaction with the landscape and the local culture.

The proposed site offers several opportunities for cultural interaction and practices within the landscape. Therefore, the goal will be to incorporate Reflexive Regionalism in the proposed building through its physical form-giving, construction, and purpose. This method in the overall scheme will allow the building to exhibit the hybrid reality of the Himba, in dialogue with the landscape, instead of only following the predetermined characteristics of Critical Regionalism. This researcher will therefore utilise the sensitive approach of Reflexive Regionalism in specific areas of the project, and critical defamiliarisation in other areas (refer to fig.24).

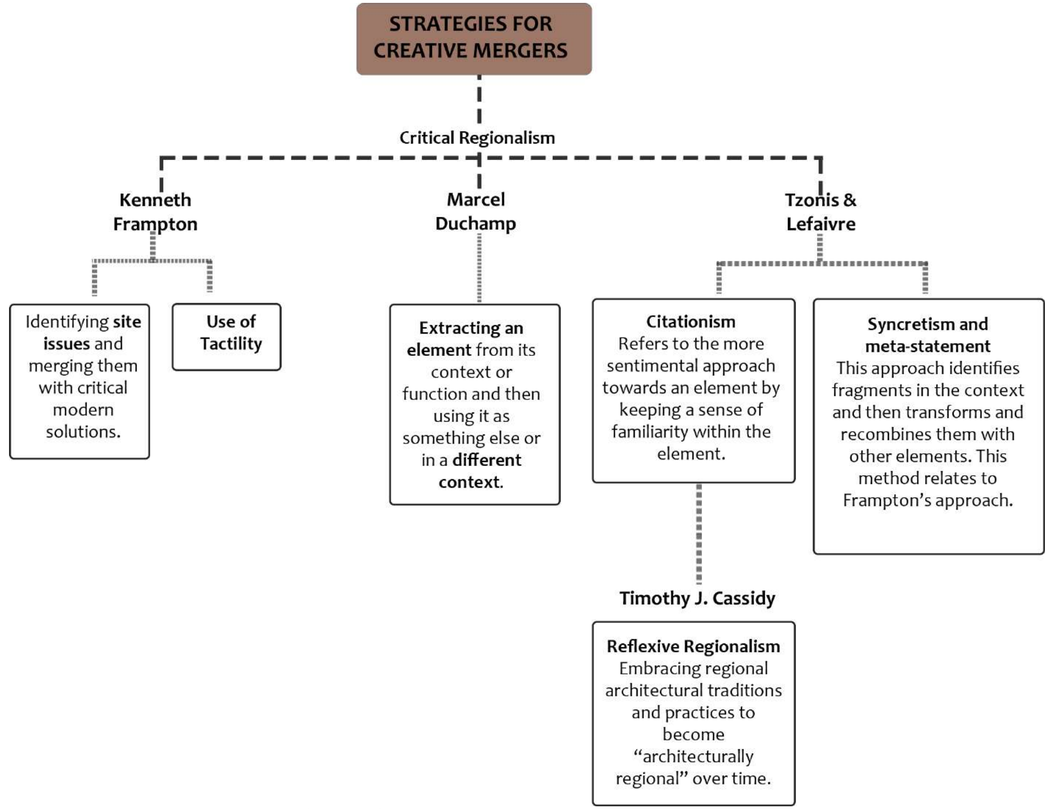


Fig.24-Strategies and approaches towards Themes (Author,2021)

1.3 PRECEDENTS / THEORY

1.3.1 Lycee Schorge Secondary School / Kéré Architecture

The Lycee Schorge Secondary School, designed by Francis Kéré, is located in Burinka Faso. This precedent was chosen for the Critical Regionalist/Regional approach taken towards the building. The project's goal was to showcase regional materials in a new and innovative way in order to provide a source of inspiration to the surrounding community, and also in the educational system (Lepik, 2017: online).

Morphology:

The layout of the building entails a series of classrooms located in a circular formation. This layout provides a central courtyard protected from the harsh climatic conditions by the exterior spaces. Consequently, this morphology allows a village condition that connects with the traditional designs of this area (refer to fig.26 & 27) (Lepik, 2017:online).

Materials:

The building walls are constructed from locally extracted laterite stone, cut into bricks (Lepik, 2017:online). This material has excellent thermal properties, which contributes to the climatic response of the building. This material also strongly connects to the clay construction used in the vernacular architecture in the context.

Local timber slats are utilised as screens around the building, placed in an informal arrangement (refer to fig.29). These screens protect the building against wind and dust, and create indoor/outdoor gathering spaces (Lepik, 2017:online). Additionally, the informality of the morphology and technique also provides a structure that draws on the traditional sensibilities of the region, as it closely relates to regional methods. Within traditional hut structures, a liminal space is created by extending the roof and timber posts. This similar element can be seen with the timber screens, which is a modern implementation.

Together with the wind towers, roof overhangs and timber screens, the temperature in the building is lowered, offering cool interior spaces.

Approach to critical regionalism

The design was planned to maximise community participation during the construction process. The construction was therefore organised as a social process, based on community support and engagement. The design entails local materials, techniques and forms, making it ideally regional within its specific context. "Gando Primary School developed an architectural language that was rooted in regional conditions and not only making use of but also developing local artisanship" (Lepik, 2017:online). This statement has a solid connection to both Critical Regionalism and Reflexive Regionalism. The precedent made use of local artisanship as is, referring to Reflexive Regionalism, but it also shows techniques where it was developed, referring to Critical Regionalism.

Fig.25 -Lycee Schorge Secondary School (Lepik, 2017: online)

Therefore, this building serves as a striking example of how architecture can combine both approaches to balance traditional and modern elements appropriately in a specific context.

The proposed Ritual Himba Pavilion will also aim to utilise the regional techniques and crafts, while in some areas developing/defamiliarising it.

Proposed Architectural Strategies:

-Implementation of village morphology
-Implementation of local materials
-Implementation of village techniques
-Participation of community in construction
-Development of local craftsmanship in the design

Fig.26 -Burinka Faso vernacular architecture (africavernaculararchitecture, n.d.)

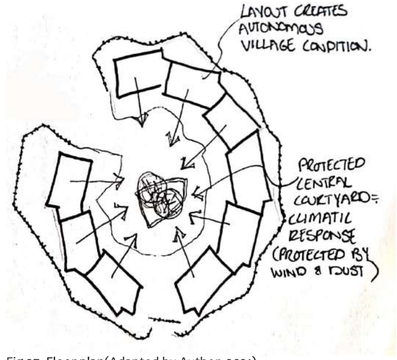


Fig.27 -Floor plan(Adapted by Author, 2021)

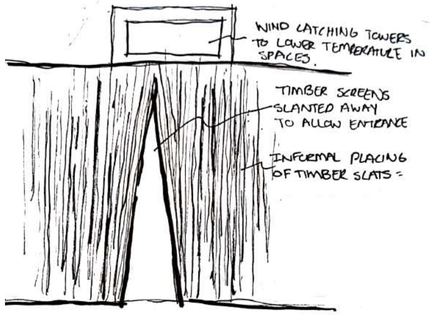


Fig.28 -Entrance through screens (Adapted by Author, 2021)

Fig.29 -Space between building and screens (Adapted by Author, 2021)

1.3.2 Tjibaou Cultural Center -Renzo Piano

The Tjibaou Cultural Center aims to create a building with strong connections to the context, culture, and vernacular architecture. The architect, Renzo Piano, also pursued the morphology of a hut, but the architectural approach between the Senegalese project and this precedent is entirely different (ArchDaily, 2021a:online). The project concept was to provide a structure in recognition of the Kanak culture, regarding their "history and traditions, past, present and future, as well as its sensitivity" (WikiArquitectura, n.d.:online).

The two main objectives of this project were to represent the vernacular building talents of the Kanak people, and to combine these with modern elements. This precedent is a good example of Critical Regionalism, as the original structure and function of New Caledonian huts were radically transformed and defamiliarised in an attempt to interpret local building traditions and social norms (ArchDaily, 2021a:online).

Structure:

The layout entails a cluster of huts situated on the river banks. These hut-like structures serve several functions, such as exhibition spaces, conference rooms, a library and studios for music, dance, painting and sculpture (ArchDaily, 2021a:online). The curve morphology of the building also has a direct connection to the construction methods of the Kanak people (refer to fig.31). The structures are made from imported wooden (iroko) ribs and slats, and the interior entails modern qualities (ArchDaily, 2021a:online). These wooden ribs are connected by horizontal and diagonal tube bracing rods made from stainless steel.

Modern sustainability techniques are embedded in the building. These include the double outer façade that allows air to circulate between the layers of slatted wood (refer to fig.32). The roof angles of the hut shape structures are also designed to harness the monsoon winds. The airflow is controlled through louvre systems, allowing fresh air, but can be closed when the wind is too extreme (ArchDaily, 2021a:online).
These unique structures jutting out from the vegetation have an undeniable symbolic feature that emphasises cultural celebration.

Critical Regional Approach:

Renzo Piano's approach towards critical regionalism was to utilise traditional elements by identifying certain fragments and then mixing these fragments with modern elements.
Even though the Tjibaou Cultural Centre is successful in its approach to defamiliarisation, the design is estranging. By comparing this precedent to the Senegal Cultural Centre, one can identify that the approach was much more sensitive towards the culture, which allowed the local people to participate in the building process.

Proposed Architectural Strategies:

This precedent was chosen for its exceptional application of defamiliarisation as a strategy to interpret indigenous structures. The buildings also hold symbolic significance, since they highlight the appreciation of a specific subject or element.

- Symbolism
- Defamiliarisation of traditional elements

Fig.30 -Tjibaou Cultural Center (Langdon, 2015: online)

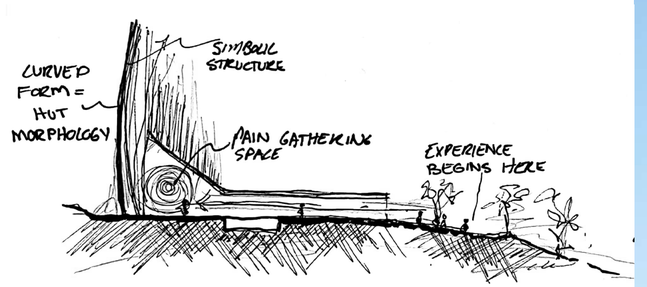


Fig.31 -Section Analysis (Author, 2021)

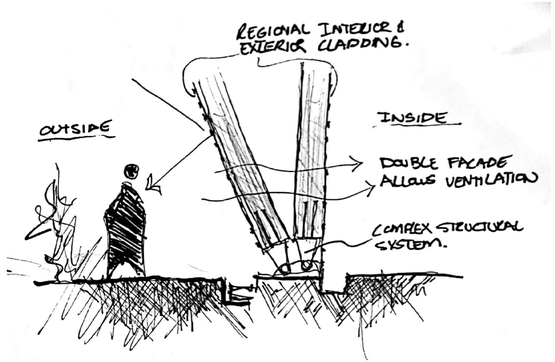


Fig.32-Technology (Author, 2021)

Fig.33- Hut-like structures (Langdon, 2015: online)

1.3.3 Freedom Park, Phase 2 / GAPP + Mashabane Rose Architects + MMA

Freedom Park is situated on a hill in the city of Tshwane in South Africa. The focus of the project was to provide a national heritage site that would challenge visitors to reflect on the context's past, to improve the present and to build on the future (ArchDaily, 2021b:online). The main focus of the building is to form an understanding of the history and the historic events during South Africa's precolonial, colonial, and Apartheid eras. This objective is achieved through the representation of history, culture and spirituality.

The large site contains several structures and is divided into two sections. The first is the Garden of Remembrance, a symbolic structure commemorating the people who lost their lives fighting for freedom. The building is mainly constructed from boulders obtained from South Africa's nine provinces, inspired by "indigenous spiritual practices of commemoration" (ArchDaily, 2021b:online).

The second section of the project entails a Place of Remembrance. The program includes a gathering space, a wall of names, a gallery and hospitality facilities. The most significant feature of the appearance of the building is the tall steel "reeds". These reeds symbolise the belief of African spirituality, which includes that "reeds are a conduit between earth and ancestors and signify the emergence of new life" (ArchDaily, 2021b:online).

The different sections are connected by an exploratory landscape pathway, which forms a commemorative journey towards the eternal flame. The unifying material is Phalaborwa quartize rock, which binds the structural and landscape phases together (ArchDaily, 2021b:online).

Approach towards Critical Regionalism

This precedent indicates how indigenous spiritual elements can be defamiliarised into architecture and experiential journeys within the landscape. The typography of the context supports the circular and organic morphology and the orientation of the buildings and landscape. In this sense, the approach towards defamiliarisation can be identified in the persistent link between culture and context.

Proposed Architectural Strategies:

This precedent was chosen to study how intangible elements can be defamiliarised to allow the viewer to have a specific experience. The building exhibits methods through which this can be achieved, such as:

- The use of light to create a certain experience
- Tactility
- Different atmospheres = different materials (allowing different experiences)
- Building exterior and interior edges
- Open and closed spaces
- Linkages between spaces
- Exploratory path
- Nature versus culture

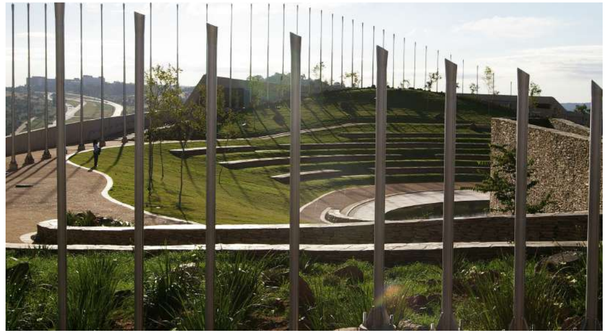


Fig.34-Freedom Phase 1 (ArchDaily, 2012: online)

Fig.35-Exploratory Pathways (ArchDaily, 2012: online)

Fig.36-Freedom Phase 2 (Welch, 2021: online)

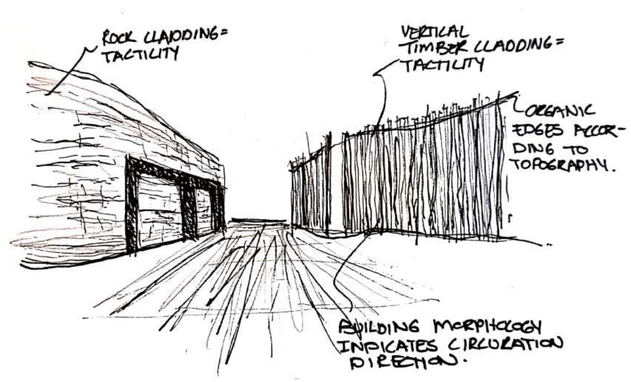


Fig.37-Phase 1-Perspective Analysis (Author, 2021)

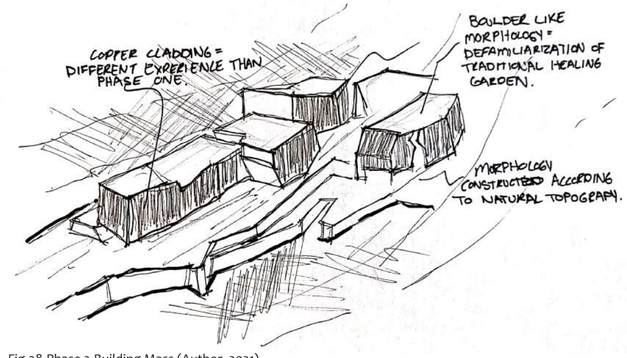


Fig.38-Phase 2-Building Mass (Author, 2021)

1.4 STRATEGIES TOWARDS CRITICAL REGIONALISM

By studying the themes and precedents, the following design principles emerged. These principles will act as guidelines in the design process in order to establish a critical regional lens through which the culture and landscape can be understood.

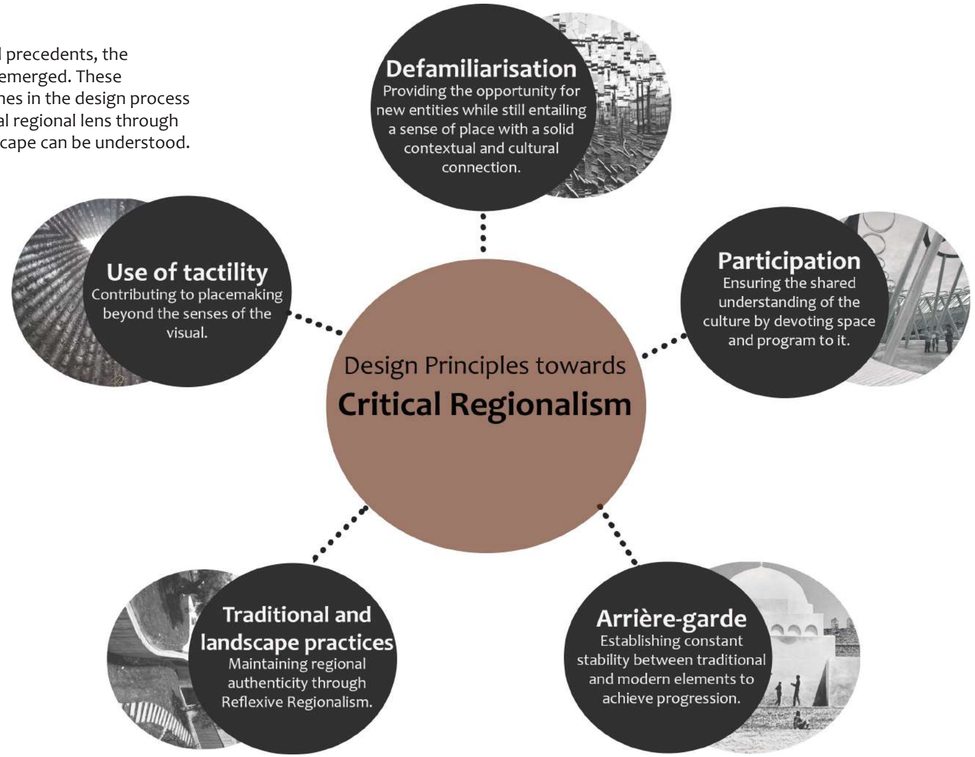


Fig.39-Design Principles towards Critical Regionalism (Author, 2021)

1.4.1 TACTILE EXPERIENCE

The strategy of tactility supports Frampton's Critical Regionalist approach. This strategy contributes to placemaking beyond the senses of the visual. It allows the viewer to experience a deeper understanding of the place and the atmosphere by enhancing the senses (Baranyi, 2016:37).

Pallasmaa emphasises the importance of tactility in his book The Eyes of the Skin (Pallasmaa, 1996). He mentions that sight is the primary sense with which we classify and perceive our surroundings. However, encountering the world only through visual elements creates a distance between ourselves and the entity, making us distant viewers. Only through physical contact can we connect with it (Pallasmaa, 1996:41-43). In genius loci, Norberg-Schulz also emphasises the importance of tactility in place-making. He states that the "spirit of place" can be defined by both the intangible and the tangible (architabanerjeeblog, 2016:online). These tangible elements include shape, structure and texture (architabanerjeeblog, 2016:online). The significance of using tactility as a strategy can be identified in Freedom Park, where it is applied to take the viewer on an embodied and spiritual journey, which allows the visitor to feel truly connected.

According to Frampton, this method will challenge the mass production type architecture that Critical Regionalism opposes by allowing a contextual and emotional connection to structure. Therefore, tactility will turn a meaningless space into a place through a journey of sensual experience.

Fig.40- Sensory perception in the Bruder Klaus Field Chapel though tactility (Archdaily, 2011: online)

1.4.2 DEFAMILIARISATION

Defamiliarisation is the primary approach identified in the field of Critical Regionalism. As previously mentioned in the grounding essay, the technique is used to confront globalised designs and avoid emblematic postmodern tendencies.

Defamiliarisation implies that familiar elements from the context, culture or regional architecture are alienated to achieve a new entity. The aim is to defamiliarise elements scenographically - the way they are perceived - and ontologically, the nature of being. These elements can be made unfamiliar in different ways, such as through the various approaches of Frampton, Duchamp and Tzonis & Lefaivre, as previously mentioned and explained. The precedent of the Tjibaou Cultural Center also displays how successful defamiliarisation can be implemented in a design.

This approach can be linked to the writing of Paul Ricoeur in History and Truth (Paul Ricoeur, 1965), where he elaborates on the "sameness" of things around the world, as brought about by globalisation, and the adverse impact of this on society (Baranyi, 2016:43). Defamiliariszation provides the opportunity for new entities to emerge while still entailing a sense of place with a solid contextual and cultural connection. It also allows the architecture to stimulate thought in the viewer by presenting the unfamiliar, unlike other methods such as Regionalism. Using this technique in architecture creates a unique space where its meaning lies in the details (Baranyi, 2016:43).

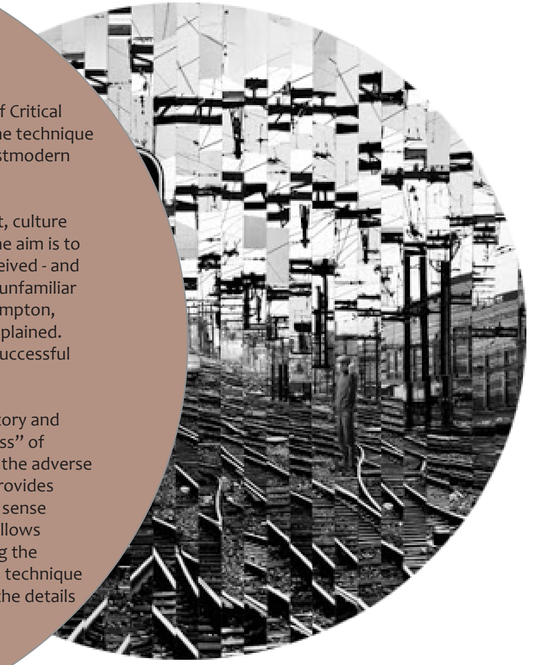


Fig.41- Defamiliarization photograph exploration
(Mendjisky, 2010: online)

1.4.3 PARTICIPATION

Participation is an action with strong connections to Regionalism. It ensures the true cultural meaning in the context of architecture through the physical participation of both the cultural groups and the tourist groups (Baranyi, 2016:45). The authentic experience of a tourist can be seen as different from that of the local inhabitant. The perception of a tourist can sometimes become superficial and inaccurate, leading to a corruption of the cultural experience (Baranyi, 2016:45). This prevents the tourists from getting accustomed to and experience the richness of the culture as a way of living. Instead, the architecture should act as a space that ensures the shared understanding of the culture (Baranyi, 2016:45).

The Critical Regional approach should therefore encourage the learning about and participation of local cultures by devoting space and program to it. The implementation of participation can provide the viewer with a more comprehensive understanding of the context (Baranyi, 2016:45).

Participation can also relate to designing a building where the locals can participate in the building process and building techniques. If the building has a solid link to the vernacular structures, participation would be possible, as in the case of the Senegalese cultural centre. When vernacular structures are defamiliarised to the extent where it becomes too complex, the local will not have a genuine connection to the building. This is evident in the Tjibaou Cultural Center precedent, where the construction was so advanced that it did not establish a space that was suitable for the Kanak people.

Fig.42- Hoop Dance Gathering Place- Mohawk College in Hamilton
(Millette, 2019: online)

1.4.4 ARRIÈRE-GARDE

Kenneth Frampton explored the idea of arrière-garde in opposition to the avant-garde trend.
"Architecture can only be sustained today as a critical practice if it assumes an arrière-garde position, that is to say, one which distances itself equally from the Enlightenment myth of progress and from a reactionary, unrealistic impulse to return to the architectonic forms of the preindustrial past" (Frampton, 1983:16-30).

The term arrière-garde denotes something old or outdated. Frampton uses the term as a solution towards restricting both the adverse consequences of "technological expansion and the media-fed consumerism" of postmodern architecture (Sarvimäki, 2014:245). The strategy of arrière-garde suggests that there should be constant stability between traditional and modern elements to achieve progression. It suggests that a critical regional approach would blend avant-garde and traditional architecture (Baranyi, 2016:47).

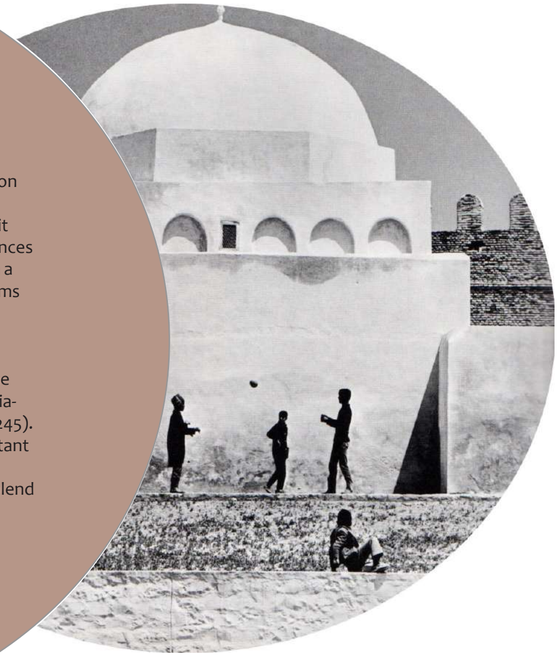


Fig.43- Exploration of Arrière-Garde architecture
(Rimskaya, 2017: online)

1.4.5 TRADITIONAL AND LANDSCAPE PRACTICES

Reflexive Regionalism demands a building steeped in the local context and culture. Natural elements such as natural light, topography, vegetation and climate can be used to achieve a dialogue between architecture and its setting, and most importantly, landscape and traditional practices (Baranyi, 2016:51).

Postmodernism entails the opposite, and searches for technical ways in which the building can link with nature. Therefore, utilising the site's natural elements through Reflexive Regionalism opposes the postmodern characteristics which Critical Regionalism entails. The Critical Regionalism approach of defamiliarisation will still be incorporated in the design, but will be augmented by utilising authentic traditional and landscape practices. This approach will allow a proposal that entails the defamiliarisation of specific characteristics, which will lead to original designs while still maintaining the true feeling and customs of the culture and the landscape. This method will allow architecture to become a platform for regional practices, and give the building its true significance.

This cultural and landscape approach is evident in the Senegalese cultural centre. It allowed the building to maintain its regional authenticity in utilising landscape and traditional practices, while also exhibiting contemporary design.

Fig.44- Nature and Culture in architecture-Mediterranean House.
(CAANdesign, 2016: online)

1.5 THEMATIC DISCOURSE

Several elements have influenced the Himba culture over the years. Currently, the culture can be identified as a project identity, which is a merged entity of modern and traditional identities. This is due to the three main influential factors in the culture: cognitive dissonance, urbanisation, and mass media and social learning. There is a concern regarding the culture moving towards a "legitimising identity", which can lead to total extinction. Castells's opinion regarding the best possible solution is to establish a power of identity by creating a project pdentity, which is already found in the cultural environment of the Himba. The logical suggestion was to discover which architectural theme would be appropriate to accommodate a project identity.

The selected method, Critical Regionalism, was chosen, since it supports the idea of combining contextual/cultural elements with modern elements to form a new interpretation. According to Tzonis & Lefaivre, this can be accomplished through the technique of defamiliarisation. The works of Tzonis & Lefaivre, Frampton and Marcel Duchamp were investigated to establish the different types of approaches that can be taken towards defamiliarisation.

Although Critical Regionalism is a suitable approach for this scheme, it entails inevitable shortcomings mentioned by Eggener. He states that it involves postmodernist characteristics, and believes that design should "meet the actual conditions of life" and must "fully succeed in making a people feel at home" through reflecting on the current conditions of culture in the region (Eggener, 2002:228).

This reflexive approach is compatible with the citationism approach, developed by Tzonis & Lefaivre, since it also encourages a more sentimental approach aimed at operating within the realms of the familiar.

In concert with defamiliarisation, the more reflexive implementation of traditional and landscape practices will form a multi-pronged strategy towards creating a platform for regional practices, which will, according to Cassidy, become "architecturally regional" and meaningful over time.

Both Critical Regionalism and Reflexive Regionalism, therefore, offer opportunities for architecture to function as a portal between the world of the Himba and the worlds of the tourist.

The study towards the Critical Regionalism and Reflexive Regionalism approaches of Tzonis & Lefaivre, Frampton, Marcel Duchamp and Cassidy allowed this researcher to identify the following, to be employed during the design process of this scheme: *The implementation of modern solutions towards site issues, use of tactility, using elements in a different context than intended, citationism and syncretism, and meta-statement* (refer to fig.45).

Tzonis & Lefaivre notice that Critical Regionalism strongly connects to the sense of place and regional elements. A study was consequently initiated by researching Norberg-Schulz's theory of genius loci. The acknowledged features were place, community and regional structures. More specifically, these elements are embedded in the concepts of the dialogue, the core and the mythological line. These concepts highlight several features to be incorporated during the design process, namely:

- Contextual approach on site
- Traditional spatial forms
- Typology of the regional spaces and built structures
- Traditional materials
- The representation of the spiritual connection between the living and spirit
- The arrangement of sacred spaces

As a result, architectural strategies were formulated from the themes and precedent studies, which will be applied to the elements mentioned above during the design process. These strategies include *defamiliarisation, participation, arrière-garde, traditional landscape practices, and tactility*.

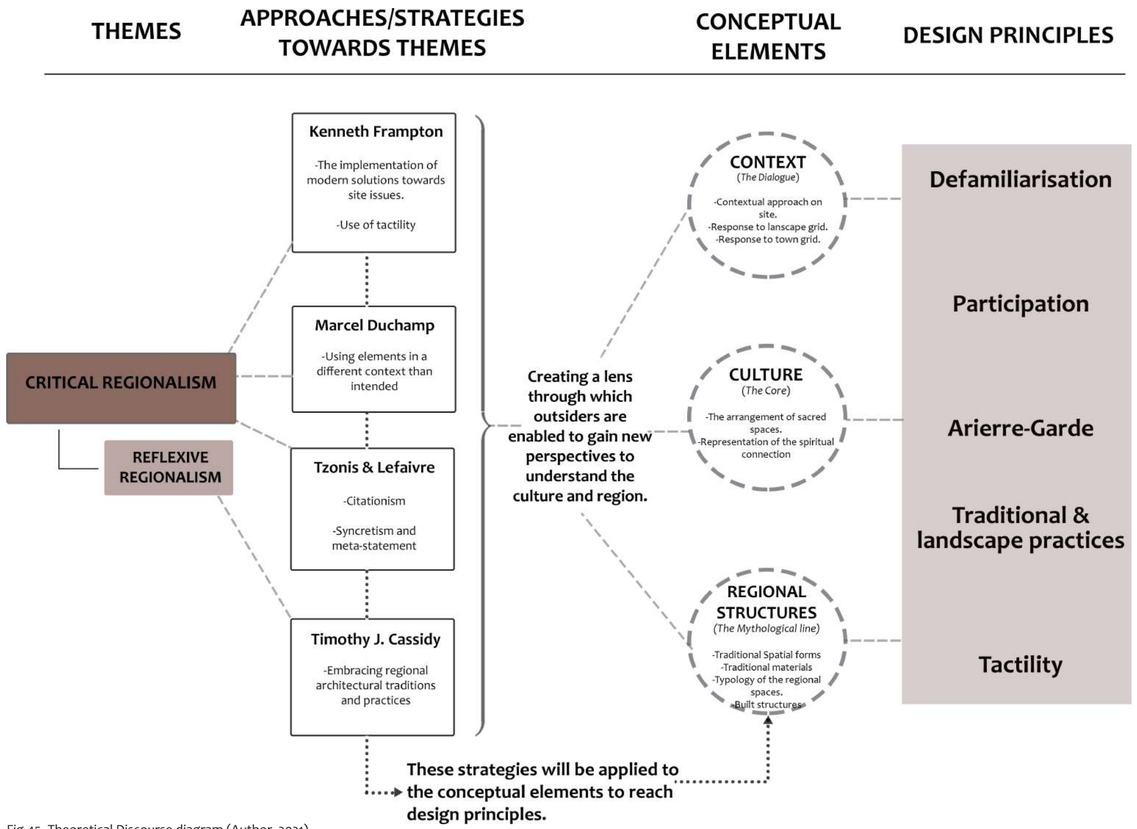


Fig.45- Theoretical Discourse diagram (Author, 2021)

1.6 CONCLUSION

The remainder of this thesis document will contain a study on the context, Himba culture, regional architecture and additional precedent studies. Furthermore, the sections will lead into the design development process to arrive at a final design synthesis. A project reflection will conclude the thesis document, reviewing the poetics and tectonics of the final proposal.

The thesis does not aim to modernise the Himba culture through Critical Regionalism, but rather to create a lens through which an outsider can learn to appreciate the richness of the culture. This involves being conservative towards certain traditional elements, and more experimentative towards others. The thematic aim is therefore to attain a suitable balance between regional and contemporary components. Critical Regionalism, as part of this project, will also allow the establishment of cultural resistance towards the colonial architecture in Opuwo. Consequently, the modern elements in the pavilion will not usurp the regional elements, but the researcher will instead strive to achieve a dynamic equilibrium between the two.

Fig.46-Himba men in Kaokoland (Nelson, n.d.: online)

02 CHAPTER

STORY OF THE PEOPLE

THE MEANING OF ONDJONGO

Fig.47- Himba Village people (Nelson, n.d.: online)

“We are all visitors to this time, this place. We are just passing through. Our purpose here is to observe, to learn, to grow, to love…and then we return home.”
(AboriginalPoverb, n.d.: online)

Fig.48- Himbawomen in Kaokoland (Nelson, n.d.: online)

2.1 INTRODUCTION

Meaning of Ondjongo

Indigenous Namibian dances have a strong connection with the event and function to which they are related. Several events are included in these rituals, such as spiritual ceremonies and transformative or initiatory events, seasonal celebrations, and social and political events (Mans, 1997:163). These dance rituals are seen as an opportunity provided by ancestral spirits, and are therefore an essential medium of communicating with relatives of the past and the future. According to the ethno-choreologists Thompson, Dagan and Tierou's views (in Mans) on traditional dances, they are a blend of art forms such as movement, sculpture, colour, sound and communication. They span time and space (Mans, 1997:163). Dargan states that "dance in Africa is the domain where body, mind, and soul are united, where past and present, vision and reality, the sacred and the profane are intertwined" (Dargan, 1997:122). These elements are also supported by the lyrics sung during the dance, which entail descriptions of people, everyday situations, events, and hopes for the future". Therefore, the Himba culture will be investigated to identify these intertwined elements that comprise the spiritual aspects of the Ondjongo dance.

A section from Mans's thesis, presenting the directly translated words from the text of the song (called Omambo), sung by the Himba, will be used to identify the elements mentioned above. From the Ondjongo song, these words will be quoted in the sections called "The Story of the People" and "Story of the Place", explaining the background of the specific text.

Quoted section from (Mans, 1997: p.275):

Omambo wo varumendu (men's texts)	
• *Ehi retu rakutuka Namibia yetu oveni*	our country is celebrating Independence
• *Ondunda ya Mbombo inunisa ozongombe*	the hill ofMbombo (a place) makes the cattle fat
• *Tate Sem (sic) Nujoma ongwakotora ehi retu ko uyara womundu*	Tate (mister or older person) Sam Nujoma (the President) took back our land and responsibility for the people
Omambo wo vakaendu (women's texts)	
• Oruljanda rwa Hopoho karuumbirwa ruzera	the pan at Hopoho (Opuwo) is holy, people may not be shot there
• Ozomburu ka zeno nganda mazekwatere mo ndjira	white people don't have homes, they have children alongside the road
• Mbaimbira okateipa kaMuhata	I have sung in the tape of Muhata (name of person)

The chapter titled Story of the People will explain the meaning of Ondjongo. Several movements of the Ondjongo dance, influenced by the customs and politics of the culture, will also appear in the section (refer to **).
This chapter will therefore discuss the social and economic aspects, and also customs related to the culture. According to Dargan, this is the meaning and reason for the dance. This study also links to identifying the cultural elements of the sense of place to create a lens through which outsiders can observe the culture from a new perspective. The cultural elements will later be conceptually analysed and presented with the design process.

Fig.49- Himba Ondjongo dance (Tarli, n.d.: website)

2.2 THE HIMBA PEOPLE

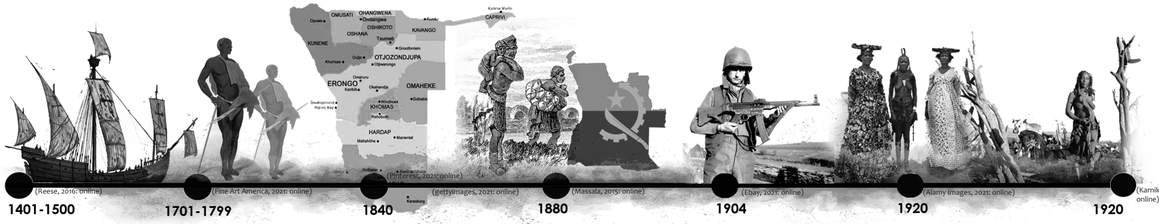
The Himba is an indigenous group of people situated in the Kunene Region, Namibia. They share the same ethnicity as the Herero people, who existed between Namibia and Botswana. After several conflict situations regarding land ownership, the Himba people moved to the harsh environment of northern Namibia in search of land. Presently, these semi-nomadic people have a population of around 20 000 – 50 000, of whom most are found around the commercial hub of the Kunene Region, a town called Opuwo. Their economic activity involves agro-pastoralism, which includes keeping livestock (cattle, goats and sheep) and the seasonal farming of crops (Living Culture Foundation Namibia, 2021:online).

The Himba are known for their unique 'red' appearance, as well as their indigenous lifestyle. Within the Himba culture, several rituals occur during life, death, and the practice of their religion. These are showcased in their character, their food production, craftsmanship (e.g. pottery, wood carving and leather tanning), the construction of their villages, and their performing arts (Living Culture Foundation Namibia, 2021:online).

Fig.50- Himba women in a hut (Nelson, n.d.: online)

2.2.1 HIMBA HISTORY

The meaning of Ondjongo: "Sam Nujoma (the President) took back our land and responsibility for the people" (Mans, 1997:275). This text quoted from the song refers to the Independence of Namibia, as Sam Nujoma was elected as president after the Apartheid regime (The Presidency, n.d.: online). The text "took back our land and responsibility for the people" also links to the further history during the 1920s. The section below explains the history of the Himba people, and their return to Namibia after the German War.



1401-1500

Portuguese Presence
In the 15th century, Portuguese navigators investigated the Namibian coastline in their quest of seeking a sea route to India. Due to Namibia's "endless, empty wastes", no permanent settlements were established by the Dutch, English or French (Joyce, 2014: online).

1701-1799

Herero Settlement
As is the case with all the Herero cultural groups, the Himba stockbreeders have a place in the Bantu etymological gathering. In the 18th century, the Himba people travelled from the Great Lakes locale over the Kunene River, which is the border between Angola and Namibia. During this time, some of the Himba settled in the central part of Namibia and others in the hostile Kaokoland (Kunene Region) due to most of the land being occupied by the Ovambo and Nama people (Joyce, 2014: online).

1840

Himba vs Nama People
Between 1840 and 1880, the Nama tribes attacked the Herero on multiple occasions because of competition for water and grazing land. This caused great cattle losses for the Herero, and they were forced to move back towards Angola.

1880

The Beggars
When they arrived at the new land, they asked the San for security and generosity. In that troublesome time, they were given their name, Ovahimba, which means "the beggars".

1904

German War against the Herero people
After several coastal towns were found by the Dutch Government circa 1793, the German colonisation movement started moving further into Namibia from 1842. During the mid-20th century, the German initiated a war with the Herero people due to contrasting beliefs (Joyce, 2014: online).

1920

Herero Genocide
The German colonialisation thrust resulted in the slaughter of several Herero people who remained in Namibia. The survivors were deprived of their cultural beliefs and forced into a westernised way of living (Exploring Africa, 2021:online). The Herero group that had been forced into Angola retained their traditional ways, while the Herero who stayed in Namibia underwent major transformations. This event led to the formation of two distinct cultures, namely the Himba and the Herero (Joyce, 2014: online).

1920

The return of the Himba people
During the South Africa colonisation in the twenties (1920), the Himba's returned to Namibia, bringing their indiginous lifestyle along. Led by the Herero war leader Vita, they crossed the Kunene River to reclaim their land, therefore situating themselves in the Kunene Region (Kovahimba, n.d.:online).

Fig.51- History Timeline (Author: 2021)

2.2.2 APPEARANCE

The Himba people have an aesthetic appearance, with red skin, unique hairstyles, native jewelry and animal skin clothing. The natural pigment, red ochre, is mixed with "otjize", a paste of butter and fat rubbed on their skin and hair. This ritual provides the Himba with their red glow, which signifies both blood, the spirit of life, and the earth's rich red colour (McGinty, n.d.: online). This mixture protects the skin from the harsh sun and acts as an insect repellent (Hodgskiss, 2015: online).

Hairstyles play an essential role in the Himba culture, as it is "socially symbolic" and indicate status and age. Young girls have two main braids facing forward until they reach adulthood. Their hair is then swept back and covered with the otjize mixture to form the red plaits symbolising fertility. When a Himba woman is married or bears a child, a crown-like piece called erembe, made from goatskin, is placed on the head, together with a cone shell necklace around the neck (McGinty, n.d.:online). The Himba women are also known for their ornamental accessories. These pieces further contribute to expressing the status of a Himba woman in the community, and are mostly made from copper wire, ostrich eggshells, beads, grass, and cloth.

Fig.52- Traditional Himba wear for women (Nelson, n.d.: online)

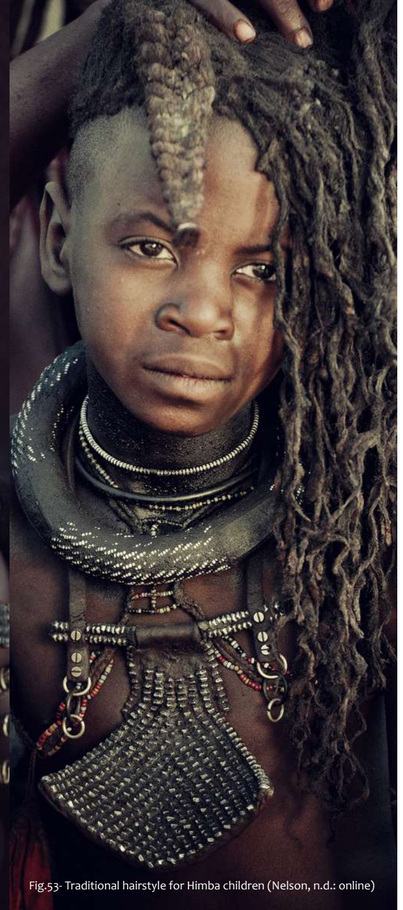


Fig.53- Traditional hairstyle for Himba children (Nelson, n.d.: online)

The movements of Ondjongo: the Ondjongo entails quick circular motions performed by the women. This movement relates to the contextual influence of small activities due to the energy expenditure in the heat, while emphasising them in different ways. In this case, the motion is highlighted by manipulating their flowing cattle skin skirts (britannica, n.d.:online). Women would even flip up their back skirts during marriage ceremonies as a flirtatious gesture during the Ondjongo dance (Fisher, n.d.:online).

Fig.55- Red Ochre (Sikhakhane, 2021:online)

Fig.56- Cattle skin skirts (Nelson, n.d.: online)

Fig.57- Himba accessories (Unknown, n.d.: online)

Fig.58- Erembe head piece (Unkown, n.d.: online)

Fig.59- Men hairstyle (Unkown, n.d.: online)

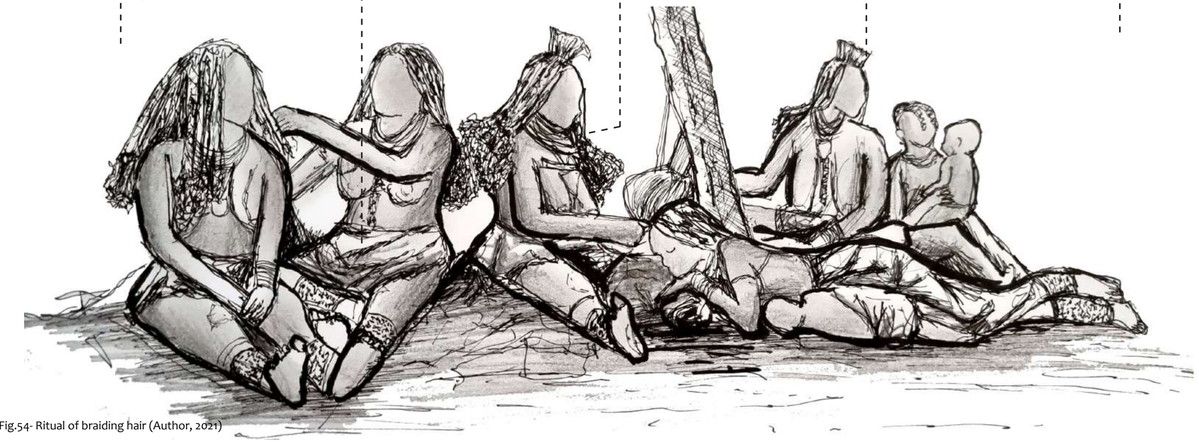


Fig.54- Ritual of braiding hair (Author, 2021)

2.2.3 ECONOMICS AND SOCIAL LIFE

The meaning of Ondjongo: "the hill of Mbombo (a place) makes the cattle fat" (Mans, 1997:275). The Himba people are known as livestock breeders. This text, therefore, refers to the economic and daily life activities of the Himba people.

The Namibian nomads are livestock breeders in what is called a "zero-income culture" (Living Culture Foundation Namibia, 2021: online). Their wealth is based on the number of cattle owned by the family. Additionally, the Himba people also breed goats and sheep, and they grow maize and millet. Several of the Himba men leave the village during the drought season in search of water and grazing grounds. The women stay at the homesteads - building huts, making food and crafts, and raising children.

Smoke bath:
Due to a scarcity of water in the Kunene region, Himba women have a unique way of maintaining their hygiene by scenting themselves with perfumed smoke (refer to fig.60 & 61). Each woman has her own herb mixture, which is placed between smoldering charcoal, creating a scented smoke. They then bend over the smoke until their bodies start perspiring. The same process takes place when they scent their blankets and clothes. They place a thinly woven basket over the smoldering charcoal and drape their 'washing' over the basket to absorb the scent (Vandyke, 2021:online).

Food and water
The most popular and staple traditional food in the Himba culture is maize meal porridge. Slaughtered livestock meat is eaten with porridge only during festivities or major events. A unique delicacy in the culture is mopane worms. They prepare these worms by sun drying or cooking them in warm water and adding salt. The Himba also eat these with the staple porridge to incorporate protein in their meal when meat is not available (YouTube, 2020).
Even though the Himba do not bathe in water, they and their cattle still need drinking water. Water is obtained by hand-digging a three-meter deep well next to a dried-out river bed. Digging these wells can take up to three months, and the location is only determined after several trial wells have been excavated. All family members frequently visit these wells. In most cases, the Himba people have to travel far distances to attain food from grocery stores and water from the wells (Vandyke, 2021:online).

Namibia's harsh climatic conditions in the Kunene region, together with successive droughts, have caused a massive strain on stock breeding (Cameron, 2013:14). Despite this, tourism has remained a constant source of opportunity. This has led the Himba, especially women, to shift towards trading crafts to sustain their livelihoods. These small and informal Himba trading points are situated on the sidewalks in tourist towns or Himba villages. When the women are trading their goods in town, they will sit for hours in the scorching hot sun, on the ground, making and selling crafts to passing tourists.
The strain put on livestock due to the drought has also caused several Himba men to turn towards formal employment as a solution to support their families. This event has a significant strain on the sustainability of the culture, as later explained on page 100.

Fig.60- Smoke herb mixture (Dyke, n.d.: online)

Fig.61- Smoke bath (overstock, n.d.:online)

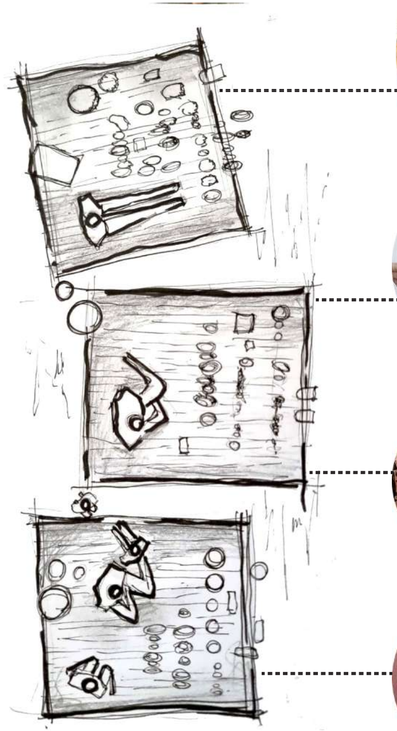


Fig.62- Sitting Formation of Himba women selling crafts

Fig.63- Storage (Pohley, 2013: online)

Fig.64- Basketry (Pintrest, n.d.: online)

Fig.65- Woodcarvings (Westend61, n.d.: online)

Fig.66- Beadwork (Unknown, 2020)

2.2.4 HIMBA CRAFTS

The Himba people have several artisan skills which they utilise to generate an income through tourism (refer to fig.62). These crafts include the following:

Basketry
Baskets are typically woven by the Himba women, and are made from makalani palm leaves (refer to fig.64). This material is woven into a shape determined by its future function, e.g. flat bowl shapes for sorting, big bowl-shaped baskets for transporting objects, and small enclosed baskets in the shape of bottles for stowing fluids. The palm leaf material is also dyed and used to weave symbolic symmetrical patterns into the baskets.

Wood carving
Wooden objects are carved, typically by the men, with adzes, axes and knives. Cutting, chiseling and burning methods are utilised to bring the wood to life. The men produce several types of woodcarving objects such as instruments, toys, animal figures, bows, arrows, bowls, and furniture (refer to fig.65).

Leatherwork
Leatherwork is another popular craft practiced by the Himba. Using vegetable materials, animal fat and red ochre, the Himba colour and tan the hides of cattle, sheep and game. The tanned leather is then used to craft bags, tobacco pockets, karosses (to be utilised as floor coverings or covers), traditional clothing and other contemporary items such as shoes, boots, totes, belts and coats.

Beadwork
Both men and women participate in beadwork (refer to fig.66). The Himba make jewellery from iron beads and shells. The men typically make the beads, while the women weave and string them into necklaces, bracelets, armlets, anklets and headbands (McIntyre, 2004). They often make use of materials obtained in the natural environment for their beadwork.

2.2.5 RELIGION

The Himba are monotheistic, as they worship their ancestral spirits and their god, the Makuru. They believe that these spirits are representatives of the Makuru and are therefore endowed with supernatural qualities that can influence the lives of the living (Living Culture Foundation Namibia, 2021:online). During important events such as births, deaths and traditional dances, they connect to these spirits through the holy/ancestral fire, known as the okuruwo. This fire is always kept alight to sustain their connection to the ancestors (Living Culture Foundation Namibia, 2021:online).

2.2.6 RITUALS OF LIFE AND DEATH

If a woman desires to have a baby, she leaves the village and sits under a tree, alone, until she hears the "birth song" or the "song of a child" (Living Culture Foundation Namibia, 2021:online). After hearing the song, she returns to the village to physically conceive the child. When the woman is ready to give birth, she leaves the village with a group of older women who helps her during the labour process. After the birth, the mother and child are housed in a designated shelter for a week, where their spiritual ancestors protect them. This shelter is located next to the chief's hut, near the holy fire, and is only used for birthing. After a few weeks, the child is introduced to the spirits during a gathering around the holy fire. This ritual is the introduction to the social life of the community (Exploring Africa, 2021:online).

During the death ritual, the deceased is buried in the ground. Instead of a tombstone, the Himba sculpt a structure made from cattle skulls, symbolising the deceased's wealth, gender, and ethicity. This ritual emphasises the importance of livestock breeding in the Himba culture. After the burial ceremony, several heads of cattle are slaughtered, and a cerebration of three days are held to honour the lost community member (refer to fig.67) (Exploring Africa, 2021:online).

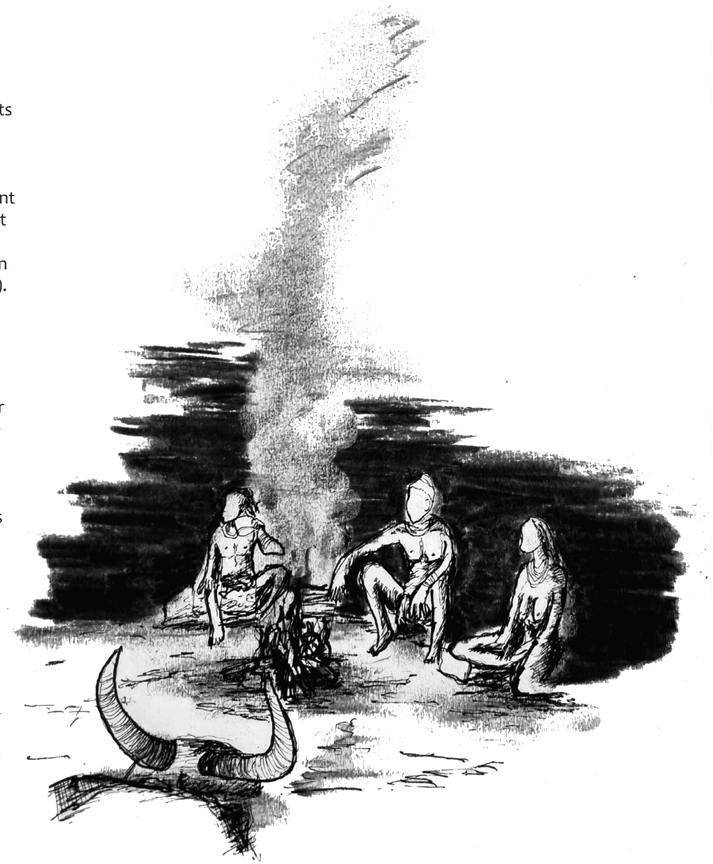


Fig.67- Himba Death Ritual (Author, 2021)

2.3 CHIEF INTERVIEW

The following interview was conducted with Chief Katanga (refer to fig.68) in his village called Okau, through the help of a translator. This village is situated between Opuwo and Oukongo.

1) How do you and your people feel about tourists that invade your villages and privacy?	*1) "It is alright. We do not like that they disturb the village life, but it is one of the only ways for us to make money."*
2) How far and how regularly do your people travel to Opuwo, and for what reasons?	*2) "I only go to Opuwo when a family member or myself is sick and for meetings. But I mostly try to avoid Opuwo. The others go to Opuwo more frequently for work, shopping and the children to school."*
3) Do you and your people feel like you belong in Opuwo?	*3) "Yes, we belong there."*
4) How do you feel about the Himba leaving the village and turning towards modern ways?	*4) "If someone leaves the village, it is fine, but if he comes back to be with his family, he must be like a Himba again."*
5) Does ancestral worship remain part of the lives of those Himba individuals that turn to a modern life?	*5) "Yes, most of them still believe in the Makuru."*
6) Suppose a Himba pavilion (with market spaces and a water point) was established, where Himbas and tourists could interact and gather. Would the Himba use such a structure to improve their economic situation?	*6) "For visits, I will go, but I will not live there. If it is a place where we can go to sell our things, it will be good."*

Fig.68- Chief Katanga (Author, 2021)

2.4 HIMBA CONSTRUCTION

A Himba village has a circular formation, and everything surrounds the central okuruwo (holy fire) (refer to fig.70). An imaginary line runs from the central fire towards the chief's house, with the entrance always orientated east or west. This space between the leader's house and the holy fire is seen as sacred, and this symbolic line may not be crossed without the chief's permission. The chief's hut is also the only structure whose entrance faces the okurowo, while the others are orientated differently. The cattle enclosure, where smaller cattle are kept, is situated in the centre of the village, while the larger livestock is allowed to roam within the periphery (Barnett, 2012:online).

The symbolic line running through the entire village causes two sides, namely maternal (eanda) and the paternal (oruzo) systems. The paternal line of the family is always situated to the right of the chief's hut, while the maternal line is on the left. These systems are based on complex inheritance structures, where the maternal wealth is inherited from the maternal line and the social status from the paternal line (Barnett, 2012:online).

Fig.69- Traditional Himba Dome Hut (YouTube, 2021: video)

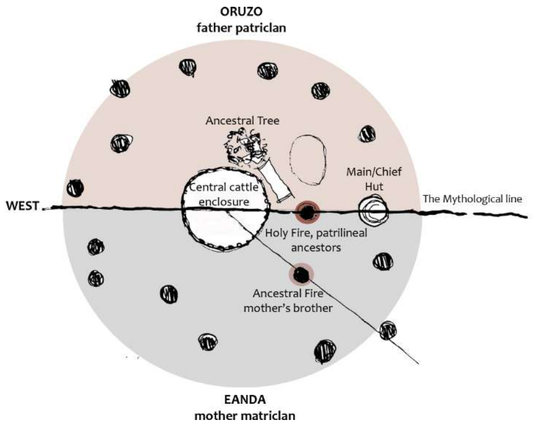


Fig.70- Himba village formation (Author, 2021)

(Author,2021)

Thatch

This material is generally used for the roof covering on a hut and has great thermal properties.
This material is obtained in the natural context as it is local dried grass.

(Alamy Images, 2021: online)

Clay and Dung plaster

It is used to weatherproof the shelter. It also has excellent thermal properties as it keeps the hut cool during the hot days and warm during the cold evenings.
It is usually plastered on the walls as well as on the roof of the dome-shaped huts.

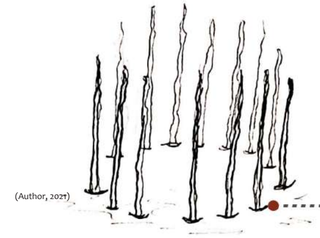
(McMorrow, 2005: online)

Mopane timber

Tree branches are harvested from Mopane trees and used as timber frame structures within the hut construction.
It is also used to build the central cattle enclosure.

Fig.71- Himba hut materials (Author, 2021)

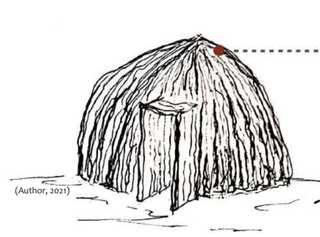
The huts are constructed from branches attained from mopane trees in the surrounding environment (refer to fig.71). The branches are planted in the ground, maintaining a circular layout (refer to fig.72). The planted branches are then bent towards the centre point of the circle, where they overlap at the ends. These are then tied with elastic tree bark in an informal knot to form the domed frame structure of the hut. Openings between the branches are closed by adding additional mopane branches, and tying them to the anchored branches until the entire dome is densely covered by timber. A mixture of clay, dung, and water is plastered onto the densely branched frame structure, to provide the hut with better climatic performance (Nomad Architecture, 2021: online).



(Author, 2021)

Branches from Mopane trees are harvested and planted in holes that are hand-dug in a circular form.

(Nomad Architecture, 2021: online)



(Author, 2021)

(Nomad Architecture, 2021: online)

The top ends of the tree branches are pulled to the centre of the circular form and fixed together with elastic tree bark.

(Author, 2021)

(Nomad Architecture, 2021: online)

A mixture of clay, dung and water are then plastered to the exterior and interior of the timber frame structure.

Fig.72- Himba hut construction Process (Author,2021)

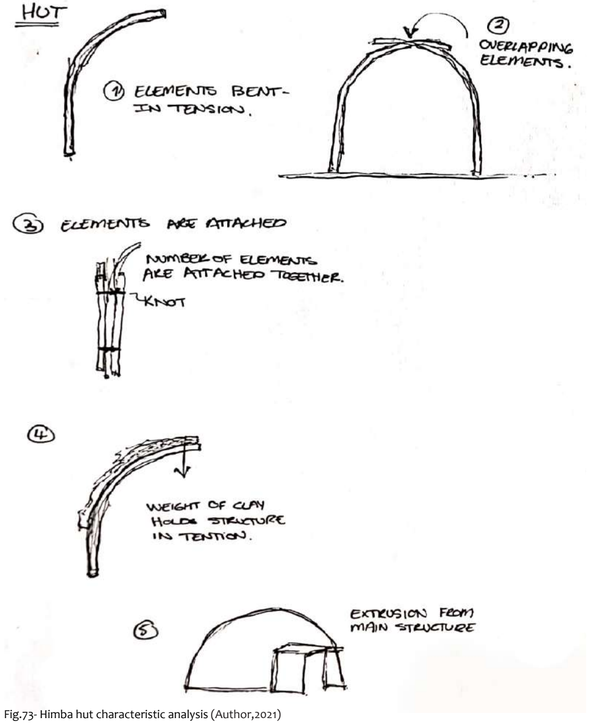


Fig.73- Himba hut characteristic analysis (Author,2021)

The most significant characteristics extracted from the traditional construction of the hut are the heavy clay plaster carried by the frame structure, the structural elements bent in tension and tied, the overlapping of structural branches, and extrusions from the main structure (refer to fig.73). These features will be carried through towards the design process.

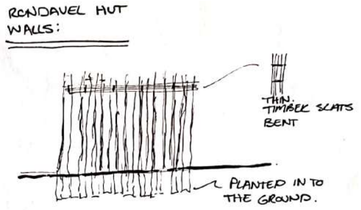


Fig.**- Rondavel hut wall construction (Author,2021)

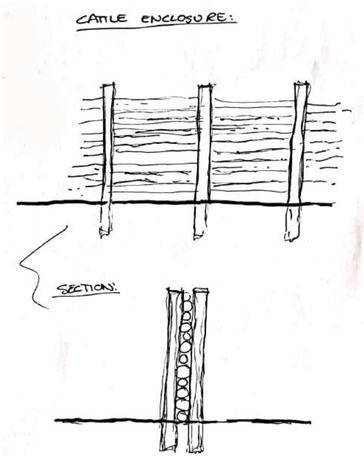


Fig.74- Cattle enclosure construction analysis (Author,2021)

The cattle enclosures entail two large timber posts planted across one another for every +- one and a half meters. Horizontal timber branches are then placed between the two vertical posts to form the cattle enclosure. At each horizontal interval, two vertical post sets are placed to accommodate the overlapping of horizontal posts (refer to fig.74).

Fig.75- Himba rondavel hut (Author,2021)

The rondavel shaped hut (refer to fig.75) is also constructed by anchoring mopane posts in the ground. However, these posts are shorter and thicker than the branches used to create walls in the dome huts. The vertical posts are then fixed together with elastic tree bark and a horizontal branch that runs through the entire circular form of the hut, functioning as a wallplate. The walls are also densely covered with timber branches before the clay mixture is plastered onto the walls. A frame roof structure is then constructed from the walls towards a central vertical post and covered with thatch or clay.

The most notable difference between the rondavel and dome hut is that the walls and roof are separated within the rondavel, while in the dome hut the roof and walls are one entity (refer to fig.76 & 77).

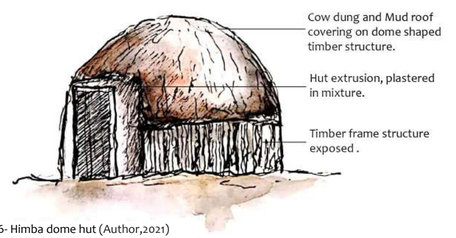


Fig.76- Himba dome hut (Author,2021)

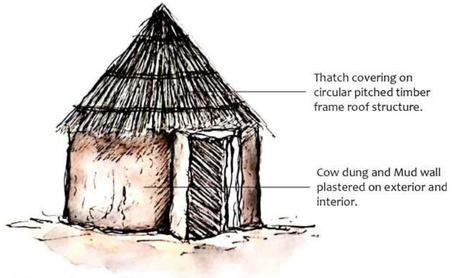


Fig.77- Himba rondavel hut (Author,2021)

The leader's hut has a unique interior roof feature where no clay is added to the top end (refer to fig.78). This feature relates to the ritual activities of the holy fire, when an ember is moved into the chief's house at night. This is done so that the flames can be rekindled in the morning. This hut is also the only structure with a post in the middle to support the roof (Burger, 2021: personal interview).

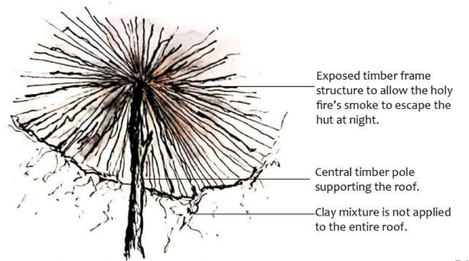


Fig.78- Chief hut roof construction (Author,2021)

Fig.79- Lifted Himba dome hut (Loebermann, n.d.: online)

In some villages, huts are built on stilts or above food storage spaces. This design prevents animals from entering the huts at night or having access to food stores (refer to fig.79 - 81).

Fig.80- Lifted Himba Rondavel hut (Maysmor, 2011: online)

Fig.81- Lifted Himba dome hut (Molcho, n.d.: online)

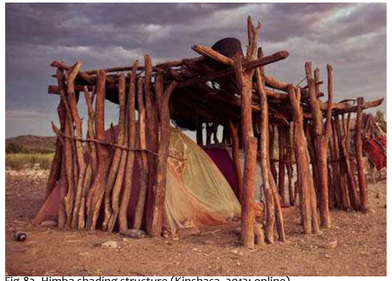


Fig.82- Himba shading structure (Kinshasa, 2012: online)

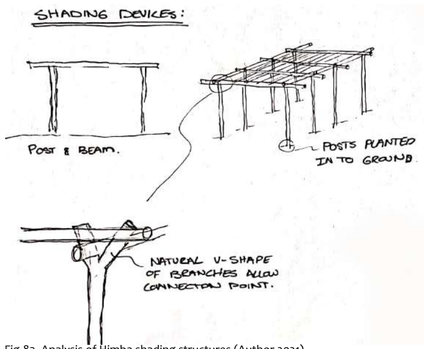


Fig.83- Analysis of Himba shading structures (Author,2021)

Himba shading devices are simple post–and-beam rectangular forms also built from mopane timber (refer to fig.82 & 83). The Himba would typically search for v-shaped branches for the posts, so that the beam can rest easily between the separated branches.

Fig.84- Himba women in hut (Nelson, n.d.: online)

2.5 PRECEDENT STUDY / VILLA EILA BY HEIKKINEN

Fig.85- Villa Eil (chilearq, 1995: online)

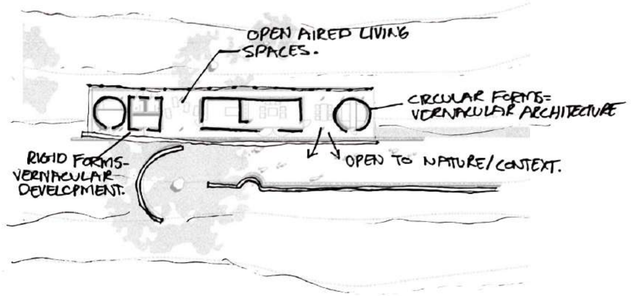


Fig.86- Villa Eila floor plan analysis (Adapted by Author: (chilearq, 1995: online)

Villa Eila is a house situated in the mountains of the Republic of Guinea. The house was built to foster traditional art works and to help with the overall improvement of the day-to-day situation of the community. The house was planned by the Finnish design team Heikkinen-Komonen, who combined the community's native knowledge of wood construction with local materials. This regional way of construction was then further developed by utilising basic technical enhancements.

The project evolved around two primary aspects: the picturesque characteristics of the site and the necessity to apply local materials, improved through simplistic developments.

The building entails an informal spatial program with circular volumes constructed from earth (refer to fig.87). This type of program allows the circulation spaces to be semi-open aired, linking to indigenous formations (refer to fig.86). In contrast with the free/open walls, a rigidly structured roof that appears detached, is applied over the areas with penetrable timber screens on the east facade to filter the morning sun, wind and rain (refer to fig.88).

This precedent is used as inspiration for how indigenous vernacular architecture can be reinterpreted into advanced architecture. Even though it makes use of a more advanced method than the traditional architecture in the region, it still contains a sense of informality that provides the building with tangible and intangible contextual and cultural qualities.

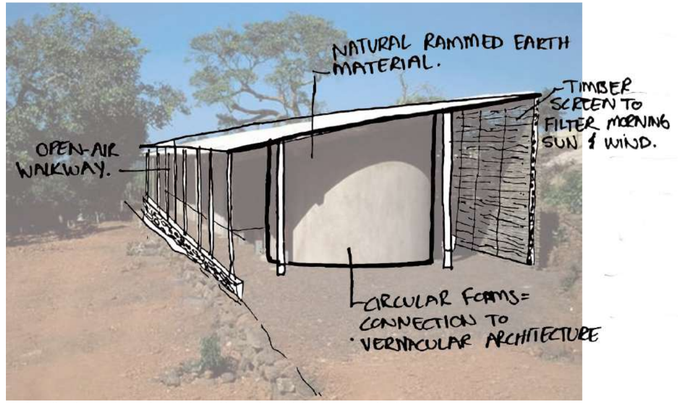


Fig.87- Villa Eila Exterior analysis (Adapted by Author: (chilearq, 1995: online))

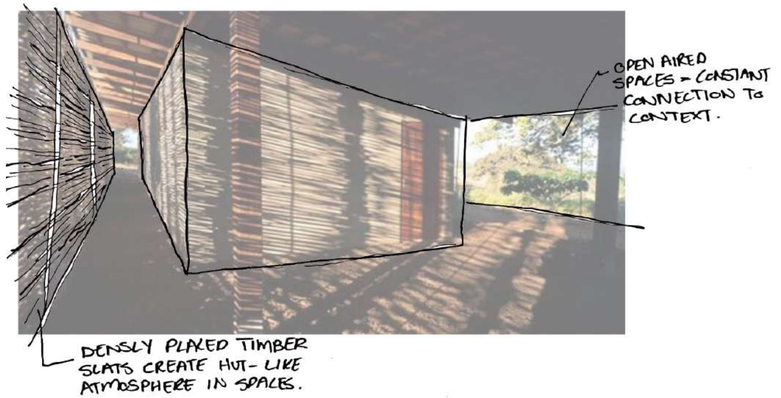


Fig.88- Villa Eila interior analysis (Adapted by Author: (chilearq, 1995: online))

Fig.89- Open-aired walkway (chilearq, 1995: online)

Fig.90- Villa Eila exterior/interior space (chilearq, 1995: online)

Fig.91- Himba boys in cattle enclosure (Nelson, n.d.: online)

2.6 CHAPTER CONCLUSION

Studying the people and their vernacular architecture provided important conceptual aspects that will significantly affect the design process. These critical viewpoints include the spiritual connection between the Himba and their ancestors, and the symbolic line within the vernacular formation. Other studies on the appearance of the Himba, and their crafts, can further inspire detailed design elements, contributing to Cassidy's theoretical strategy of incorporating traditional and landscape practices.

The precedent study identifies how the atmosphere of a hut, and typical African architecture, can be represented. This study will play a major role in the design to accurately draw the contemporary building closer towards the traditional way of life it is meant to celebrate.

03 CHAPTER

STORY OF PLACE
THE MOVEMENTS OF ONDJONGO

"The Land is sacred; it belongs to the countless numbers who are dead, the few who are living and the multitudes of those yet to be born."
(Penan, n.d.:online)

Fig.92- Kunene Region context (Nelson, n.d.: online)

3.1 INTRODUCTION

Movements of Ondjongo:

"Dance is influenced by the natural world. Cultures are formed and informed by the physical environment in which they function. As a physical expression of life, dance is a reflection of the environment" (Mans, 1997: 160).

According to Tierou (in Mans), even basic stances and dancing positions are influenced by elements found in the natural environment, such as mountains, fields, the plains or the coast. In Namibia, the arid environment also influences the Himba dance (Mans, 1997:160).

The Ondjongo dance movements start with a "basic earth" position, which entails bent knees, feet flat on the ground and torso leaned forward (Mans, 1997:278-279). During the dance, the men would often round their backs as they raise one knee. In comparison, the women would mostly have straightened backs while facing the ground or forward. The movements are spirited and powerful, while thumping sounds are made by stamping their feet on the ground. Bodyweight is placed on one foot while the other foot is lifted into the air by bending the knee. This movement is repeated while rotating in the centre of the circle (Mans, 1997:278-279).

The movements of the Ondjongo dance will be used to identify the several regional and site characteristics that influenced the design actions. Therefore, this chapter will contain a macro-, meso-, and micro-level site analysis, including history, vegetation, climatic factors, accessibility, resources, and site characteristics.
The meaning of Ondjongo referred to in the last chapter, will also be mentioned in some cases where contextual facts and features are indicated.

Fig.93- Himba Ondjongo dance (Tarli, n.d.: website)

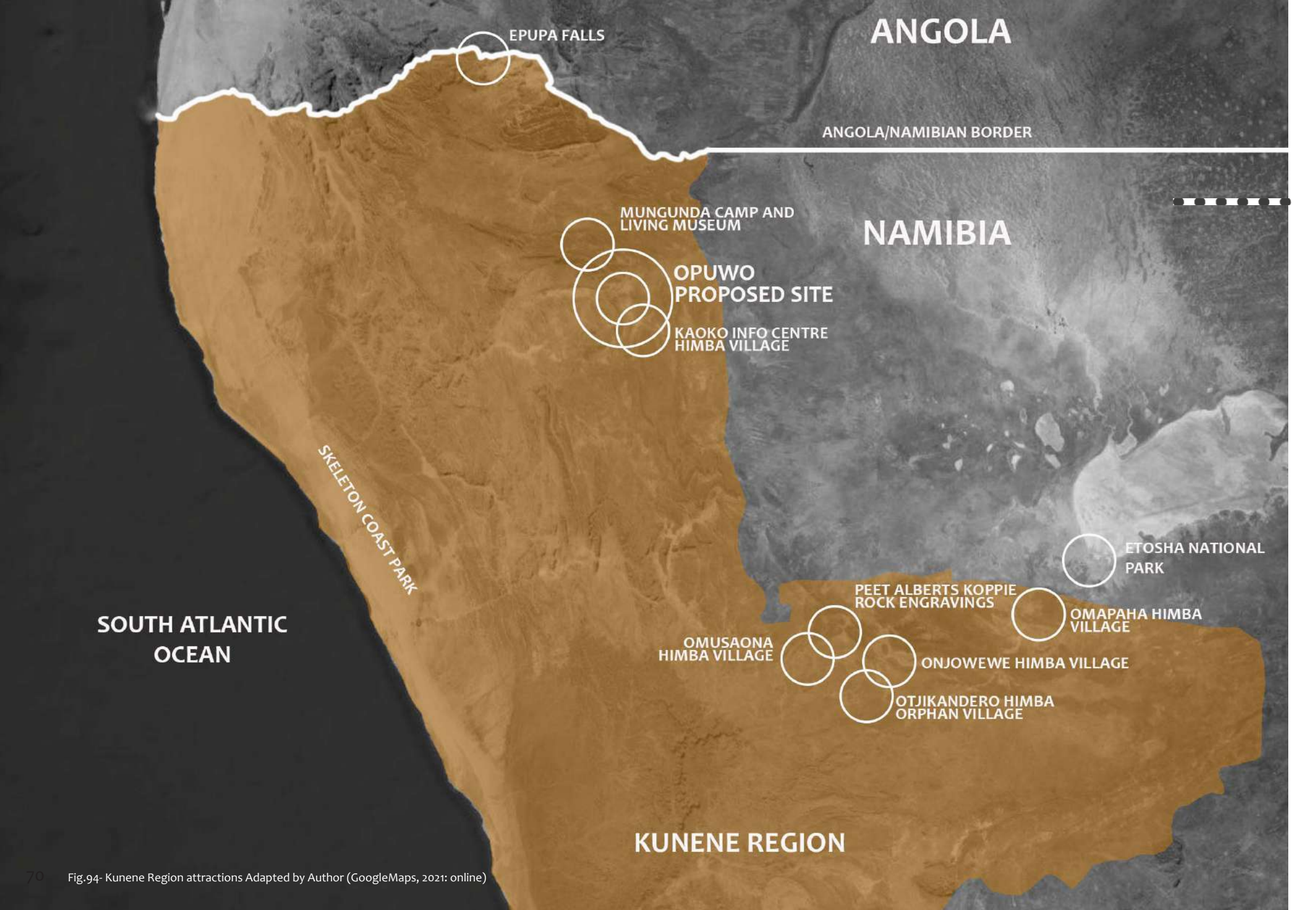


Fig.94- Kunene Region attractions Adapted by Author (GoogleMaps, 2021: online)

3.2 MACRO SITE CONTEXT

OPUWO, KUNENE REGION, NAMIBIA

The site is situated in Opuwo, the rural capital of the Kunene Region. The Kunene Region is located in the northwestern corner of Namibia (refer to fig.95). It is generally considered to be the most beautiful and untainted area of the country with its breathtaking scenes and rich cultural heritage. The region is meagerly populated, peaceful and to a great extent deserted, with dispersed settlements. An assortment of environments can be identified, ranging from desert territories in the west, mopane savannah terrains toward the east, and mountainous areas toward the north border close to the Kunene River, which acts as a natural boundary between the Kunene Region and Angola (Natural World Safaris, 2021:online.). These contrasting environments annually attract a great number of tourists to the Epupa Falls, the Skeleton Coast, and the great escarpment. The Kunene Region acts as a joining element between the bordering regions of Otjozondjupa in the east, Erongo in the south, and Oshikoto, Oshana and Omusati in the north-east (Hailombe, 2011: online).

3.2.1 POPULACE

The region's annual population growth is at 1.9%, compared to the global average annual growth rate of 2.6%. The population density is 0.6 people per square kilometer, compared to Namibia's highest regional density of 18.7 people per square kilometer.
This region is home to several ethnic groups, such as the Ovimbundu, Ganguela, Khumbi, Oshiwambo, Zemba, Khoisan, Europeans and the Ovahimba people. The native and semi-nomadic Himba people, who can date their ancestry back to the 16th century as relatives of the Herero clans, inhabit most of the northern Kaokoland area (Kunene.River Awareness Kit, n.d.:online).

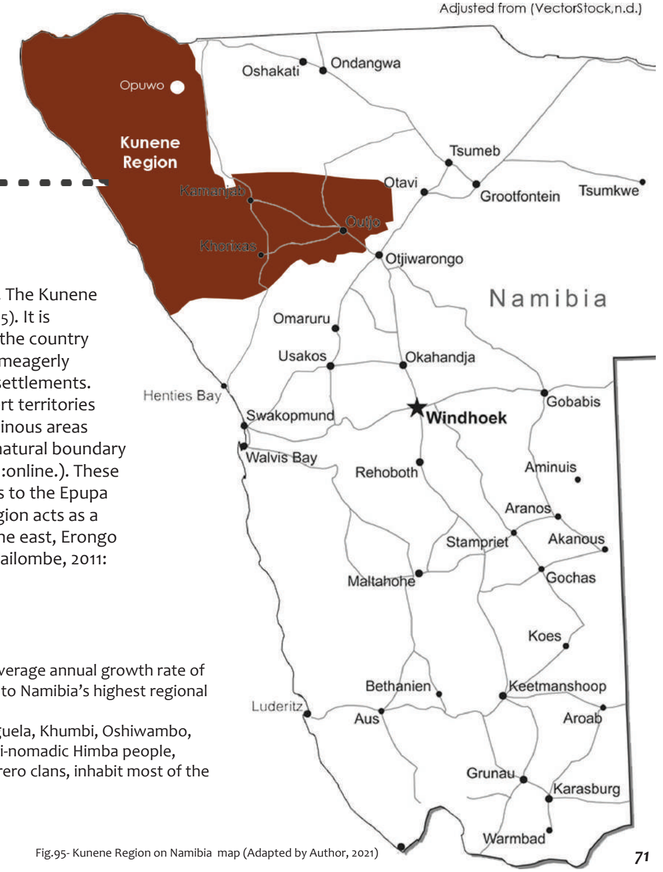


Fig.95- Kunene Region on Namibia map (Adapted by Author, 2021)

3.2.2 KUNENE REGION/ OPUWO HISTORY

The meaning of Ondjongo: "*our country is celebrating Independence*" (Mans, 1997: p.275). This text in the Ondjongo song refers to the long brutal history of the Kunene Region/Namibia towards independence. The narrative is discussed in the following section.


(Reese, 2016: online)


(Fine Art America, 2021: online)


(gettyimages, 2021: online)


(Ebay, 2021: online)

1401-1500

Portuguese presence in Namibia

1701-1799

Herero group settles in Namibia from Angola

1840-1880

Nama people attacks Herero group, causing them to flee back to Angola and settle with the San people.

1904-1914

German War against the Herero people resulting in mass Herero genocide.

1915
South Africa gains power over Namibia

In 1915 Namibia was invaded by the South African forces to overthrow the Germans during the First World War. South Africa gained control over Namibia and compiled the Blue Book report, in which they accused the Germans of annulling the rights and privileges of native Namibians. The report presented South Africans as focused on everyday freedom.

In 1919 an agreement was reached, which gave South Africa mandatory power over Namibia and specified how the country should be administered. This agreement stated that the "material and moral well-being, and the social progress of the inhabitants of the Territory" must be encouraged. Additionally, it also prohibited slave trading and prohibited forced labour, except for fundamental public works. Despite all of these optimistic assumptions, the Commission set up racial isolation and "attempted to destabilise traditional leadership" (South African History Online, 2019:online).

Fig.96- Drawing of Building in Opuwo (McCallum, 2013: online)

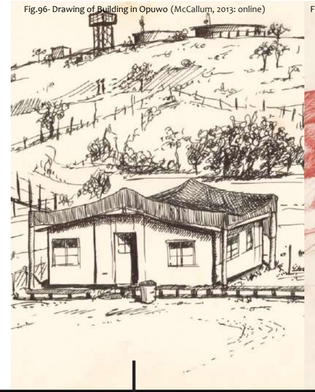


Fig.97- Drawing of Opuwo (McCallum, 2013: online)

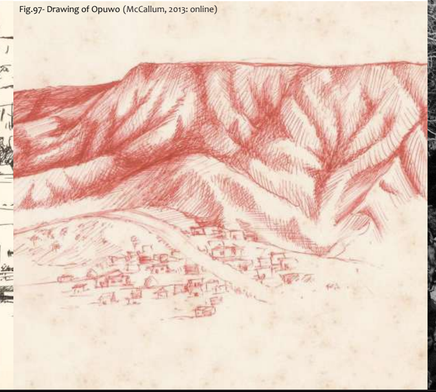


Fig.98- Anti-Apartheid protests (Seidel, 2021: online)

1925 - 1939
Opuwo was established

From 1925 to 1939, the first colonial administration office was established by Sergeant Herbert in Swartbooisdrift on the banks of the Kunene River. Later the administrative control shifted to central Kunene, where Hugo Hahn, the commissioner of Ondangwa, had to search for an appropriate location for the new office. When he arrived, he asked a Himba headsman for a piece of land and received a small plot to build the headquarters, which he named Opuwo, meaning "it is enough for me" (Hihanguapo, 2000:online).
This office functioned as a police station to monitor the movement of the Dorsland Trekkers, who had moved from Angola into Namibia in 1928 (Crandall, 2000:15). These offices were mainly to control the spread of the Rinderpest among the livestock. Due to this occupation, the first-ever borehole was excavated in Opuwo.

1948-1960
The implementation of Apartheid

In 1948 The National Party gained control in South Africa, which led to politically sanctioned racial segregation. This spilled over to Namibia. Consequently, the new law constrained black Namibians from political rights, and limited their social and financial opportunities. The South African Defense Force (SADF) was established in 1957 to counter any rebellious actions against the law.

During the 1960's most African nations had acquired autonomy, except Namibia. Due to Namibia's mineral wealth, South Africa held on to Namibia. They also used Namibia as a buffer space to keep the Angola guerrilla war away from South African soil (South African History Online, 2019:online).

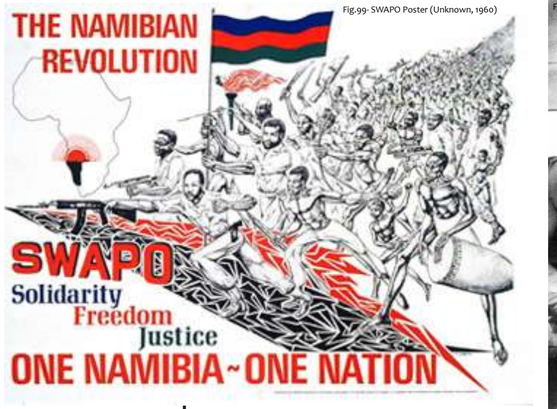


Fig.99- SWAPO Poster (Unknown, 1960)

Fig.100- SADF troops in Opuwo(McCallum, 2013: online)

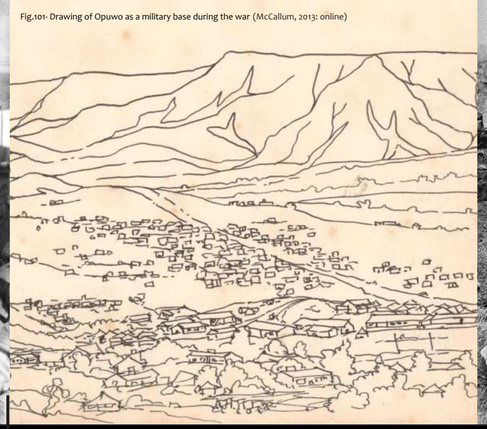


Fig.101- Drawing of Opuwo as a military base during the war (McCallum, 2013: online)

Fig.102- War between SADF & SWAPO (Belli, 2020: online)

Fig. 103- Namibia Independance (Mupetami, 2014:online)

Fig. 104- Namibia Independance (Mupetami, 2014:online)

1964-1978
SWAPO Guerrilla rivalry

In 1964, a group called SWAPO (South West Africa People's Organisation) formed in the south of Angola. SWAPO supported Black African Nationalism and encouraged the idea of independence and political and social freedom to make a verifiable change in Namibia (South African History Online, 2019:online). During the 1970's Angola became independent, which led to better inventory lines, and allowed the SWAPO group to promote a severe guerrilla rivalry crusade. SWAPO dispatched several attacks into Namibia in 1978 (South African History Online, 2019:online).

1975 -1989
SADF responding to guerrilla incursions

Due to the uprising, the SADF dispatched 30 000 South African military staff to the border of Namibia in 1985 to enter into Angola in order to battle the SWAPO groups (South African History Online, 2019:online). Military bases were established in Opuwo and Okongwati (McCallum, 2013:online). The South Africans reacted by striking enemy bases across the border, which drove the rebels deeper into Angola and caused significant damages.

1981-1988
War between SADF & SWAPO

In 1981 the conflict between the two groups increased, and they fought their first battle. Two Angolan units, including their Russian guides, were eliminated. Roughly 10 000 guerrilla fighters were killed, while around 800 South Africans died (South African History Online, 2019:online).

By 1988, the number of SWAPO soldiers had rapidly diminished and SADF's prosperity in the long run forced SWAPO to withdraw (South African History Online, 2019:online). When South Africa supported the National Union for the Total Independence of Angola (UNITA) in 1987, it resulted in the Battle of Cuito Cuanavale in Angola (South African History Online, 2019:online). This battle was mainly fought between SWAPO and UNITA, and South Africa sent troops to help UNITA in the siege against SWAPO. This siege was abandoned in 1988, after which Cuba sent 10 000 troops to the border to support the communist government in Angola. This provided SWAPO with a safe haven near the border from which they launched their further guerrilla warfare operations (South African History Online, 2019:online).

1989-1990
Namibia gained independence from South Africa

In the 1980's, South Africa became increasingly isolated internationally due to Apartheid. This caused military costs to escalate. South Africa realised that if they released Namibia, they could set certain terms for Namibia's independence to ensure South African business interests. After elections in 1989, SWAPO won, and Namibia became independent (South African History Online, 2019:online).

1992
Opuwo declared a town

After the regional elections of 1992, Opuwo was formally declared a town and appointed with authority under a town council. After that, the settlement developed into the capital town of the Kunene Region, now known as "the land of the Himba people" (TravelNewsNamibia, n.d.: online).

3.2.3 KUNENE REGION TOURIST ACTIVITY

+- 2.5% increase in Namibian tourism every year.

30.0% Northern Border Posts Tourism Entry

46.7% tourist occupancy rate in Kunene Region (the highest percentage of all Regions)

61.6% of the total tourist arrivals from Zambia.

8.2% tourist arrivals from Germany

2.2 and 2.1 percent from the UK and France

Seasonality:

24.0% Comes between Jan-April

25.1% Comes between May-Sept

23.8% Comes between Oct-Dec

Fig. 105- Tourist Activity in the Kunene Region Adapted by Author (Shifeta, 2019: online)

PURROS CONSERVATION AND ECO-TOURISM PROJECT

This joint project between the local community and the Integrated Rural Development and Nature Conservation (IRDNC) is based in Swakopmund. The main goal of this project is to preserve the environment and wildlife, while also promoting sustainable tourism in the area, which will benefit both the local community and the tourists. The project guides visit to local Himba villages. During these tours, the fact that the tourist is a guest who is spending some time with the local people is emphasised. This is done to create a respectful gathering environment rather than treating the Himba people as attractions in a zoo (Ballard, 1997:181).

Fig. 106 Adapted by author from (Khoo, 2016: online)

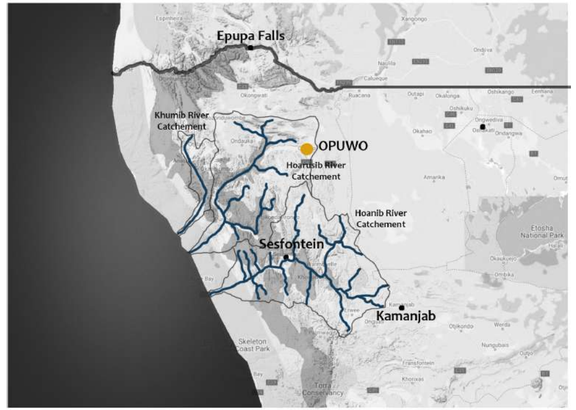


Fig.107-Kunene Region seasonal rivers (Adapted by Author, 2021)

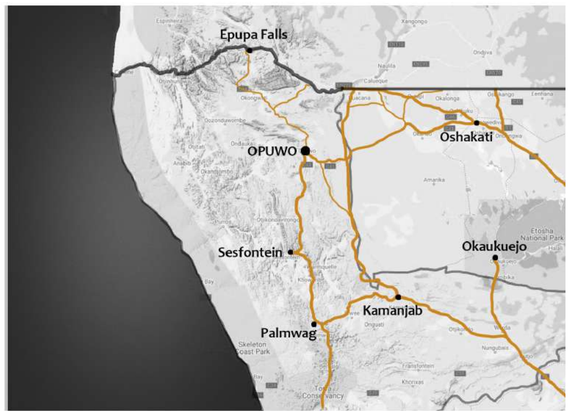


Fig.108-Kunene Region circulation (Adapted by Author, 2021)

Fig.109 Kunene Region mountains & parks(Adapted by Author, 2021)

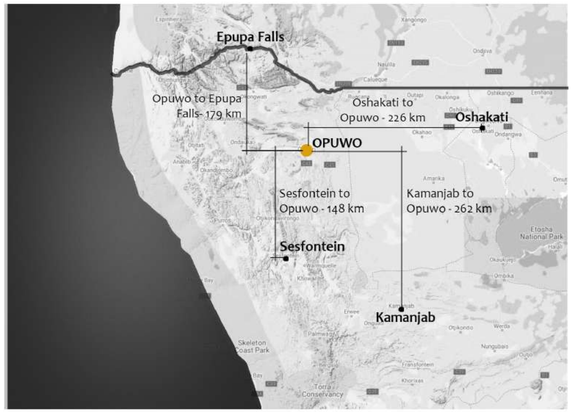


Fig.110-Distances (Adapted by Author, 2021)

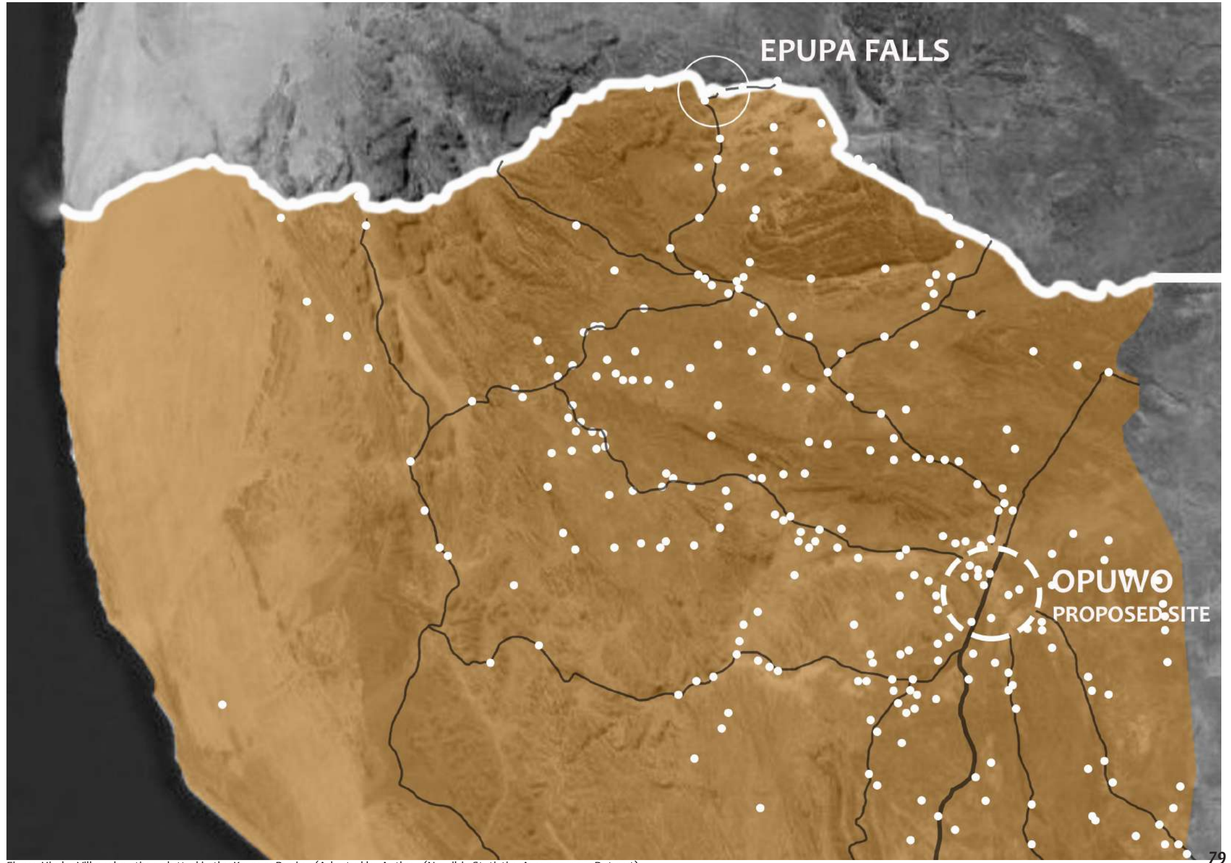


Fig.111-Himba Village locations dotted in the Kunene Region (Adapted by Author: (Namibia Statistics Agency, 2015: Dataset)

3.2.4 CLIMATE & RAINFALL

Even though the Kaokoland technically falls within the tropics, this context contains a desert environment. The climate in Kaokoland (Kunene Region) has an extreme contrasting temperature, ranging from 38 degree C day temperatures to freezing night temperatures (Ham, n.d.: online).

The rainfall in this region can be classified into the dry season and the wet season. The dry season stretches from May to October (winter), which is the coldest time of the year. The climate in this season later increases in temperature, which generally leads to drought. During the wet season of November to April (summer), the temperature is high with light rainfall and casual thunderstorms. Even though light rain occurs during this time, the sun shines typically throughout the day.

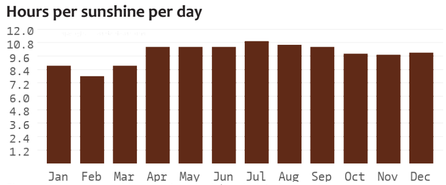


Fig.112- Hours per sunshine per day graph(worlddata.info, n.d.: online)

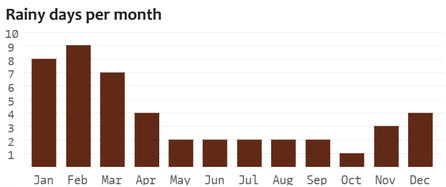


Fig.113- Rainy days per month graph (worlddata.info, n.d.: online)

The Movements of Ondjongo: the water scarcity in Namibia influences the Ondjongo dance, as it limits energy expenditure. This contributes to the modest range of movement and the use of dust in the dance (Mans, 1997:160).

Fig114-View from the site during Summer (Author,2021: online)

Fig115-View from the site during Winter (Author,2021: online)

3.2.5 AQUIFERS

The name of the region was inspired by the Kunene River, which forms the border with Angola. The inside “plateau” is drained by various occasional streams, either running north into the Kunene or toward the Atlantic Ocean. Kunene’s interior rivers only flow after heavy rainfall but still maintains an underground water flow where water can be obtained by delving in the sandy riverbeds. Additionally, various springs occur in the region, yet constant water is infrequent (refer to fig.116).

3.2.6 SOIL & VEGETATION

Due to the harsh weather, the regional vegetation is determined by water accessibility, and also the geography and geology. Several different mopane vegetation and grass species can be found in the Kunene Region, which has clay-rich soil (Teshirogi, 2017:online).
Kaokoland has a variety of stone granite, of which the most important for the Himba is the ochre stone, with which they make a mixture to cover themselves (Ally, 2014: online). Opuwo is also rich in dolomite and limestone in the earth.

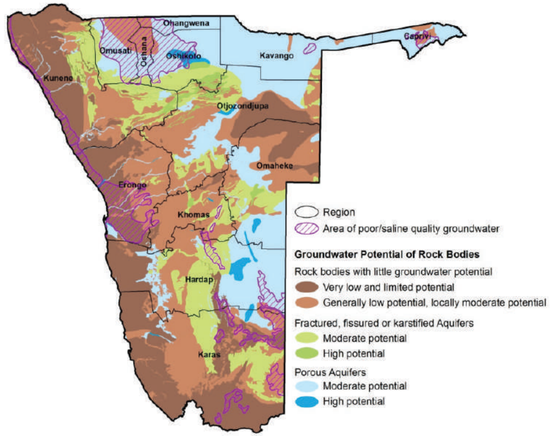


Fig.116- Namibia Groundwater map (Dall, 2009: online)

Fig.115- Kaokoland (Dall, 2009: online)

3.2.7 KUNENE REGION WILDLIFE

Fig.117- Gemsbok (Shutterstock, n.d.:online)
Fig. 118- Desert Elephant (Heeb, 2020: online)
Fig. 119- Hartmann's mountain zebra (Delaney, n.d.:online)
Fig.120- Giraffe (NamibiaTours&Safaris, n.d.: online)
Fig.121- Springbuck (stanley-safaris, n.d.: online)
Fig.122- Spotted Hyena (wildkratts.fandom, n.d: online)

GEMSBUCK

The gemsbuck is an antelope with a white and black face. These are large creatures, with striking black and white colouring on their bodies, and long straight horns that sweep back behind their ears. These animals are usually found in herds in western Damaraland and the Skeleton Coast National Park (Ballard, 1997:27).

DESERT ELEPHANT

The desert elephant is found in the Kunene Region. They are specifically adapted to the dry Kaokoland and the desert dunes on the skeleton coast. These animals walk up to 70km daily searching for food and water, and can survive without water for up to five days (Ballard, 1997:174).

HARTMANN'S MOUNTAIN ZEBRA

This animal can be found in the mountainous area of the Namibian desert. The zebra can be observed in Kaokoland and along the escarpment in the Kunene Region. These animals are good climbers and can withstand arid conditions. During scorching days, they seek shade and stand still for hours to retain their energy, making them hard to detect (Ballard, 1997:25).

GIRAFFE

Seeing a small herd of majestic giraffes walking across the plains is witnessing Africa at its finest. It immediately gives one a sense of calmness. These animals have excellent sight and hearing while also living off a variety of tall trees. Their only natural threat are lions attacking their young (Ballard, 1997:25).

SPRINGBUCK

The springbuck is one of the best-known antelope species in Namibia. They are recognised for their fawn and white colour, which is distinguished by a dark brown stripe on the flank. These animals typically appear in large herds. The males display a distinctive 'pronking' movement when they are startled, or to attract a mate or ward off a predator (Ballard, 1997:29).

SPOTTED HYENA

The hyena is a relatively large animal with a light brown colour and dark spots. Hyenas typically appear in small packs and are known for their scavenging habits. These creatures are generally sighted on the Skeleton Coast (Ballard, 1997:30).

3.2.8 KUNENE REGION TOPOGRAPHY

The geography of the Kunene Region can be separated into the western Namibian fields and the "interior highlands" isolated by a rough and profoundly scored slope (refer to fig.123). The Kunene Region is the most underdeveloped region of Namibia due to its exceptional and delicate topography, mountainous and isolated setting, and the desert-like environment that impedes "agricultural development or any form of commercial farming and industrial development" (Hailombe, 2011: online).

Topographically, the terrain comprises mountain ranges to the inside, which fall steeply to the lower lying fields of the Namib Desert. It has an assortment of natural life, which incorporates elephants, lions, cheetahs, impalas, zebras and giraffes. It is generally regarded as the last remaining truly wild regions of Southern Africa. Due to its numerous wildlife reserves, Kunene Region has become a significant vacation destination, leading to a flourishing travel industry in certain areas (Hailombe, 2011: online).

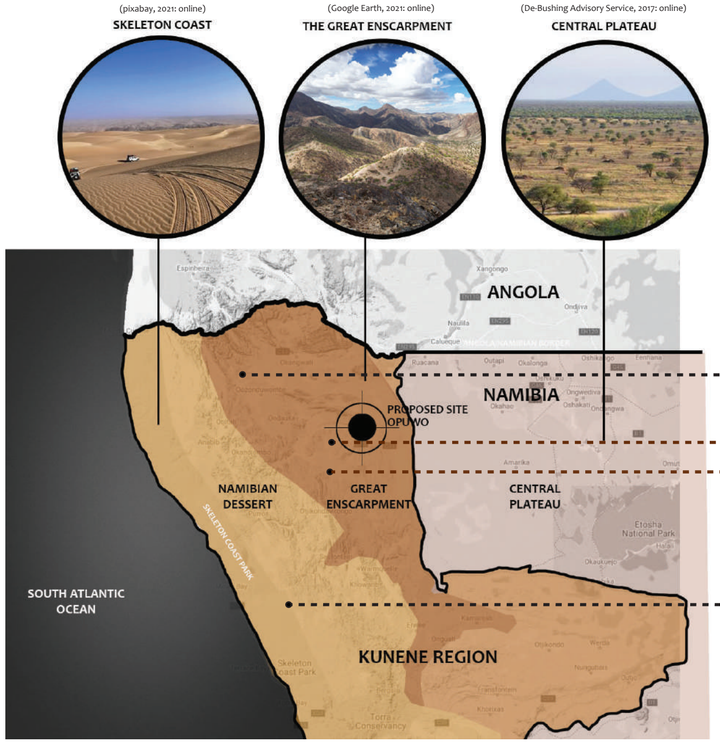


Fig.123- Kunene Region Topography (Adapted by author, 2021: online)

3.2.9 VEGETATION

Fig.124- Stipagrotis grass (wikipedia, n.d.: online)

GRASSLANDS

In the north towards the Marienfluss and Hartmann's Valleys, there are very little trees and shrubs. This area is mainly covered with grasslands, of which the dominant grass is Stipagrotis (Ballard, 1997:39).

Fig.125- Welwitschia Mirabilis (Jürgens, n.d.: online)

WELWITSCHIA MIRABILIS

One of the most unique and widespread plants in the Namibian desert is the Welwitschia Mirabilis. The plants are usually found on west-facing slopes near the coast, as they draw fog from the sea. If there is no fog, the plants have no source of water (Ballard, 1997:39).

Fig.126- Quiver tree (wikimedia, n.d.:online)

QUIVER TREE

The quiver tree is a succulent plant located along the mountainous escarpment. This tree is known for its tall, spiky and cactus-like appearance (Ballard, 1997:39).

Fig.127- Paper bark tree (Pintrest, n.d.: online)

PAPER BARK TREE

The paper bark tree has a characteristic appearance of peeling bark, exposing the underlying green layer. These trees are found from Sesfontein to Opuwo in Kaokoland (Ballard, 1997:39).

Fig.128- Mopane tree (wikimedia, n.d.:online)

Fig.129- Purple-pod-terminalia (Waterberg, n.d.)

MOPANE & PURPLE-POD-TERMINALIA

Further to the south, closer to Opuwo, mopane and purple-pod terminalia vegetation are found (Ballard, 1997:39).

3.3 MESO ANALYSIS / Opuwo Town

The proposed site is in the rural town of Opuwo in Namibia, surrounded by low-lying hills. The town grew into a permanent settlement and administrative point for the region during the war before Namibia's independence. The South African Defense Force established the settlement during the war, where it functioned as a base from which expeditions were launched (Ballard, 1997:178-179).

Today the town is known for the many Ovahimba people who occupy the land, and the several traditional Himba villages around this settlement. Due to the many tourists travelling through Opuwo, and also because of its modern conveniences, it has become a point where "ancient traditions and modern times meet, as Opuwo is the centre of the Himba culture" (Info Namibia, 2021:online). Many tourists visit the surrounding villages annually to experience the Himba people's aesthetic culture and rituals.

3.3.1) ACCESSIBILITY

Opuwo is seen as the gateway to other Kunene Region attractions such as the Epupa Falls and the Marienfluss & Hartmann's Valleys. The town is situated at the intersection of the C41 and C43 roads (refer to fig.130). Only one of these roads is tarred – the one entering the town from the east. The road from the south is a gravel road. The main circulation route through the settlement is the only tarred road in town. Two gravel roads exiting the town provide circulation towards the northern settlements of the region. Opuwo is an essential node and the heart of the district.

Fig.130- Opuwo Circulation (Adapted by author, 2021: online)

The meaning of Ondjongo: "the pan at Hopoho (Opuwo) is holy, people may not be shot there" (Mans, 1997:275). This text relates to the war history of Opuwo, but these days the town is known as the Himba capital.

Fig.131- Entrance to Opuwo (Author, 2021)

Fig.132- Opuwo main road (infonamibia, n.d.: online)

3.3.2 OPUWO TOWN FABRIC

Opuwo consist of the main street that runs through the entire town, giving access to a petrol garage, shops, bars and residential areas (refer to fig.138). There are also few streets of bungalows, which were built during the Bush War for army and government personnel. These bungalows now house government officials and a few business people in the area (Ballard, 1997:178-179). The town remains relatively underdeveloped and still exudes a colonial urban fabric (refer to fig.136 & 137). Despite the unique context and the culture of the inhabitants, no architectural structures suggest Himba identity or contextual significance. This provides an architectural opportunity and need to establish a sense of place, as a resistance against the standardised colonial designs.

Fig.133- Opuwobuilt forms (Adapted by author, 2021: online)

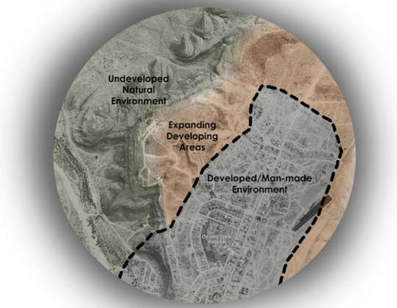


Fig.134- Opuwo Development zones (Adapted by author, 2021: online)

Fig.135- Opuwo Occupation (Adapted by author, 2021: online)

The development of Opuwo mainly expanded from the main road outwards. Figure 133 shows that the most extensive built forms can be located nearest to the main road, after which it reduces in size further away from the centre. This structure is primarily due to the expanding developing area in figure 134 containing widely spread informal settlements. This zone borders on the beautiful Kaokoland natural landscape, stretching as far as the eye can see.

After Opuwo was declared a town, several developments took place to turn the war base settlement into a fully functional town (Ballard, 1997:178-179). This resulted in the establishment of a church, hospital, police station, schools, and municipal buildings. The town accommodates a variety of occupations, specifically commercial, municipal, recreational and residential (refer to fig.135).

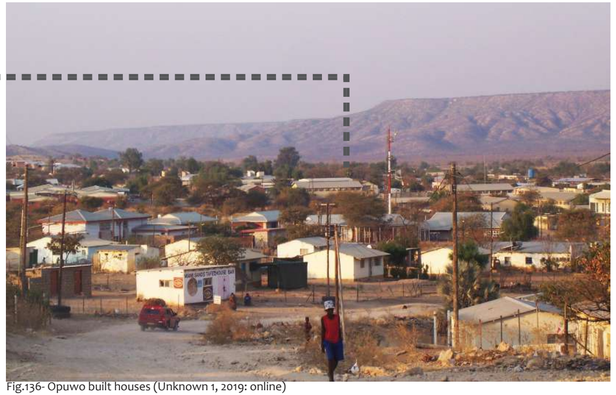


Fig.136- Opuwo built houses (Unknown 1, 2019: online)

Fig.137- Opuwo built houses (Unknown 2, 2017:online)

Fig.138- Opuwo main street (infonamibia, n.d.: online)

3.3.3 OPUWO NATURAL RESOURCES

As previously mentioned, the Kunene Region is rich in aquifers and seasonal rivers (refer to fig.139). The Cuvelai-Etosha groundwater basin is a transboundary wetland that crosses the border into Angola. In the rainy season, oshanas flow in the Namibian part of the basin, while perennial tributaries only occur in Angola. In Namibia, oshanas are "interconnected flood channels and pans through which surface water flows slowly or may form pools depending on the intensity of the floods". The Cuvelai basin provides divided surface water from Otavi to Outjo, Kamanjab, Otjovasandu, Otjondeka, Opuwo and Ruacana (Christelis & Struckmeier, 2011:online).
A seasonal river called the Hoarusib can also be identified in the Opuwo area (refer to fig.140). This river flows through the Tonnesen and Giraffe Mountains into the Atlantic Ocean, and irregularly carries water during the rainy seasons of November and February/March (Christelis & Struckmeier, 2011:online).

Even though there are several opportunities regarding water resources, the Kunene Region remains a harsh and dry environment (refer to fig.141). Surface water is scarce, and where there is surface water, it only remains for a short period (Christelis & Struckmeier, 2011:online).

Fig.141- Hoarusib River during drought-most of the year (Wilkinsons, n.d.: online)

Fig.140- Hoarusib River during rain season (Wilkinsons, n.d.: online)

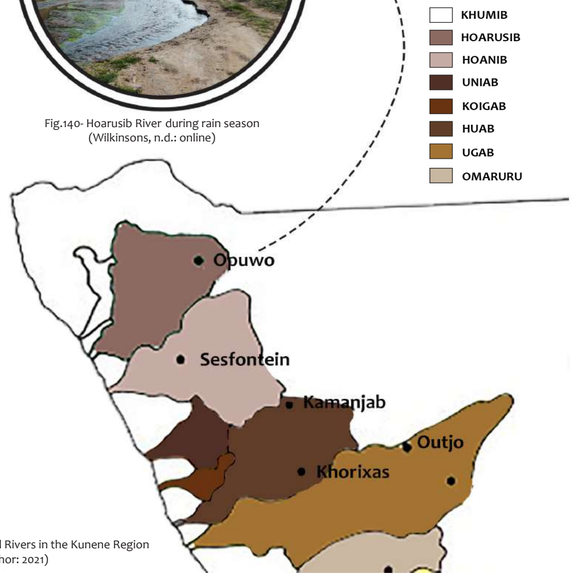


Fig.139- Seasonal Rivers in the Kunene Region (Adapted by author: 2021)

3.3.4 SUROUNDING HIMBA VILLAGES

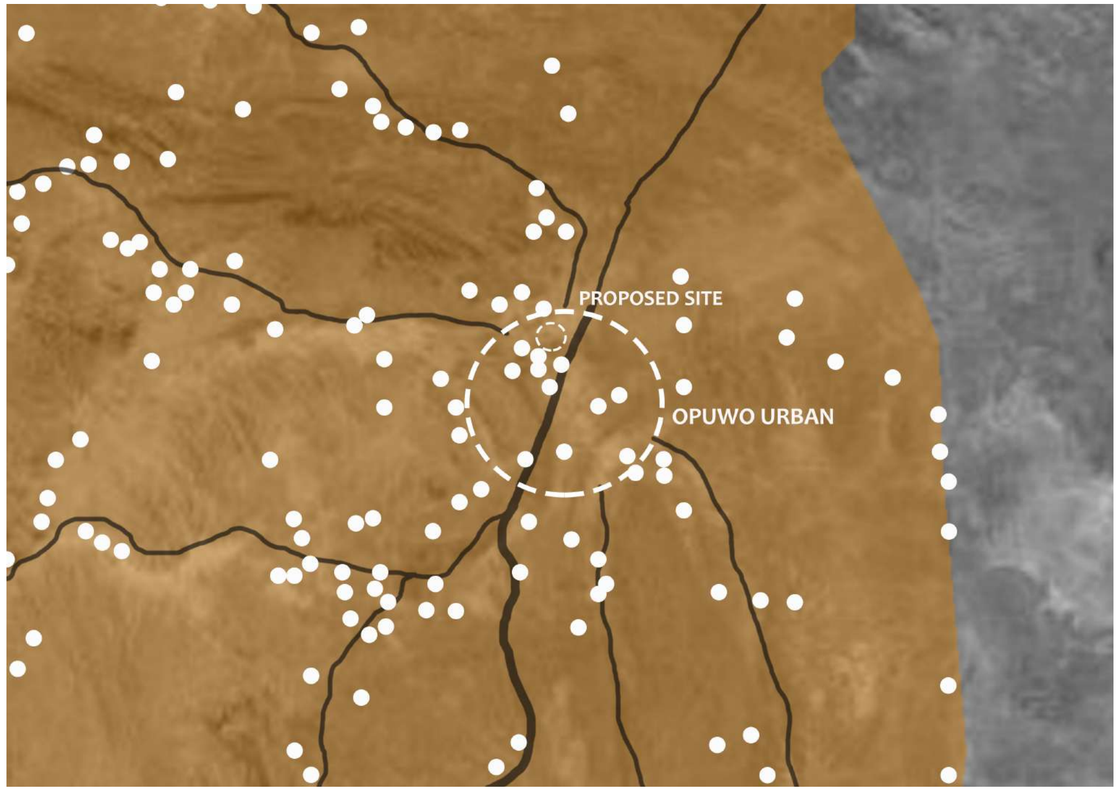


Fig.142-Himba Village locations dotted in and near Opuwo (Adapted by Author: (Namibia Statistics Agency, 2015: Dataset)

3.4 MICRO ANALYSIS

3.4.1 ACCESS TOWARDS SITE

The site is located on the ridge of a hill, situated next to the town of Opuwo (refer to fig.143 & 144). The most transferable access towards the site includes a dirt road moving up the hill in-between the informal settlements. This access route allows one to experience the true rural nature of the town. Moving up the slope, one can also notice views of the town (refer to fig.146) and the gorgeous wild landscape surrounding it (refer to fig.145). As one moves up the hill, the town's view slowly disappears, and then the mountainous landscape in the north emerges.

This road allows a south-east entrance towards the site. The Opuwo Country Lodge is situated 560 meters away from the proposed site, where tourists can find accommodation during their visit to the proposed Ritual Himba Portal.

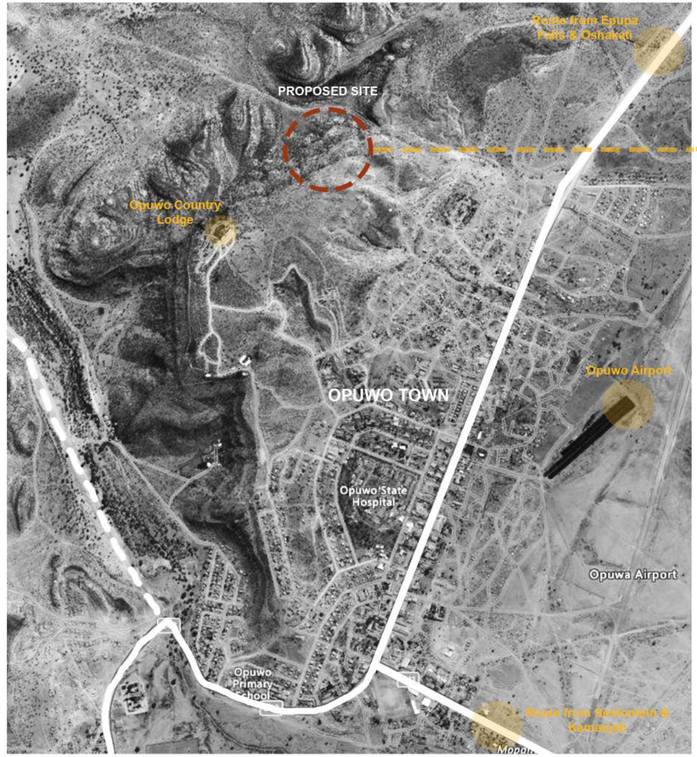


Fig.143- Site Location in Opuwo (Adapted by author: 2021)

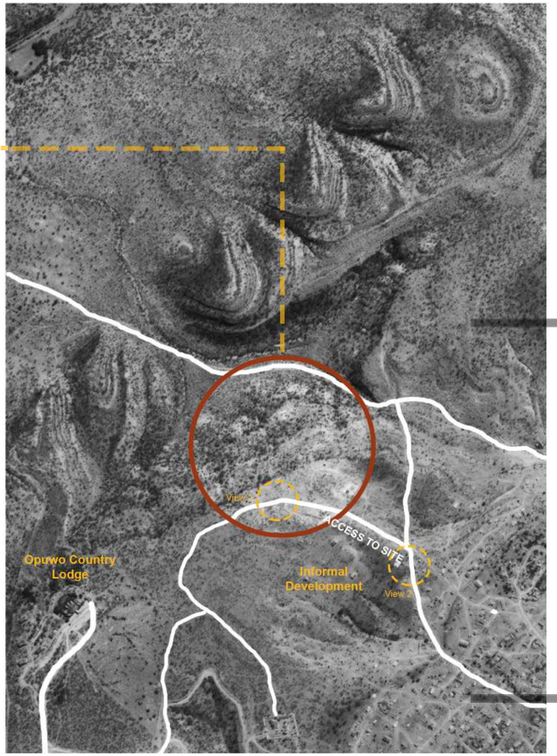


Fig.144- Proposed Site (Adapted by author: 2021)

Fig.145- View 1 towards the landscape (Author: 2021)

Fig.146- View 2 towards the town (Author: 2021)

3.4.2 SITE CHARACTERISTICS

The location is relatively distant from the town, but close enough for tourist activities. The site has a 180-degree view of the nearby mountain ranges (refer to fig.147). It involves a sloping topography on a hill with some informal structures to the Southeast. Climatically the site will receive northern sunlight throughout the day, with a cool breeze from the east and northeast.

Fig.147- South west view from site (Author: 2021)

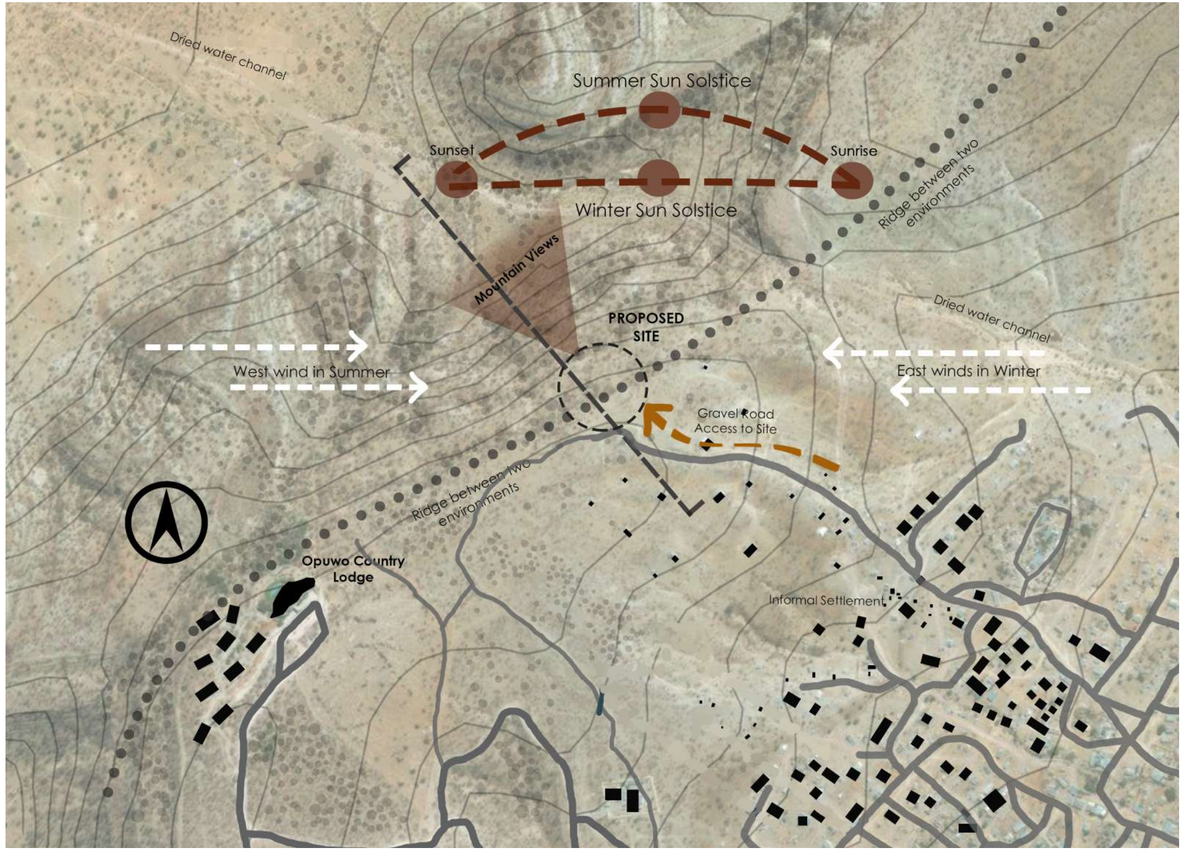
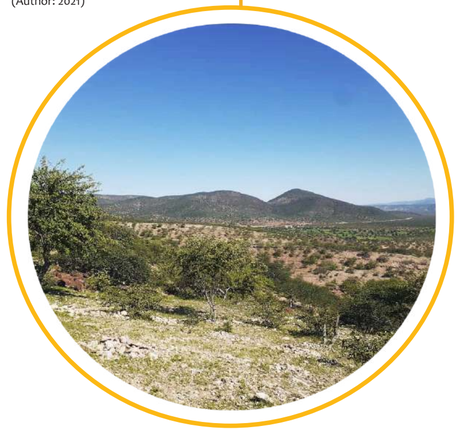


Fig.148- Site Analysis (Author: 2021)

3.4.3 SITE ENVIRONMENTS

Fig.149- Site's sloping topography
(Author: 2021)



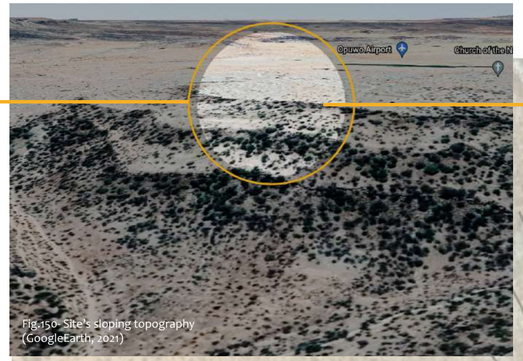


Fig.150- Site's sloping topography
(GoogleEarth, 2021)

The site is located on the border between two environments, namely man-made and natural. In this way, the site acts as a portal between the modern town and the tradition of the Himba people rooted in the natural landscape (refer to fig.152).

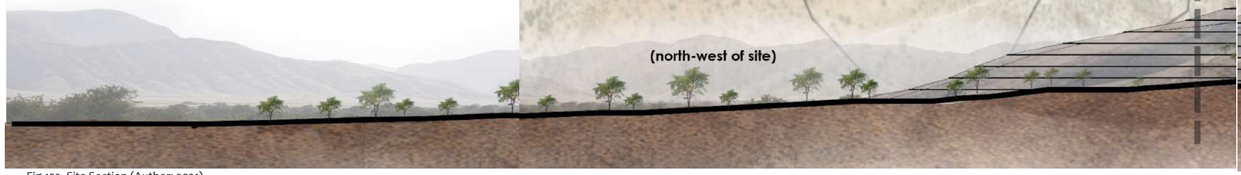
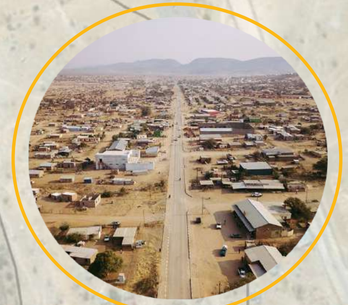


Fig.152- Site Section (Author: 2021)

Fig.151- Opuwo (infonamibia, n.d.: online)



3.4.4 SITE DETAILS

The topography on site has a drastic slope towards the north with three distinct rock outcrop lines allowing vegetation along these lines (refer to fig.153). This natural occurrence is a feature that will be emphasised in the design.

Fig.153- Rocky outcrop and vegetation line on site (Author: 2021)

Fig. 154- Informal block brick house around site (Author: 2021)

Fig. 155- Informal steel shading structure around site (Author: 2021)

Fig. 156- Informal steel house around site (Author: 2021)

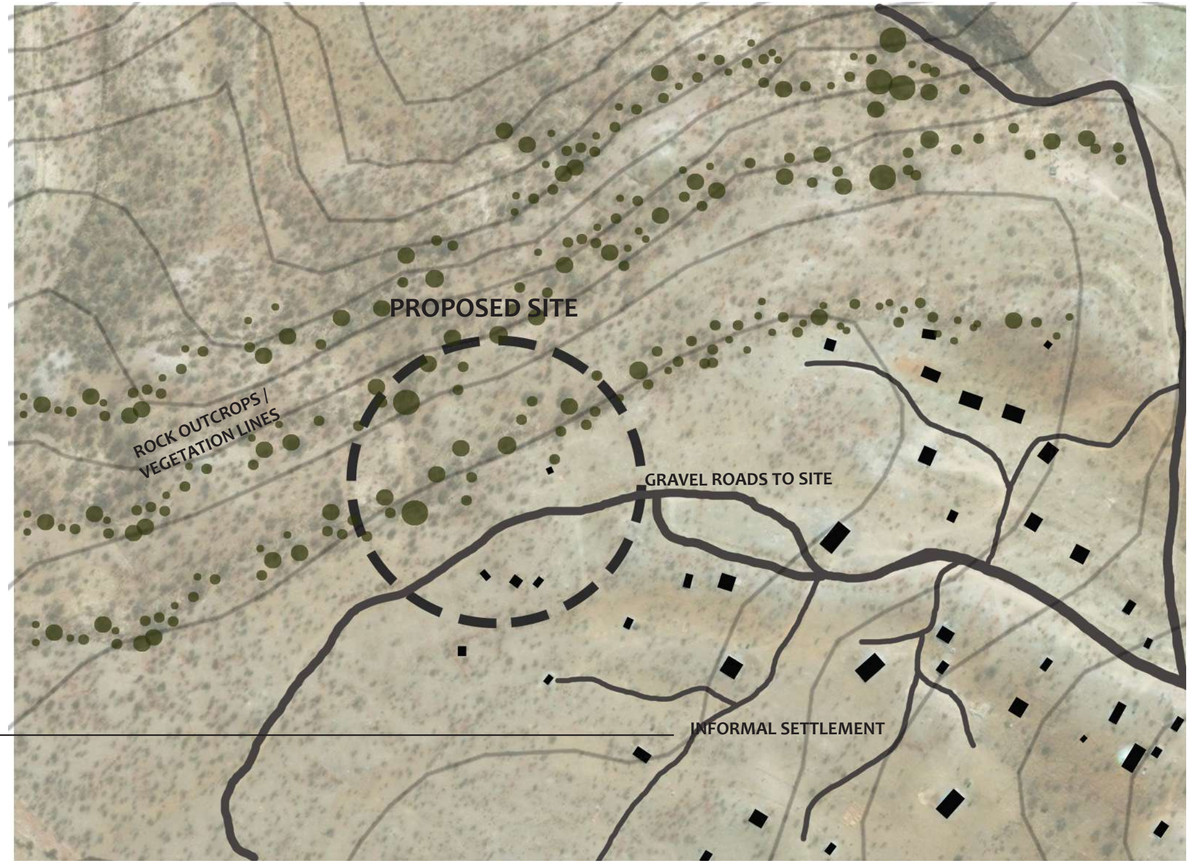


Fig.157- Site Analysis (Author: 2021)

3.4.5 THE COMMUNITY

Fig.158- Community living around the site (Author: 2021)

The occupants around the site are a group of Himba/Herero people who turned towards the western way of living. According to the information obtained by talking to these residents, the main reason for relocating to Opuwo was for employment. These people are also helped by the State Department, where there are provided with free land to establish themselves. One man from Ruacana stated that he used to work for someone, but lost his job due to COVID-19 and therefore relocated to Opuwo in search of a new occupation. Another resident mentioned that he stayed with his family in a traditional Himba village before coming to Opuwo. However, the drought caused all their cattle to die, resulting in the relocation. They both stated that turning towards a more western way of life was the only solution to obtain formal employment in the town. Only if they returned to their traditional villages would they wear their traditional Himba attire.

Fig.159- Community living around the site (Author: 2021)

These people live southeast of the proposed site. The State Department provided them with plots of land on which to erect informal structures mostly made from corrugated sheeting and hollow block bricks. With these structures, all vernacular Himba construction elements are unfortunately disregarded (refer to page 108).

These residents close to the proposed site allow one to realise the unsettling reality of their cultural circumstances. It is therefore evident that the culture must be celebrated in order to encourage the community to participate in the modern world but still maintain their cultural identity.

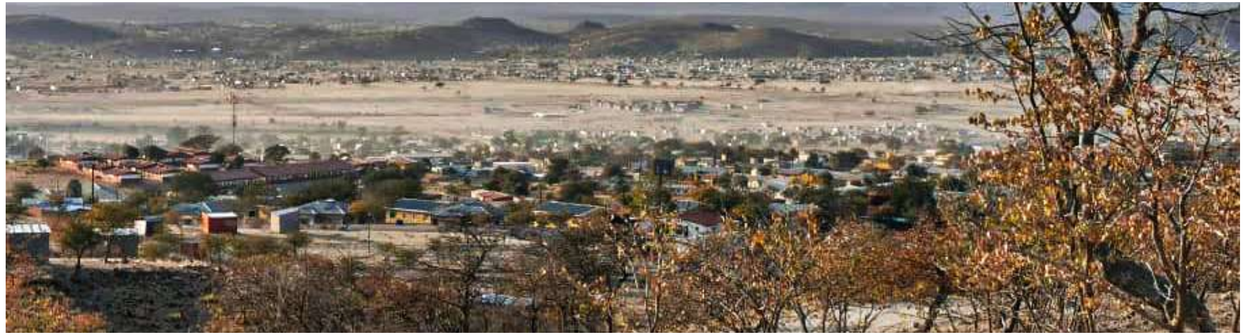


Fig.160- View of Opuwo from access to site (Author: 2021)

3.4.6 SITE EXPLORATIONS

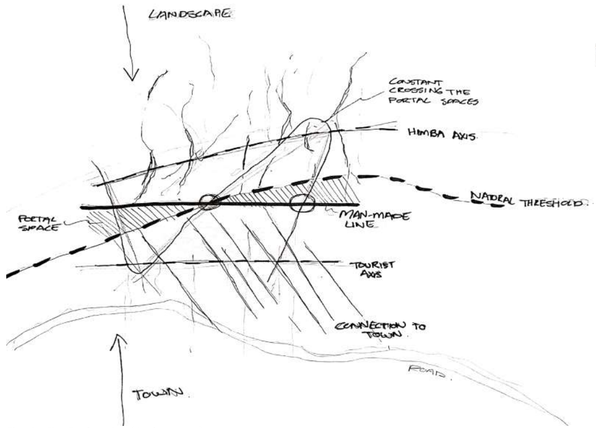


Fig.161- Site Exploration (Author: 2021)

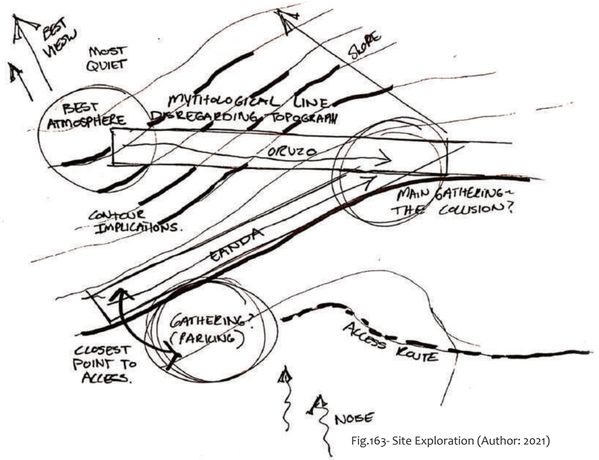


Fig.163- Site Exploration (Author: 2021)

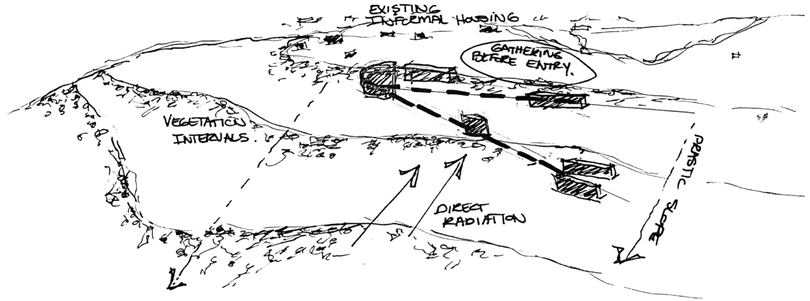


Fig.162- Site Exploration (Author: 2021)

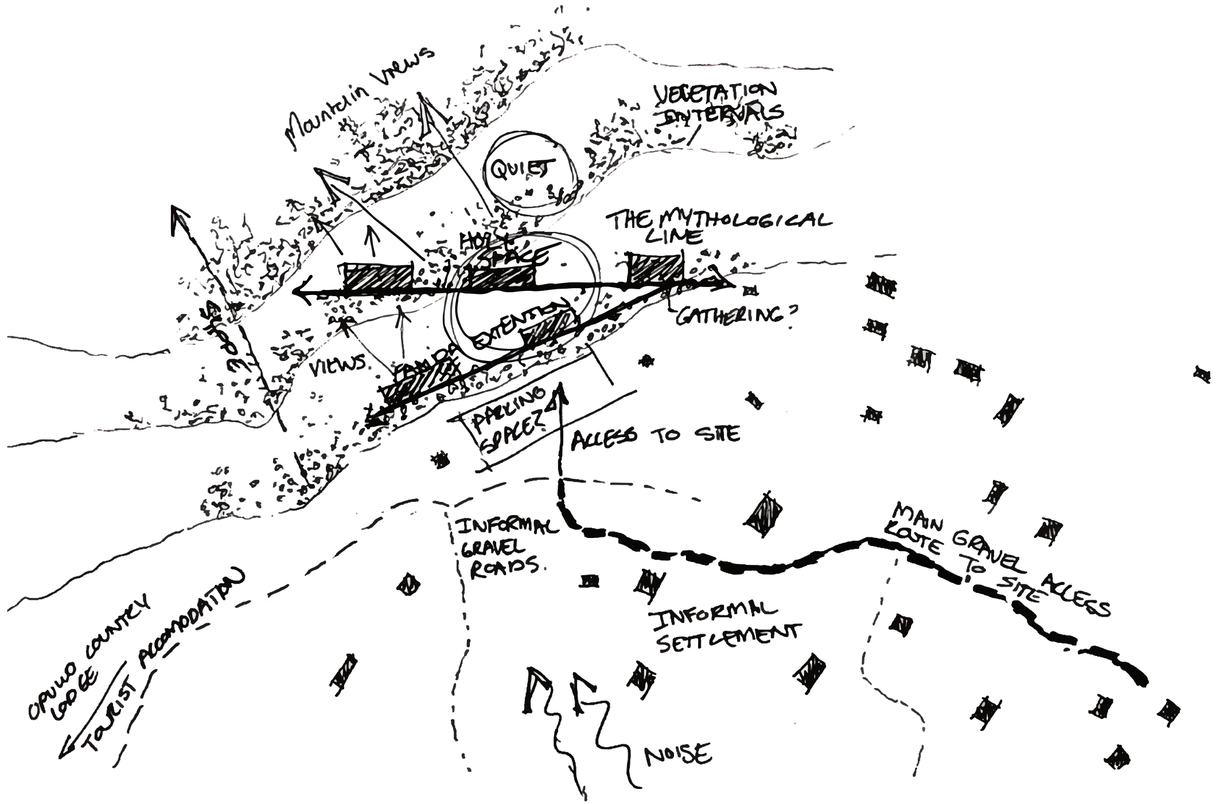


Fig.164- Site Exploration (Author: 2021)

3.4.7 APPROACH TOWARDS SITE

Several influencing formations can be identified on site: the formal town grid, the natural contours, the symbolic Himba line, and the natural vegetation running through the site (refer to fig.165).
These elements are fundamental, as they will have a significant influence on the design layout. The components can also be identified under two of the three categories contributing to the sense of place, namely context and vernacular structures.
The sacred symbolic line in the village formation explained on page 56, is an essential element in incorporating landscape and traditional practices. This principle relates to Eggener's approach to reflect on the actual conditions of life (refer to page 24).

Two clans can be identified in a traditional Himba village, namely the maternal clan, Eanda, and the paternal clan Oruzo. The imaginary line has two axes, of which the east-west axis is reserved for the Oruzo clan and the northeast/southwest axis for the Eanda clan. On the site, these distinct axes will determine the layout of the building. Additionally, this formation entails the imaginary line, which defines the two clan sides mentioned above. In the same way that the line defines the clans within the village, similarly the line will define the different worlds between the tourists and the Himba. This line will consequently become the portal space where these two groups meet.

The contrasting grids between the town and the landscape will determine how the building masses will be placed on the site. These grids also connect at the portal space, emphasising the gathering of two contrasting environments, namely the man-made and the natural context.

Additionally, the natural mopane vegetation and rocky outcrop crosses the Himba line at the point of the holy fire. Despite this religious space already having spiritual meaning within the culture, the crossing of the vegetation also contributes to the spirituality of the landscape. The tree of life is a famous symbol that represents various aspects across different cultures and religions. Trees represent "the interconnectedness of everything in the universe. It symbolises togetherness and serves as a reminder that you are never alone or isolated, but rather that you are connected to the world" (One Tribe Apparel, 2019:online). Therefore, the occurrence on the site becomes a significant feature highlighting the holy fire as the building's main hierarchy and gathering point for the landscape and the different cultures.

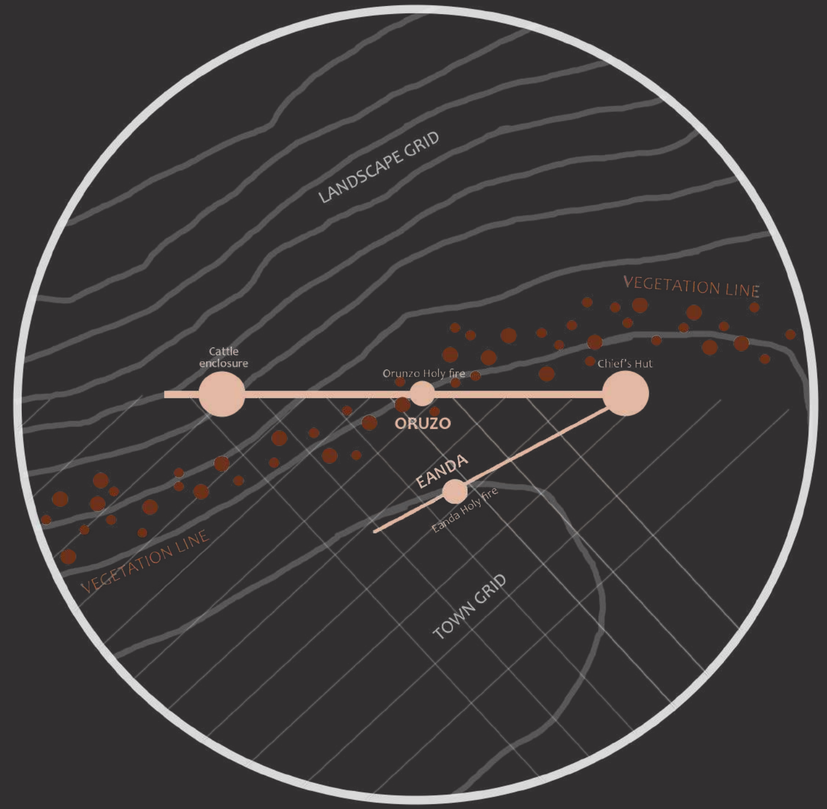


Fig.165- SiteApproach diagram (Author: 2021)

3.5 CONTEXTUAL PRECEDENTS

Fig. 166- The Habitat Research and Development Center (Nina Marits Architects, 2004: online)

3.5.1 The Habitat Research and Development Center/Nina Maritz

Fig **. The Habitat Research and Development Center (Nina Marits Architects, 2004: online)

As previously mentioned, the Kunene Region is a desert environment with harsh climatic circumstances. Therefore, careful consideration should be given to the climatic response and how it is controlled in regional Architecture. Consequently, the Habitat Research and Development Center, designed by Nina Maritz, was used as a precedent study. Although this precedent does not capture the poetics intended for the project, it shows how sustainable architecture can be implemented within the extreme temperatures of Namibia.

In conclusion to the analysis, the following essential elements were identified: Elongated west-east building axis to allow optimal wind flow through the building, shortened north-south axis to allow sufficient daylight into the building, roof overhangs allowing winter sun but preventing summer sun, wind towers, rammed earth and clay wall construction to allow low heat conductivity, and high energy storage.

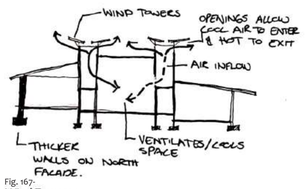


Fig. 167- *Wind Towers (Adapted by author,2021)*

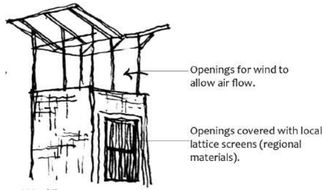


Fig. 168- *Wind Towers (Adapted by author,2021)*

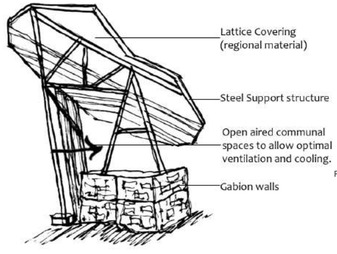


Fig. 169-*Shading Structures Adapted by author,2021)*

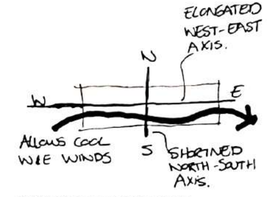


Fig. 170-*Building Axis according to climate*

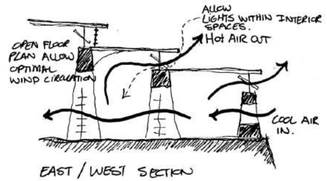


Fig. 171-*Climatic Roof Designs Adapted by author,2021)*

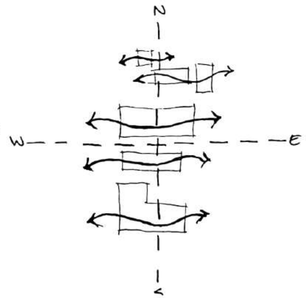


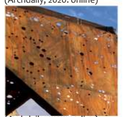
Fig. 172- *Buildings Allocation on site according to climate*

(Archdaily, 2020: online)

Thatch
helps with thermal control, in effect breathing, allowing warm air to escape during the day. Even though it has a high fire risk in this context, it is still visible in the architecture of the Kunene Region.

(Archdaily, 2020: online)

Local Stone
This material is used for its low maintenance and durability within a desert context.



(Archdaily, 2020: online)

Metal
Several Namibian designs incorporate metal due to its durability, low fire risk,aesthetic properties and capacity to capture wind and water.

(Nina Marits Architects, 2004: online)

Rammed Earth
This construction method is traditional and primarily used in Namibia's vernacular architecture for its thermal benefits and availability of raw material.

Fig. 173- Architectural materials used in Namibia (Author, 2021)

3.5.2 andBeyond Sossusvlei Desert Lodge / Fox Browne Creative, Jack Alexander

Fig 174. Sossusvlei Desert Lodge (Archdaily, 2020: online)

Fig 175. Sossusvlei Desert Lodge sketch (Archdaily, 2020: online)

3.5.3 Game Lodge / Slee & Co Architects

Fig 176. Game Lodge (Archdaily, 2021: online)

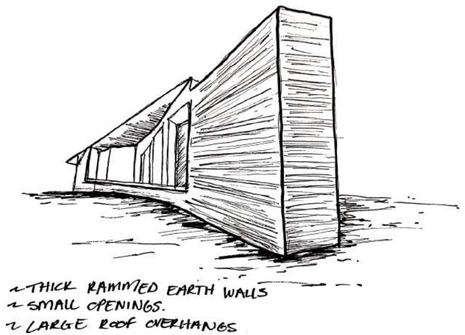


Fig 177. Game Lodge sketch (Archdaily, 2021: online)

Fig.178- Himba boys in cattle enclosure (Nelson, n.d.: online)

3.6 CHAPTER CONCLUSION

From the contextual chapter, one can draw essential aspects from the macro-, meso and micro-analysis, such as opportunities, constraints, topology issues and possible solutions towards the architectural approach of the context. The site is located in a colonial town in Kaokoland, which holds deep historical meaning for the Ovahimba people. Several factors such as the history, the surrounding environment and conditions, resources and the community were studied to gain a greater perspective on the contextual influences and meaning on the culture.

During this process, the researcher uncovered hidden content and the opportunity to attain contextual inspiration towards a reimagined space. The characteristics studied in Chapters 2 and 3 relate strongly to the elements identified in the sense of place theory, namely culture, vernacular architecture, and context. The information gained from these studies were utilised in the conceptual development during the design process to create the three conceptual lenses through which outsiders will be enabled to gain a new perspective on the culture and the region.

110 Fig.179. Himba man next to holy fire (Mcrae, n.d.: online)

04 CHAPTER

PRECEDENT STUDIES
CONSTRUCTION ANALYSIS

4.1 Senegal Cultural Centre / Toshiko Mori

Fig. 180 -Senegal Cultural Center-Perspective of Gathering space (Archdaily, 2020: website)

Architect: Toshiko Mori
Location: Sinthian, Senegal
Type: Cultural Center
Year: 2015

Fog. 181-Vernacular Senegal Huts (McMorrow, 2006: online)

User Requirements

The Senegal Cultural Centre is a hub for the local community. It offers a space where artists can have a "meaningful experience" of the Senegalese cultural identity. The program includes vendor spaces, teaching spaces and multi-functional spaces for dance rituals and assemblies (refer to fig.182) (Gotthardt, 2017:online). The community areas are relatively open-aired, while the private rooms are more enclosed.

Function/ Program

The village cultural centre is situated in Sinthian in southeastern Senegal. This building was designed to provide the people of the surrounding rural villages with various programs and the chance to find new types of creativity and develop their abilities (Gotthardt, 2017:online).
This building has the same rationale as the intended Ritual Himba Pavilion. It functions as a gathering space between the village people and artists from around the world seeking creative inspiration. Milo McBride, one of the project collaborators, states that the building "is based around a symbiotic exchange between the artists and the local community, with hopes of creating bridges between this region and the various artists who come to collaborate" (Gotthardt, 2017:online).

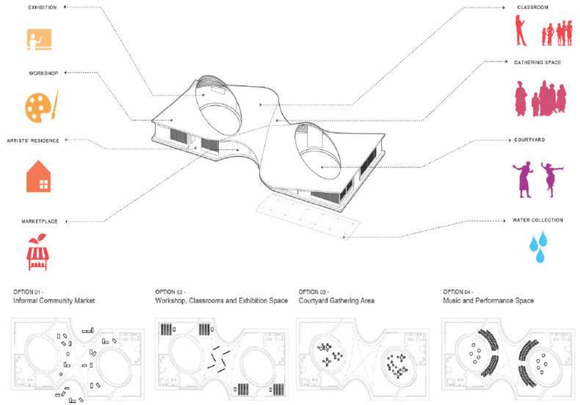


Fig.182- Program and function (Archdaily, 2020: website)

Type & System Details

The roof structure of the centre is inspired by the local pitched roof huts of the Senegalese people (refer to fig.181). The roof of the building underwent a parametric transformation to become an inverted version of the traditional morphology, which allows the collection of water (fig. 4) (Gotthardt, 2017:online). The curved roof structure encloses workshop spaces and bedrooms at either end, and then flanks on both sides towards open-air courtyards. This action can be identified as Frampton's approach towards defamiliarisation, where a problem with the context is identified, and then estranged. In this case, the traditional roof structure is modified to solve the need for water.

The overall structure of the building consists of solid load-bearing walls, perforated walls (which outline the spaces), columns and a parametric roof structure. Only the articulated areas are defined by walls, and this leaves most of the building with a post and beam construction, carrying the roof (fig. 183). This design provides a contrast between the roof frame and the solid elements in the structure. It also creates the visual appearance that the top is floating within the interior spaces.

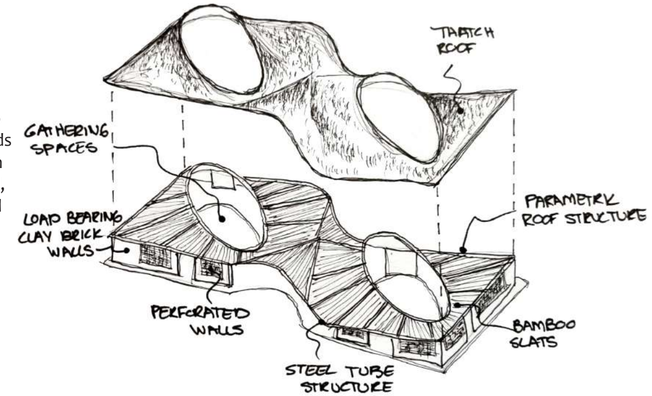


Fig. 184- Construction analysis (Author, 2021)

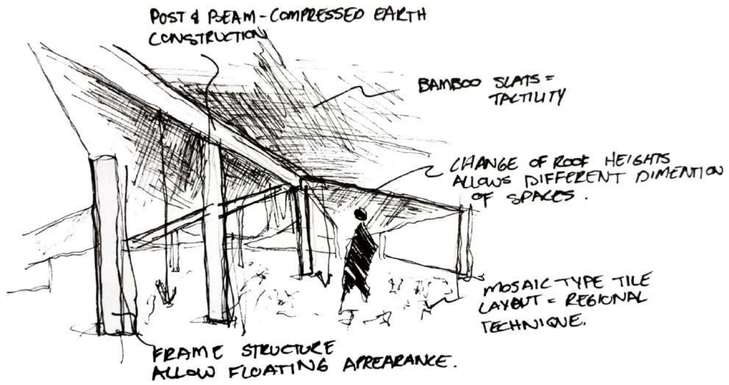


Fig. 183- Interior perspective analysis (Author, 2021)

Fig. 185- Interior Perspective (Archdaily, 2020: website)

Materials & techniques

The undulating roof structure is constructed from a light steel frame structure and bamboo sourced locally (fig. 186). According to Mori, lashing techniques from Japan was used during construction, allowing an "exchange and cross-fertilisation of traditional construction methods" (fig. 187) (Gotthardt, 2017:online). The roof structure was then covered with local thatch, which provides the building with a traditional and low-cost roofing solution.

Even though bamboo is not a local Namibian material, one can still use the construction techniques in this precedent to inspire the intended mopane timber framework.

The post and beam construction is made from compressed earth to support the parametric shapes of the roof. The beam construction is fragmented, so each end of the beam is supported by a different height column or load-bearing wall.

Fig. 186- Senegal cultural center during construction (Author, 2021)

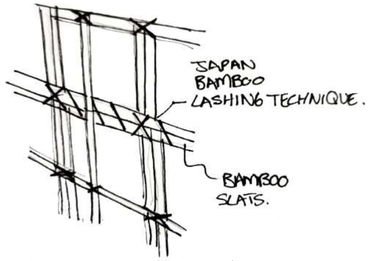


Fig. 187- Bamboo construction (Author, 2021)

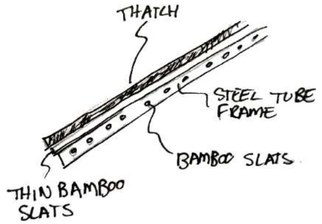


Fig. 188- Roof construction (Author, 2021)

Climate & site requirements

Senegal's tropical climate is hot and humid, with strong southeasterly winds. The solid structures in the building are constructed from clay bricks, of which some are perforated. The perforated walls function as a cooling system that prevents direct radiation, but allows ventilation and light to enter the enclosed spaces (fig. 190 & 192). The large roof also plays a role in keeping direct sunlight out.

The area has a prolonged dry season from mid-October to mid-June (Climates to travel, n.d.:online). The roof morphology was therefore designed to collect water during the rainy season. The thatch surface contributes to collecting the rainwater, which is stored in water reservoirs and later used to grow crops (fig. 189).

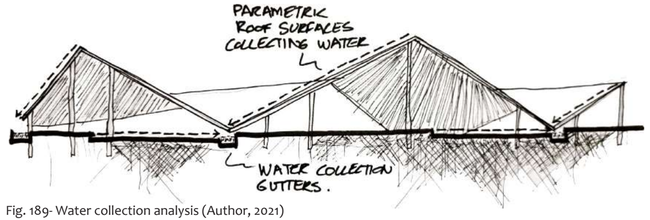


Fig. 189- Water collection analysis (Author, 2021)

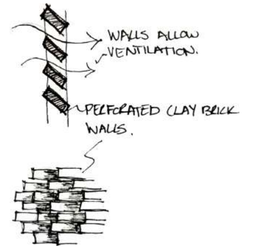


Fig. 190- Perforated clay Brick walls (Author, 2021)

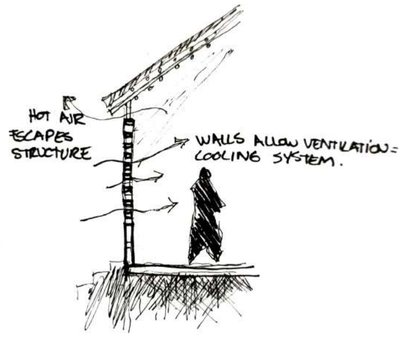


Fig. 192- Section-Perforated clay brick wall (Author, 2021)

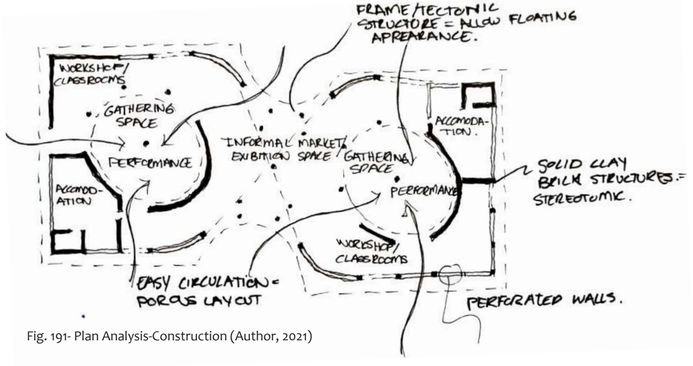


Fig. 191- Plan Analysis-Construction (Author, 2021)

Circulation

The building entails easy circulation due to the structural system. The solid wall elements in the building are relatively fragmented, which allows the plan to be porous and have several access points into the building (fig. 191). The larger areas entail open and accessible circulation due to no solid walls restricting movement through the building.

Approach to Critical Regionalism:

Toshiko Mori focused on traditional construction techniques regarding the type of materials, morphology and technology. These elements have been defamiliarised to expand the possibilities for the vernacular hut architecture of the Senegalese people. Materials in the natural context were used to construct the building, namely bamboo, brick, and thatch. Together with local building techniques and the architect's innovative designs, the building is inspired by the context, culture and cultural architecture. This precedent has a more sensitive critical regionalist approach compared to the Jean-Marie Tjibaou Cultural Centre, by Renzo Piano. The more sensitive system allowed the community to still feel comfortable despite the estrangement of the design. This precedent entails the strategies of use of tactility, defamiliarisation and participation.

Proposed Architectural strategies:

This precedent was chosen to indicate how a sensitive critical regionalist approach can be incorporated into a design. This centre also indicated the program, function and structure, as it contains similar regional materials, techniques and structures to those identified in Namibia.

The following design strategies were gained through this precedent:

- Building program
- Use of local/natural materials
- Use of local techniques
- How regional structures can be modified to achieve a sensitive critical regional approach
- Participation

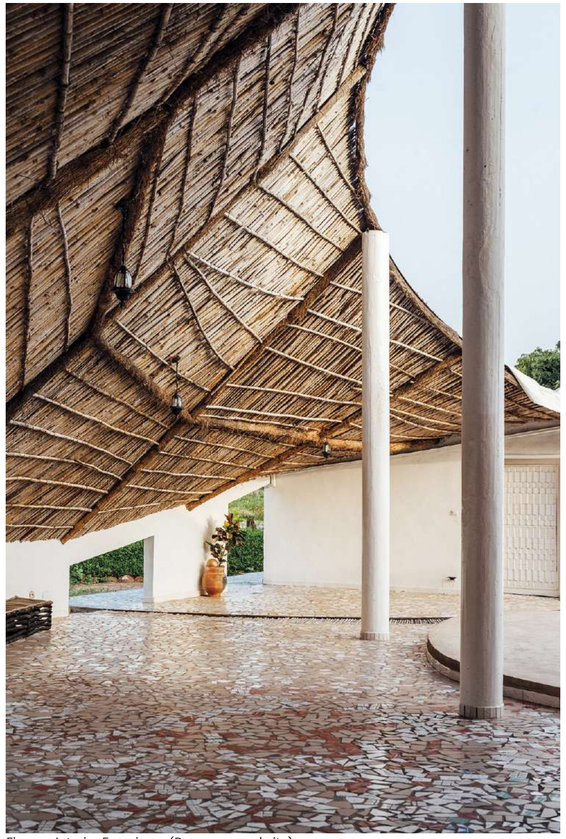


Fig. 193- Interior Experience (Baan, 2015: website)

4.2 Mapungubwe Interpretation Centre / Peter Rich

Architect: Peter Rich
Location: Mapungubwe, South Africa
Type: Cultural Center
Year: 2009

Form & Function

The Interpretation Center is situated in Mapungubwe, South Africa. The building is located in a heritage site which contains an immense history of the local. The Interpretation Building functions as a visitors' centre, and includes exploratory pathways and spaces to recollect the narratives of the location, and to display regional artefacts. Alongside these occupations are tourist facilities and SANParks offices (ArchDaily, 2021d: online).
Program of the building:

- Exhibition spaces
- Restaurant
- Experiential routes and spaces
- Educational spaces
- Craft shop

Fig. 194- Mapungubwe Interpretation Centre (Archdaily, 2010: website)

Morphology

The architect's approach towards construction was to identify Mediterranean architectural elements, and transform them symbolically and structurally to accommodate the African climate (Selkou, n.d.:online). This resulted in the dome-shaped structures, which is an old Mediterranean tradition that was adapted to this environment. These traditions are called Catalan or Guastavino vaulting. By adopting this ancient method, the structure was reestablished as part of the identity of the building (Ramage, Ochsendorf, Rich, Bellamy & Block, 2010:online).

The cairn, an artificial stone structure that is regularly utilised in Zimbabwe to demarcate a route, was used as the primary design reference for the morphology of the forms (Selkou, n.d.:online). The vaults represent the symbolic elements of a sacred space, where the light infiltrates the oculus. A circular opening at the top of the vault allows the structure to open visually towards the sky (Selkou, n.d.:online). The central aspect of the building is its integration with its natural and cultural setting, which embraces the social scene, the sloping topography, the harsh landscape, and also the historical landscape (fig. 195). All these elements combine to form a complex entity.

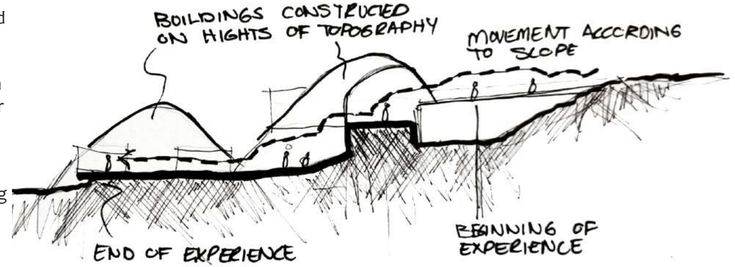


Fig. 195- Section Analysis of Morohology (Author,2021)

Site Planning / Accessibility

The building is constructed on a distinct east-west axis, with a second south-west axis jutting out from the main circular form (fig. 200). This axis forms a clear circulation route that allows the viewer to experience the spaces along the route. This type of form corresponds with the intended layout of the Ritual Himba Pavilion. It displays the same characteristics as a Himba village, namely east-west Axis, a less significant south-west axis, and two main destination points. These axes are also positioned in line with the natural contours, allowing the building to adopt the topography's gradual slope. By doing this, the building adapts to its topographical limitations, providing it with a connection to its context.

Fig.196- Roof during construction (Selkou, n.d.: website)

Fig.197- Compressed earth bricks (ArchDaily, 2021d: online)

Fig.198- Stone (ArchDaily, 2021d: online)

Fig.199- Timber reeds (ArchDaily, 2021d: online)

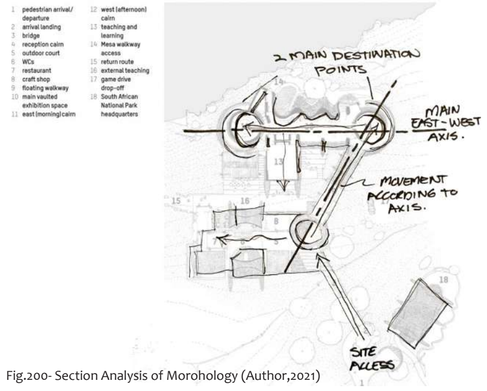


Fig.200- Section Analysis of Morohology (Author,2021)

Materials & building techniques

The building was constructed from local materials, using local techniques, which allows for local participation in the building process.

The structural constraints were cost limitations and construction time. These constraints led to finding the cheapest materials and using as little steel as possible. Local materials and minimal steel were therefore used in this project.

Traditional fired clay bricks were replaced with stabilised earth tiles, which are more sustainable. These tiles were constructed from local sand and earth, mixed with 5% cement and compressed using a Hydraform block press (Ramage et al., 2010:online). This type of construction allowed thin tiles to form, which are relatively weak but sufficient for the primary application. Despite the several disadvantages of the tiles being vulnerable to impairment, it is still the most relevant solution as it exhibits contextual identity (Ramage et al., 2010:online).
The vault structures were also constructed from these earth tiles (fig. 196). As the bricks can only withstand a low level of compression, the structural domes were designed to have low stresses and only act in compression.

The stabilising earth is a sustainable material which is refined through hand-pressed techniques, creating a suitable component for vaulting. All the roof surfaces are covered in local stone, which gives the building an ageless quality (Ramage et al., 2010:online). This allows the building to geographically and visually merge into the context.

Other materials used with the shading devices include timber reeds for the roof elements, and circular, hollow steel pipes for the frame structure. The walls are made from sandstone, and for the interior walls, brick was plastered with an earth mixture.

Structure

The shape of the building was determined by techniques of graphic statics. The vault geometry was established by first identifying the lines of thrust under dead load and asymmetrical loads. These lines of thrust can be recognised as lines indicating how the path of compressive forces will occur on a specific structure (fig. 201) (Ramage et al., 2010:online). Therefore, the spatial shapes and vault forms were established by using the envelope of thrust lines and transforming it into architecture. In this case, the gravitational loads dictated the structure (Ramage et al., 2010:online).
The construction of the building entailed laying sandstone foundations to carry the vault structures (fig. 196). Before constructing the vaults, a temporary timber frame was first built to establish the intended morphology and to act as a building guide. Tiles were then laid on the timber frame with fast-setting gypsum mortar applied to the edges of the earth tiles. Several layers of these thin tiles were placed and finished off with a stone cladding. The vaults were built to spring from foundation walls and raised buttresses which are structurally tied to resist the thrust forces of the domes (Ramage et al., 2010:online).

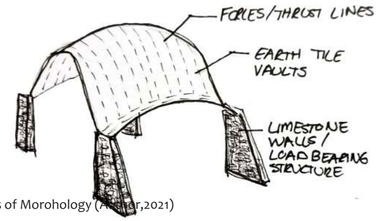


Fig. 201- Section Analysis of Morohology (Author,2021)

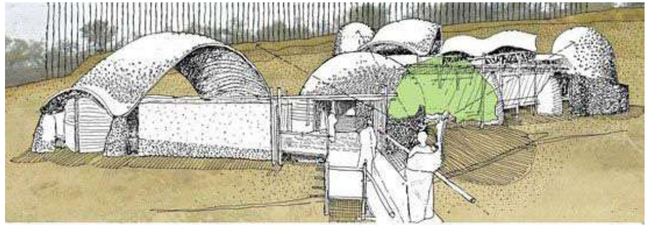


Fig.202- Journey towards building (Escutia, 2014: website)

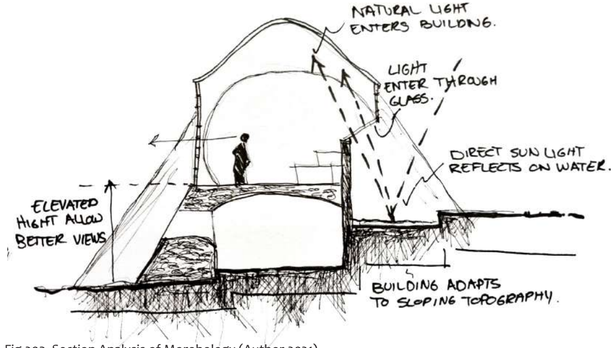


Fig.203- Section Analysis of Morohology (Author,2021)

Landscape:

The building has two distinct axes – the east-west axis and the south-west axis. These two axes automatically create spaces. These spaces are developed and articulated through landscape techniques to provide an exploratory journey outside the building. This journey is achieved through shaded walking areas, bridges, lifted pathways, amphitheater-like seating and walking surface height changes (fig. 204-206). By incorporating these techniques, the visitor is taken on a journey to experience the building from different perspectives and through other senses.

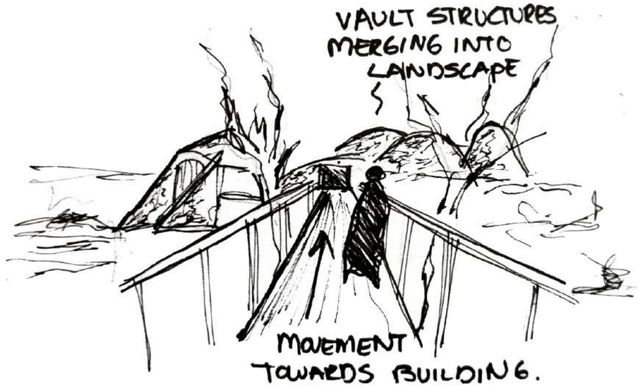


Fig.204- Experiential Journey towards building (Author,2021)

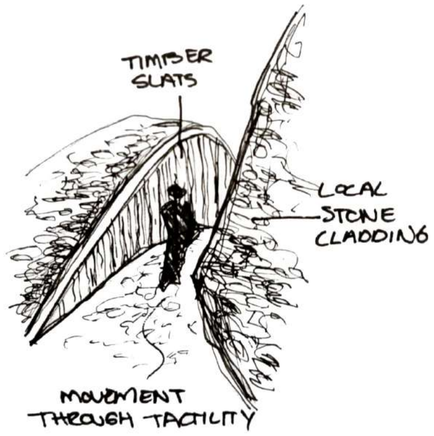


Fig.205- Use of Tactility (Author,2021)

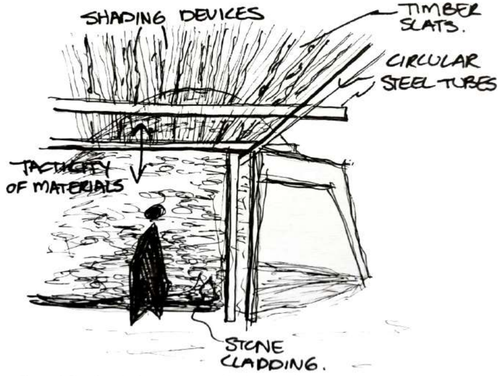


Fig. 206-Shading devices structure (Author,2021)

Spatial Enhancement

The use of several materials in both the interior and exterior offer pronounced tactile experiences. The materials allow a connection to the contextual environment, which contributes to the overall experience of the building. The experience through the building is enhanced through changes between the spaces of the following elements: space volumes, natural light, movement patterns, structural characteristics and height changes. The quality of space is also enhanced through the incorporation of Critical Regionalism. This method is achieved by defamiliarising the interpretation of the natural conditions of the landscape and its history.

Proposed Architectural strategies:

This precedent was chosen to identify how an African context and culture can be incorporated into architecture. It is also a fine example of how a narrative can be presented through exploratory pathways (fig. 25) to achieve a sense of place. Critical Regionalsim plays a major role, as this building exhibits the strategies of tactility, defamiliarisation, participation, arrière-garde and nature & context.

The following design strategies were extracted from this precedent:

- -Program and layout
- -Site planning and landscape
- -Use of materials to apply tactility
- -How traditional dome-shaped structures can be interpreted and constructed

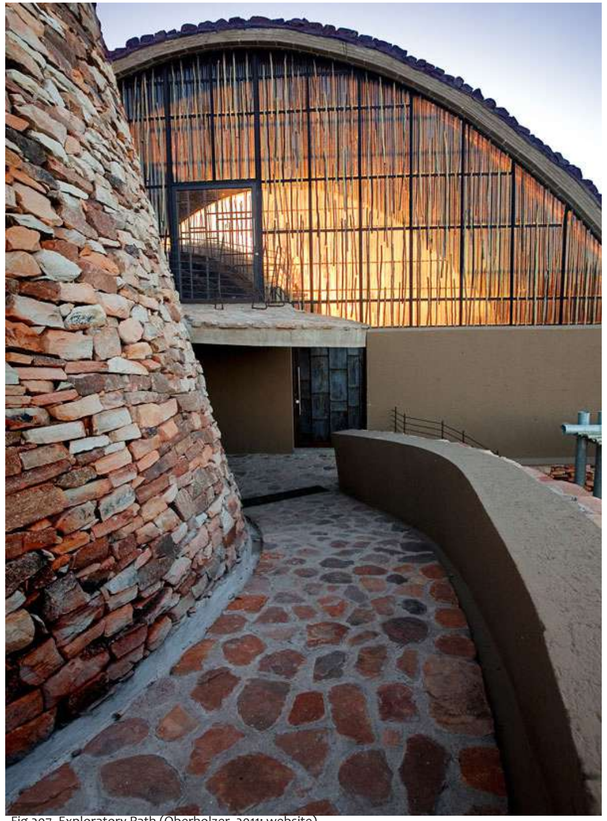


Fig.207- Exploratory Path (Oberholzer, 2011: website)

05 CHAPTER

THE EXPLORATION
ONDJONGO AS A COMPOSITION

Tell me and I'll forget. Show me, and I may not remember. Involve me, and I'll understand.
(North American Native Proverb, n.d.: online)

Fig.208- Himba women in the Kunene Region (Nelson, n.d.: online)

5.1 INTRODUCTION

The Design Development section will present the design process, influences, moments and final proposal.
It will also demonstrate the connections through which all the above information regarding theory, context and culture is processed into design solutions. In this section, theoretical links will also be highlighted, indicating how and where the theory is implemented, and if the design principles are met in the design. Design Developments one to four will explain how each scheme developed. Consequently, the Final Design Proposal will present the concluded product of all the developed phases.

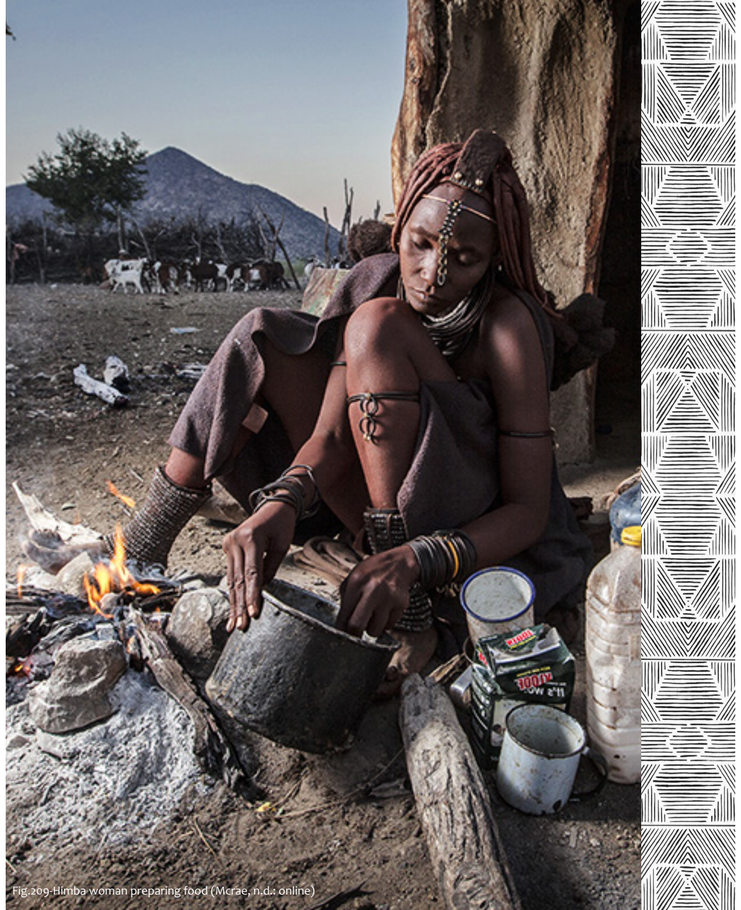


Fig.209-Himba woman preparing food (Mcrae, n.d.: online)

5.2 PROGRAM- ACCOMMODATION GENERATION

BRIEF:

The following table indicates the functional requirements which will be carried over into the accommodation program to ensure cultural sustainability within the building functionality.

HIMBA CULTURAL SUSTAINABILITY

ENVIRONMENTAL	ECONOMIC	SOCIAL	CULTURAL
-Use of Green technologies -Energy Efficiency -Environmental Education -Eco Exibition	-Cultural Tourism -Cultural Employment -Economic revitalization of local community	-Sense of Place -Active participation -Engagement	-Heritage Preservation -Cultural Skill and knowledge -Memory/Identity -Cultural diversity/intercultural dialogue -Creativity and innovation -Artistic vitality

PROGRAM:

TOURIST PAVILION	RITUAL PAVILION	SACRED PAVILION	MARKET PAVILION	HIMBA PAVILION
-Tourist Shops -Reception -Cultural art gallery -Office space -Kiosk -Kitchen & Storage -Briefing Space -Outside seating space -Ablutions -Research facilities -Storage -Staff Room -Refuse	-Gathering/ Performance space -History Exibition space -Cultural customs exibition space -Memorial walkway/ seating -Ancestral memorial garden	-Mythological Line circulation/experiantial space -Holy Fire space -Underground Chiefs memorial space	-Informal Market Space -Landscape viewing point -Restaurant -Kitchen -Loading bay -Ablutions -Storage -Refuse	-Craft workshops -Leather tanning spaces -Wood carving space -Indiginous Education space -Outdoor Social space -Food preparation spaces -Storage -Water tower -Ablutions

Table 1- Brief according to cultural sustainability objectives (Adapted by author: Borza, 2015:online)

5.3 CONCEPT 1
Context

THE DIALOGUE

Merging the contrasting context of the Kunene Region.

According to the Cambridge Dictionary, the definition of converge is to "move towards the same point where they join or meet" (Cambridge Dictionary, 2021:online).

The concept "converge" defines the aim of the context to create a point of gathering and mutual interest. The context entails a break between two environments, namely the natural and the artificial. This concept will test how the gap between these environments can be bridged to form a mutual gathering point. The concept gave rise to several design strategies, such as overlapping spaces and juxtaposition.

These two strategies imply the contrasting context between the Skeleton Coast, the Great Escarpment and the plateau of the Kunene Region, on the one hand, and the micro-site context on the other. These overlapping juxtaposed elements of the general context and the micro-elements include soft versus hard edges, height differences, light versus rigid materials, natural versus human-made, complexity versus simplicity and undeveloped versus developed.

The central theme, Critical Regionalism, is also represented in the concept, allowing tradition to merge with modernity to form a new entity. These different situations form a negative/positive duality and a sort of tension between the two entities. This concept explores how these two entities can merge by interpreting the joining environments in the context.

Fig.210-Conceptual interpretation drawing of The Dialogue (Author, 2021)

Fig.211-Concept Model -*The Conversion* (Author, 2021)

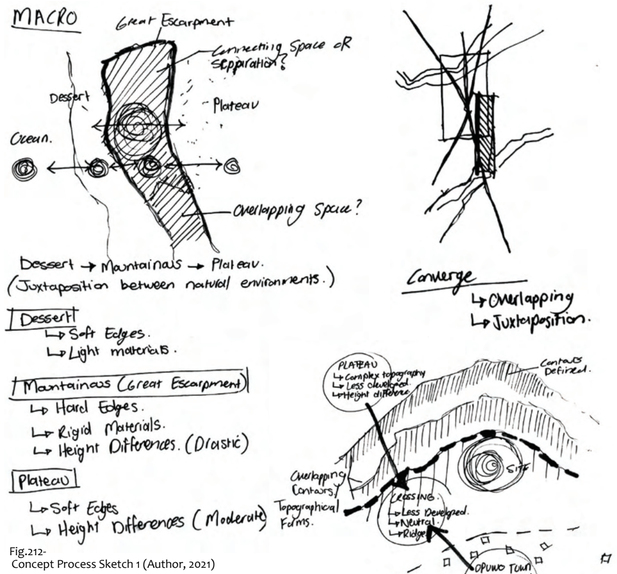


Fig.212-
Concept Process Sketch 1 (Author, 2021)

Fig.213- Concept Process Sketch 2 (Author, 2021)

5.4 CONCEPT 2
Culture

THE CORE

Aid in the mythical space between the living and spirit.

"From ancient times, African societies have marked the transitions of the life cycle, from birth to death, with rites of passage" (Johanson, 2013:online). Through these spiritual passages, individuals can rise above the ordinary worries of life to associate with their ancestral spirits and the mythical world.

After a careful evaluation of the modern and traditional elements of the Himba culture, one can argue that the connection between man and spirit in most cases remain, despite the drastic impact of external elements on their traditional culture. The journeys of the spirit are important to both the individual and the community. Cultural rituals that mark the phases of life give precise meanings of society's assumptions for an individual, and they give a person the feeling of identity and belonging (Google Arts & Culture, 2013:online). The concept therefore symbolises this spiritual core that stays grounded in the culture, despite external adjustments. As this connection is the grounded aspect, it is an essential element in incorporating a sense of place.

The concept intends to bridge the gap between the living world and the spirit world. It will test the several characteristics of spiritual and mythical space, namely open and closed space, portal or threshold, and exploratory path. Other characteristics include an articulating destination point, delineating space through natural or man-made boundaries, links between spaces, contrasting space scales, light, and colour.

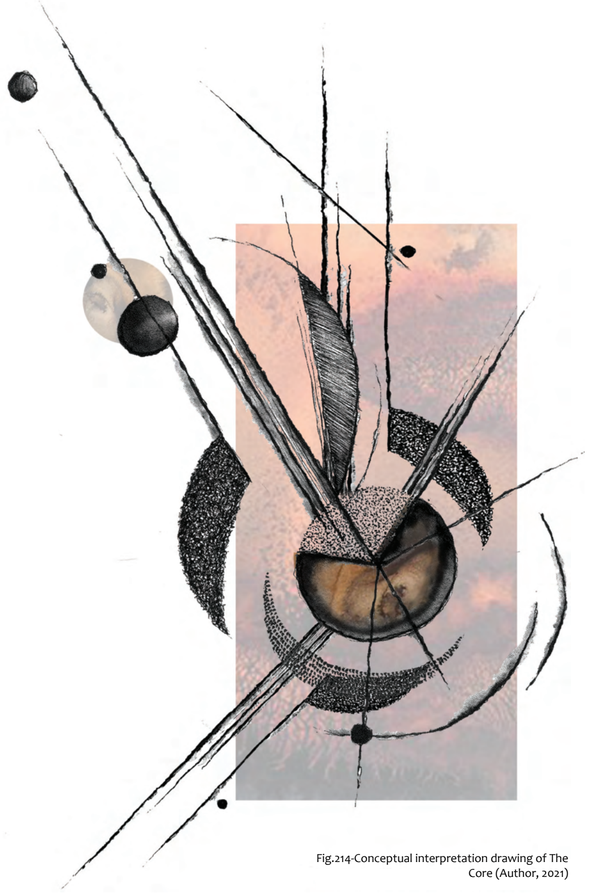


Fig.214-Conceptual interpretation drawing of The Core (Author, 2021)

Fig.215-Concept model-*The Core* (Author, 2021)

Fig.216-
Concept Process Sketch 1 (Author, 2021)

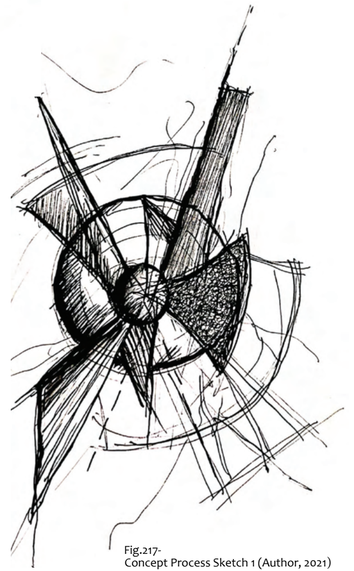


Fig.217-
Concept Process Sketch 1 (Author, 2021)

5.5 CONCEPT 3
Cultural Architecture

THE MYTHOLOGICAL LINE

Himba Indigeneity through the formation.

"Regional forms are those which most closely meet the actual conditions of life" (Eggener, 2002:228). Eggener believes that this type of architecture reflects the current circumstances of the culture of the region (Eggener, 2002:228).

The concept is inspired by his writings, in which he supports the idea of Critical Regionalism and architecture that rise up to meet the current situation. The concept of the symbolic line concept therefore relates to the form of a village in order to reflect on their authentic living environments.

The symbolic line runs from the okuruwo (holy fire) towards the chief's hut, and is perceived as a sacred area. The chief's hut is always orientated towards the east or the west, irrespective of the site conditions. This axis splits the village into two sections: the right, where the closest family members are located, and the left, where the huts of more distant family members are situated (Burger, 2021:personal interview).

The orientation and allocation of everything else in the village revolve around this imaginary line. It can therefore be seen as a beacon that determines the layout of the village, despite the site conditions. This concept will regulate how the structure and construction of a village can be reinterpreted and implemented, and establish a dominant axis that will lead the design. Indigeneity can be established through this application, which will contribute to the context and culture through placemaking. The specific architectural aspects identified in this concept are the orientation towards the east or west, the main axis, two main anchor points, two formation sides, the vertical articulation of an imaginary line, and form combined with meaning.

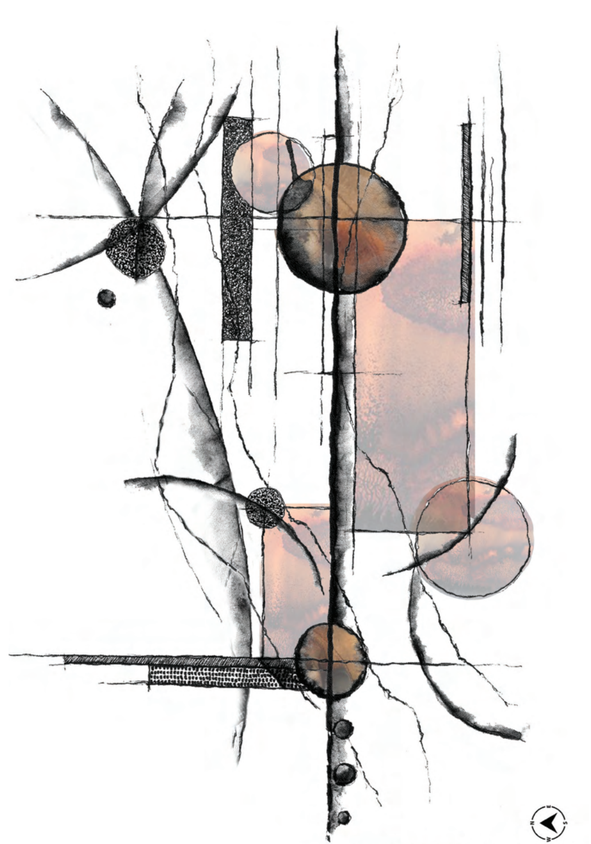


Fig.218-Conceptual interpretation drawing of The Mythological line (Author, 2021)

Fig.219-
Concept Model -*The Mythological line* (Author, 2021)

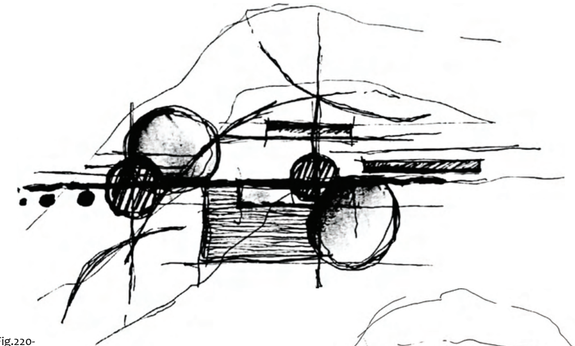


Fig.220-
Concept Process Sketch 1 (Author, 2021)

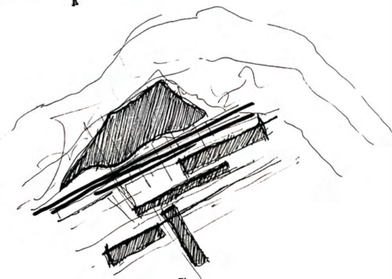


Fig.221-
Concept Process Sketch 2 (Author, 2021)

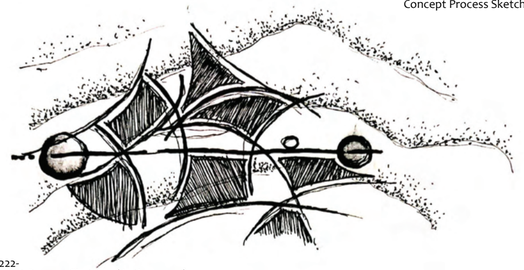


Fig.222-
Concept Process Sketch 3 (Author, 2021)

5.6 DESIGN DEVELOPMENT 1

5.6.1 CONCEPTUAL & THEORETICAL IMPLEMENTATION

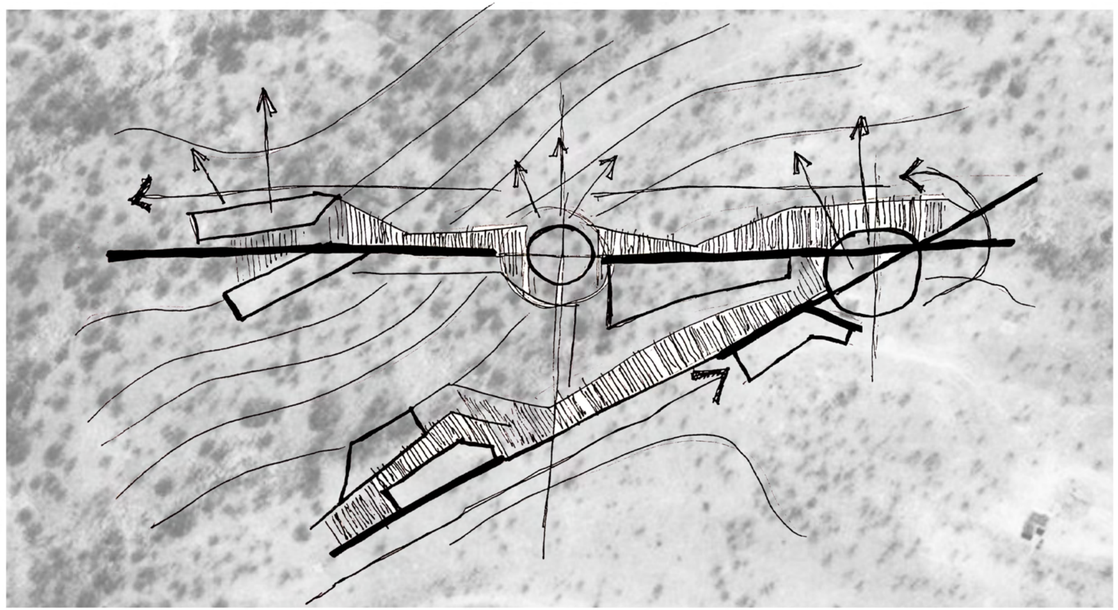


Fig. 223- Conceptual Development (Author, 2021)

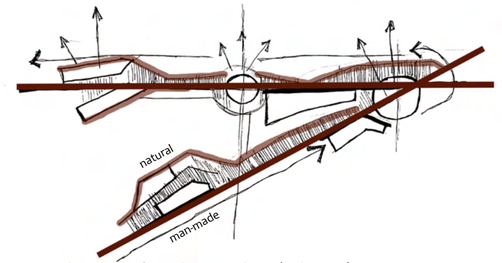


Fig. 224- Implementation of natural & man-made axis (Author, 2021)

The Dialogue:
ARTICULATING THE TENSION BETWEEN NATURAL AND MAN-MADE GRIDS

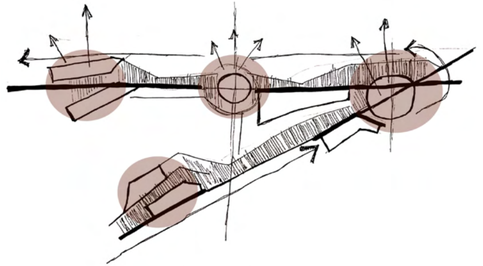


Fig. 225- Implementation of Nodes (Author, 2021)

The Core:
DISPERSED NODES ACCORDING TO HIMBA FORMATION

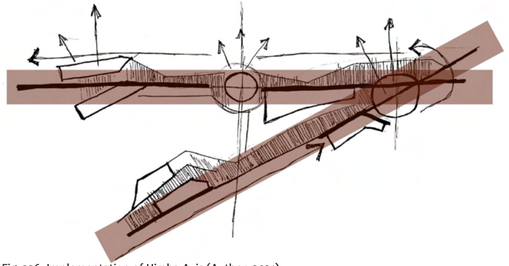


Fig. 226- Implementation of Himba Axis (Author, 2021)

The Mythological Line:
INCORPORATING THE HIMBA AXIS

5.6.2 PRECEDENT STUDIES

Precedent studies were done to identify different characteristics and approaches towards cosmic architecture, which entails solid properties, cutting into the landscape, protective facades, courtyards etc. The initial design adopted the fundamentals of tent-like cosmic architecture.

Tucson Mountain Retreat / DUST
Sonoran Desert

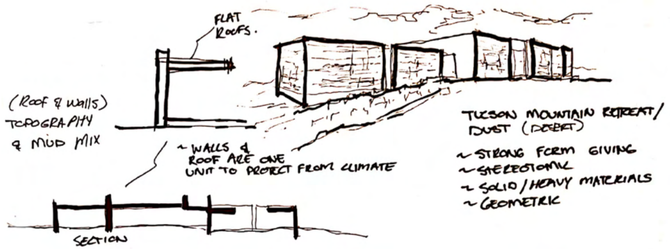


Fig. 227- Tucson Mountain Retreat Precedent Analysis sketch (Author, 2021)

Desert Courtyard House / Wendell Burnette Architects
Scottsdale, United States

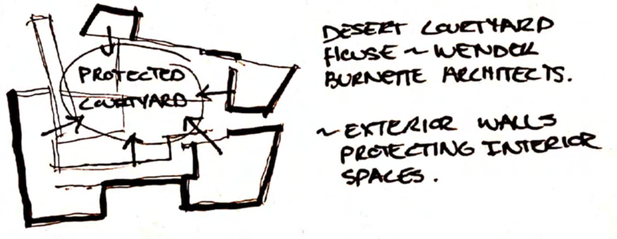


Fig. 228- Desert Courtyard House Precedent Analysis (Author, 2021)

Bedouin tent resort-AW2 Designs
Saudi Arabia

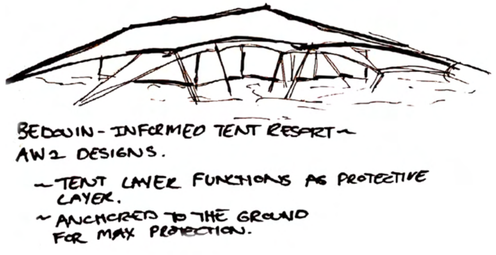


Fig. 229- Bedouin tent resort Precedent Analysis sketch (Author, 2021)

Eureka Gymnasium-Hawkins Architects
Eureka, Nevada

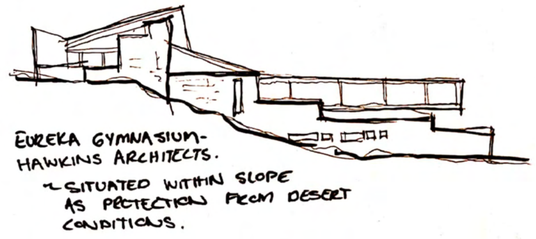


Fig. 230- Eureka Gymnasium Precedent Analysis (Author, 2021)

Hylla Cloud Nature Experience Center / gad
China

The precedent, Hylla Cloud Nature Experience Center, was analysed for its cosmic tent-like roof characteristics. The building has a similar function as the proposed Himba Ritual Portal. It also inspired spatial forms in the first few design proposals. This precedent motivated the morphology of the roof structures in Design Development One. . This is also true for the structural system, namely space-defining walls and a frame roof structure supported by posts.

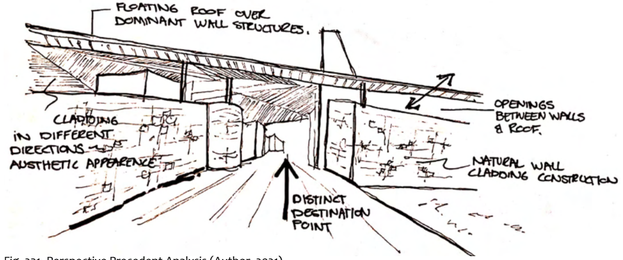


Fig. 231- Perspective Precedent Analysis (Author, 2021)

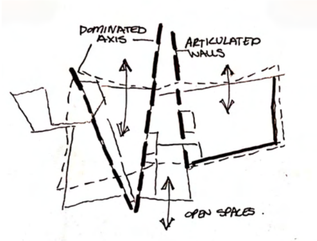


Fig. 232- Plan Analysis (Author, 2021)

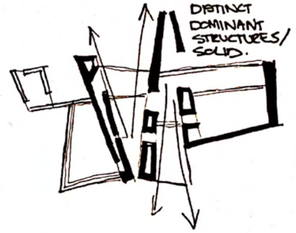


Fig. 233- Plan Analysis (Author, 2021)

Fig. 234- Hylla Cloud Nature Experience Center (Archdaily, 2021: online)

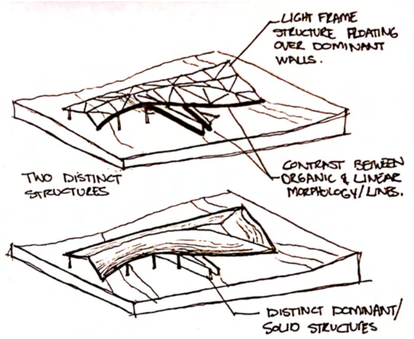


Fig. 235- Construction Precedent Analysis (Author, 2021)

5.6.3 PROCESS DRAWINGS

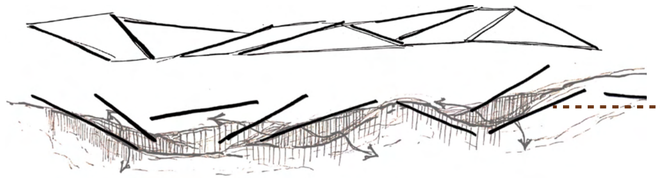


Fig. 236- Landscape Defamiliarisation Sketch (Author, 2021)

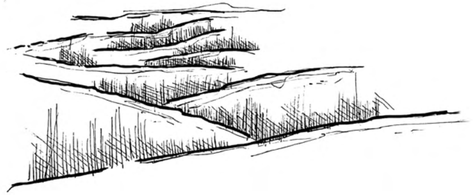


Fig. 237- Landscape Defamiliarisation Sketch (Author, 2021)

Design Development One employed the principle of defamiliarisation in specific conceptual elements. The mountain characteristics entailing sloping edges and angles, were defamiliarised to reach a workable roof morphology. Tzonis and Lefaivre's approaches towards Critical Regionalism, namely syncretism and meta-statement (refer to p. 29), were applied in this design development.

Frampton's thematic strategy is appropriated through the character analysis of the Himba hut. One of the noticeable factors was the decay of the hut materials. The question therefore arose: how can Himba identity be preserved through architecture? The idea presented in the structural touchstone, enduring versus transient, therefore became a possible design idea.

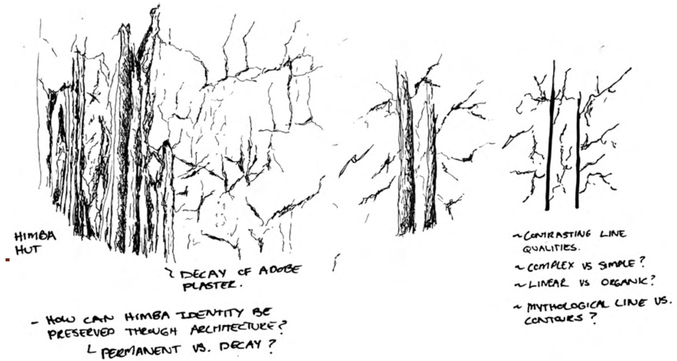


Fig. 238- Materiality of Himba hut Defamiliarization Sketch (Author, 2021)

The second approach towards the design was the implementation of Frampton's strategy. The Himba village formation in the context is defamiliarised by identifying the contrasting natural contours and implementing them through the spatial positioning of the building. However, this strategy becomes more evident in Design Proposal Two.

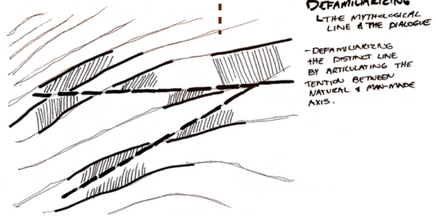


Fig. 239- Conceptual development of Axis on site (Author, 2021)

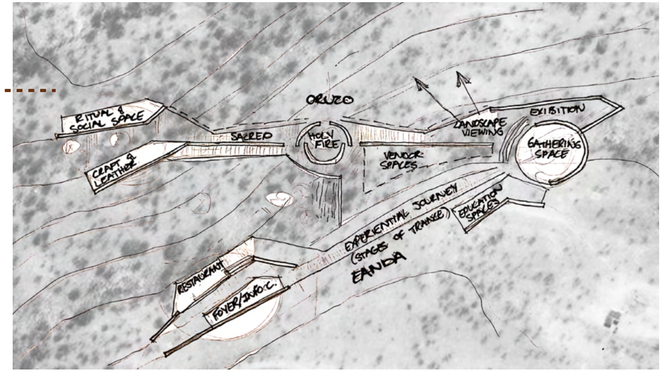


Fig. 240- Design development1 sketch plan (Author, 2021)

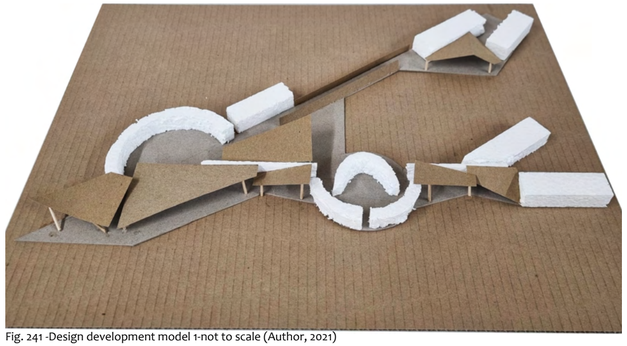


Fig. 241 -Design development model 1-not to scale (Author, 2021)

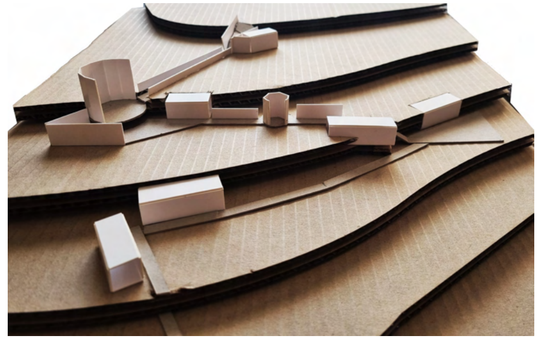


Fig. 242 -Design development model 2-not to scale (Author, 2021)

5.6.4 STRUCTURAL TOUCHSTONE

WHAT IS THE TOUCHSTONE ABOUT?

Construction phenomenology will be based on the concept of the core. Battling with the two worlds of modernisation and tradition, there is one constant aspect in the Himba culture, and this is their connection between the living world and the spirit world. During ritual activities, they commemorate their ancestors through recreating a system of places, echoing their selective presentation of genealogies. This element was identified as the most crucial aspect that endows the Himba with identity and belonging.

The phenomenology of the construction will support this concept of the everlasting spiritual core. Therefore, the structure will exist of two elements: a never-changing component and adjusting components latching on to the constant element.

This construction will also entail a timeline where the fundamental core element is exposed after the disintegration of the external material. Consequently, materiality, morphology and structural typology will all play an essential role in constructing the Himba Ritual Pavilion.

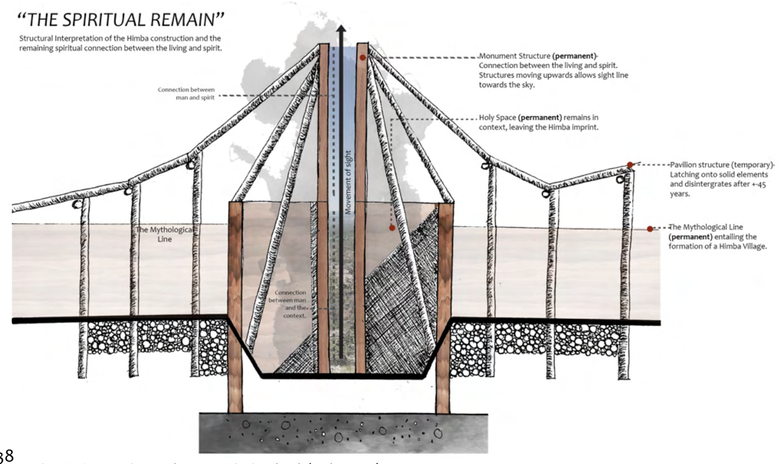


Fig. 243- Construction Touchstone Inspiration sketch (Author, 2021)

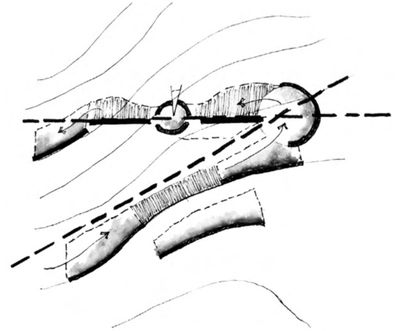


Fig. 244- Construction Touchstone Development (Author, 2021)

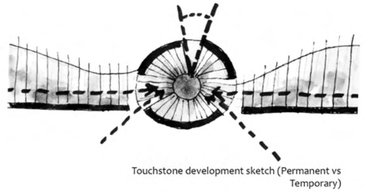


Fig. 245- Construction Touchstone Development (Author, 2021)

REPRESENTATION OF THE TOUCHSTONE

The construction touchstone emphasises the tension between enduring versus transient materiality, solidity versus frame structures, and modern versus traditional morphology.

The intended materials include rammed earth, with a life span of 1000+ years, as well as native mopane circular timber beams and columns that will remain in place for +- 25 years. Due to the materiality of the timber structure, it will disintegrate after a few years. Consequently, the rammed earth construction will remain, leaving the Himba imprint on the context and emphasising the lasting connection between man and spirit.

Two different structural systems are explored, namely a solid (enduring) and lightweight (transient) structure. The lightweight structures latch onto the substantial elements, emphasising the importance of the main components.

Several vernacular techniques are included in the touchstone. The central circular element reinterprets the morphology of a Himba hut, as does the roofing structure. The rammed earth materiality also has a clear connection to the adobe type of construction of the Himba. The additional lightweight system adopts a more modern approach, which emphasises the tension between tradition and modernity.

Note that the construction approach was revised later in the design process. The later approach entails community participation for the upkeep of the building, rather than focusing only on transient and enduring materiality. The concept of solid versus frame structures was still implemented in the design, but was interpreted differently than in the early construction touchstone. The idea of modern versus traditional morphology is presented as two different elements in the first approach. In the new proposal, characteristics are extracted from traditional elements and then defamiliarised to achieve an aspect that entails both modern and traditional features.

Fig. 246- Construction Touchstone Model (Author, 2021)

Fig. 247- Construction Touchstone Model (Author, 2021)

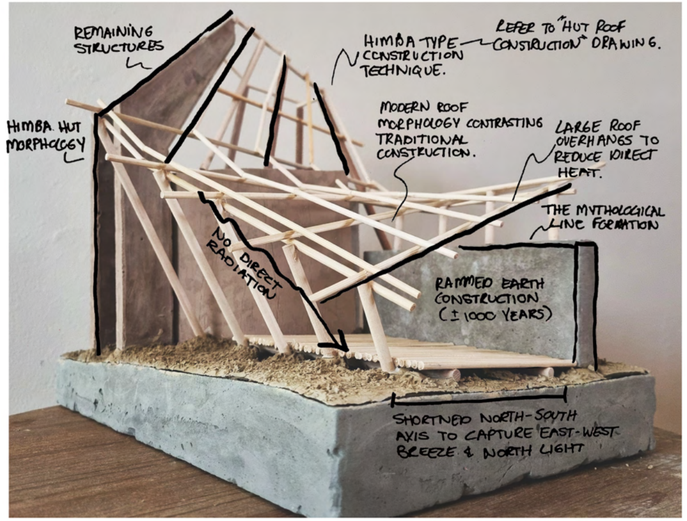


Fig. 248- Construction Touchstone Model (Author, 2021)

5.6.5 EXTERNAL REVIEW 1 PROPOSAL

With the first approach toward the design (refer to fig. 249-251), the designer tried to incorporate the three main concepts. The concept of the symbolic line is clearly evident in the layout. It entails the sacred space in the middle, with two main spatial points on either side, resembling the formation of the Oruzo clan (cattle enclosure - holy fire - chief hut). The layout also involves a second spatial axis jutting out from one of the primary spatial points, resembling the Eanda clan in a traditional village layout. This formation controls the experiential circulation through the building. Tourists will enter through the Eanda axis and move towards the Oruzo axis to enter the pavilion space.

The gathering point in the layout can be seen as the sacred fire. The concept of the core supports this order, as it emphasises the holy area as the most significant element, both in the design and in traditional life. This space will be where the traditional world meets the modern world.

Dialogue is represented in the layout by incorporating the natural and man-made axes from the landscape and the village. However, the tension between the landscape axis and the town axis, clear hierarchy and appropriate thresholds has not yet been achieved in the layout.

Fig. 249- Design Approach 1 working model (Author, 2021)

Fig. 250- Design Approach 1 working model (Author, 2021)

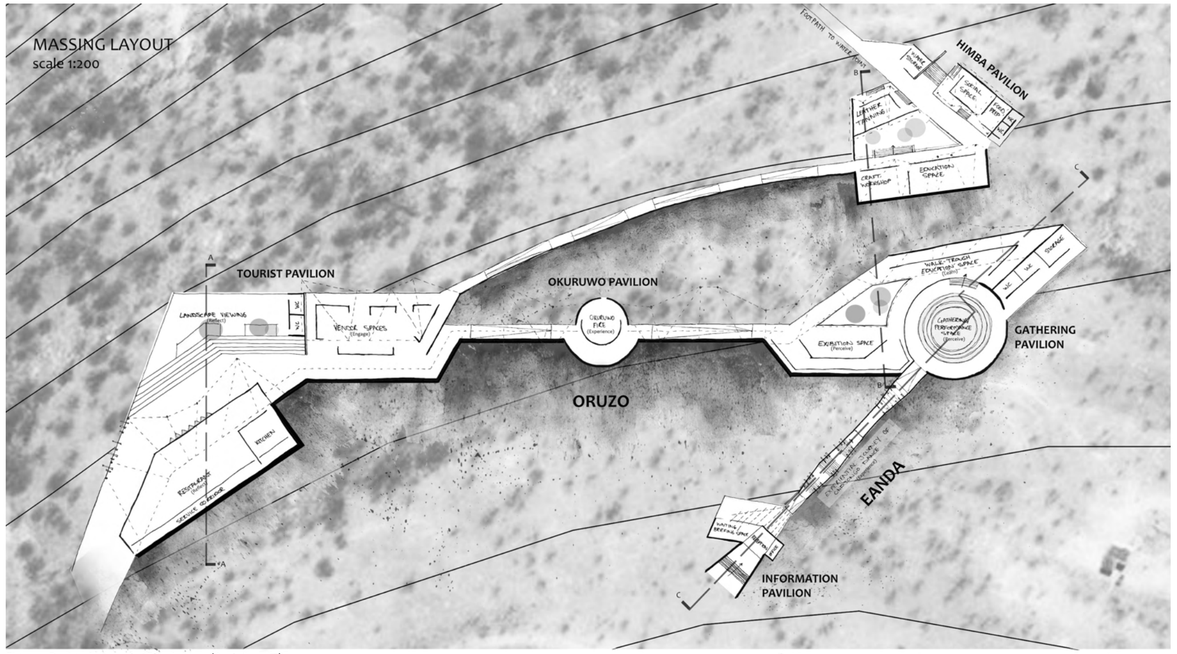


Fig. 251- Design Approach 1 Plan Layout (Author, 2021)

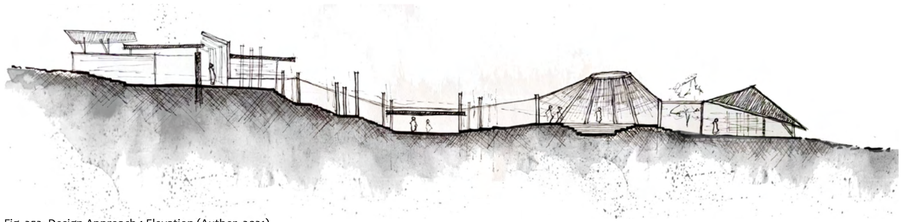


Fig. 252- Design Approach 1 Elevation (Author, 2021)

The defamiliarisation of the edges and angles of the landscape inspired the first roof exploration (refer to fig.254). The design proposed that the spaces be sunk into the ground to minimise the climatic effect on the building (refer to fig.255). The system entailed solid retaining walls with a tent-like roof system, screening the spaces from the harsh climate. This proposal necessitated the characteristics mentioned regarding the structural touchstone, namely frame versus solid elements, and temporary versus permanent materials.

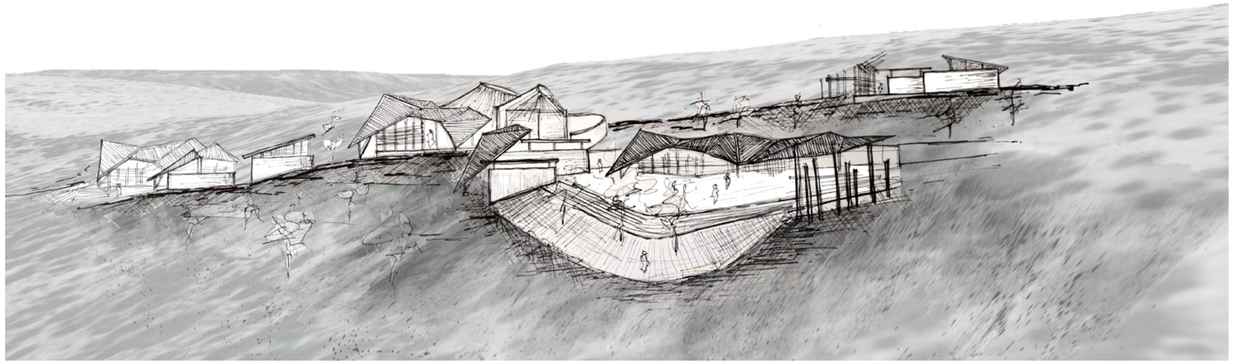


Fig. 253- Design Approach 1 Perspective (Author, 2021)

Fig. 255- Ondjongo dance walkway Proposal 1 (Author, 2021)

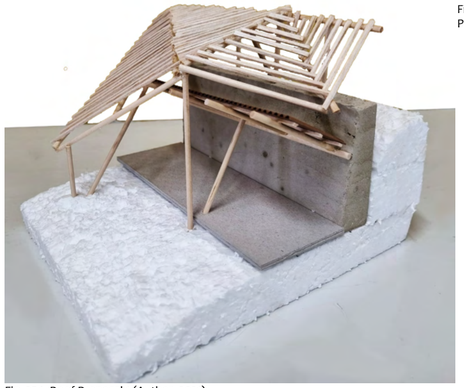


Fig. 254- Roof Proposal 1 (Author, 2021)

Overall, the design can be seen as a stepping stone for the project, entailing several conceptual elements and implementing the strategies of Frampton and Tzonis & Lefaivre. However, improvements such as making the layout more organic, improving the Himba village design, designing the space between the axes and noticing the scale of civic spaces, were added in further design developments.

Fig. 256- Entrance Proposal 1 (Author, 2021)

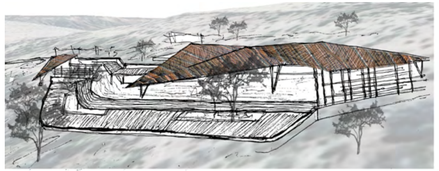


Fig. 257- Market pavilion Proposal 1 (Author, 2021)

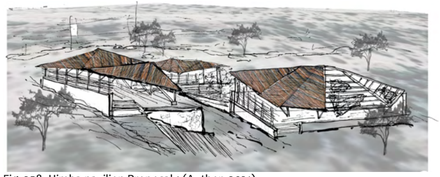


Fig. 258- Himba pavilion Proposal 1 (Author, 2021)

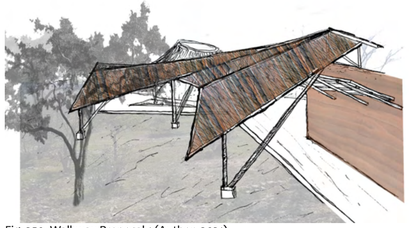


Fig. 259- Walkway Proposal 1 (Author, 2021)

5.7 DESIGN DEVELOPMENT 2

5.7.1 INTERNAL REVIEW 1 PROPOSAL

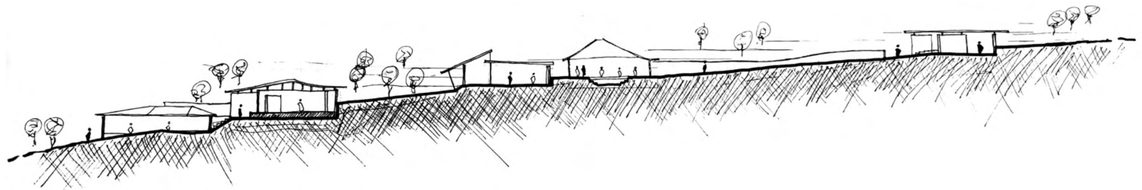


Fig. 260- Design Approach 2 section (Author, 2021)

The second design proposal took a different approach in terms of the style of the layout and the features of spaces. The form became much more organic, while the spaces also become more enclosed with distinct circulation routes (refer to fig.262). This type of enclosed/ detached spatial typology relates better to Himba construction than the previous open-plan layout. However, the design can be criticised as being confusing. The change in the typology also led to the previous roof structure not being suitable anymore.

The built model only explored the change of the layout, and therefore contains no roof (refer to fig.261).

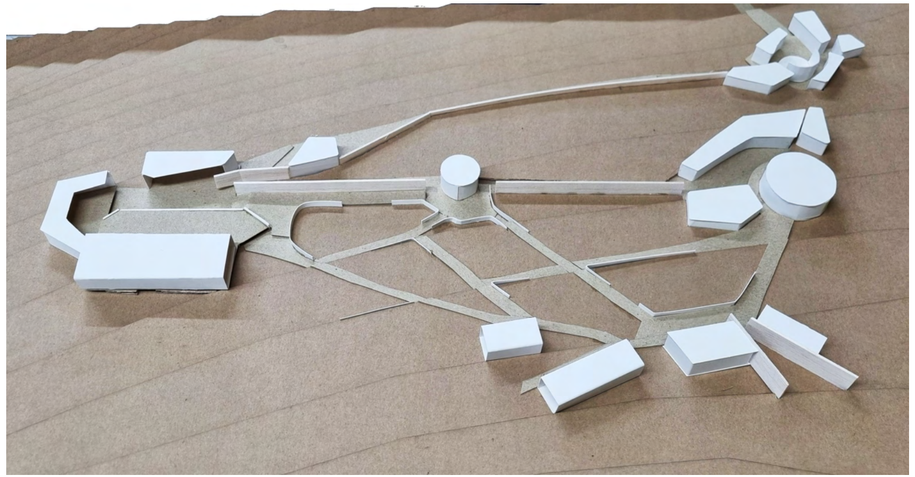


Fig. 261- Design Approach 2 Working Model (Author, 2021)

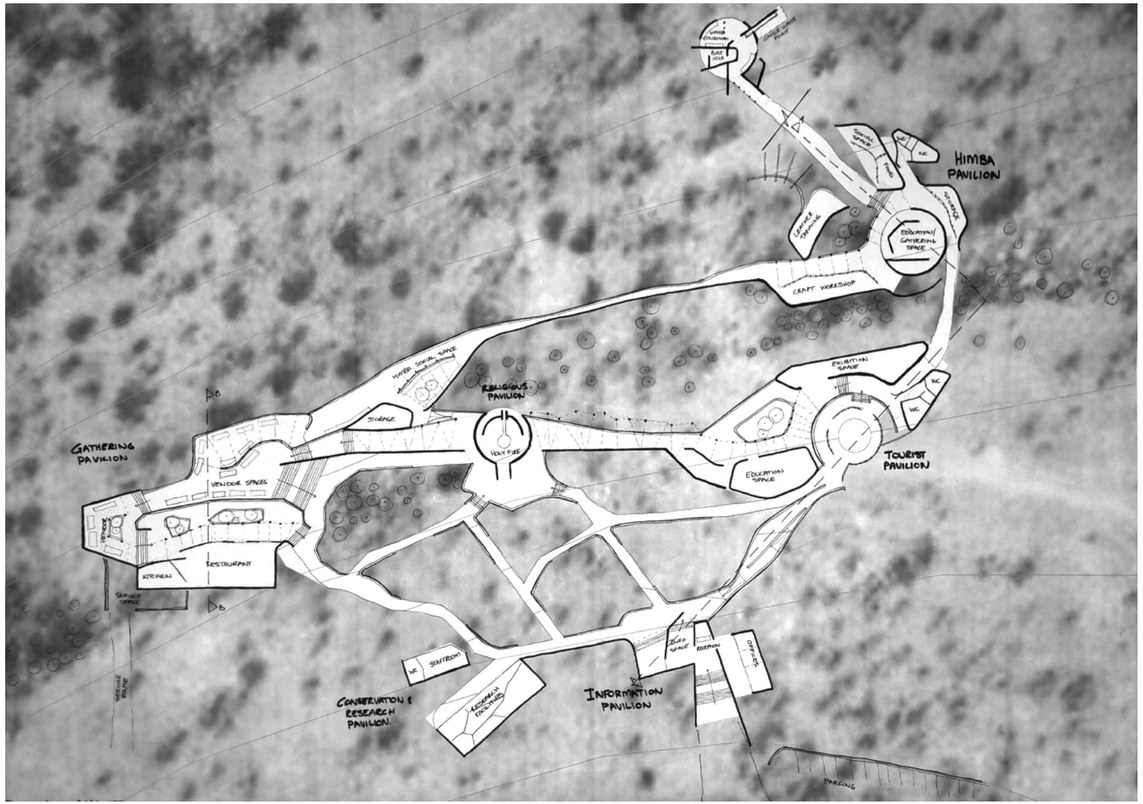


Fig. 262- Design Approach 2 Plan Layout (Author, 2021)

Fig. 263- Design Approach 2 Roof Exploration Model (Author, 2021)

In proposal two, a roof structure with bent elements were explored due to its relation to Himba construction practices (refer to fig.263 & 265). During the construction of a hut, branches are bent towards the centre of the hut and tied. The implementation of this characteristic in a roof structure will represent Cassidy's strategy, and possibly reach the design principle of embracing regional architectural traditions and practices.

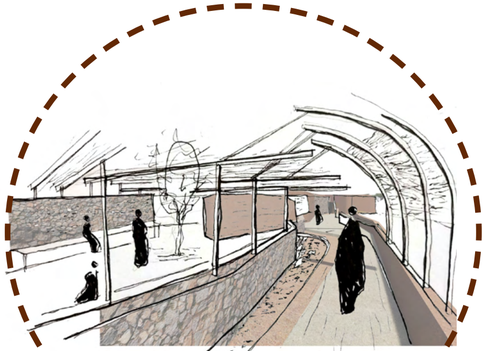


Fig.264- Design Approach 2 Social Space Perspective (Author, 2021)

Fig. 265- Design approach 2 roof exploration working model (Author, 2021)

Fig. 266- Design Approach 2 Himba Pavilion Perspective (Author, 2021)

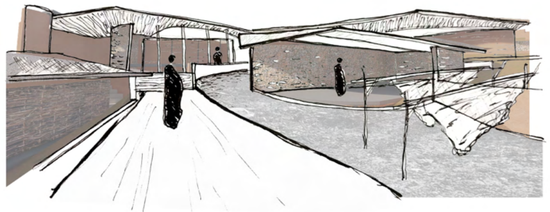


Fig. 267- Design Approach 2 Himba Pavilion Perspective (Author, 2021)

Fig. 268- Design Approach 2 Water Point Perspective (Author, 2021)

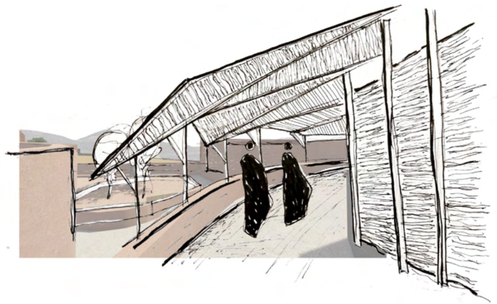


Fig. 269- Design Approach 2 Ritual Pavilion Perspective (Author, 2021)

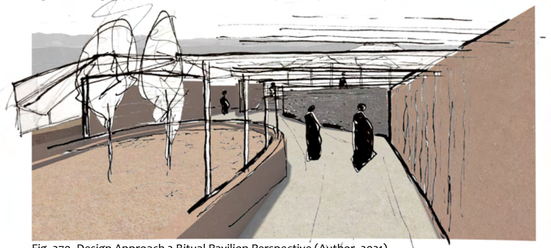


Fig. 270- Design Approach 2 Ritual Pavilion Perspective (Author, 2021)

Fig. 271- Design Approach 2 Holy Fire Perspective (Author, 2021)

5.8 DESIGN DEVELOPMENT 3

5.8.1 DIAGRAMATIC DEVELOPMENT

Fig. 272- Development Model (Author, 2021)

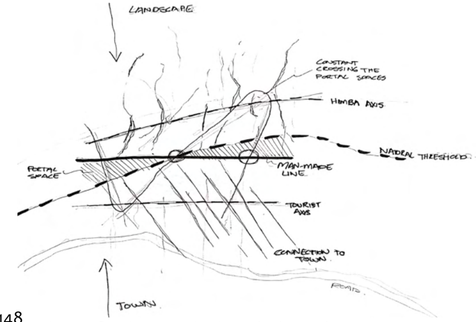


Fig. 273- Influencing Axis on Site Diagram (Author, 2021)

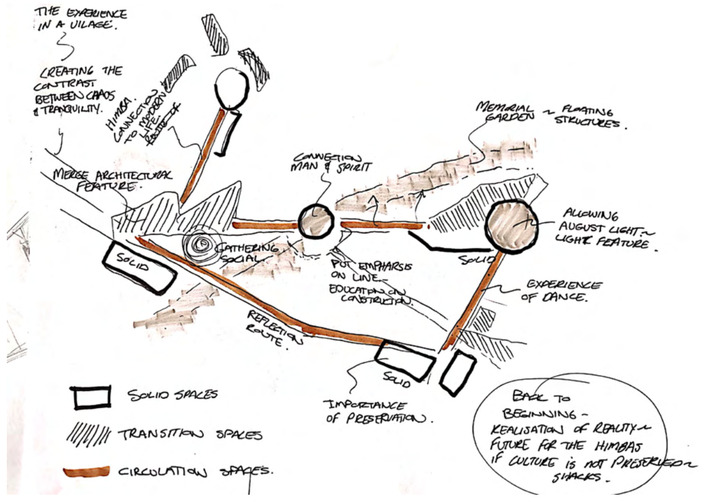


Fig. 274- Diagram showing Experiential spaces (Author, 2021)

During this development, the designer explored how the town grid could be incorporated in the design (refer to fig.274). The aim was also to allow better spatial flow and to simplify the layout. Uncertainties about what the building should look like arose during this process, which caused the architectural language to become unclear. Each pavilion presented a different architectural style, which caused the design to become discordant.

The following development aimed to correct the issues related to design proposal two and the designs that followed. The designer therefore reconstructed the design to entail a coherent architectural language containing rigid circulation routes and organic wall morphologies to define spaces (refer to fig.275). Natural sections between areas and circulation routes were incorporated to maintain a constant connection to the landscape, and to indicate the liminal space present among the spatial forms in a village. Bold and solid retaining walls were also featured, indicating the direction of movement and applying thresholds between different spaces. Overall this building morphology related better to Himba structures than the other layouts, as it reflected its organic nature and the connection to the landscape, while also connecting to the town grid.

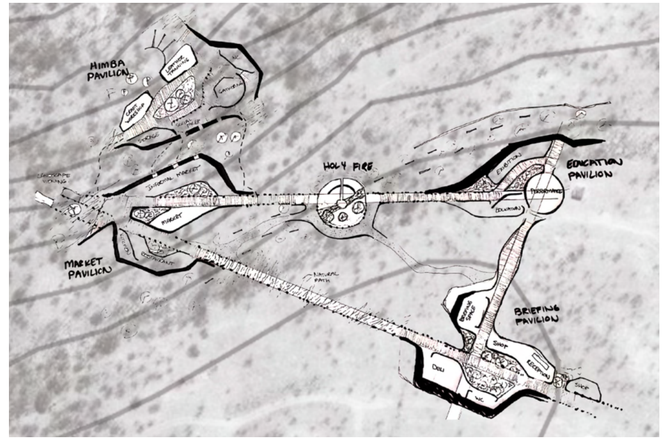


Fig. 275- Design Approach 3 Parti Diagram (Author, 2021)

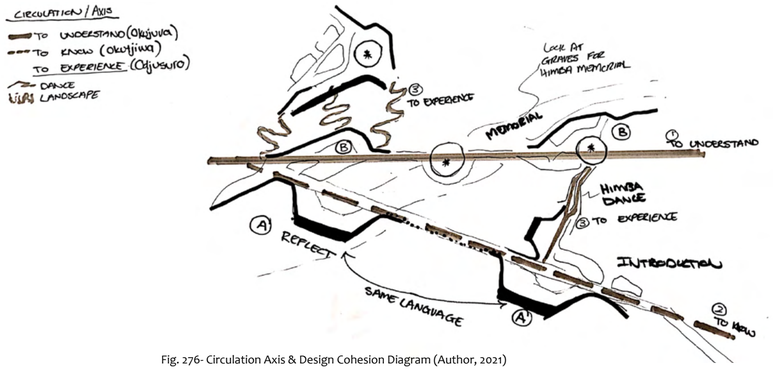


Fig. 276- Circulation Axis & Design Cohesion Diagram (Author, 2021)

5.8.2 PRECEDENT STUDY

Sandibe Okavango Safari Lodge / Nicholas Plewman Architects in Association with Michaelis Boyd Associates
Okavango Delta, Botswana

Fig. 277- Sandibe Okavango Safari Lodge (Archdaily,2020: online)

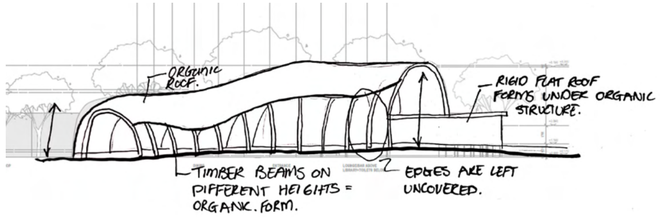


Fig. 278- Elevation analysis Adapted by author: (Archdaily,2020: online)

The Sandibe Okavango Safari Lodge is situated in Botswana, and functions as a hotel. The roof morphology was inspired by the creatures inhabiting the surrounding context and, specifically, the armadillo. The construction involves laminated pine timber beams with different heights, which informs the organic morphology of the roof, covered with butt-jointed pine scale planks. The roof appears as a protective carapace of scales similar to that of an armadillo (ArchDaily, 2021e:online).

Inspiration was drawn from the curved roof morphology (refer to fig.278). This structure, however, does not involve the theory and characteristics of bent structural branches, as suggested by the construction of a Himba hut. Therefore, the curved roof idea was altered to suit the specific construction characteristics of the Ritual Himba Pavilion (refer to fig.281 & 283).

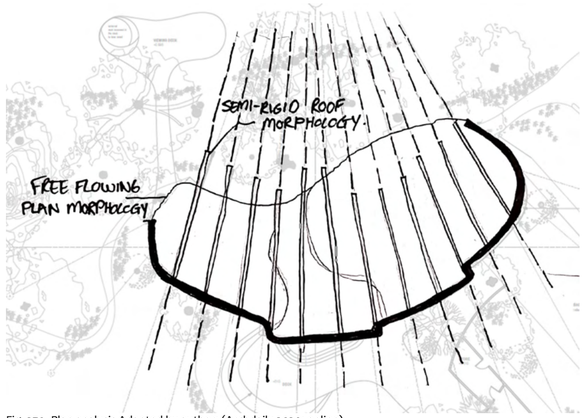


Fig. 279- Plan analysis Adapted by author: (Archdaily,2020: online)

Fig. 280- Sandibe Okavango Safari Lodge (Archdaily,2020: online)

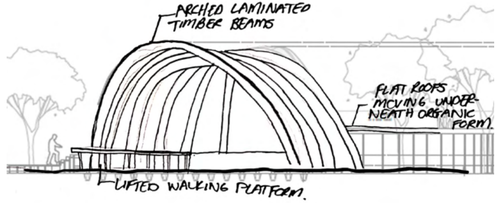


Fig. 282- Section analysis Adapted by author: (Archdaily,2020: online)

Precedent influence on design:

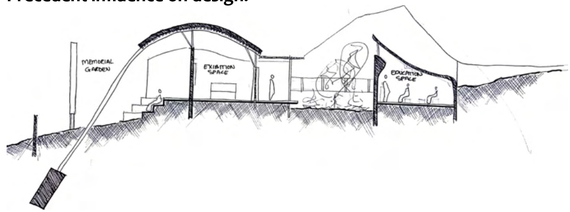


Fig. 283- Design Approach 3 Sectional Roof Development (Author, 2021)

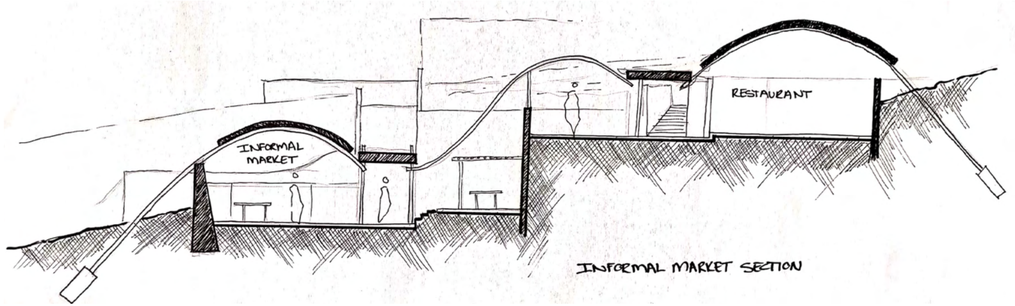


Fig. 281- Design Approach 3 Sectional Roof Development (Author, 2021)

5.8.3 CONCEPT AND THEORETICAL IMPLEMENTATION IN LAYOUT

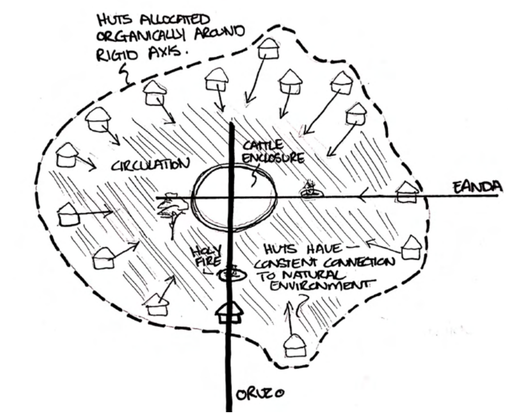


Fig. 284- Himba Village Analysis (Author, 2021)

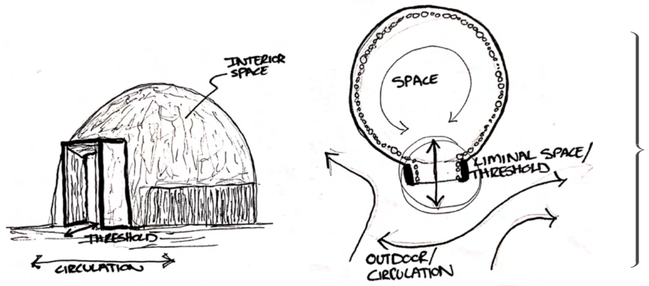


Fig. 285- Himba Hut analysis (Author, 2021)

ORGANIC ALLOCATION OF SPACES AROUND RIGID AXIS

CONSTANT CONNECTION TO NATURAL ENVIRONMENT.

THRESHOLDS BETWEEN SPACES

The two essential factors extracted from the analysis of the elements of a Himba village were the organic allocation of the Himba huts around the Okuruwo axis, and the constant connection to the natural environment (refer to fig.284). One implemented these elements through the organic walls and space morphology, as well as the natural cut-out sections between the circulation and spaces (refer to fig.286 & 287).

The application of thresholds between different spaces was suggested through the Himba hut analysis (refer to fig.285). Although there are numerous Himba hut typologies, most huts entail an extrusion at the entrance, allowing a threshold between the outdoor and interior spaces. This characteristic is executed in the design through signature thick organic walls that contain the layout, act as retaining walls, and provide distinct transitions between specific spaces (refer to fig.288).

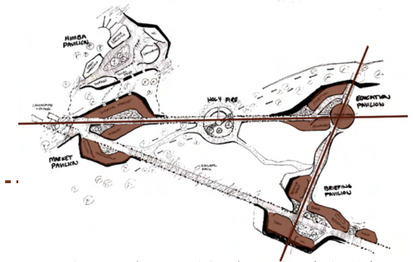


Fig. 286- Implementation of organic morphology of spaces in layout (Author, 2021)

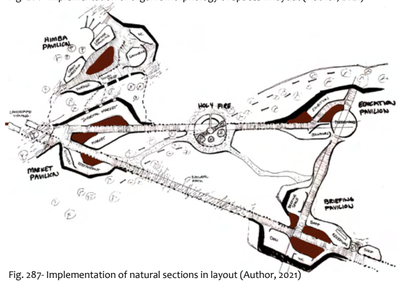


Fig. 287- Implementation of natural sections in layout (Author, 2021)

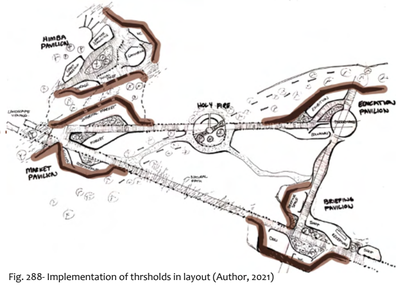


Fig. 288- Implementation of thrsholds in layout (Author, 2021)

These conceptual implementations refer to the approach of Timothy J. Cassidy, embracing regional architectural traditions and Tzonis and Lefaivre's approach of Syncretism. The design principles of Traditional & landscape practices and defamiliarization are therefore, taken into account during these stages (refer to page 49).

5.8.4 CONCEPT AND THEORETICAL IMPLEMENTATION IN SECTION

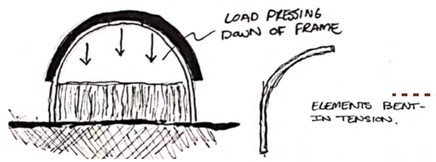


Fig. 289- Himba Hut construction diagram (Author, 2021)

BENT STRUCTURAL MEMBERS & SOLID LOAD ON FRAME STRUCTURE.

The characteristics of bent structural branches and a solid roof structure carried by a frame were implemented in the design (refer to fig.292). The roof construction is further explained in the structural development section (refer to page 166).

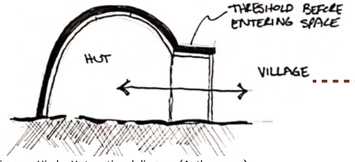


Fig. 290- Himba Hut sectional diagram (Author, 2021)

LIMINAL SPACE BETWEEN SPACES AND CIRCULATION

The extrusion at the entrance of the Himba hut, as previously mentioned, creates a threshold (refer to fig.290). These extrusions are more or less 600mm in depth, creating a transition space. The design emphasises this characteristic by separating the circulation platforms from the walls and only connecting the areas at the entrances, in effect creating a liminal space before the actual spaces are entered (refer to fig.295).

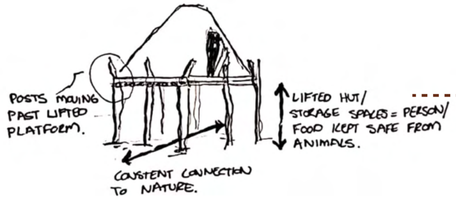


Fig. 291- Himba Hut on stilts analysis (Author, 2021)

CIRCULATION ELEVATED FROM GROUND

Other Himba construction details entail hut structures on stilts in response to keeping items or people safe from animals (refer to fig.291). This element is incorporated in the circulation platforms by lifting it from the ground to ensure a safe circulation space while maintaining the connection to nature.

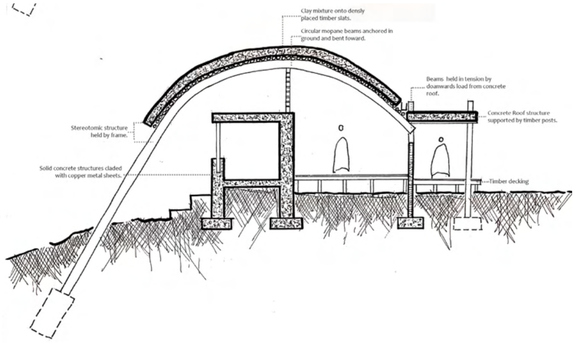


Fig. 292- Ritual Pavilion roof exploration sketch (Author, 2021)

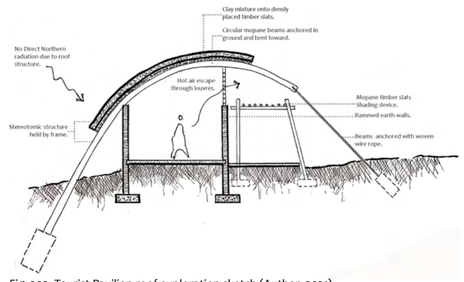


Fig. 293- Tourist Pavilion roof exploration sketch (Author, 2021)

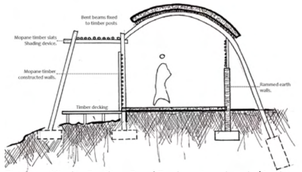


Fig. 294- Himba Pavilion Roof Exploration sketch (Author, 2021)

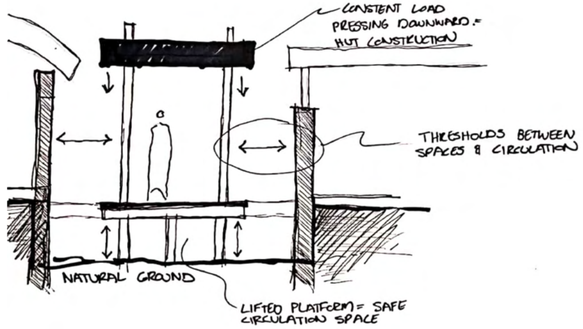


Fig. 295- Sectional exploration sketch (Author, 2021)

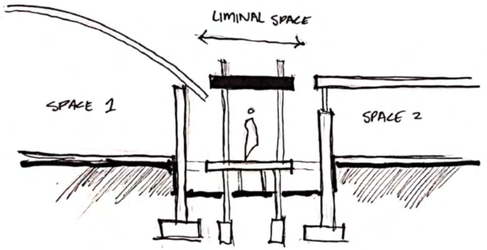


Fig. 296- Sectional exploration sketch (Author, 2021)

5.8.5 STRUCTURAL DEVELOPEMENT

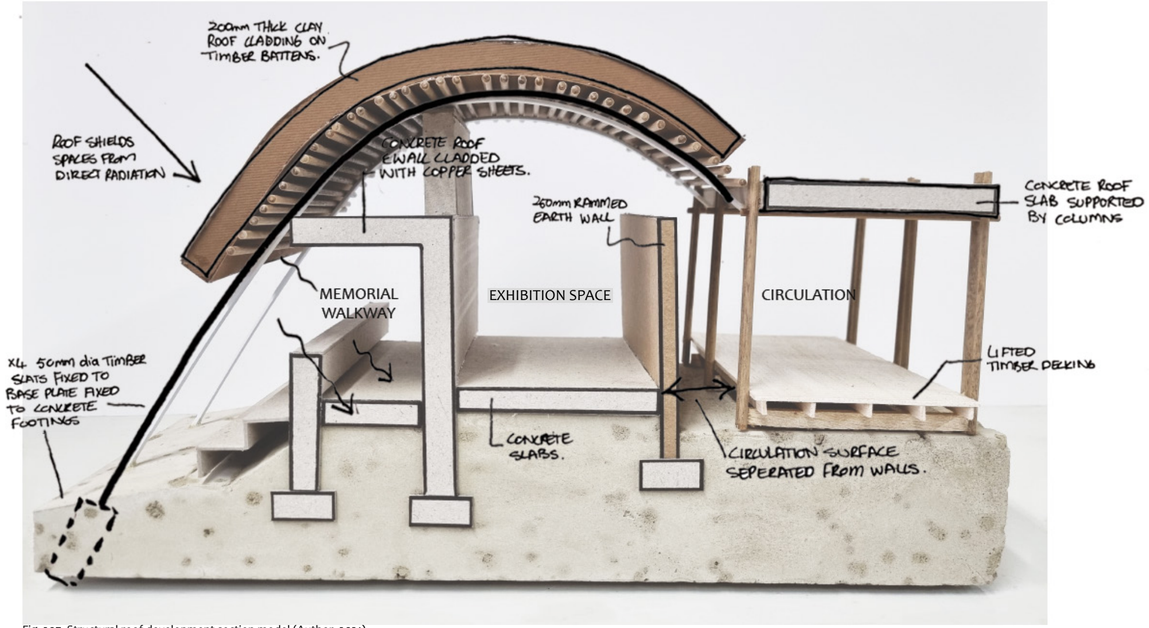


Fig. 297- Structural roof development section model (Author, 2021)

The roof structure, previously mentioned, was further structurally explored. This proposal entails structural units being planted, then bent forward and anchored at the edges (refer to fig.297). The structural members will be mopane slats tied together and dampened to obtain the desired flexibility. Mopane battens will be placed densely onto the structural branches, to which a thick clay mixture will be placed on top of the frame structure.

REVISED CONSTRUCTION PHENOMENOLOGY

Traces of the initial construction principles, namely solidity versus frame structures, modern versus traditional morphology, and enduring versus transient materiality, are still evident in the current design, but in a refined way.

Solid versus frame structures

This concept was attained by structurally analysing the Himba hut. The roof involves a frame structure supporting a solid/heavyweight roof cladding. The heavy clay cladding will apply a downward load onto the frame, which will contribute to keeping the bent elements in place. This application emphasises solid versus frame structures in composition, rather than independently. This design element has a strong connection to Cassidy's theory of Reflexive Regionalism.

Modern versus traditional morphology

The design strongly relates to the built form of the Himba, as previously mentioned (refer to page 58). These characteristics are reinterpreted/defamiliarised to attain a new typological roof structure. Contemporary and traditional elements are therefore joined in the revised structural scheme, rather than presented separately, as in the first proposal. This process relates to the syncretism approach of Tzonis & Lefaivre.

Enduring versus transient materiality

The structural aspect of enduring versus transient materiality is refined to relate with the design principle of participation. The materiality of the current proposal entails local structural timber members and purlins with 200mm thick clay roof plaster. By keeping the construction techniques and materials similar to that of the Himba, the design principle of participation can be observed in the building process and the maintenance of the building. As the clay roof cladding is a material that requires maintenance, the life expectancy of the building is dependent on community participation. If the building is no longer needed at some point in the future, the structure will disintegrate, except for the hierarchical points and the steel and concrete elements. The design principle of participation relates to Cassidy's approach, highlighting traditional and landscape practices in the building.

Note that this was the first step towards a suitable roof structure. The roof design will be structurally improved as the design process progresses.

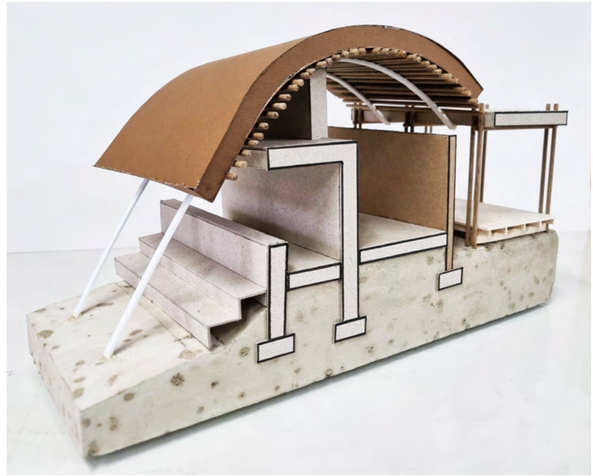


Fig. 298- Structural roof development model (Author, 2021)

5.8.6 EXTERNAL REVIEW 2

Working Model 3 is a development of the adjusted layout and the implementation of the new roof proposal. This development served as the basis for the final proposal. This design focuses on implementing all the influencing axes: the symbolic Himba line, the town grid, and the natural landscape contours and topography.

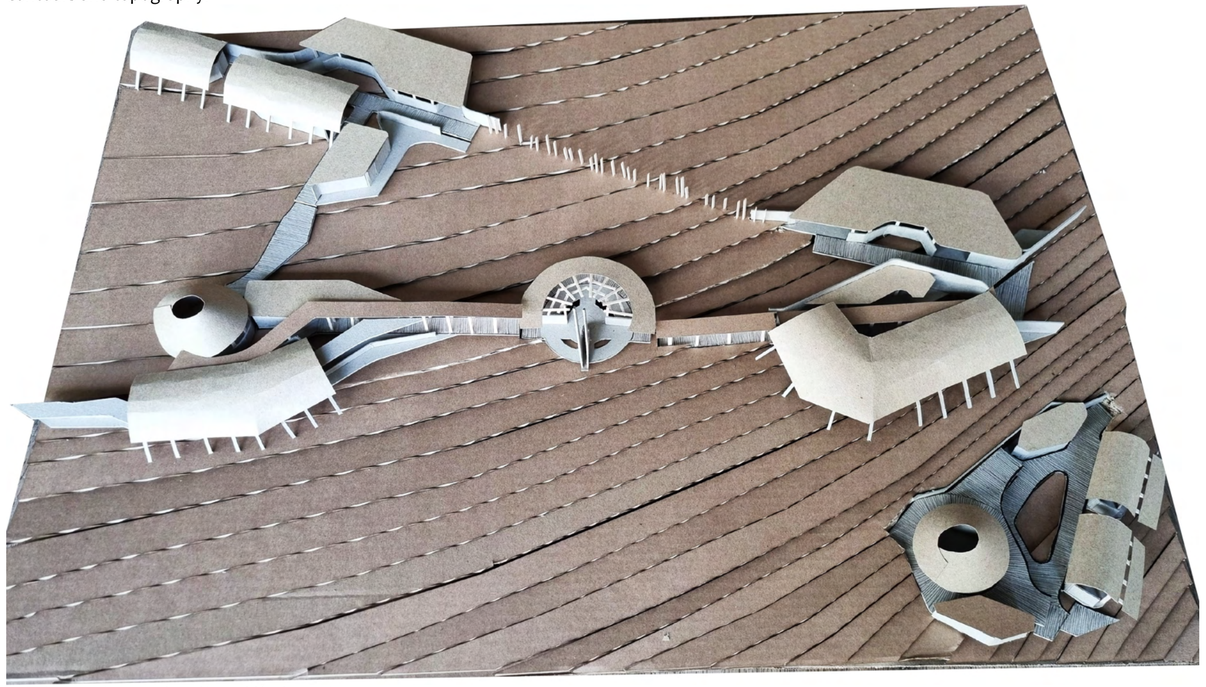


Fig. 299- Design proposal 3 working model (Author, 2021)

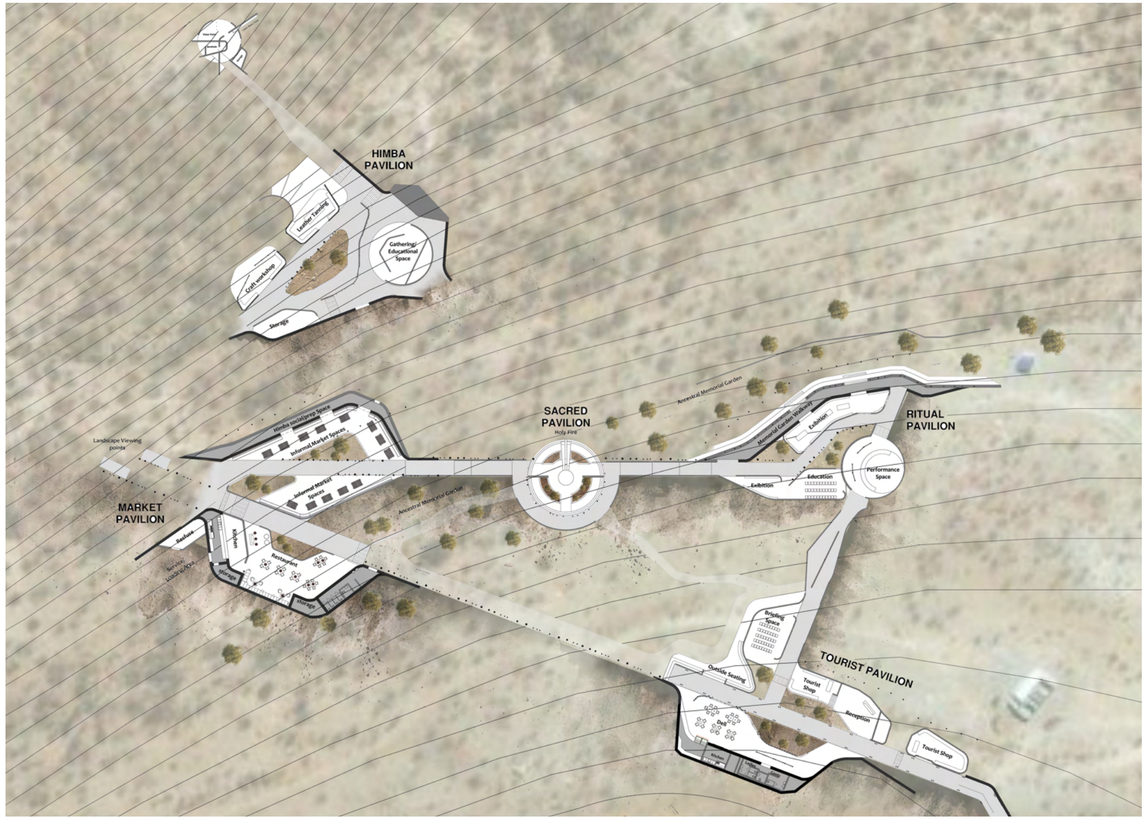


Fig. 300- Design proposal 3 plan layout (Author, 2021)

5.8.7PERSPECTIVE AND ELEVATION EXPLORATION

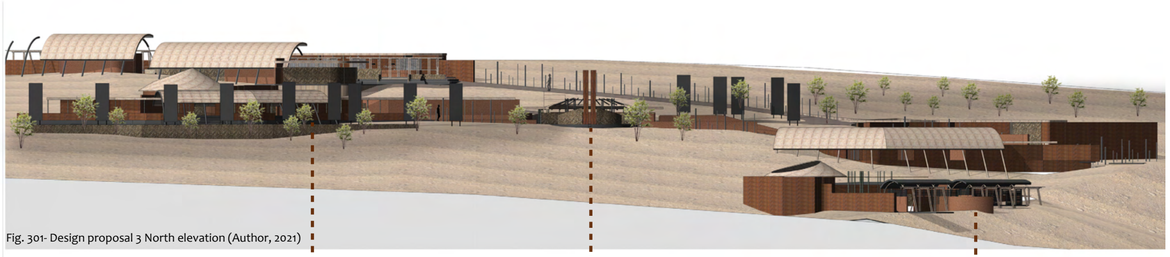


Fig. 301- Design proposal 3 North elevation (Author, 2021)

Fig. 302- Ritual Pavilion model (Author, 2021)

Fig. 303- Sacred Pavilion model (Author, 2021)

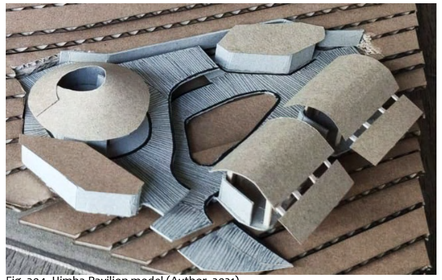


Fig. 304- Himba Pavilion model (Author, 2021)

MEMORIAL SPACE

The memorial garden will entail vertical panels which will appear as if it hovers in the air. These elements represent the in-between ancestral medium, connecting the Himba people and their God, the Makuru.

SACRED PAVILION

The holy fire space entails a roof structure with similar characteristics to a chief's hut roof construction. Initially, a chief's hut is constructed to allow the smoke from the holy fire to escape. This idea is presented within the design of the sacred pavilion.

HIMBA PAVILION

The Himba pavilion entails smaller spaces and structures. However, larger natural spaces and outside shaded areas are provided as socialising areas. This design, therefore, links with the spatiality of a village and allows the socialising conditions in which they feel most comfortable.

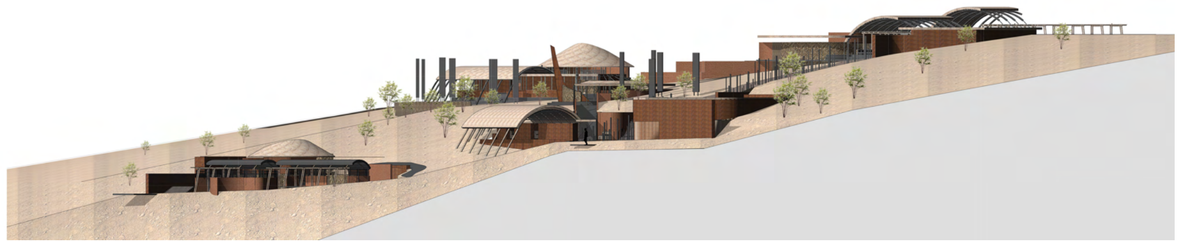


Fig. 305- Design proposal 3 West elevation (Author, 2021)

Figure 301 & 305 is a development on the elevations and perspectives of the various pavilions. The goal of these images was to apply suitable materials to the design, and to simulate the atmosphere of the Kunene Region and the Himba people in the building. This ambience was created by using natural materials such as stone, clay, mopane timber, and informal landscape and traditional construction methods.

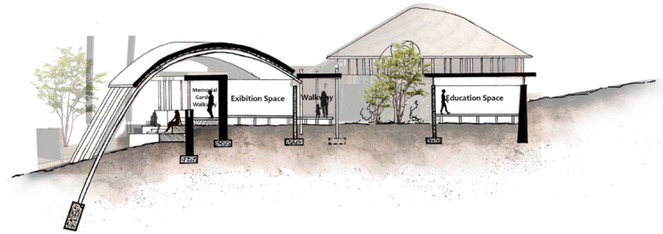


Fig. 306- Design proposal 3 Ritual Pavilion cross-section (Author, 2021)

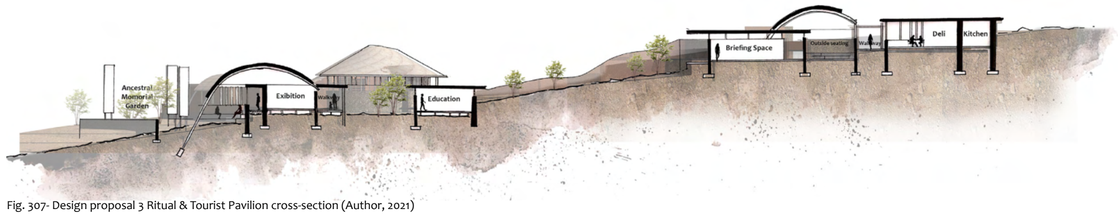


Fig. 307- Design proposal 3 Ritual & Tourist Pavilion cross-section (Author, 2021)

5.9 DESIGN DEVELOPMENT 4

5.9.1 STRUCTURAL DEVELOPMENT

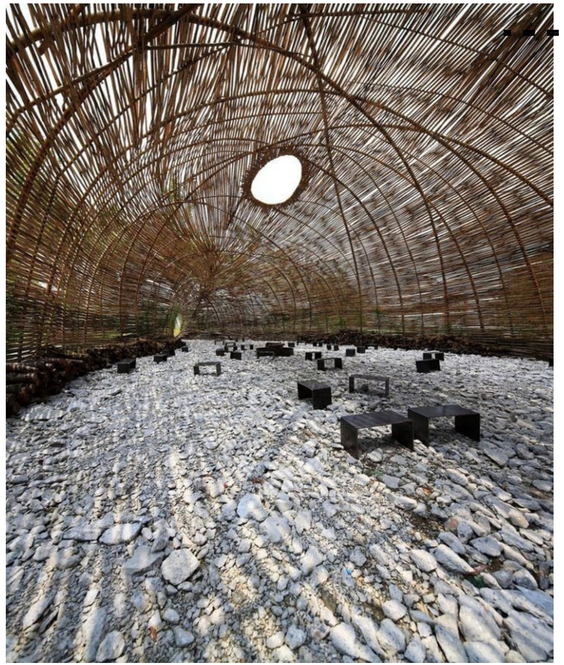


Fig. 308- Cicada / Marco Casagrande (Archdaily, 2012:online)

Fig. 309- Overlapping Members (Archdaily, 2012:online)

The roof design was re-evaluated after a meeting with the engineers, to establish structural integrity. The materiality of the structural members was therefore changed to steel rods, which gave the proposal a different design appearance, and linking even more with traditional Himba construction than the previous roof structure.

Cicada / Marco Casagrande

The Cicada pavilion by Casagrande was used as inspiration on how the steel rods can be incorporated into the design. This structure is located in Taipei city in Taiwan. The construction is based on the local knowledge of human-scale flexible bamboo structures containing a high level of inventiveness (Archdaily, 2012: online). The structural design entails primary structural bamboo members, which are bent to form arches (refer to fig.308). These members are overlapped with one another, and tied in different intervals allowing the members to brace themselves and one another (refer to fig.309 & 310). The placement of the members provides the structure with a sense of coordinated informality. The members are then covered with woven bamboo strips.

The proposed roof will entail a similar coordinated informal structure, with bent steel rod members and a covering of mopane timber slats (refer to fig.311 & 312). This type of construction links with the aspects of technical phenomenology mentioned earlier.

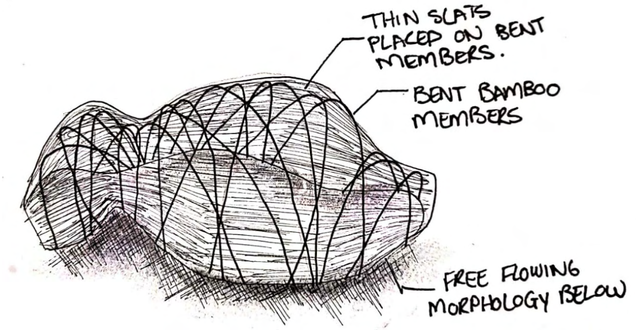


Fig. 310- Structural analysis Adapted by author: (Archdaily, 2012:online)

Precedent influence on design:

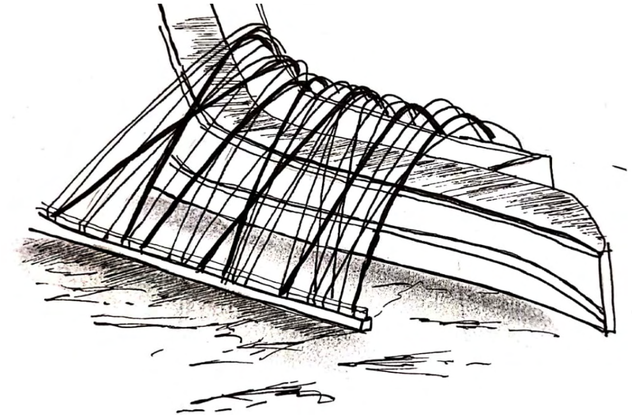


Fig. 311- Structural roof development 4 (Author, 2021)

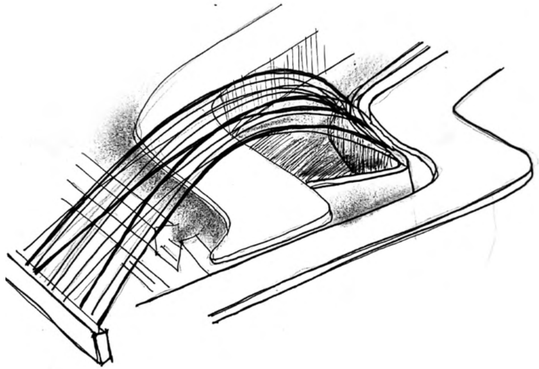


Fig. 312- Structural roof development 4 (Author, 2021)

5.9.2 CHOICE OF MATERIALITY

TIMBER

The local material of mopane timber will be utilised in the building through shading structures, timber decking, and purlins within the roof construction. Mopane timber is one of the most used materials in Himba construction due to its durability and resistance to termites. However, this material does have certain disadvantages when considering it as a structural element within this specific building design and scale.

Fig. 314- Timber (Shutterstock, n.d.: online)

ADOBE PLASTER & RAMMED EARTH

The walls will be rammed earth construction. This method is closely connected to the natural and informal materiality of the earth mixture used in a Himba hut. This technique is suitable for the desert climate and rural context of Opuwo, as the material is locally available and has good thermal properties. Consequently, it is a sustainable building technique feasible for rural development in dry environments. The construction of rammed earth will also enable community participation. It uses similar indigenous techniques such as mixing the adobe and compacting it to form a structural system.

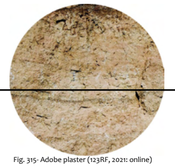


Fig. 315- Adobe plaster (123RF, 2021: online)

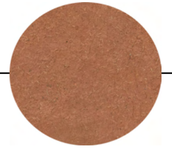


Fig. 316- Rammed Earth (Shutterstock, n.d.: online)

STONE

Due to the rocky context in which the building is situated, the local stone will also be utilised to incorporate raw contextual materials within the building and contribute to a tactile experience. By including these local materials, the building will need a low level of embodied energy, and produce little waste.

Fig. 317- Stone (WallpaperFlare, n.d.: online)

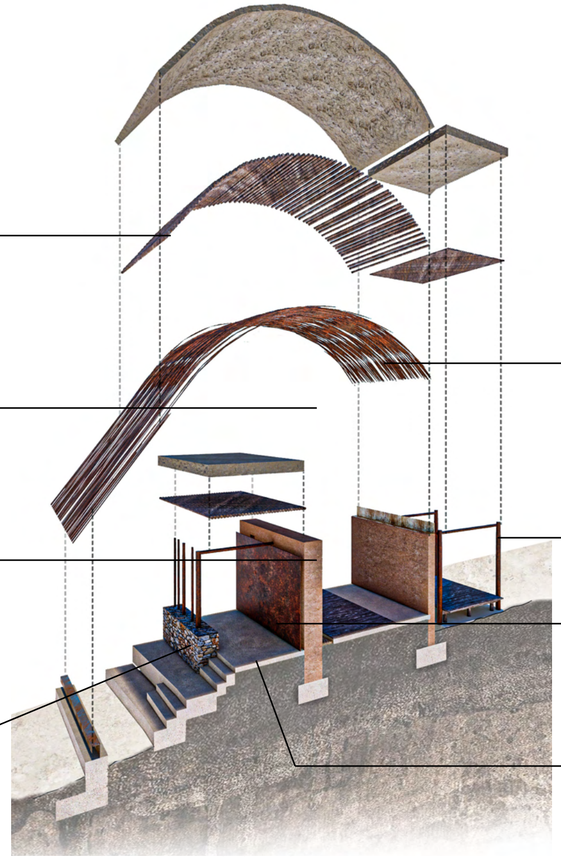


Fig. 313- Exploded sectional perspective (Author, 2021)

Fig. 318- Rusted steel rods(Karwat, 2015: online)

Fig. 319- Corten steel (WallsHeaven, n.d.: online)

Fig. 320- Concrete (Shutterstock, n.d.: online)

STEEL

The use of steel in the design represents the steel materiality in the informal structures occupied by the modernised Himba community surrounding the building as well as the built environment of Opuwo. Structural and cladding steel has become a popular material in modern Namibian architecture, specifically for its durability, aesthetic appearance within the dessert context, low maintenance and fire-resistant properties. It is therefore incorporated in the design as the primary structural material.

-Rods

The frame of the roof structure will be constructed from untreated steel round bar. This decision was based on the affordability of the material, its durability, and its ability to be bent on site.

The roof inspiration was obtained from the bent timber members in a Himba hut. Unfortunately, timber would not have been suitable for the intended scale and roof design as it would have deformed over time while supporting a load. The required member lengths would have been unavailable, the timber would have reduced the roof structure's intended character and theory, and it would have restricted the building with a shorter life expectancy. Laminated timber beams were also considered, but would have been too expensive and out of context of the rurality of Opuwo, and the theoretical approach.

-Circular steel columns and beams

The flat roof structures are constructed from untreated circular steel columns and beams, welded together to obtain a supporting frame. Local timber slats are then used as purlins, placed densely together with adobe plaster as the cladding roof material.

-Corten

In some areas, corten steel cladding is fixed to the adobe walls. This material is included to emphasise important thresholds or axes. The steel further provides a different tactile experience, and represents the idea of decay and embedded history.

CONCRETE

Concrete will only be used in the building for structural purposes such as wall footings, plinths walls and floor slabs.

5.9.3 SPATIAL DEVELOPMENT

Fig. 321- Omumborombonga tree (Author, 2021)

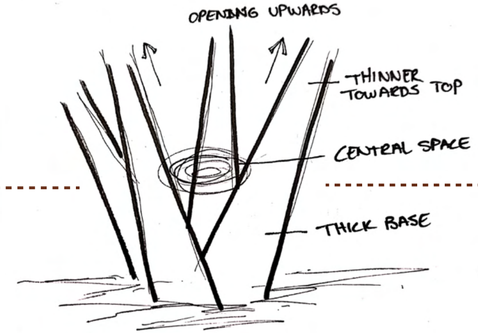


Fig. 322- Omumborombonga tree exploration (Author, 2021)

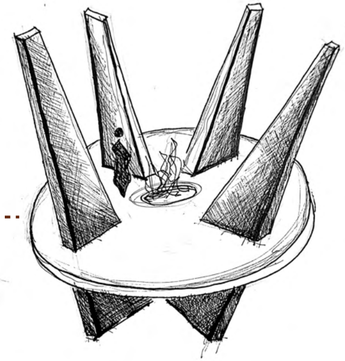


Fig. 323- Reinterpretation of legend in design (Author, 2021)

HIMBA LEGEND

The Himba people believe in the creation myth of their god, the Makuru and his wife Kamungarunga. They are descendants from the roots of a sacred tree called Omumborombonga (refer to fig.321). The scientific name of this tree is Combretum imberbe, also known as leadwood. The people also believe that their treasured cattle descended from the roots of this tree, while other animals and clans descended from blossoms and crawled out of the earth. The Omumborombonga tree is valued by the Himba people, and seen as the "father of life". When the people come across this tree, they place twigs at the roots of the tree as a gesture of respect (Kaakunga, 2018: online).

This legend is represented in the architecture of the sacred fire. This functions as a place of religious ritual, connecting the Himba with their ancestors and the Makuru. The sacred fire acts as a pinnacle point, with monumental structures

REINTERPRETATION OF THE HIMBA LEGEND

inspired by the morphology of the Omumborombonga tree (refer to fig.322). These structures push through the concrete to the underground level of the sacred pavilion, symbolising the roots of the tree. The visited will move from the sacred fire into the underground space, through the 'roots', and exit the sacred pavilion into the symbolic line. This design provides the visitor with the experiential journey of the Omumborombonga tree legend, about emerging from the roots. This architectural interpretation will possibly contribute to the understanding of the culture and its beliefs (refer to fig.323).

EXPERIENCE OF THE ONDJONGO DANCE

The Ondjongo dance is a ritual that occurs during social events or gatherings, such as weddings, and is known as the dance of happiness. It is practised only by using voices and handclaps. The dance entails a group standing in a circular formation, facing the centre. The leader then initiates the first reaction, to which the individuals in the group then responds. One of the dancers would then enter the central space, followed by energetic dance movements (refer to fig.324) (Mans, 1997:278). These movements incorporate the following characteristics, which will be reinterpreted into an architectural experience:

- Freedom in movement (refer to fig.325)
- Strong movements
- Disorientation
- Loss of balance
- Rotating movements

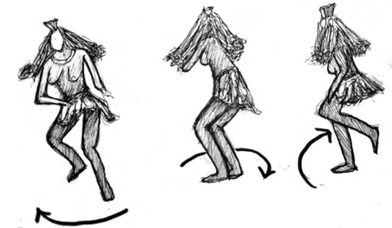


Fig. 324- Ondjongo dance circular movements (Author, 2021)

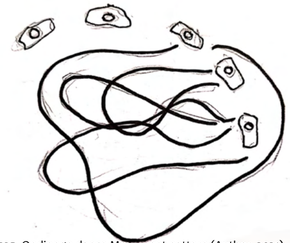


Fig. 325- Ondjongo dance Movement pattern (Author, 2021)

Fig. 326- Ondjongo Exploration sketch 1 (Author, 2021)

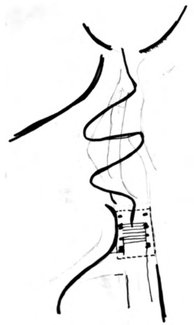


Fig. 327- Ondjongo Exploration sketch 2 (Author, 2021)

Fig. 328- Ondjongo Exploration sketch 3 (Author, 2021)

Fig. 329- Ondjongo Exploration sketch 4 (Author, 2021)

The burial spaces of the Himba inspired the memorial walls. The traditional tombstones involve a vertical stake plunged into the ground. Cattle skulls are then placed through the stakes, symbolising the deceased wealth (refer to p.52) (refer to fig.330). The tombstone is then finished with stones placed at the foot of the structure.

The memorial garden therefore involves a stone wall representing the rocks placed at the end of the stake (refer to fig.331 & 332). Circular steel elements are then vertically built into the stone wall, with earth bricks sliding into these vertical elements. Due to the simplicity of the construction of earth bricks, they can be produced by the Himba whenever a loved one passes away. This structure relates not only to the skulls placed on the stake, but also to the familiar ritual of beading.

REINTERPRETATION OF THE HIMBA GRAVES

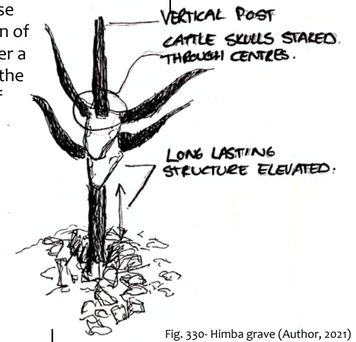


Fig. 330- Himba grave (Author, 2021)

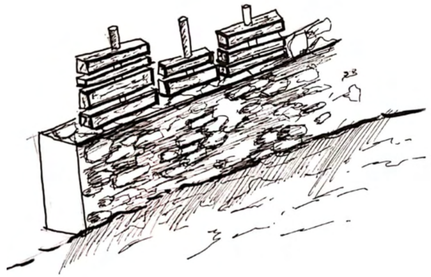


Fig. 331- Reinterpretation of Himba graves perspective (Author, 2021)

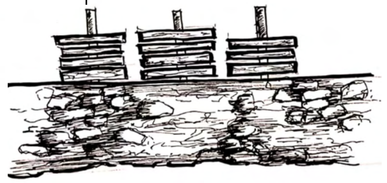


Fig. 332- Reinterpretation of Himba graves elevation (Author, 2021)

Fig. 333- Ritual pavilion model (Author, 2021)

Fig. 334- Sacred pavilion model (Author, 2021)

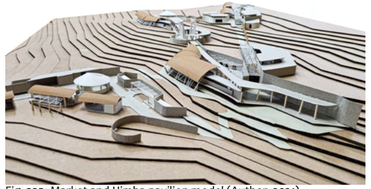


Fig. 335- Market and Himba pavilion model (Author, 2021)

5.9.4 EXTERNAL REVIEW 3

External 3 was the last design development towards a final design synthesis. During this stage, attention was paid towards detailing certain design elements, and re-evaluating specific design decisions in terms of how they relate to the Himba culture.

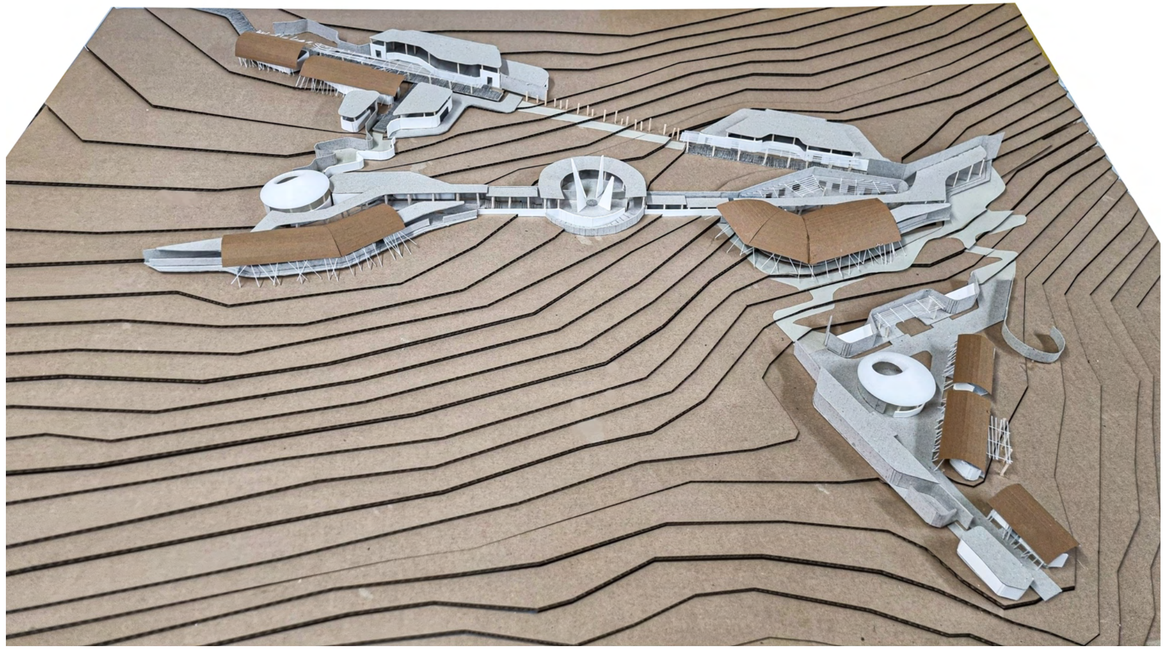


Fig. 336- External 3 model (Author, 2021)

Fig.337- Himba women around Holy Fire (Mcrae, n.d.: online)

06 CHAPTER

DESIGN SYNTHESIS

N

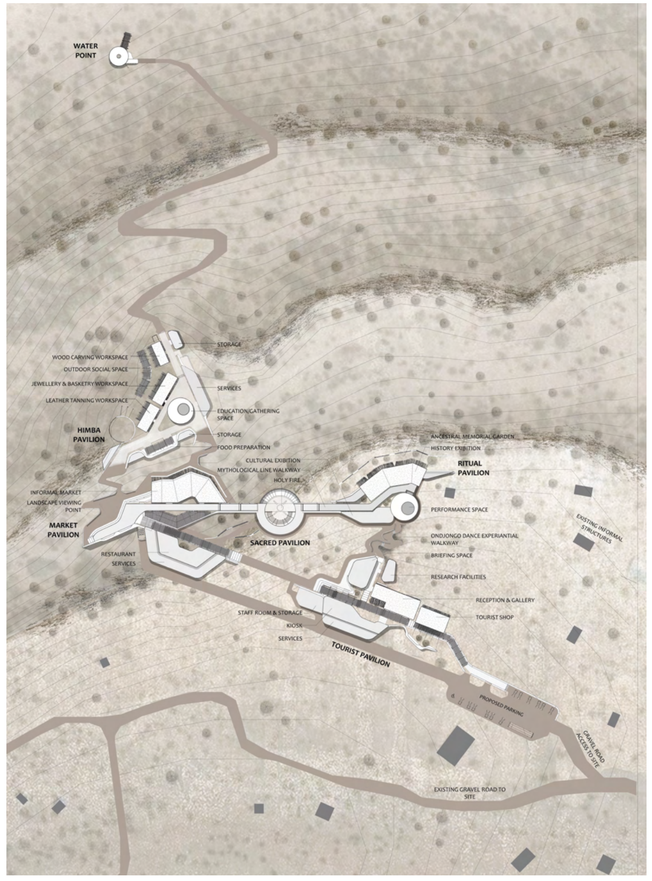
6.1 SITE PLAN

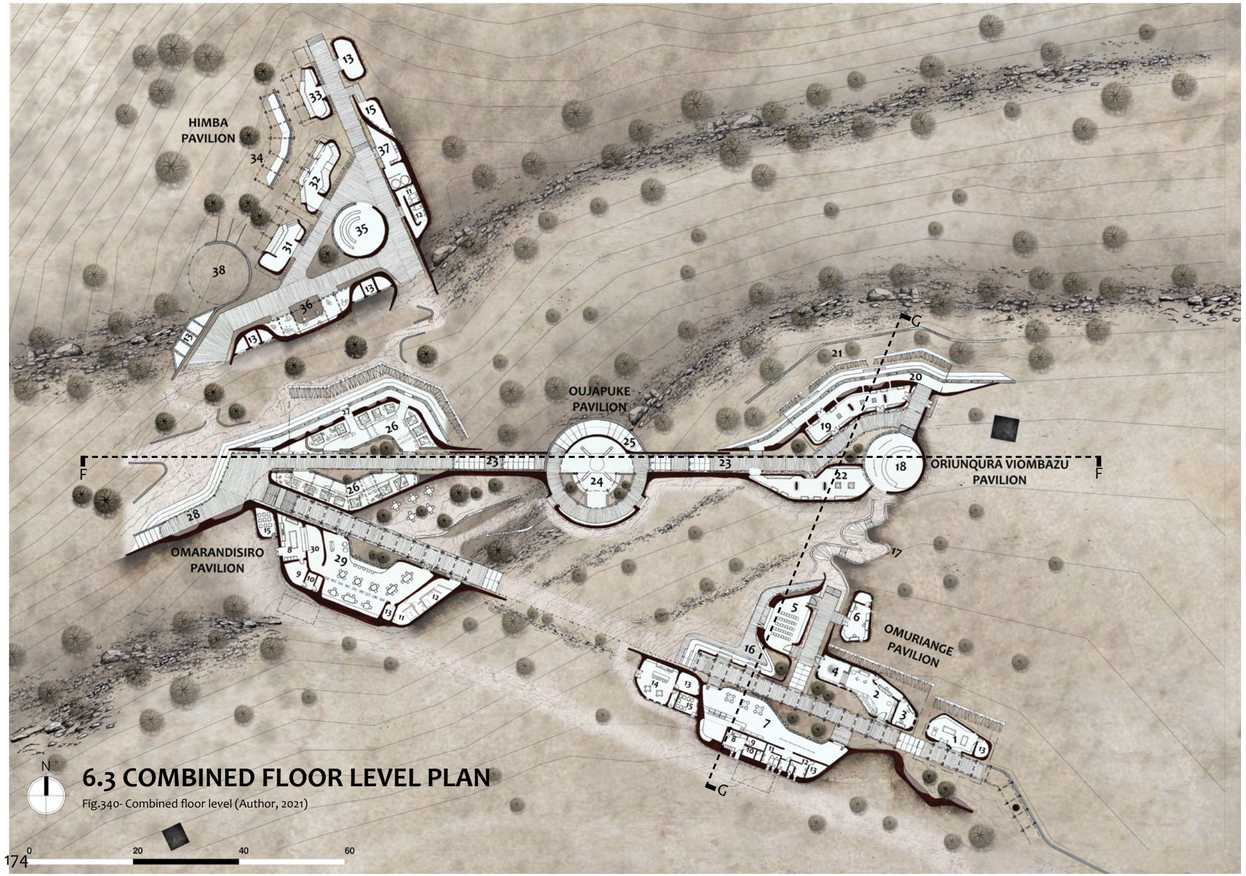
Fig.338- Site Plan (Author, 2021)

N

6.2 ROOF PLAN

Fig.339- Roof Plan (Author, 2021)





6.3 COMBINED FLOOR LEVEL PLAN

Fig.340- Combined floor level (Author, 2021)

OMURIANGE PAVILION (Tourist Pavilion)

1. Curious shop
2. Reception
3. Administration Office
4. Cultural Gallery
5. Briefing Space
6. Research facilities
7. Kiosk
8. Kitchen
9. Dry Storage
10. Cold Storage
11. Ladies Ablutions
12. Gents Ablutions
13. Storage
14. Staffroom
15. Refuse
16. Outside Seating Area
17. Experiential Ondjongo Dance Route

ORIUNQURA VIOMBAZU PAVILION (Ritual Pavilion)

18. Performance Space
19. Historic Exhibition
20. Ancestral Memorial walkway
21. Ancestral Memorial Garden
22. Cultural Customs Exhibition
23. Mythological Line Walkway

OUJAPUKE PAVILION (Sacred Pavilion)

24. Holy Fire
25. Underground Chief memorial space

OMARANDISIRO PAVILION (Market Pavilion)

26. Market Space
27. Himba social & market preparation space
28. Landscape Viewing Space
29. Restaurant
30. Food Collection

OVAHIMBA PAVILION

31. Leather tanning workspace
32. Jewellery & Basketry workspace
33. Woodcarving Workspace
34. Outdoor social Himba space
35. Gathering/Educational space
36. Food preparation space
37. Water Collection
38. Cattle Enclosure

OMEVA POINT

39. Water collection Points
40. Cattle water point
41. Borehole equipment room

6.4 OMURIANGE PAVILION / *TOURIST PAVILION*

The final design synthesis involves entering the portal through the south-eastern side of the tourist pavilion. Tourists will have the opportunity to visit the shop selling local curios, and gather at the outside seating space before entering the pavilion. They will then move towards the reception area leading to the Cultural Gallery and Briefing space. The visitors will be introduced to the Himba culture, and briefed as they journey through the building. The kiosk also provides the guests with beverages and snacks after their long travel. From the tourist pavilion, visitors will move towards the ritual pavilion.

Although there is an intended order inthe circulation, the visitors can move wherever they want as each person will experience the context differently. This also allows freedom in movement and exploration of the culture and landscape.

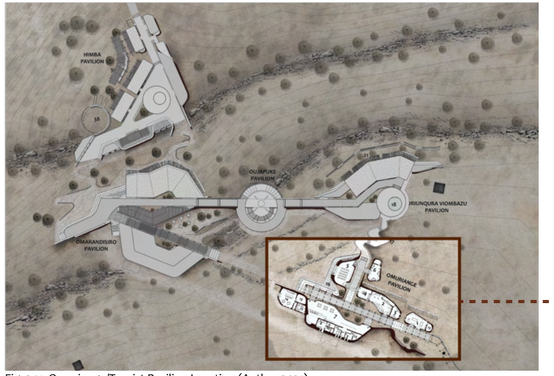


Fig. 341- Omuriange/Tourist Pavilion Location (Author 2021)

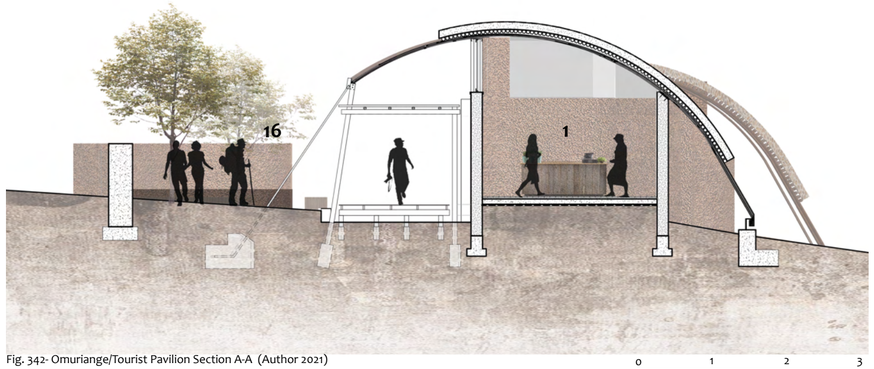
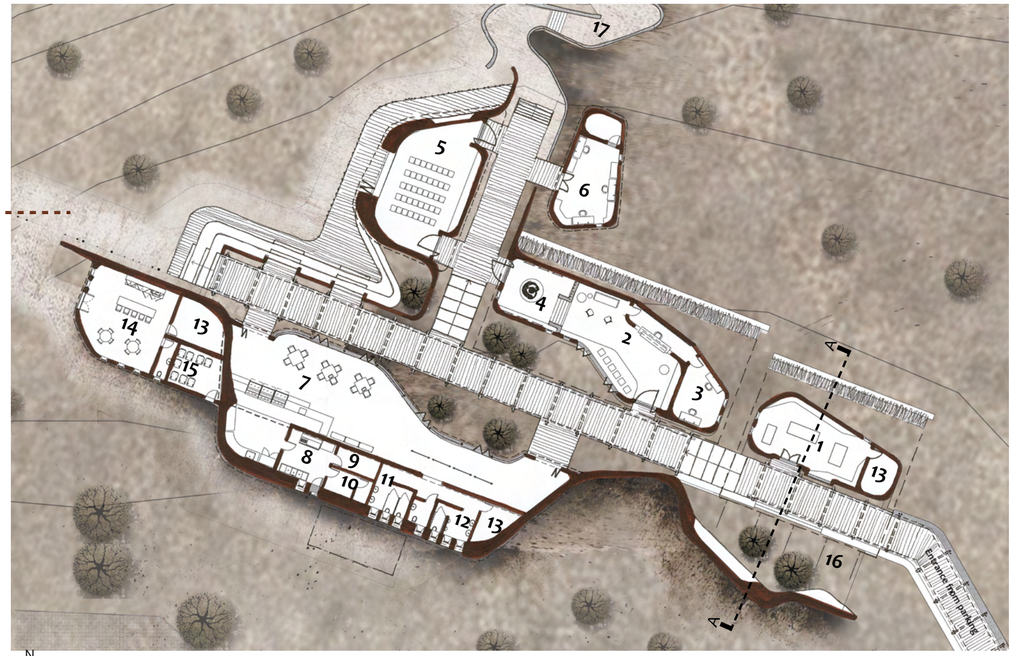


Fig. 342- Omuriange/Tourist Pavilion Section A-A (Author 2021)

1. Curious shop
2. Reception
3. Administration Office
4. Cultural Gallery
5. Briefing Space
6. Research facilities
7. Kiosk
8. Kitchen
9. Dry Storage
10. Cold Storage
11. Ladies Ablutions
12. Gents Ablutions
13. Storage
14. Staffroom
15. Refuse
16. Outside Seating Area
17. Experiential Ondjongo Dance Walkway



N

OMURIANGE PAVILION LAYOUT

Fig. 343 Omuriange/Tourist Pavilion Layout (Author 2021)

OMURIANGE PAVILION ENTRANCE
Fig. 344- Omuriange Pavilion Entrance Perspective (Author 2021)

OMURIANGE PAVILION RECEPTION
Fig. 345- Reception Perspective (Author 2021)

OMURIANGE PAVILION WEST PERSPECTIVE

Fig. 346- Omuriange Pavilion West Perspective (Author 2021)

ONDJONGO DANCE EXPERIENTIAL WALKWAY

Fig. 347- Ondjongo Dance Experiential Walkway Perspective (Author 2021)

6.5 ORIUNQURA VIOMBAZU PAVILION / *RITUAL PAVILION*

The Ondjongo dance walkway connects the tourist and ritual pavilions. Visitors will experience the interpretation of potent dance aspects such as free-flowing movement, loss of balance, disorientation, and rotating movements. After the experiential dance walkway, visitors will take part in and experience the Himba dance in the performance space. Exhibition and informative spaces displaying the cultural and contextual history and customs will contribute to an understanding of the culture. The ancestral memorial walkway along the history exhibition provides visitors with a view of the mountainous landscape and memorial garden, recreating the feeling of being in a Himba hut. Here visitors can pay their respects to the Himba deceased.

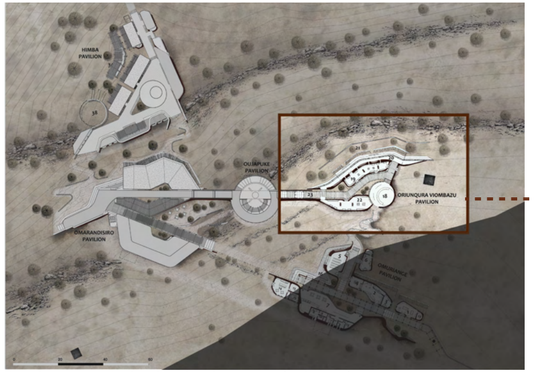


Fig. 348- Oriunqura Viombazu/Ritual Pavilion Location (Author 2021)

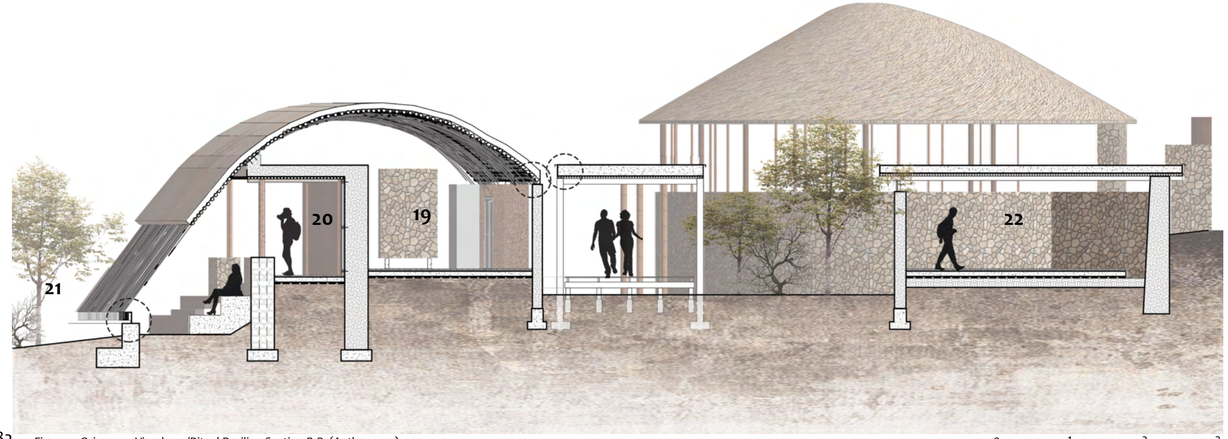
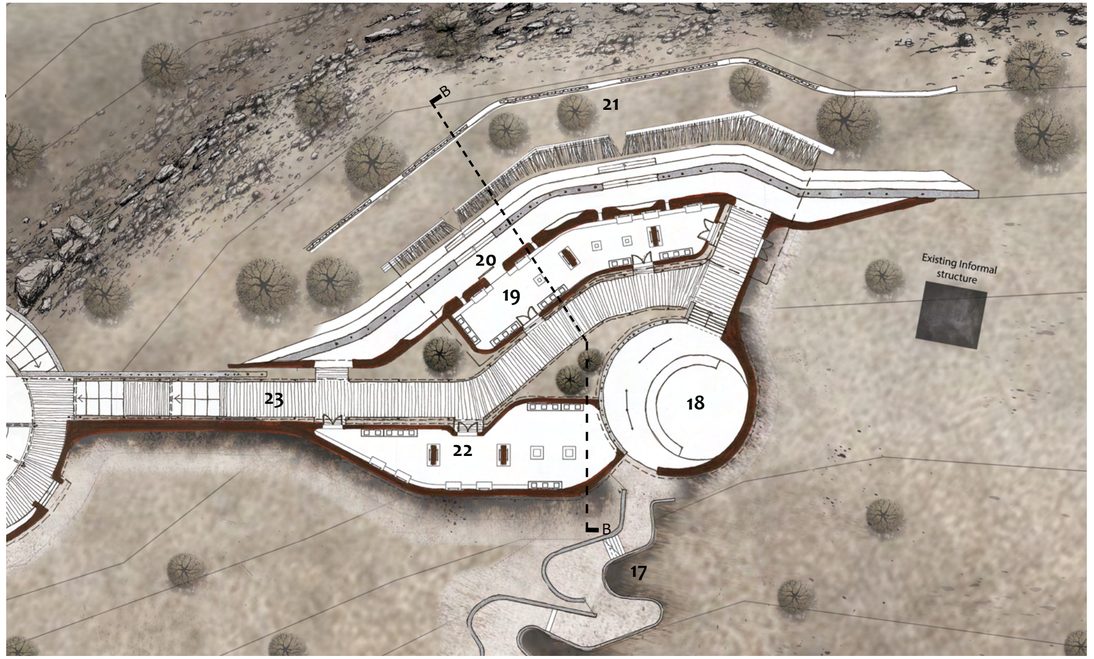


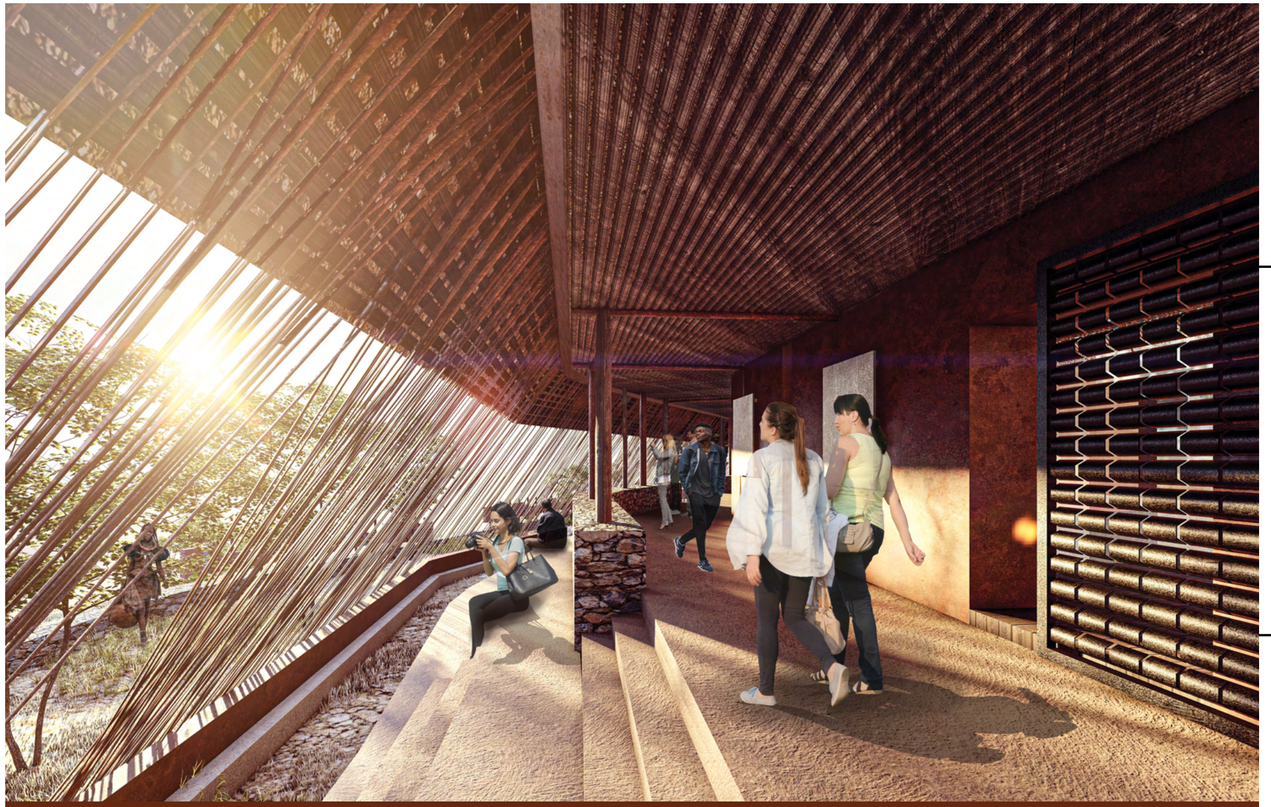
Fig. 349- Oriunqura Viombazu/Ritual Pavilion Section B-B (Author 2021)

17. Experiential Ondjongo Dance Walkway
18. Performance Space
19. Historic Exhibition
20. Ancestral Memorial walkway
21. Ancestral Memorial Garden
22. Cultural Customs Exhibition
23. Mythological Line Walkway



ORIUNQURA VIOMBAZU PAVILION PAVILION

Fig. 350- Oriunqura Viombazu/Ritual Pavilion Layout (Author 2021)



ANCESTRAL MEMORIAL WALKWAY

Fig. 351- Ancestral Memorial Walkway Perspective (Author 2021)

Fig. 352 Himba leg jewellery (enstock2k, 2021: online)

Several detailed elements, such as the door and the reception wall panels, are inspired by the iron leg jewellery of the Himba women. This design implementation refers to Marcel Duchamp's theoretical approach towards defamiliarisation- using an element in a different context (refer to page 22).

Fig. 353- Exposed Himba hut structure (Author, 2021)

The rod facade achieves the aesthetic aim of entailing the atmosphere similar to a Himba structure (refer to fig. 353 & 354). The design involves a cluster of individual bent elements, allowing sunlight to seep through the gaps. This design provides the visitor with a Himba experience.

Fig. 354- Ambience in a Himba structure (Nelson, n.d.: online)

6.6 OUJAPUKE PAVILION / *SACRED PAVILION*

From the ritual pavilion, visitors move along the symbolic line walkway towards the sacred fire. Here they will have the opportunity to experience the Himba connection between the living and the spirit worlds. Visitors will have the opportunity to collect branches from the surrounding area and placing them on the fire. This action will motivate participation in the ritual, while keeping the spiritual connection alive. Visitors will then move towards the lower level of the sacred pavilion, leading to the chief's memorial space. The architectural design is inspired by the Himba legend, and the visitor experiences this when moving through the space towards the symbolic line walkway.

23. Mythological Line Walkway
24. Holy Fire
25. Underground Chief memorial space
26. Market Space

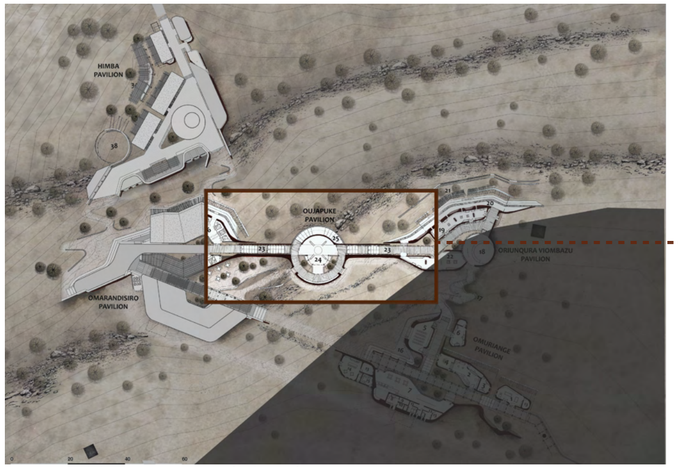
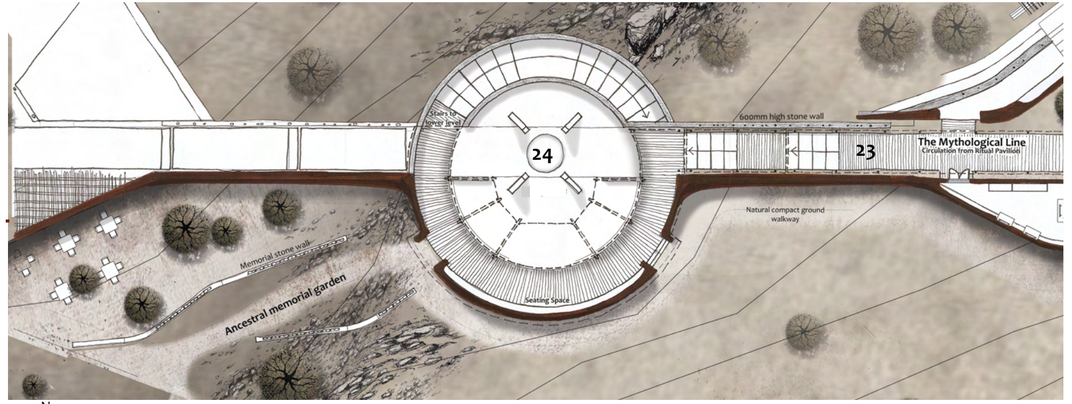
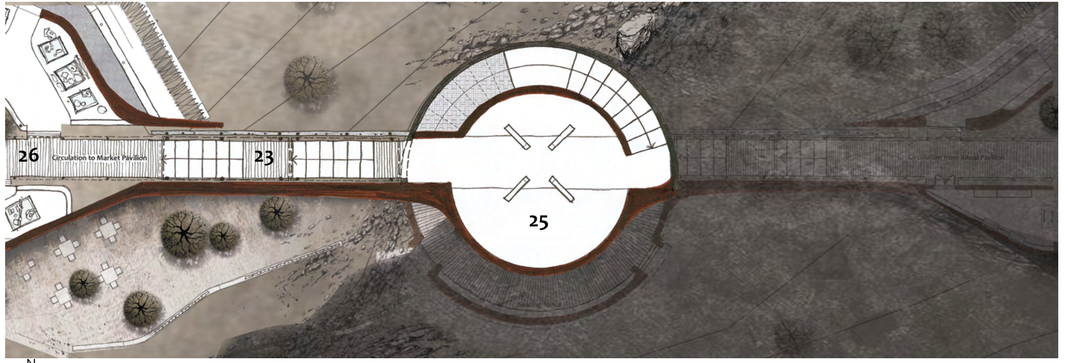


Fig. 355- Oujapuke/Sacred Pavilion Location (Author 2021)



OUJAPUKE PAVILION UPPER LEVEL
Fig. 356- Oujapuke/Sacred Pavilion Upper Level (Author 2021)



OUJAPUKE PAVILION LOWER LEVEL
Fig. 357- Oujapuke/Sacred Pavilion Lower Level (Author 2021)

THE MYTHOLOGICAL LINE WALKWAY

Fig.358- The Mythological Line Walkway Perspective (Author 2021)

OUJAPUKE PAVILION

Fig. 359- Oujapuke Pavilion Perspective (Author 2021)

6.7 OMARANDISIRO PAVILION / *MARKET PAVILION*

From here, visitors will move towards the informal market, where the Himba people have the opportunity to sell their crafts and socialise with the visitors. The progression through the building then leads them to the landscape viewing point. They then have the chance to stay on the decked walkway towards the restaurant area, where they can reflect on their journey, or explore further by taking the informal footpath to the Ovahimba pavilion.

The circulation from the restaurant back to the tourist pavilion is an informal gravel path, demarcated by timber posts only. This design allows visitors to truly experience the landscape without any structural barriers, similar to the way the Himbas would.

8. Kitchen
9. Dry Storage
10. Cold Storage
11. Ladies Ablutions
12. Gents Ablutions
13. Storage
15. Refuse
16. Outside Seating Area
26. Market Space
27. Himba social & market preparation space
28. Landscape Viewing Space
29. Restaurant
30. Food Collection

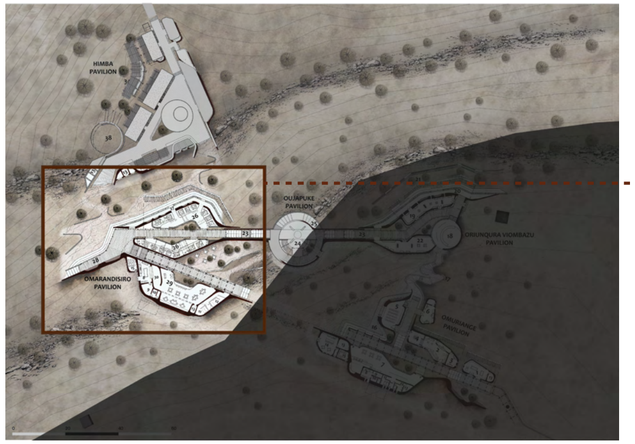
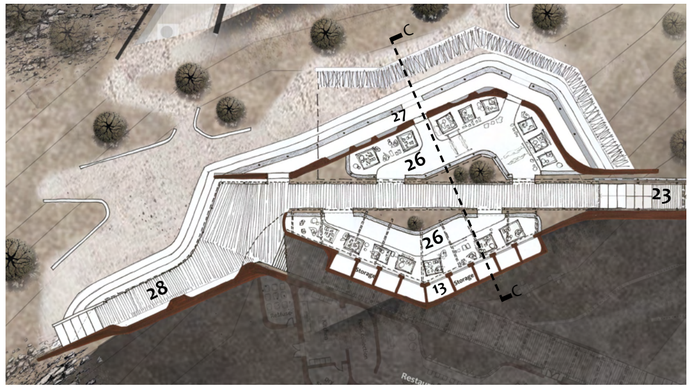


Fig. 360- Omarandisiro/Market Pavilion Location (Author 2021)

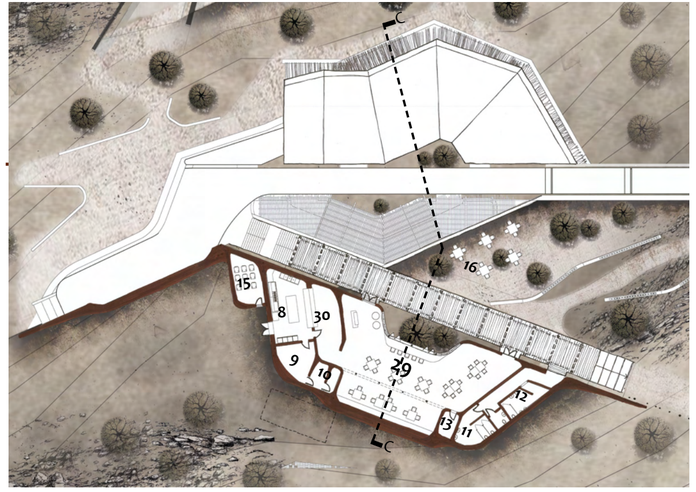


N

OMARANDISIRO PAVILION LOWER LEVEL

Fig. 361- Omarandisiro/Market Pavilion Lower Level (Author,2021)

0 10 20 30



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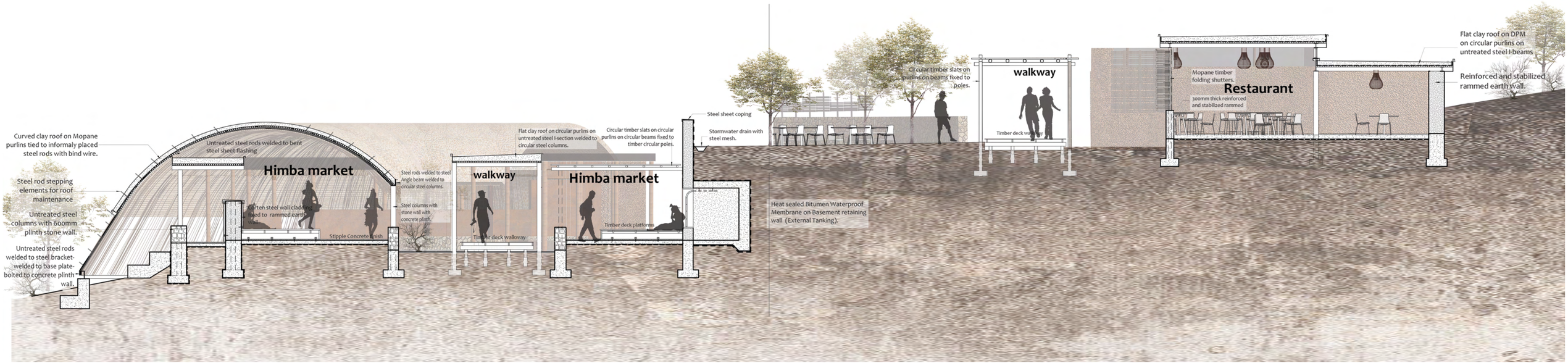
OMARANDISIRO PAVILION UPPER LEVEL

Fig. 362- Omarandisiro/Market Pavilion Lower Level (Author,2021)

0 10 20 30



OMARANDISIRO PAVILION SECTION C-C

Fig. 363- Omarandisiro/Market Pavilion section C-C (Author,2021)

0 5 10 15

6.8 OVAHIMBA PAVILION

The Ovahimba pavilion specifically houses Himba functional spaces for activities such as jewellery making, woodcarving, basketry, leather tanning, water collection, and social and gathering/educational spaces. This pavilion is for the Himba, but visitors can access it if they take the informal footpath. Further interaction can then take place between visitors and the Himba, as they go about their everyday activities and rituals.

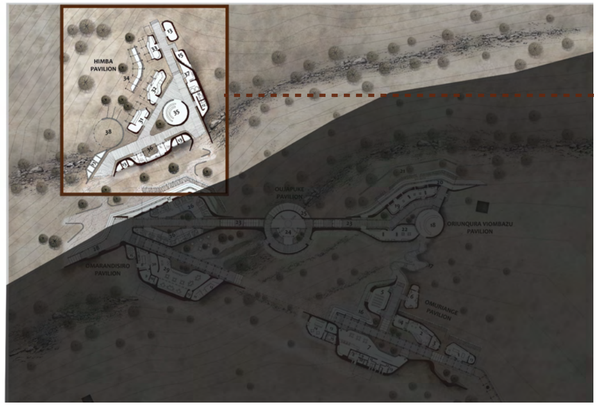


Fig. 364 Ovahimba Pavilion Location (Author 2021)

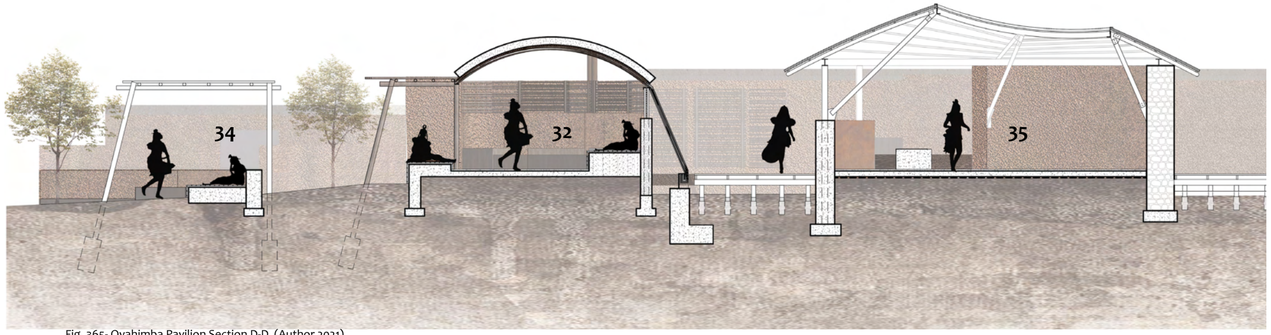


Fig. 365- Ovahimba Pavilion Section D-D (Author 2021)

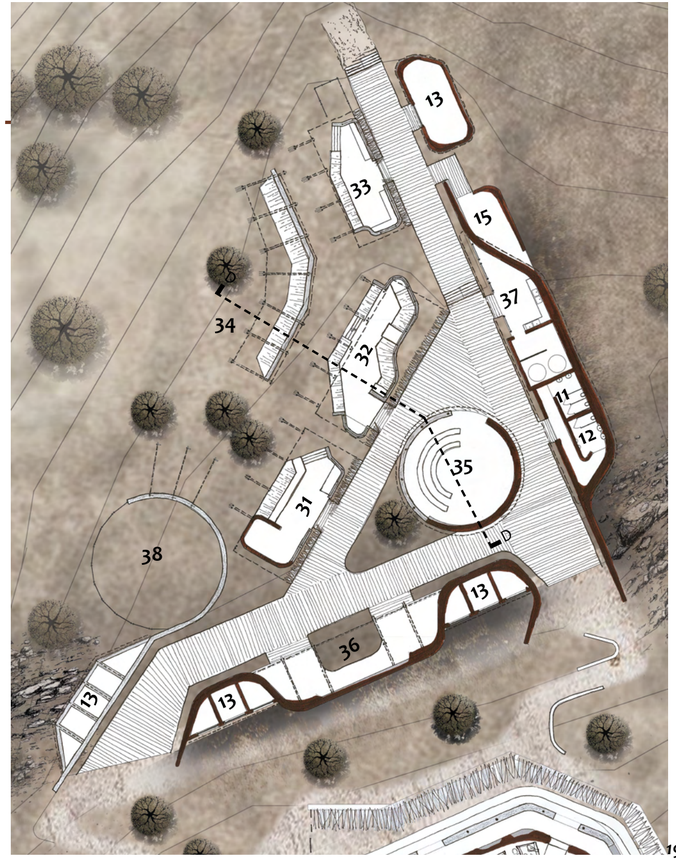
0 2 4 6

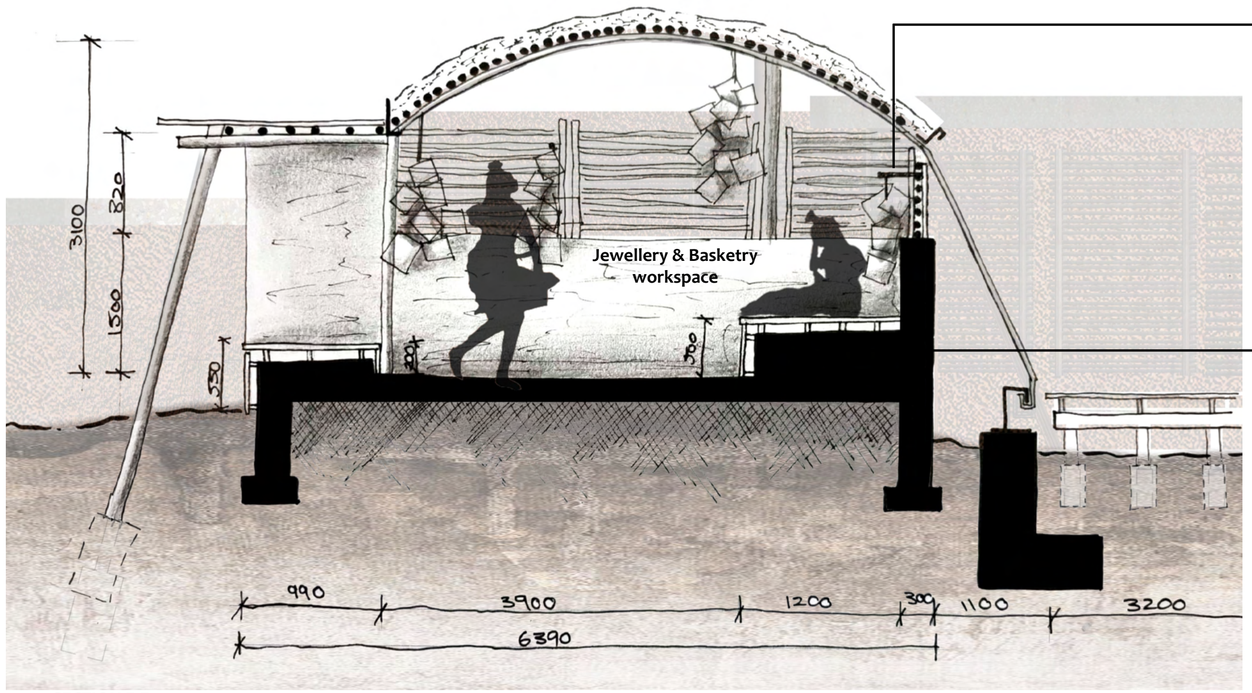
11. Ladies Ablutions
12. Gents Ablutions
13. Storage
15. Refuse
31. Leather tanning workspace
32. Jewellery & Basketry workspace
33. Woodcarving Workspace
34. Outdoor social Himba space
35. Gathering/Educational space
36. Food preparation space
37. Water Collection
38. Cattle Enclosure

N

OVAHIMBA PAVILION

Fig. 366- Ovahimba Pavilion Layout (Author,2021)





SECTION E-E

Fig. 367 Jewellery & Basketry section (Author, 2021)

Fig. 368- Himbahut interior (Author, 2021)

The interior of a Himba hut inspired the walls within the pavilion. The walls are constructed with a bottom rammed earth section and the top from timber branches. This element allows the Himbas to hang their personal belongings and crafts from the timber sections.

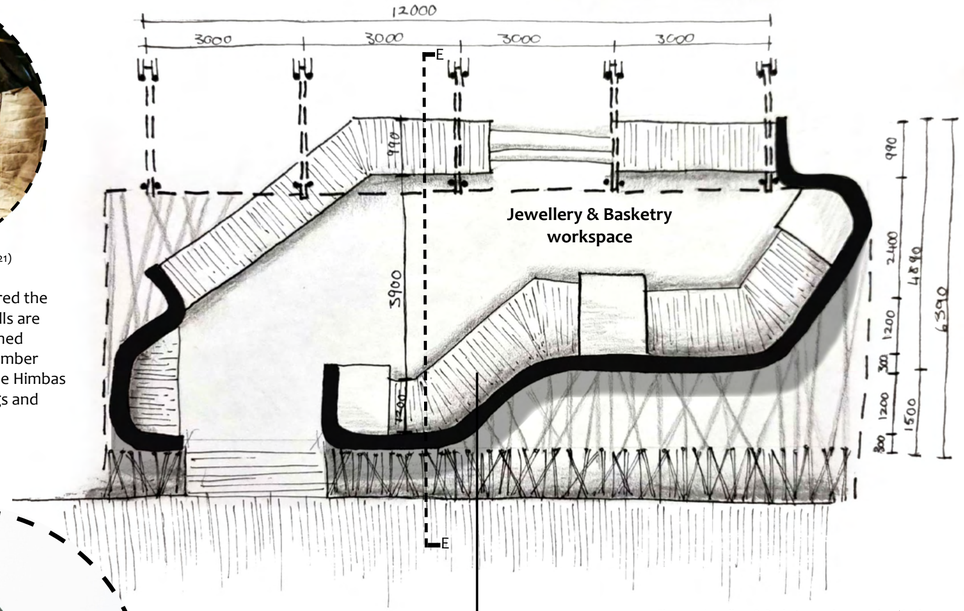


Fig. 370- Jewellery & Basketry workspace plan (Author, 2021)

The Himba people's sit positions doing crafts, leather tanning, basketry is usually on the ground. Therefore, the working spaces are designed with 500mm high seating platforms which accommodate their ground-sitting positions.

Fig. 369- Himba woman sit position while making crafts (Garces, 2021: online)

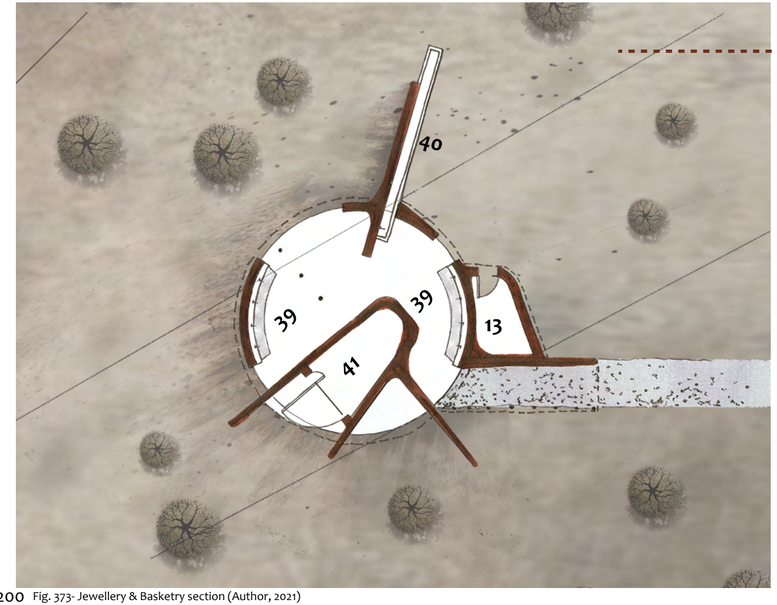
OVAHIMBA PAVILION INTERIOR
Fig. 371- Ovahimba Interior Perspective (Author 2021)

OVAHIMBA PAVILION PERSPECTIVE
Fig. 372- Ovahimba Pavilion Perspective (Author 2021)

6.9 OMEVA POINT/ *WATER POINT*

The water point is situated at the foot of the Hill, and connected to the Ovahimba pavilion by a natural footpath. Due to the drought in the Kunene Region, this space will become an attraction point, providing clean water through a borehole to the Himba people and their cattle, luring them to the building.

39. Water collection Points
40. Cattle water point
41. Borehole equipment room



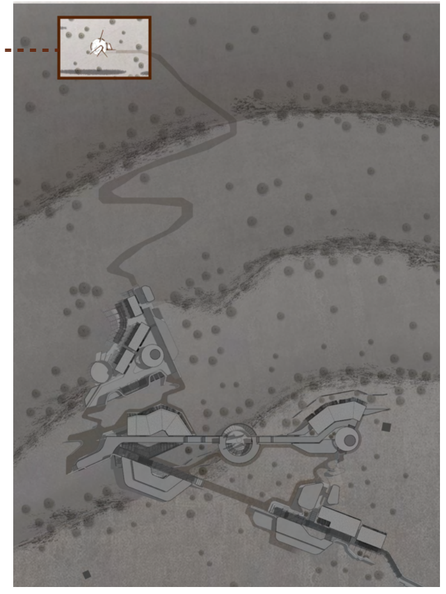
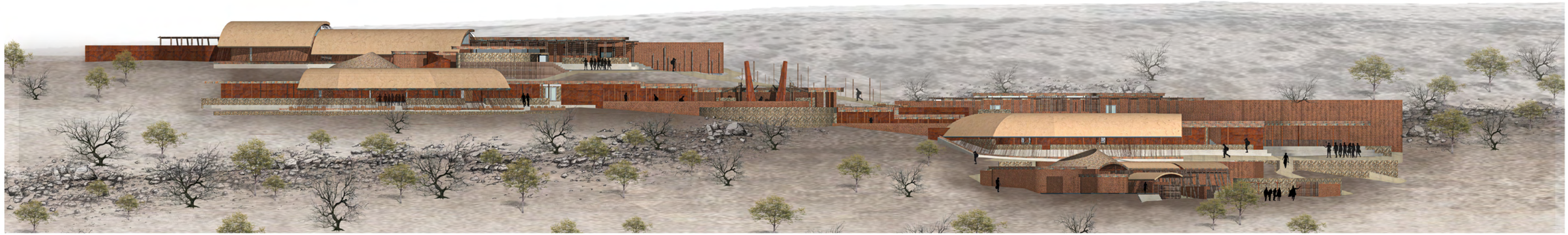


 Fig. 373- Jewellery & Basketry section (Author, 2021)

Fig. 374- Jewellery & Basketry section (Author, 2021)

OMEVA POINT PERSPECTIVE
Fig. 375- Omeva Point Perspective (Author 2021)



NORTH ELEVATION

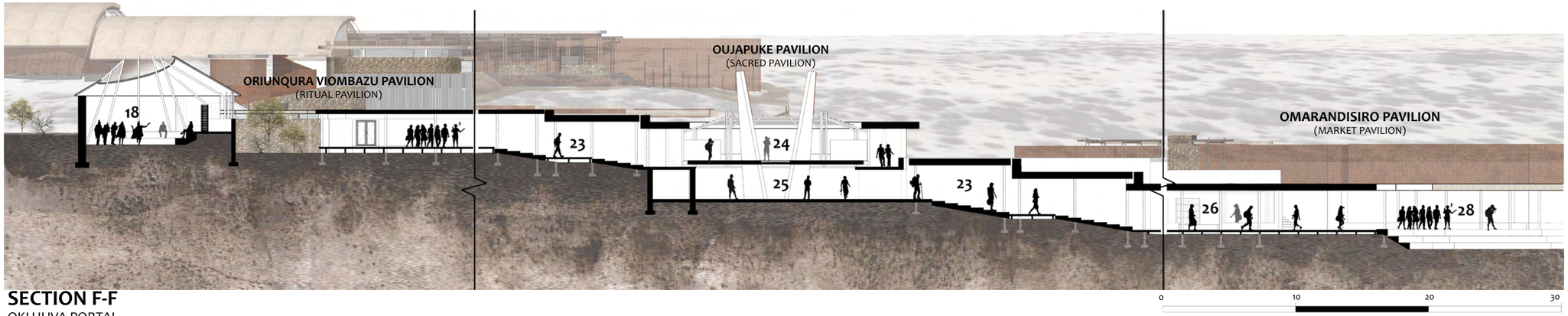
Fig. 376- North Elevation (Author, 2021)

0 10 20 30

WEST ELEVATION

Fig. 377-West Elevation (Author, 2021)

0 10 20 30



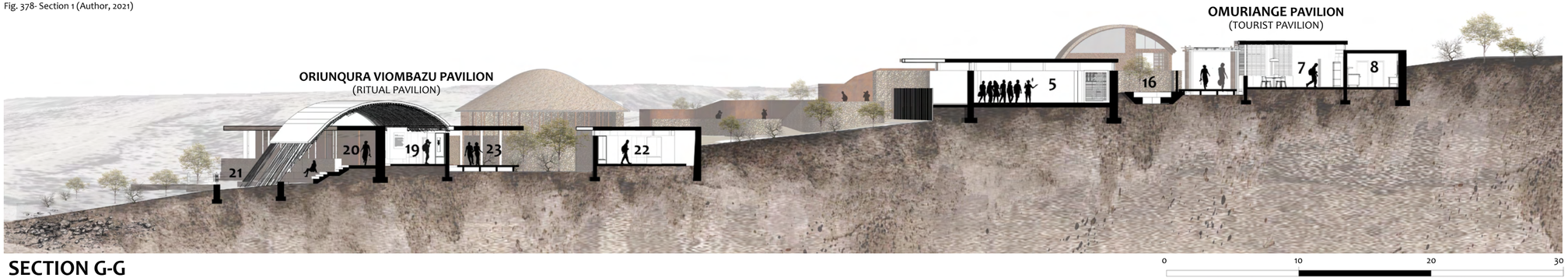
SECTION F-F

OKUJUVA PORTAL

Fig. 378- Section 1 (Author, 2021)

18. Performance Space
23. Mythological Line Walkway

24. Holy Fire
25. Underground Chief memorial space
26. Market Space
28. Landscape Viewing Space



SECTION G-G

ODJUSURO WALKWAY

Fig. 379- Section 2 (Author, 2021)

5. Briefing Space
7. Kiosk
8. Kitchen
16. Outside Seating Area

19. Historic Exhibition
20. Ancestral Memorial walkway
21. Ancestral Memorial Garden
22. Cultural Customs Exhibition
23. Mythological Line Walkway

WEST PERSPECTIVE
Fig. 380- West elevation Perspective (Author 2021)

Fig.381- Himba women around cattle enclosure (Mcrae, n.d.: online)

07 CHAPTER

REFLECTION
END OF ONDJONGO

7.1 TECHNICAL SECTION

7.1.1 CIRCULATION & ALLOCATION OF SPACES

The circulation can be identified into three types of walkways: To Know, To Understand, and To Experience (refer to fig. 383). The allocation of spaces is organised around this specific journey (refer to fig. 382).

“Knowing” is defined as ”the expertise and skill acquired by an individual through his experiences and education” (Emelda, 2018:online).. It includes facts and information about certain things of which a person is certain. It involves the basic recall of data that have been previously presented (Emelda, 2018:online). The first walkway is named OKUTJIWA, meaning “To Know”. The occupational functions connecting to this walkway all refer to the concept of knowing. It connects the tourist pavilion, where the briefing will occur, and the restaurant, where visitors will be able to reflect on their journey. This walkway will start and end with a decked walk surface, and connect the two pavilions by a compacted natural earth footpath indicated by timber posts.

“’Understanding’ is processed in the brain. It is defined as a psychological process related to a person, object, situation, or messages, which requires an individual to think and use concepts to deal with. Also called ‘intellection’, understanding involves conceptualization and association” (Emelda, 2018: online). The second walkway is called OKUJUVA, meaning “To Understand”. It is the circulation route through the portal space connecting the ritual, sacred and market pavilions. This walkway leads the visitor through the learning, experiential, and engagement spaces, potentially providing the visitor with a deeper understanding and appreciation of the culture. The timber-decked walkway is covered by a heavy clay roof, articulating the importance of the movement.

The two ODJUSURO walkways (“To Experience”) function as links between the OKUTJIWA and OKUJUVA walkways. These circulation routes contribute to the overall process towards understanding the culture. They are natural compacted earth surfaces implemented in different ways. The walkway to the south is the experiential walkway of the Ondjongo dance, where visitors will experience the potent aspects of the cultural Himba dance. The walkway to the north links the market pavilion to the Himba pavilion. If the visitors are willing to explore further than the decked walkway, and experience the true nature of the context, they will discover the Himba pavilion.

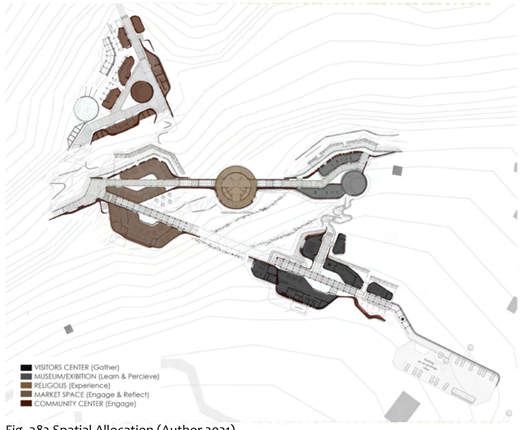


Fig. 382 Spatial Allocation (Author 2021)

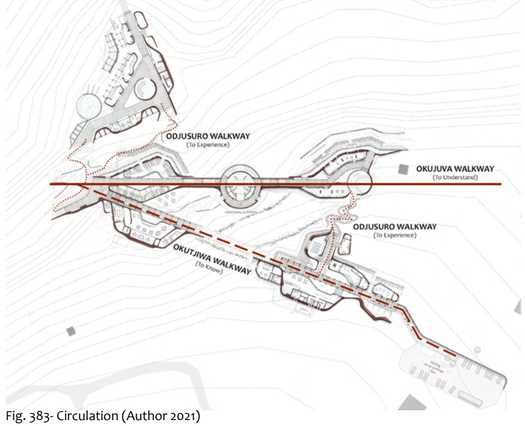


Fig. 383- Circulation (Author 2021)

7.1.2 SITE PLANNING & LANDSCAPE

The access towards the site is a main gravel access road from the south-east, from which visitors first enter the parking space (refer to fig. 384). The parking has an informal layout corresponding to the informality of the landscape and housing development surrounding the site. Twenty-two parking spaces are available, of which one is an indicated disabled parking space. There is also bus parking.

When evaluating the scale of the surrounding structures, the overall footprint of the proposed building is much larger. However, it does not appear to be so when looking from the southern part of the site (refer to fig. 386). This is because the building is partially sunken into the hill. The building has a scattered layout, rather than being one single mass. This formation refers to the scattered layout of the surrounding informal development and the village formation. This idea is also represented in the detached typology of the spaces in each pavilion.

Fig. 384- Parking lot (Author 2021)

Fig. 385- Vertical timber posts (Author 2021)

The surrounding landscape is kept relatively natural. The implemented landscape elements include natural earth compacted footpaths, stone stacked borders, stone walls and vertical timber posts to indicate the circulation direction (refer to fig. 385).

Fig. 386- Building in it’s context (Author 2021)

7.1.3 PARAPLEGIC CIRCULATION

All the pavilions are universally/paraplegic accessible through 1000 wide and 170 high stairs with 1000mm high handrails (refer to fig. 387 & 388). The universal circulation surfaces for the formal walkways are timber decking, while the informal surfaces are compacted natural earth. Disabled bathrooms are available at the tourist and market pavilions, with a minimum dimension of 1800x1800mm.

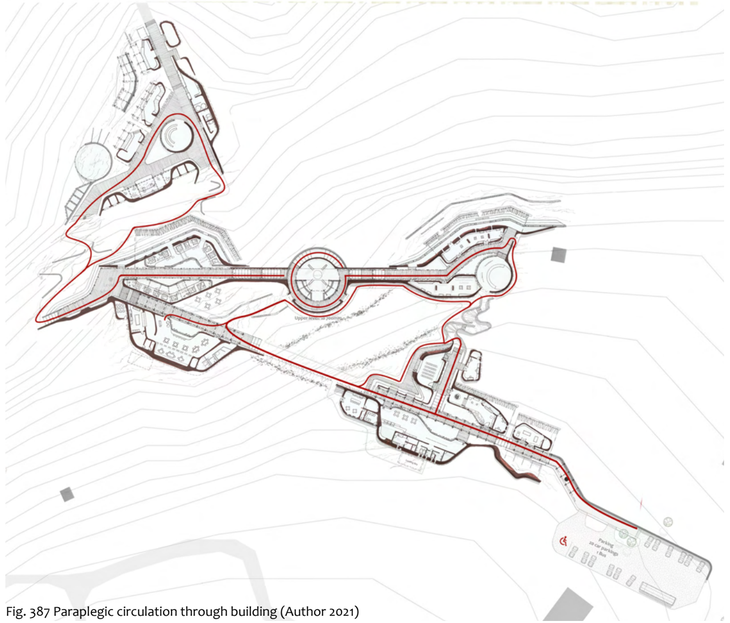


Fig. 387 Paraplegic circulation through building (Author 2021)

Fig. 388 Paraplegic circulation section (Author 2021)

7.1.4 CLIMATIC RESPONSE

The building is orientated towards the north, and allocated on an east-west axis. This orientation allows all the spaces to receive northern sunlight. The elongated axis towards the east and west also allows optimum cross-ventilation throughout the building. The layout includes natural courtyard spaces, which cool the air that enters the building. These spaces include vegetation that contributes to cooling the air and reducing surface exposure to direct sunlight.

The orientation and scale of the curved roof structures prevent direct summer sun radiation into the building from the north, acting as a shield. The thick clay roof cladding also acts as roof insulation, keeping the spaces cool during hot days. The flat roof designs are covered with adobe earth.
Openings in the thick rammed earth walls and between the flat roof and walls allow hot air to exit the spaces. Door and window openings are kept small to allow ventilation, but will prevent an excess of radiation and dust from entering the building.
The thick rammed earth walls also contribute to the climatic response, as they provide comfortable indoor conditions in hot and arid places due to their density and high heat capacity.

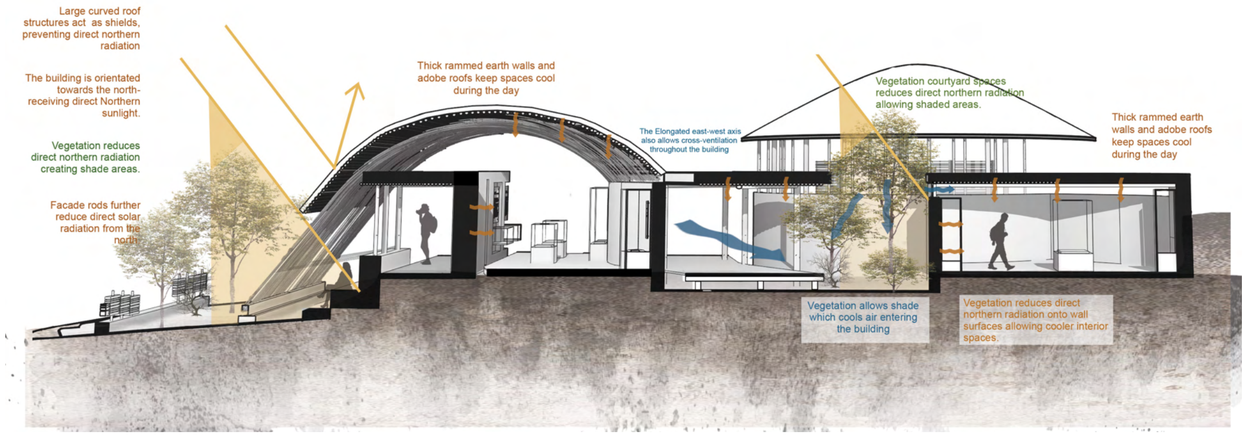


Fig. 389 Climatic Response (Author 2021)

7.1.5 SERVICES

A service root can be located on the South of the building, reaching the service spaces, namely, the loading bays, refuse areas and ablutions at the Kiosk and the Restaurant (refer to fig. 390).
The service route from the Himba pavilion is a footpath towards the restaurant's refuse area, corresponding to the informal way the Himbas dispose of their refuse. The natural waste produced from the Himba pavilion will be transported by hand or through the help of a wheelbarrow, keeping the process informal.

Due to the severe and frequent droughts in the Kunene region, Multrum composting toilets will be installed in the building (refer to fig. 391). This solution will allow no water wastage as well as composting opportunities. One realises that these toilets can be high maintenance and can result in foul smells if care is not implemented. This solution, therefore, provides job and educational opportunities in composting and the maintenance of these toilets.

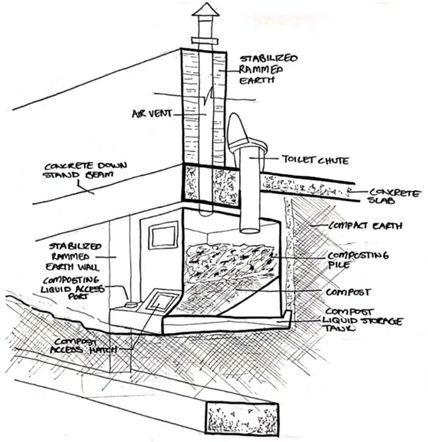


Fig. 391 Multrum composting toilets in design (Author 2021)

7.1.6 ENVIRONMENTAL LEVELS

Most of the private/service spaces are located to the south of the building, and are hidden from the public (refer to fig. 392). Most of the spaces are for public use, which allows freedom of circulation through the building. The Ovahimba pavilion is semi-public/ private as it is essentially designed for the Himba people, but it is also accessible to tourists.

Fig. 390 Service circulation (Author 2021)

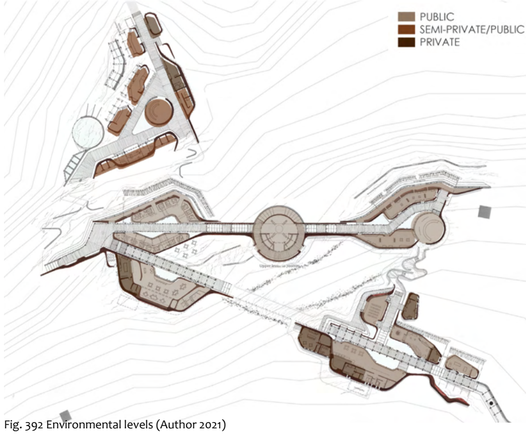


Fig. 392 Environmental levels (Author 2021)

7.1.7 ROOF ACCESSIBILITY

The result of this design process will require maintenance and, during construction, access to the roof. Access will be achieved by welding steel stepping elements to the rods to function as a ladder on the north façade (refer to fig. 393 & 394). The south side of the roof can be accessed by placing a ladder against the adobe wall. The edges of the roof can be accessed by stepping onto the flat memorial walkway roof through the steel stepping elements (refer to fig. 395).

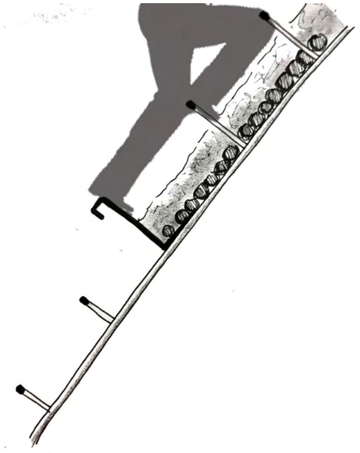


Fig. 393- Steel stepping elements section (Author 2021)

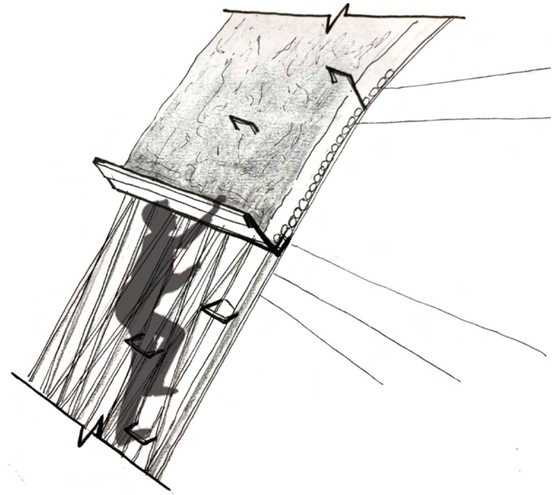


Fig. 394- Roof Accessibility (Author 2021)

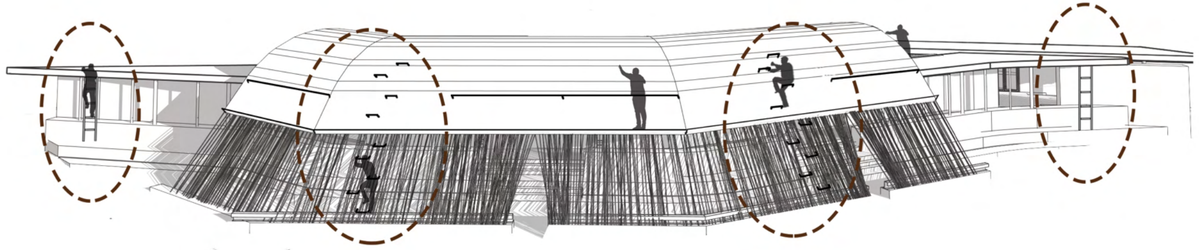


Fig. 395- Maintenance Roof Accessibility (Author 2021)

7.1.8 STRUCTURAL SYSTEM & BUILDING PROCESS

The construction of the traditional Himba hut inspired the building process of the featured roofs. The structural system entails the intended construction phenomenology, which includes solid versus frame structures, modern versus traditional morphology, and enduring versus transient materiality (Refer to p157). Implementing these aspects allowed one to attain the design principles of traditional and landscape practices, namely defamiliarisation and participation, in the structural design.
The following diagram sequence shows the intended process in which the structures will be built and maintained.

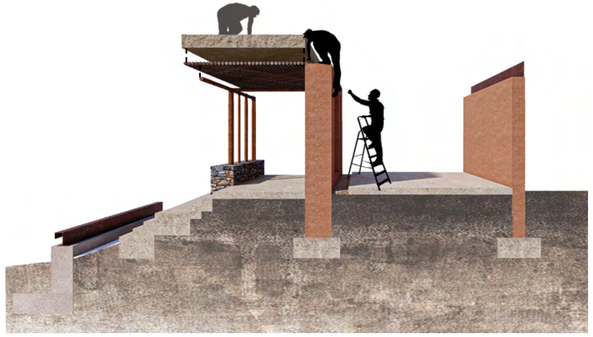


Fig. 396- Building process diagram 1 (Author 2021)

(Refer to fig. 396) All concrete floor slabs and rammed earth walls will be constructed first, together with the flat memorial walkway roof structure. Due to the inherent qualities of the wall materials, community participation can be implemented at this stage. The concrete plinth and footing will then be cast, with an untreated steel beam welded to a baseplate and bolted to the plinth wall.

Fig. 397- Building process diagram 2 (Author 2021)

(Refer to fig. 397) The untreated round bar will then be welded to the steel element. The placement of these round bars will be in a random sequence and overlapping one another to ensure the bracing of the roof.
Once the rods have been secured to the steel element, they will be bent over the intended spaces and welded to the flat bar at the memorial roof intersection, and to the L-beam, connecting the roof and the adobe wall.

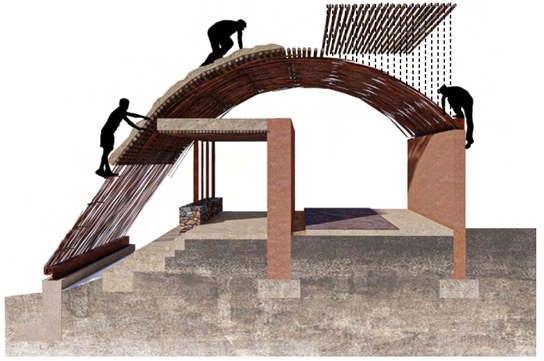


Fig. 398- Building process diagram 3 (Author 2021)

(Refer to fig. 398) Community participation is further required to densely tie mopane timber slats to the rod system with bind wire. Thick layers of adobe mix will then be plastered onto the timber slats.

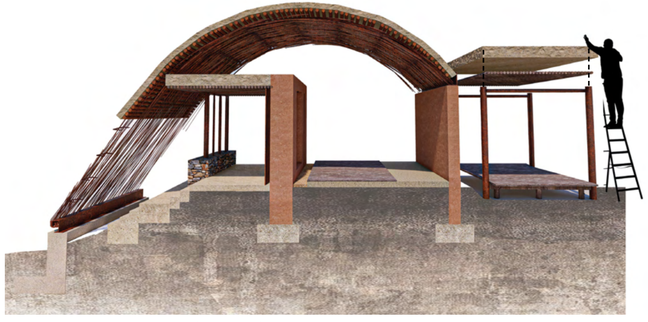


Fig. 399- Building process diagram 4 (Author 2021)

(Refer to fig. 399) After the curved roofs have been constructed, the decked walkway and flat roof on the south will be erected. The steel frame will be constructed, on which the mopane timber slats will then be placed. The same earth mix is then plastered to form the roof cladding.

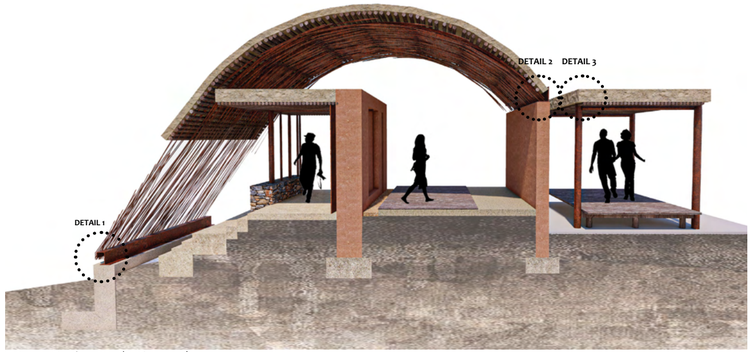
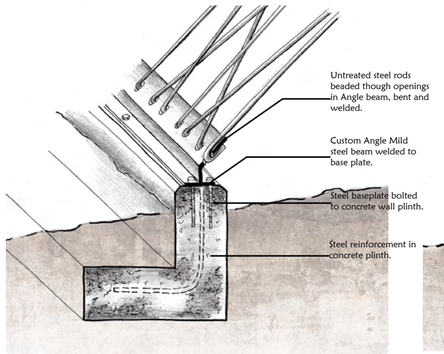


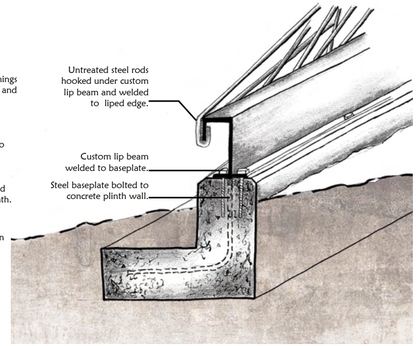
Fig. 400- Roof section (Author 2021)

DETAIL 1:

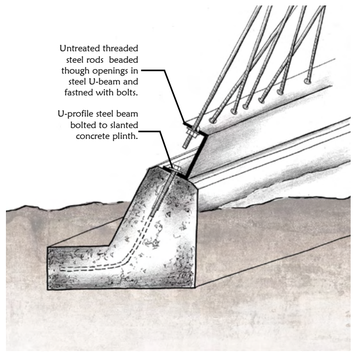
Detail dependant on steel contractor's capabilities on site.



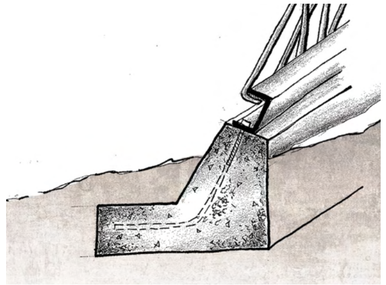
Roof/Plinth Detail-Option 1 (welded)
Fig. 401- Detail 1- Proposal 1 (Author 2021)



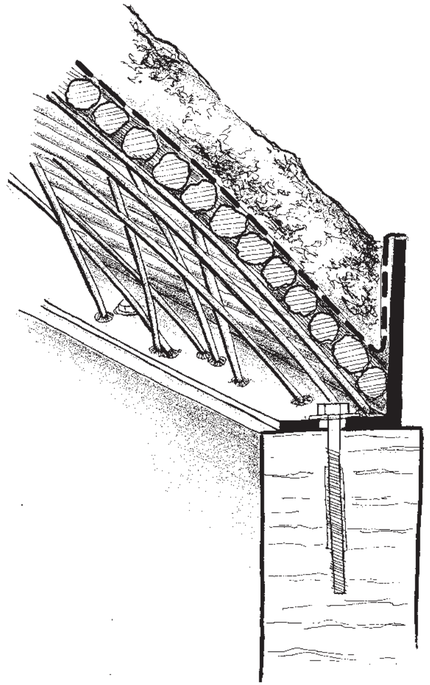
Roof/Plinth Detail -Option 2 (welded)
Fig. 402- Detail 1- Proposal 2 (Author 2021)



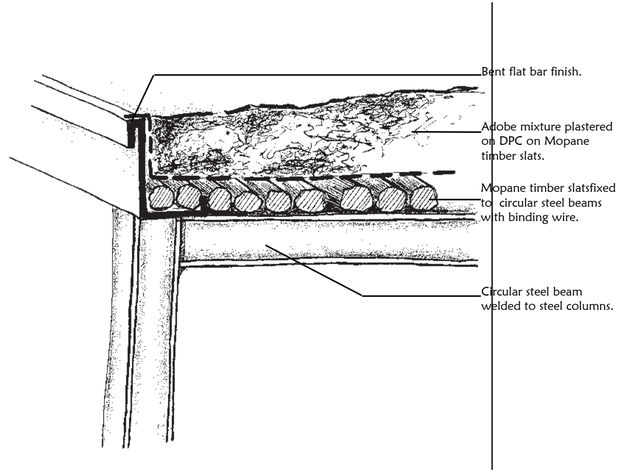
Roof/Plinth Detail-Option 3 (threaded)
Fig. 403- Detail 1- Proposal 3 (Author 2021)



Roof/Plinth Detail-Option 4 (welded)
Fig. 404- Detail 1- Proposal 4 (Author 2021)



DETAIL 2 -Roof/Wall Connection
Fig. 405- Detail 2 Roof/wall connection (Author 2021)



DETAIL 3 -Walkway Roof Detail
Fig. 406- Detail 3 walkway roof connection (Author 2021)

 Fig.407- Himba woman in village (Mcrae, n.d.: online)

7.2 CONCLUSION

This thesis documents the design of a portal space for accustomisation, where visitors and the Himba people can gather, interact and learn from each other. Due to the threat of cultural extinction, it is essential to create a space to promote, encourage and provide economic growth to the Himba people through cultural sustainability.

Chapter 1 investigates the Himba culture, and how the people are influenced by modernity. The theoretical direction was investigated, which led to the concept of creating a space that entails modern and traditional characteristics due to the hybrid nature of the Himba culture. One found that a project identity, entailing characteristics of the dominating modern world and suppressed traditional world, would be the optimal type of identity in order to maintain cultural sustainability. This refers to participating in the modern world while still upholding the traditional culture. The aim was to create an architectural space suitable for a project identity, while also encouraging cultural sustainability through tourism, economic empowerment, and participation. During precedent and theoretical studies, the designer established the different approaches of Tzonis & Lefaivre, Frampton, Marcel Duchamp and Cassidy towards critical regionalism, which were used as design tools.

The core elements of critical regionalism namely context, culture and vernacular architecture, were investigated in Chapters 2 and 3 to discover the potent aspects of the culture and context. The previously mentioned approaches towards critical regionalism were implemented during the design process to reach the desired principles visible in the final proposal.

Poetics and tectonics:
The design synthesis illustrates the final design proposal, which entails potent traditional and contextual elements.
The research question was answered by implementing the theoretical approaches in order to achieve defamiliarisation, participation, arierre-garde, traditional and landscape practices, and tactility. These principles are visible in several of the final design decisions, such as the building program, layout, construction, contextual approach, spatial forms and materiality.
These theoretical aspects have been incorporated in the tectonics of the building to create a critical regional dialogue between modernity and tradition.

Challenges:
As a designer who focuses mainly on the functionality and technical aspects of architecture, and is classified as a converger in the experiential learning cycle, it was a challenge to change my way of thinking to adapt to the process requirements of this specific topic. During certain project phases, I was required to think like an accommodator or a diverger to avoid my technical-driven thought process to dominate the form-giving, and to instead focus on concepts and the context to inform my design. Overall I'm pleased with the outcome of the design, as I believe that it covers all the theoretical and technical aspects while providing a poetic design representing the culture and the context.

Even though architecture might not resolve the problem of cultural extinction, it can contribute to cultural sustainability by providing a space that celebrates the local community and provides economic, cultural, social and environmental opportunities. Therefore, this proposal will promote cultural acknowledgement, celebration and empowerment in the Kunene Region and Opuwo, specifically.

7.3 REFLECTION

This study explores the cultural and contextual qualities of the Kunene Region, proposing a place of accustomisation between the worlds of the Himba and visitors from around the globe. Being aware of my limited knowledge and outsider's view of the culture, I was sceptical of selecting this topic. However, throughout the year and after doing research on the Himba culture, I gained a strong appreciation for the aesthetics and unique characteristics related to the culture. It made me think what the world would be like if everyone were of the same religion and ethnicity. Personally, I think the world would look quite dull. What is the purpose of life if we cannot love, learn and appreciate the unique qualities and identities of others? I think in the current world we have forgotten to do so, leading to several conflict situations. If we can learn to understand and appreciate through receiving knowledge and experiencing the beliefs of others, I am confident the world would be much more culturally integrated.

The thesis is my architectural interpretation based on the facts I obtained as an outsider/visitor, focusing on creating an architectural space functioning as a lens through which a visitor can understand and experience the Himba culture. My aim for this year was to study the culture in order to obtain a greater appreciation for it than merely the superficial knowledge I had before. Based on my experience through obtaining knowledge through research, I am optimistic that an architectural experience of the Himba can elevate cultural recognition in others.

As Chopra stated, we are travellers in this world, living for the precious moments in which we encounter each other, entering in a little parenthesis in eternity where we meet, love and share (Chopra, 1994: p37). At its core, this project strives to achieve this.

Fig.408- Himba children (Mcrae, n.d.: online)

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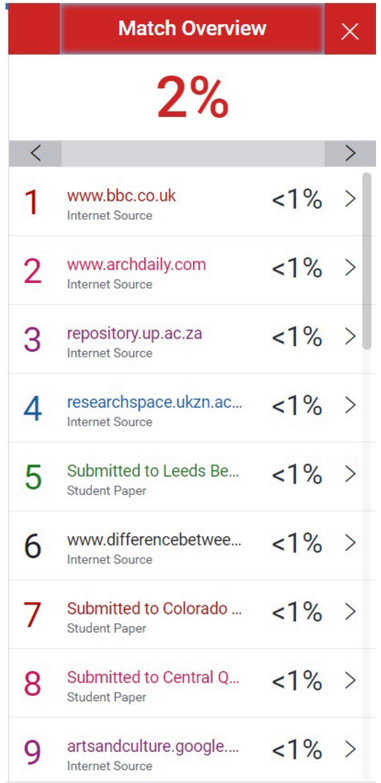


To whom it may concern

This is to state that the architecture mini thesis titled *Portals Between Worlds* by Ms Chrizelle Loots has been language edited by me, according to the tenets of academic discourse. The final responsibility to implement any suggested language changes resides with the student.

Annamarie du Preez

B.Bibl.; B.A. Hons. (English)
07-09-2021

DESIGN POSTERS

PINNED-UP POSTERS DURING FINAL EXAM

PORTALS BETWEEN WORLDS

RITUAL HIMBA PORTAL

A place of accustomisation celebrating the Himba cultural identity through a critical regional dialogue between modernity and tradition in the Kunene region.

Research Question:
How can a Critical Regionalist approach be used to create architectural spaces of accustomising, in which foreigners can be introduced to the Himba culture in a respectful yet revelatory way, in order to eventually establish a fruitful dialogue between globalist modernity and indigenous tradition in the Kunene Region?

PROJECT BACKGROUND

The Himba people are an indigenous group living in northern Namibia. They are known for their extraordinary red appearance and several ritual practices around life and death, their religious system and their general cultural customs around food production, craftsmanship, the building of clay huts, and their singing and dancing (Living Culture Foundation Namibia, 2021:online). These ritual activities and their unique indigenous culture annually attract numerous tourists.

CORE PROBLEM

Over many years of modernisation and a number of other external elements, the Himba people are increasingly exposed to modern/western customs, causing the culture to adopt a hybrid identity, entailing modern and traditional characteristics. In order to preserve the culture in its current state, cultural sustainability should be encouraged in the region through the economic, social and ecological development of the Himba culture.

Additionally, the site, situated in Opuwo, known for the many Ovahimba people in the town, does not support the sustainability of the culture. Due to the history of colonisation in the Kunene Region, the urban fabric still supports colonial economics, architecture and identity, despite the aesthetic Himba ethics that inhabit the context.

THEME

This essay will present a research proposal on how critical regional architecture can provide a gathering and meeting space for the Himba people and tourists, in which the Himba can benefit economically and socially, while also celebrating and preserving their culture.
The theoretical theme of critical regionalism assisted with establishing different approaches that are sympathetic to the traditional Himba way of life while, simultaneously defamiliarising potent aspects of the local culture and environment in order to reveal new readings of this ancient way of life.

CHRISTELLE LOOTS
2015005842

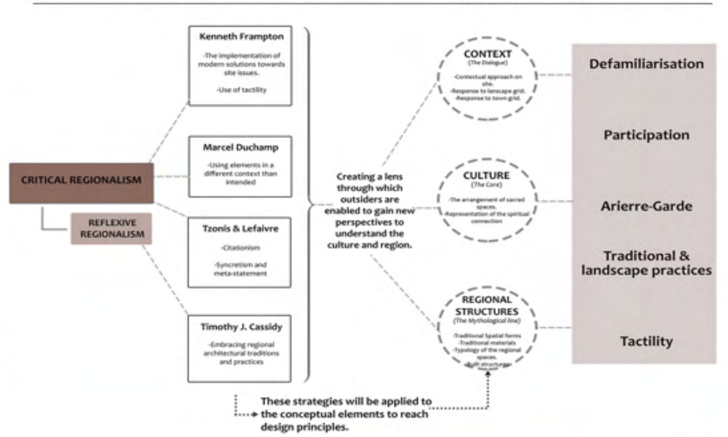
PRIMARY THEMATIC FOCUS

Critical Regionalism, Reflexive Regionalism, Genius Loci

Even though modernisation is one of the factors threatening the Himba culture, it also forms a significant part of their daily contemporary life. Eliminating the modern world from the Himba culture would therefore lead to catastrophic results, as it already became an integrated part of their life. Adjusting to new situations is their way of responding to the ever-changing external environment and town in order to survive. However, the cultural adjustment towards modernity can be sustained in a more subtle environment to prevent the destruction of the culture.

In the book "The Power of Identity", Manual Castells identifies three types of identity building (Castells, 1997: book). His "project identity" is relevant in this case, as it pursues the transformation of all social structures. Currently, the Himba can be seen as rebuilding their identity in a modern world, while continuing to live according to their traditional way of life. Nevertheless, the Himba people are moving progressively towards total modernity. If cultural sustainability is not implemented, it can lead to the total extinction of the culture. It is therefore of the utmost importance to implement ecological, economic and social development. This situation presents an opportunity in Opuwo for an architectural portal of accustomisation, which foreigners can visit and the Himba people can utilise economically and socially.

The discourse investigates how architecture can accommodate a project identity through the lens of Critical Regionalism. The different approaches of Tzonis & Lefaivre, Frampton, Marcel Duchamp and Timothy J. Cassidy were analysed to suggest modern solutions towards site issues, use of tactility, using elements in a different context than intended, citationism and syncretism, and meta-statement. A set of design objectives/principles were identified during the study of critical regionalism, namely defamiliarisation, participation, arrière-garde, traditional and landscape practices, and tactility.



PROGRAM

TOURIST PAVILION	RITUAL PAVILION	SACRED PAVILION	MARKET PAVILION	HIMBA PAVILION
-Tourist Shops -Reception -Cultural art gallery -Office space -Kiosk -Kitchen & Storage -Briefing Space -Outside seating space -Ablutions -Research facilities -Storage -Staff Room -Refuse	-Gathering/ Performance space -History Exibition space -Cultural customs exibition space -Memorial walkway/ seating -Ancestral memorial garden	-Mythological Line circulation/experiantial space -Holy Fire space -Underground Chiefs memorial space	-Informal Market Space -Landscape viewing point -Restaurant -Kitchen -Loading bay -Ablutions -Storage -Refuse	-Craft workshops -Leather tanning spaces -Wood carving space -Indiginous Education space -Outdoor Social space -Food preparation spaces -Storage -Water tower -Ablutions

PROJECT AIM

The project aims to create a portal between the diverse worlds of the tourists and the Himba. The pavilion will create a space for cultural appreciation and accustomisation through architecture as the dialogue medium.
The project will display, support and safeguard the indigenous Himba culture by implementing educational and awareness amenities, and celebrating and motivating the cultural significance within the functions.

At its core, the project seeks to expand and enrich the cultural understanding between these worlds, and thereby undermine the superficial appreciation that much of the world has of northern Namibia and the Himba culture. It will provide a gathering space between the two worlds, and will contribute to the cultural sustainability of the Himba people while also providing them with a space suitable for their project identity.

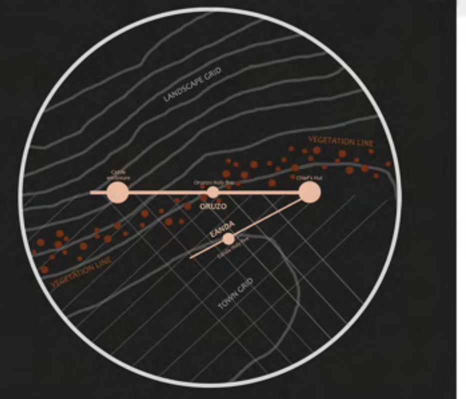
SITE APPROACH

Several influencing formations can be identified on site: the formal town grid, the natural contours, the symbolic Himba line, and the natural vegetation running through the site.
These elements are fundamental, as they will have a significant influence on the design layout. The components can also be identified under two of the three categories contributing to the sense of place, namely context and vernacular structures.
The sacred symbolic line in the village formation, is an essential element in incorporating landscape and traditional practices. This principle relates to Eggener's approach to reflect on the actual conditions of life.

Two clans can be identified in a traditional Himba village, namely the maternal clan, Eanda, and the paternal clan Oruzo. The imaginary line has two axes, of which the east-west axis is reserved for the Oruzo clan and the northeast/southwest axis for the Eanda clan. On the site, these distinct axes will determine the layout of the building.

The contrasting grids between the town and the landscape will determine how the building masses will be placed on the site. These grids also connect at the portal space, emphasising the gathering of two contrasting environments, namely the man-made and the natural context.

Additionally, the natural mopane vegetation and rocky outcrop crosses the Himba line at the point of the holy fire. Despite this religious space already having spiritual meaning within the culture, the crossing of the vegetation also contributes to the spirituality of the landscape. The tree of life is a famous symbol that represents various aspects across different cultures and religions. Trees represent "the interconnectedness of everything in the universe. It symbolises togetherness and serves as a reminder that you are never alone or isolated, but rather that you are connected to the world" (One Tribe Apparel, 2019:online). Therefore, the occurrence on the site becomes a significant feature highlighting the holy fire as the building's main hierarchy and gathering point for the landscape and the different cultures.



STORY OF THE PEOPLE

The Ovahimba Community

Himba Village people

HIMBA VILLAGES IN AND AROUND OPUWO

In rural northern Namibia, the Himba live in and around the colonial town of Opuwo. After Namibian's independence in 1990, the Himba became subjected to increasingly modern Western influences.

Villages around Opuwo

HIMBA CUSTOMS

The Himba people have an aesthetic appearance, with red skin, unique hairstyles, native jewelry and animal skin clothing. The natural pigment, red ochre, is mixed with "otjize", a paste of butter and fat rubbed on their skin and hair. This ritual provides the Himba with their red glow, which signifies both blood, the spirit of life, and the earth's rich red colour (McGinty, n.d.: online).

Himba Customs & Rituals

HIMBA CRAFTS

The Himba people have several artisan skills, which they utilise to generate an income through tourism. These crafts include basketry, wood carving, leather tanning and beadwork.

INFLUENCE OF MODERNITY (TRADITION VS MODERNISM)

Currently, the Himba people face the challenge of maintaining their traditions while also gradually integrating with modernity. For many years, the Himba rejected modern influences, but their way of perceiving the world is slowly changing. Due to the tourism industry, which rapidly increased in the Kunene Region over the past few years, the Himba are regularly introduced to modern technologies, systems and concepts (Murdock, n.d.:online).

According to Austin Cameron, who did an intense qualitative study on the factors influencing the Himba culture in his master's thesis, there are three main theories that could explain cultural change, namely cognitive dissonance, urbanisation, and mass media and social learning theory (Cameron, 2013:27-37).

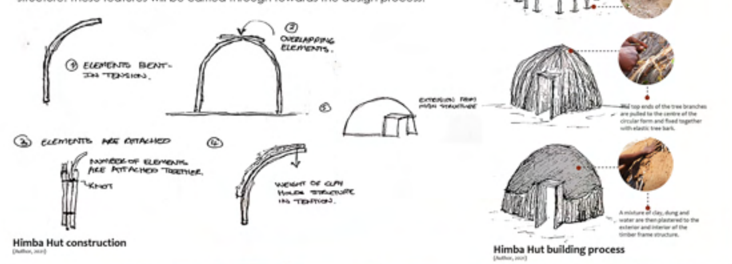
Mass Media & Social Learning
Familiarisation with technological devices causing curiosity about the outside world.

Urbanisation
Modern conveniences such as "hospitals, cell phones, cars and roads" have become integrated into their lives.

Cognitive Dissonance
Change in Himba behaviour towards western clothing and notions to reduce the Dissonance in Opuwo.

HIMBA CONSTRUCTION

The most significant characteristics extracted from the traditional construction of the hut are the heavy clay plaster carried by the frame structure, the structural elements bent in tension and tied, the overlapping of structural branches, and extrusions from the main structure. These features will be carried through towards the design process.



Himba Hut construction

Himba Hut building process

PRECEDENT STUDIES

Mapungubwe Interpretation Centre , Senegal Cultural Centre, Sandibe Okavango Safari Lodge

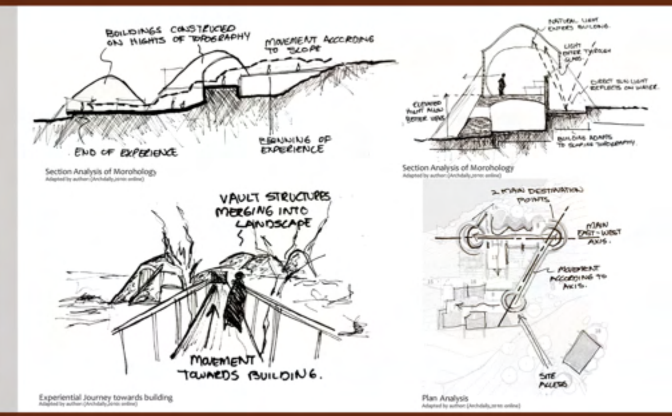
Mapungubwe Interpretation Centre / Peter Rich

Mapungubwe, South Africa

The Interpretation Center is situated in Mapungubwe, South Africa. The building is located in a heritage site which contains an immense history of the local. The Interpretation Building functions as a visitors' centre, and includes exploratory pathways and spaces to recollect the narratives of the location, and to display regional artefacts.

This precedent was chosen to identify how an African context and culture can be incorporated into architecture. It is also a fine example of how a narrative can be presented through exploratory pathways to achieve a sense of place. Critical Regionalsim plays a major role, as this building exhibits the strategies of tactility, defamiliarisation, participation, arrière-garde and nature & context.

Mapungubwe Interpretation Centre (Archdaily, 2010: website)



Section Analysis of Morohology

Experiential Journey towards building

Plan Analysis

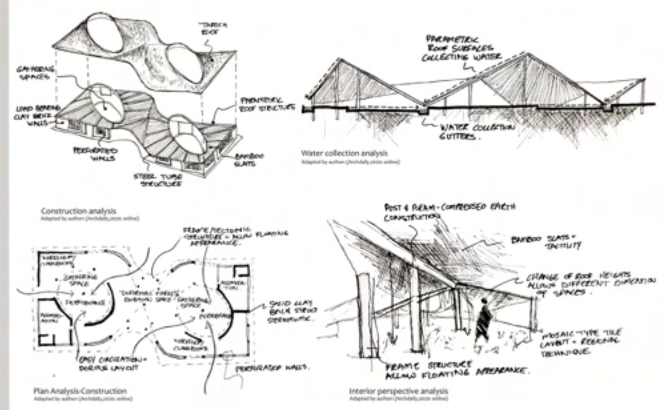
Senegal Cultural Centre / Toshiko Mori

Sinthian, Senegal

Toshiko Mori focused on traditional construction techniques regarding the type of materials, morphology and technology in the Senegal Cultural Centre. These elements have been defamiliarised to expand the possibilities for the vernacular hut architecture of the Senegalese people. Materials in the natural context were used to construct the building, namely bamboo, brick, and thatch. Together with local building techniques and the architect's innovative designs, the building is inspired by the context, culture and cultural architecture.

This precedent was chosen to indicate how a sensitive critical regionalist approach can be incorporated into a design. This centre also indicated the program, function and structure, as it contains similar regional materials, techniques and structures to those identified in Namibia.

Senegal Cultural Center-Perspective of Gathering space (Archdaily, 2020: website)



Construction analysis

Water collection analysis

Plan Analysis-Construction

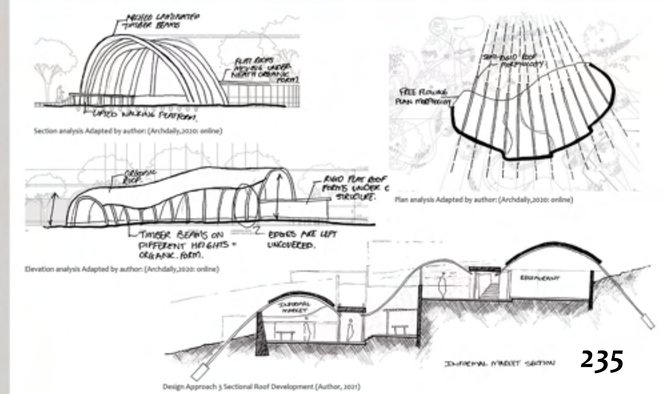
Interior perspective analysis

Sandibe Okavango Safari Lodge / Nicholas Plewman Architects in Association with Michaelis Boyd Associates

Okavango Delta, Botswana

The Sandibe Okavango Safari Lodge is situated in Botswana, and functions as a hotel. The roof morphology was inspired by the creatures inhabiting the surrounding context and, specifically, the armadillo. The construction involves laminated pine timber beams with different heights, which informs the organic morphology of the roof, covered with butt-jointed pine scale planks. The roof appears as a protective carapace of scales similar to that of an armadillo (ArchDaily, 2021e:online).

Inspiration was drawn from the curved roof morphology. This structure, however, does not involve the theory and characteristics of bent structural branches, as suggested by the construction of a Himba hut. Therefore, the curved roof idea was altered to suit the specific construction characteristics of the Ritual Himba Pavilion.



Section analysis Adapted by author: (Archdaily,2020: online)

Plan analysis Adapted by author: (Archdaily,2020: online)

EXPLORING THE MERGED STAIN OF TRADITION AND MODERNISM.

Touchstone:

The touchstone represents the merged product of tradition and modernity. The red liquid represents the traditional unit, as it resembles the red ochre that the Himba women mix with butter to apply on their skin. The wire mechanism represents modern-day influences. Together these two units produce a stain that symbolises a new approach with both tradition and modernism embedded.
The staining process has similar and distinct characteristics of the slow method of medicine administered into the body through a drip - the continuous slow introduction of fluid into the body through gravity. Comparable to this method, the staining occurs through natural forces such as surface tension in materials, gravity and solubility. This occurrence is not forceful but rather a natural infusion.

In a sense, the planned building will itself become the stain. It will provide a medium that celebrates both the contemporary and indigenous aspects, and act as a gathering point between the two worlds.

THE DIALOGUE

Merging the contrasting Kunene Region context.

Concept 1:

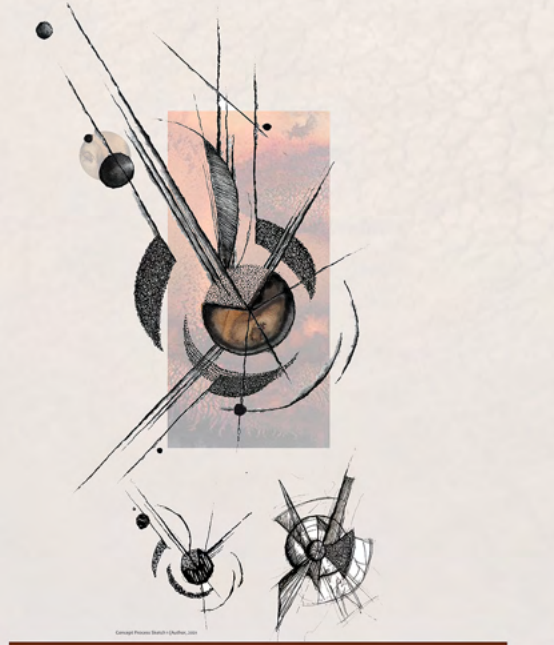
The concept "dialogue" defines the aim of the context to create a point of gathering and mutual interest. The context entails a break between two environments, namely the natural and the artificial. This concept will test how the gap between these environments can be bridged to form a mutual gathering point. The concept gave rise to several design strategies, such as overlapping spaces and juxtaposition.

These two strategies imply the contrasting context between the Skeleton Coast, the Great Escarpment and the plateau of the Kunene Region, on the one hand, and the micro-site context on the other. These overlapping juxtaposed elements of the general context and the micro-elements include soft versus hard edges, height differences, light versus rigid materials, natural versus human-made, complexity versus simplicity and undeveloped versus developed.

THE CORE

Aid in the mythical space between the living and spirit.

Concept 2:



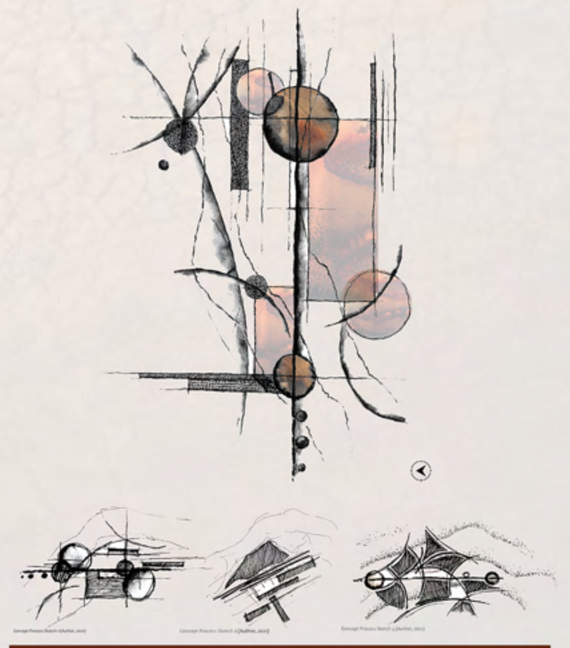
After a careful evaluation of the modern and traditional elements of the Himba culture, one can argue that the connection between man and spirit in most cases remain, despite the drastic impact of external elements on their traditional culture.
The concept therefore symbolises this spiritual core that stays grounded in the culture, despite external adjustments. As this connection is the grounded aspect, it is an essential element in incorporating a sense of place.

The concept intends to bridge the gap between the living world and the spirit world. It will test the several characteristics of spiritual and mythical space, namely open and closed space, portal or threshold, and exploratory path. Other characteristics include an articulating destination point, delineating space through natural or man-made boundaries, links between spaces, contrasting space scales, light, and colour.

THE MYTHOLOGICAL LINE

Himba Indigeneity through the formation.

Concept 3:



This concept supports the idea of critical regionalism and architecture that rise up to meet the current situation. The symbolic line concept therefore relates to the form of a village in order to reflect on their authentic living environments.

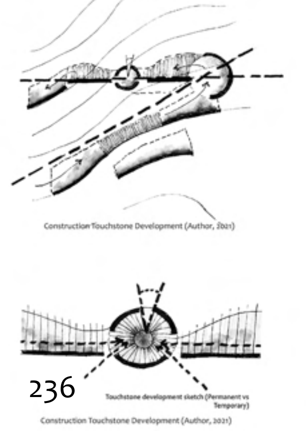
The symbolic line runs from the okuruwo (holy fire) towards the chief's hut, and is perceived as a sacred area. The chief's hut is always orientated towards the east or the west, irrespective of the site conditions.

The orientation and allocation of everything else in the village revolve around this imaginary line. It can therefore be seen as a beacon that determines the layout of the village. This concept will regulate how the structure and construction of a village can be reinterpreted and implemented, and establish a dominant axis that will lead the design. Indigeneity can be established through this application, which will contribute to the context and culture through placemaking.

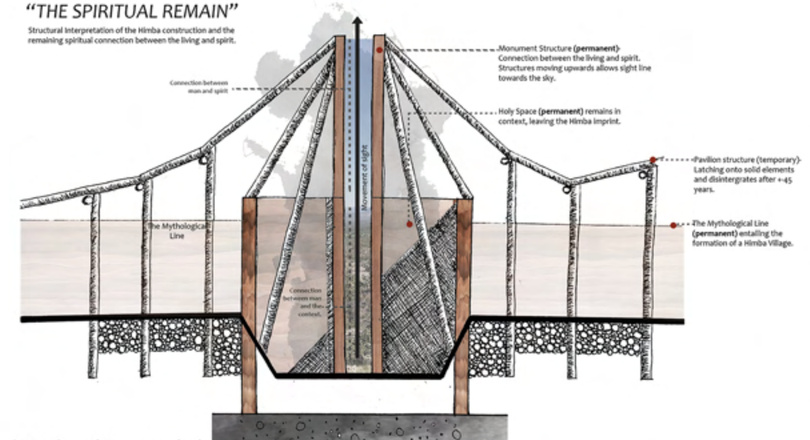
THE DIALOGUE

Merging the contrasting Kunene Region context.

Structural Touchstone



"THE SPIRITUAL REMAIN"



Construction touchstone concept sketch

THE REPRESENTATION OF THE TOUCHSTONE

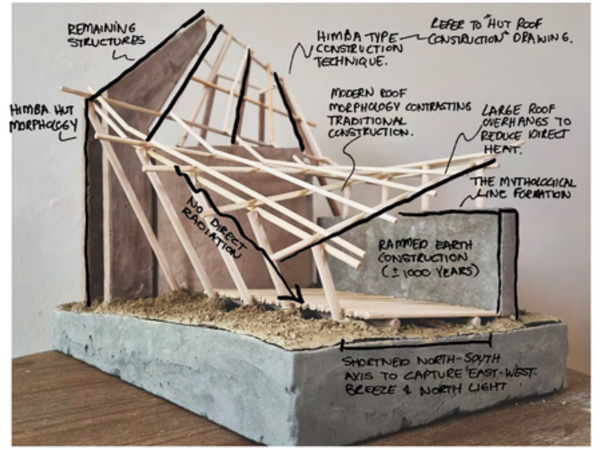
The construction touchstone emphasises the tension between enduring versus transient materiality, solidity versus frame structures, and modern versus traditional morphology.

The intended materials include rammed earth, with a life span of 1000+ years, as well as native mopane circular timber beams and columns that will remain in place for +- 25 years. Due to the materiality of the timber structure, it will disintegrate after a few years. Consequently, the rammed earth construction will remain, leaving the Himba imprint on the context and emphasising the lasting connection between man and spirit.

Two different structural systems are explored, namely a solid (enduring) and lightweight (transient) structure. The lightweight structures latch onto the substantial elements, emphasising the importance of the main components.

Several vernacular techniques are included in the touchstone. The central circular element reinterprets the morphology of a Himba hut, as does the roofing structure. The rammed earth materiality also has a clear connection to the adobe type of construction of the Himba. The additional lightweight system adopts a more modern approach, which emphasises the tension between tradition and modernity.

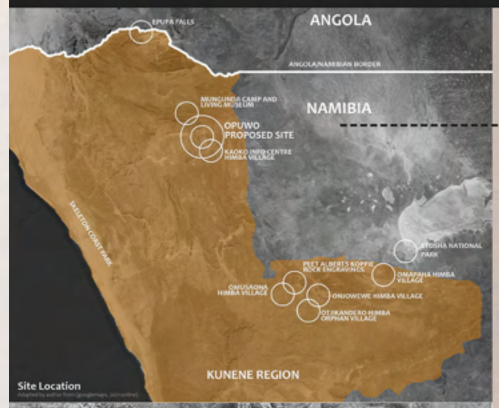
Note that the construction approach was revised later in the design process. The later approach entails community participation for the upkeep of the building, rather than focusing only on transient and enduring materiality. The concept of solid versus frame structures was still implemented in the design, but was interpreted differently than in the early construction touchstone. The idea of modern versus traditional morphology is presented as two different elements in the first approach. In the new proposal, characteristics are extracted from traditional elements and then defamiliarised to achieve an aspect that entails both modern and traditional features.



Construction Touchstone Model (Author, 2021)

STORY OF PLACE

Opuwo town, Kaokoland, Kunene Region, Namibia



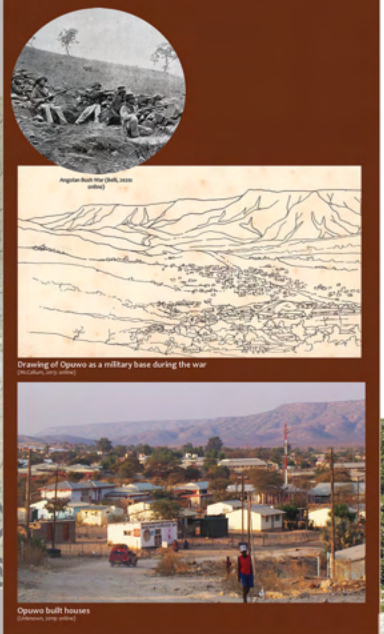
The proposed site is located in the small rural town of Opuwo in Namibia. The town is the capital and commercial hub of the Kunene Region in the desert environment of north-western Namibia. The town has a population of 20 000, and there are about 50 000 Himba living in the Kunene Region (Government of the Republic of Namibia, 2021:online).

Opuwo is well known for the many Ovahimba people who reside in traditional Himba villages around this settlement. A large number of tourists travel to Opuwo annually to visit these villages and experience the Himba people's aesthetic culture and rituals. It also forms the Gateway to other Kunene Region attractions such as the Epupa Falls (Schoenmaeckers, n.d.: website).

TOWN HISTORY

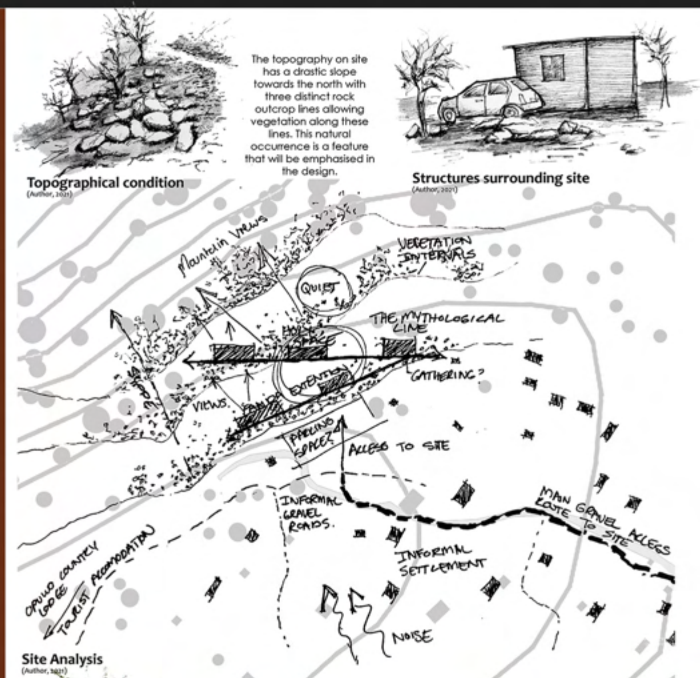
The town grew into a permanent settlement and administrative point for the region during the war before Namibia's independence. The South African Defense Force established the settlement during the war, where it functioned as a base from which expeditions were launched (Ballard, 1997:178-179).

The town remains relatively underdeveloped and still exudes a colonial urban fabric (refer to fig.136 & 137). Despite the unique context and the culture of the inhabitants, no architectural structures suggest Himba identity or contextual significance. This provides an architectural opportunity and need to establish a sense of place, as a resistance against the standardised colonial designs.



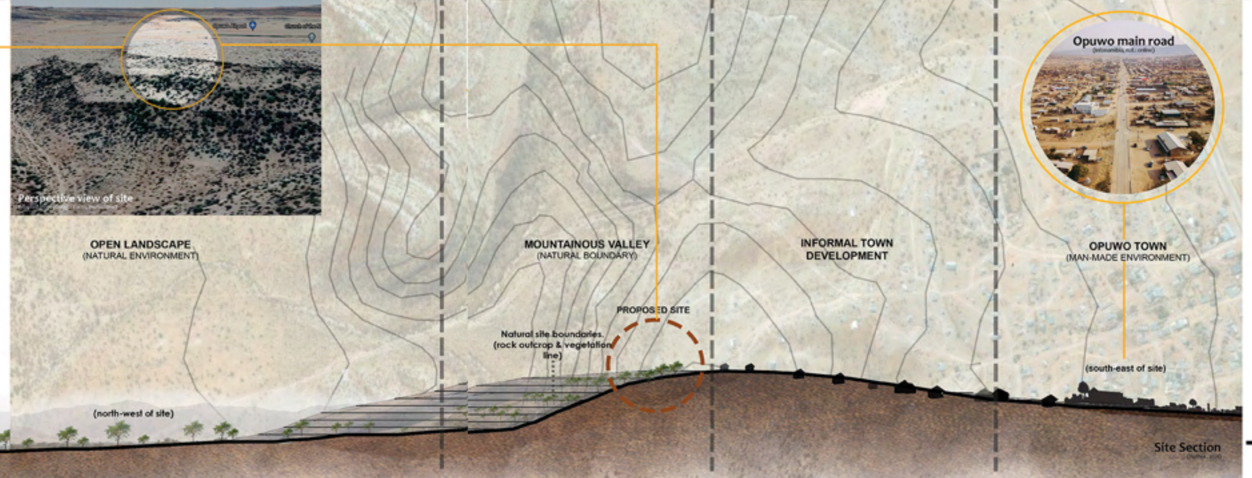
Drawing of Opuwo as a military base during the war

Opuwo built houses



North-west view from site

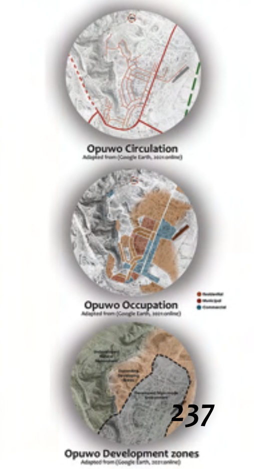
The proposed site is located on a hillside, overlooking the landscape. It provides the pavilion with the prospect to become an in-between medium, linking the town and the natural landscape and creating a gathering point between the traditional and the modern world.



THE COMMUNITY SOUTH OF THE SITE

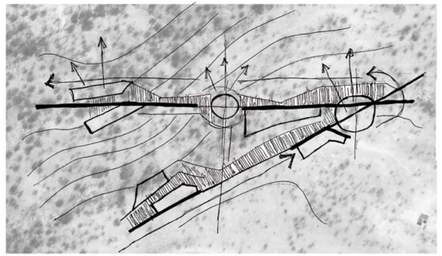
The occupants around the site are a group of Himba/Herero people who turned towards the western way of living. According to the information obtained by talking to these residents, the main reason for relocating to Opuwo was for employment. These people are also helped by the State Department, where there are provided with free land to establish themselves. The informal structures are mostly made from corrugated sheeting and hollow block bricks. Within this construction, all Himba vernacular elements are unfortunately disregarded.

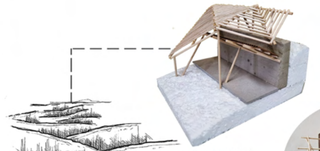
These residents allow one to realise the unsettling reality of their cultural circumstances. It is therefore evident that the culture must be celebrated in order to encourage the community to participate in the modern world but still maintain their cultural identity.



PROCESS DRAWINGS
AND THEORETICAL IMPLEMENTATION

DESIGN DEVELOPMENT 1

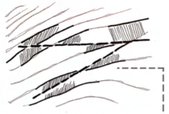

Conceptual development diagram

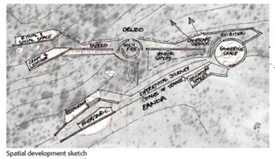

Roof Proposal 1 (Author, 2021)

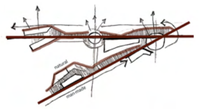

Landscape Defamiliarization Sketch (Author, 2021)

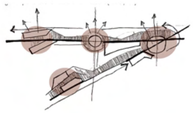

Construction Touchstone Model (Author, 2021)

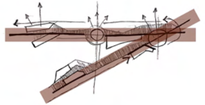

Materiality of Himba hut Defamiliarization Sketch (Author, 2021)


Conceptual development of Axis on site (Author, 2021)

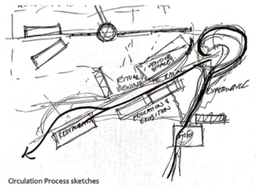

Spatial development sketch

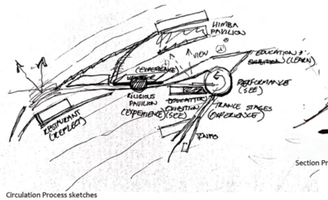

The Dialogue:
ARTICULATING THE TENTION BETWEEN NATURAL AND MAN-MADE GRIDS

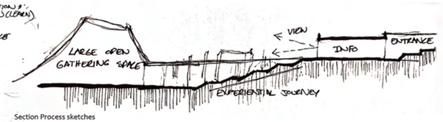

The Core:
DISPERSED NODES ACCORDING TO HIMBA FORMATION

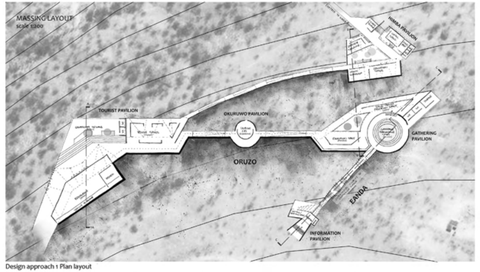

The Mythological Line:
INCORPORATING THE HIMBA AXIS

DESIGN DEVELOPMENT 2


Circulation Process sketches

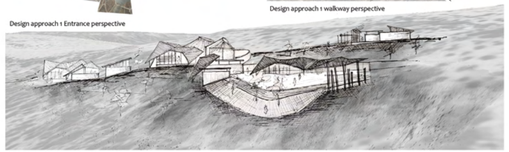

Circulation Process sketches


Section Process sketches

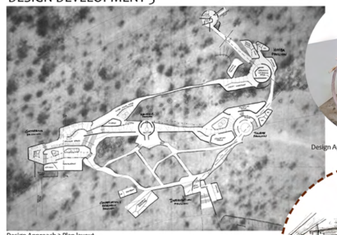

Design approach 1 Plan layout


Design approach 1 Entrance perspective

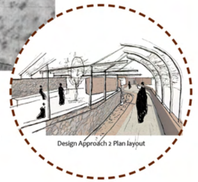

Design approach 1 walkway perspective

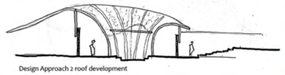

Design approach 1 market perspective

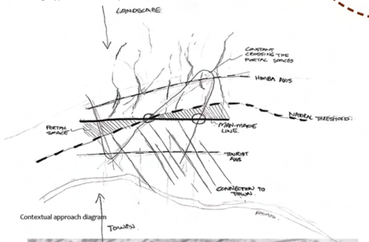
DESIGN DEVELOPMENT 3

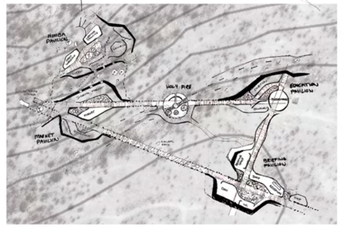

Design Approach 2 Plan layout


Design Approach 2 roof development model

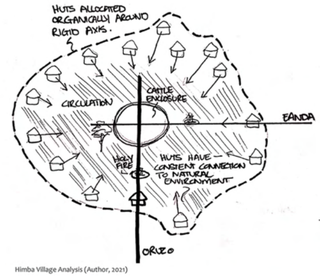

Design Approach 2 Plan layout

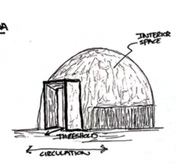

Design Approach 2 roof development

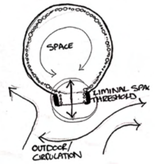

Contextual approach diagram


Design Approach 3 Parti Diagram

DESIGN DEVELOPMENT 3


Himba Village Analysis (Author, 2021)


Himba Hut analysis (Author, 2021)



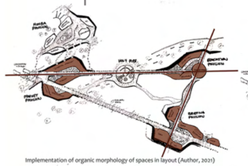
ORGANIC ALLOCATION OF SPACES AROUND RIGID AXIS

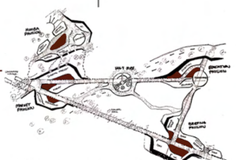
CONSTANT CONNECTION TO NATURAL ENVIRONMENT.

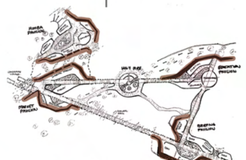
THRESHOLDS BETWEEN SPACES

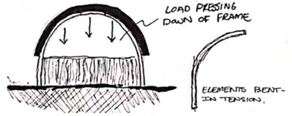
The two essential factors extracted from the analysis of a Himba village were the organic allocation of the Himba huts around the Okuruwo axis and the constant connection to the natural environment. One implemented these elements within the design through the organic walls and space morphology as well as the natural cut-out sections between the circulation and spaces.

The application of thresholds between different spaces was suggested through the Himba hut analysis. Although there are numerous Himba hut typologies, most huts entail an extrusion at the entrance, allowing a threshold between the outdoor and interior spaces. This characteristic is executed within the design through signature thick organic walls that hold the layout, act as retaining walls, and provide distinct transitions between specific spaces.


Implementation of organic morphology of spaces in layout (Author, 2021)


Implementation of natural sections in layout (Author, 2021)

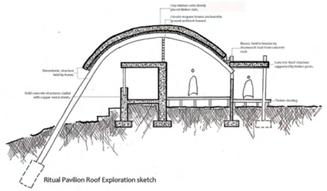

Implementation of thrsholds in layout (Author, 2021)



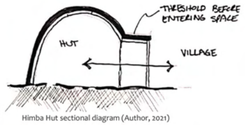
Himba Hut Construction Diagram (Author, 2021)

BENT STRUCTURAL MEMBERS & SOLID LOAD ON FRAME STRUCTURE.

The characteristics of bent structural members and a solid roof structure being carried by a frame were implemented in the design. The roof construction is further explained in the structural development section.



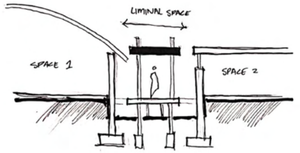
Ritual Pavilion Roof Exploration sketch



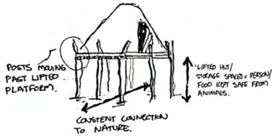
Himba Hut sectional diagram (Author, 2021)

LIMINAL SPACE BETWEEN SPACES AND CIRCULATION

The Extrusion at the Himba hut's entrance, as previously mentioned, creates a threshold. These extrusions are more or less 600mm in depth, creating a transition space. The design emphasises this characteristic by separating the circulation platforms from the walls and only connecting the areas at the entrances, thus creating a liminal space before entering the spaces.



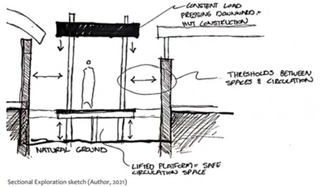
Sectional Exploration sketch (Author, 2021)



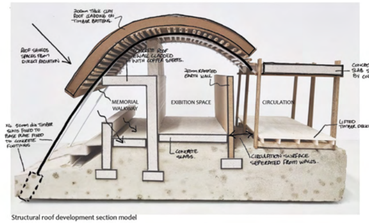
Himba Hut on stilts analysis (Author, 2021)

CIRCULATION ELEVATED FROM GROUND

Other Himba construction entails hut structures on stilts in response to keeping items or someone safe from animals. This element is incorporated in the circulation platforms by lifting it from the ground to ensure a safe circulation space while maintaining the connection to nature.

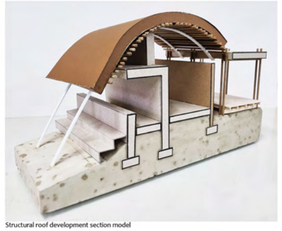


Sectional Exploration sketch (Author, 2021)



Structural roof development section model

The roof structure, previously mentioned in Design Development 2, was structurally explored further. This proposal entails structural units being planted, then bent forward and anchored at the edges. The structural members will exist from mopane slats tied together and dampened to get the desired flexibility within the elements. Mopane batters will be placed densely onto the structural members, to which a thick clay mixture to be placed on top of the frame structure.



Structural roof development section model

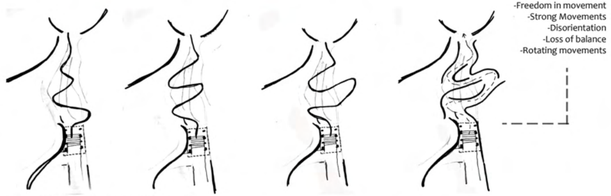
Ondjongo Dance movements (Author,2021)

Ondjongo Dance Freedom in movements (Author,2021)

EXPERIENCE OF THE ONDJONGO DANCE

The Ondjongo Dance is a ritual that occurs during social events or gatherings, such as weddings, and is known as the dance of happiness. It is practised only by using voices and handclaps. The dance entails a group standing in a circular structure facing the centre. The leader then initiates the first reaction, to which the group then responds. One would then enter the central space, followed by energetic dance movements (Mams, 1997, online). These movements entail the following characteristics, which will be reinterpreted into an architectural experience.

-Freedom in movement
-Strong Movements
-Disorientation
-Loss of balance
-Rotating movements

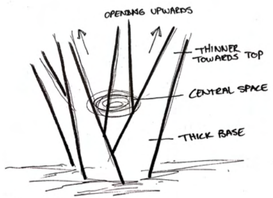


Implementation of characteristics in design (Author,2021)

REINTERPRETATION OF THE HIMBA GRAVES

The burial spaces of the Himba inspired the memorial walls. The traditional tombstones involve a vertical stake plunged into the ground. Cattle skulls are then placed through the stakes, symbolising the deceased wealth. The tombstone is then finished with stones placed at the foot of the structure.

The memorial garden therefore involves a stone wall representing the rocks placed at the end of the stake. Circular steel elements are then vertically built into the stone wall, with earth bricks sliding into these vertical elements. Due to the simplicity of the construction of earth bricks, they can be produced by the Himba whenever a loved one passes away. This structure relates not only to the skulls placed on the stake, but also to the familiar ritual of beading.ts



Omumborombonga tree Analysis (Author,2021)

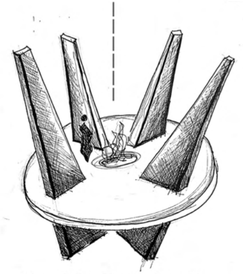
Omumborombonga tree (Author,2021)

REINTERPRETATION OF THE HIMBA LEGEND

HIMBA LEGEND

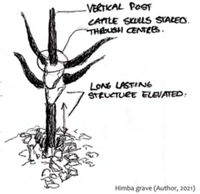
The Himba people believe in the legend about the beginning of humanity, stating that their god, the Makuru and his wife Kamungarunga are descendants from the roots of a sacred tree called Omumborombonga. The scientific name of this tree is Combretum imberbe, also known as leadwood. The people also believe that their treasured cattle descended from the roots of this tree, whereas other animals and clans descended from regular blossoms and crawled out of the earth. Overall the Omumborombonga tree is valued by the Himba people and seen as the "father of life". When the people come across this tree, they would place twigs at the tree's roots as a gesture of respect.

This legend is presented within the sacred fire architecture, functioning as a place of religious ritual, connecting with their ancestors and the Makuru. The holy fire acts as a pinnacle point with monumental structures inspired by the morphology of the Omumborombonga tree. These structures push through the concrete to the underground level of the sacred pavilion, symbolising the tree's roots. One will move from the holy fire into the underground space, where one will move through the 'roots' and exit the sacred pavilion into the mythological line. This design provides one with the experiential journey of the Omumborombonga tree legend about emerging from the roots. This architectural interpretation will possibly contribute to the understanding of the culture and its beliefs.

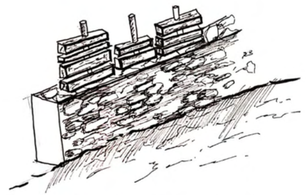


Himba legend implementation on design (Author,2021)

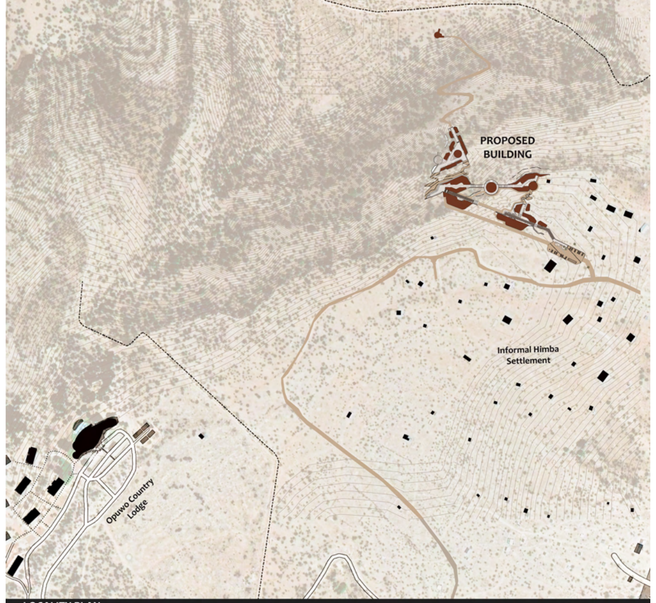
Reinterpretation of Himba graves elevation (Author, 2021)



Himba grave (Author, 2021)



Reinterpretation of Himba graves perspective (Author, 2021)

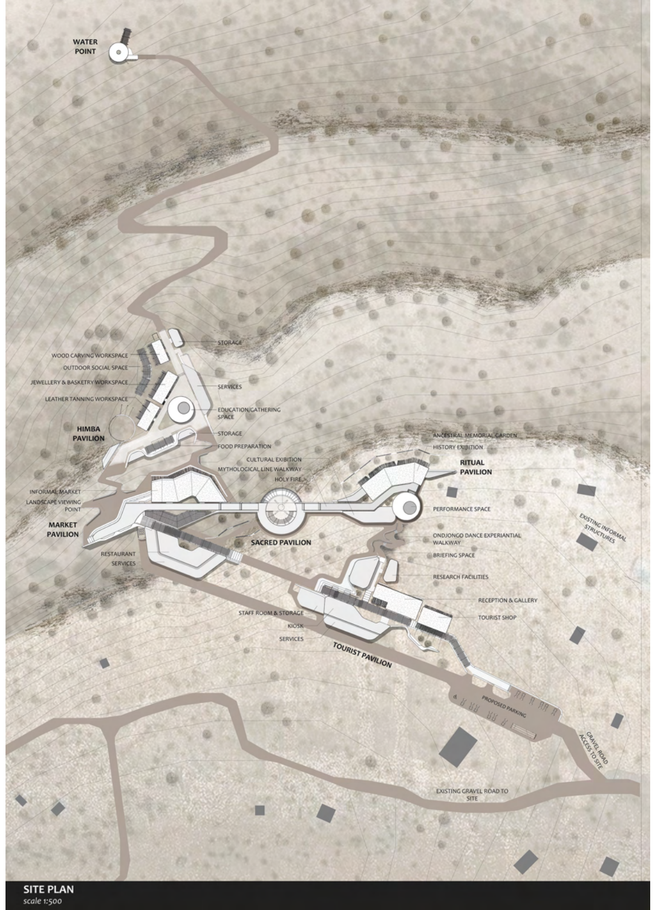


LOCALITY PLAN
scale 1:1500

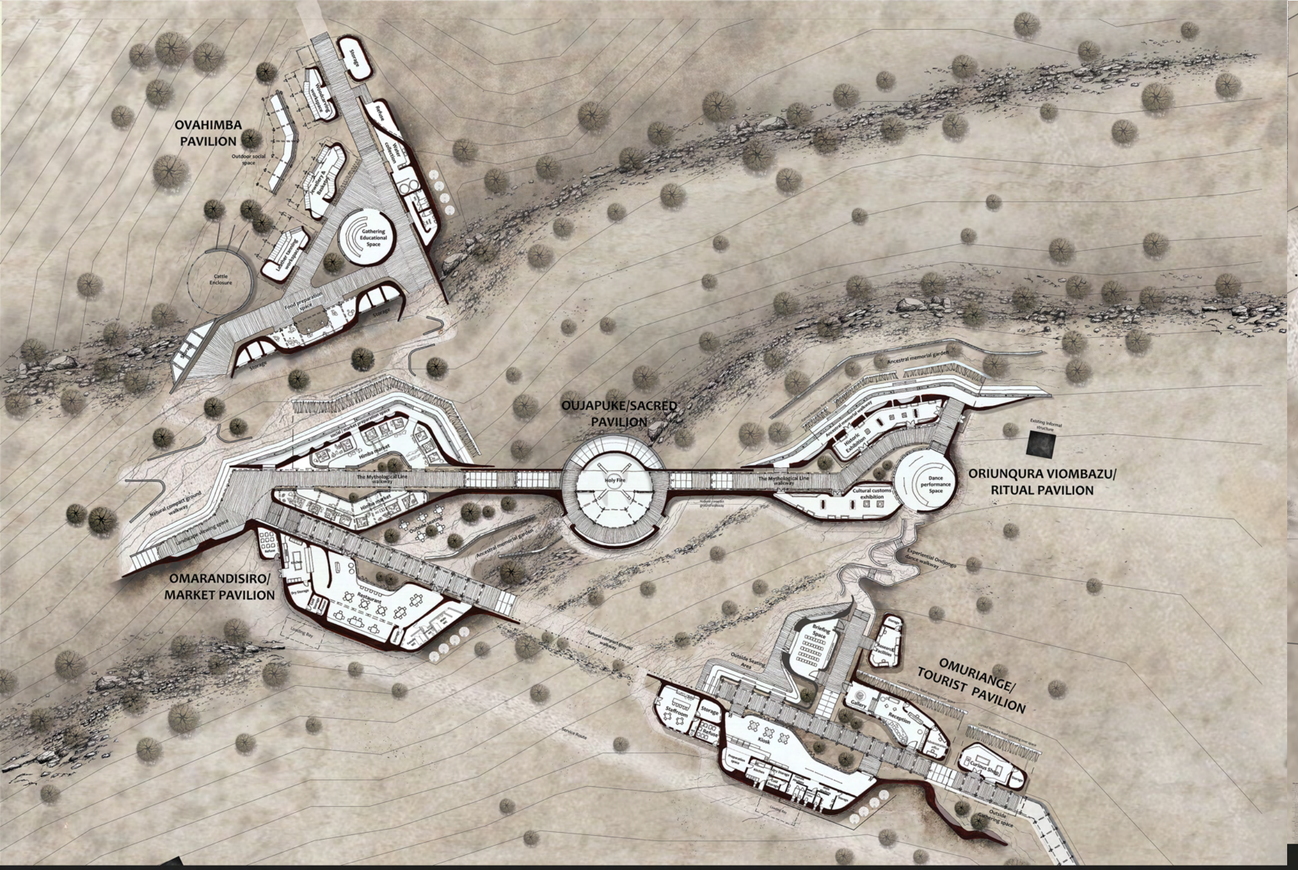
View 1 towards the landscape (Author: 2021)

View 2 towards the town (Author: 2021)

LOCATION OF SITE

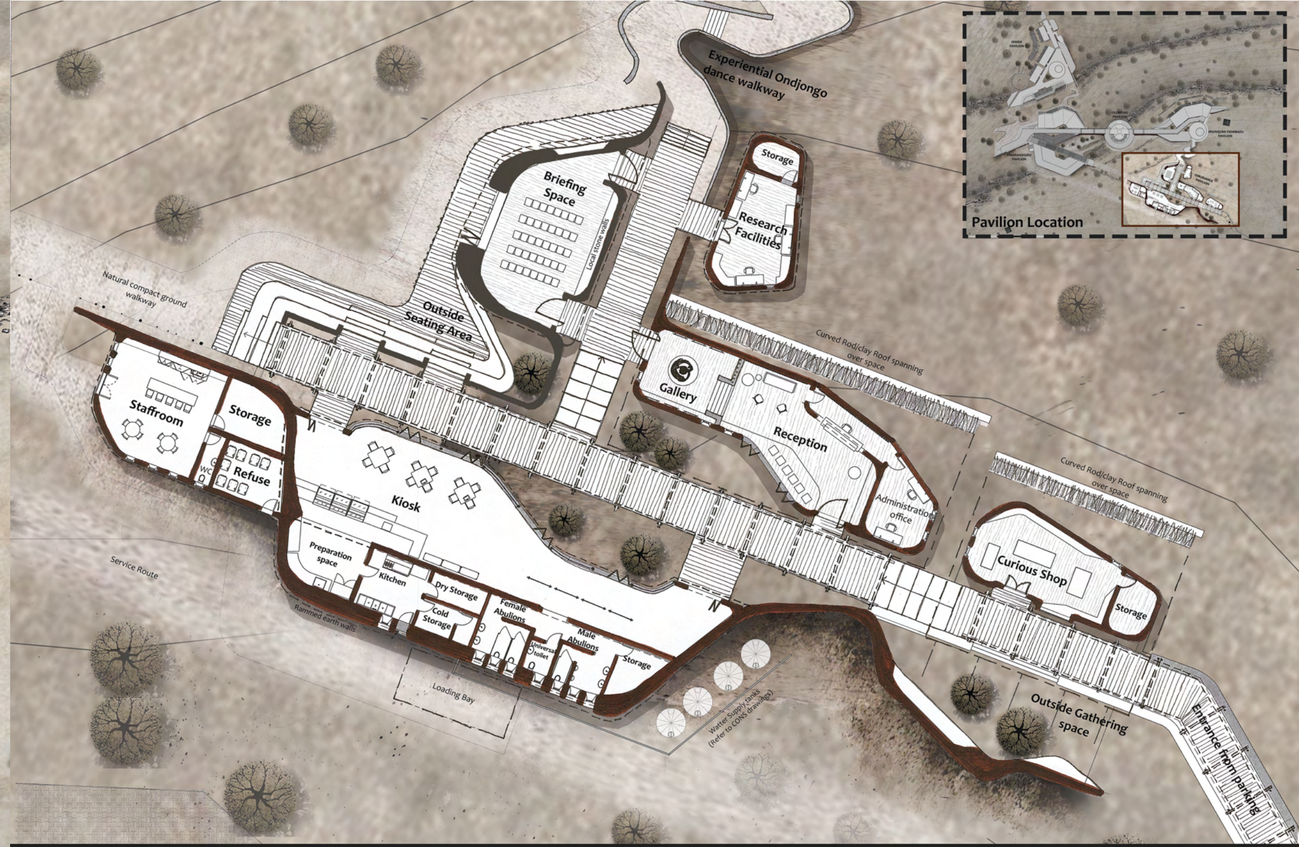


SITE PLAN
scale 1:500



N

COMBINED LEVEL FLOOR PLAN
scale 1:200



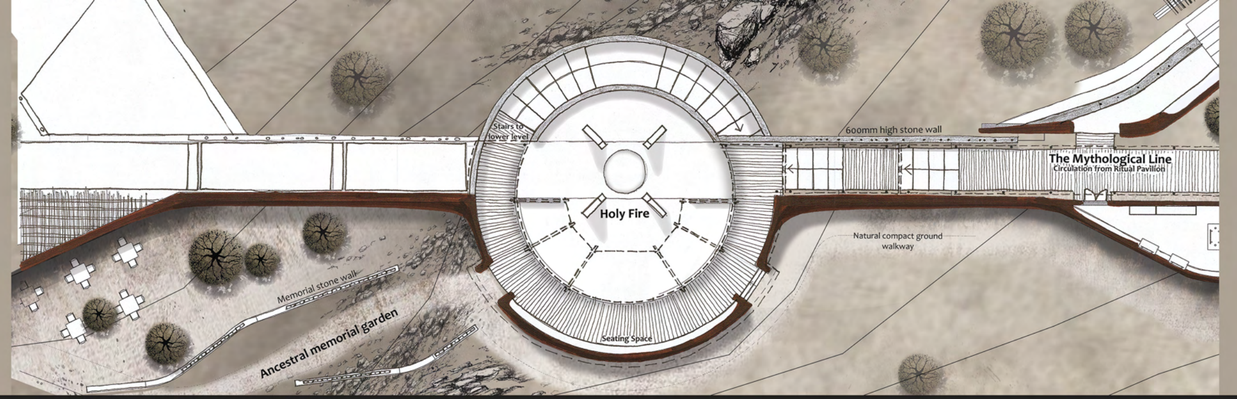
N

OMURIANGE / TOURIST PAVILION
scale 1:100

N

ORIUNQURA VIOMBAZU / RITUAL PAVILION

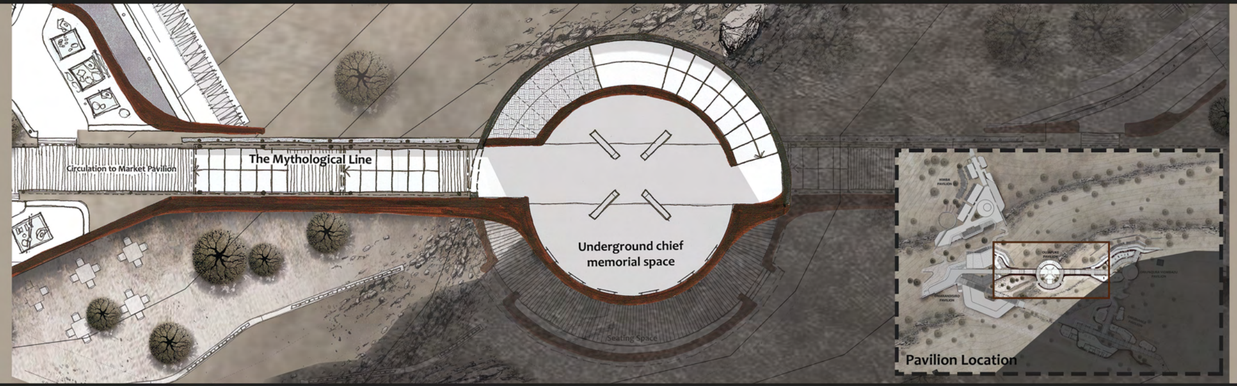
scale 1:100



N

OUJAPUKE / SACRED PAVILION UPPER LEVEL

scale 1:100



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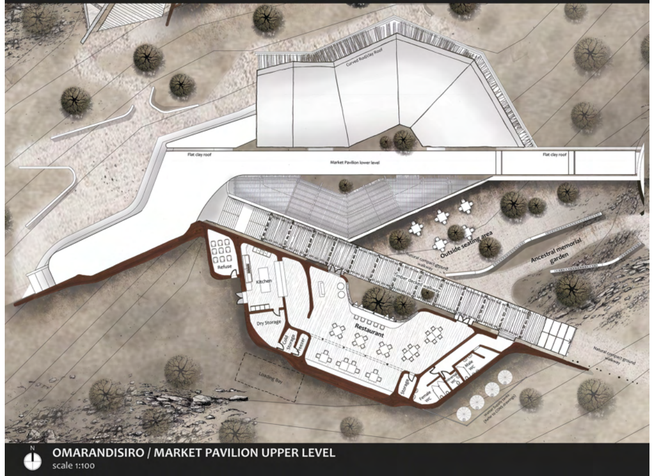
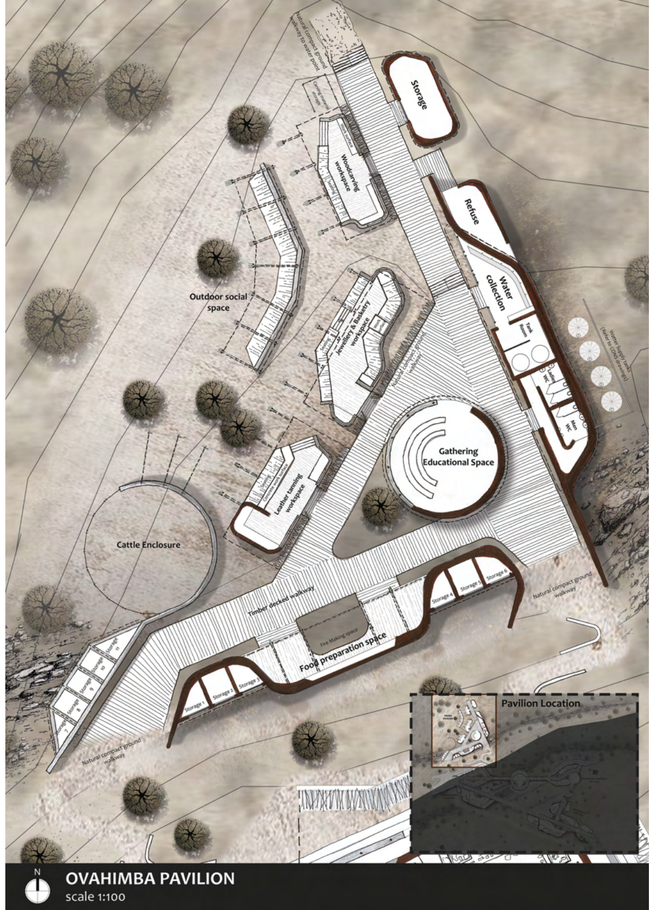
OUJAPUKE / SACRED PAVILION LOWER LEVEL

scale 1:100

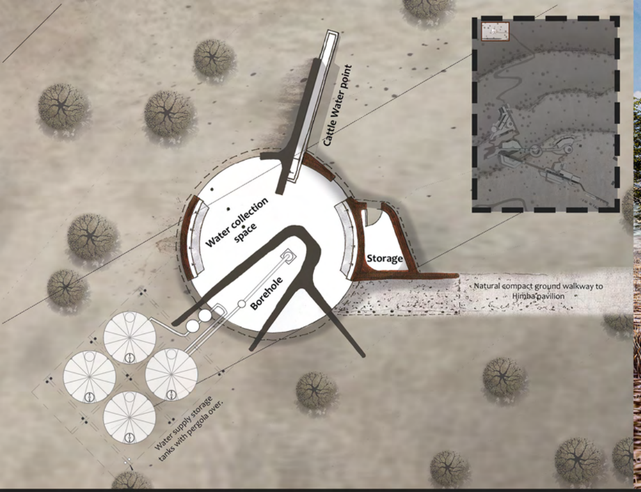
OMARANDISIRO / MARKET PAVILION LOWER LEVEL
scale 1:100



OMARANDISIRO / MARKET PAVILION UPPER LEVEL
scale 1:100



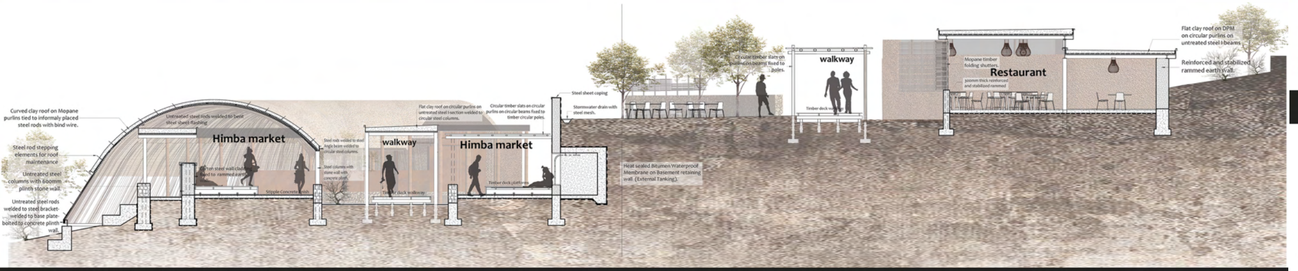
OVAHIMBA PAVILION
scale 1:100



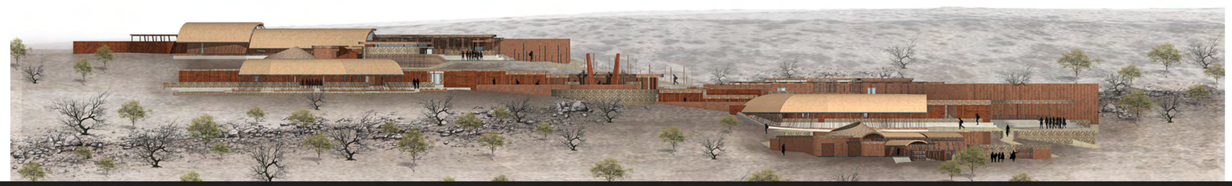
N

OMEVA / WATER POINT
scale 1:100

WATER POINT PERSPECTIVE

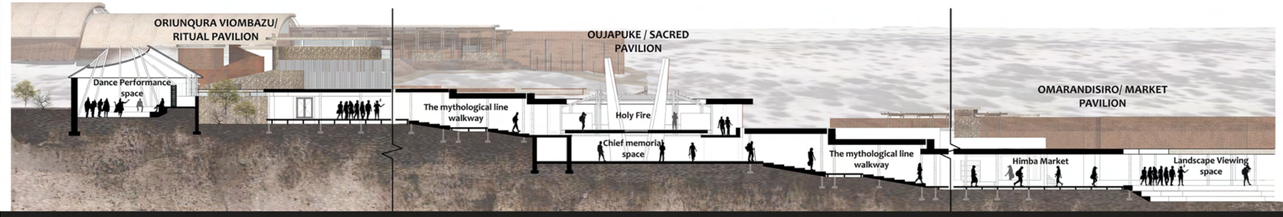


MARKET PAVILION SECTION
0 20 40 60



NORTH ELEVATION
scale 1:200

WEST ELEVATION
scale 1:200



SECTION A-A
scale 1:100

SECTION B-B
scale 1:100

STRUCTURAL THEORY & APPROACH

Solid vs frame structures, Modern vs traditional morphology, Enduring vs transient materiality

STRUCTURAL THEORY

Solid versus frame structures

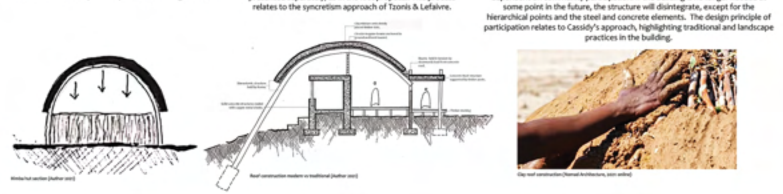
This concept was attained by structurally analysing the Himba hut. The roof involves a frame structure supporting a solid/heavyweight roof cladding. The heavy clay cladding will apply a downward load onto the frame, which will contribute to keeping the bent elements in place. This application emphasises solid versus frame structures in composition, rather than independently. This design element has a strong connection to Cassidy's theory of Reflexive Regionalism.

Modern versus traditional morphology

The design strongly relates to the built form of the Himba, as previously mentioned (refer to page 58). These characteristics are reinterpreted/defamiliarised to attain a new typological roof structure. Contemporary and traditional elements are therefore joined in the revised structural scheme, rather than presented separately, as in the first proposal. This process relates to the syncretism approach of Tzonis & Lefaivre.

Enduring versus transient materiality

The structural aspect of enduring versus transient materiality is refined to relate with the design principle of participation. The materiality of the current proposal entails local structural timber members and purlins with 200mm thick clay roof plaster. By keeping the construction techniques and materials similar to that of the Himba, the design principle of participation can be observed in the building process and the maintenance of the building. As the clay roof cladding is a material that requires maintenance, the life expectancy of the building is dependent on community participation. If the building is no longer needed at some point in the future, the structure will disintegrate, except for the hierarchical points and the steel and concrete elements. The design principle of participation relates to Cassidy's approach, highlighting traditional and landscape practices in the building.



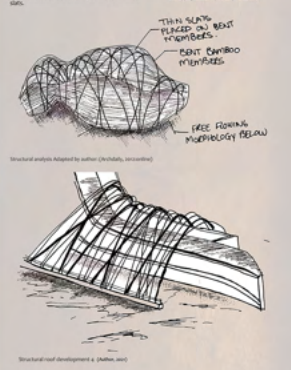
STRUCTURAL PRECEDENT

Cicada / Marco Casagrande

The Cicada pavilion by Casagrande was used as inspiration on how the steel rods can be incorporated into the design.

The construction is based on the local knowledge of human-scale flexible bamboo structures containing a high level of inventiveness (Archdaily, 2012: online). The structural design entails primary structural bamboo members, which are bent to form arches. These members are overlapped with one another, and tied in different intervals allowing the members to brace themselves and one another.

The proposed roof will entail a similar coordinated informal structure, with bent steel rod members and a covering of mopane timber slats.



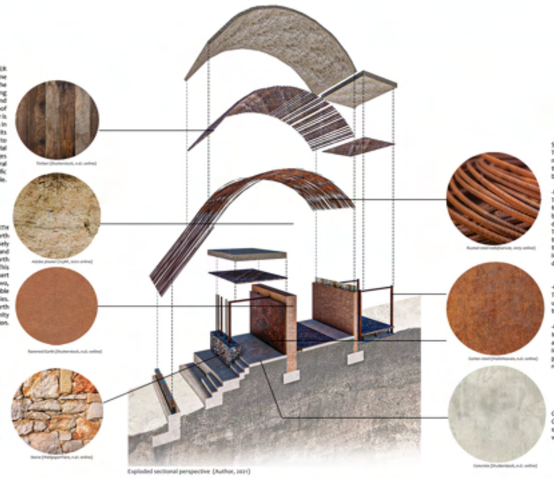
Structural roof development 4 (Author, 2021)

MATERIALITY

TIMBER
The local material of mopane timber will be utilised in the building through shading structures, timber decking, and purlins within the roof construction. Mopane timber is one of the most used materials in Himba construction due to its durability and resistance to termites. However, this material does have certain disadvantages when considering it as a structural element within this specific building design and scale.

ADOBE PLASTER & RAMMED EARTH
The walls will be rammed earth construction. This method is closely connected to the natural and informal materiality of the earth mixture used in a Himba hut. This technique is suitable for the desert climate and rural context of Opuwo, as the material is locally available and has good thermal properties. The construction of rammed earth will also enable community participation.

STONE
Due to the rocky context in which the building is situated, the local stone will also be utilised to incorporate raw contextual materials within the building and contribute to a tactile experience. By including these local materials, the building will need a low level of embodied energy, and produce little waste.



Exploded sectional perspective

STEEL
The use of steel in the design represents the steel materiality in the informal structures occupied by the modernised Himba community surrounding the building as well as the built environment of Opuwo.

-Rods
The frame of the roof structure will be constructed from untreated steel round bar. This decision was based on the affordability of the material, its durability, and its ability to be bent on site. The roof inspiration was obtained from the bent timber members in a Himba hut. Unfortunately, timber would not have been suitable for the intended scale and roof design as it would have deformed over time while supporting a load.

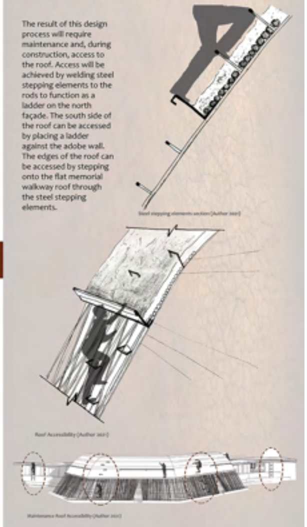
-Circular steel columns and beams
The flat roof structures are constructed from untreated circular steel columns and beams, welded together to obtain a supporting frame.

-Corten
In some areas, Corten steel cladding is fixed to the adobe walls. This material is included to emphasise important thresholds or axes. The steel further provides a different tactile experience, and represents the idea of decay and embedded history.

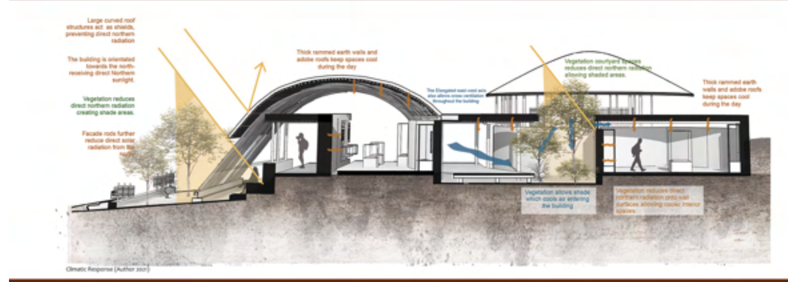
CONCRETE
Concrete will only be used in the building for structural purposes such as wall footings, plinths walls and floor slabs.

ROOF ACCESSIBILITY

The result of this design process will require maintenance and, during construction, access to the roof. Access will be achieved by welding steel stepping elements to the rods to function as a ladder on the north façade. The south side of the roof can be accessed by placing a ladder against the adobe wall. The edges of the roof can be accessed by stepping onto the flat memorial walkway roof through the steel stepping elements.



CLIMATIC RESPONSE



BUILDING PROCESS

OMURIANGE / TOURIST PAVILION ENTRANCE

OMURIANGE / TOURIST PAVILION WEST PERSPECTIVE

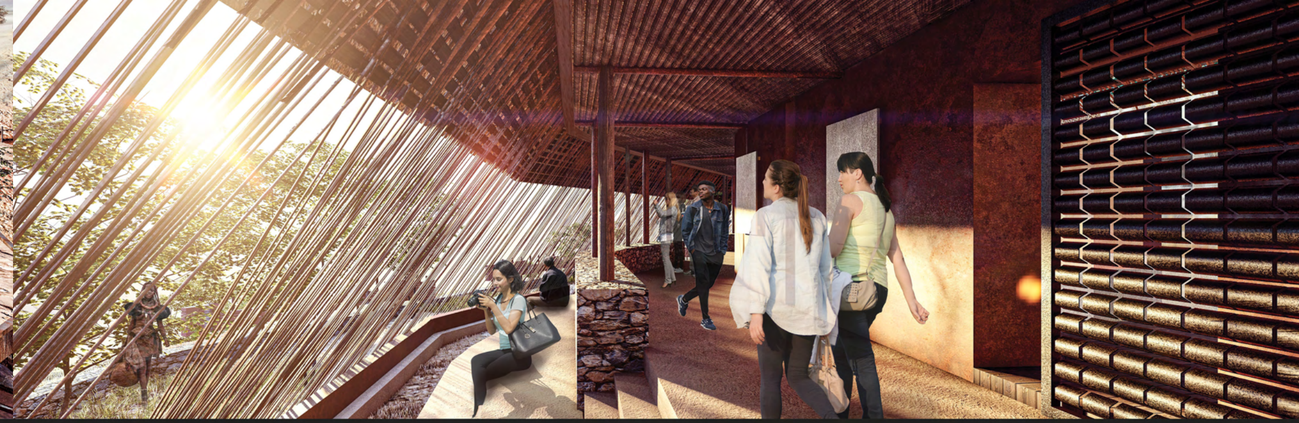
ONDJONGO DANCE WALKWAY

OVAHIMBA PAVILION

THE MYTHOLOGICAL LINE WALKWAY

OVAHIMBA STRUCTURES

OUJAPUKE / SACRED PAVILION

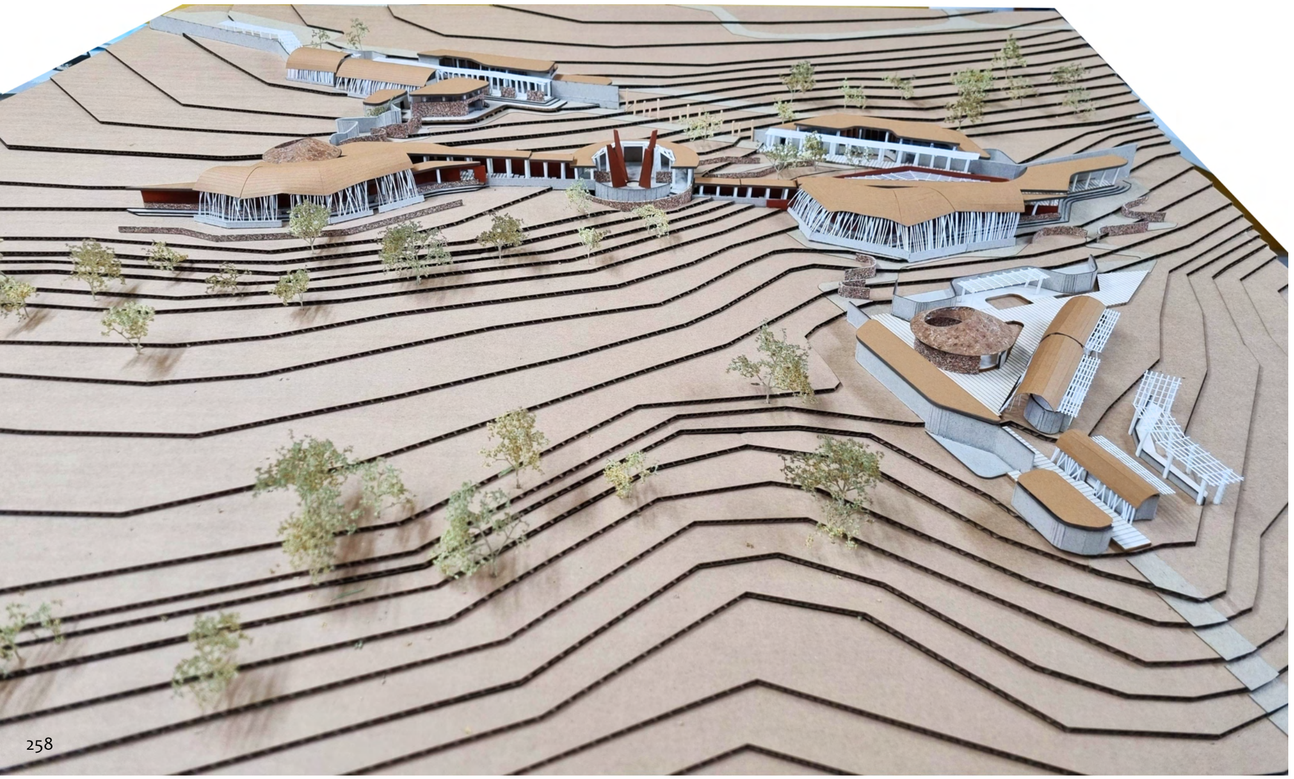


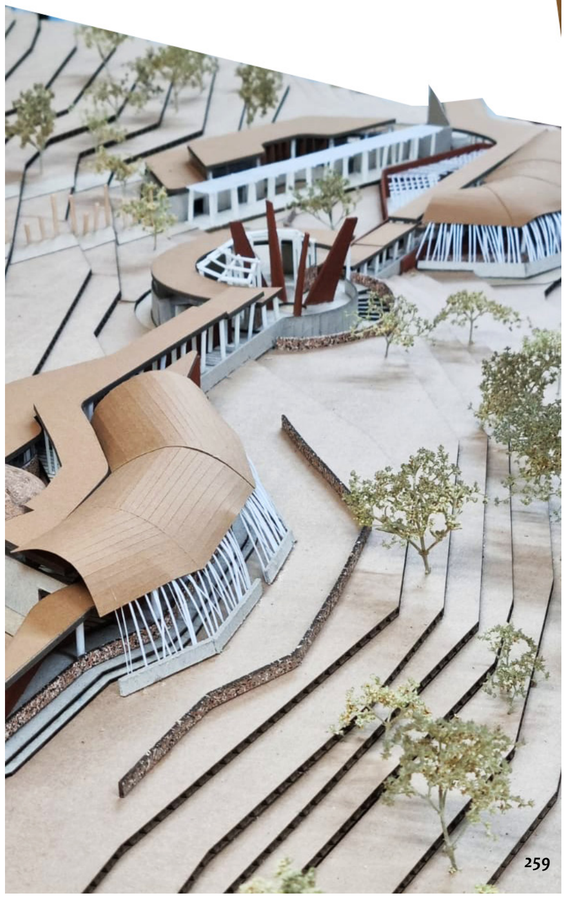
ANCESTRAL MEMORIAL WALKWAY

OVAHIMBA & OMARANDISIRO / MARKET PAVILION

OMURIANGE / TOURIST PAVILION RECEPTION

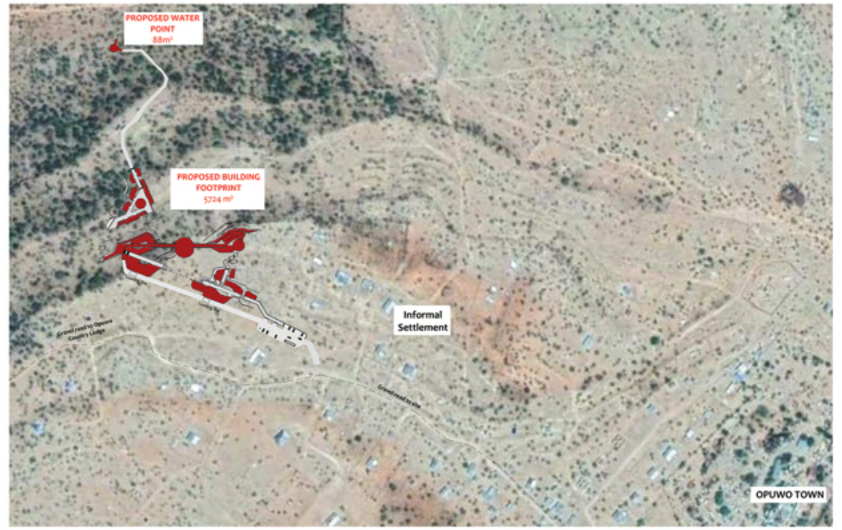
FINAL DESIGN MODEL





TECHNICAL DRAWINGS

PINNED-UP DRAWINGS DURING FINAL EXAM



LOCALITY PLAN
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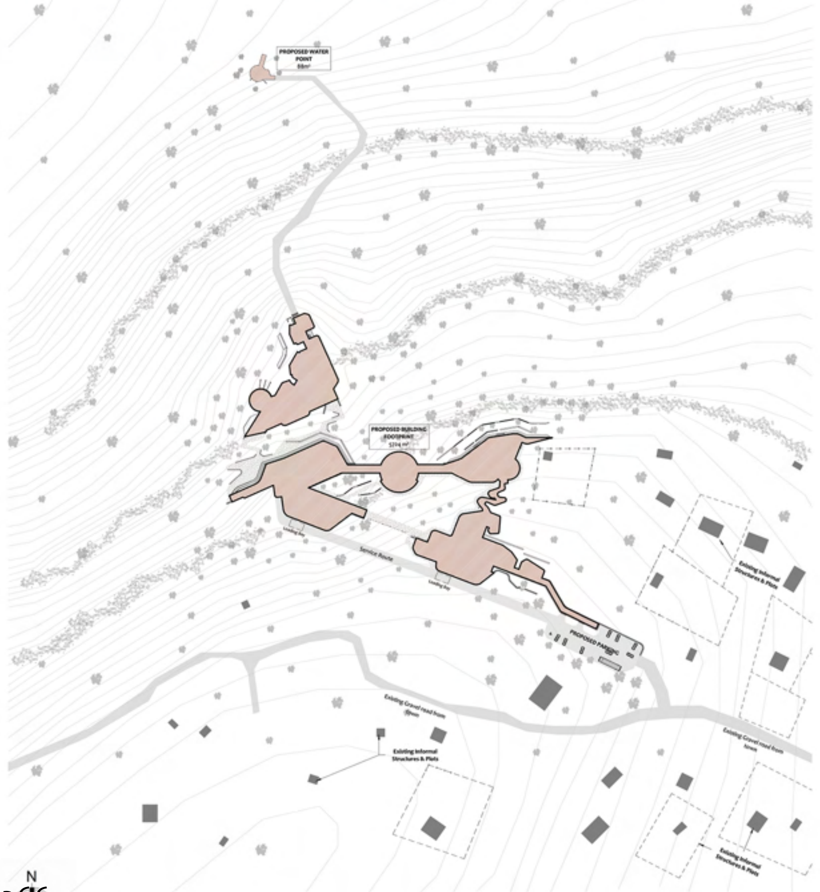


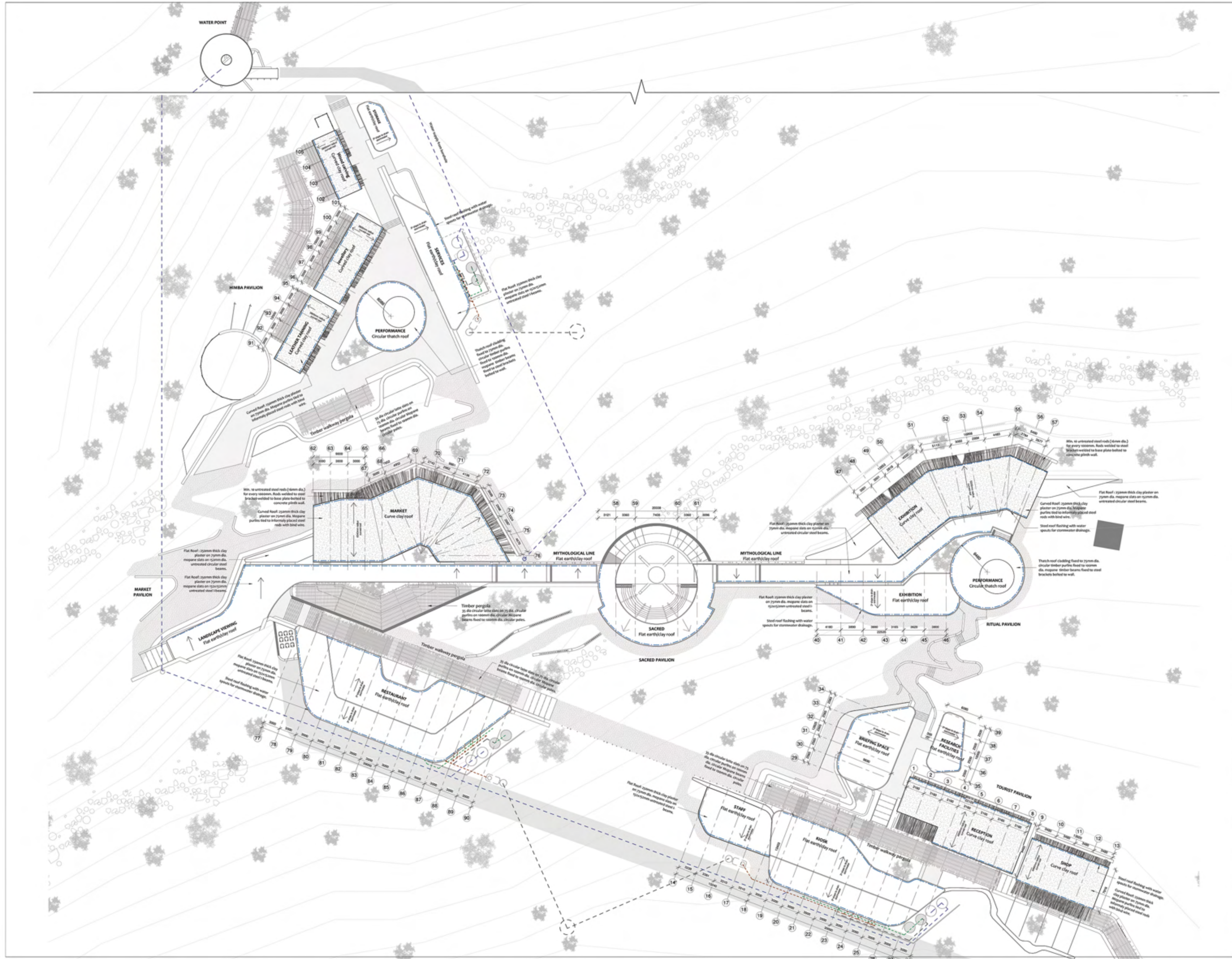
AREA PLAN
scale 1:1000

SITE PLAN
scale 1:500

GENERAL NOTES

CHRIZELLE LOOTS
2015005842

PROJECT	Ritual Himba Portal		
CLIENT	Hizetjitwa Indigenous Peoples Organisation		
DRAWING DESCIPTION	Area Plan & Site Plan		
SITE	Opuwo, Kunene Region, Namibia		
FILE	01	DATE	12-08-2021
SCALE	As indicated	DRAWING	
DRAWN	Chrizelle Loots		
	2015005842		01-CS-1101



GENERAL NOTES

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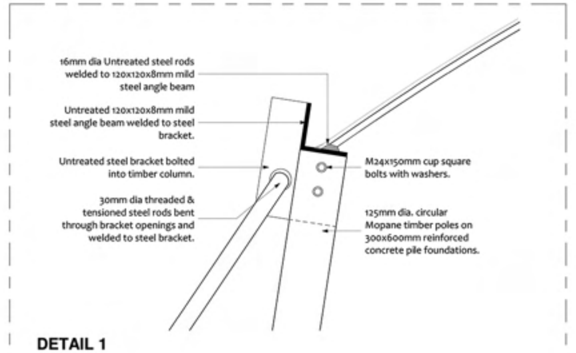
2015005842

PROJECT	Ritual Himba Portal		
CLIENT	Hizetjitwa Indigenous Peoples Organisation		
DRAWING DESCIPTION	Roof Plan		
SITE	Opuwo, Kunene Region, Namibia		
FILE	01	DATE	12-08-2021
SCALE	As indicated	DRAWING	
DRAWN	Chrizelle Loots		
	2015005842		01-CS-1101



DETAIL 1
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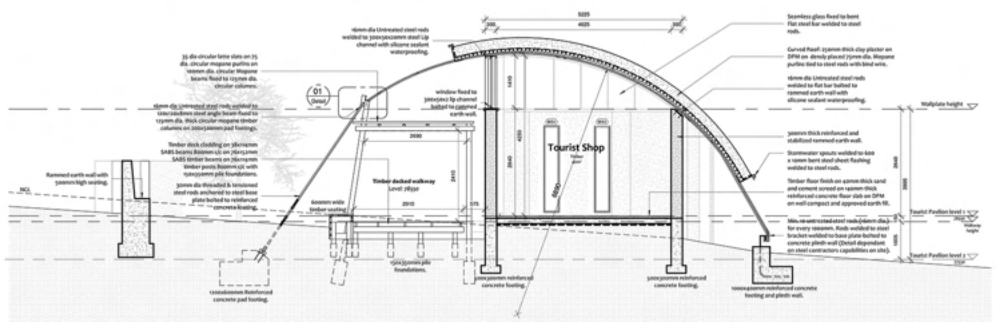
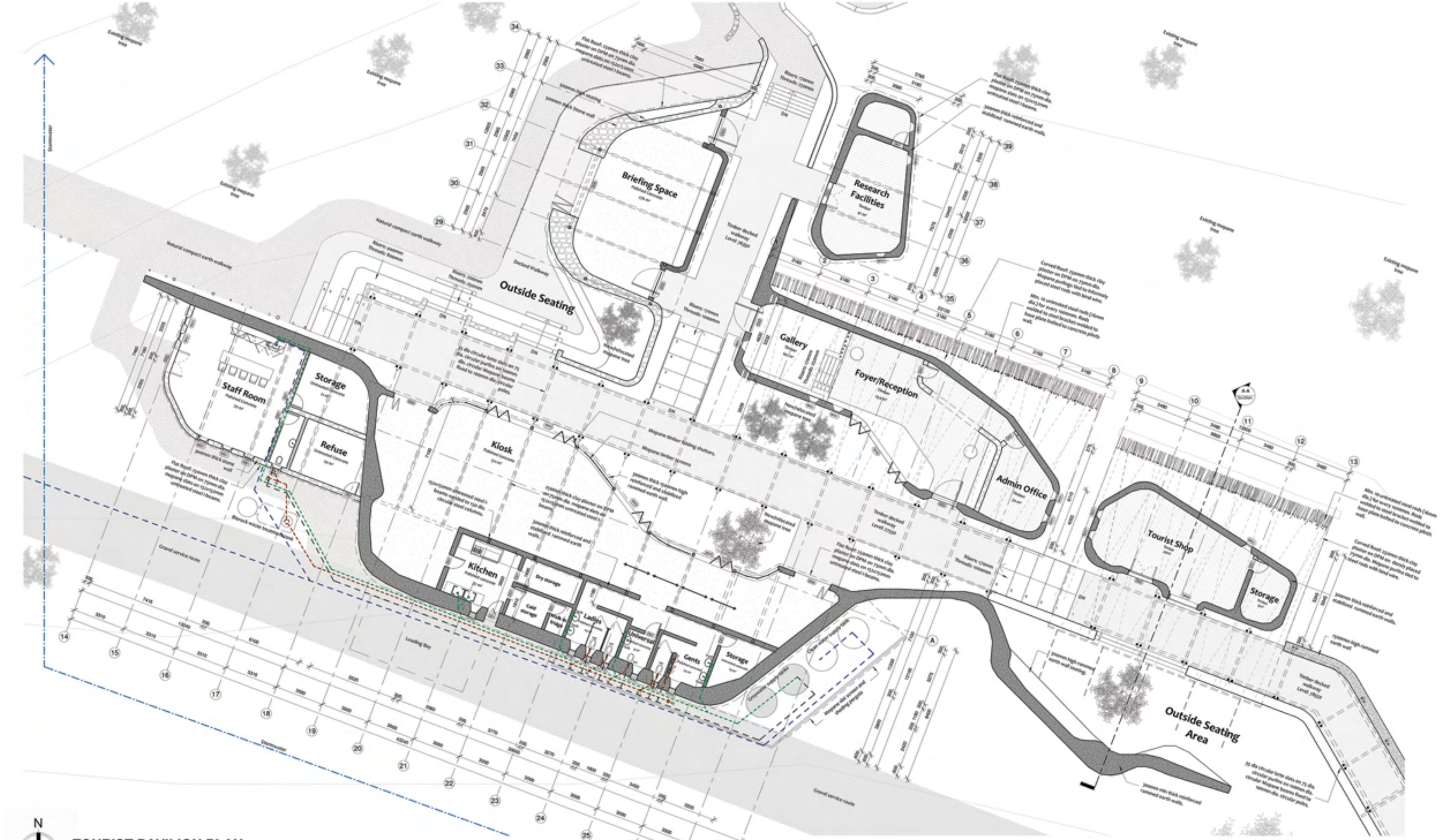


SECTION A-A
TOURIST PAVILION
scale 1:50



TOURIST PAVILION PLAN
scale 1:100

GENERAL NOTES

CHRIZELLE LOOTS
201300584

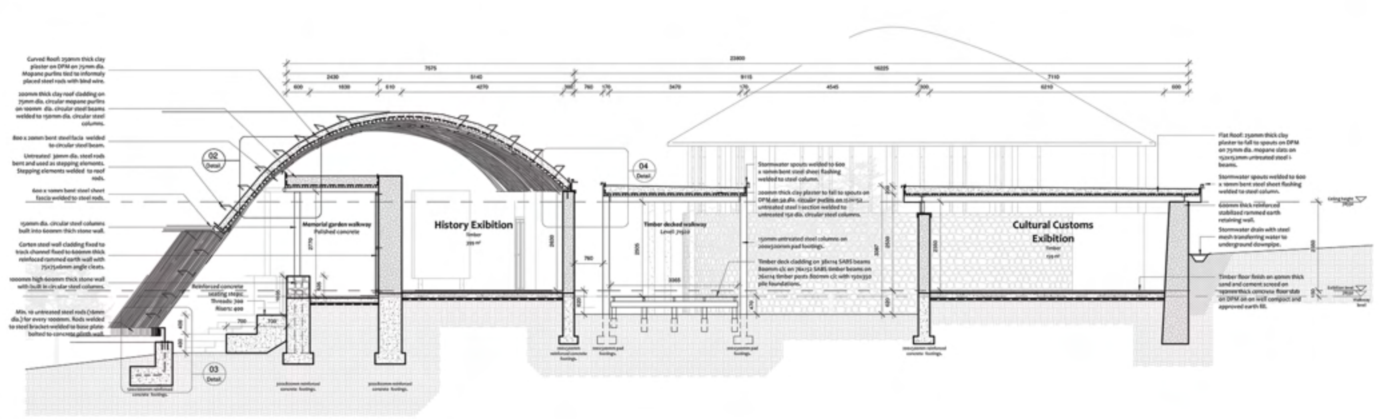
PROJECT
Ritual Himba Portal

CLIENT
Hizeljiwa Indigenous Peoples Organisation

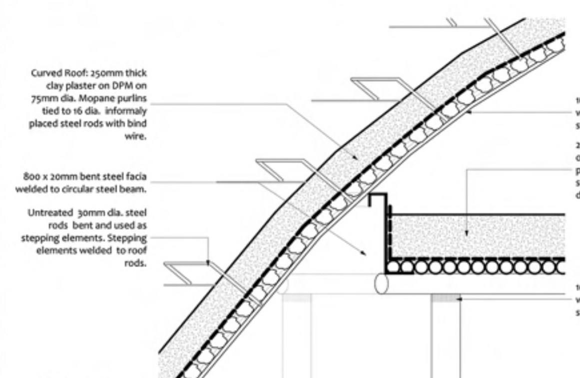
DRAWING DESCRIPTION
Tourist Pavilion

SITE
Opuwo, Kunene Region, Namibia

FILE	01	DATE	12-08-2021
SCALE	As indicated	DRAWING	
DRAWN	Chrizelle Loots		
	201300584		01-CS-1101



SECTION B-B
RITUAL PAVILION
scale 1:50



DETAIL 02
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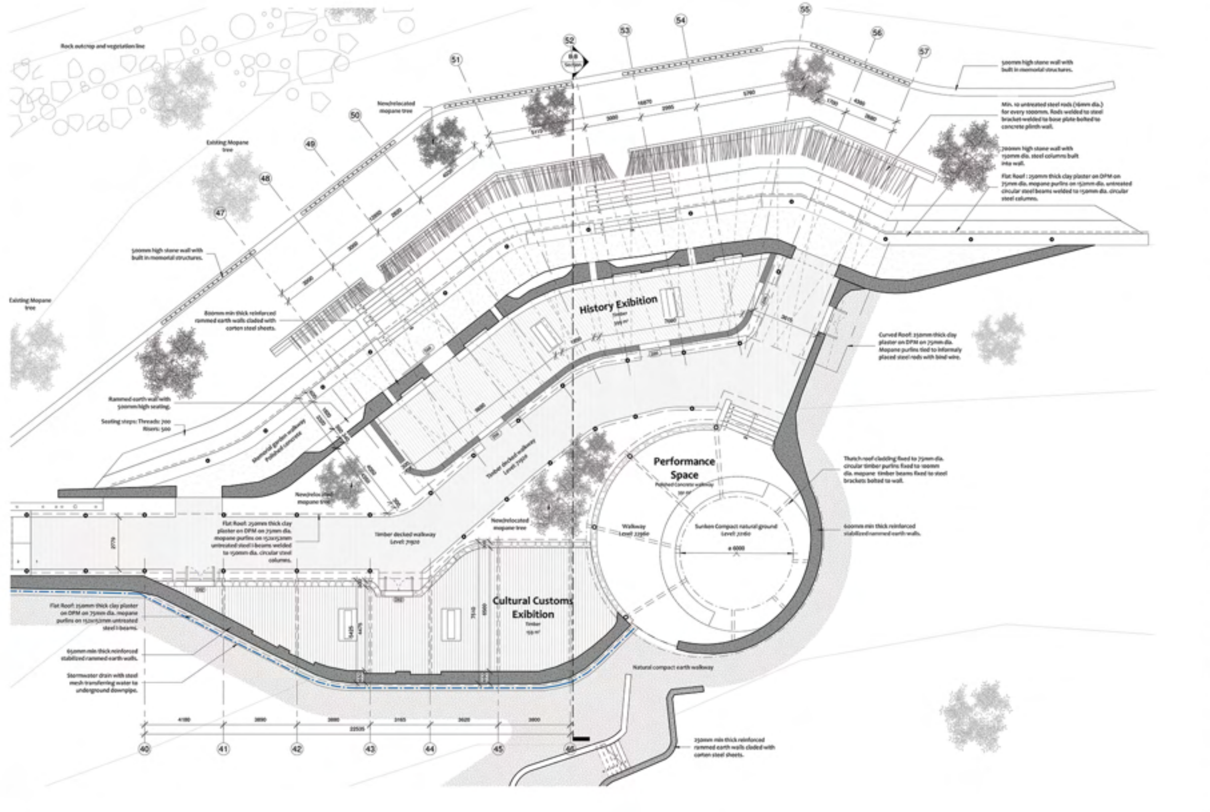

RITUAL PAVILION PLAN
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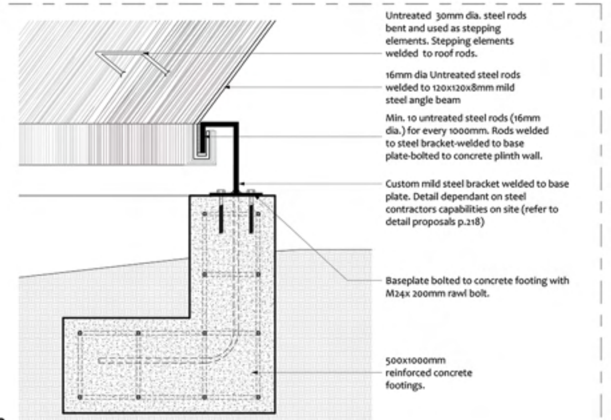

DETAIL 03
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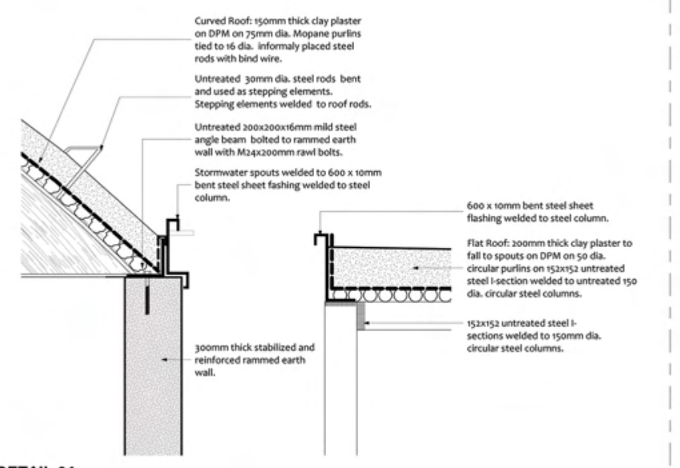
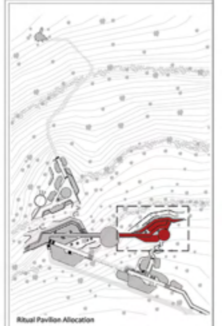


DETAIL 04
scale 1:10



GENERAL NOTES

CHRIZELLE LOOTS
201300584

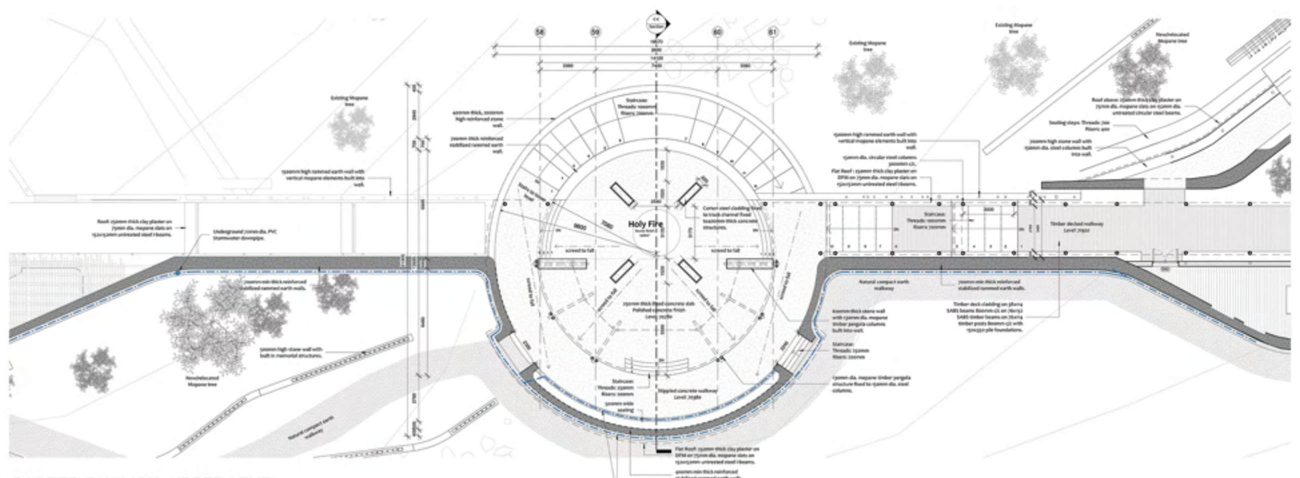
PROJECT
Ritual Himba Portal

CLIENT
Hizeljiwa Indigenous Peoples Organisation

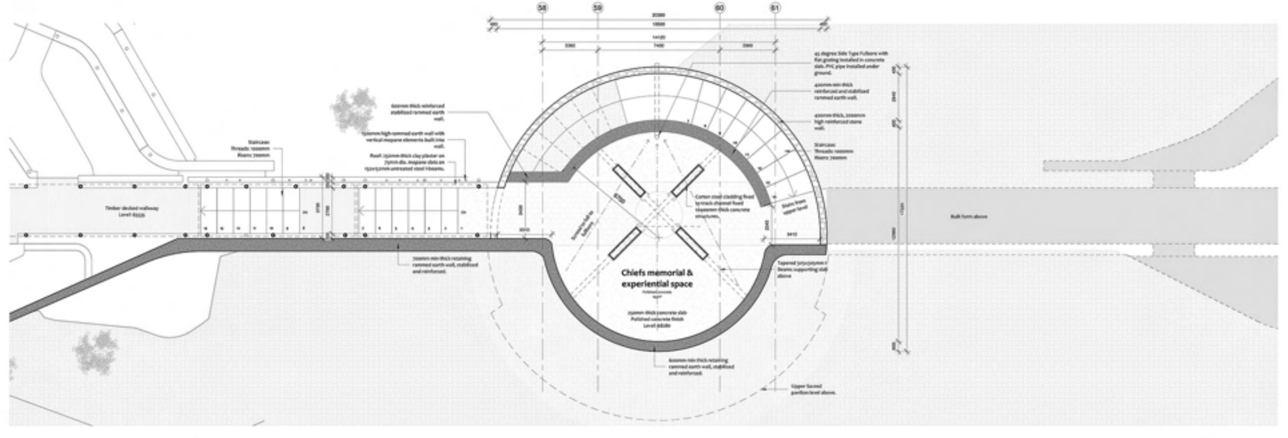
DRAWING DESCRIPTION
Ritual Pavilion

SITE
Opuwo, Kunene Region, Namibia

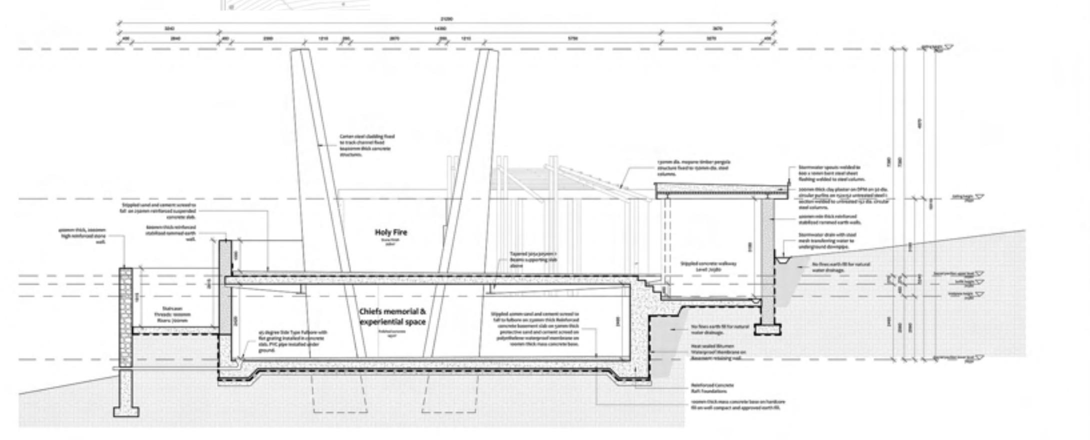
FILE	01	DATE	12-08-2021
SCALE	As indicated	DRAWING	
DRAWN	Chrizelle Loots		
	201300584		01-CS-1101



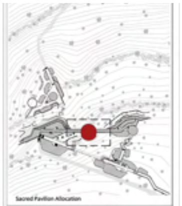
SACRED PAVILION- UPPER LEVEL
scale 1:100



SACRED PAVILION- LOWER LEVEL
scale 1:100



SECTION C-C
SACRED PAVILION
scale 1:50



GENERAL NOTES

CHRIZELLE LOOTS

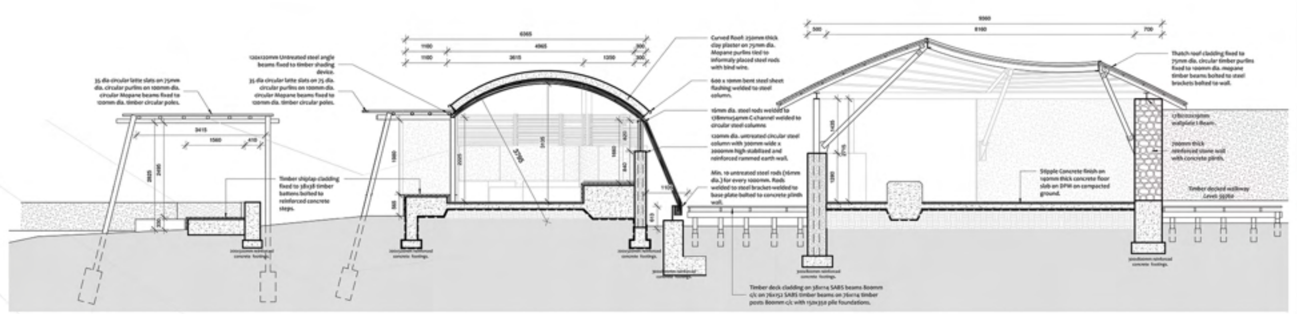
PROJECT
Ritual Himba Portal

CLIENT
Hizetjitwa Indigenous Peoples Organisation

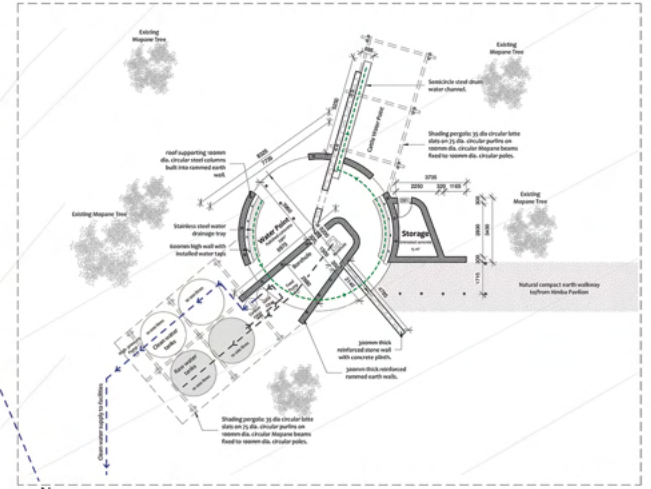
DRAWING DESCRIPTION
Sacred Pavilion

SITE
Opuwo, Kunene Region, Namibia

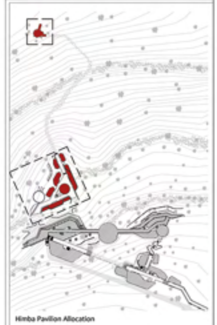
HIMBA PAVILION PLAN
scale 1:100



SECTION E-E
HIMBA PAVILION
scale 1:50



WATER POINT PLAN
scale 1:100



GENERAL NOTES

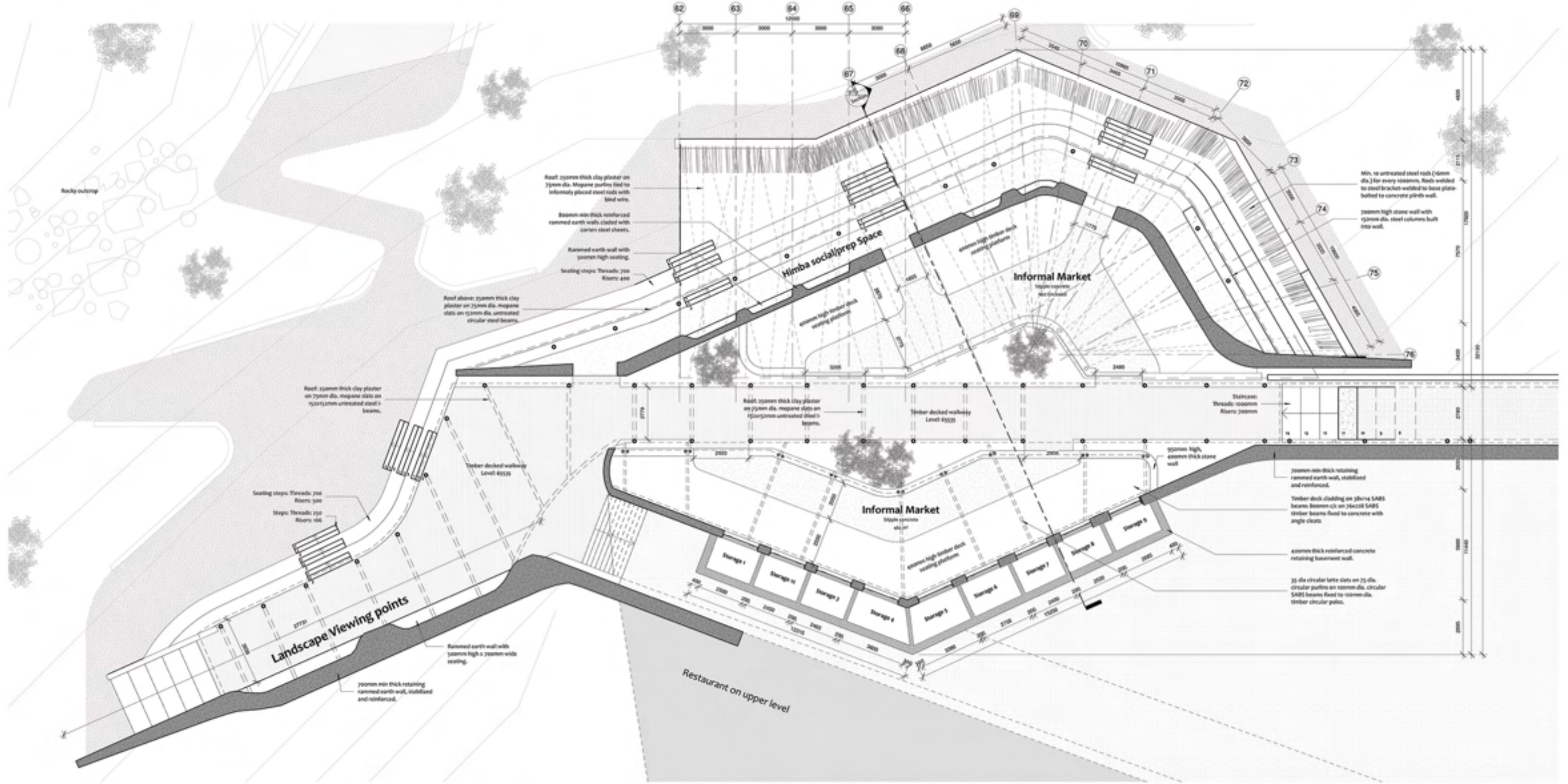
CHRIZELLE LOOTS

PROJECT
Ritual Himba Portal

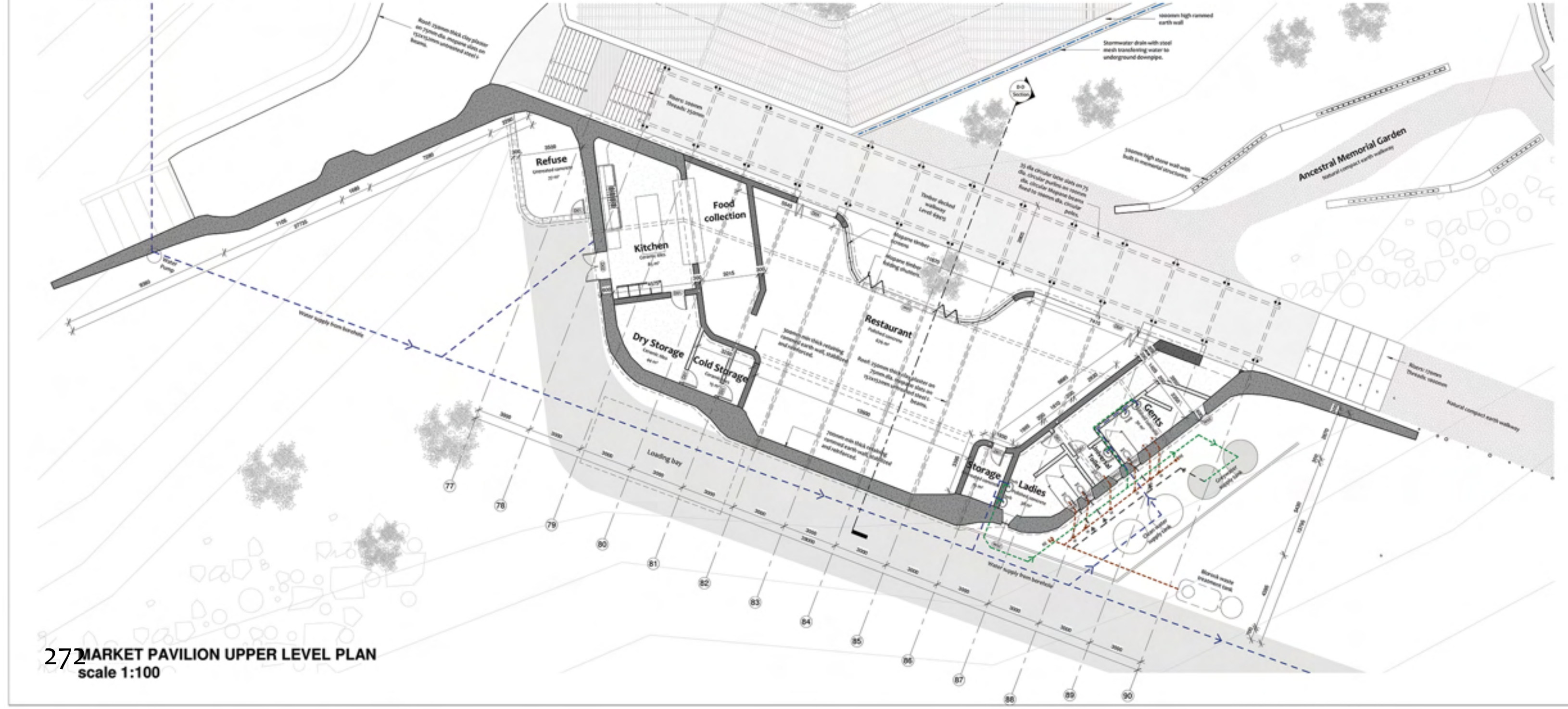
CLIENT
Hizetjitwa Indigenous Peoples Organisation

DRAWING DESCRIPTION
Himba Pavilion & Water Point

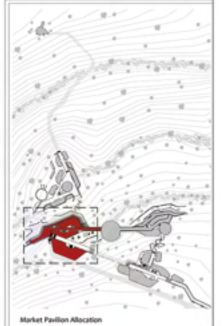
SITE
Opuwo, Kunene Region, Namibia



MARKET PAVILION LOWER LEVEL PLAN
scale 1:100



MARKET PAVILION UPPER LEVEL PLAN
scale 1:100

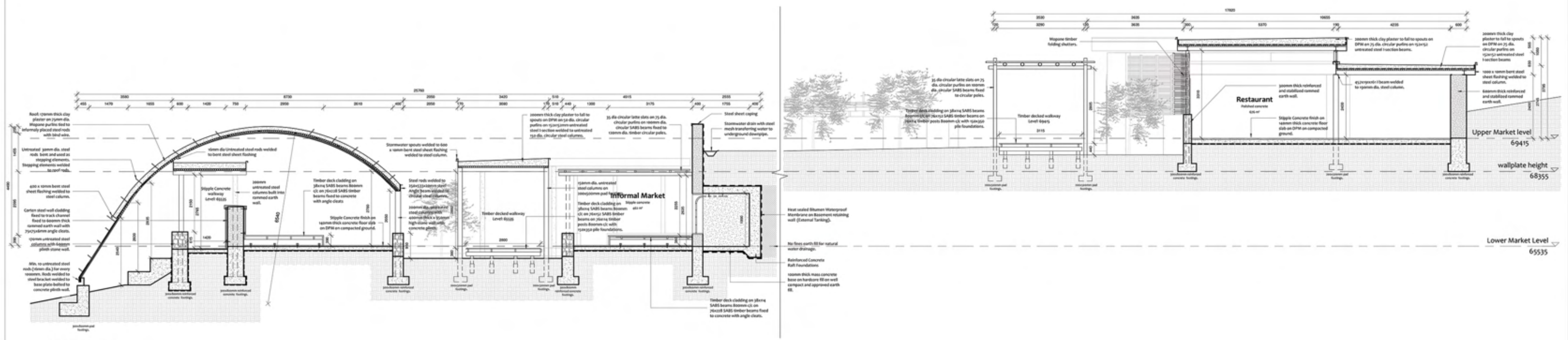


Market Pavilion Allocation

GENERAL NOTES

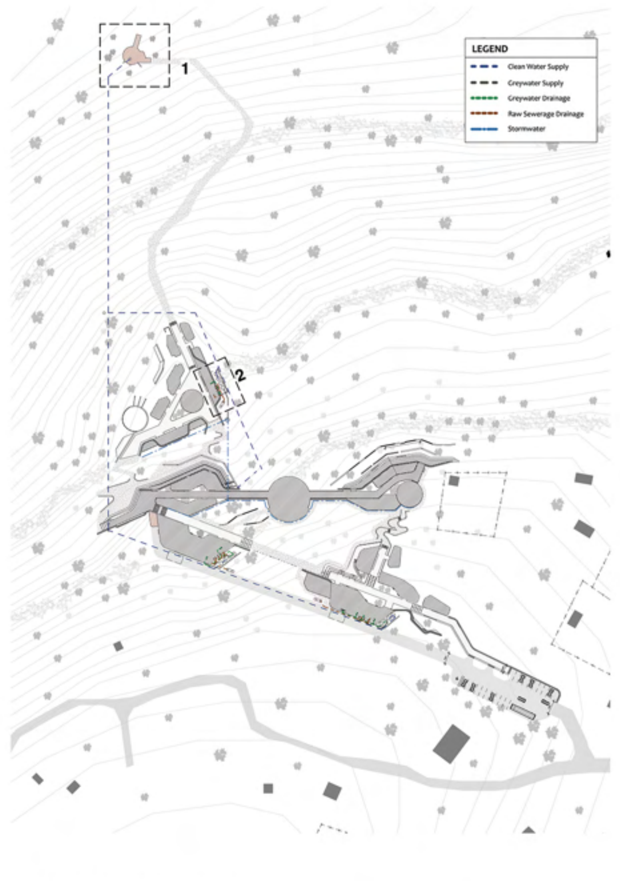
CHRIZELLE LOOTS
2015005842

PROJECT	Ritual Himba Portal
CLIENT	Hizetjitwa Indigenous Peoples Organisation
DRAWING DESCIPTION	Market Pavilion Plans
SITE	Opuwo, Kunene Region, Namibia
FILE	01
DATE	12-08-2021
SCALE	As indicated
DRAWN	Chrizelle Loots 2015005842
DRAWING	01-CS-1101



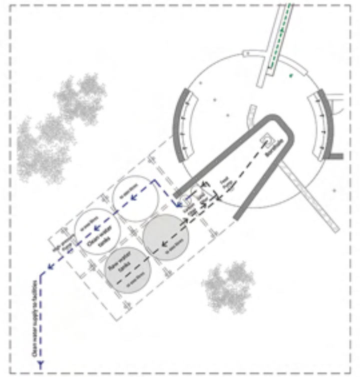
SECTION D-D
MARKET PAVILION
scale 1:50

WATER SUPPLY & DRAINAGE SYSTEM



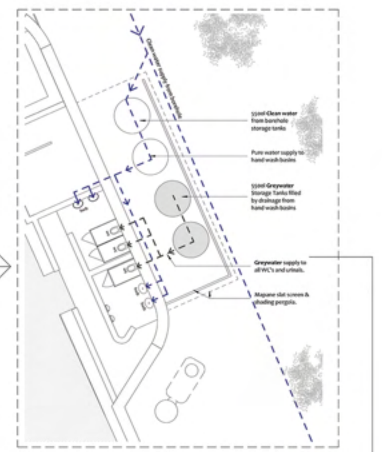
TOURIST PAVILION PLAN
scale 1:100

1) Water extraction from Borehole, filtered & Stored in tanks

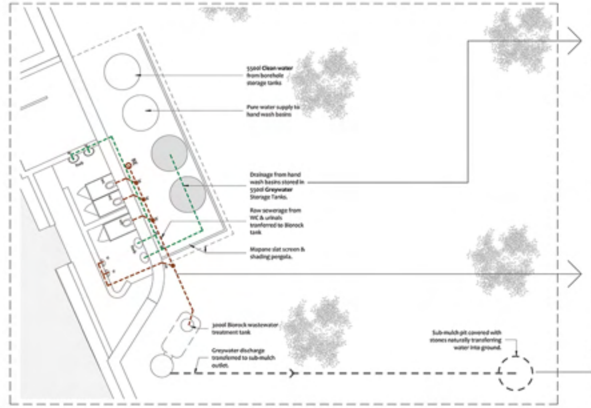


Drainage Plan 1
(Water Point)

2) Clean Water Supply to Sinks & Hand wash basins



Water Supply Plan 2
(Himba Pavilion)



Water Drainage Plan 2
(Himba Pavilion)

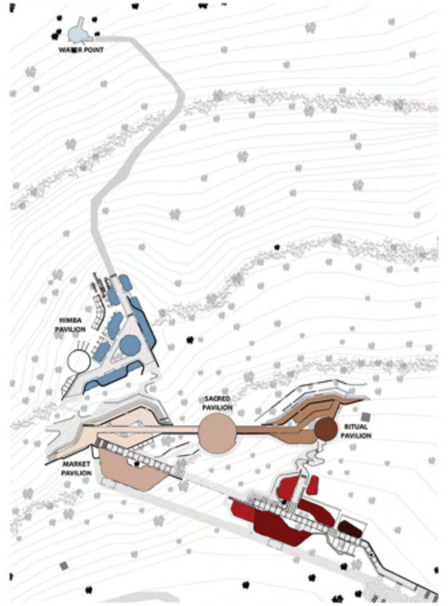
3) Greywater harvested from sinks & hand wash basins and stored in tanks.

4) Harvested greywater supplied to WC's & urinals

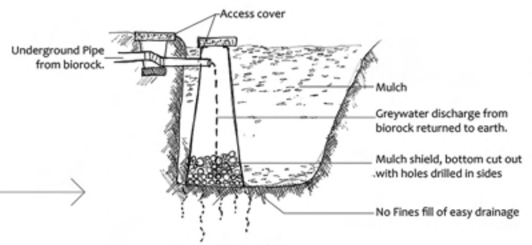
5) Serewage from WC's & urinals transfered to Biorock wastewater treatment tank.

6) Greywater discharge transferred to sub-Mulch outlet where water is returned to the ground.

DIFFERENT LEVELS OF PAVILIONS



PAVILION HEIGHTS
78550mm
77550mm
76350mm
72960mm
71920mm
70380mm (Upper level) 67980mm (Lower level)
65535mm
59760mm
0mm



Sub-mulch outlet

GENERAL NOTES

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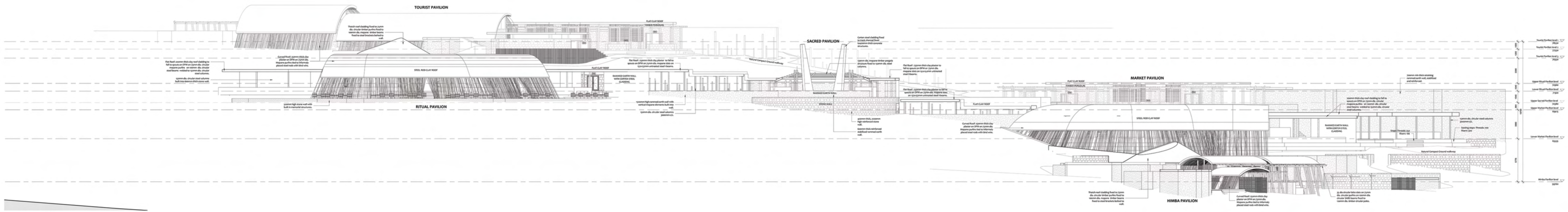
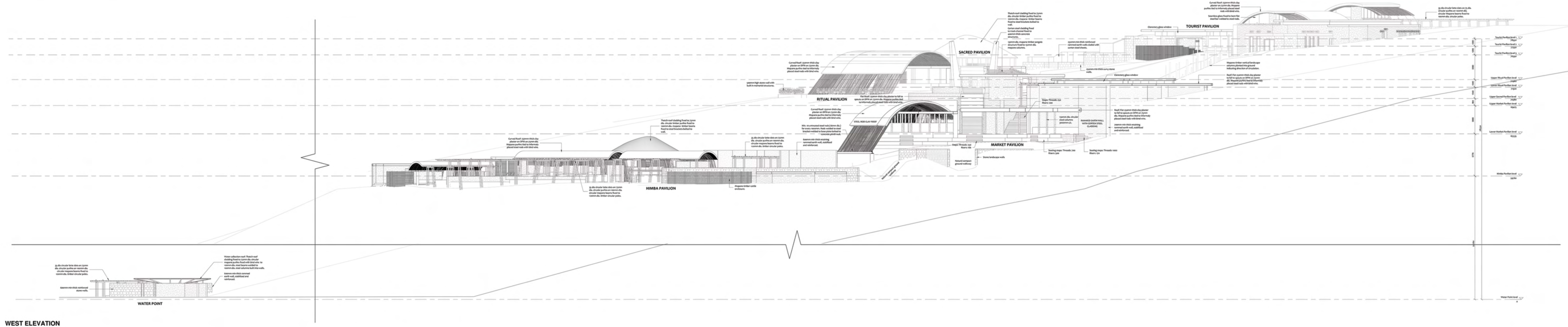
CHRIZELLE LOOTS
2015005842

PROJECT	Ritual Himba Portal
CLIENT	Hizetjitwa Indigenous Peoples Organisation
DRAWING DESCIPTION	Market Pavilion Section & Water and Drainage system
SITE	Opuwo, Kunene Region, Namibia
FILE	01
DATE	12-08-2021
SCALE	As indicated
DRAWN	Chrizelle Loots 2015005842
DRAWING	01-CS-1101



NORTH ELEVATION
scale 1:100



WEST ELEVATION
scale 1:100

GENERAL NOTES

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2015005842

PROJECT
Ritual Himba Portal

CLIENT
Hizetjitwa Indigenous Peoples Organisation

DRAWING DESCRIPTION
North & West Elevation

SITE
Opuwo, Kunene Region, Namibia

FILE	01	DATE	12-08-2021
SCALE	As indicated	DR[illegible]	
DRAWN	Chrizelle Loots		
	2015005842	01-CS-1101	

FINAL CONSTRUCTION MODEL