

# A Memory Exchange Hub

ENCAPSULATING MEMORY THROUGH AN ARCHITECTURAL INTERVENTION.



Nico Janse van Rensburg

2015050038



This dissertation is submitted in partial fulfilment of the requirements for the degree M.Arch (Prof) 2021  
Department of Architecture, Faculty of Natural and Agricultural Sciences, University of the Free State.  
Nico Janse van Rensburg | 2015050038 | nico.marchprof@gmail.com | +27786167368

Supervisors

Prof J.D Smit, Mrs P. Smit, Mr H. Raubenheimer and Mr P. Mabe

DECLARATION AND ORIGINAL AUTHORSHIP

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

I, Nico Janse van Rensburg, hereby declare that I am aware that the copyright is vested in the University of the Free State. The graphic images have been generated by me unless- referenced otherwise.

I Nico Janse van Rensburg, hereby declare that all royalties as regards intellectual property that was developed during the course of and/ in connection with the study at the University of the Free State, will accrue to the University.

### Aknowledgements,

Thank you to my parents Marius Janse van Rensburg and Linque Janse van Rensburg for the opportunities they have created for me, if it was not for them I would not be the first of my extended family to reach a university qualification, let alone pursue a masters degree! I owe you all that I am and so much more.

I would also like to thank my friends and family for their support, patience and mostly their understanding throughout this chapter in my life.

### Dedication and Thanks

This dissertation is dedicated to all the educators who had a positive impact on my journey of internal, spiritual, emotional and academic growth. Most of all, it is dedicated to the first person in my family who obtained a matric certificate, a man who impacted a large number of the Lephallale community, someone who passed on way too soon; my Oupa Rooi.

Words teach and examples reach!

Thank you Oupa for the lessons you will forever live on as a testimony of academic excellence.

**TO WHOM IT MAY CONCERN**

I, Wanda Odendaal, hereby confirm that I have edited **A Memory Exchange Hub: Encapsulating Memory through an Architectural Intervention** for **Nico Janse van Rensburg** to the best of my ability, during 2021 and January 2022.

I strive to consistently maintain the highest quality in respect of document editing and academic writing advice. However, as I have no way of ensuring that source documents are indeed replaced with my edited version, and also have no control over changes subsequently made to documents, the final responsibility for documents always rests with the commissioning author.

**HEIL DIE LESER**

Ek, Wanda Odendaal, bevestig hiermee dat ek in 2021 en Januarie 2022 die taalversorging van **A Memory Exchange Hub: Encapsulating Memory through an Architectural Intervention** vir **Nico Janse van Rensburg** na die beste van my vermoë gedoen het.

Ek poog om altyd die hoogste gehalte te handhaaf ten opsigte van dokumente wat taalversorg word. Aangesien ek egter op geen wyse kan verseker dat brondokumente wel met die taalversorgde weergawes vervang word nie, en ook geen beheer het oor veranderinge wat agterna op dokumente aangebring word nie, rus die finale verantwoordelikheid vir dokumente altyd op die opdraggewer.



18/01/2022

**W Odendaal**

M. Arch (Professional) UFS M.Arch (Research) UFS

BA (Hons) (Art History and Visual Culture) UFS *cum laude*

Registered professional architect with South African Council for the Architectural Profession (SACAP)

Cultural Historian Grade II (Architecture) with the South African Society for Cultural History (SASCH)

## **ABSTRACT**

This dissertation is an exploration and design of a Memory Exchange Hub in Lephhalale in between the Maroela Old Age Home and the local Lephhalale Library. Lephhalale is situated in Limpopo where the EXXARO coal mine is crucial to South Africa's energy production and in being so offers a resource for the community at large, but the question is what this industry offers to Lephhalale in return. The community is need of an intervention which contributes to their daily routines in community engagement. The reason for this study is to provide a central space in Lephhalale for the community to expand their knowledge on different topics and be closely exposed to different types of people in Lephhalale. A variety of trees surround the Bushveld landscape and the most important to the people is what is known as the big five South-African trees. These trees forms part of the way Lephhalale treatsThis project introduces the formulation of a theoretical approach through an ancestral dream of the author. This evokes a study on the history of the people of Lephhalale and ultimately formulates forms of memory to be introduces as physical realness. A culmination of conceptual approaches like preservation, interweaving and transience influences the design approach. The main theoretical stance is based on the theme of different forms of memory and how memory relates to space and time. A contribution to sustainable building design in a hot interior area is designed using the primary structural use of eucalyptus poles, secondary use of steel and an introduction of an alternate use of material. Thatch roofs evolve into thatch walls as a new morphological element. The main theme of the project introduces a space where the people of Lephhalale can engage in different forms of narrative and be reminded of the connection they have with each other, their set of skills and the history of Lephhalale.

Key Words: Gathering, Memory, Hermeneutics, Historic, Sustainable and Design

## Preamble

The proposed project takes the form of a memory exchange hub in the centre of Lephalale in the Onverwacht region of Limpopo. The aim of this project is to promote engagement, skill development, education and story telling between members of small town Lephalale. A space where the community can exchange memories on a central site and be able to learn from a diverse range of people with a diverse set of skills and experiences. The project combines the arts, technology, knowledge and conversations in all its spaces of gathering.

My interest in this typology arose from a dream I had of my ancestors who lived here and my own upbringing in the town. The memory of my late grandfather and the even greater impact he and so many others could have made if there was a space like this in town. A space to uplift the education and arts sectors, as they have been regressing due to the lack of community engagement over the past 15 years.

The community gathers within their own groups of association, this limits the influence one may have on another group. People are limited to either their social groups or colleagues at work. The people often gather under trees before they go to work, some gather for religious events and in schools when temperatures in town are at its peak, pupils gather under trees to learn.

The research in this document offers an historical understanding of the place, its people and overall the ethics of memory and the hermeneutic paradigm of Paul Ricoeur. The research is focused on Lephalale and the way memories are linked to spaces of gathering; under trees.

The delimitation of the study is linked to the typology as well as location- the study is based in a specific place and this implies a context that requires a specific response. To avoid creating just a community or skill development or education centre, the theme of past, present and future memory connects the people and ecology in one architectural intervention.

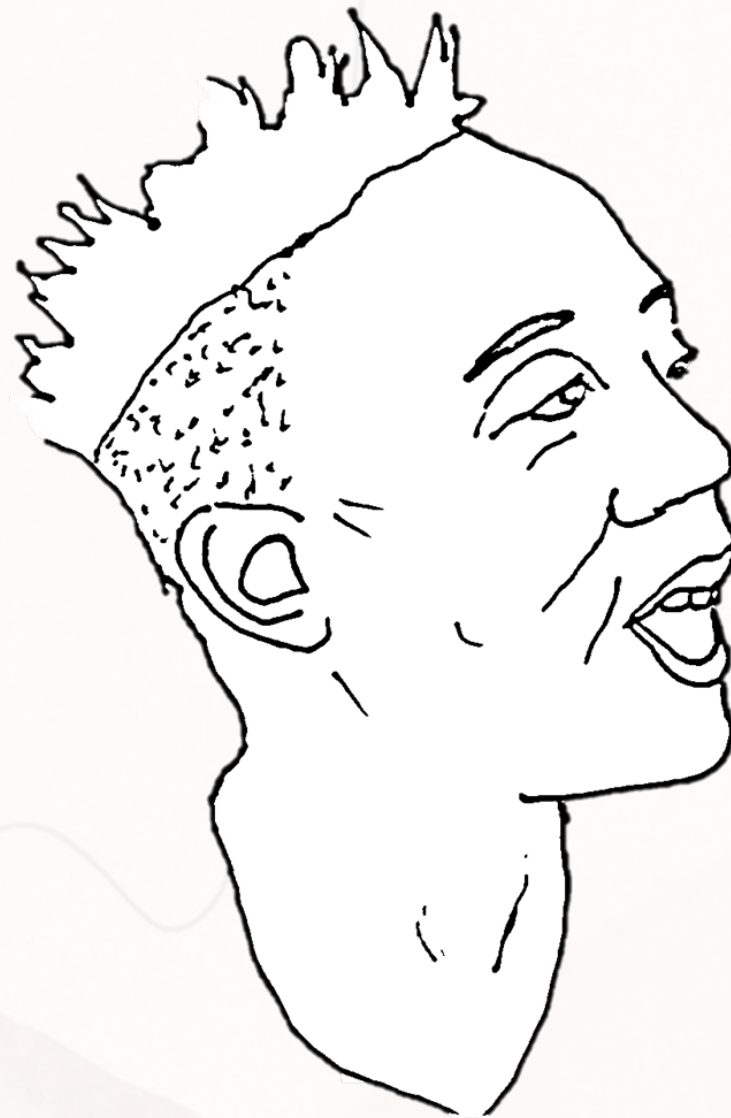
The proposal is aimed at improving the community engagement and to allow a space that offers a form of ritual, cultural and knowledge exchange. Thus providing a space where people can freely express their knowledge in the arts, exhibit their work, discuss experiences, improve their education and feel connected to people they never thought they would.





# Table of contents

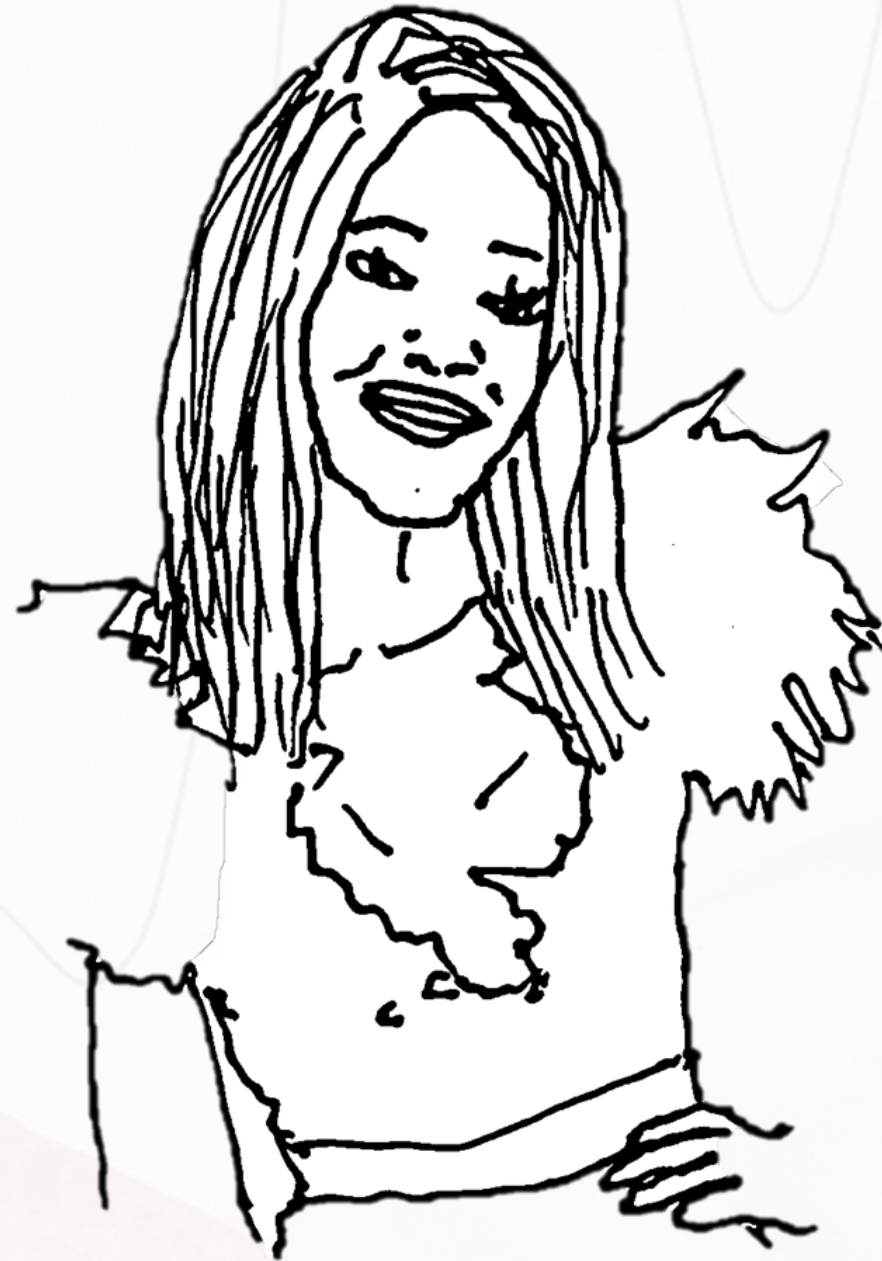
Abstract	5
Preamble	6
Introduction	11
Document Framework	13
Orientating the Project	14
Project Programme Summary	15
Problem Statement	16
Research Methodology	22
Part 1: Orientating the Project	14
1.1.1. The Genesis: Ancestral Dreams	18
1.1.2. Historical Impact	23
1.1.3. Theorising Memory Exchange	32
1.1.4. Narratives of the People of Lephale: Interviews	43
1.1.5. Mapping of Trees	50
1.1.6. Precedent Exploration	52
1.2. Typology	56
1.2.1. The Client	56
1.2.2. The User	56
1.3. Topology	58
1.3.1. Introduction to site and context	59
1.3.2. Macro Site Analysis	60
1.3.3. Meso Site Analysis	69
1.3.4. Micro Site Analysis	72
1.4. Morphology	74
1.4.1. Influences on the design resolution	75
1.5. Research Question	79



Part 2: Exploration and Grounding	80
2.1. Conceptual Development	82
2.1.1. Touchstone	82
2.1.2. Concepts	84
2.3. Typology	90
2.3.1. Precedent Exploration	91
2.3.2. Design Progress	93
2.3.3. [re]Figure Process	111
2.4. Tectonics	133
2.4.1. Precedent and Case Study	134
2.4.2. Structural Touchstones	137
2.4.3. Structural Philosophy	140



Part 3: Design Development and Technical Synthesis	145
3.1. The Building	145
3.2. Tectonics	163
3.2.1. Technical Report	164
3.2.3. Conclusion	174
Part 4	175
4.1. Reflection	175
4.2. Reference List	176
Appendix	185



## Introduction

Lephalale has a great history of using trees as gathering destinations, either for narrative, knowledge, skill or ritual exchange. These spaces often develop into permanent outdoor living spaces, mostly formed cohesively by nature and human activity.

Starting as a game farming community in the early 1900s, the first plan of action from one of the pioneers, Mr. J. L. Lee, revolved around education. The town is located near the South Africa/Botswana border, with the closest border post at Groblersbrug, thus existing schools were too far. Therefore, the community had to establish successful education facilities through its multiple levels of schooling and contributing facilities like a library, additional accommodation for students and sporting grounds. However, this focus started to change when coal was discovered and the town started expanding its industrial sector in 1974. This too was good for the schools, but it did alter the focus from education to projects of industrial growth. Due to this growth there was an expansion of people in town to assist the construction of the mine and power stations. Once

construction started reaching completion, many of those workers left town and, mostly, it is the original inhabitants who remain. The town is occupied by 17000 people, but now has many vacant spaces due to the efflux of people. This has changed the culture of the people in town as the people are separated now, but they have the potential to regroup their connection through an external intervention.

For many years the people of the community did as much as possible to promote community engagement through hosting festivals, specific sport and cultural events, as well as community service projects. Currently the sport sector is still celebrated a bit, but most other engagements are too spread out and thus not easily accessible to all school learners. The community is definitely in need of reinstating these rituals. Locating a space in the town's central hub, where the people of the three main regions may meet on one central site to engage with each other on a daily basis, will improve community engagement and restore similar past engagement projects.

In order to achieve an architectural exploration, the history, the community, the ecological framework and the rituals need to be understood first as the theoretical framework of memory is built around these factors. The exchanging of memories from past to future and Ricouer's five steps in his hermeneutic paradigm of memory is explored, as explained by Richard Kearney in 'Architecture, ethics and the personhood of place' (2007), analysed and applied to an architectural design exploration.

An investigation on the use of Eucalyptus timber construction as a super structure is investigated, along with lightweight steel construction. The hot interior area becomes one of the main challenges and leads to the investigation of thatch as a wall element.

# Document Framework

This document is set out in four parts.

## Part 1- Orienting the Project

This section demarcates the project rationale and background, through situating the reader relating to the ecological and memory preservation of the Lephalale community. The theory relating to memory (Bastea, 2004; Ricoeur, 1913-2005 and Kearney, 2007) and showing the influence of these theories on the design and how they are addressed.

## Part 2- Exploration and Grounding

This section, through an in depth interrogation of the macro and micro site, the influence of the site, context and parametres are explored. Precedents and suitable case studies are analysed which serve to inform the design.

## Part 3- Design Development

This section delves into the design process and synthesis of the research conducted as well as the project aims concerning typology, morphology and topology, and tectonics. Through documenting every design, sketch, iteration and idea that serves to summate the final design, the entire design process is presented.

## Part 4- Reflection

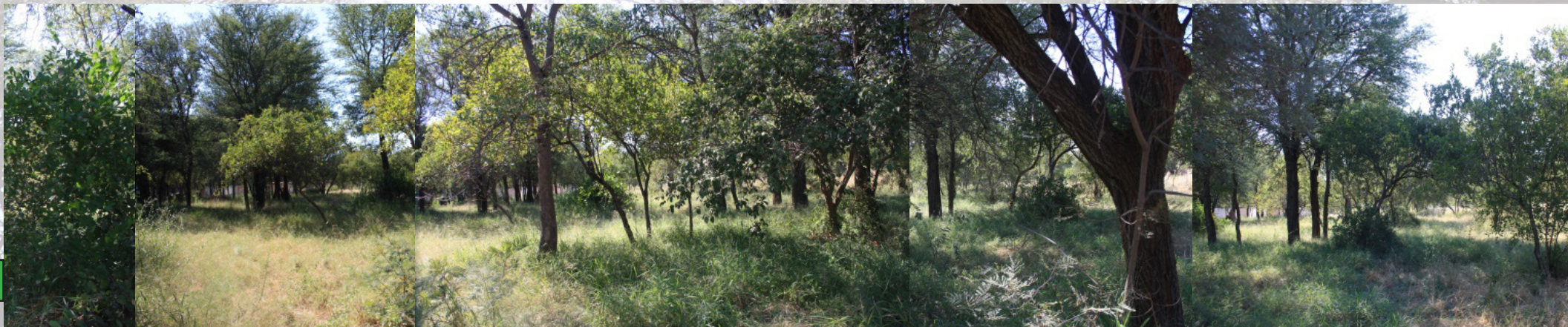
This section includes a personal reflection on the project. I interrogate whether the initial intent in terms of the initial aims and objectives of the project were fulfilled, where shortcomings exist and how solutions were incorporated. This section also includes the conclusion.

# Part 1: Orientating the project

This section starts off with the historical premise relating to the growth and decline in engagement of the community and a timeline summary of events in Lephale. This will then introduce the discourse to the design, referring to memory, education, gathering and community engagement. Lastly, the challenges and aims will be investigated in terms of topology, morphology and typology.

Part 1	14
1.1.1. The Genesis: Ancestral Dreams	18
1.1.2. Historical Impact	23
1.1.3. Theorising Memory Exchange	32
1.1.4. Narratives of the People of Lephale:	43
Interviews	
1.1.5. Mapping of Trees	50
1.1.6. Precedent Exploration	52
1.2. Typology	56
1.2.1. The Client	56
1.2.2. The User	56
1.3. Topology	58
1.3.1. Introduction to site and context	59
1.4. Morphology	74
1.4.1. Influences on the design resolution	75
1.5. Research Question	79

Figure 1: Photographs of Site View Collated (Author, 2021).



# Site Description:

Location: 1 Douwater Way, Onverwacht, Lephalale, South-Africa.

Site coordinates: -23.68774192323029, 27.69725266572486

Client: The Limpopo Department of Sports Arts and Culture; Department of Higher Education and Training, Evergreen Arts Centre.

Users: The Lephalale Community: Sculptors, painters, singers, musicians, students, elderly and entrepreneurs.

## Architectural Theoretical Premise:

Investigating the *ke kopano* of inside and outside gathering spaces and how memory is exchanged.

## Architectural Approach:

Creating a building which harmonises with the ecological preservation culture of the Lephalale community, where members may freely visit to explore their artistic expression and delve deeper into who they are as a community. A central, accessible space where community engagement is pivotal and where gaining knowledge can be magnetised, or in other words be absorbed through various forms of interactions. A celebration of Lephalale, its people and ecology.

## Project Programme Summary

### Private:

- Study Rooms- 10m<sup>2</sup>
- Offices- 75m<sup>2</sup>
- Boardroom- 30m<sup>2</sup>
- Printing room- 20m<sup>2</sup>

### Public:

- Coffee Shop- 50m<sup>2</sup>
- Exhibition hall- 295m<sup>2</sup>
- Discussion hall- 200m<sup>2</sup>
- Gallery of capsules- 166m<sup>2</sup>

### Semi-Public:

- Creative hall- 112m<sup>2</sup>
- Adaptable hall- 100m<sup>2</sup>
- Music Room- 20m<sup>2</sup>
- Computer hall- 220m<sup>2</sup>

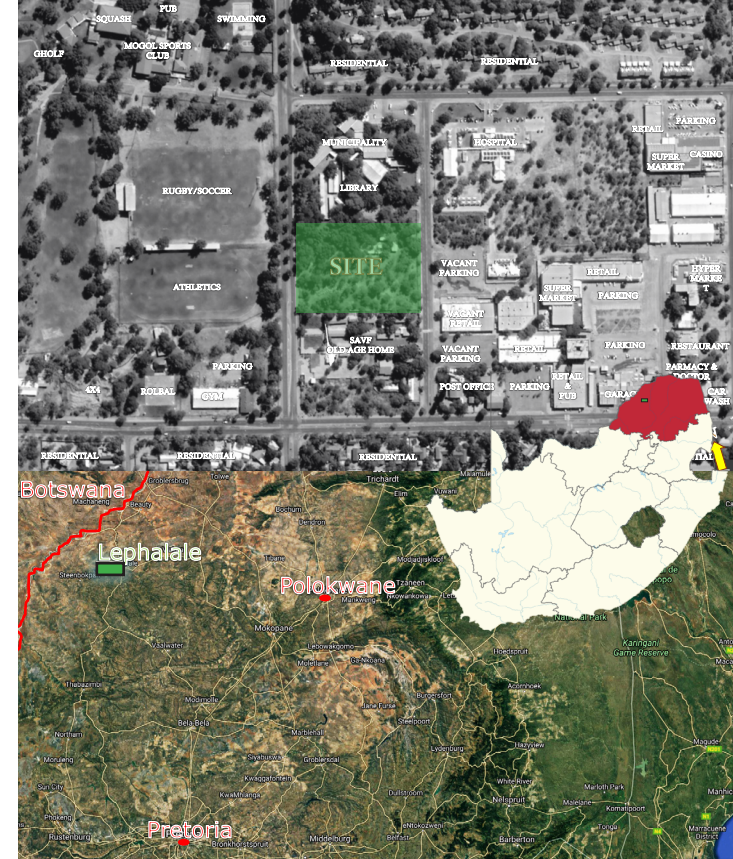


Figure 2: Site location in Onverwacht, Lephalale. (Google Earth, 2021: online adapted by author).



## Problem Statement

Lephalale is regressing since the construction of the two main power stations started in 1981 for Matimba and 2007 for Medupi. Given that Lephalale accommodates the worlds largest dry cooled power station in the world, it is fundamental to keep its memory and heritage alive.

The people of Lephalale are disconnected from one another, yet most are still connected to the ecology. The community tends to create nesting or feeding spaces for the wildlife in the area, some cultivate their backyards to grow fruits and vegetables, others go beyond with cleaning up the area they inhabit. The people have a great sense of pride for the bushveld, which resonates from the community's past in how the environment has impacted their identity.

A site-specific commemorative building aims to keep the memory and heritage of Lephalale alive. The town has historical graves placed at odd spaces in town, all far from one another. This evoked a question of how we can gather the past, present and future of Lephalale and allow these moments in time to be accommodated in one building that has an impact on the whole community.

Lephalale has a rich history of community engagement with projects that connected a diverse of people in multi-faceted ways. So many events come to mind, most of which were hosted by Exxaro and Iscor, understandably so since they had the largest impact on the town's development after the discovery of coal.

This building that acts as a passageway for the exchange of memories can be a reminder to the people that their engagements are crucial to the growth of the community.

## Project aim

The bushveld environment allows for conversation, gathering, growth and engagement. The study aims to reconnect the people of Lephalale and allow them to be influenced by members they never knew would have an impact on them. These influencers are members of the past, present and future. Architecture that engages with both the metaphysical and physical calls for spaces that can allow one to discuss, reflect, replace, remember and react to moments in time.

The building should allow each person who visits it to be marked as a member of the identity of Lephalale and engage with different exchanges of memory.

## The Genesis: Ancestral Dreams

This section touches on the first thoughts and experiences prior to the start of the project. The aim of this section is to not only pay a tribute to the author's family, but also to enlighten the reader on how a thought can evoke the theoretical input.



The decision to start with this particular study was initially to honour the memory of the late people of Lephhalale and it is based on a personal spiritual experience, where I dreamt of my late grandfather, Johannes Nicolaas Jacobus Steyn (1942-2012) as well my late aunt Magret Marie Steyn (1967-2020).

At the start of 2020 I was still very conflicted as to what my research topic for the year should be. That was until my grandfather visited me in a dream early January. I could see him in detail and were were enjoying a memorable conversation, I described everything my grandfather said in the dream to my mother, his eldest daughter. My mother was shaken at the spaces and events I described from my dream. It was all accurate events she remembers, but I've never experienced. In one particular moment, he was sitting on a brown couch where the room had carpet flooring and horrible green curtains- a scene I can't recall, but my mother mentioned they always had carpets and definitely had green curtains and couches. There was a lady on the couch next to him, I had assumed this was my grandmother as she passed away when I was only thirteen, when my grandfather passed away and at this age we didn't socialise as much as my older siblings did with him. In the dream he was drinking a whiskey on the rocks and I had a whiskey with soda water, my mother claimed he would only drink whiskey on the rocks if it was a really good one and that he only started drinking whiskey during his last few years alive.

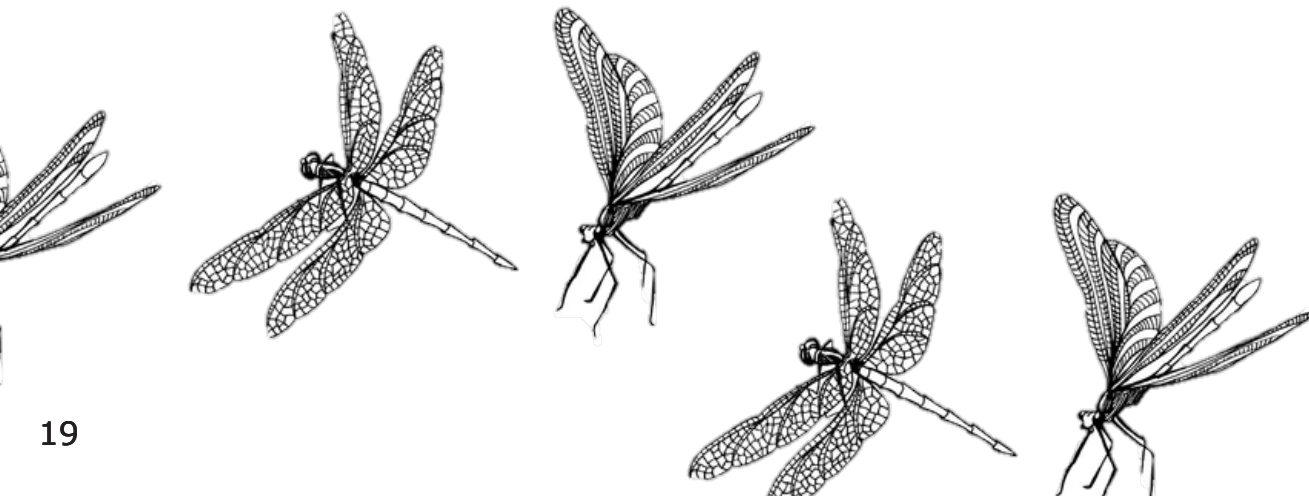


Figure 3: Photograph of Oupa Rooi and Busveld Trees (A. Steenberg, 2011; edited by author).

Our conversation didn't make sense for the most part, I specifically remember him exclaiming "...stelligmiete, stelligtiete...", my mother truly laughed at this as she said my grandfather loved explaining what stalagmites and stalactites are. I did not know any of this. The strangest thing is that was I could hear a child in the background, but I couldn't see the child, I can only assume that this might be my mother's late sister who had passed away at the age of two and whom I've never met. Perhaps the cognitive awareness of this knowledge of my mother's sister and mother, allowed me to metaphysically paint a frame of the event in my consciousness.

Carel Bertman writes of the experiential realism, known as the "felt-real" of anima (2004: 165-186). Extracting the term in

two parts as the felt or feeling, an intuitive experience where most of the decision making in the dissertation stems from. The felt highlights the events before my grandfather's death as the felt is linked to physical experiences. The second is the real, linked to the metaphysical experiences and accentuates the events after his life. The dream I experienced is linked to physical and emotional memory that connected me to a spiritual memory and relates to his real, lived, ongoing life. The dream guided me to my grandfather's grave and we shared a moment together at the grave. I spoke to him, and I know he was listening, I am sure I heard him talk back to me. I started walking through the graveyard and also visited my dad's parents' grave. I told them the same thing I told my mom's parents, that I am uncertain with what I need to do. They needed to hear that I am here and I'm listening to them as well, in this moment I'm calling onto my ancestors to guide me. I have so many stories I needed to share with them, they passed on too soon!

Exactly one week later I dreamt of my late aunt who passed during the 2020 pandemic, she was my mother's sister-in-law. She and I had a unique bond, I will always remember the all-nighters we spent watching horrors and thrillers together, we started doing this when I was only five! No matter my age, I would always sit on her lap during family events, I truly loved her. She left us too soon, but she came to ask me something in my dream. She was sitting on the back of a white bakkie, something I never saw them with; My uncle claimed that they did have one long ago and that they also used it to travel and visit the Mogol river in Lephalale. In the dream she was sitting surrounded by people who's faces I could not recognise, I am hoping that this is her birth family. The scene in the dream felt like she faked her own death and came back to apologise, but she looked at me and asked in Afrikaans: "*Jou ma is seker kwaad*

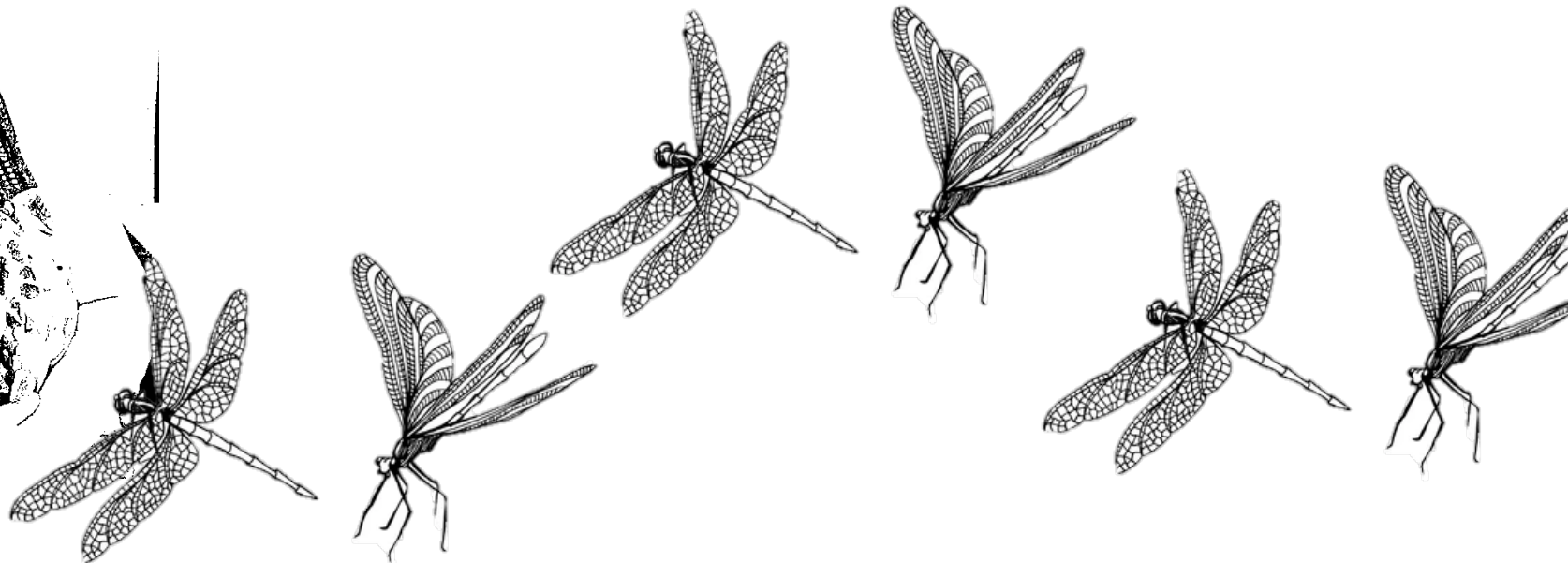


Figure 4: Tannie Meisie  
(D. Steyn, 2018: edited by author)

*vir my?*”; which translates to “Your mom is probably mad at me?” After I retold this story to my mom, she said she was mad at my aunt in an odd way, because her “Squeeza” left her without warning. I visited the site where my uncle scattered her ashes, it overlooks the bushveld, where one can see Lephalale in the distance. The view is green, blue, and beautiful! I spoke to her, and I could feel her presence, but I wasn’t sure if it was her or if it was just the wind. I got in my car, ready to leave, and a group of dragonflies surrounded my car even though there was no water nearby and then I remembered, she had a dragon tattoo- this moment reoccurred at various times in 2021.

These two dreams are the legacies of positive people in my life with whom I felt a spiritual wholeness and their memories remain part of my lived world. Their images remain powerful guidelines of familiarity throughout the process of the project in the bushveld landscape. I did imagine that maybe these dreams were only vivid memories from my childhood, but I believe that my spiritual connection to my ancestors is what linked me

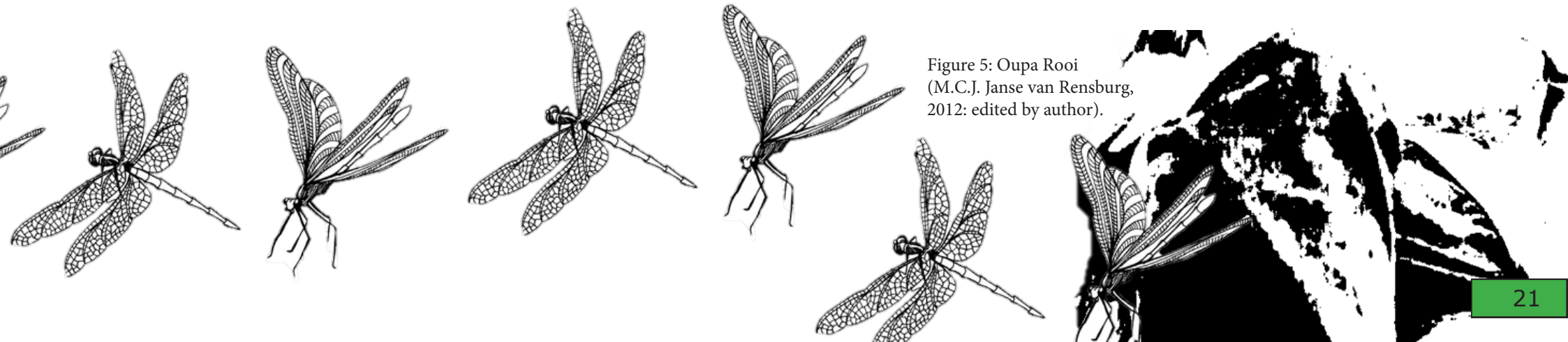
to visions of them. These visions are spiritual memories of experiences of the deceased, where my mind adjusts, edits, and realises it. These types of experiences are narrated by the departed through my mind separated from my body, because my body can only experience physical moment in lived space.

The dreams allowed me to ponder on what long term effects memory of people, places, ecology and experiences can have on people, specifically the people of Lephalale and the ecology.

The chapters that follow is not about honouring the memory of the late people of Lephalale, but rather instills different forms of memory as a tool for creating architectural space for Lephalale.

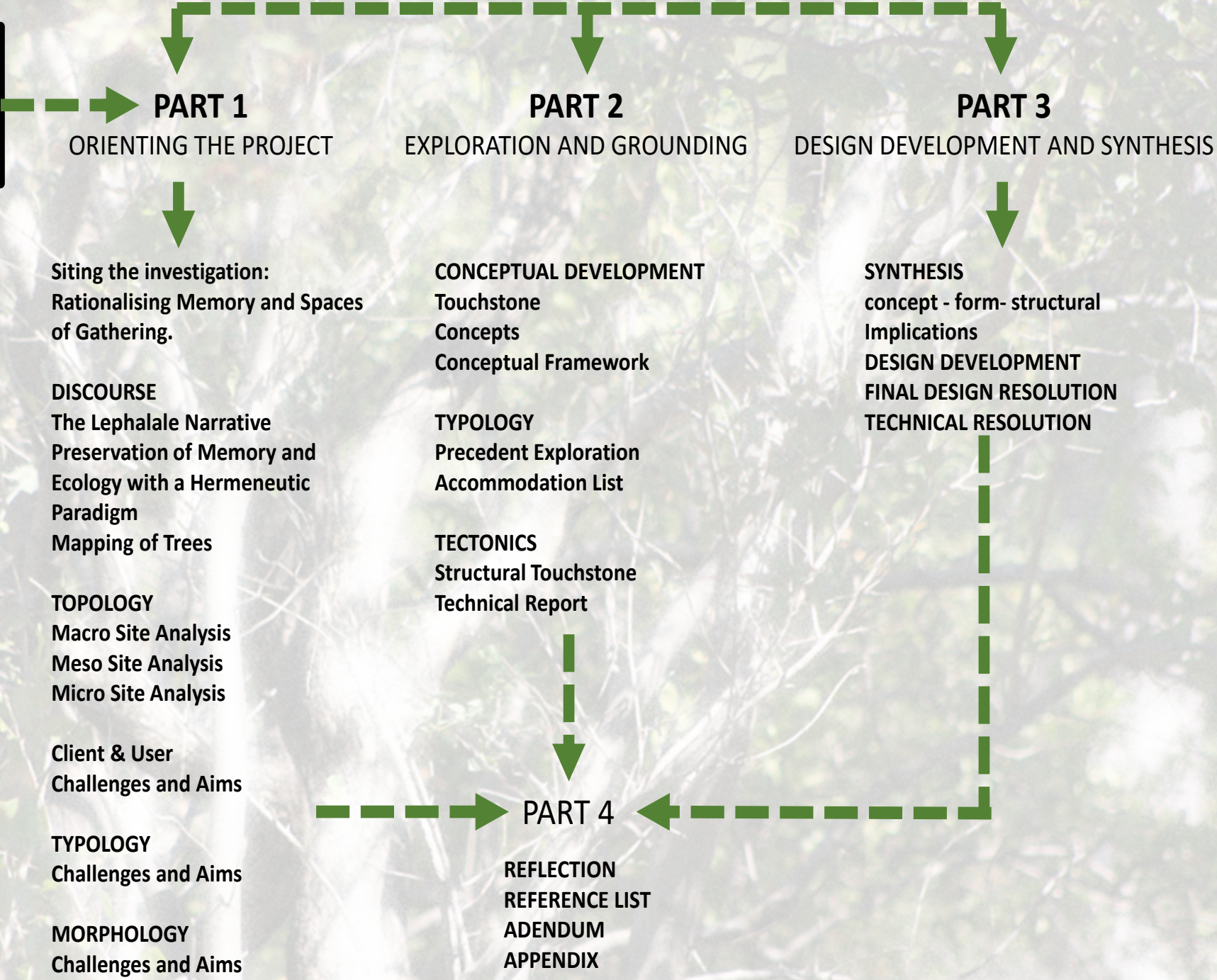


Figure 5: Oupa Rooi  
(M.C.J. Janse van Rensburg,  
2012: edited by author).



**RESEARCH DESIGN**

**RESEARCH METHOD**





## Historical impact

The past offers information that we can use to alter the methods and processes we follow today. This section delves into the development of Lephalale and how the history has an impact on the user and the design of the building.

# History of Lephalale

The History of Lephalale.

*“...dorpstgting met die omgewing te harmonieer.”* J.P.W. Erasmus.

The above translates to ‘harmonising town development with the ecology’ (Algemene Inligting Ellisras, 1990: 27).

## The Development of the Town

The town is located at 23.6665° S, 27.7448° E in the Limpopo province of South Africa, west of the Mogol river at a height of 900m above sea level (Algemene Inligting Ellisras, 1990: 28). The area is known for its Bushveld landscape and scenery (Engelbrech, n.d: 4). *Boere* around the Waterberg area, visited the area mostly in Winter, due to the wild animals frolicking during this time. The animal that was in most abundance was the wildebeest. The boere enjoyed hunting during that time and still do today, this hunting culture expanded greatly as they regularly receive foreigners visiting the game farms (Engelbrecht, [n.d.]: 5).

A large amount of coal was discovered and excavated east of Ellisras. The Exxaro mine, was essentially the birth of the town as it created a lot of job opportunities. The town was unmapped, until Exxaro decided to start the mine in 1974. This development changed the quite small town into a town that flourished and was seen by many (Bylaag tot Die

Noord-Transvaler. 1983: 4-5). The Grootegeluk Colliery is situated approximately 17km west of Onverwacht on the Grootfontein farm. The mine is the largest of its kind in the southern hemisphere. Lephalale’s population expanded from 6489 in 1985 to 12332 in 1990 (1990: 1). The total population of people in town, estimated after the last census is 17000. The mine currently employs over 2000 people and is the largest of its kind in RSA (Algemene Inligting Ellisras, 1990: 29). Exxaro provides metal coal to its centra for the production of steel and metal. The lower grade coal is delivered to Eskom’s Matimba Power Station for electricity. Thus, the entire coal production benefits the economy and is logically used. Exxaro also provided homes, jobs and relaxing facilities (1990: 29). *“Natuurbeparing en Kultuurbedryghede is eweneens belangrike prioriteite”*YSKOR & EVKOM (1990: 29-30). This quote emphasises how important the eco system and community projects used to be to the people of Lephalale, but this is not as evident as it used to be.

Exxaro obtained the land rights to six farms in 1957, this includes Grootegeluk. They can supply coal for agriculture as well as domestic and metallurgical use. They supply coal to both power stations in Lephalale and the steelworks of Iscor. Tobacco farmers use their coal as well where they run a depot at Rustenburg.

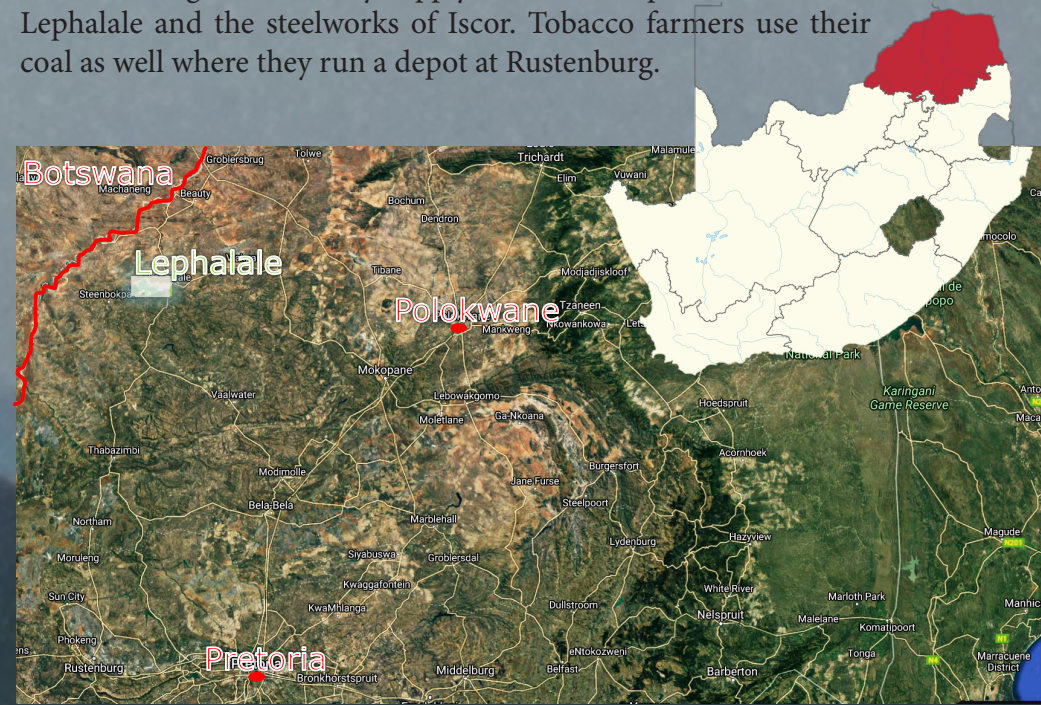


Figure 6: Limpopo Province (Google images, 2021: edited by author)

Matimba means Power in Tsonga and thus the name is suitable for the Matimba Power Station. The power station is the biggest of its kind in the world with a generating capacity of 4000MW (Algemene Inligting Ellisras, 1990: 30). The power station functions on the so-called direct dry cooling system which saves millions of fresh water daily, which is a good recommendation in the Waterberg district in the Limpopo province where water is relatively scarce. This water saving system only makes use of 0.8 litres for every kilowatt per hour as compared to regular wet-cool power stations, which uses 2,5 litres of water for every kilowatt per hour. The planning of the power station started in 1978 and the construction started in mid 1981. The first unit was placed on commercial load in September 1987.

The Lephalale Municipal area is made up of three farms; Grootfontein; which is largely in blue on the locality plan to the right, Onverwacht (in red) and Waterkloof (in green); and the area accumulates to 2500 ha (Algemene Inligting Ellisras, 1990: 2). The three developed living regions are each situated on one of these farms. Most people live in the Onverwacht (in red) and Marapong (in blue) regions, however the first developments started in the Ellisras (in green) area (Algemene Inligting Ellisras, 1990: 4-5). The 3 farms are not outlined on the locality plan, but merely indicated with colour as to give an idea of where most of the farm ground is covered.

The two sketches on the right are inspired by the shape of the town and how the main historical nodes connect. The base of the piece represents the river, along which the town was built on and the top point is the road to Botswana. The circles along the shaft are where the mine, power stations, Marapong and Onverwacht developed.

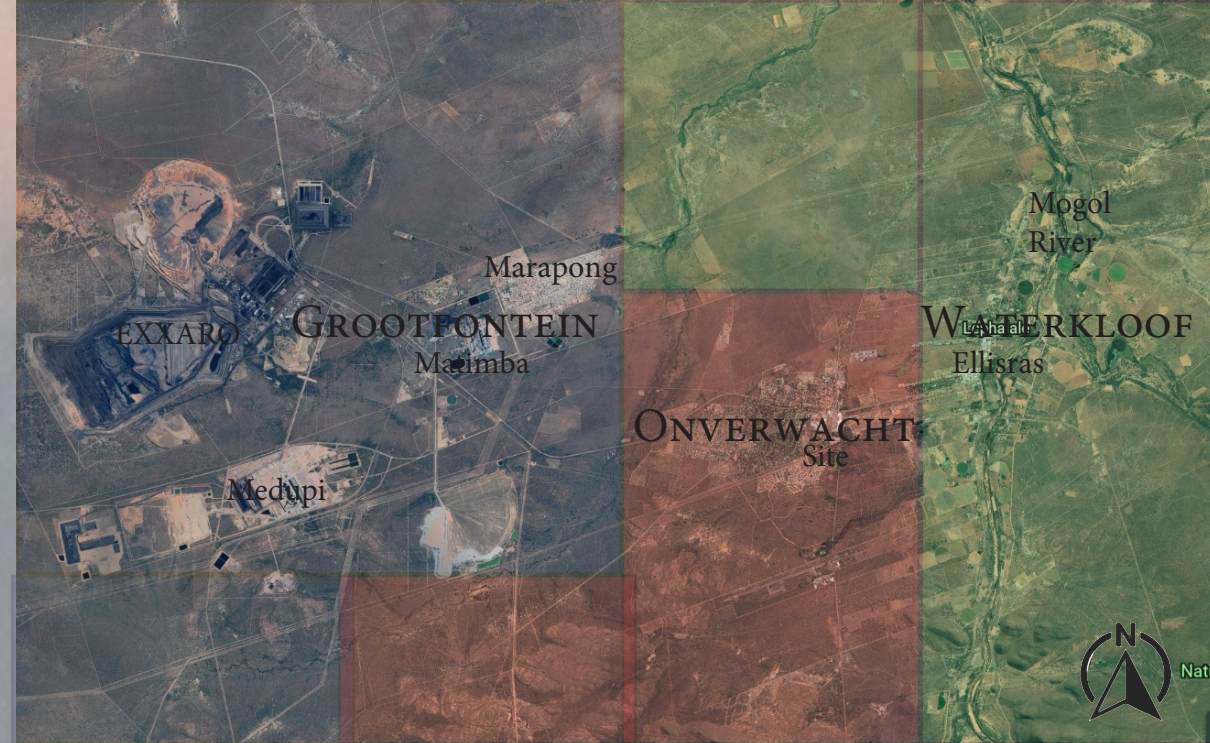


Figure 7: Site View  
(Google Earth, 2021: edited by author)

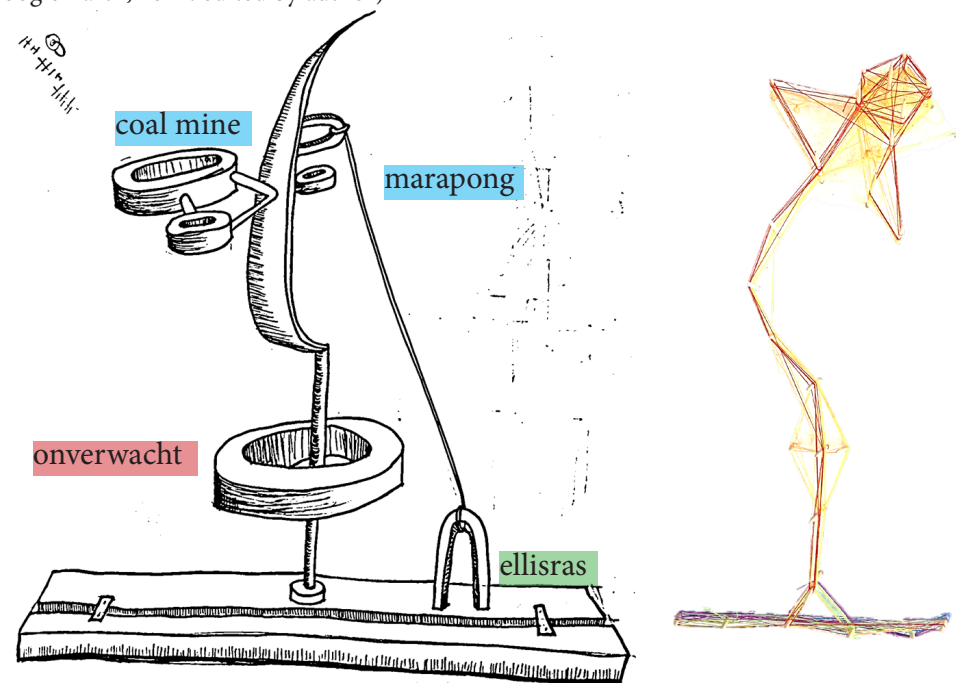


Figure 8 & 9: Lephalale as a model (Author. 2021: own illustrations)

## A Brief history (MSA-1899)

The Middle Stone ages (MSA), take place in South Africa between 150 000 - 30 000 years ago (van Vollenhoven, 2008: 9). The surrounding area of the Lephalale River is in abundance with rock art to the east and south of Lephalale (Bergh, 1999: 4-5). These artworks were painted by the Basarwa and are mostly located at Nelsonskop and the “Oliekranse” (Engelbrecht, [n.d.]: 5). This particular group of travelers were hunters and gatherers who left traces over the Waterberg area. They were of mixed descent of the San and Negroid. They inhabited the area around 1875, and possibly sooner (Pelser, 2012: 13). The “Nelson’s Kop” is also known as a Stone Age site, within the area (Pelser, 2012: 12). The area also has signs of agricultural activities, such as cattle grazing and the growing of crops. The grazing has resulted in the difficulty to scout the area, due to the highly dense vegetation (Pelser, 2012: 6-7).



Figure 10: Lephalale Cave paintings 1 (Go Limpopo, n.d: online).



Figure 11: Lephalale Cave paintings 2 (Go Limpopo, n.d: online).

The earliest known history of the area is mostly built around African travelers. One of the most powerful African tribes was that of the Seleka tribe. The legendary Mzilikaze settled in this area and after whom the Seleka area was named (Engelbrecht, [n.d.]: 5). Shongoane was another tribe and they were always under attack by other tribes. Evidence of the boulders they threw at their attackers can still be seen at the bottom of Tafelkop. A large population of the Shongoane tribe is believed to have committed suicide, as described by PJ Schoeman, hundreds of tribe members jumped from the steep cliffs. “Beska se Kop” was named after the Besha tribe, who was located between the traditional grounds of the Seleka and Shongoane tribes. These tribes lived in the North East part of the area (Pelser, 2012: 13).

The Lephalale River is also surrounded by some 200 late iron age sites (van Vollenhoven, 2008: 9). The Late Iron Age lasts between 1300-1840 CE (common era). The town is habitable for people, as it has good grazing (van Vollenhoven, 2008: 10). Cattle posts of the Letsibogo ceramic vases have been located in the Lephalale area.

During the 19th century; a.k.a the historical age; was when the first white travellers moved through the area, the first of which was Dr. Andrew Cowan and Lt. Donovan in 1808. Their expedition was followed by Coenraad de Buys in 1821 & 1825, wherafter David Hume explored the area in 1825 and again in 1830. William Cornwallis Harris moved through the area in 1836 (Bergh, 1999: 12-15, 117-118). Some sites during this age can still be found in the Lephalale area.

## A Brief History (1900-1999)

The first white person to settle on the Waterkloof farm was Pieter Ernestus Johannes Kruger (Engelbrecht, [n.d.]: 5). After his service to the Zuid Afrikaanse Republiek, he was awarded The Waterkloof farm that was later named Ellisras (Meiring, 1989). Later, Marthinus Philippus van Staden, settled on the Grootfontein farm. During this time, most of the white settlers moved to the area for the great game in the area, especially during winter. The town was located very far away from other larger settlements and transport in the 1920s and -30's was a big problem for the boere community. They used to travel with a wagon usually pulled by a donkey, ox or horse. Vaalwater, a very small town located approximately 90km from Lephalale, was the nearest place where mills were located to grind corn (Engelbrecht, [n.d.]: 10-11).

The South African railways installed a bus service bus stop on the Waterkloof farm in April of 1929, travelling from Vaalwater to Stockpoort. Stockpoort is located 76km from Lephalale next to the Limpopo river and houses the current border post to Botswana. During the movement of splitting farms into smaller units, especially on riverbanks, the farm Waterkloof already had a number of different owners in the 1930s. Thus, there was a reasonable amount of people in the Ellisras area that a shop, known as Whelpton se Winkel was also erected and later a post office was installed on the stoep of the shop. Waterkloof was known as the central point of the farming community at the time (Engelbrecht, [n.d.]: 25).

Figure 12 & 13: Wildlife Photographs around Lephalale (M. Janse van Rensburg, 2020).





The developer of the town was Marthinus Frederik Loots, he moved to the Waterkloof farm in 1929, after one of the first pioneers, Johannes Lodiwikus Lee. Lee was a hunter who moved to the area from Marico with his wife in 1886 as tenants (Engelbrecht, [n.d.]: 5) and only later in 1902 owned property. When a name was to be selected for the post office at Whelpton se Winkel, the name Ellis-ras was chosen. Marthinus Loots named the town “Ellis-Ras” and he named it after Pieter Barend Erasmus and Patrick Henry Ellis (Meiring, A. 1989). Ellis and Erasmus were both the owners of farm Waterkloof 498 in the 1930s (Algemene Inligting Ellisras, [n.d.]: 28).

Ellis was the second cousin to Marthinus and was famous for his actions in the army and his vegetable garden along the Mogol river. Erasmus was the husband of Jan Lee’s widow, Martha Magdalena Lee. He was also known for his actions in the Anglo-Boer war (South African War 1899-1902) against the British and for forming

part of the education foundation in the town’s first school (Engelbrecht, [n.d.]: 9). Thomas Kavari, a cow herd to the pioneers, played a vital role in their community development and the lives of the pioneer’s families, so much so that he was buried amongst them in the pioneers graveyard; one of many burial sites in and around the town (Meiring, 1989). This fact is very unique as Kavari was a non-white person buried amongst white people during an era where it was socially considered taboo.

The post office on the stoep of Whelpton se Winkel, expanded so much that surrounding post offices like Ons Hoop, Woudend and Monte Christo were shut down. At first there was only one telephone available in town at the call office and after a while the system expanded in such a way that almost every farm had a land line available. It was only in 1986 that the entire area made use of an automatic telephone service. The post office expanded so much though, that a new post office was erected in the Onverwacht area in 1987. A few other post offices opened up and the one on Whelpton se Winkel closed down (Engelbrecht, [n.d.]: 25-26).

## Education

The first development and growth that occurred in Ellisras (Leph-lale) was based on education. There was quite a number of farm schools in the area of Ellisras at the time. The education of the town started with a small school which was erected by Jan Lee. The first class room consisted of six long desks, big enough for 30 learners inside an old barn owned by Mr. MP van Staden. The school with 16 students was opened by the school principal, Mr. JP van der Walt on 7 October 1925 on the Grootfontein farm, next to Waterkloof. Once the school moved to Waterkloof in 1934, the school grew and even accommodated private hostels.

The first official school was built on 11 November 1926 and was located on the Ellisras Primary School grounds. It was only in 1947 that Ellisras Primary was completed on the Waterkloof farm, the addition of hostels was only complete in the following year. The school

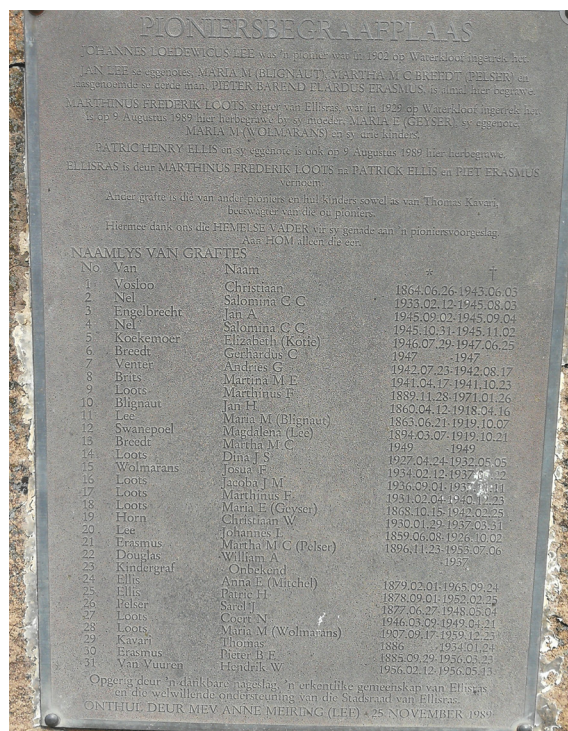


Figure 14: Pioneers engraved stone (Mering, 1989: photographed by author).

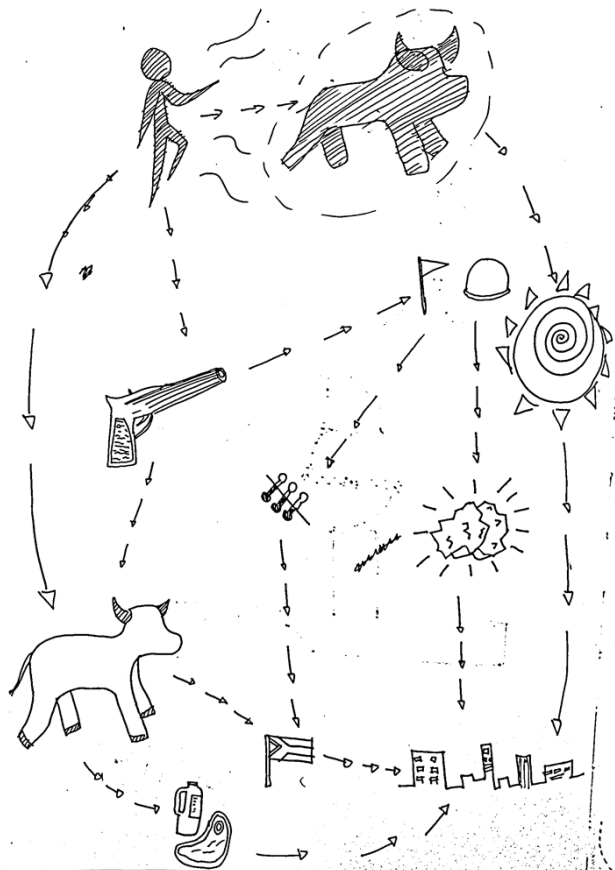


Figure 15: Lephalale Narratives Illustration (Author, 2021).

became the main school, to attend in the area, thanks to the hostels. However, the school has often been impacted by the annual floods since the school is built along the flood line and have adapted to these impacts via water channels etc. to keep the water at bay.

Many other farm schools shut down since Laerskool Ellisras opened. Education from levels grade 1-8 was available, but students were required to travel to a different area like Nylstroom (Modimolle), to further their education. Modimolle is located 152km from Lephalale.

The school's population grew to 105 and in January of 1959 it was proclaimed a Group II school which included the high-

school. Since then the school was expanded and accommodated highschool students as well, of which the first class matriculated in 1962. The School was split in two in 1964 and High School Ellisras was established across the road. Fortunately, in 1966, Ellisras High School was completed with its own hostels.

In 1986, Bosveld Primary opened in Onverwacht, making it the second primary school in town, but the first in Onverwacht. This school also still functions.

The first pre-school was Fort Asjas and by 1990 three pre-schools were established with the names of Tambotie (Ellisras preschool), Fort Asjas and Klein Duimpie (Hansie & Grietjie pre-school) all of these schools are still exist (Algemene inligting Ellisras, 1990: 6). Hansie & Grietjie is now owned by Linque Janse van Rensburg; my mother.

Most English speaking students went to school at Settlers. In 1990 the total students in each school was 1000 for Bosveld Primary, 400 for Ellisras Primary and 850 for Ellisras High School indicating the growth that occurred in Onverwacht. Marapong currently has one primary school, Onverwacht has 2 primary schools and a high school and Ellisras only has one high school and one primary school (Algemene Inligting Ellisras, 1990: 30).

### Health and Wellness

Medical assistance was difficult to find before the year 1936, thus the town's people mostly relied on *Boererate* (home remedies); which is remedies unique to their culture; and their own at home pharmacies. Dr. Dekemah and Dr. Palm, from Nylstroom would occasionally visit the town where they would stay for a week and host pop-up clinics. The district nurses also contributed the health, as they would travel to people's homes to deliver medication (Engelbrecht, [n.d.]: 15). Many well known people made lasting contributions, that ensured a healthy town.

The town didn't have any delivery facilities as woman who were in labour were required to make use of a nurse from the Waterkloof farm either at their own homes or at the nurse's house. It was only in 1946 that the S.A.V.F opened a facility to accommodate woman in labour. The building started off as a shack made of corrugated sheeting, fortunately though, a stone building was constructed and completed on 17 October 1958. On 30 January 1985, the labour facility accommodated a temporary hospital.

### Business

The first shop in town, as mentioned earlier, was Whelpton se Winkel and in 1946 a new shop was opened by Mr. Bell. That specific shop still existing and currently houses the Pica shop in the Ellisras area (Engelbrecht, [n.d.]: 25-26). The business sector grew gradually and soon the town housed Motor dealerships, a hotel, a hardware shop, a bakery, a café, and two other general stores, one of which was known as Waterkloof kontantwinkel and which fulfilled the needs of the people for a long time. A bank service was initially delivered through associates from Nylstroom (Modimolle). The first branch opened in town was Standard Bank, followed by Nedbank and later Volkskas. The influence of ISKOR and ESCOM had a large impact in the development of the business sector, since they are the reason the population of the town grew exponentially in a limited period of time. The town completed an OK-branch, a shopping centre, in 1987 and a large Supermarket was erected soon after in Onverwacht.

### Mining

It took a while for people (both white and other groups) to actually migrate to the area, due to the warm climate. The extensive herding of cows contributed to the accumulation of people in the town (Algemene beskrywing van die Ellisras Kaartvel). The area was inhabited by a few cattle herders and game hunters before the year 1920. During 1920 however, the community's government drilling programme started drilling for water

and discovered large coal deposits on the Grootegeluk farm. This discovery became the pivot to the growth of the town. The geological survey division of the department of mining in 1941 launched an exploratory programme. The country's largest steel producer at the time, ISCOR was an active participant in the programme. The drilling was complete in 1952, and in 1957 ISCOR bought the surface rights on 6 farms in total. It was only in 1973 that ISCOR decided to undertake an extensive drilling programme in the potential open-pit area on Grootegeluk and the five adjoining farms. The first trial blast in the box-cut was detonated during December of the following year, and this was to lead the development of the Grootegeluk coal mine.

The town has become the regional centre of the Noordwes-Transvaal (Waterberg region), in a relatively short period since the development of the coal mine and Matimba power station. The town was only announced and approved as an official town on 7 December 1960 and according to the article in *Munisipale en openbare dienste* (1991: 48) and *algemene inligting Ellisras* (1990: 28-29), a local committee for the town was only established on 4 November 1965. It was only on the first of July 1986 that the town reached a fully functioning city council according to the administrative act 35 of 1986, however the town has had municipal status of level 7 since 1 January 1990. Thus, the town is officially 61 years old in 2021.

Nobel Peace prize winner, F.W. de Klerk and current President Ceril Ramaphosa used to meet at the D'Nyala Nature Reserve for peace talks in the 1990s before South-Africa's first democratic election. The farm is known as the bush conference centre, mainly because of the amount of meetings it hosted for the apartheid government of South-Africa. President F.W. de Klerk was the last president of the apartheid government and he made the effort to host meetings at D'Nyala from the beginning of his reign in 1989 where the main topic on the agenda was about the development of the country and strategies for change. It is here where he announced the release of

hundreds of prisoners, whom included the first post-apartheid president, Nelson Mandela. On this day, 2 February 1990, he legalised the outlawed black liberation organisations, after 30 years of them being labelled illegal. This is also where he announced that his government wants to put an end to the apartheid era and negotiate a constitution that will benefit all citizens of South-Africa. The D’Nyala had since been considered the meeting destination to discuss the matters on change and to prepare for the birth of the new South-Africa. Apartheid ended in April 1994 and the government officials of the African National Congress (ANC) still make an effort to visit the D’Nyala Nature Reserve for meetings.

### Municipality

The centre houses the library (Figures 16 and 17) and city council, as well as where the proposed site for the project is located.

### The River and dams

Ellisras was renamed to Lephalale in 2002 by the Municipality. The name Lephalale means “to flow” and is derived from the Setswana language.

Hans Strijdom Dam (Mokolo dam) in the Mogol river supplies the town, mine and powerstation with water (Engelbrech, [n.d]: 4). The Mokolo dam was constructed between 1979 and 1980 on the Mogol river, the dam formerly known as the Hans Strijdom dam. The purpose of the dam is to serve as a form of water control for the municipality and other industrial purposes. Exxaro controls a water purifying network that is distributed by the municipality (Algemene inligting Ellisras, 1990: 30). All rivers flow north to the Limpopo river and of these the Magol river and Palala river are the most prominent (Algemene Inligting Ellisras, 1990: 28). The Limpopo river is suitable for canoos, rubberducks and small boats, except when flood season is near.

In 2008, Hennie Lee took arial photos of the Mogol river and Tambotie river flowing as one (1990: 5). The Mogol river had an urban influence on the town’s development especially during the 1930’s.



Figure 16 & 17: Onverwacht local library (Author, 2021: own photographs).



Figure 18: Mogol river and the Mogol flood line. (Author, 2021: own photographs).

## Theorising Memory Exchange

This section considers a variety of theoretical positions pertaining to different kinds of memory, how they are linked to a time line and how memory connects the ecology, the people and design on this timeline of felt-real.

FELT

Input  
Genesis of  
hermeneutic  
paradigm

**[re]PLACE**

- 1. Tree
- 2. Preservation
- 3. Re-rooting
- 4. **Spiritual Memory**
- 5. History

HOSPITALITY

**[re]MEMBER**

- 1. Community
- 2. Interweaving
- 3. The Self
- 4. **Emotional & Collective Memory**
- 5. Present

FLEXIBILITY

**[re]ACT**

- 1. Education
- 2. In-Between
- 3. Through Acting
- 4. **Action Memory**
- 5. Mystery

PLURALITY

REAL

Output  
[re]LIVE  
Built Space

TRANSFIGURING  
OF THE PAST

PARDON

THEORY  
DESIGN  
CONCEPT

## Revisit Memory: Time capsules of the Lephale narrative.

Transforming a core feeling or an idea that can only be seen through personal introspection, into a physical realness requires a series of memory exchanges and interactive processes. Irish philosopher Richard Kearney (2007) summarises French philosopher, Paul Ricoeur's hermeneutic model of "exchanging memories" where the reading focuses on memorials and how the traumatic or dramatic past experiences can allow for a different type of engagement between people today. Our memories and narratives are interwoven at different phases and thus create a platform for shared experience in a place. This section will mainly discuss the application of Ricoeur's (1913-2005) latest work on memory, history, forgetting, as well as narrative identity and the turn to selfhood through the exchange of different types of memory. Paul Ricoeur's hermeneutic paradigm of memory exchange outlines Five steps to achieve the exchange of memories namely: ethic of narrative hospitality, ethic of narrative flexibility, narrative plurality, transfiguring of the past and finally pardon (Kearney, R. 2007: 99-101).

Kearney (2007: 91-92) postulates that separated moments in time can provoke a sense of disorientation, which at the same time does not allow memory to "flow" as the past is what Ricoeur refers to as "blocked memory". I question Ricoeur's stance, as blocked memory is connected to the present, which is still a period of time, but blocked memory is not the past. The past consists of spiritual memory and place memory, whereas the present embodies emotional and collective memory.

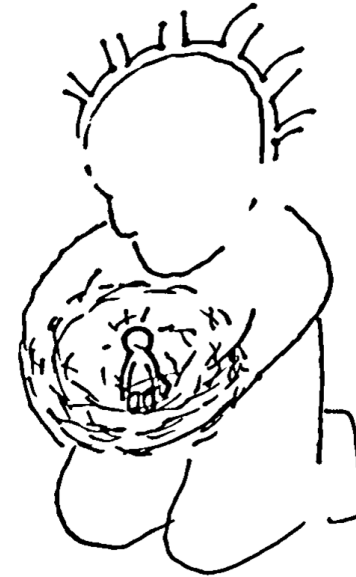


Figure 20: Capsulating oneself; illustration (Author, 2021).

Figure 19: Watercolour Series (Author, 2021).



In the animated series, *Avatar the last air bender*, Guru Pathik guides the Avatar to achieve the avatar state through opening his chakras. Guru Pathik is a century old nomadic supercentenarian in this episode and has accumulated a vast knowledge base of the spirit world and how people can be affected by it, especially when it comes to the Avatar who is the bridge between the human and the spiritual worlds (Konietzko and DiMartino, 2013: film). The human body possesses seven chakras and is believed to remain in a flowing state, if not then it can affect the physical and emotional well-being of the individual. Thus, if the individual's memory is blocked, it does not allow for an emotional flow which affects your present state. The Avatar is connected to his past lives especially when in the avatar state, meaning he can communicate with his past spiritual selves and learn about the places they lived in; for the average human it is about connecting with one's inner-self. This connection is a metaphysical experience and contributes to a spiriutual awakening in oneself. The history of a place is known as spiritual memory; in some instances, we can refer to spiritual memory as place memory, which in essence is the ethics of narrative hospitality and refers to the spirit of the place, thus spirit-place memory. The respect one has for the ecology contributes to the ethics of narrative hospitality in a spiritual sense.

Perhaps a culmination of the two forms of memory is the product of subsequential memory, which in essence is the loss of memory; memory that has passed away. *Avatar the last airbender* teaches one about balance, and being hospitable towards the spirit of the place which is, in essence, what the



Laphalalians do for the environment. Hospitality (Caring/Preserving) towards the trees and the ecology is in fact preserving history, which is spiritual-place memory.

The present embodies emotional and collective memory through the living members of the spirit of the place, which emphasises the ethics of narrative flexibility and narrative plurality. Most gathering spaces are where people tend to connect; where emotional and collective memory are mostly at play. Narrative flexibility is navigated by the ability to integrate the experience of processing an emotion and determining what the feeling meant, “more specifically, a person’s ability to switch between these modes” (Angus cited in Boritz, 2016: 2).

Collective memory is a form of communicative memory and it has no fixed point which would bind it to the ever expanding past in the passing of time. Such fixity can only be achieved through a cultural formation and therefore lies outside of informal everyday memory (Warburg cited in Assman and Czaplicka, 1995: 126-127).

The transfiguring of the past is a mystery, it emphasises acting on the past and influencing the future, which is action memory. The action memory consists mostly of a learning spectrum where one can make use of subject-performed tasks or verbal task to act on (Engelkamp and Cohen, 1991: 175-182). When an occasion for performing a task occurs, like an artist creating a piece of work or a miner is mining coal, that instruction is translated into action or visual schemes (Koriat, Ben-Zur and Nussbaum, 1990: 568).

Ricoeur’s fifth step to achieve the full exchange of memories highlights the essence of the project. Pardon is the physical realness of the project, the built space. Ricoeur refers to this stage as a stage of “working-through” whereas Kearney emphasises the mourning and the letting go in this stage, it was because Kearney (2007) focused on memorial spaces. These memorial spaces are still commemorative space, but the building typology of this dissertation is not that of a memorial space. The focus on “work” in working-through, presents a physical act whereas “through” is that of the metaphysical. The “work” is the real memory and

the “through” is the felt memory, and conjoining the two is that of history, present and mystery. Therefore, the felt-real is a culmination of spirit-place memory, emotional memory, collective memory, and action memory.

Pardon refers to a forgiving process, however, when we create memories as a community no forgiveness is required, unless the memories are linked to the pains of the past. This fifth step in a memory exchange hub would not be focused on forgiveness, but rather keeping an open mind. Allowing oneself to share memories; to engage and relive moments in new memories.

Greek architect, Eleni Bastea is the editor of the book, *Memory and Architecture* and she collaborated with many others like Thomas Fisher, Sabir Kahn and Eric Sandweiss. They write on memory and its changing role in spaces that reveals the layers of imagination and enacting. The typology of the building is that of a memory exchange hub, it aims to allow for community engagements and a form of cultural, ritual and narrative exchange. Lephallale is a small coal mining town in Limpopo and in a bushveld landscape with a rich opportunity for hunting game. The first phase of the town’s development revolved around education, but the core focus shifted after the discovery of coal on the Grootfontein farm. The site-specific project commemorates the hybrid construct between generations of community members and the Lephallale local library, where a diverse community have tales to share and the capacity to learn and teach

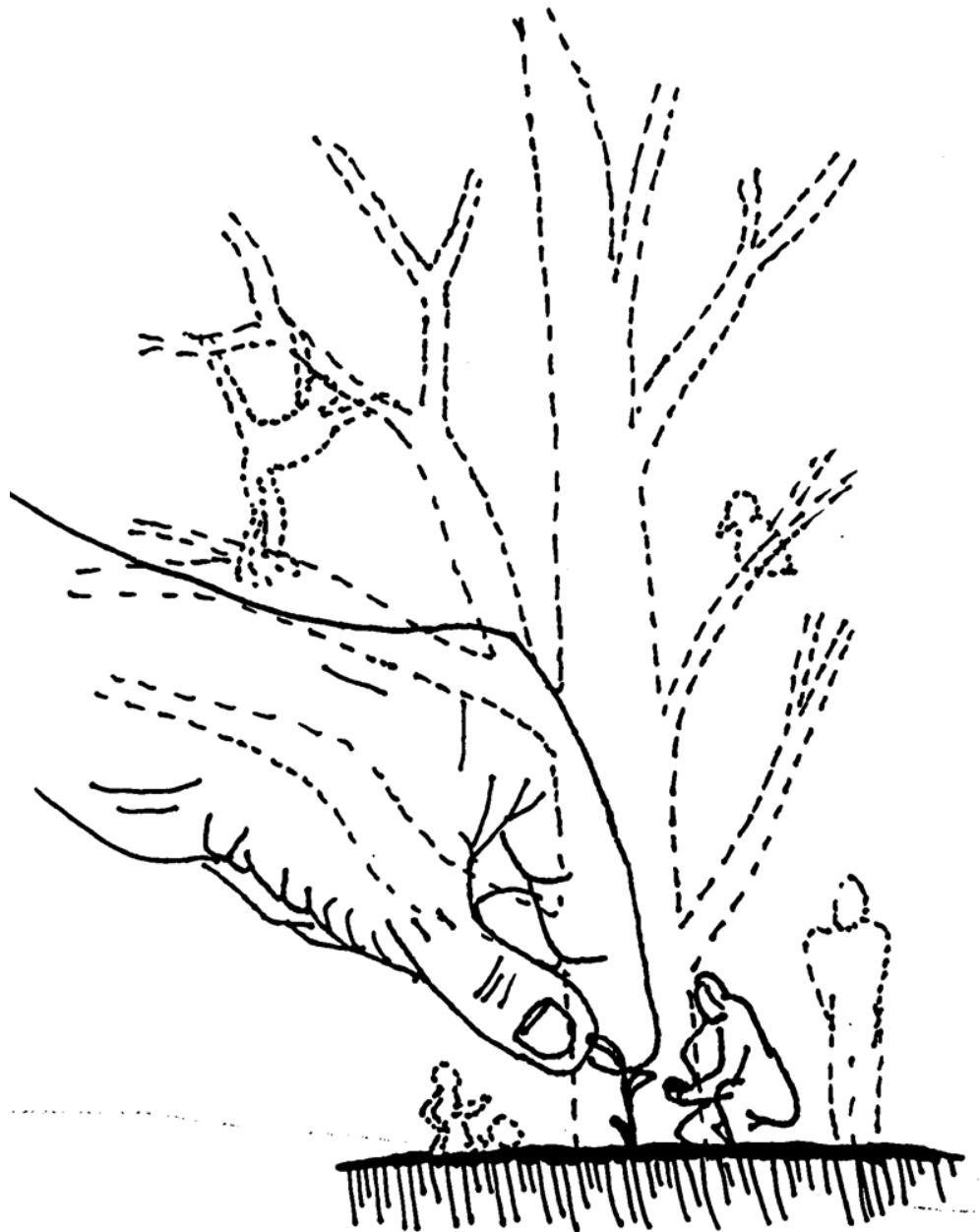


Figure 21: [re]Place; illustration (Author, 2021).

skills in a community hungry to learn.  
Memory of Tree: [Re]placing.

The spiritual memory of this place, this bushveld landscape, is that of hunting, gathering and ecological respect. When the first Basarwa travelled through the bushveld, they treated the area with care and left their markings through paintings at “Jors se Koppie”/ Nelsonskop and the “Oliekrans” in Lephalale, Limpopo. The Mogol River, on which most of the initial farm lands and infrastructure is located, is also where a few ceramics have been located that was created by this nomadic tribe. The historical and present day contextual layout and setting is to be respected by all living organisms of the bushveld so ethics of narrative hospitality may be achieved.

The place has changed in many ways from the middle stone ages to the 21st century. Irish Professor of history, Eric Sandwiess (2004: 25) writes that “Change is... one of the few constants of... life.” The only thing in the bushveld that has never changed is the respect that the people and the ecosystem have for the trees in the area. The trees form part of the greater memory of the place as they have achieved a place of permanence here and preserve an image of the past. Trees act as structures that allow spaces for exchange between different members’ histories and via welcoming the narratives of the outsider, the affected and the forgotten members. The trees are in essence the place, and as such, they are what American historian, Carel Bertram, refers to as the spiritual aspects of the history (2004: 182-186).

Lephalale’s experiential inception by vehicle is dominated by vegetation and trees, one need to venture on foot to pause and witness the intensities of the thresholds in between the trees and realise specific building typologies. The trees act as an architectural framework and even with the change of seasons, it is often difficult to tell the passing of time; that is if the temperatures don’t change a bit. Time is experienced as a continuum rather than a progression; thus memory of the trees is fixed, they’ve always just been there, they are phenomenological beacons and therefore the spiritual memory

of the place. The memory that the trees have of the people and the biodiversity are ever changing. Portuguese chemical engineer and politician, Maria de Lourdes Luz and Brazilian architect Ana Lucia Viera Dos Santos stipulates that there is no human presence or even future without memory (2004: 99). The biodiversity and trees hold memory, thus they encapsulate the spirit of the place.

People tend to care for the bushveld landscape, almost as if the biodiversity is a guest the community's living space. The truth is that the people are guests of the bushveld and are treated with a welcoming hospitality, and for the most part people practice the same care onto the environment.

When a tree collapses, due to heavy annual rainfall, the lived members of the community notice this change and almost suddenly a moment of mourning or remembrance takes place, especially to those to whom that specific tree had more value to; either for cooling, fruit, gathering or play. These moments for every tree that falls can create what Kearny explains as an "ongoing drama of semantic and symbolic reinvention" (2007: 96). The trees are spiritual values of the site and at the same time used as markers of remembered spirituality, as explained by Bertram (2004: 182-186). If a tree is removed, then that would mean memory is removed, but the act of remembering the tree can be honoured through an external intervention and a positive emotional charge. The empty space where particular rituals used to occur now becomes a place of remembering, linked to the lived members' memories as emotional charge. These moments are where lived members, who are the bearers of memory of the place, take action to remove the dead member of the community and plant a sapling nearby. This highlights the ethic of narrative hospitality as the living takes an open minded responsibility and acts out of sympathy for the dead, learning from the stories which concern another.

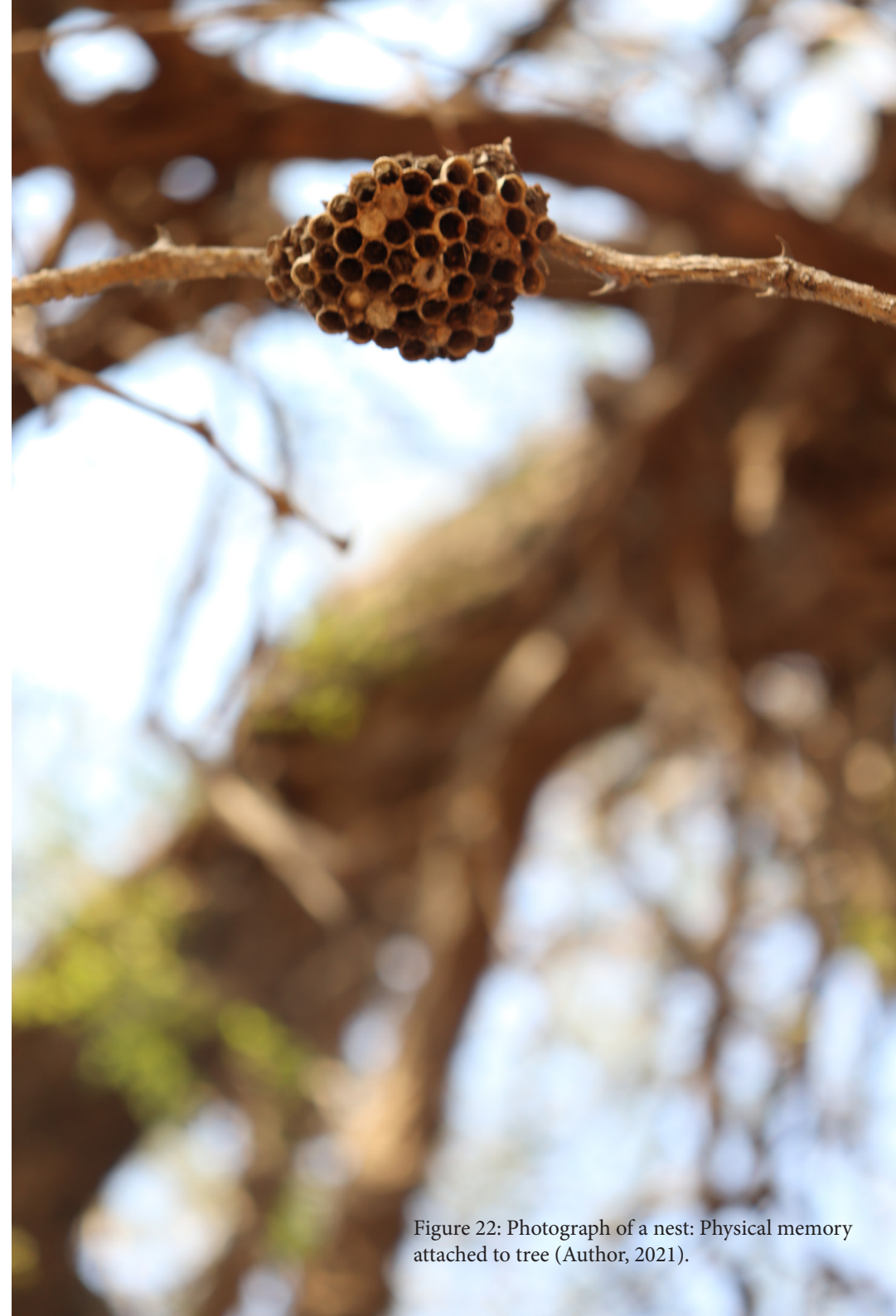


Figure 22: Photograph of a nest: Physical memory attached to tree (Author, 2021).

## Memory of Community: [Re]membering.

The two main cultural groups in Lephalale are that of the Afrikaner and the Bapedi. The proposed building thus becomes a space for multiple narratives and their intertextual interactive actions. Celebrating only one metanarrative in the community can lead to the challenge of competing narratives, thus celebrating one person and not the specific community at large can be liberated when loosened, which highlights the ethic of narrative flexibility and the narrative plurality. Different narratives can be conflicting, and it is thus vital to allow spaces that invite empathy to ‘outsiders’ of Lephalale and in return gain a “plurality of narrative perspectives” as explained by Kearney (2007: 99-100).

*“Space and the Collective Memory:*

*The great majority [of a city’s inhabitants] may well be more sensitive to a certain street being torn up, or a certain building or home being razed, than to the gravest national, political, or religious events. That is why great upheavals may severely shake society without altering the appearance of the city. Their effects are blunted as they filter down to those people who are closer to the stones than to men—the shoemaker in his shop; the artisan at his bench; the merchant in his store; the people in the market; the walker strolling about the streets, idling at the wharf, or visiting the garden terraces; the children playing on the corner; the old man enjoying the sunny wall or sitting on a stone bench; the beggar squatting by a city landmark.” (Halbwachs, 1950: 128-156)*

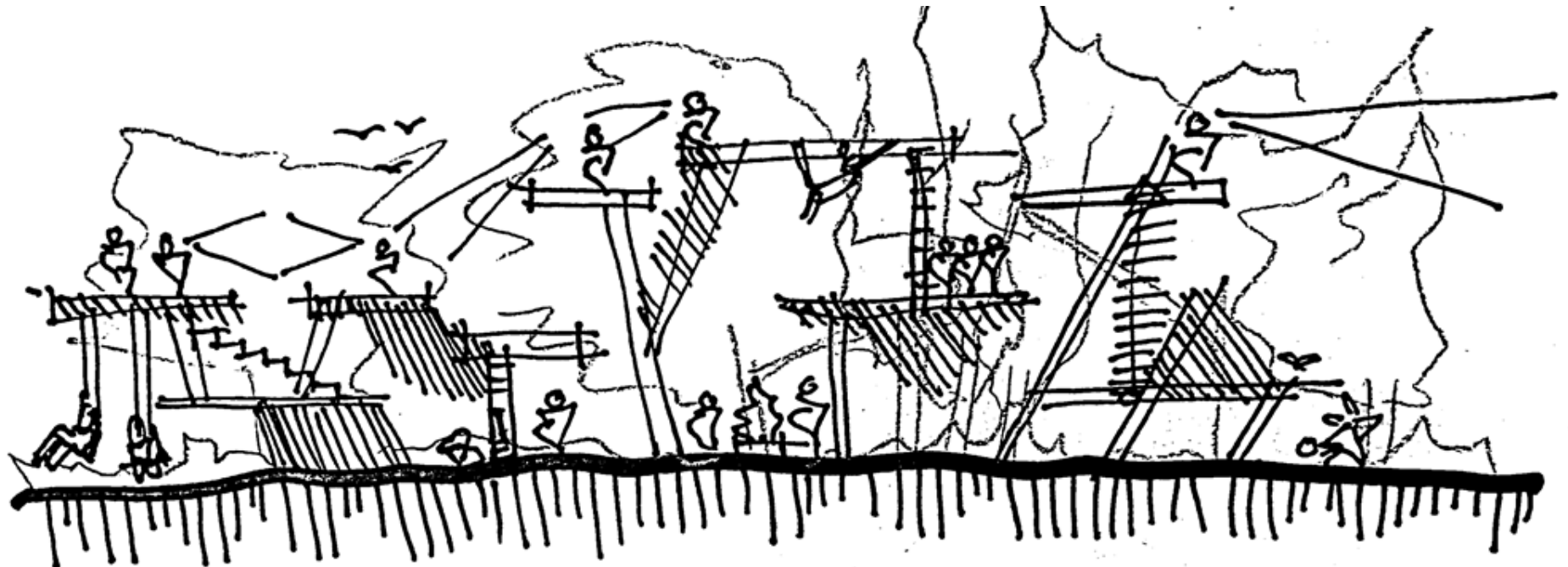


Figure 23: [re]Member; illustration (Author, 2021).

An individual who has the lived experience of the bushveld landscape is confronted by their awareness of their role and cultural meaning when attempting to regenerate latent memory within the ecological environment. Every being of the place is on a venture to discover an “irrecoverable elsewhere”, Kearny explains it as every life being possessed by the feeling of absence and loss (2007: 97).

The essence of creating a space for the community of the bushveld is to [re]member the metaphysical memory within the lived members: [Re]living an experience, a symbol. The space is to ensure that narratives of the members are exchanged; Kearney writes that German philosopher, Gadamer, refers to it as a “fusion of horizons” (2007: 99). When cultural memories are exchanged between the members, they empower the town’s local history and gain the ability to recount and reconfigure past actions: extracting coal, community transformation, the past of oneself.

Lephalale experienced a rapid cultural change in 1974 when ISCOR developed what is known as EXXARO coal mine today. The town experienced an influx of ‘outsiders’ and this changed the cultural set up of Lephalale. The new inhabitants needed to learn about the way of living in the town and the original inhabitants needed to accommodate this experience. This new narrative plurality allowed for a celebration of different people, from different backgrounds, working together to achieve transformation of raw resources, new beginnings, and action experiences. The interwoven memories of the insiders and outsiders of the community in a shared narrative signify the expansion of memory and the embraced history as place.

The identity of the diverse people in Lephalale is based on the recounted stories in the same past and the poetical ethics of memory is achieved after the remembering, retelling, and reciprocating of the members’ memories. The poetical ethics of memory refers to when the members exchange memories that might be foreign to another, the members enhance their own sense of self-awareness, in experiencing “oneself as another” which is also the title of Ricoeur’s book (1994).

## Memory of Knowledge: [Re]acting.

People come to Lephalale to celebrate and transform things: raw resources into finished products, new beginnings into bitter-sweet endings, action experiences into metaphysical experiences. The community exchanges memories and keep the narratives and teachings of past lives intact by practising and improving their methods, thus transfiguring the past.

The act of learning is an ethical context of responsibility to the people in the community which achieves to offer a new future to past methods, whilst allowing the reciprocal exchange between members. Lephalale is a town built around industry, and the culture of craft is multi-faceted people that make up a larger part of the community. Nearly every member of the community has the skill to create something by hand: carpentry, welding, tanning, or wiring. Only the skills that are used at the mines for electrical and mechanical purposes are catered for in town through GROVOS, the training and development centre for future EXXARO coal mine employees.

The community needs a creative intervention that would enable them to improve their knowledge base through means of a building that would enable them to enact their required field of expertise which may include moulding, weaving, baking, brewing, painting or singing.

Methods of teaching and learning change, but the way it was done in the past can’t be changed as it is already fixed in time. Therefore people can practice fixed memory, thus follow instructions when performing a method to a specific task. Practicing memory requires the mentor to enact and improve the methods of learning and creating. The process may become easier by including improved methods of learning or being skilled in the making, but the tradition of making remains intact. Some ancient methods of creation may remain hidden if not exchanged amongst the living, thus it is vital to celebrate the methods in the present, so the past may live on in the future. The readings on methods can be discovered at the local library to the north of the site and the practical teachings from past lived experience can be taught by the elderly living at the old age home south of the site. Other

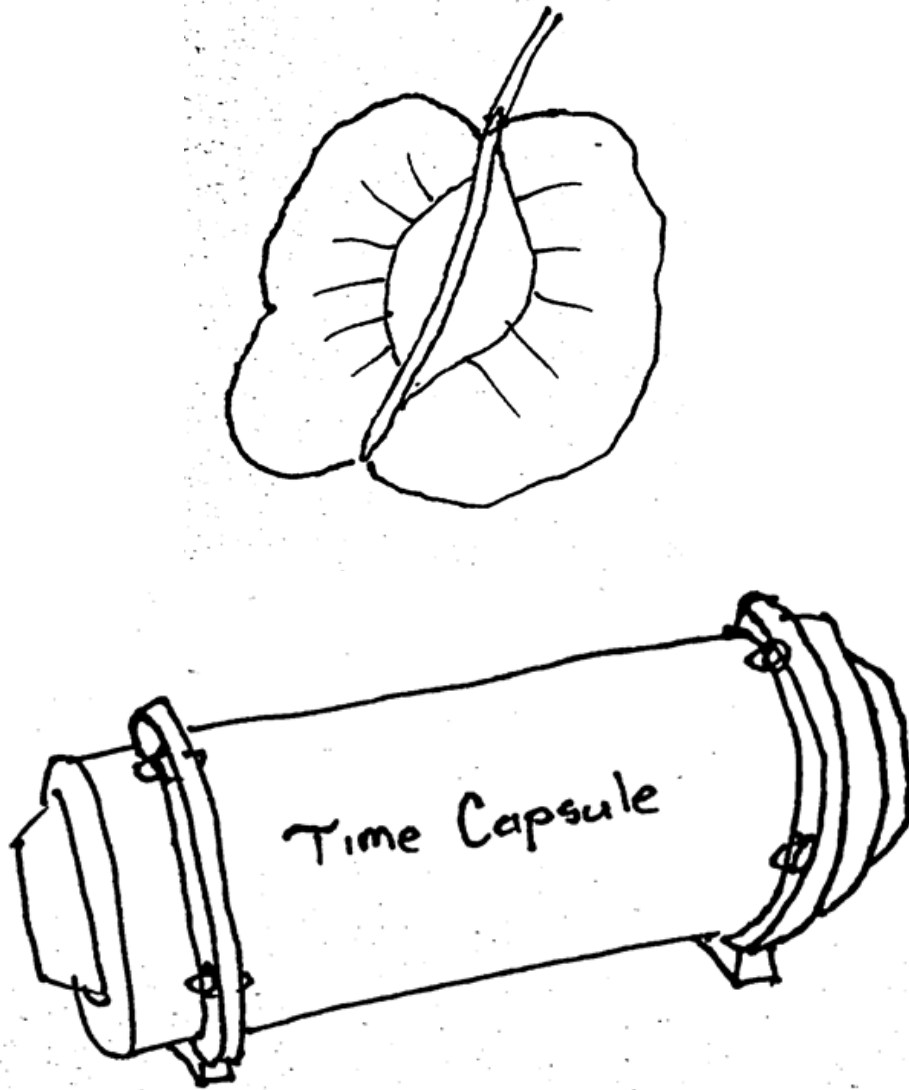


Figure 24: [re]Acting; illustration (Author. 2021).

members of the community with the necessary skill set can also partake in teaching the members who wish to learn and develop their skills and honour the specific craft.

Johannes Nicholaas Jakobus Steyn was a local craftsman in Lephalale, and this project honours his memory as well. Sabir Kahn (2004) refers to the act of making as the “figuration into memory” and that it requires the live teachings and practices of the craft also referred to as memory-work or what Bertram calls memory as construction. That memory’s “transmutation” as Kahn explains, is that of a coherent narrative (2004: 118, 183). Thus the art of performance and the art of making is the “figuration into memory” which Kahn talks about. French architect, Jean-Louis Cohen and German architect, Johannes Engelkamp uses simpler terms where action memory is either subject-performed tasks or verbal tasks. The items Steyn made is an autobiography of a memory, thus the object referred to as constructed memory is an assemblage of collective memory and offers a strong connection to the “tangled web of memory and space” (2004: 124, 182-184).

A memorial space, as Kahn (2004) explains, allows for the process of letting go and putting to rest, but then that would mean that a community centre for learning takes the memory and puts it to action. The end product is a result of the working memory that can be exchanged again.

## To conclude

A Memory exchange hub as built space lays the foundation for the larger narrative which respects the unique characteristics of the people of Lephale, as well as accepting and utilising the ecological reality. “Our histories are bound in space, just as they are bound in time” (Bastea, E. 2004 :7). It is thus the duty of the community of the bushveld to continue creating representational spaces for the history of the ecology over mere obscure lived spaces for just themselves. Ricouer’s hermeneutic model elaborates that people are living entities of the ecology and those members should treat the environment with that respect. The building is an expressive indicator of Lephale’s living members’ agreement to co-exist peacefully, Maria de Lourdes Luz and Ana Lucia Viera Dos Santos refers to this act as *Modus Vendi*, which allows for an improved comprehension understanding of the diverse social dynamics of the community (2004: 99). The building serves as an innovative exchange of memories that involves the ecology and the people. The exchange of raw material for end products is core to the building’s typology and the memory of the place.

All buildings have an element of symbolizing narrative and memory, thus it is the essence of the community’s identity and the lived members can link meaning to the spaces. Carel Bertram (2004) writes this place is “comprehensible” and therefore the creations on site are symbolic memory (2004: 165). In order to make the place memorable to the self, the building should allow for the act of poetic ethics of memory.

An exchange of memories of creation requires the Ricouer’s fifth ethical principle known as *pardon*, where reliving, remembering, and reacting requires a series of feeling, understanding and continuity. The aim of the building is thus to become a space where nature, community and knowledge is celebrated by motivating the reliving an exchange of memories. When people visit the abundantly tree filled site, they are all, for a fleeting moment, members of the site and eternally engraved in the memories of the trees. The memory exchange hub forms part of subsequential, emotional, collective and action memory as it is intact with a knowledge base value where people can learn from one another and this act of learning encapsulate real memory, and it is therefore a space that allows for a shared architectural past.

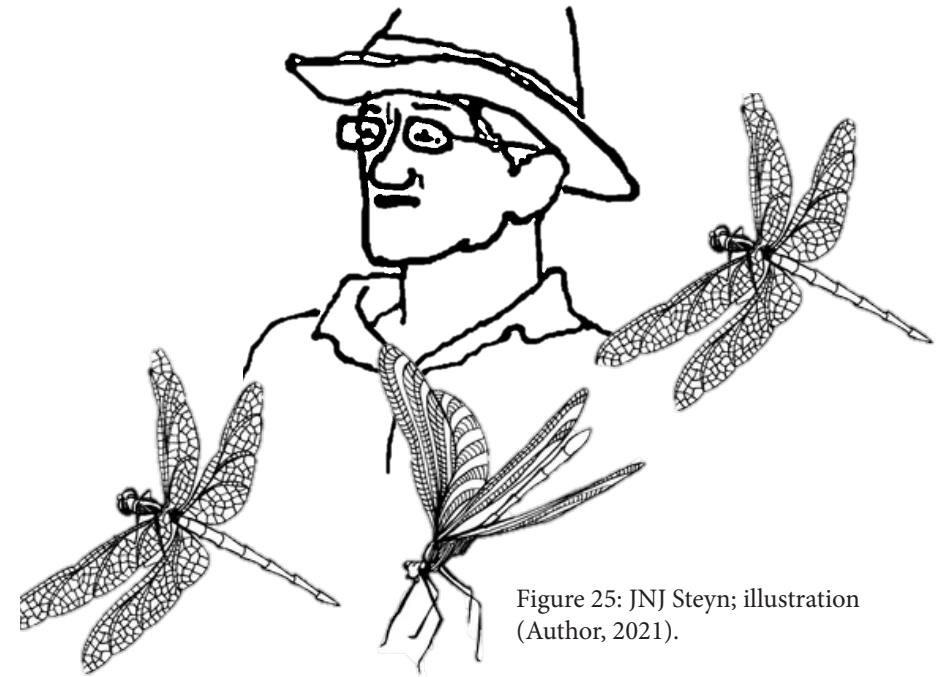


Figure 25: JNJ Steyn; illustration (Author, 2021).

## Narratives of the People of Lephale: Interviews and Tree Comparisson

The narratives of community members in Lephale are just as important as the trees in the area. This section aims to highlight the connection between community members and indigenous trees on the site. The understanding of how people and trees are part of one spirit of the place, will lead to how gathering spaces can be created to celebrate the Knob-thorn, Boabab and Marula trees.

The section introduces the inspiration for the different spaces designed in the project.



Figure 26: Bafedile A Masasa;  
illustration (Author, 2021).

### The Knob Thorn tree (*Senegalia nigrescens*)

Elephants make use of this particular tree in the wild to smooth out their horns. It is evident how the tree received its name, the knob thorns along its mark is visibly unique to this tree. Bafedile, Rene and Ben all have one characteristic in common; bringing people together to perform and stand out. Just as the thorns become more visible as time passes, as does the talent of people when they grow the skill.

### Bafedile Abraham Masasa

Evergreen is an organisation which aims to improve and restore the arts sector in Lephalale. The chairperson of the organisation is 34 year old Bafedile, an artist, director, writer and active member in his community. The spiritual Tswana performer was raised in the Marapong area where he currently resides. As a young boy he loved wearing dresses, which is so very rare and never embraced in Lephalale. He was bullied for being a proud LGBTQ+ member in society, but since the age of 13 that didn't phase him anymore as he learned how to fend for himself. Artists like Jim Alley, Sello Maake and Nambitha Mpumwana inspired him to go study Industrial and Musical theatre at PRIDA in Polokwane and was lectured by Mahuma Paul Rapetsoa from Get down Productions.

### Ben & Rene Eloff

Growing up in Lephalale I was taught singing techniques by Ben and painting techniques by his wife Rene. They both travel every Wednesday from Pretoria to teach the people of the town these two skills. Rene also teaches her students how to play instruments. They are not originally from Lephalale, but they have become part of the artistic community. Music can have an impact on triggering memories of the past or even memories of specific people. My late aunt really loved the music of Juanita du Plessis and playing her music on my aunt's first birthday in heaven on 1 June 2021, proved to me that music does trigger memory. The emotions, the shared experiences and the dances on Juanita's music sparked a spiritual connection and it was as if my aunt was listening to it with me. I remember how she used to react when the song Jessica of Ray Dylan would play, as the song starts she would scream from the top of her lungs! I can't listen to that song without hearing that screaming or rather cheering in my head.



Figure 27: Photograph of Knob Thorn Tree on site (Author, 2021).



Figure 28: Photograph of Boabab Tree on Site (Author, 2021).

### Boabab Tree (*Adansonia digitata*)

The tree has a high nutritious and medicinal value and can be cultivated very easily (Sanchez, 2009:199). There is a Boabab tree not too far from Lephale that has a bar built inside of its trunk. These trees hold magnificent qualities and are known for its enduring lifespan.

### Delsinia Ngwepe

The 25 year old Bapedi traditional healer studied at Mbambali in Hermans Kraal, where she learned to help people with their health and personal problems presented in past, present and future. She grew up in Lephale on Blinkwater and currently resides in Marapong area. She received an ancestral calling through visions she received since the age of 13. The pot she uses to make medicine is made of mud/clay and she uses common plant like Monapari, Sponyopa, Mpesu, Tshikadithatha, Tjhikwani and Moshoanwanuku.

Both Delsinia and the Boabab tree are known in the Lephale context for different reasons by the members of the community. They both encapsulate the trait of healing and engagement with multiple individuals, spiritually and physically.

### Claris Dreyer

Exxaro coal mine's former local geologist, Mr. C. Dreyer have been part of the Lephale community for many years. His children all live overseas and he has no other descendants in South-Africa. Claris and his wife live in Lephale, in one of the few houses without a single fence where they chose to retire. Claris spent his life gathering objects like stones, fossils and even ceramics throughout his years of traveling and involvement in projects. His narrative evokes the question of where his founding might end up one day, since transporting it overseas to his children will be a big challenge.

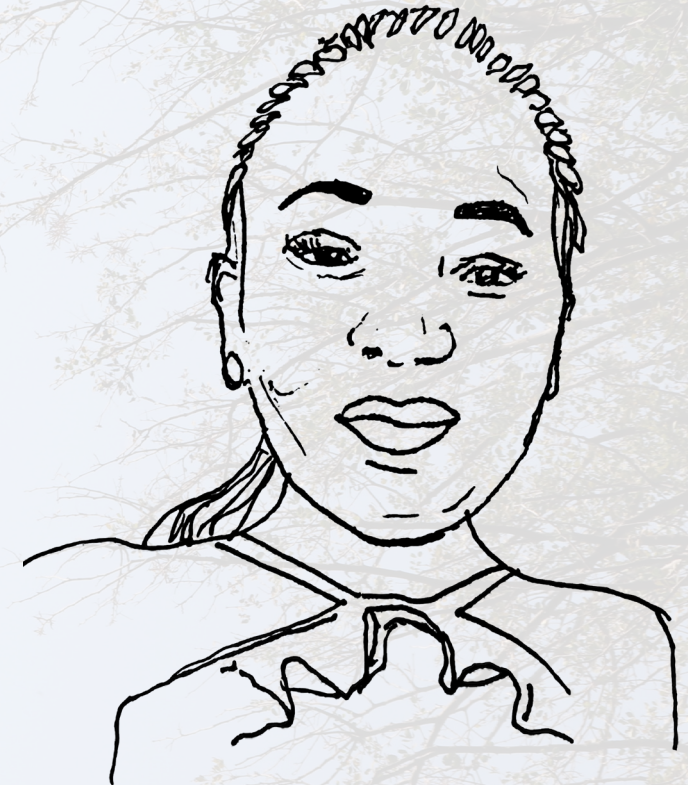


Figure 29: Delsinia Ngwepe; illustration (Author, 2021).

### The Marula Tree in town (*Scelerocarya birrea*)

Lephalale has an abundance of Marula trees. People traveling by foot can easily pick up the fruit that has fallen from the tall tree and eat it on their way. Locals in Lephalale use the fruit to make mampoer or traditional beer. The tree is high in vitamin C writes Beijing Forestry University (2011: 38), they mention that the Vitamin C content of the fruit surpasses that of orange, lemon and mango per 100g fresh weight. Most of the trees are located more in the Onverwacht area and other North West areas. The tree has multiple uses and different indigenous practices across Africa. In Botswana; the border is approximately 40km from Lephalale; their practises involves using the bark of the tree and a powdered or infusion made from the male or female plant can influence the gender of an unborn child. South African indigenous practices use parts of the tree and/or fruit to treat asthma, arthritis, cramps, kidney pain, fever, malaria, burns boils diarrhea and the plant is also used as an anti-aging product or moisturiser (2011: 40). Marula has been a protected species in South Africa since 1962 (2011: 37). Just like Mari and Maymowrei, the tree creates opportunities for entrepreneurship.

### Freezing time: Marulas

In January 2021 I gathered some Marula fruit in town from the sidewalks as I used to do as a child, I then stored these fruit in a freezer to see if they would still be usable and edible after defrosting them. The fruit could be defrosted and did not lose its quality, the contents of the fruit was well preserved and did not lose its taste.

### Maymowrei Nyama

The 27 year old Bapedi & Northern Ndebele entrepreneur is a WITS Business management graduate from Onverwacht, Lephalale who currently resides in Johannesburg. She started her own clothing brand, Maylux Swimwear.

The library was a home for her, she spent many hours there. She was part of the children who painted Christmas decorations on the library windows. She never wants to leave Lephalale, so she is hoping to return to town soon and impact the youth.

### Mari van Lingen Barnard

During my adolescence I worked at a coffee shop, Innovation which was owned by Mari and known by many. The coffee shop is where a lot of senior citizens and mostly women went to break away from their daily routines. The spirit of the place is left empty when her soul left her body in 2021.



Figure 30: Mari van Lingen illustration (Author, 2021).

Figure 31: Photograph of Marula Tree on Site (Author, 2021).





## Trees plotted on Site:

Boabab (*Adansonia Digitata*)

Knob-Thorn (*Senegalia Nigrescens*)

Marula (*Scelerocarya Birrea*)

Mopane (*Colospermum Mopane*)

Red Bushwillow (*Combretum Apicalatum*)

Russet Bushwillow (*Combretum Hereroense*)

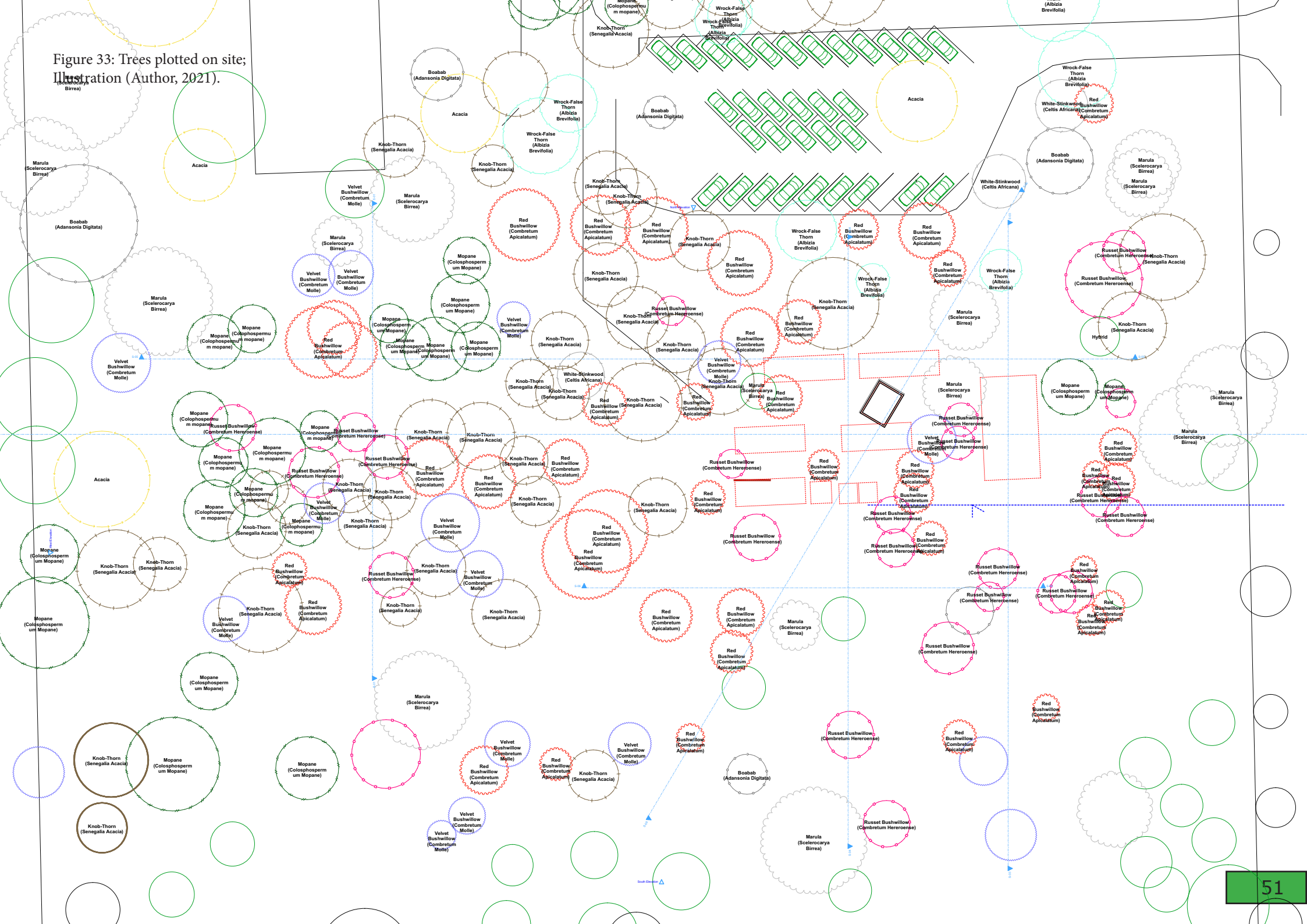
Velvet Bushwillow (*Combretum Molle*)

White-Stinkwood (*Celtis Africana*)

Wrock-False Thorn (*Albizia Brevifolia*)

Figure 32: Edited Photographs:  
Knowledge of Site (Author, 2021).

Figure 33: Trees plotted on site;  
Illustration (Author, 2021).



## Precedent Exploration

Three theoretical precedent studies are discussed on the next few pages, two of which are international and one in the Waterberg area; the same region as the choice of site for the design proposal.

Each one of these have impacted the design of the memory exchange hub.

Nid Vu, Nid Connu  
(The Nest)  
Muttersholtz, France

FIRM  
Studio 1984

TYPE  
Cultural › Pavilion

YEAR  
2012

SIZE  
20 square-metre

This particular design in France makes use of natural material that was located on site. An old den stacked with unused hay was used to create this cultural pavilion.

The repurposing of materials has given the elements new play and uplifted the use of the site. The agricultural vernacular construction method offers a typical form of the traditional barns and attempts at restoring their discreet charm.

The structure's environmental impact is almost zero, thus resulting in the structure caringly fitting in with the environment.

The use of hay sparks the possibility of using a local South-African material, thatch, generally used as a roof material, to use them as walls instead in the hot interior climate of Lephalale.

Figure 34: The Nest before  
(Studio 1984, 2011: online).



Figure 35&36: The Nest after  
(Studio 1984, 2012: online).



# Ring around a Tree

Tachikawa, Tokyo Japan

FIRM

Tezuka Architects

TYPE

Kindergarten

YEAR

2007

SIZE

145 square-metre

A typhoon impacted the area where a Zelkova tree was partially uprooted, survived and selected as the site to honour the past with this building project.

The tree acts as a memory of the traumatic natural disaster that impacted the city, and creates a structure that protects the tree honours that memory in new forms. The children will now remember the tree as one that offers a space for play, where older generations it is a reminder of the past. The contrasting creation of memory and subsequential memory live harmoniously in this space.

The play space protects the tree, but this approach could hinder the trees maximum limits to growth if not executed appropriately. In the Lephalale area one has to also consider animal life.

This precedent sparked the notion of creating singing spaces on platforms at the same height that birds sing to. Thus connecting to nature in a new way and also allow the people who play sports to notice the sound of people singing, and actually spot them singing on the site. Thus, resulting in another approach to attract the Lephalale community to site.

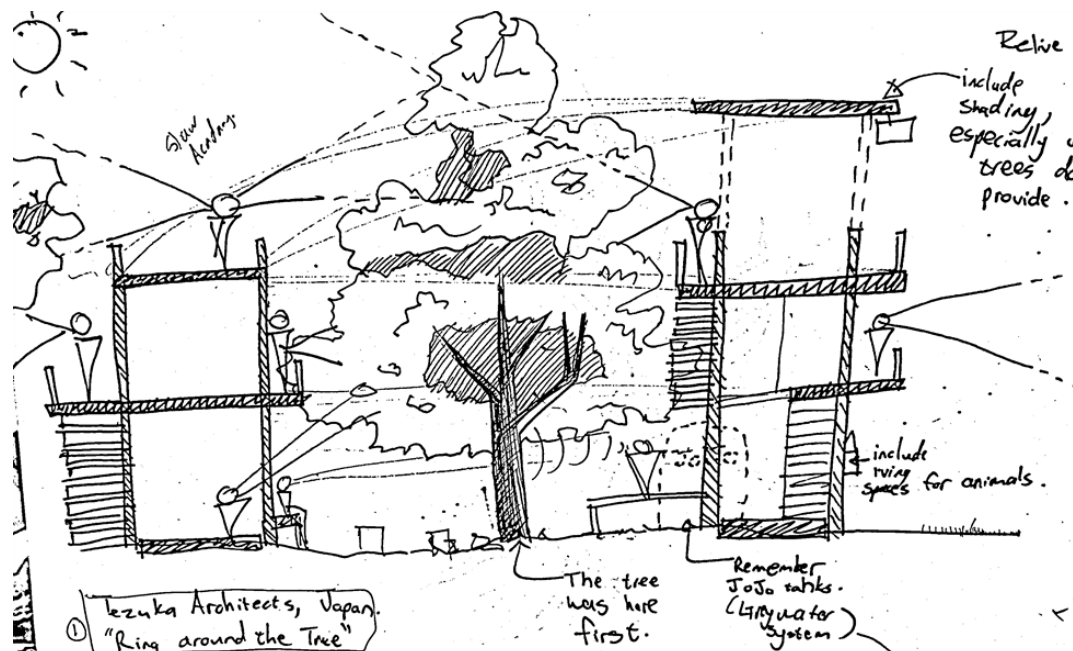


Figure 37: Ring around the Tree; illustration (Author, 2021).

Figure 38: Ring around the Tree (Unknown. 2011: online).





Figure 39: Wine cellar (Pappas, 2019: online).



Figure 40: Aerial view (Pappas, 2019: online).

## House of the Big Arch

Waterberg, South-Africa

ARCHITECT  
Frankie Papas

TYPE  
Home

YEAR  
2019

SIZE  
120-square-metre

Frankie Pappas built an “incredibly” narrow brick residence that disappears in the waterberg mountains

The building was designed for an elderly couple who has great knowledge and love for the bushveld. The aim of the project was to not cut down any trees, which also evokes the notion that bushvelders (this includes people of Lephalale) care for the environment and want to protect it as much as possible.

The memory exchange hub, just like the House of the Big Arch is located in the Waterbeg area.

Frankie Papas made use of a 3D scanner and Printers to aid in locating where the trees on site are, thus resulting in locating a narrow open corridor for the construction of the home (2019: online).

The first image to the left shows inspiration for the tower of knowledge, which houses an archive of irreplaceable books, articles, photographs and news papers of Lephalale and her history.

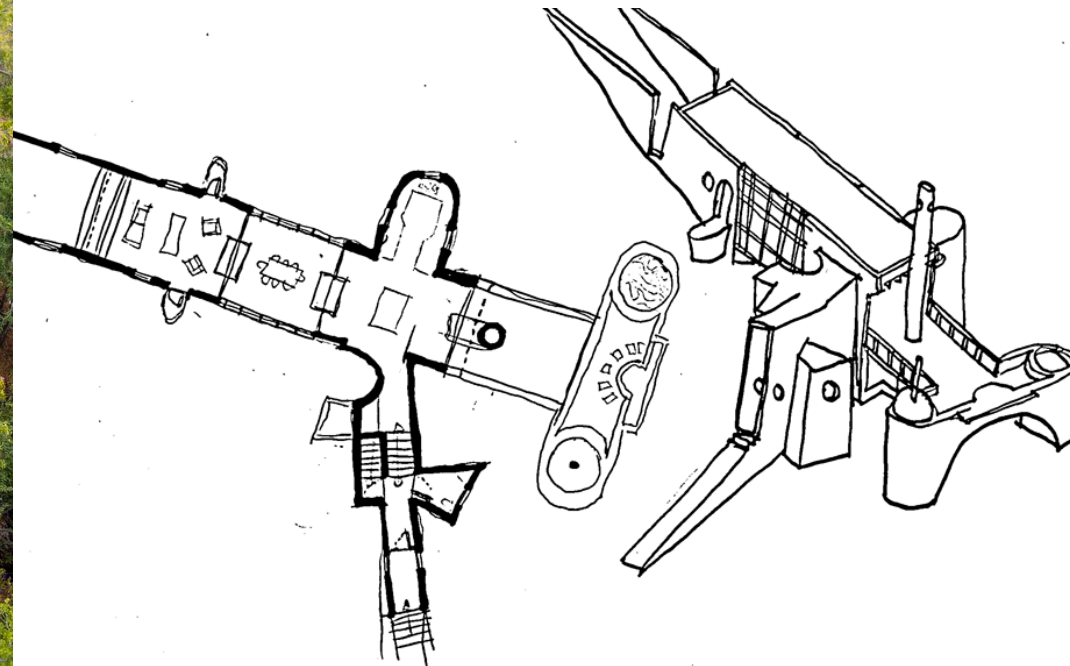


Figure 41: House of the Big Arch Plan; illustration (Author, 2021).

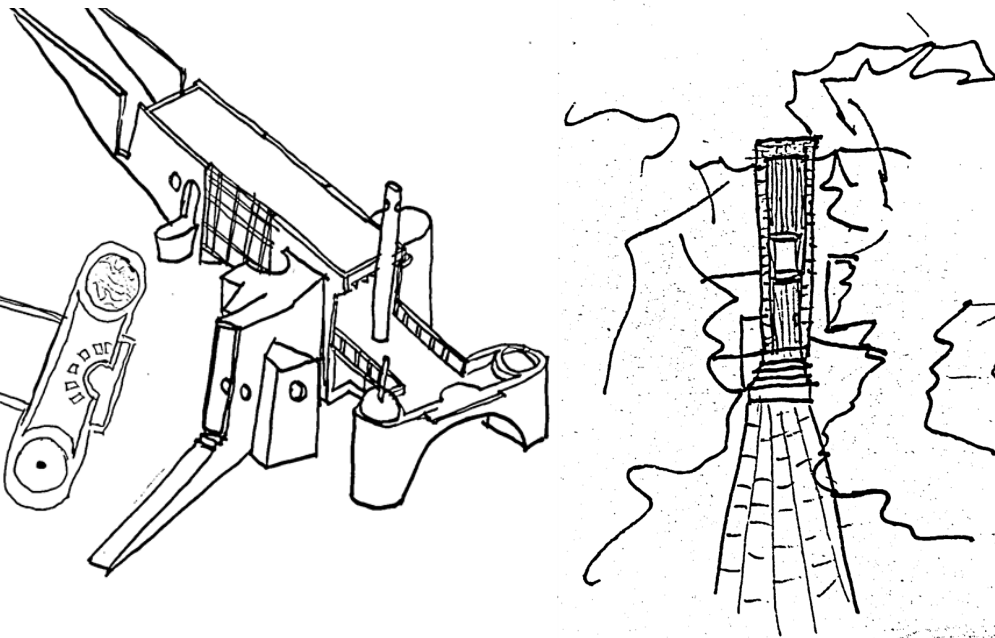


Figure 42: House of the Big Arch Exterior; illustration (Author, 2021).

Figure 43: House of the Big Arch Entrance; illustration (Author, 2021).

## Typology

The typology is that of a public building open to the Lephalale community, which offers facilities to be educated, to socialise, to teach and to be creative.

## Clients

The site is located on the premises of the Lephalale Municipality and the building will connect to the existing library linked to the municipality building. The building accommodates arts, culture and education facilities where the departments in Limpopo would be actively involved along with community established organisations: Lephalale Community Arts Centre, Lephalale the Musical and Evergreen.

## Users

Students of all ages ( Especially those who require computer facilities),

Parents (Who may drop off their children at after school extra curricular activities or who need a break away),

Elderly (Mostly from the SAVF Marula oord old age home South of the site),

Educators like Rene, Ben and Bafedile (Singing, dancing, acting, art)

Entrepreneurs like Maymowrei and Mari (Clothing,



**Lephalale Community Arts Centre**

Where Talent is Developed





LIMPOPO  
PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF  
**EDUCATION**



LIMPOPO  
PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA

Department of  
**SPORT, ARTS & CULTURE**



LEPHALALE  
MUNICIPALITY

*A vibrant City and the Energy Hub*



Figure 44: Photograph of Lephalale Municipality North facade (Author, 2021).



The bushveld's obstacles are unpredictable, the aim is to accommodate and simplify these issues through compartmentalization under the different groups of typology, topology, morphology and tectonics. This investigation will serve as a means to inform the topic further.



Figure 45 : Photograph of Boabab Tree on Site (Author, 2021).

## USE- THE FUNCTION

The typology of a building pertains to the type of functions the building has to offer as well as the type of people that would regularly be making use of the building. The typology of this particular building is theoretical and thus is categorised as a-typical since no clear typology could be found categorised as a memory exchange hub. Community and cultural centres, as well as social space, creative spaces and exhibition spaces need to be examined to locate a more clear understanding of sizing and how the functions would fit into the building.

## PROBLEM STATEMENT RELATING TO TYPOLOGY

The typology of the building is hybrid and focuses on spaces that promote the art sector as well as community engagement and education through narrative and skill building. Thus main spaces to be included are creation spaces for art (art studio, exhibition hall, backstage music room and main stage performance space); social spaces for the share of narrative (Discussion hall, restaurant and multi-functional space); as well as spaces to improve learning (Computer facilities, play area and gallery of capsules). This building aims to allow for the exchange of memories in a past, present and future framework amongst the Leph-alale community.

## AIMS RELATING TO TYPOLOGY

The building aims to offer a central space in town for community members to gather and reinvent new forms of community engagement. To avoid the building being unnoticed behind dense trees on site by the community, an approach of building on the edges of the site should allow the building to also engage with the external surroundings. The inclusion of a tower as hierarchical point can evoke curiosity and attract more users or visitors.

## DELIMITATIONS OF THE STUDY

This project is not just another educational or cultural or social building. This building aims to encapsulate memory, not only between individuals, but physically as well; through the art of exchange. The focus on preservation of environment, memories and engagement is a coherent factor which should remain constant.

## DESIGN CHALLENGES INCLUDE:

1. Preservation of the ecological makeup of the site and context.
2. Activating a road that has not been fully utilised in years.
3. Achieving a way to invite a diverse people to the building on a daily basis.
4. Ensuring that the art sector grows through the use of this building.
5. Creating spaces where conversation and other forms of exchanges may occur.
6. Minimising the carbon footprint since the mines already have a negative impact.

## PROJECT AIM

The bushveld environment allows for conversation, gathering, growth and engagement. The study aims to reconnect the people of Leph-alale and allow them to be influenced by members they never knew would have an impact on them. These influencers are members of past, present and future. Architecture that engages with both the metaphysical and physical calls for spaces that can allow one to discuss, reflect, replace, remember and react to moments in time.

The building should allow each person who visits it to be marked as a member of the identity of Leph-alale and engage with different exchanges of memory.

## Macro Context

Lephalale is located in Limpopo, South-Africa and has a population of 17000 people. A majority of visitors access the town via the entrance on the Ellisras farm, which is where the Mogol river flows. Heavy rainfall is the cause of this river flooding this area of the town, sometimes prohibiting access to the town, especially for people who live on farms along the river. The town was built along this river until coal was discovered.

The town expanded since the discovery of coal and now has 3 living regions: Marapong, Onverwacht and Ellisras.

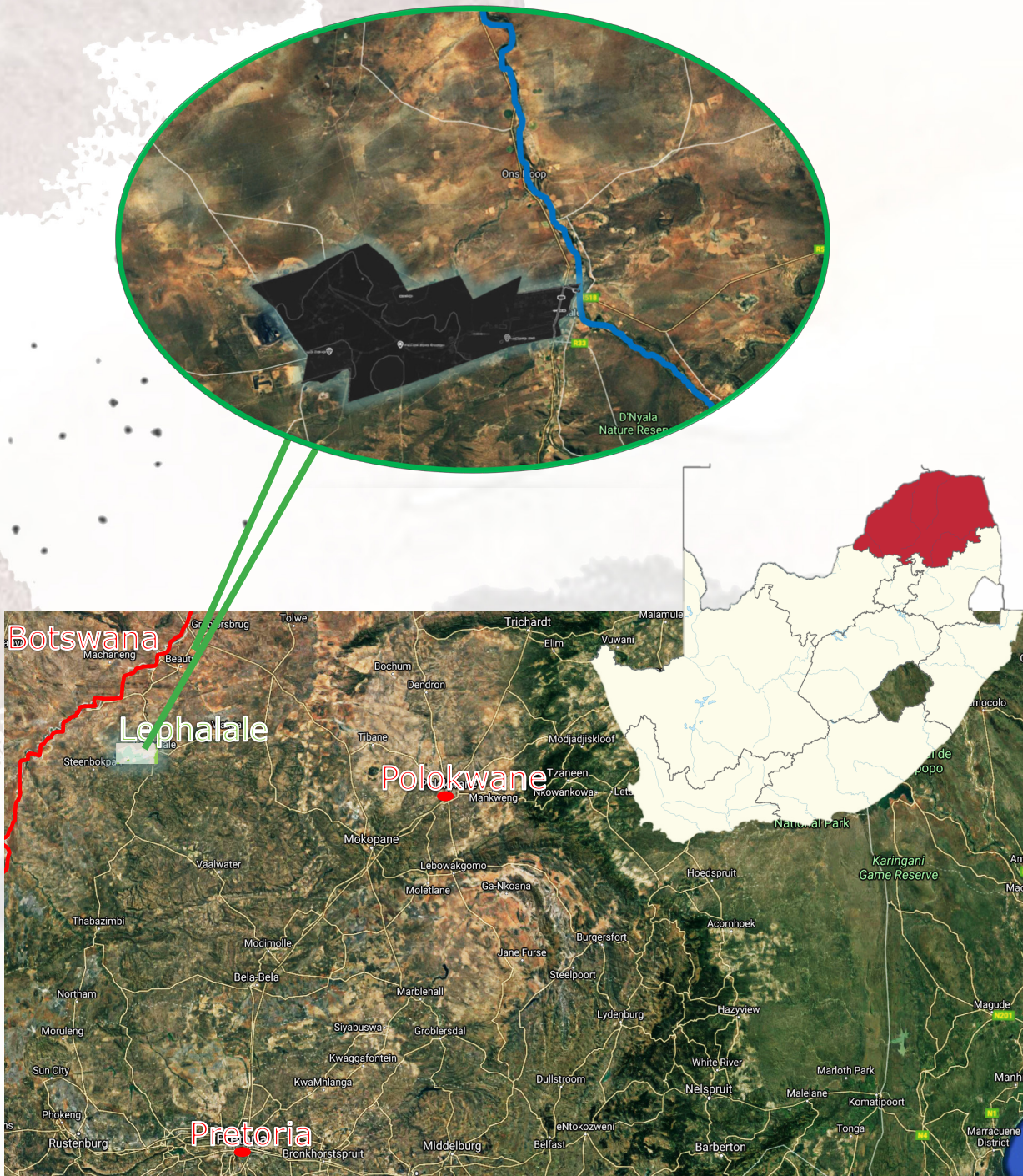


Figure 46 : Lephalale in Limpopo  
(Google images, 2021: online).



Figure 47 : Macro view of Lephale (1Map, 2021: online).

## Vegetation, Soil and Ecosystem

Aside from the climate, the town has beautiful living areas thanks to its abundance in indigenous bushveld trees like Maroela, Hardkool, Wilde Sering and Rooibos to name a few of the most well known in the area.

The area is a great plains landscape starting in the North-Western part of Limpopo and reaches the foothills of the Waterberg in the South-East (Algemene Beskrywing van die Ellisras Kaartvel) The town also has a variety of farming, such as cattle, game, citrus and crop irrigation.

The area is a popular sought after game hunting area. Kudus (*Tragelaphus strepsiceros*), Warthogs, reedbucks (*Aepyceros melampus*) and “vlaktewild” can be found mostly on farms. Crocodiles (*Crocodylus niloticus*) and Hippos (*Hippopotamus amphibius*) are mostly located in the Mogol River and Mokolo Dam.

A variation of plantlife can be seen in town, from “suur bosveld” in the south-east with Trasvaalboekenhout (*Faurea saligna*) as an a-typical specimen. The central area is more of a “mixed bosveld” with rooiboswilg (*Cornbretum apiculatum*) as the dominant specie. “Soetbosveld” covers the Limpopo valley (1990: 34).

## ELLISRAS

Ellisras is located on the farm Waterkloof  
During 1970's the Ellisras area, along the Mogol river was mostly used for commercial use and still hosts many of the first retail stores open in town.

## ONVERWACHT

Onverwacht is on the farm Onverwacht and houses the Iscor employees' residential area, known to locals as "*blikkiesdorp*". All the homes were constructed in a similar manner, from asbestos.  
Onverwacht houses a majority of the town's activities.

In 1990 the Mogolclub, to the east of the project site, was maintained by ISCOR and ESCOM.

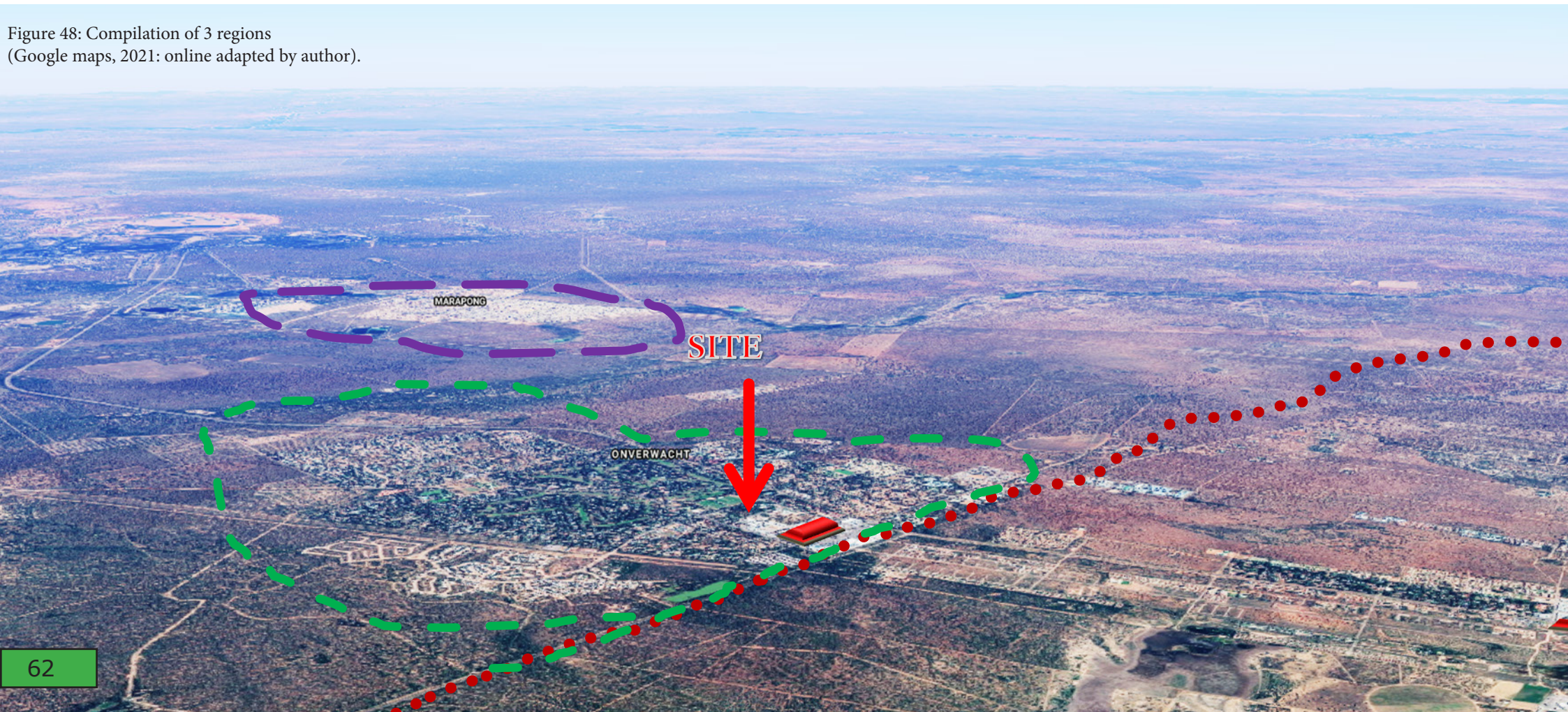


Figure 48: Compilation of 3 regions  
(Google maps, 2021: online adapted by author).

## MARAPONG

Marapong is located on Grootfontein.

This area is located close to the mines and power station and wasn't part of the Municipality until 1994. The area was established for ESCOM and ISCOR's black employees at the time. This region of the town

still houses many members of the town's population. Phase 1 of the town had 812 erven and the total area provided for development at first was 324,6291 hecter (Algemene Inligting Ellisras: 7). The Marapong area was run by their own municipality, separate from Onverwacht and Ellisras regions.

The town's only railway track connects Thabazimbi to Exxaro and the Matimba power station.

Thousands of hitchhikers travel from Mokerong Lebowa to the town daily.

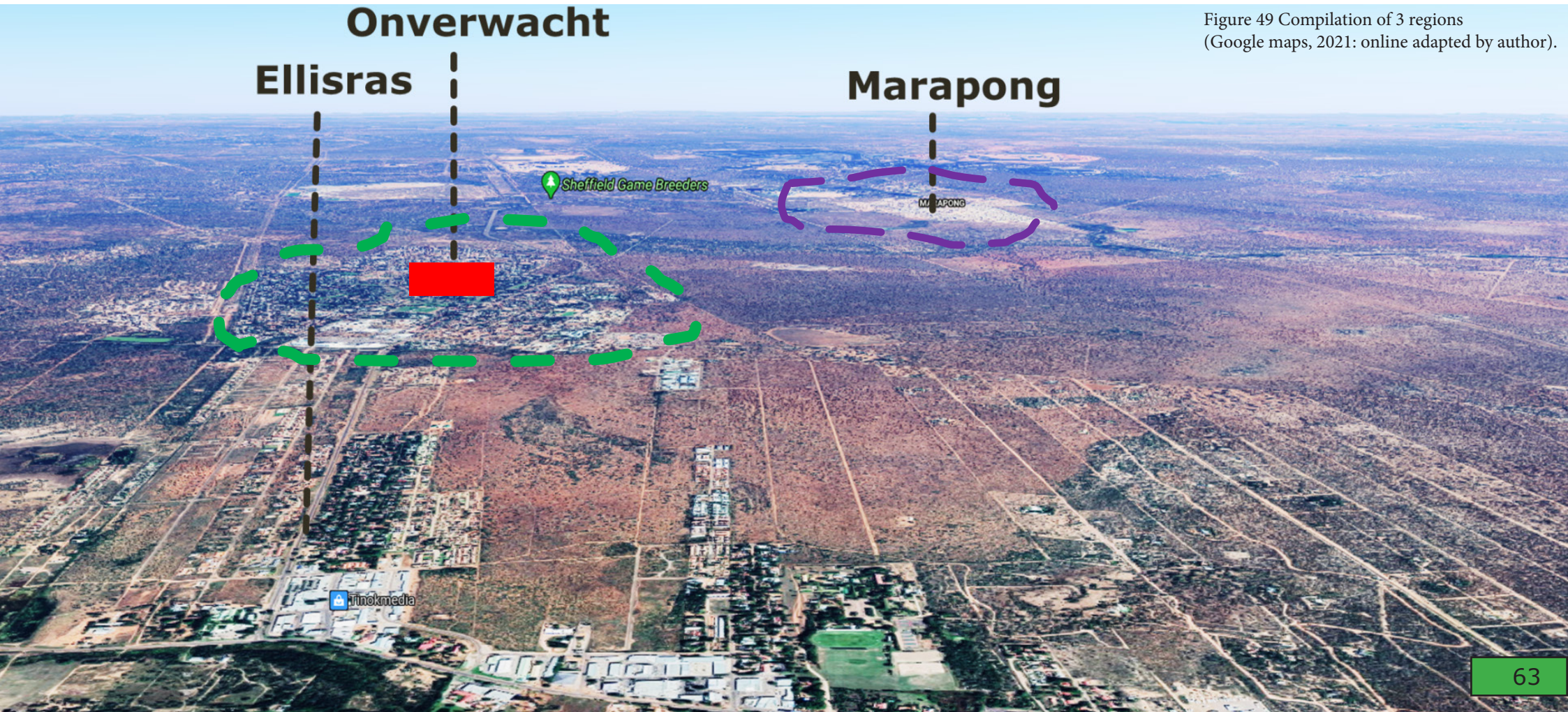


Figure 49 Compilation of 3 regions (Google maps, 2021: online adapted by author).

## Choosing a site

Three potential sites were initially investigated at the start of the research to ensure that the most suitable solution can be selected. The building requires the site to be easily accessible by the public, however it should embody some hidden quality. The entirety of Lephalale is filled with bushveld scenery, meaning a lot of trees, grass and small creatures like monkeys, warthogs, mongooses and guiney fowls can be spotted in the area.

The first investigated site is located right next to the up-town shopping centre on Nelson Mandela drive and Wells Street. The site is located east of Lephalale, and has immediate access to the main road leading through mid-town known as the Onverwacht area, all the way to the coal mines near the Marapong area. The site is surrounded by retail, accommodation and has a small family graveyard. The graveyard, however is an obstacle that can hinder the building process in multiple ways. Especially considering white painted stones located around the grave site, that might be possible nameless graves. Relocating the graves will be a big process, as some are not identified

Figure 50: Guinea fowl in a tree  
(Janse van Rensburg, M., 2021: photograph).

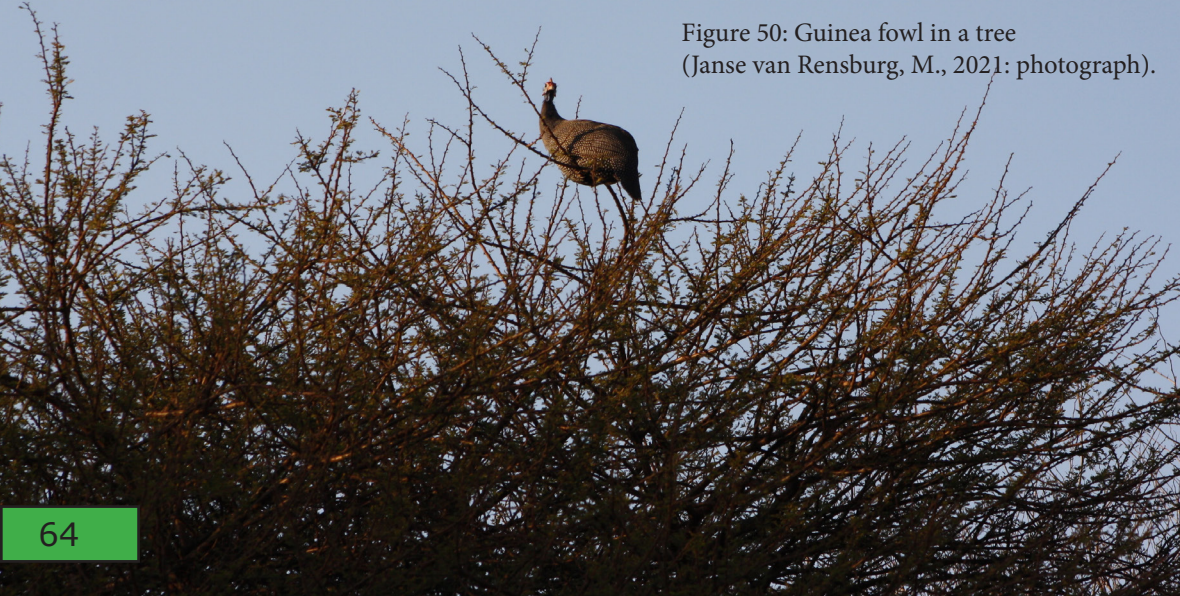


Figure 51: Signal Tower  
(Janse van Rensburg, M., 2021: photograph).



and others are older than sixty years. The site is also in abundance with wild fruits and homeless people have occupied hidden areas on the site. Uptown is where most Zimbabweans live, even illegally sometimes, because it is closer to farming lands and where they can locate jobs easier.

Onverwacht has a large and mostly unutilised fenced off site, right across the town's first mall. This second option site is located on the intersection of Walter Sisulu drive and Chris Hani Avenue. The mall, local garage, car wash, food corner, taxi stop, local vendors and retail form part of the meso context around the site. This site is currently used as a walkthrough site and might develop into a further extension of the mall, if the town's population allows it.

The Mogol river has had a large impact in the lives of the community and the town as a living entity. The third site is located on the banks of the river as one enters town from Modimolle. The site is on the R33 and R510 intersection and can experience flooding every other year. The highest recorded flooding of the river was in 1955.



Figure 52: Photographs of Site Option 1 (Author, 2021).



Figure 53: Site Option 1 (1 map, 2021: online adapted by author).



### Site option 4:

Located in the Onverwacht area inbetween an old age home, library, sporting grounds and vacant retail.

### Site option 2

Located on the East of the Onverwacht area in between the Lephale Mall and other active retail.

**Nelson Mandela Drive**  
This road connects Ellisras to Onverwacht and to Marapong

### Site option 3

Located in the Ellisras area on the Mogol river floodline. People from Pretoria enter the twon at this intersection.

### Site option 1

Located in the Ellisras area next to a hotel and shopping centre. This site houses a few graves.

ELLISRAS/ ONVERWACHT LINE



Figure 58: All Site Options considered (1 Map, 2021: online adapted by author)





Figure 60: Onverwacht Area  
(1Map, 2021: online adapted by author).

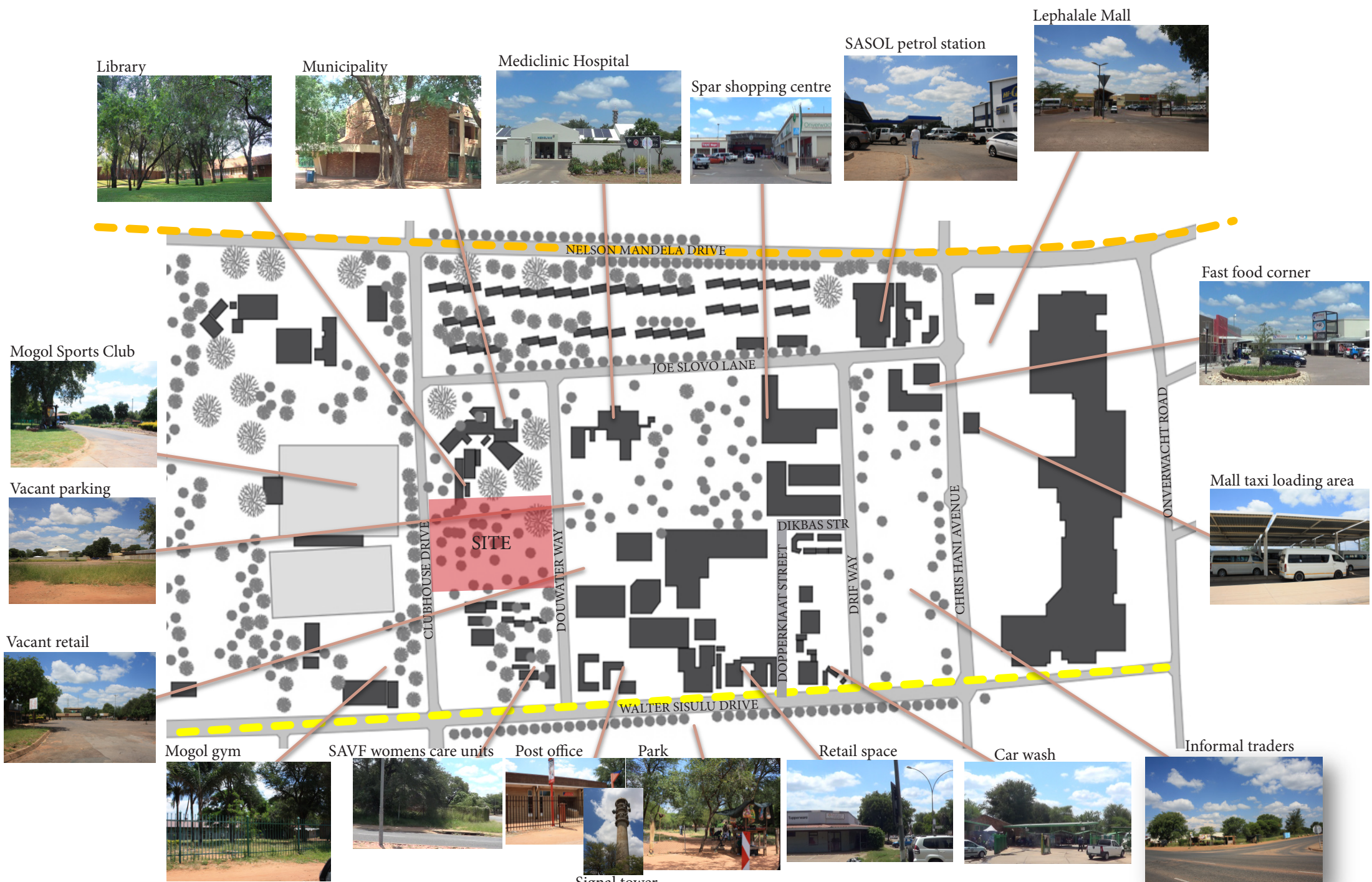


Figure 61: Meso Context; Illustration and Photographs (Author, 2021).





Figure 62: Frequently visited Retail, health care and public service spaces in the Onverwacht area in yellow (1Map, 2021: online adapted by author).

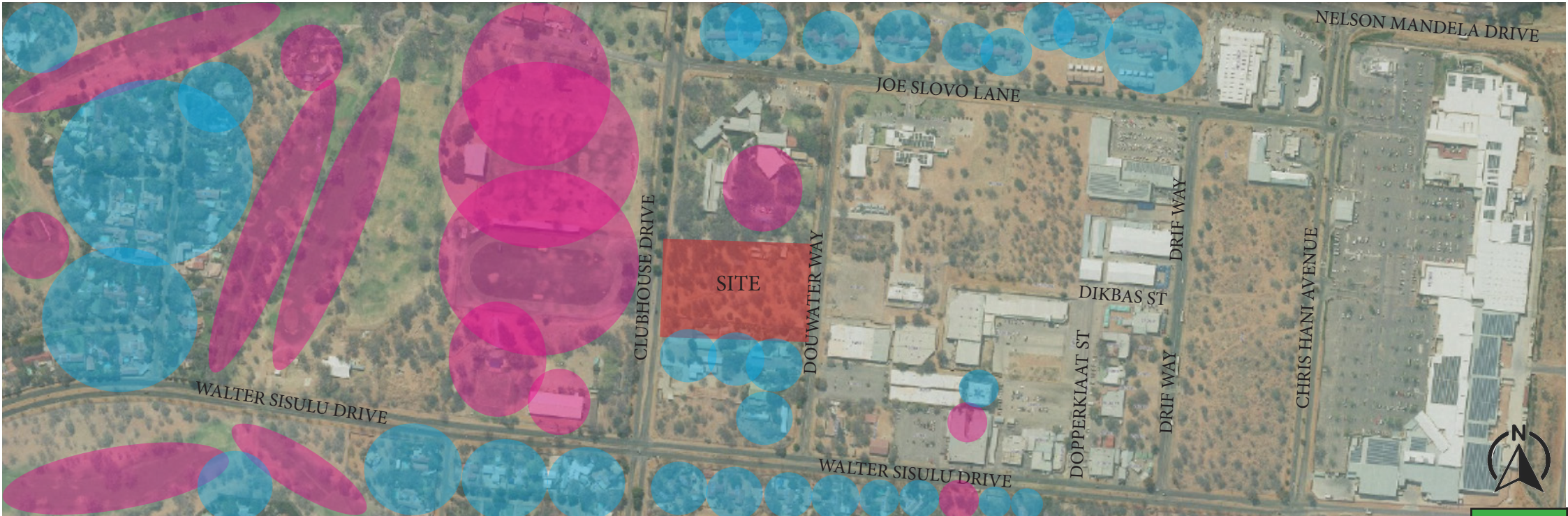
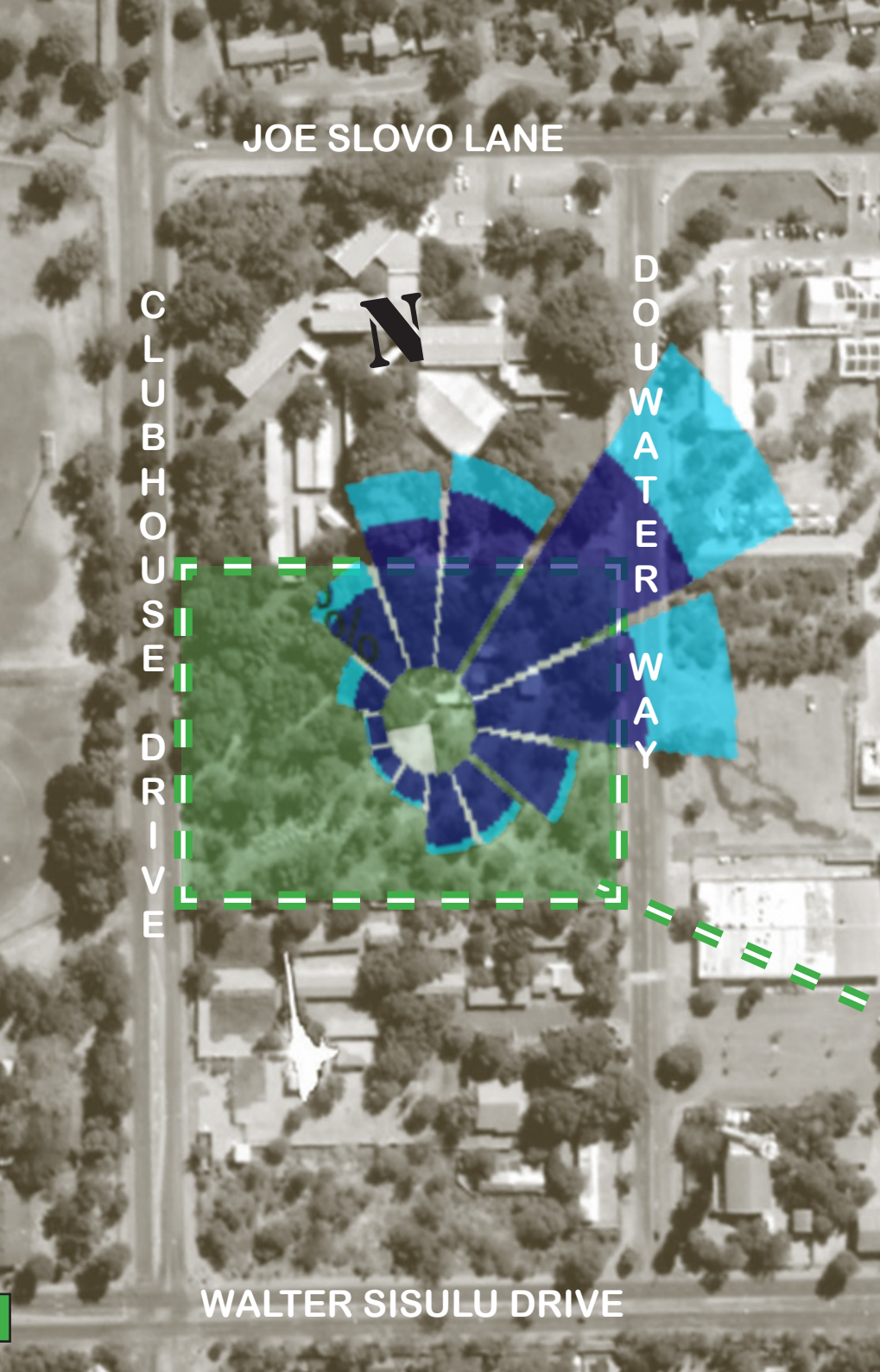


Figure 63: Sports and recreational facilities in the Onverwacht area in pink and accommodation in blue (1Map, 2021: online adapted by author).



## Micro Context

The site: ERF 2629

In between Clubhouse Drive and Douwater way is a series of buildings which include the Lephalale municipality, the On-verwacht library, Maroela Oord old age home and a care unit for women who faced gender based and domestic violence.

Amongst these functions is where the project proposal is situated and thus establish a link between the two roads as well as the library (erf 2628) and the old age home (erf 2630). The library houses books and some electronic facilities, in essence readable material. The old age home houses some elders of Lephalale who are 'living books' as they have stories they have a need to share.

The site currently houses an existing parking (used by library visitors), guinea fowl nesting (to be preserved) and old asbestos buildings (to be removed). The site is in abundance with indigenous trees that may not be removed, these trees contribute to the flourishing ecosystem in town and aid in cooling down the site in the extreme heat.

The memory exchange hub is placed between these two functions with the aim to allow different forms of memory to live cohesively and establish a place for the people of Lehalale to read, talk, create and mostly learn about the town in different forms.

Figure 64: Wind direction on Site  
(1Map, 2021: online adapted by author).



EXISTING PARKING

ASBESTOS OFFICE BUILDINGS

GUINEAFOWL NESTING

NO EXISTING PATHWAYS

EXISTING PATH

GREEN PALISADE FENCING

DOWD WATERWAY

BRICK WALL OF OLD AGE HOME

Figure 65: Obstacles on site (1Map, 2021: online adapted by author).

# Morphology

The project site (erf 2629) has historically always inhabited the Bushveld's flora and fauna. The trees play a vital role in maintaining a cooler atmosphere. The build environment around the site and in town is discussed on page 23 in the historical impact section. Not much have changed in the built environment of Onverwacht over the past thirty years. The latest building however is the Lephalele Mall to the East of Onverwacht.

Figure 66: Photograph of Municipality staff entrance (Author, 2021).



The buildings around the area mainly make use of sandstone face brick and slightly pitched corrugated roofing, usually painted green. The town area is situated in the hot interior zone in South-Africa and thus many buildings make use of top and bottom windows for improved ventilation. Many of the walkways in town and around buildings are a layout of bricks. People have a tendency to plant foreign plants like palm trees in their yards and in some places in town.

Figure 67: Photograph of Municipality North view (Author, 2021).

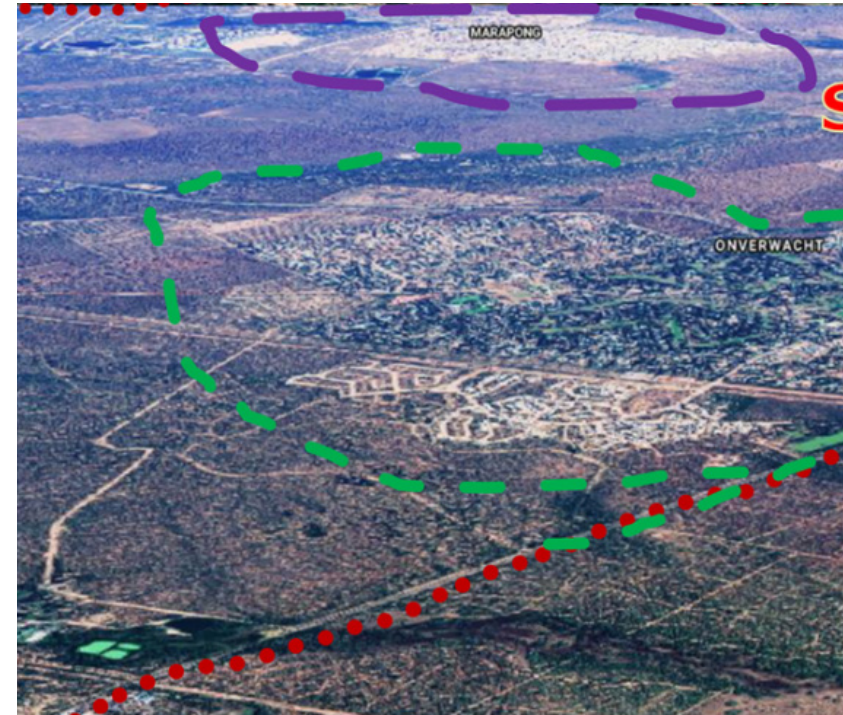


Figure 68: The Four sites (Google maps, 2021: online adapted by author).

Figure 69: Photograph of View towards existing parking from Library entrance (Author, 2021).



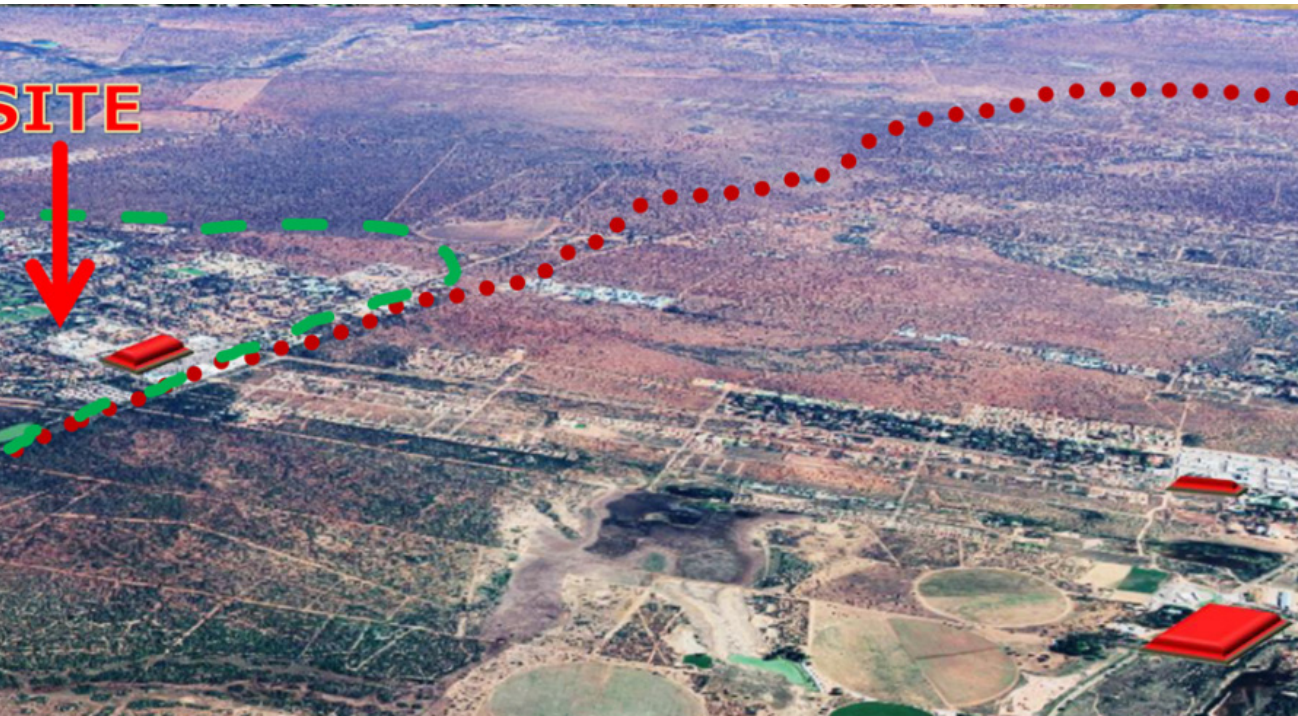


Figure 70: Photograph of office units to be removed (Author, 2021).



Figure 71&72: Photograph of the consistent watered vs naturally grown scene (Author, 2021).



## Climatic and Ecological factors to consider on site

The bushveld is known for its abundance in trees and wildlife as well as having a warm climate. A building in this area should accommodate at least these three factors. The trees on site with a diameter thicker than 100mm are not to be removed, unless special permission is granted and if the trees aren't indigenous to the area. The town has beautiful living areas thanks to its abundance in indigenous bushveld trees like Maroela, Hardekool, Wilde Sering and Rooibos to name a few of the most well known in the area.

Figure 73: Photograph of guineafowl nesting area (Author, 2021).





Figure 74: Photograph of axis from site to Library (Author, 2021).

Monkeys, bush babies, Guiney fowls, meerkats, monitor lizards and tortoises are often seen in this area.

The biggest topic in summer in Lephalale is probably on the heat as it has a warm summer climate and moderately warm winter climate, both are suitable for good outside living conditions. The annual summer rains vary between 300mm-500mm. The warm summer evenings holds a temperature of about 32 °C, where the lowest winter temperature may vary between 11°C and 20 °C. The town is situated 820m above sea level. The sun shines at an average of 65% in summer and 80% in winter.

The general geology of the Waterberg area, south of Lephalale contains traces of “Kwartsietiese” Sandstone of the Waterberg Super group. North and East of these specimen is sandstone and skalie from the Karoo super group, the last mentioned consists of a large amount of coal deposits (Algemene inligting Ellisras, 1990: 28). The site is located in between these two specific groups of stone. The surrounding building’s facades are that of sandstone Travertine face brick.

Figure 75: Photographs of ant hill on site (Author, 2021).



Figure 76: Photograph of offices to be removed from site (Author, 2021).





## WEST STREET VIEW

Figure 77: Collated photographs of Clubhouse Drive (Author, 2021).

Clubhouse drive is situated on the west of the site and consists of a 2 lane double way divided by a longitudinal island occupied by trees. The road connects to the mogol sports club and is used often by vehicles and pedestrians as this road connects to the town's main axis road, Nelson Mandela drive, which connects the mines and Marapong area through Onverwacht all the way to Ellisras where one enters town from Pretoria. There is only one house that connects to this road, all other homes along this road faces with their backs to the street due to its high traffic volumes in town.



## EAST STREET VIEW

Figure 78: Collated photographs of Douwater Way (Author, 2021).

A post office, signal tower, vacant retail, vacant parking, old age home, women's safety unit, municipality, library and hospital occupy Douwater street. Ironically, in contrast to Clubhouse drive that has no functions connecting along the street, Douwater has many functions, but very minimal activity. The vacant parking has been occupied by a local driving instructor for at least 15 years now. All functions that are used daily are situated at the south point and the north of the road, thus leaving no reason to actually visit the center of the road.

Figure 79: Photograph of a flock of Guinea fowls on site (Author, 2021).



Figure 80: Photograph of Mongoose on site (Author, 2021).



## Climate and Weather

The biggest topic in Summer in Lephalale is probably on the heat, as discussed earlier. The living conditions of a town is determined by both internal and external factors. Lephalale has a warm summer climate and temperate winter climate, both are suitable for good outside living conditions. Lephalale receives its wind from the North and East (see page 72). Wind speed reaching 6-7.9 m.s-1 were observed from the south (SAWS, 2019: 11-12).

The annual summer rains vary between 300mm-500mm (Algemene Inligting Ellisras, 1990: 28). The warm summer evenings holds a temperature of about 32 °C, where the lowest winter temperature may vary between 11°C and 20 °C (Engelbrecht,[n.d.]: 4). The town is situated 820m above sea level. The maximum temperatures measured annually are between 32-46°C and the coldest is between 4-16°C, note that these temperatures have been measured throughout the year and is not fixated on just Summer or Winter.

The sun shines at an average of 65% in summer and 80% in winter. The summer evenings are well suited for outside living (Algemene Inligting Ellisras, 1990: 28).

Every other year the town experiences floods. The town has a flood line at the start of Nelson Mandela drive, near the entrance of the town. This flood line indicated the levels at which the water has risen since the first documented flood in 1955, this was also the highest level. Other major peak water levels were marked in 1976 and 1996 (Mogol Flood line on brick wall: Lephalale).





## Research Question

How can an architectural intervention in Lephalale, encapsulate different forms of memory and connect people from an eco-cultural community?



Figure 81: Illustration of Memory Exchange Hub (Author. 2021).

## Part 2: Exploration and Grounding

In this section, an exploration is shown to indicate how architecture can be used as a Mediator for the in-between space, pores and the interwoven. The process investigates the conceptual development, the typology as well as the tectonics.

The main challenges of the architectural problem are addressed in order to reveal any elemental obstacles. From this investigation, a formalised action plan can be derived and implemented.



# Conceptual development

## Design Touchstone

This model's purpose is suppose to capture the essence of the project. It acts almost like an hypothesis in the sense that it tries to predict what the outcome should be after answering the research question.

The design of the touchstone is made up of mostly recycled material. One timber plank remains rested on a surface, painted with a new layer of paint. Steel rods are insterted and placed to face upright. Different coloured thread is then weaved through the rods in very unpredictable patterns. Many of the steel rods have magnets sticking to them through gravitational pull. A second plank is suspended in the air, the second plank does not receive a new layer of paint. Thread is attached to the top plank and the grid is in line with the steel rods on the bottom grid. Each one of the threads has a magnet tied and glued to it. The magnets move unpredictably as they group themselves in a form I did not intend them to move into.

The fact that the model is constructed of recycled materials, contributes to the idea of working with mostly the existing environment. The magnets were extracted from old speakers, just like coal was extracted from the landscape. The magnets project a new voice, where as the coal allowed for growth.

Two timber panels are used to portray the new versus the old. The old is the existing site, and the washed and ruined appearance of it elaborates the fact that the landscape is used and has many vacant spaces. The magnets linked to the equal cut string indicates that people are separated, but have the potential to regroup their connection through an external intervention. The new panel is painted black and has a grid



Figure 82: Design Touchstone Model (Author, 2021).

that holds steel shafts. Smaller magnets are linked to the top of the shaft. Different coloured thread is weaved through the steel, indicating the architect's influence and a form of cultural intervention. The thread is the only element of the touchstone which is not recycled material.

The “old” is suspended in the air and the “new” rests on a platform. Two parties will have to work together to elevate the new and bring it together to the old. Once the old and the new is connected, the vacant spaces are filled. As soon as we separate them, then an exchange between the members occur. The people of Lephalale have already proven that they can work together in expanding their community in 1974 when the ISCOR mine required to people.

The one thing that has not changed in the town is the ecosystem and how people interact with it. There is an abundance of trees all over and these trees are living architectural entities where people and animals get to gather. Schools, churches, commuters and artisans still gather under trees for various reasons.



Figure 83 & 84: Design Touchstone Model, Closed and Open (Author, 2021).



Trees with a radius larger than 100mm are not to be removed from site and thanks to this rule, the ecology has been preserved. The community still experiences sighting of animals throughout the town.

The community will have to work together to elevate their set skills, knowledge, memory and rituals. Once the exchange occurs, it allows opportunity for the vacant spaces to be filled. As soon as we separate the two parties a form of exchange between the members will occur.

The more people who become involved in this ritual, the more and more the outcome will be different and possibly beneficial. Thus, the intervention requires the action of people to make the difference better.

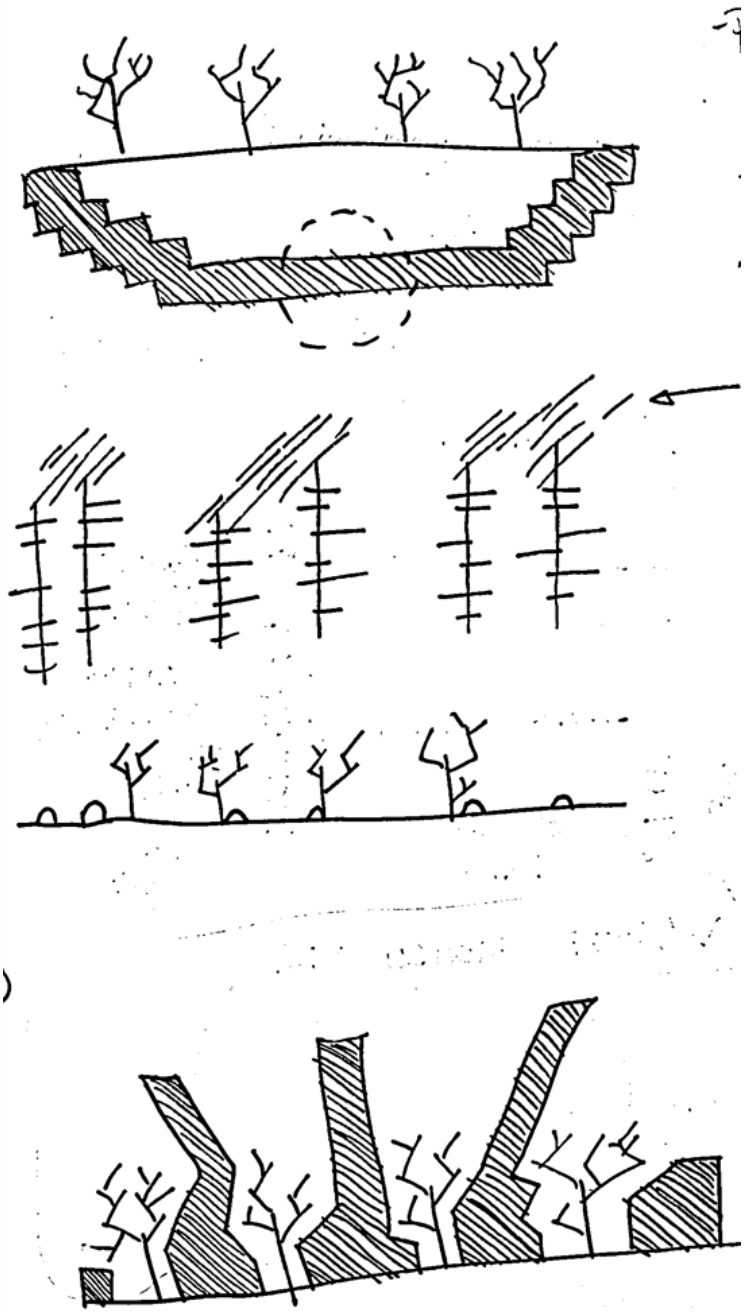


Figure 85: Below, Above, In-between; Illustration (Author, 2021).

## Preserving Porosity, Voids and Pores (The Nature)

Preserving the environment was a challenge in the design process, especially because of the abundance of trees, ant hills and animal nesting spaces on site. The trees on the site, acts as a barrier and plays a vital role in the design process. No trees with a radius thicker than 100mm may be removed from site, unless special permission is granted. Investigating which trees are allowed to be removed allows for more flexibility in the design. The concept of pores as an architectural realm allows the builder not to harm nature, but to build around it. The coal mining history of the town sparked the notion of possibly constructing below ground.

The construction of the mine lead to a small permanent cloud and latching an architectural space onto this cloud provides potential to not touch the site at all. The future building can possibly dance in between the trees and thus not touch them, but live between them, giving the trees full capacity to still grow. Thus, creating a distinct threshold between the natural environment and human-made structures.

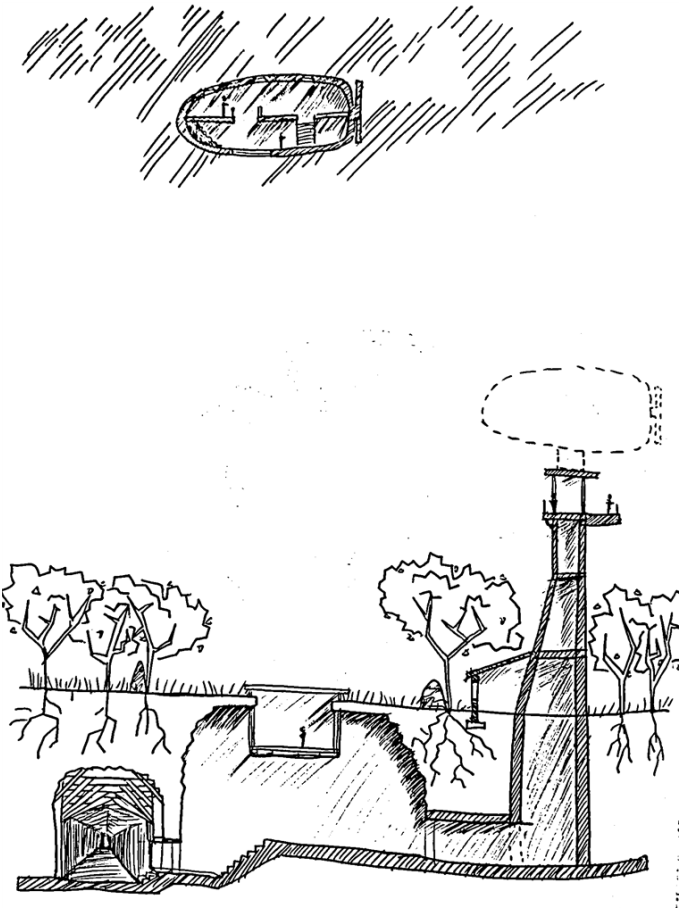


Figure 86: Illustration of Pores (Author, 2021).



Figure 87: Model of Concept 1, top view (Author, 2021).

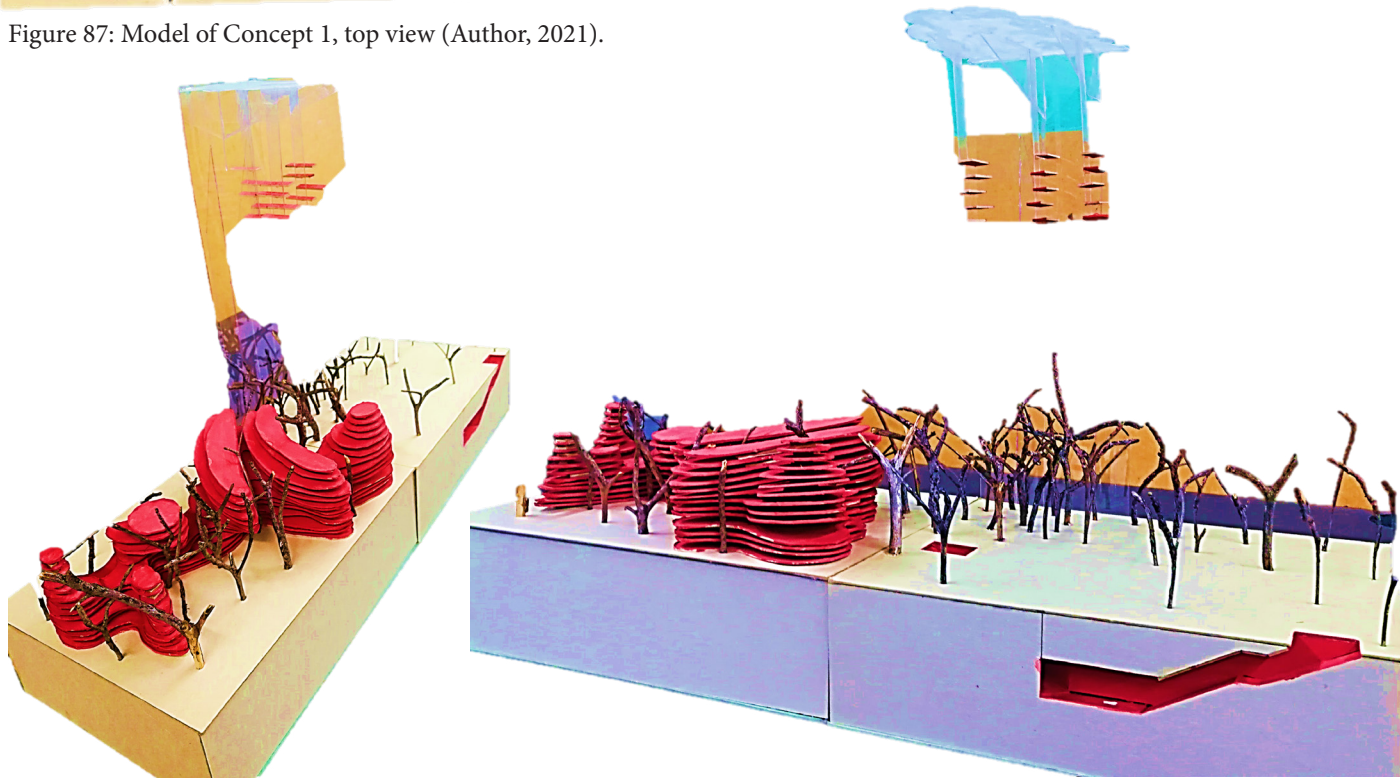


Figure 88: Model of Concept 1, angled (Author, 2021).

Figure 89: Model of Concept 1 side view (Author, 2021).



Figure 90: Watercolour of Concept 1 (Author, 2021).



Figure 91: Transformation; Illustration (Author, 2021).

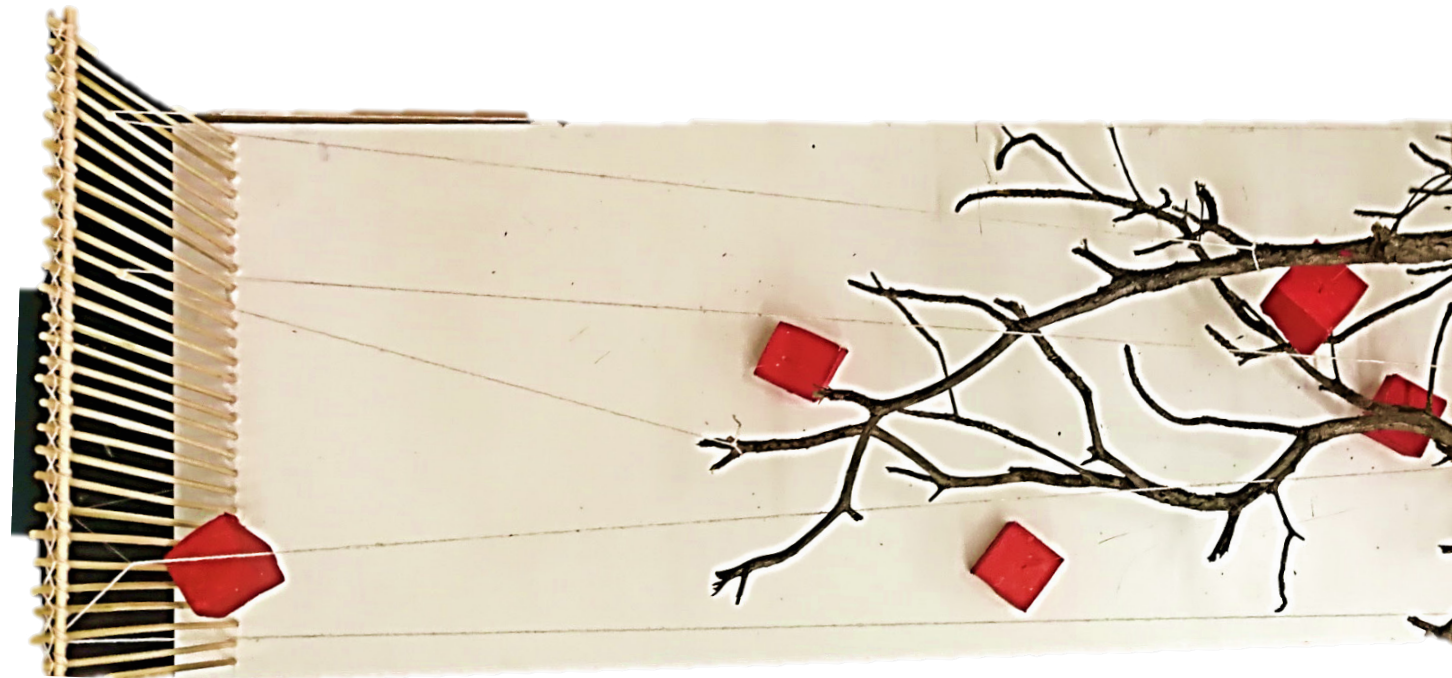


Figure 92: Model of Concept 2 (Author, 2021).

### Interweaving cultural exchange (The User)

“People will become animals” just as buildings will form part of nature. Human-made structures, ideas and rituals can in one way or another be connected or influenced by the environment they’re in. The art is in how these two worlds unite. The intervention of people shouldn’t change the value of the environment, but the purpose is to evolve. A dream of my late aunt encouraged me to visit the place where we left her ashes, it overlooks Lephallale. My aunt had a dragonfly tattoo, and before I left a group of them surrounded me. The same thing happened to my mom’s friend when her brother passed away, he also admired dragonflies just

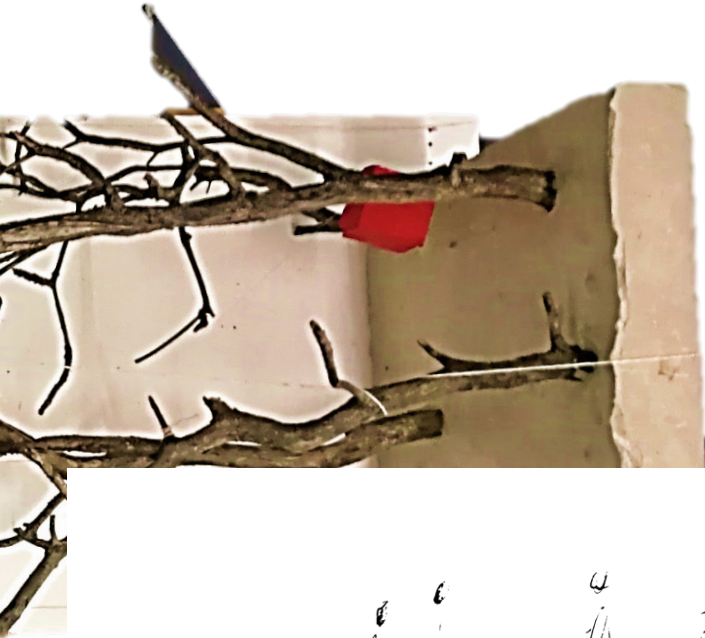


Figure 93: Reformation;  
Illustration (Author, 2021).

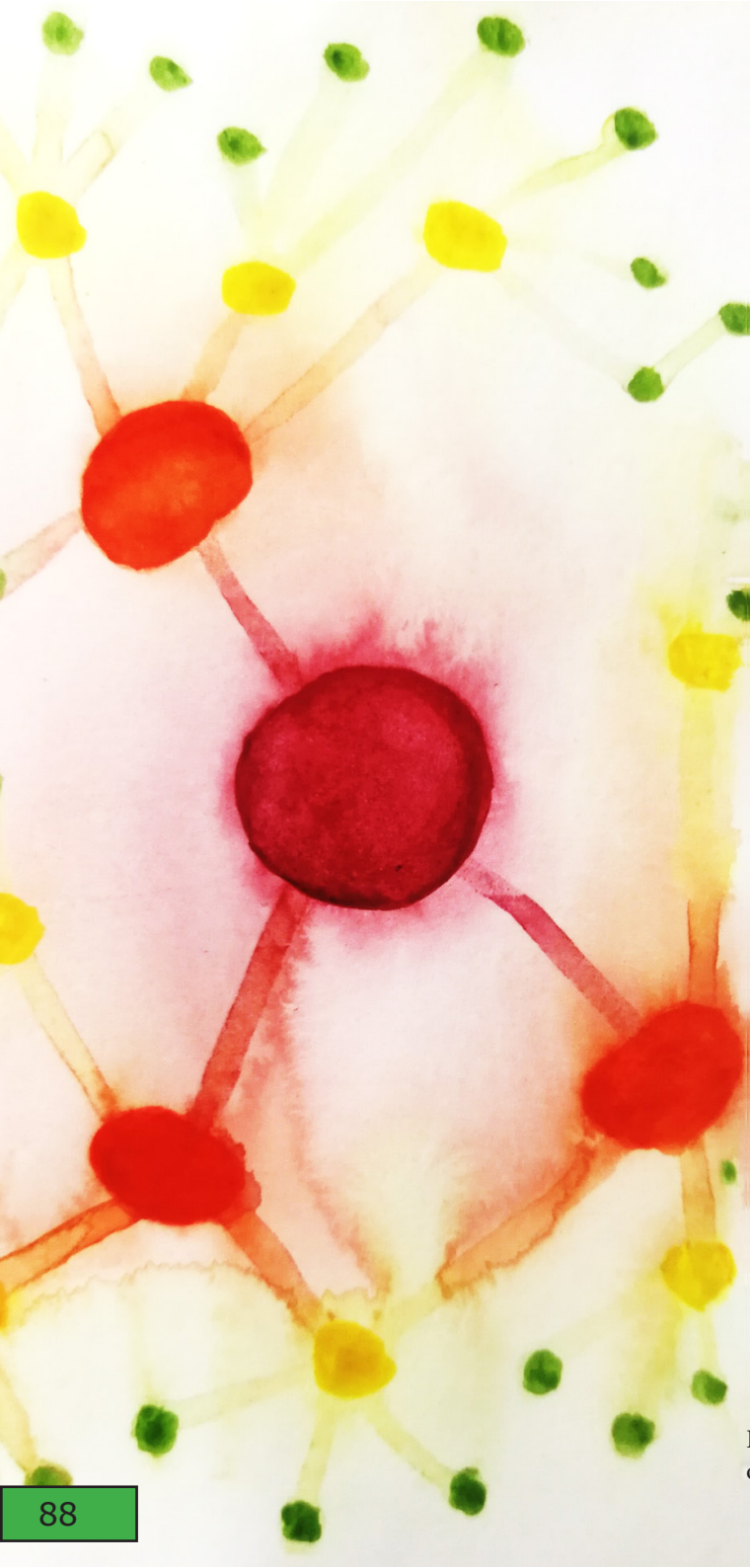
like my aunt.

So does this mean that the people get reincarnated into their spirit animals? Moana (Musker and Clements, 2016: film) is a Disney animated movie about a girl traveling across the ocean to save her village and prove that her tribe are meant to do more than just remain on an island. In this film, her grandmother is known as the crazy village lady, but she offers her granddaughter significant guidance. The old lady sadly passes away, and we see her later again reincarnated as a giant sting ray- This was also a tattoo she had.

Maybe the marking we create ourselves while alive, become part of who we will become when we pass on? People and animals will always find a way to make space for them and create a habitat in a specific environment most suitable to them. Thus, the natural environment will adapt according to external influences, therefore people should work with the environment and not against it.



Figure 94: The mark; watercolour  
(Author, 2021).



## The transience of narrative in between spaces (The Building)

There is always at least one link between the experiences in one person's story, compared to another. The beginning and ending of every person's narrative remains the same, life to death. The tales of Lep-halale connects in various ways from start to date. The aim is to locate those in-between spaces where people are connected and how architecture can allow for these in-between spaces.

These spaces can be linked to a child's playtime at the local Spur, where the jungle gym has multiple entrances and children get to experience moments on the same jungle gym differently. Then there are moments where these spaces meet, not necessarily all together, but where particular two spaces meet, THAT is where the shared experience is. Every person is unique and with a jungle gym that has different entrances, children are very likely to approach the entrances most suitable to their abilities and likeness.

Figure 96: Transience in time;  
Illustration (Author, 2021).

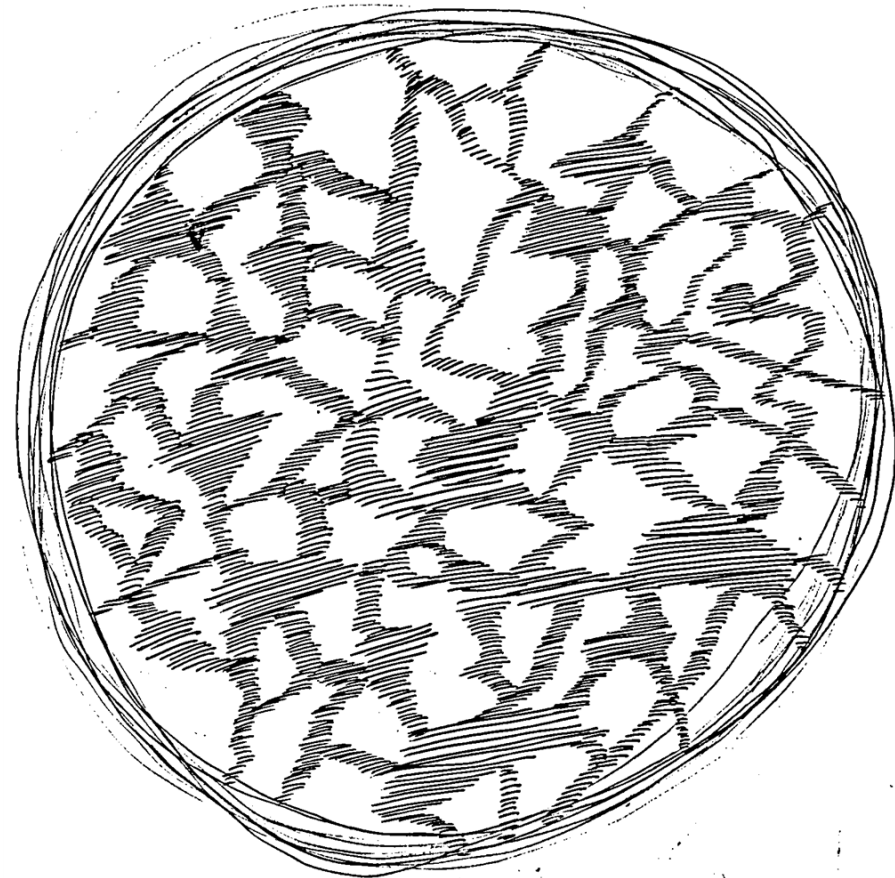


Figure 95: Connect, Engage; watercolour (Author, 2021).



Figure 97: Model of Concept 3 (Author, 2021).



### Typology

The precedent studies, design process and [re]figuration of the initial approach provides the reader with an understanding of the form giving and the design decisions and how the design relates to the theory of different forms of memory.

## Design Precedent Studies:

### Pumanque Community Centre

PUMANQUE, CHILE

FIRM  
The Scarcity and Creativity Studio

TYPE  
Community Centre

YEAR  
2014

This structure was designed after Chile's worst earthquake ever recorded hit the area and destroyed many homes. The purpose of this community centre is to develop the community through craft training workshops and social cohesions (Hensel and Cordua, 2015: 57). The functions in this building allow for action memory to be present and thus contributes to the educational and skill evolution of the community,

just as some of the functions of the memory exchange hub aims to do. The passageways through the building create angles at the edges, especially when faced with a natural obstacle like shrubs and trees. This method is used as a design tool in the Memory Exchange Hub.

Light filters through the building due to the pattern of the timber cladding exterior.

Figure 101: Extrapolation of Model (unknown, 2014: online).

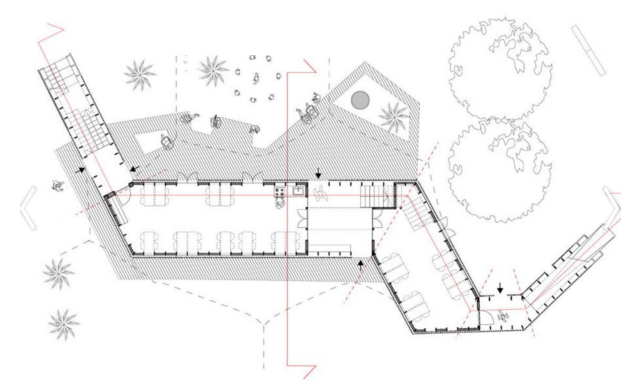


Figure 99: Photograph of Main facade (unknown, 2014: online).



Figure 100: Photograph of Timber detail (unknown, 2014: online).





Figure 102: Main thatch facade (van Vlijmen, 2008: online).



Figure 103: Front desk (van Vlijmen, 2008: online).



Figure 104: Interior thatch wall (van Vlijmen, 2008: online).

## THATCH BUILDING NETHERLANDS - DELFT

FIRM  
MÖHN + BOUMAN

TYPE  
DAYCARE

YEAR  
2008

Traditionally thatch would be used as a roof element, however using it as a wall elements especially in a climate like that of Lephalale will create great thermal insulation and ensure cool spaces in summer and warmer spaces in winter.

The daycare is an educational building, just as the project proposal for the memory exchange hub.

**“When I want to be held, I sit within the trees;  
When I want to expand, I sit with the stars.”**

(Wojciechowski, 2020: online)

**DESIGN  
PROGRESS**

## Design Process

Courtyards are simple tools to use when creating exterior gathering spaces. The main focus is to create a link with the narrative of the people of Lephallale who gather under the trees, just as they would gather inside buildings. Thus, creating spaces outside the building need to cohesively function with spaces inside the building. The reason for the conceptual approach relates back to the historic impact chapter, where I elaborate on the reasons for gathering under trees.

In essence, people often gather under trees, due to the lack of proper ventilation in most buildings in Lephallale. The buildings don't always accommodate the heat factor and the designs lead to hot interiors.. A light breeze flows through the town and thanks to the density of the trees, the air is mostly cool. Figure 107 indicates how hot air could escape the building, and establishing an outlet for warm air at the top of the building.

Often the idea of dancing around a tree would arise with the notion of protecting it and celebrating it, just as this celebration is done around fires at night. Once I've identified a tree all people in Lephallale can associate with (the Marula tree) I attempted find a way to celebrate these trees on site.

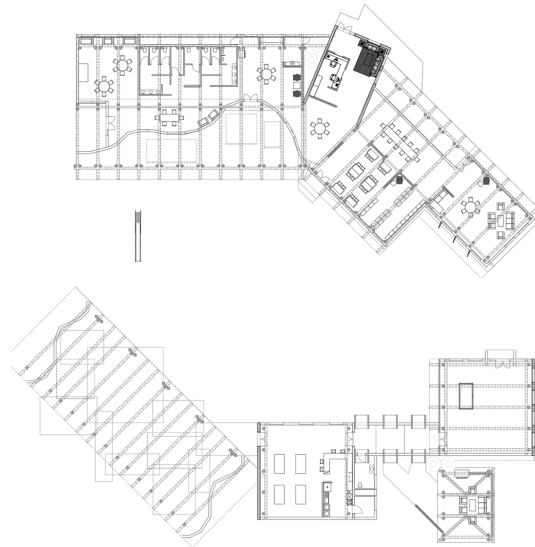


Figure 105: The first plan (Author, 2021).

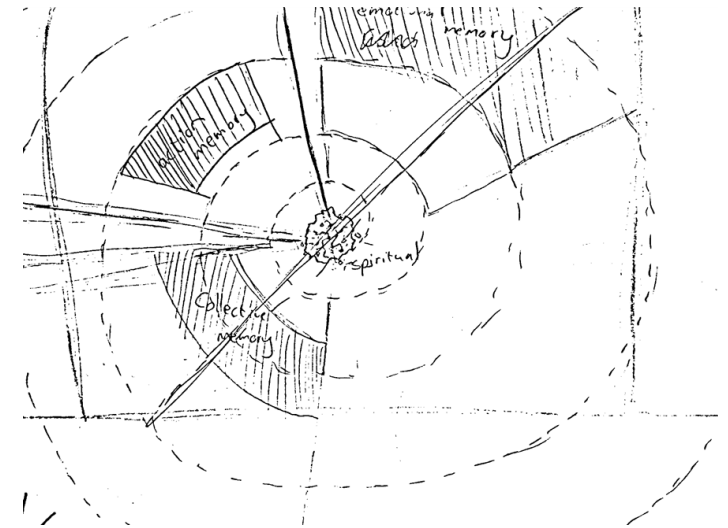


Figure 106: Buildings gathering (Author, 2021).

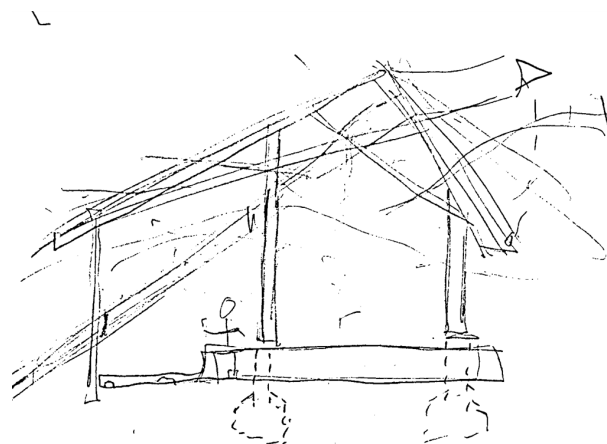


Figure 107: Initial thoughts on structure (Author, 2021).

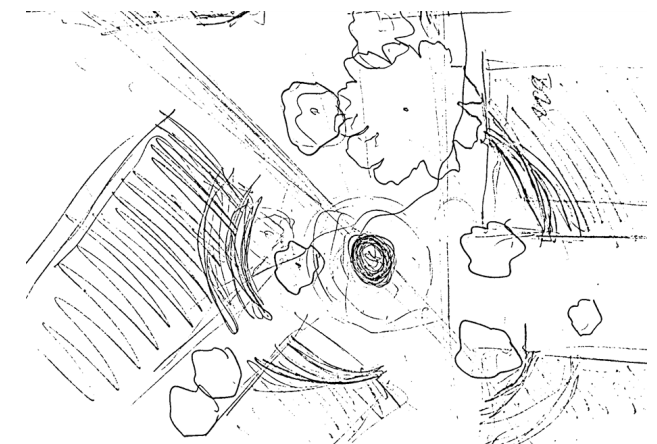


Figure 108: Centralizing a fire place (Author, 2021).

The first plan (figure 105) does not consider any trees in the design yet, but considers the idea of encapsulating all interior spaces into one large courtyard, an exterior space. The first plan is not placed on site yet, but is used as a tool for future design thinking.

Different forms of memory meant different functions in this section, later it would be evident that this is not the case. When the building would 'gather' like people (figures 106 & 107) around an important tree, the spaces form courtyards. Thus spaces in between buildings become cool gathering areas that also accommodate the function of the building next to it.

A video of the Evergreen Association inspired the layout of figure 110. The video depicts a group of people dancing around a fire in a clockwise direction, while a band plays music next to people dancing. I imagined the buildings dancing around a tree to compliment night time and day time celebrations.

One tree that is very important in town is the marula tree, which have been elaborated on in Part 1 of the 'Narratives of the People of Lephalale' section. On site there is many opportunities to design around one of these trees and celebrate it as illustrated in figure 111. However, the challenge comes in locat-

ing the tree which is situated appropriately along the vertical and horizontal axes in relation to the existing built environment.

Once a central tree was located to celebrate, the next step was to find a way to create more than one courtyard along the axis in between where the structure could be placed. Again, the aim is not to remove any trees. Therefore, the decision was taken to make use of open areas for the building structure.

Douwater road is a very quiet road and is located to the east of the site. Even though an axis can be created from Douwater Way to Clubhouse drive through the site, a majority of functions should be placed closer to the east of the site as indicated in figure 109.



Figure 109: The dance of trees and structure (Author, 2021).

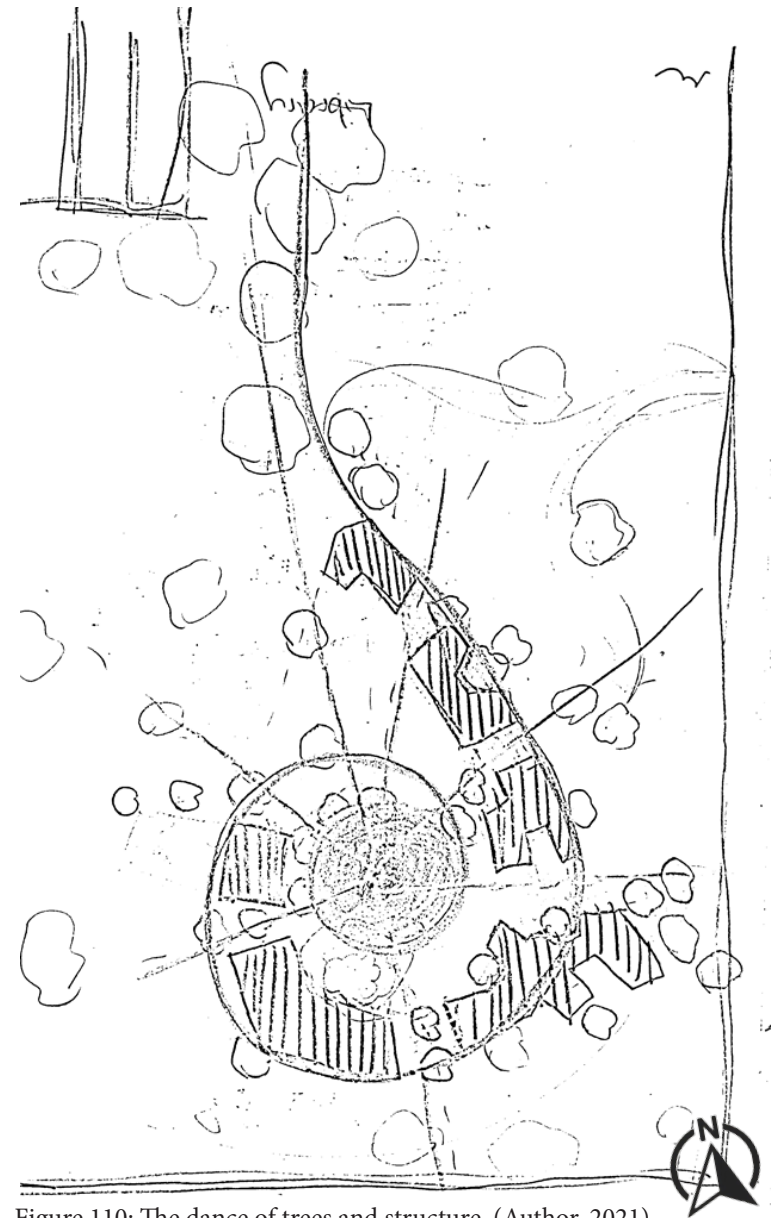


Figure 110: The dance of trees and structure (Author, 2021)



Figure 111: The marula Tree as node (Author, 2021).

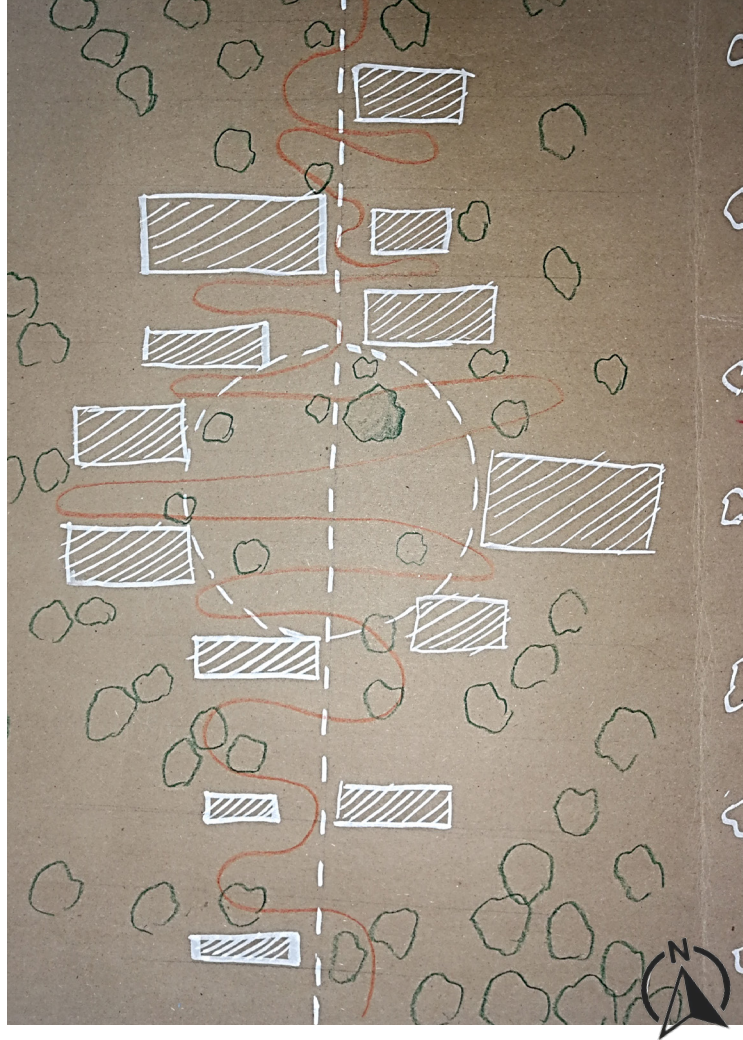


Figure 112: Weaving through the courtyard (Author, 2021).

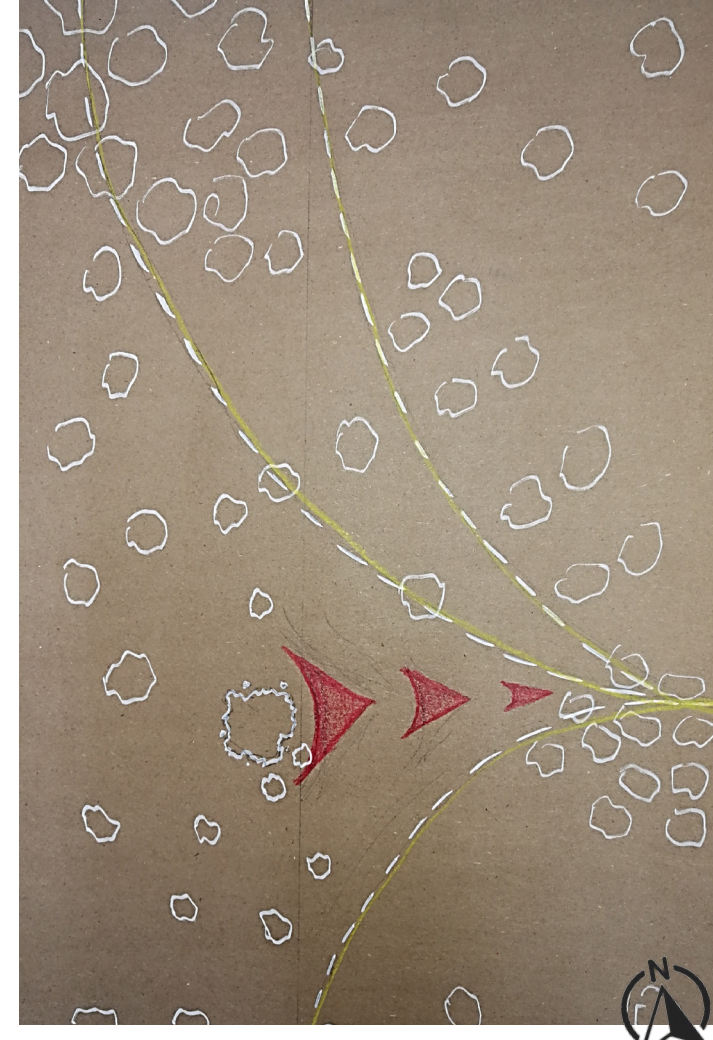


Figure 113: Activate East; Douwater road (Author, 2021)



Figure 114: Passage ways (Author, 2021).



Figure 115: Platforms (Author, 2021).



Figure 116: Nature lover (Author, 2021).

Figure 113 illustrates the connection between the Marula tree on site and Douwater way and how that connection can guide the design layout towards the library (North) and the old age home (South).

Possible design approaches include a multi story building to allow for the occurrence of exterior gathering spaces under trees and between buildings as in figure 99.

A series of watercolours (figures 114, 115, 116, 122, 123 & 124) allow the potential to sketch in between the trees on site and establish what the outside spaces might feel like since these images already capture the feeling of the site as I experienced it at certain points in time. This also creates a specific memory at a specific point in time.

An open courtyard space in the old age home (indicated in blue in figure 117), is situated against the wall which divide the site and the old age home from one another. I aim to connect that courtyard with the existing pathways leading to the library (in yellow). The pathway would pass the marula tree mentioned previously.

The general design process I used always started with sketches, then some computer work and then model building. All of which aided in finding the more appropriate approach.

Through the design process I discovered that the closer the units were placed the greater opportunity for intimate courtyard spaces. In cases where single units were used, it was noticeable that the more it morphed with nature, the greater the possibility to include exterior courtyard spaces within the building. These spaces then become moments for breathing between the different parts of the building.

The model building process provided a more clear understanding of the scale and that single stories are sufficient to respect the site.

However this did create the question of whether the building would be noticeable and become a destination for the community if it is completely hidden between trees. The hidden aspect is linked to memory, often memories only surface when linked with another experience, or even in a dream. But there needs to be some point of access to the memory.

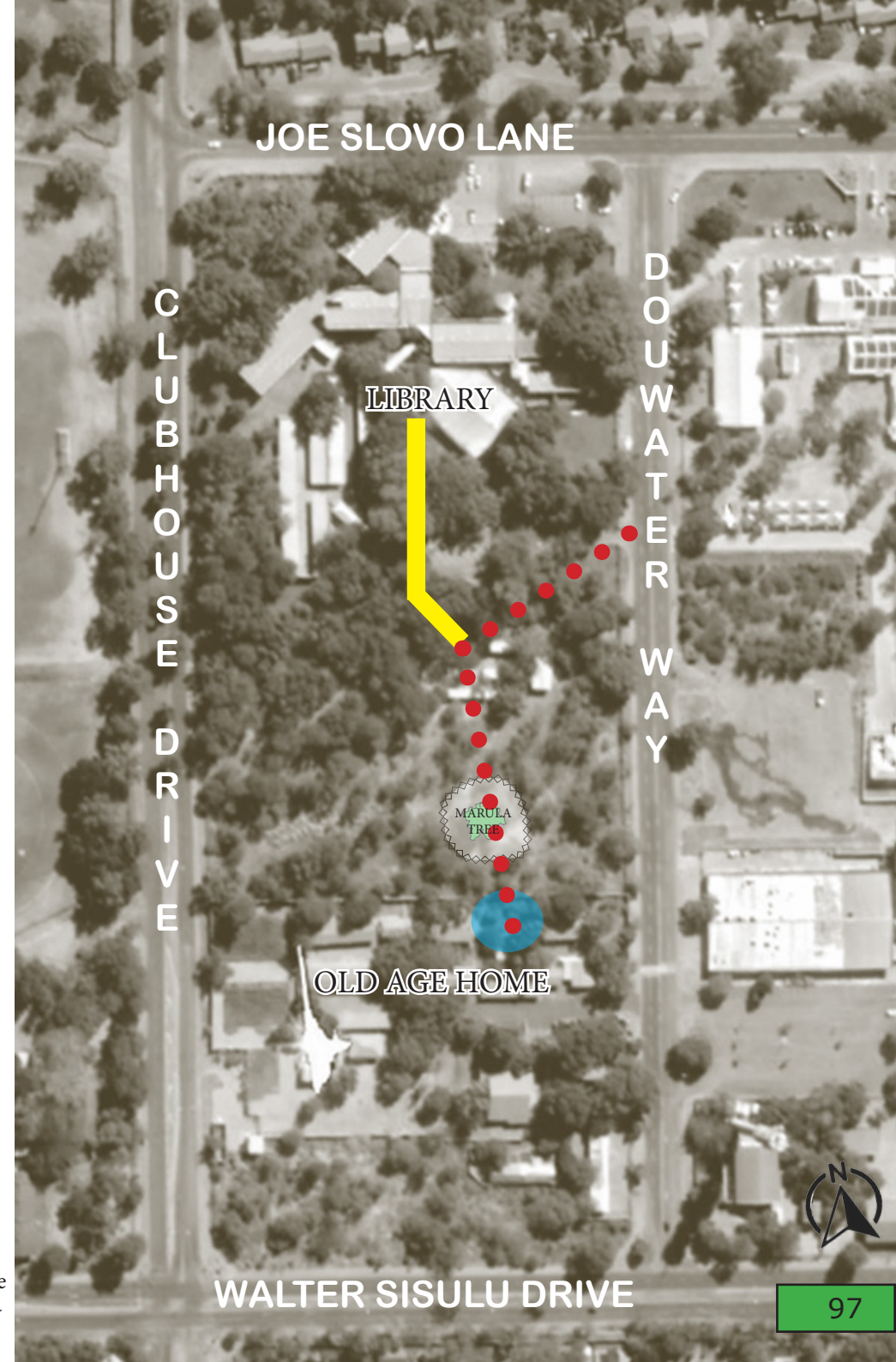


Figure 117: A site reference (1map, 2021: online adapted by author).



Figure 118: Breaking Units, possible park (Author, 2021).

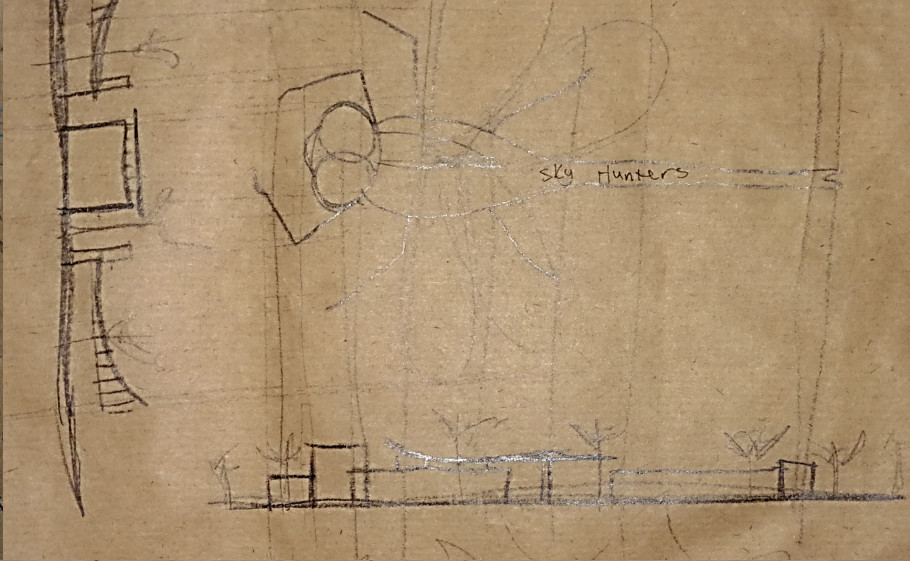


Figure 119: Dragonfly Form (Author, 2021).



Figure 120: First thoughts on sizing (Author, 2021).

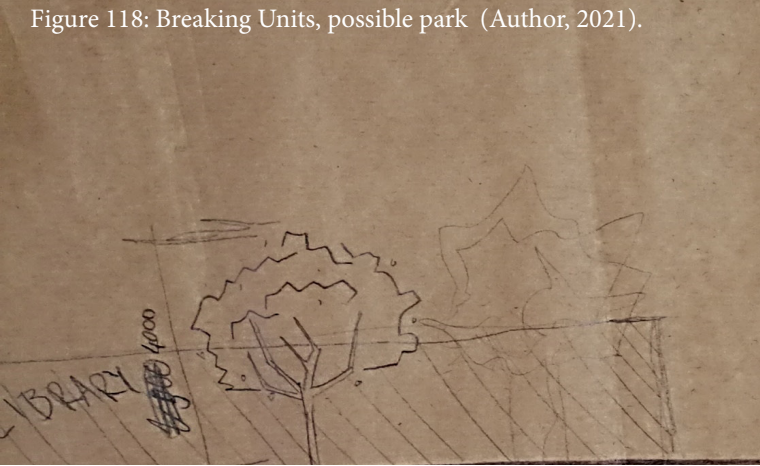


Figure 121: Under the building; under the tree (Author, 2021).

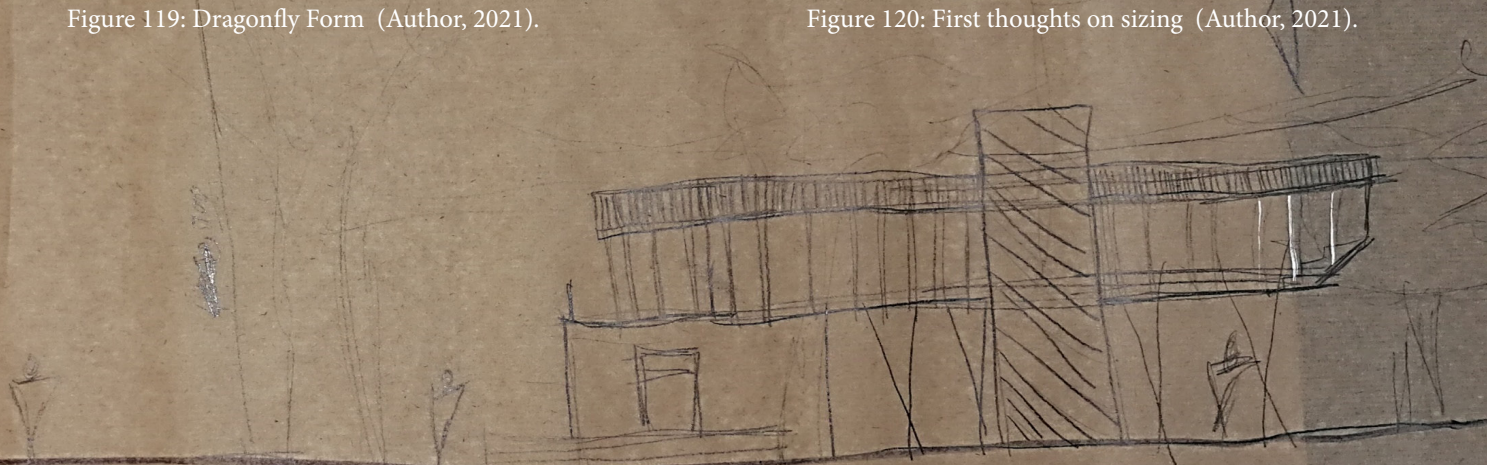


Figure 122: Elevated (Author, 2021).



Figure 123: Noticable; Hidden (Author, 2021).



Figure 124: The wall (Author, 2021).

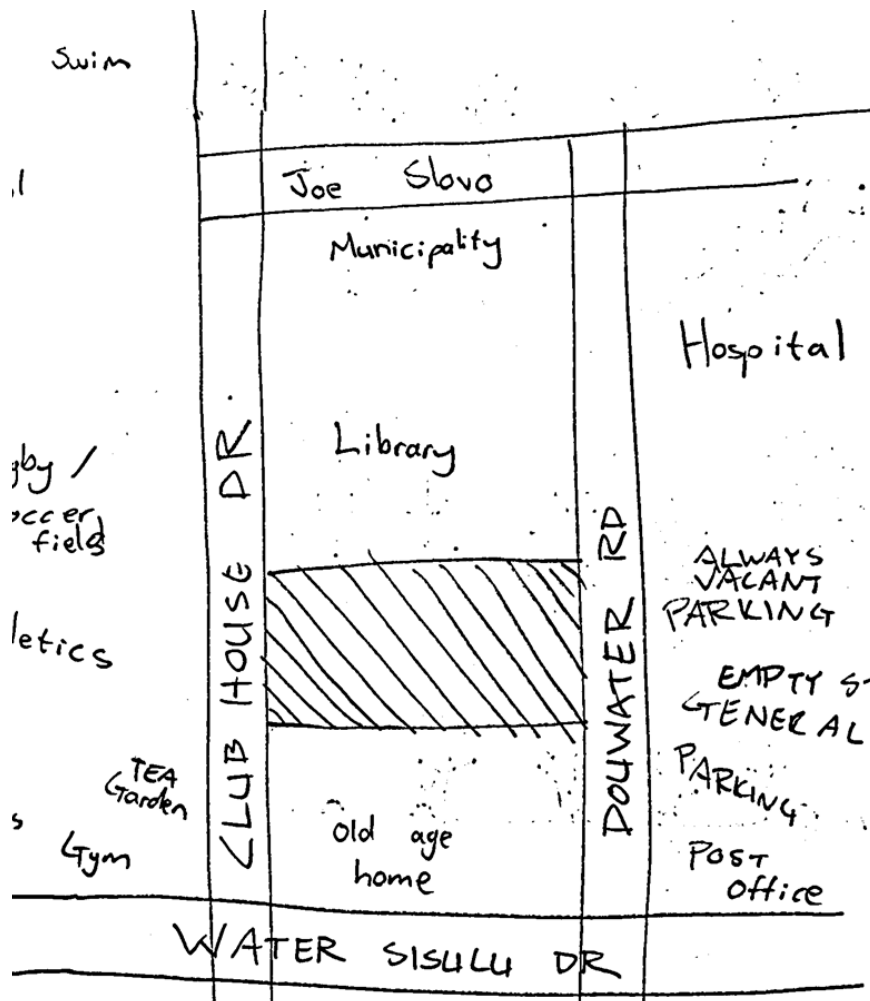


Figure 125: Reference to site (Author, 2021).

Activating Douwater Way became the core challenge, as well as connecting the library and the old age home via a route passing through indigenous trees. In order to activate Douwater Way, a placement of structures near the road would invite people to the site. Placing buildings closely to the East of the site minimises the carbon footprint as opposed to placing structures over the entire site. The density of trees is also minimum along the Eastern edge of the site, thus bricks could be used and still have a minimum impact on the trees.

A blue dotted line in figure 128 illustrates the location of where the existing pipeline runs on site. This axis could potentially allow an entrance for services to the site as a new pipe line can be linked to that of the existing pipeline. Both axes leading to the existing parking (North) and to the Marula tree (South), which allows an opportunity for two potential entrances on site.



Figure 127: Activating Douwater Way (1map, 2021: online adapted by author).



Figure 128: Three possible entrances to site (1map, 2021: online adapted by author).



Figure 126: Reference to site: horisontal axes (Author, 2021).



Figure 129: Educational kitchen (Author, 2021).



Figure 130: Reception (Author, 2021).



Figure 131: Social hall (Author, 2021).

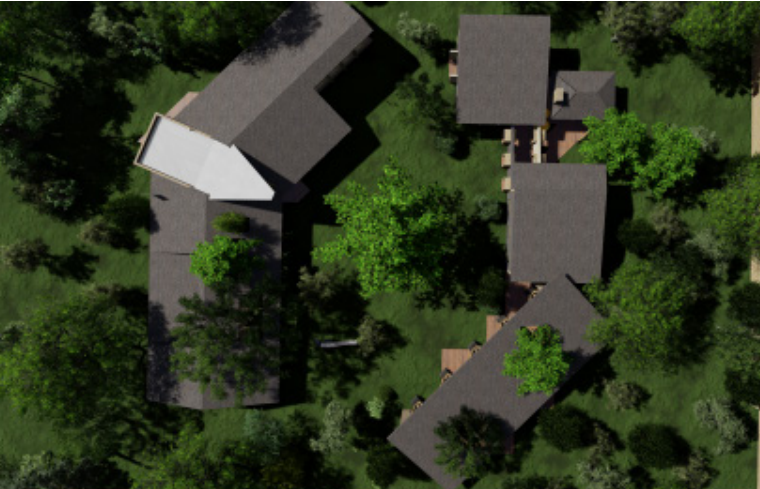


Figure 132: Play area (Author, 2021).



Figure 133: Structure Option (Author, 2021).



Figure 134: Roof Plan 1 (Author, 2021).



Figure 135: Exterior of social hall (Author, 2021).



Figure 136: Play area (Author, 2021).



Figure 139: Entrance (Author, 2021).

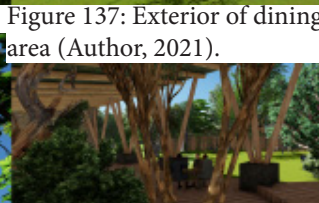


Figure 138: Dining area (Author, 2021).



Figure 140: Exterior passage (Author, 2021).



Figure 141: First- Walkway and pavilion (Author, 2021).



Figure 142: Second- The centre and the West (Author, 2021).

Renders of physical models built above and below:



Figure 147: Exterior covered pathway (Author, 2021).



Figure 148: Exterior pathway (Author, 2021).



Figure 152: Stairs to a stage (Author, 2021).



Figure 153: Passage into trees (Author, 2021).



Figure 154: Platform framing tree (Author, 2021).



Figure 155: Raised building (Author, 2021).



Figure 156: Possible entrance (Author, 2021).



Figure 143: Third-East to Wes (Author, 2021).

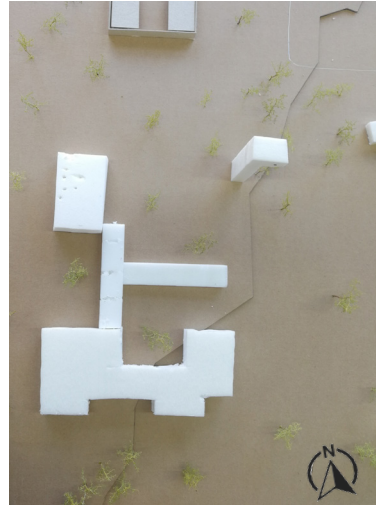


Figure 144: Fourth- Central (Author, 2021).

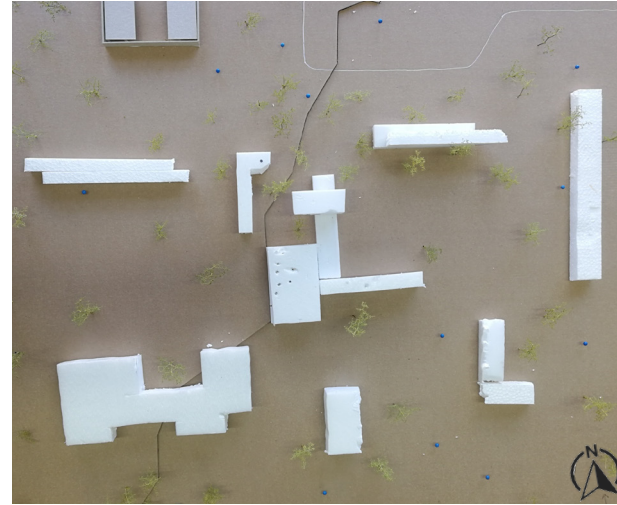


Figure 145: Fifth-Searching all over (Author, 2021).

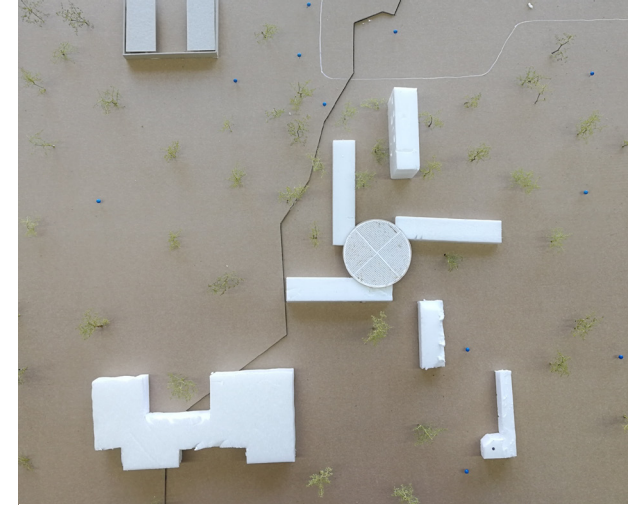


Figure 146: Sixth- canopies and narrow passages (Author, 2021)



Figure 149: Exterior skill development (Author, 2021).

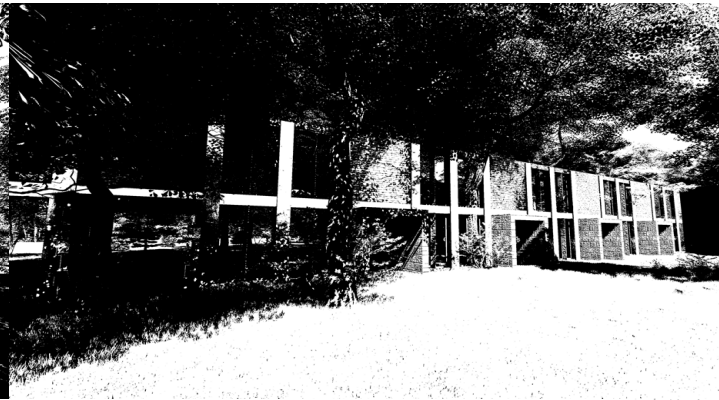


Figure 150: Passage into the trees (Author, 2021).



Figure 151: Person walking through passage into the trees (Author, 2021).



Figure 157: Enclosed buildings forming courtyard (Author, 2021).



Figure 158: Skill development (Author, 2021).



Figure 159: Courtyard space (Author, 2021).



Figure 160: Large overhang (Author, 2021).



Figure 161: Covered courtyard (Author, 2021).



Figure 162: Covered courtyard (Author, 2021).



Figure 163: Entrance option (Author, 2021).

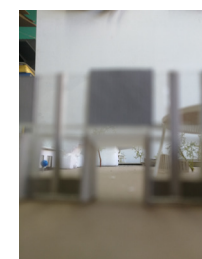
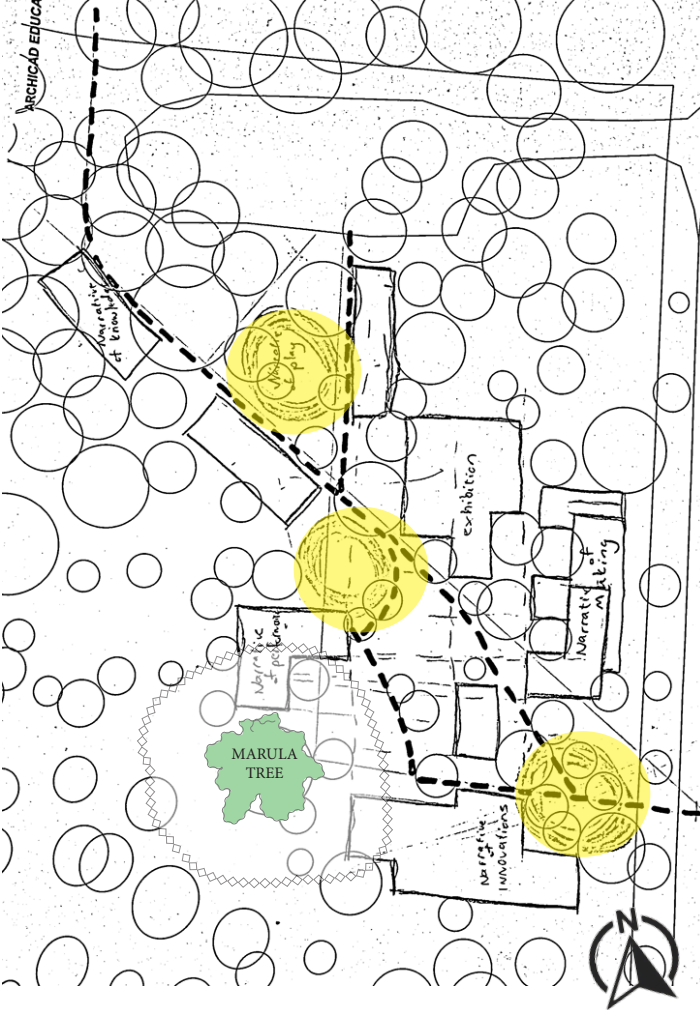


Figure 164: Passage into trees (Author, 2021).



Figure 165: Entrance option 2 (Author, 2021).



The placement of functions along the North to South axis was another challenge; the axis establishes which function connect better with the library, old age home by also accommodating Douwater Way. These challenges can be seen when comparing figures 166 and 167. The dotted lines indicate different pathway solutions to the North. The yellow circles indicate courtyards that allow for adjacent functions to connect in a central exterior space.

The innovations coffee shop inspired by Marie van Lingen (as elaborated in the Interviews section) is placed closest to the old age home in most figures and shaded in the colour green like in figure 175. It's placement in figure 119 aims to invite people onto site from Douwater Way. Connecting East to North allows more functions to be placed between the Library and Douwater way, thus activating the street and invite more visitors to the local library. Maymowrei Nyama mentioned that she used

Figure 166: Connect east to North (Author, 2021).

Figure 167: Creating pathways to North (Author, 2021).

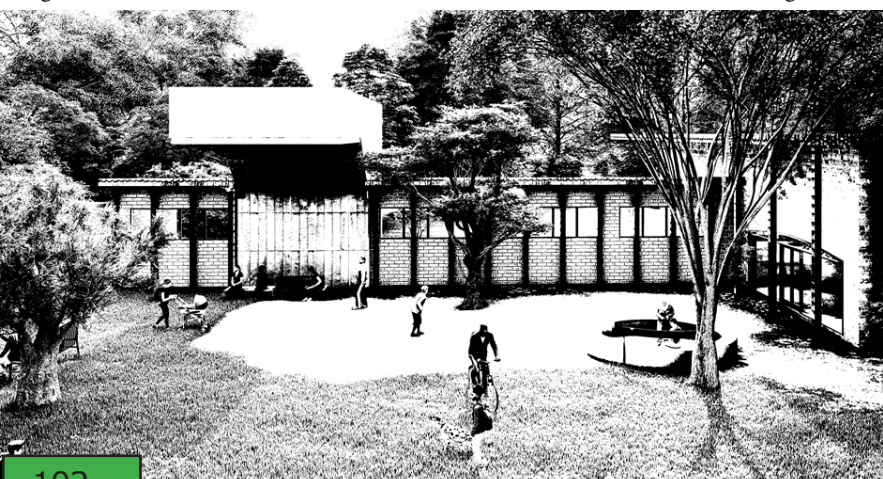


Figure 168: Courtyard at main entrance (Author, 2021).



Figure 169: Courtyard 2 (Author, 2021).

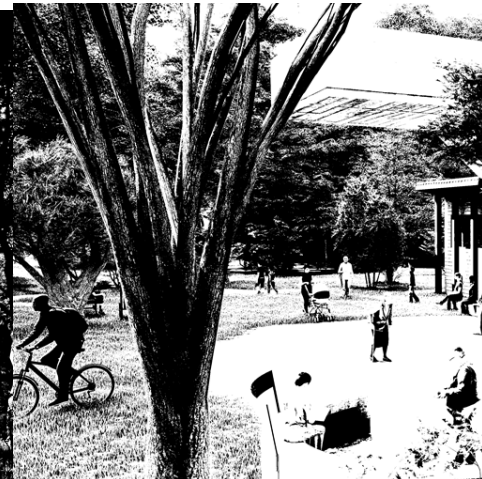


Figure 170: Circles under trees (Author, 2021).

to go to the library a lot when she was still in school, but now the amount of students visiting the library has decreased due to minimum activation in the area now. The axis from East to North create moments of rest as indicated on figure 117. The break away spaces (indicated as circles) are created through crossing pathways.

The courtyards in between the functions are placed in a more linear pattern in figure 173, the courtyards are also indicated in yellow here. Opposing axes connect the functions to the courtyards on the North to South-East axis. This axis connects Douwater Way to the Library.

Figures 168 to 172 explores the different possibilities for a main entrance. The renderings is an exercize that explore materiality of the structures. Figure 168 provides a view of what the site might feel like, should concrete be used as a main design element. Then the option of brick and large

lintels is explored in figure 170 along with the creation of seating at the entrance. Figure 172 offers an understanding on how timber or steel might be a lighter material which compliments the trees on site. Shadows of the trees allow for filtered light on the terrain, thus small openings in the structure could potentially create the same effect nature does.

The placement of functions are not in a fixed placement from the start of the design process. The axis and spaces for courtyard and possible building placement is experimented in between the trees. The trees are not to be removed, thus using the trees as a design tool becomes part of the process. This process is almost similar to working within a heritage site with existing buildings that need to be respected. Functions are placed in between the trees on open areas, thus contributing shade where trees are not present.

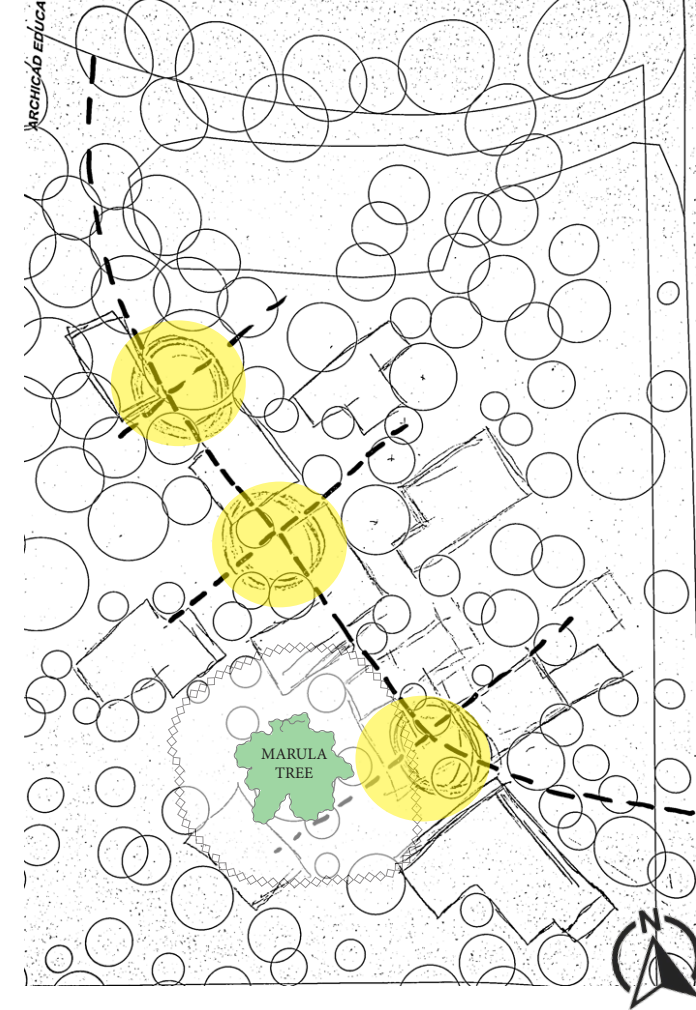


Figure 173: one main axis and secondary axes (Author, 2021).

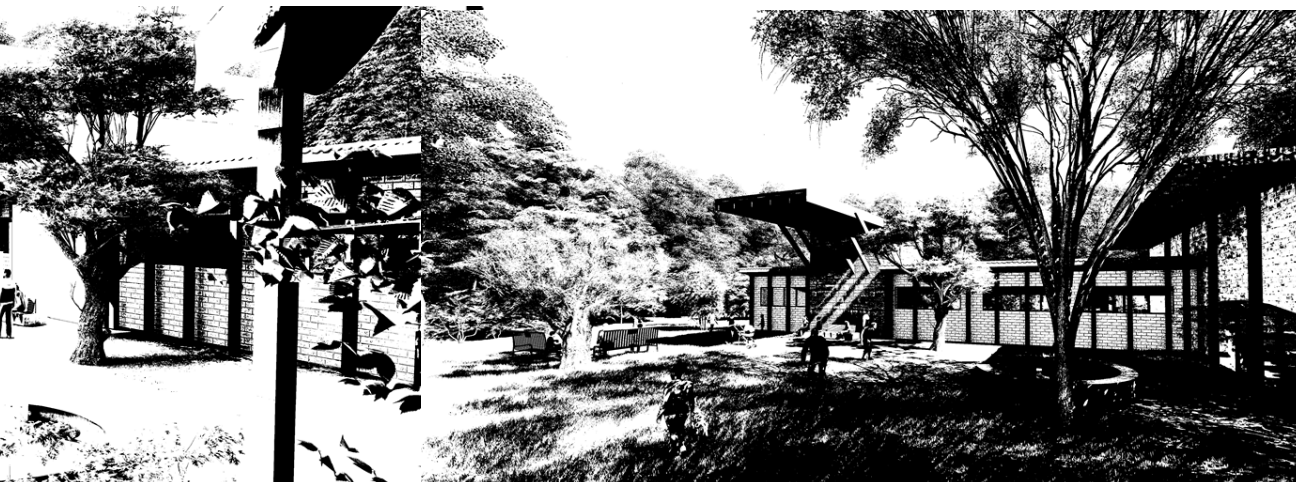


Figure 171: Timber and brick (Author, 2021).



Figure 172: Shadow lines (Author, 2021).

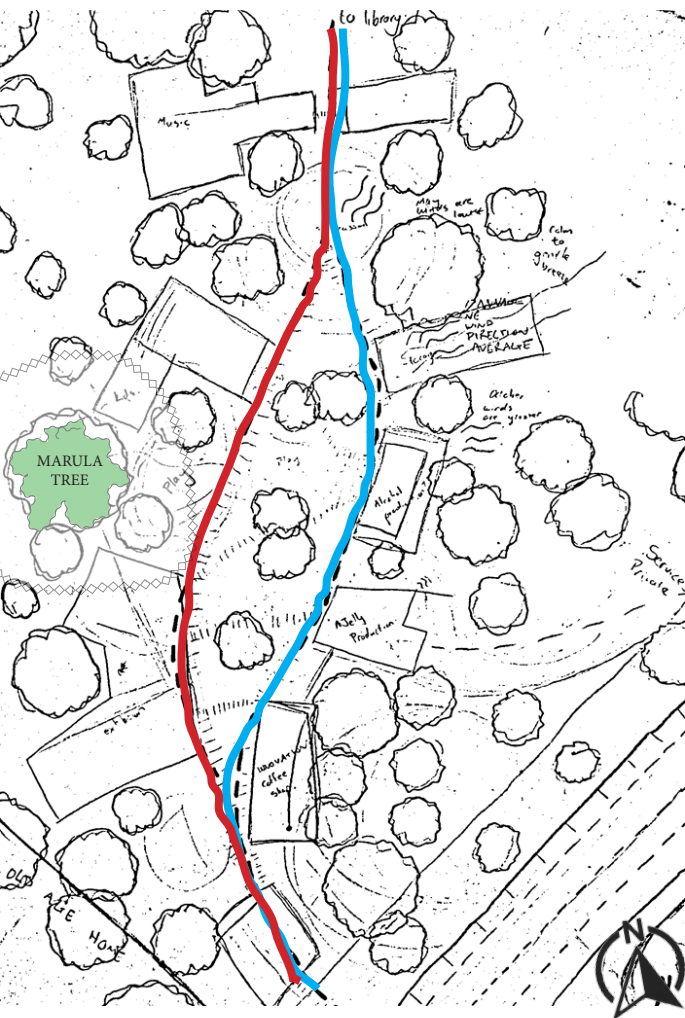


Figure 174: Splitting axis, creating courtyard (Author, 2021).

As soon as a connection between East and North was established in figure 173, I realised that even though every visit to site could be a new memory created, I was still only catering for a singular experience. If the singular axis is split into more than one axes then functions could be organised according to the type of person using a desired axis, as indicated in figures 174 and 175. The axis is however singular, but establishing more than one path can allow larger courtyards for community gathering to occur under the trees in between the various functions. The blue line on both figures represent the path for improving technological and historic education and the red represents the path where the arts is celebrated, practiced and appreciated.

Figures 177-182 show experiments with the open courtyard celebrating the chosen murula tree. The community shares the narrative of using the fruit from the marula tree for various purposes. Figure 179 introduces the celebration around a bushveld fire pit as well. Thus a celebration of outside gathering can be introduced during the day and at night. This particular courtyard development links the memory the town has of the annual the bushveld festival, to the site. The festival is hosted in July to left of the site at Mogol Club. This festival, known as *Bosvelfees*, provides an opportunity for people in town as well as people out of town to practice their entrepreneurial skills as well as celebrate other skills like farming, artistry, singing, dancing, acting, modeling and culinary. The festival has a central place where one can make a large

bonfire and a few smaller fires surrounds this bonfire. This is where the famous potjie making occurs and it is one of the core memories of the festival.

Many community members celebrate the memory of potjie around a fire by recreating the dish at multiple events and occasions, thus a space that accommodates that memory on site would allow for improved activation in the area. American philosopher Edward Casey (2001: 685) writes that Place is linked to Event - so meaning is created where events happen. This event creates a memory, and thus meaning. In essence, just like when people replace a fallen tree as discussed earlier in narrative hospitality, the architecture can establish new spaces that uplifts past memories of Lephalale (see page 37).

Exterior shaded gathering spaces are modeled in Figures 183-186 where the space of gathering suggests a performance space. The cover provided above the surface is not solid, but promotes the idea illustrated in figure 172. Lightweight steel is a material that can be easily assembled by people of the community, as it is a material they are used to working with. Rain is a minimal concern annually, however when it rains it is heavy rain and can last up to two weeks (see page 76). Solid covered gathering spaces are thus not an issue for the people of the community. The cover should however provide enough shade to minimise the heat, fortunately the wind and trees on site also contribute to cooler air.

Three pathways are introduced in figure 177 and in figure 178 the pathways shift to connect with the nodes of the multiple functions placed on site. The dark triangles in figure 181 suggests the possible location for covered walkways and entrances. In figures 175- 182, each colour represents a specific type of interior function:

- Green is social spaces
- Blue is performance spaces
- Pink is skill development spaces
- Red is exhibition spaces
- Purple is main reception area



Figure 175: Identify entry point (Author, 2021).



Figure 176: a walkway and hidden courtyards (Author, 2021).

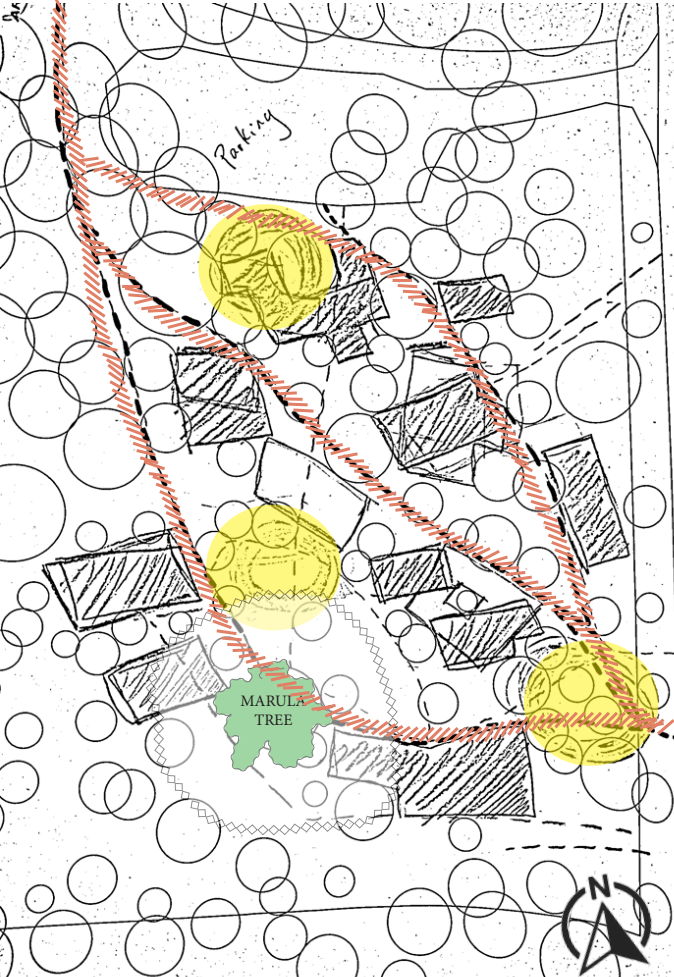


Figure 177: A third Axis (Author, 2021).

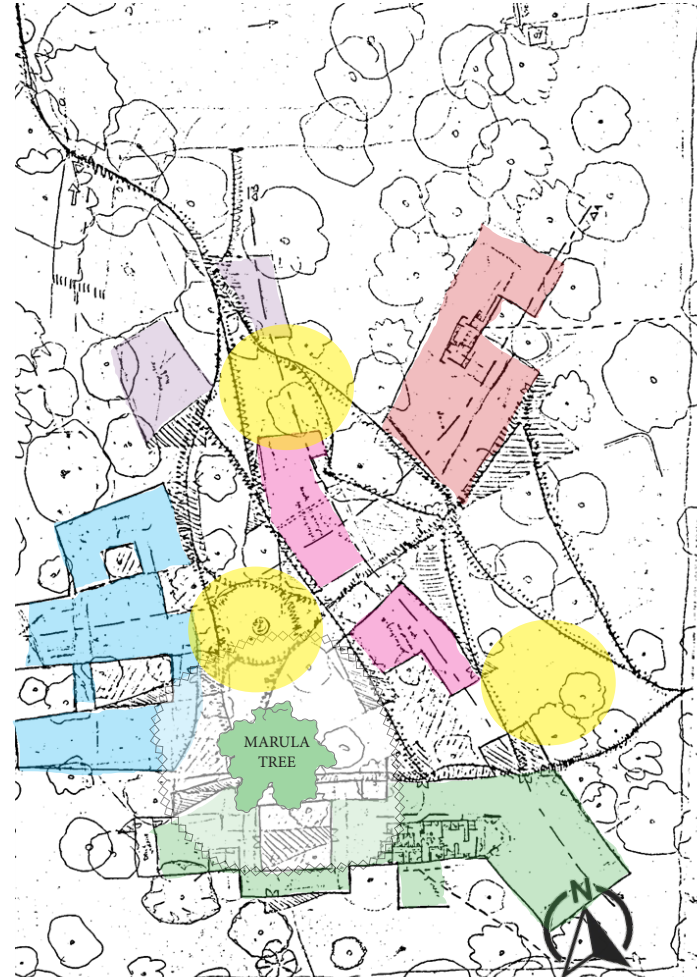


Figure 178: Connecting nodes (Author, 2021).

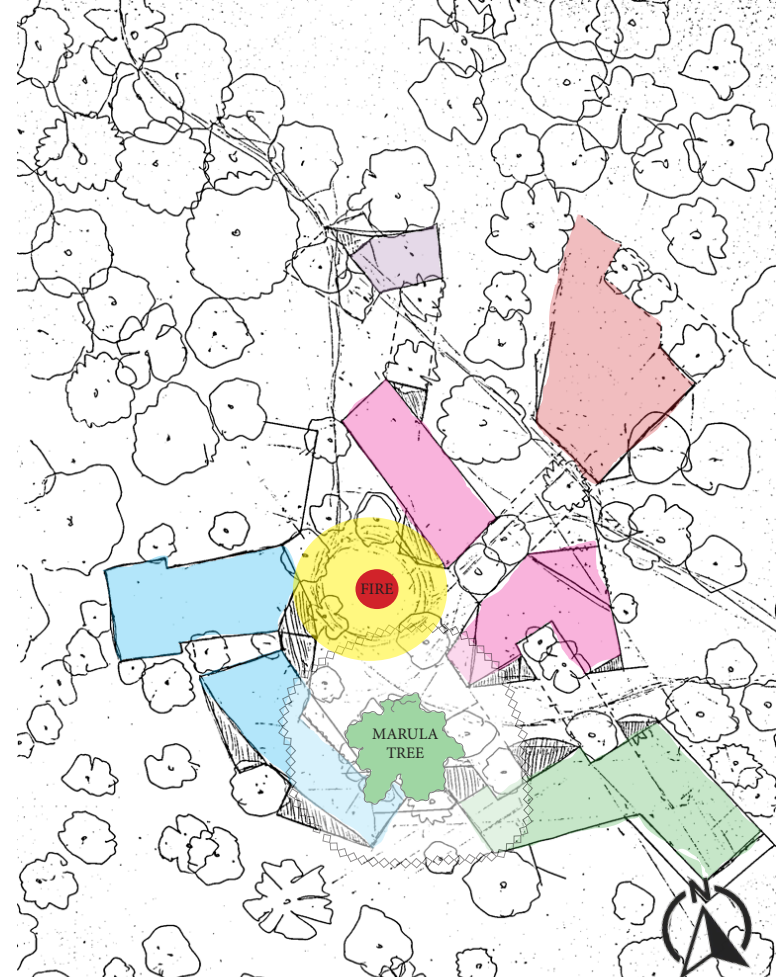
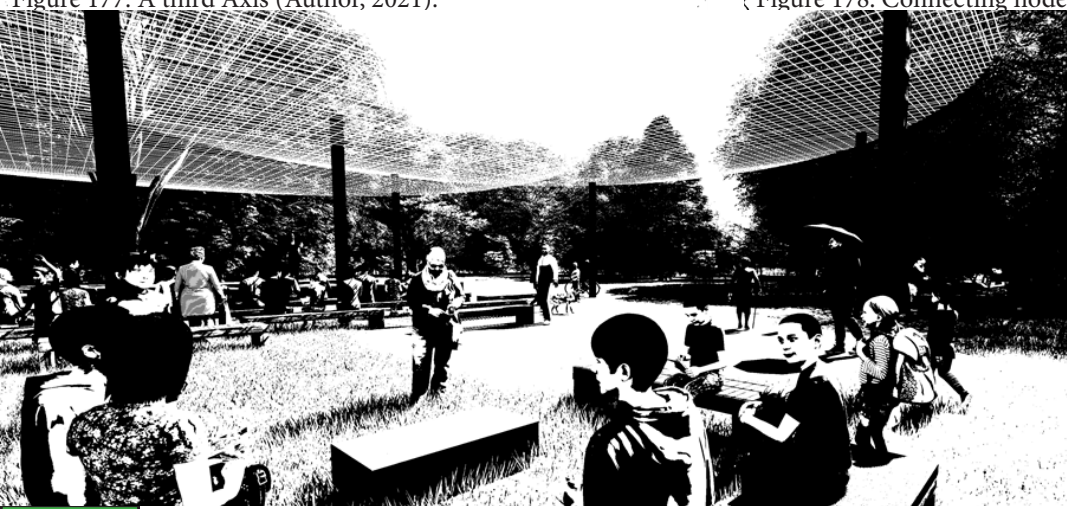


Figure 179: Nodes and one main courtyard (Author, 2021).



106 Figure 183: Shaded outside performance space 1 (Author, 2021).

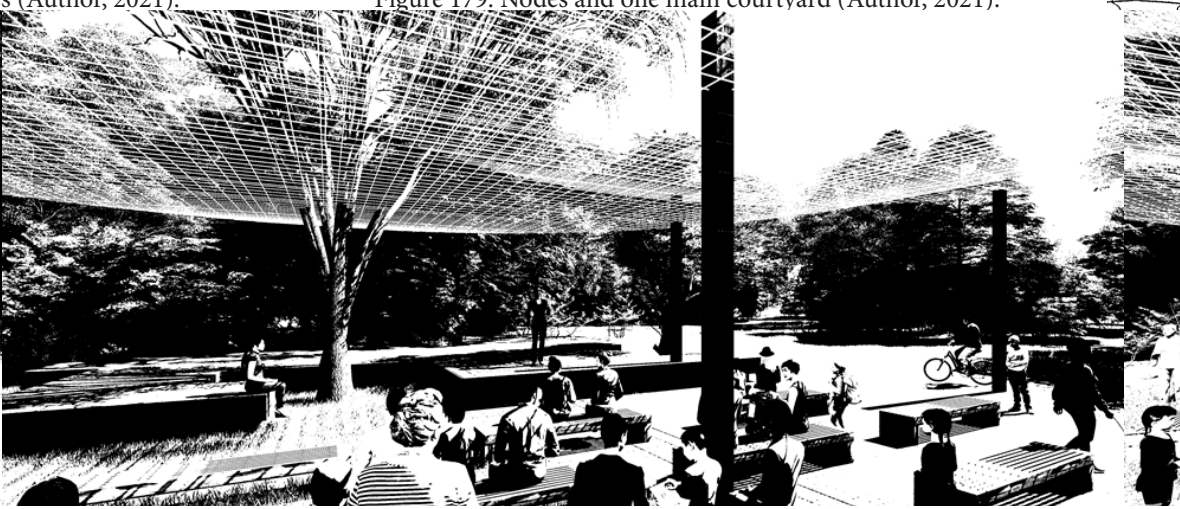


Figure 184: Shaded outside performance space 2 (Author, 2021).



Figure 180: Main and private courtyards (Author, 2021).

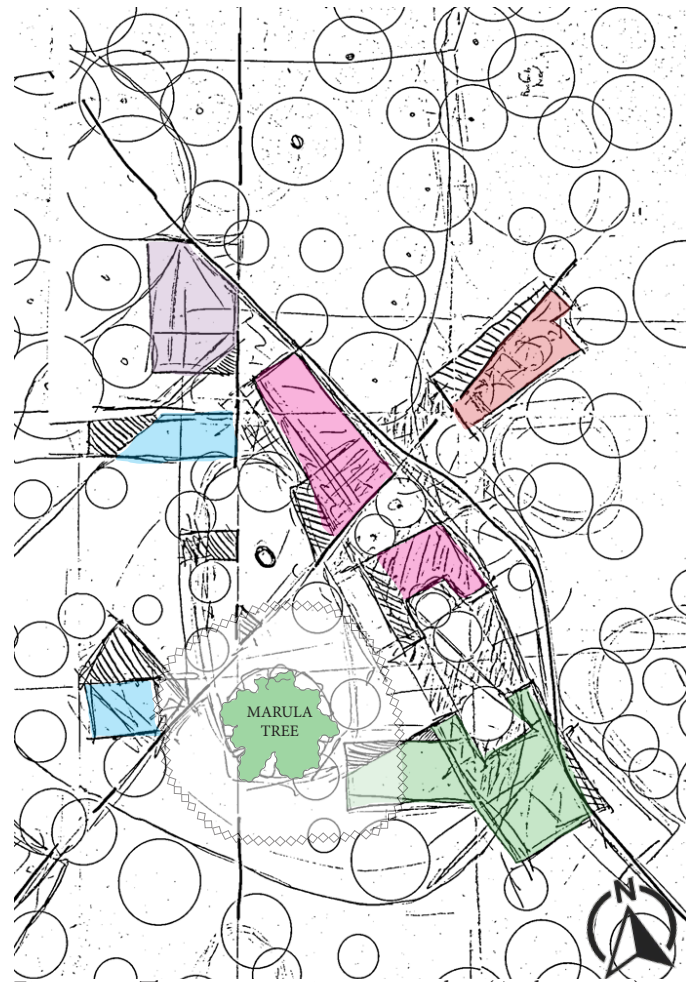


Figure 181: Three axes crossing one another (Author, 2021).

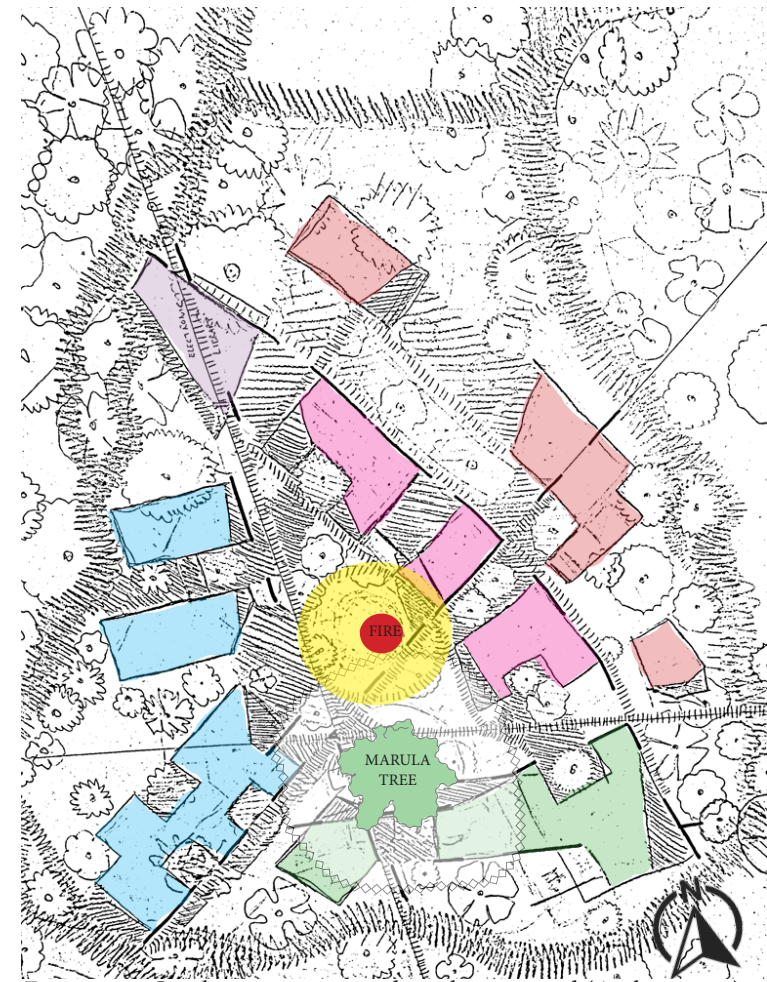


Figure 182: Combining 3 axes and single courtyard (Author, 2021).

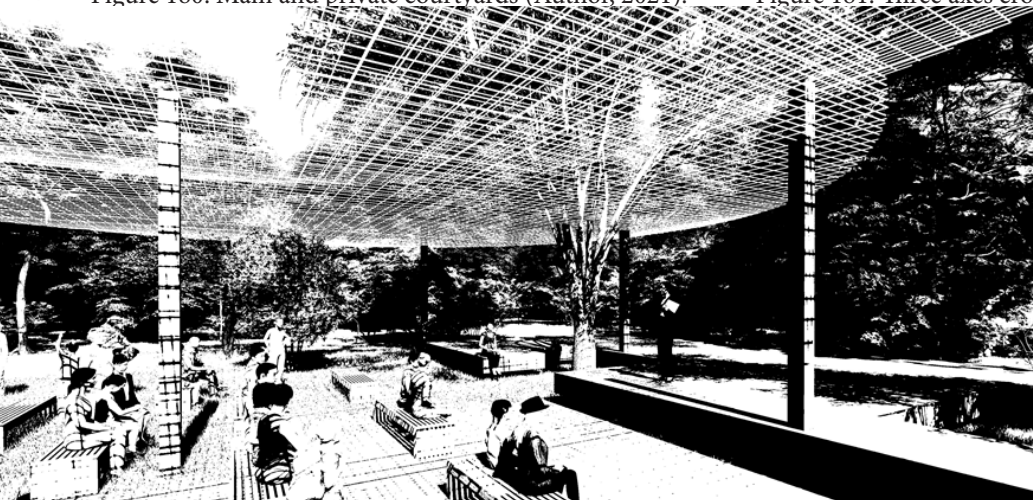
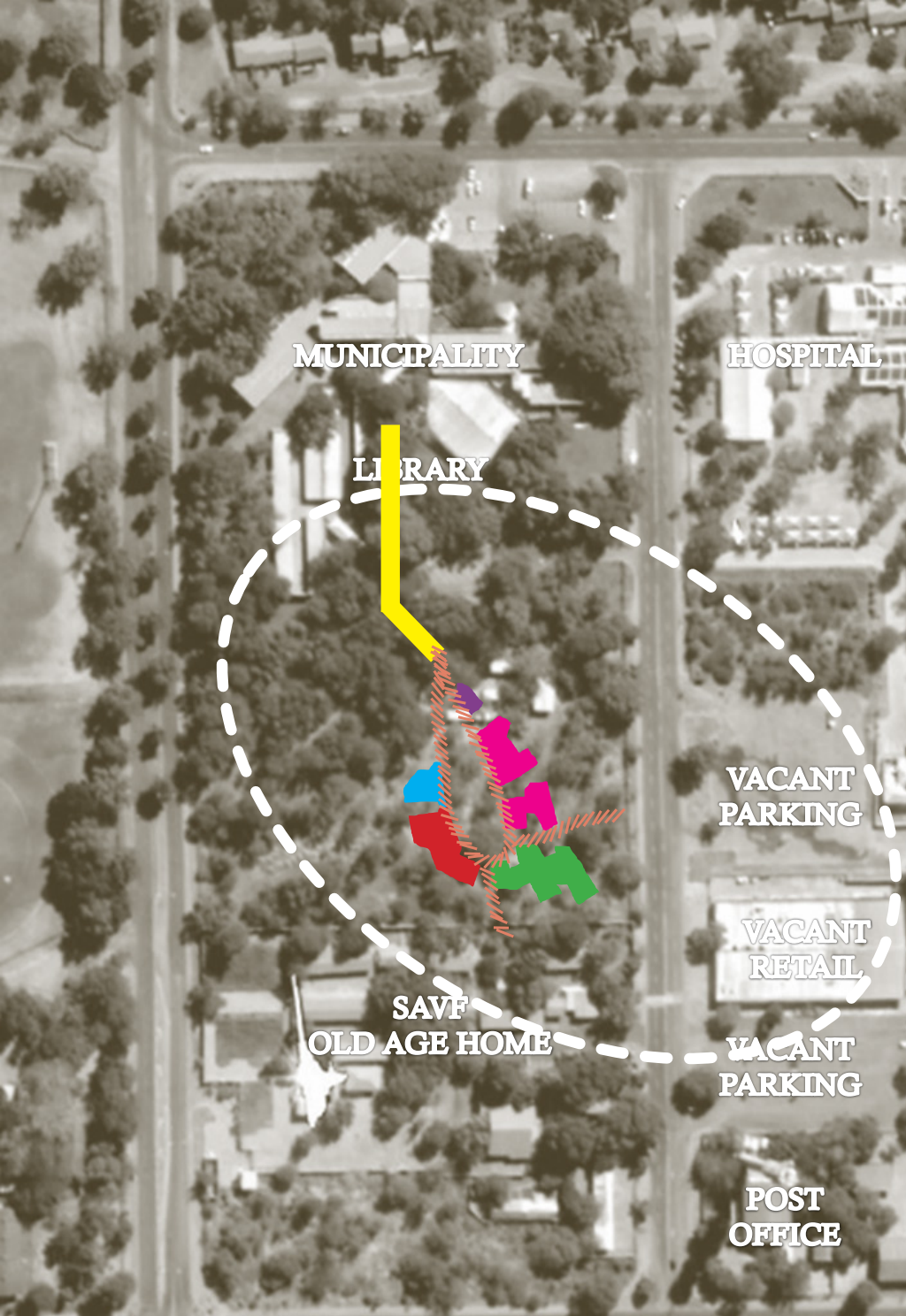


Figure 185: Shaded outside performance space 3 (Author, 2021).



Figure 186: Shaded outside performance space 4 (Author, 2021).



### Mid Year External Review Plan:

Making use of the existing parking allows both functions (library and memory exchange hub) to connect in this space. The reception area (purple) is to the North and the closest building to the shared parking space.

Three multi-functional spaces (pink) are offered to be used by teachers, students, artists and musicians. A space for Artists (A) is located closest to the reception area. This building (A) also houses the public bathrooms mainly used by those who make use of the spaces (B and C) to the south. A private courtyard is formed in between the multi-functional spaces in order to provide a space for different students to converse on different topics.

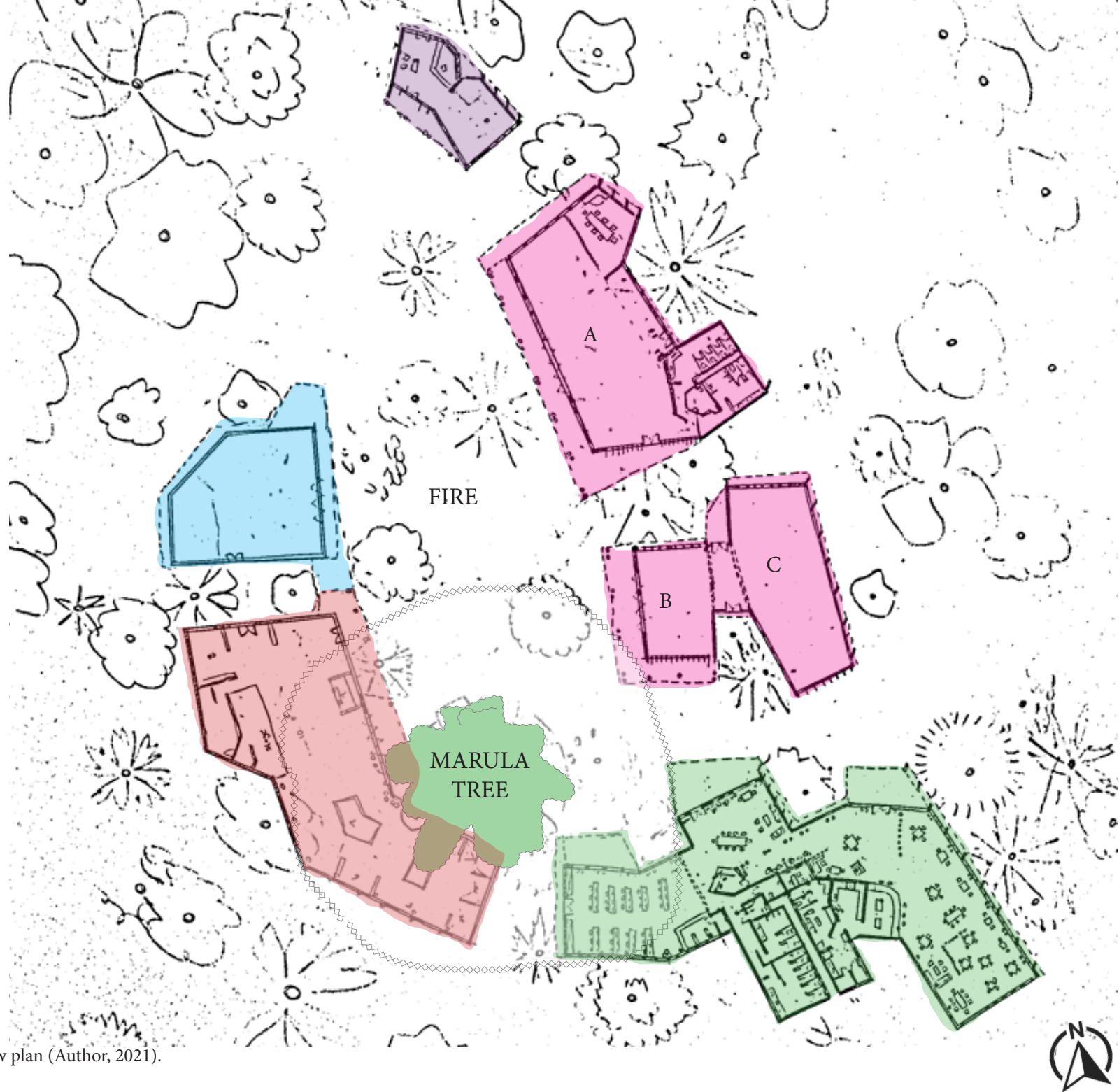
The closest function to Douwater Way is the Innovations coffee shop (green) to the South-West of the site. This function also accommodates culinary facilities offered by the SAVF (the South African Womens Federation) ladies at the Maroe-la old age home to the south of the site.

The exhibition space offers a space for members of the community, especially those who create their art on site, to display their work.

A dance room /performance (blue) space for associations like Evergreen is available to the community close to where the fire place is located.

The layout of the buildings is spaced to be 'gathered' around the central courtyard. This layout celebrates the concept of 'The transience of narrative in between spaces', as explained on page 86.

Figure 187: Reminder of the Site and the context (1map, 2021: online adapted by author).



D  
O  
W  
N  
W  
A  
T  
E  
R  
  
W  
A  
Y

Figure 188: Mid year external review plan (Author, 2021).



Figure 189: Mid year external model (Author, 2021).



Figure 190: Mid year external model (Author, 2021).



Figure 191: Mid year external perspective(Author, 2021).

## The Redo: Reflection

Right here is where the design was reinvestigated, rethought and reinterpreted. I had lost the soul purpose of the design process and needed to reconfigure the design approach and recall the initial design methodology.

The preservation of the ecology is core to the building's nature as to become on of the members of the Lephhalale community; the community cares for the ecology, thus the building should do the same.

The new approach started with revisiting the site, gathering more information and returning to the drawing board. The asbestos buildings on site are to be removed by the municipality, thus constructing where these structures were located would be best as they have already left a scar on site. The use of gumpoles and light weight steel construction will allow the building to be elevated and this approach will also minimize the environmental impact the design could have had initially. The project at this point does not engage with the community, thus building on the site edges was the opposite and taken into consideration for the new design approach.

On 9 July 2021 the design process was revisited, many ideas archived, others scrapped and the design was reinterpreted with a new approach to the same site. The approach starts by regrouping the different function and to locate new openings until the projects expands like a sappling into a tree; growing towards the edges of the site.

## The Redo

Referring back to the site, a recollection of key focuses need to be plotted down as indicated in figure 192. Firstly, the library has an existing path (solid yellow line) leading from the library, past the existing parking (blue) to the removable unutilised office units (red). A connection (yellow dashed lines) from the old age home should be created to provide the elderly with different activities during the day, thus contributing to ensuring the elderly have a space to travel to near by should the need arise. Connecting Douwater Way to Club house Drive will promote activity on site as the people on Mogol Sport grounds could also access the site. This axis is indicated in the white dashed lines from East to West of the site. The purple area should remain untouched as mentioned before, it is the area where the town's guinea fowl nesting area is located.

In the “Redo” of the project the celebration of only one tree (Marula) is nullified, as suggested in figure 194. In this section the celebration of all trees are celebrated in locating what connects a specific space to a specific tree in accordance with the ‘Narrative of the People of Lephale’ as well as the different forms of memory. An illustration in titled figure 193, aims to connect more trees using straight lines. A grid will later follow in figure 202 due to the alignment of obstacles on site. This process also improves the performance of spirit-place memory discussed on page 37. An attempt to group specific trees in multiple area is illustrated in figure 197 where small courtyards are introduced to the design. The courtyards are enclosed and could thus create inside-outside spaces.

The five stages of Paul Ricoeur's hermeneutic paradigm is used as a layout tool in figures 195 and 196 to configure the route of memories through the various functions. Each function houses multiple forms of memory, however certain forms of memory are amplified in specific functions.

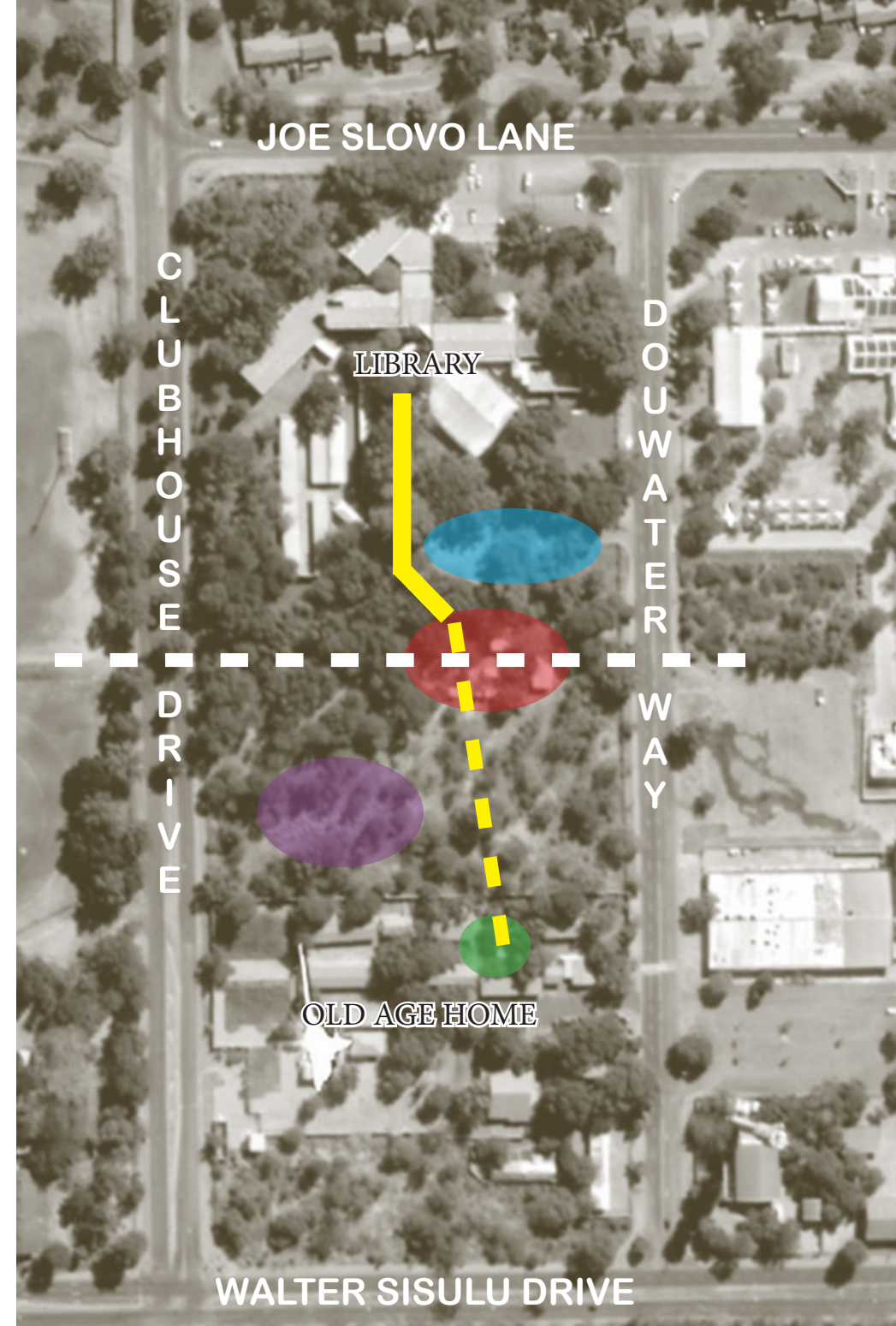


Figure 192: Reference to Site (1map, 2021: online adapted by author).

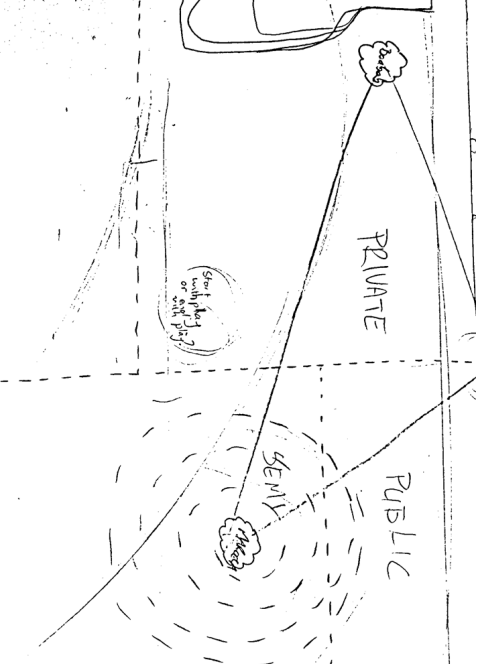


Figure 193: Connecting more trees (Author, 2021).

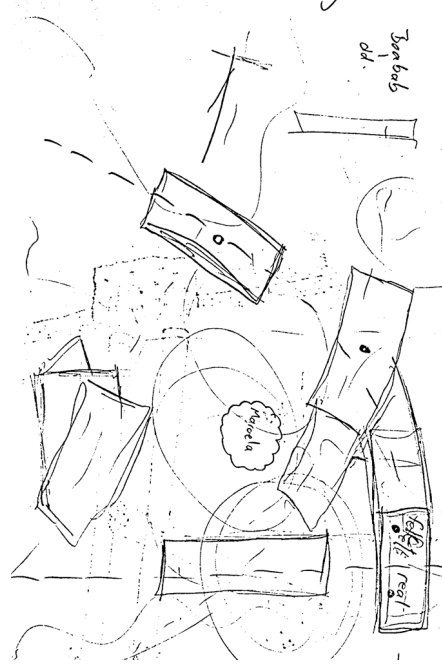


Figure 194: Breaking away from one particular tree (Author, 2021).

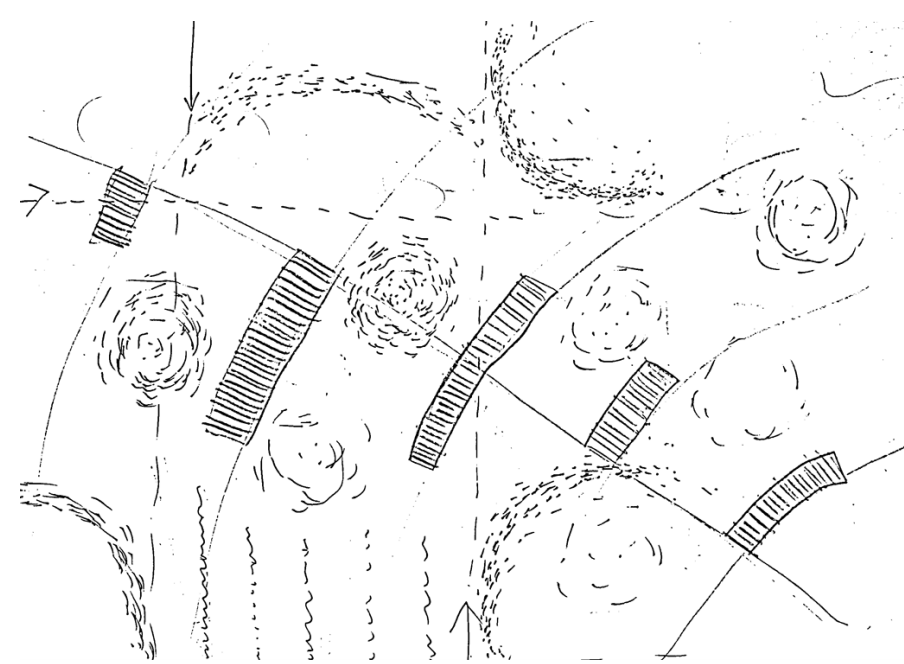


Figure 195: The 5 steps of the hermeneutic paradigm (Author, 2021).

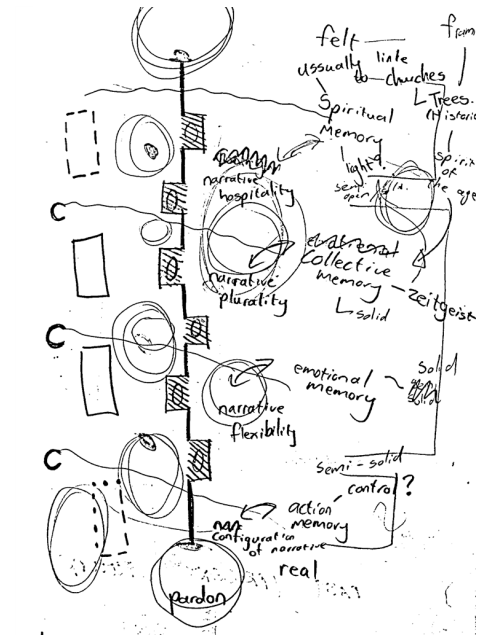


Figure 196: Ordering Memory (Author, 2021).

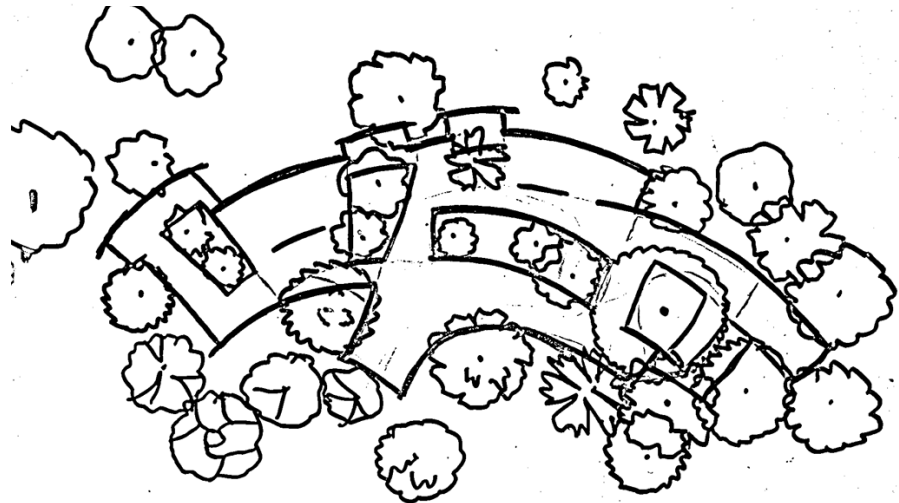


Figure 197: Gathering of trees (Author, 2021).

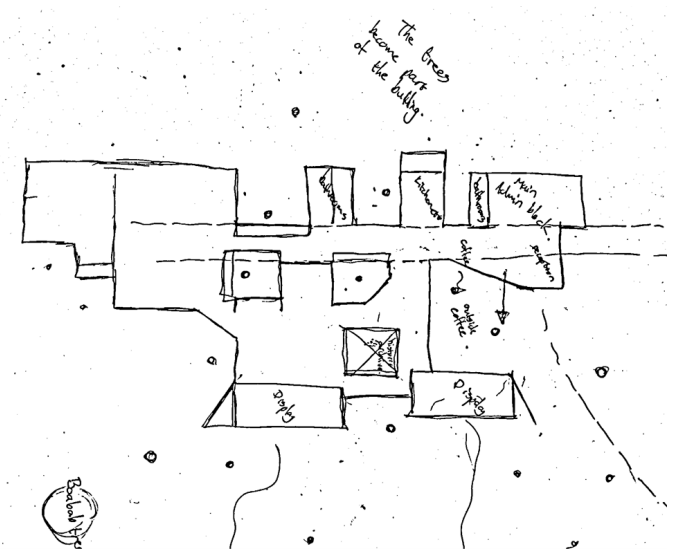


Figure 198: Rigid form around trees (Author, 2021).



Figure 199 Existing parking lot on site (Author, 2021: own photograph).

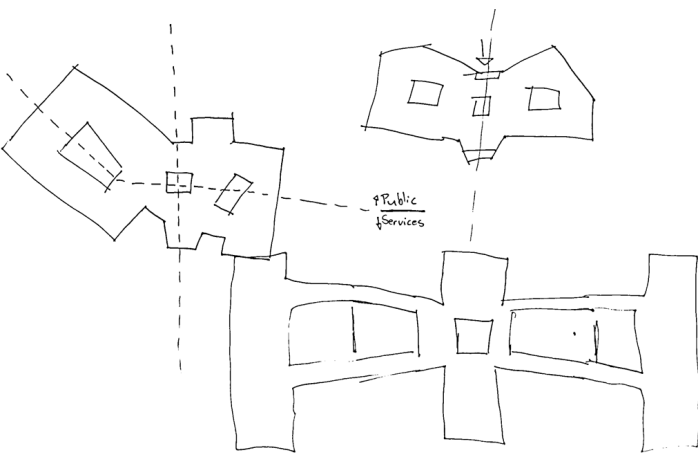


Figure 200: Breaking squares (Author, 2021).

A solid building is presented in figures 197, 198 and 200 where each layout accommodates inside-outside spaces and the layout essentially groups trees into specific courtyards. Figure 201 introduces the use of a straight line as a design tool, which connects trees on one line as mentioned before. The use of this line opens up some of the courtyards to the rest of the site. Figures 202 and 203 also accommodates these type of courtyards. The layout of figure 203 places small courtyards close to each other, almost creating a large courtyard, similar to that of before. Due to this reason the idea is rejected and a new approach is followed in figure 204.

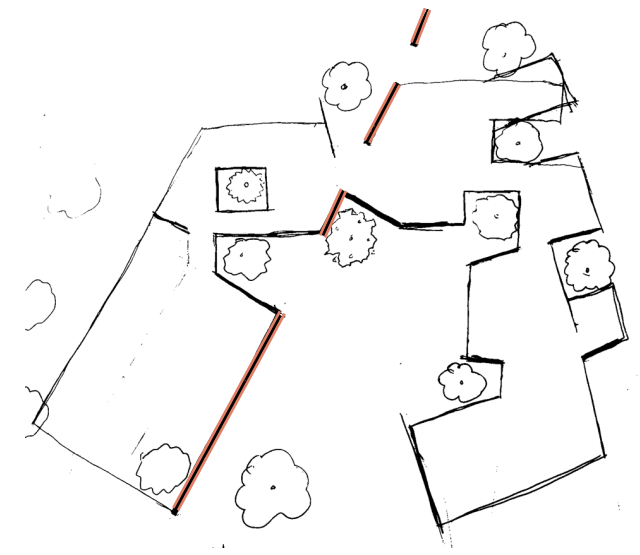


Figure 201: Splitting the building (Author, 2021).

A grid is placed on site in figures 202-206 and 209 as an experiment to test where different trees could be in line. In this section of the design process the existing parking is used as a reference point for the design. The idea of the Innovations coffee shop is thus placed to the North of the site, close to the existing parking area. The circles on the illustrations to the right are where the trees are situated on site. Figure 202 presents the idea that one half of the building could be designed for a young visitors and the other accommodates an older generation of visitors.

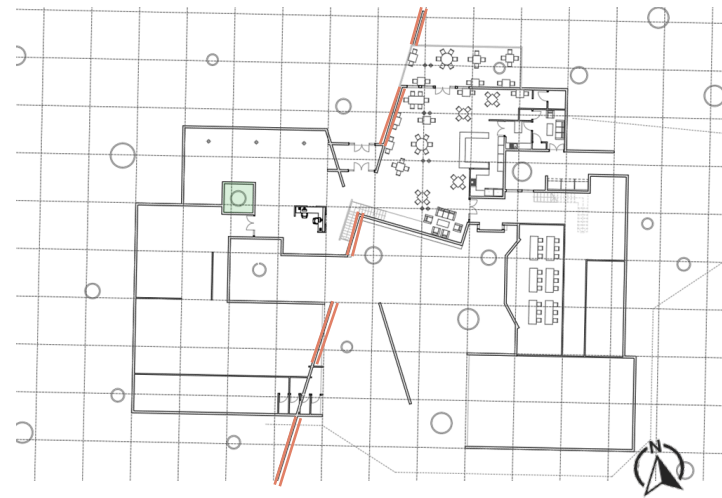


Figure 202: Adding a grid to site (Author, 2021).

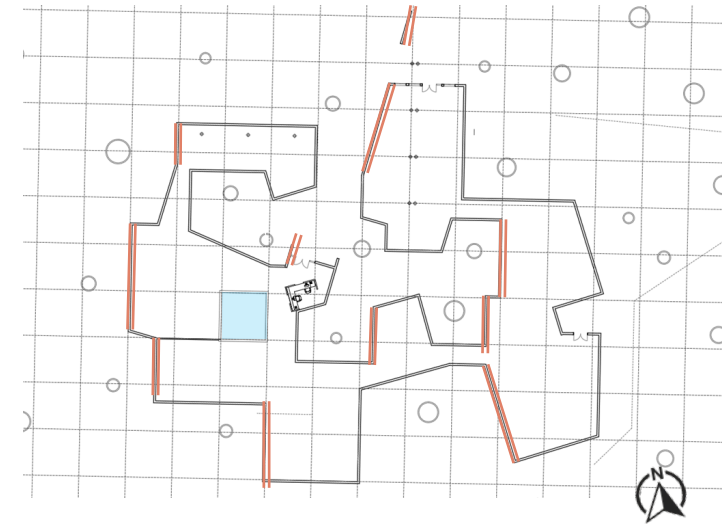


Figure 203: Entering Mini Courtyards (Author, 2021).

Multiple inside-outside spaces are reintroduced in green in figure 204. Figures 205 and 209 clearly illustrate how each interior space is provided with an exterior space which accommodates similar functions. A placement of columns is also experimented in both figures.

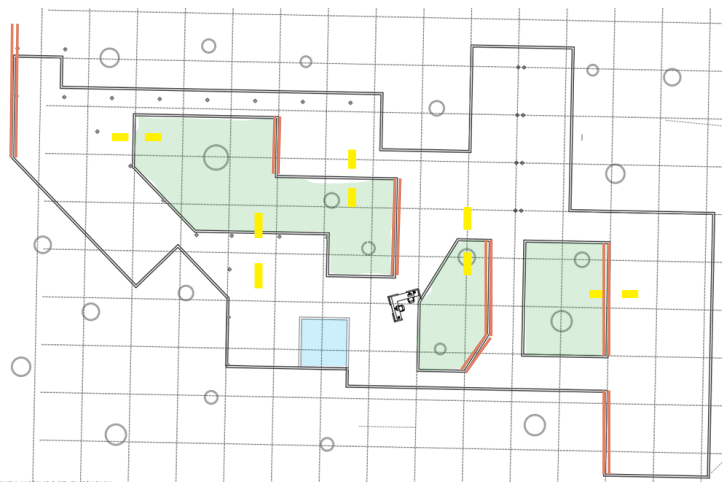


Figure 204: Linking spaces and creating courtyards (Author, 2021).

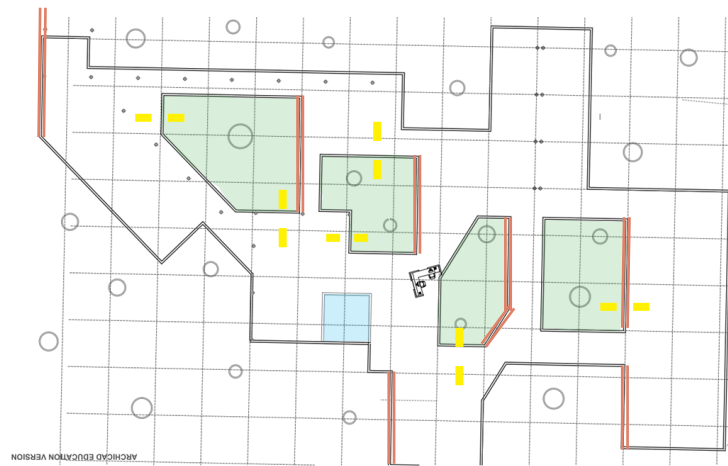


Figure 205: Split the big courtyard in two (Author, 2021).

A shape of the thatch wall is indicated in section in figure 207, it is introduced on plan as the datum in figure 201 and indicated in peach coloured lines throughout the design process that follows. The purpose of the wall is to insulate the building from the Western sun. Figure 204 displays the thatch wall at an angled shape on plan which would be repeated later. This shape offers optimal protection from the Western sun. The shape of the wall in figure 214 is a literal illustration of a common thatch roof placed on its side.

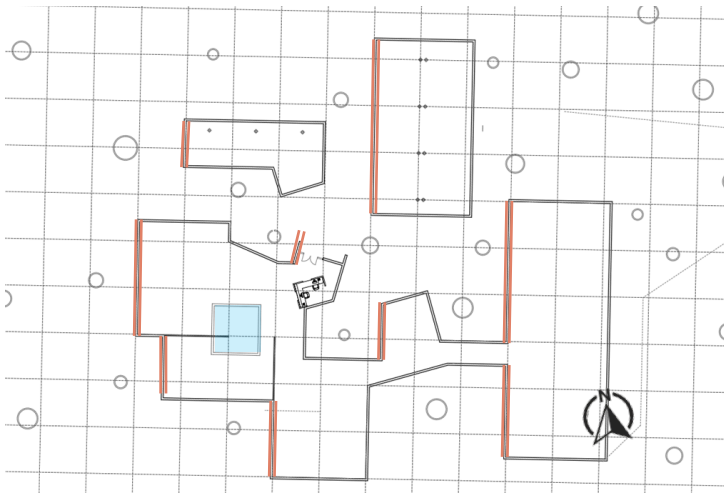


Figure 206: Splitting up (Author, 2021).

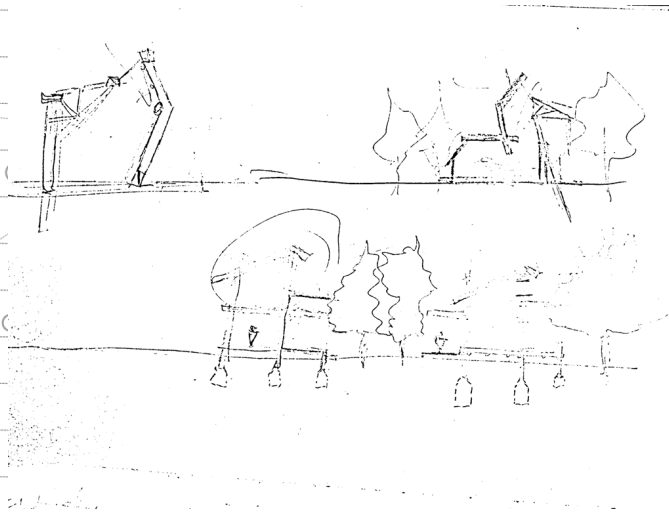


Figure 207: Investigating thatch as a wall element (Author, 2021).

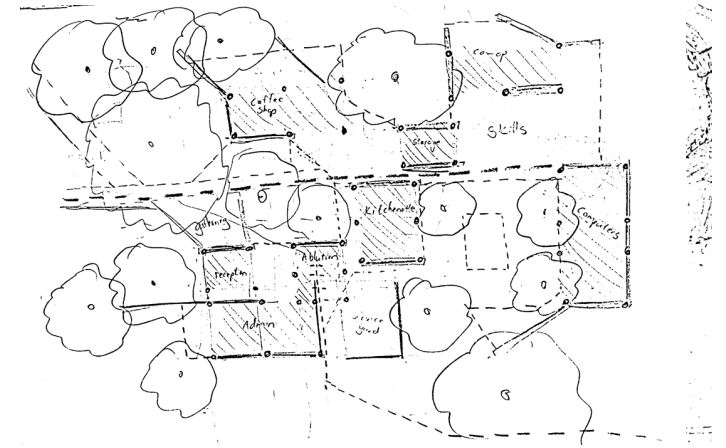


Figure 208: The hub outside (Author, 2021).

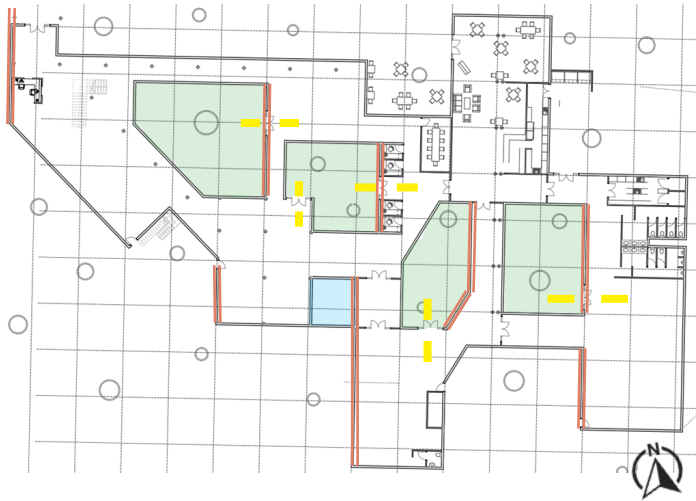


Figure 209: The first step to placing services (Author, 2021).

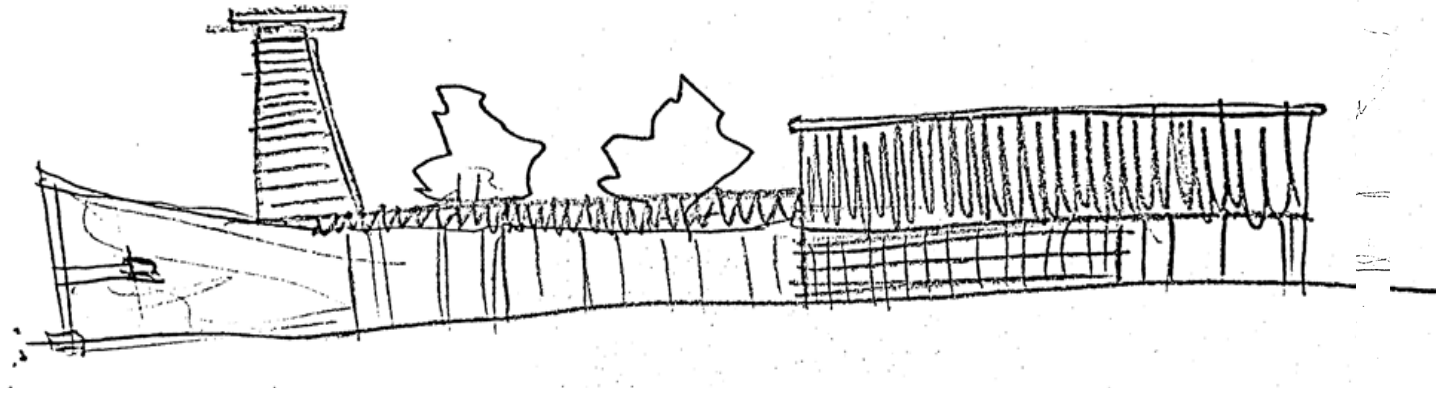


Figure 210: The leaning tower of knowledge (Author, 2021).

The tower illustrated in figure 210 is first introduced on plan in figure 203 as the blue square and this is indicated in all process drawings after. The tower aims to invite people to site as it serves as a point of hierarchy. Due to its placement North of the site, it establishes a direct connection to the library and is therefore known as the tower of knowledge. In most of drawings, the tower is placed near the main reception where people can get information when they visit the building. The tower is placed to the South of the building in figures 204, 205, 207, 211, 212, 213 and 216 where it guides students who visit the library to the new computer hall as an additional space to the library.

Each function serves a purpose to accommodate a form of memory as well as accommodate different types of people who used to visit this part of Onverwacht. The type of people accommodated on site are those who share similar traits and narratives with those mentioned in 'Narratives of the People of Lephalale' (see page 43).

The Creation hall is inspired by the history the people of Lephalale have in the coal mine. The coal mine offers a range of skills to the community who wishes to be part of the EXXARO company. These skills are mainly artisan skills like welding, electrical wiring and mechanical knowledge. The artisans are accommodated in

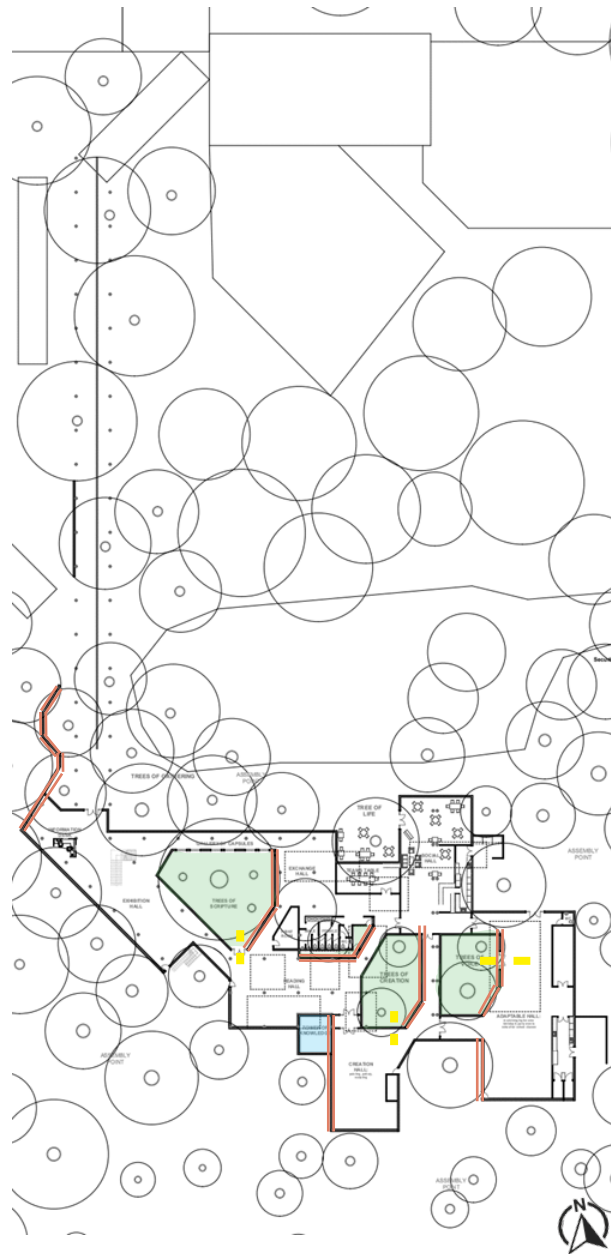


Figure 211: Connection to Library (Author, 2021).

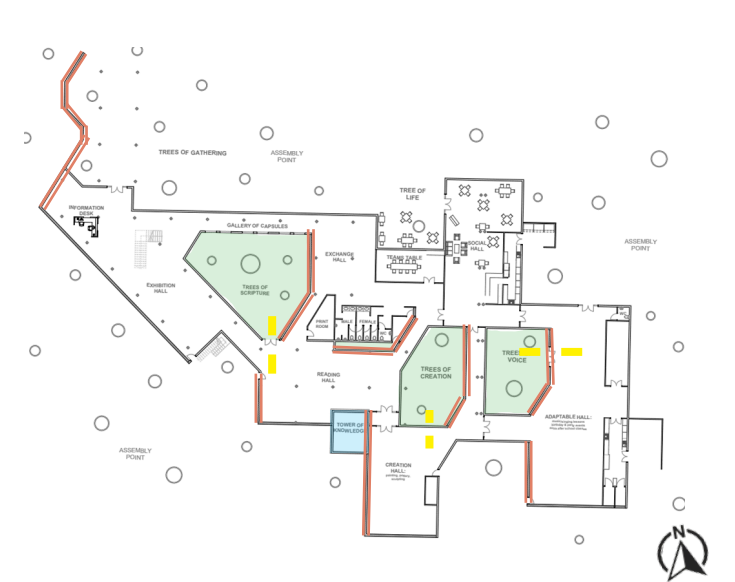


Figure 212: Centralising ablutions according to existing offices on site (Author, 2021).

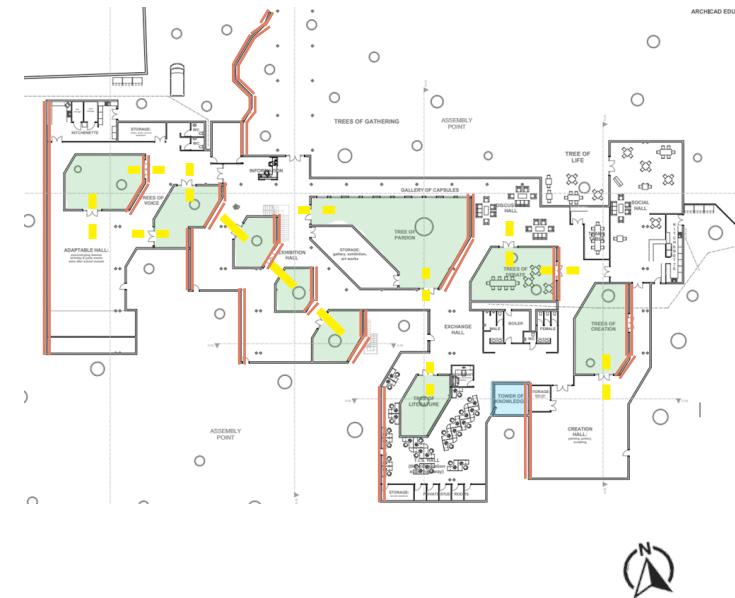


Figure 213: Move Multifunctional from East to West (Author, 2021).

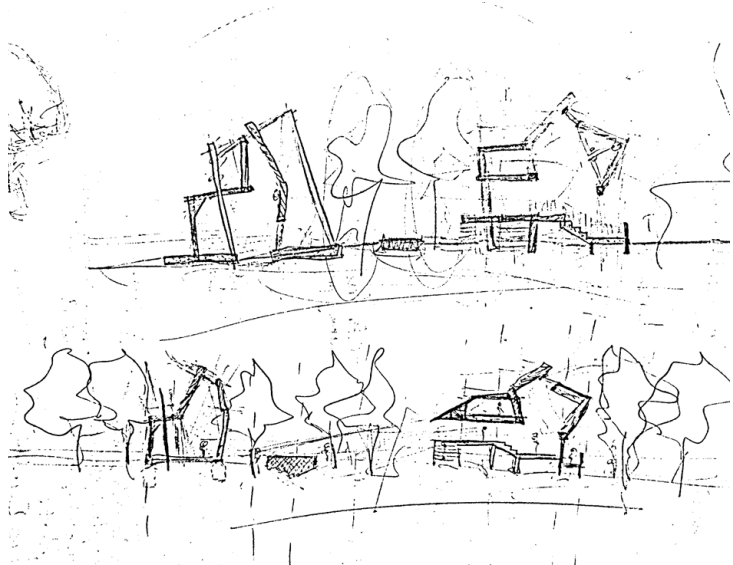


Figure 214: Roof to Wall thatch element (Author, 2021).

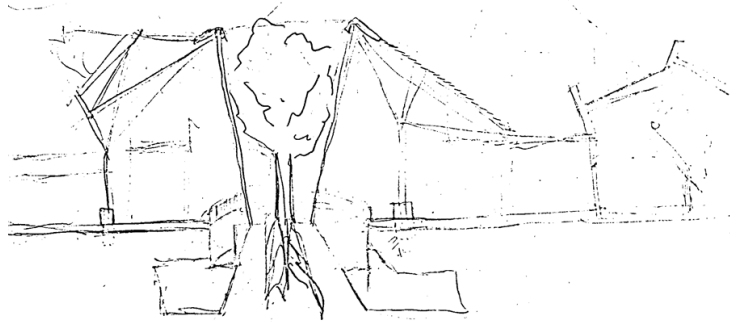


Figure 215: Framing a tree with structure (Author, 2021).

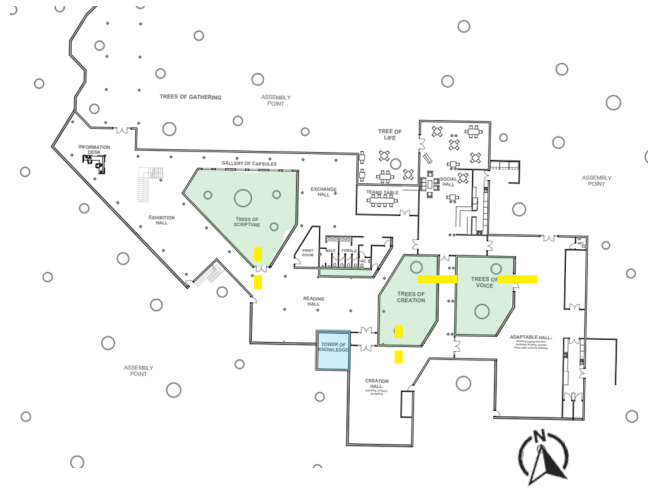


Figure 216: Configuring space (Author, 2021).

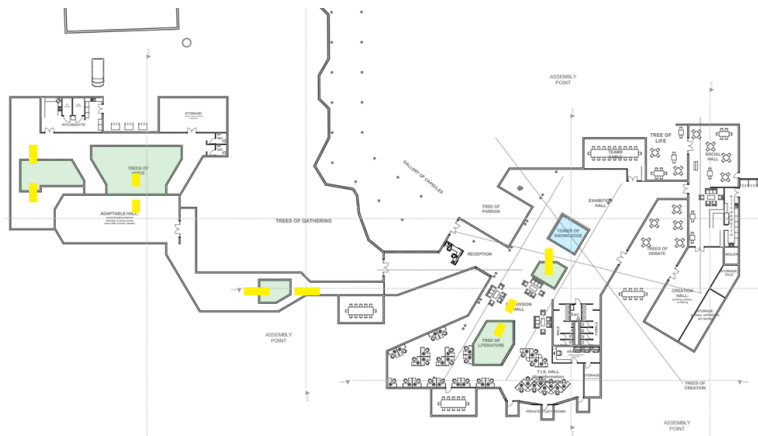


Figure 217: Break away with courtyards (Author, 2021).



Figure 218: Reference to Site (1map, 2021: online adapted bu author).



Figure 219: Reference to Site (1map, 2021: online adapted bu author).



Figure 220: Reference to Site (1map, 2021: online adapted bu author).

town, but the artists are not. Rene Eloff along with Ben Eloff travel from Pretoria to offer singing, instrumental and art lessons to those intrested in town. They have accommodation in town, but locating a suitable place to teach these skills are always a challenge for them. A designated space on this site like the creation hall and a music room would assist them.

Bafedile Masasa from Evergreen is a local and requires a better space to perform and practice their show called 'Lephalale the Musical'. Thus people out of town like Rene and Ben, as well as local organizations in town like Evergreen, will benefit from a music room and a creation hall.

The art that people create in the creation hall or even the art they create at home, would require a place where it can be put on display. An exhibition hall will contribute to the library as a space where one can learn about art in the physical form and not just through literature.

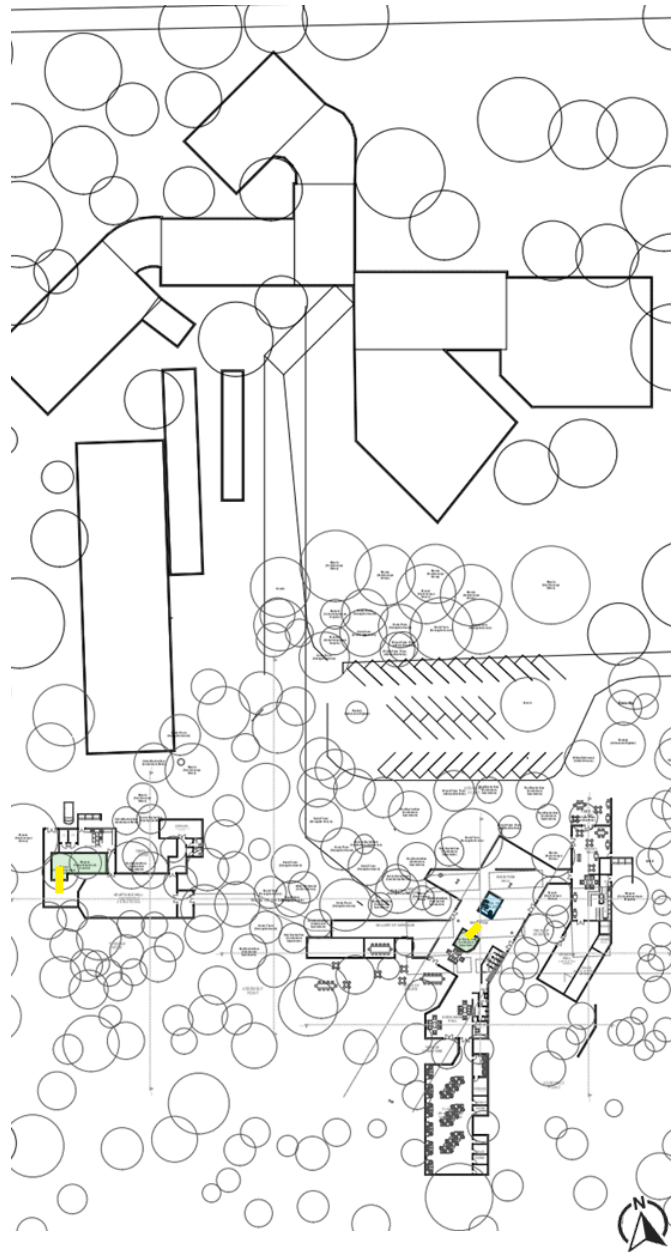


Figure 221: Opening the courtyards at multi-functional hall (Author, 2021).

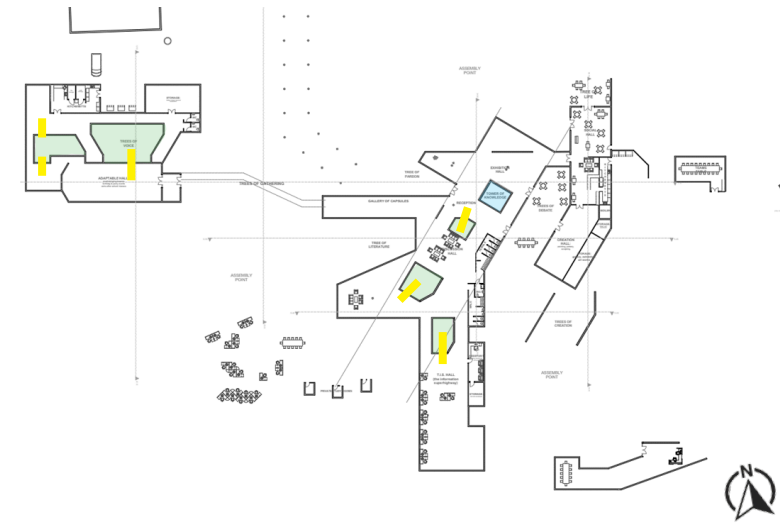


Figure 222: Defining spaces, clinging to inside courtyards (Author, 2021).

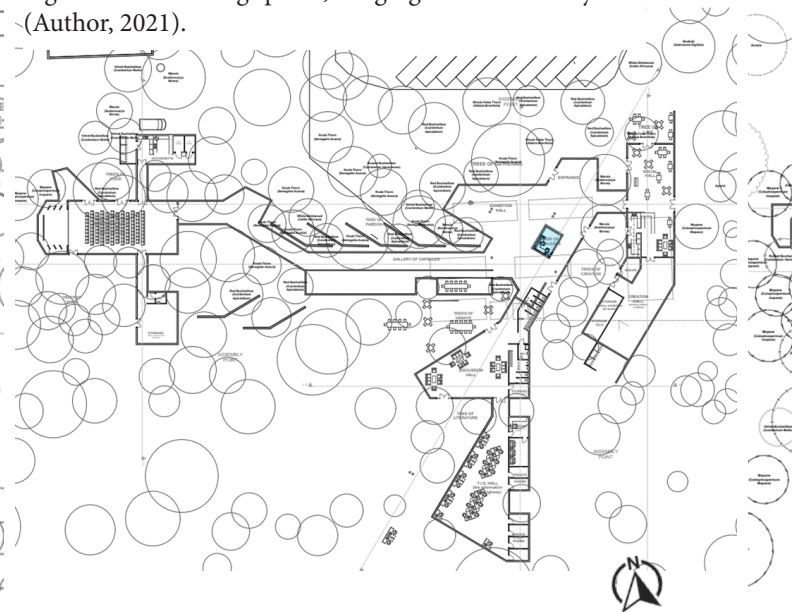


Figure 223: Opposite wings on multi finctional (Author, 2021).

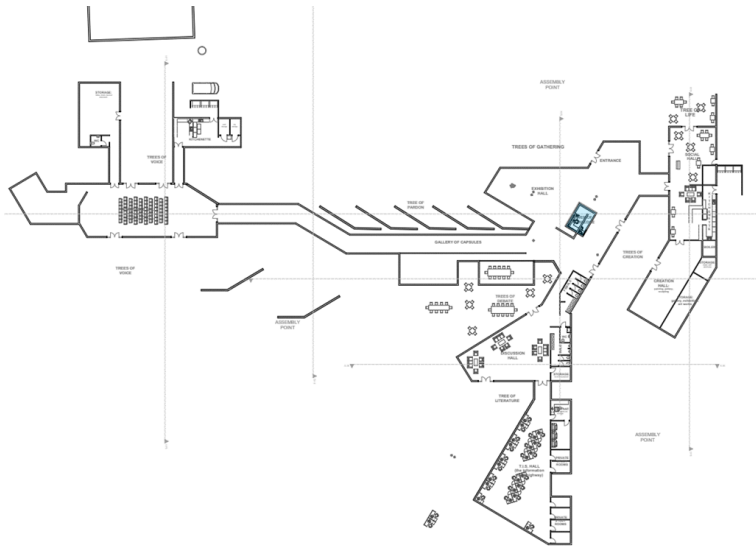


Figure 224: More angles that accommodate trees (Author, 2021).

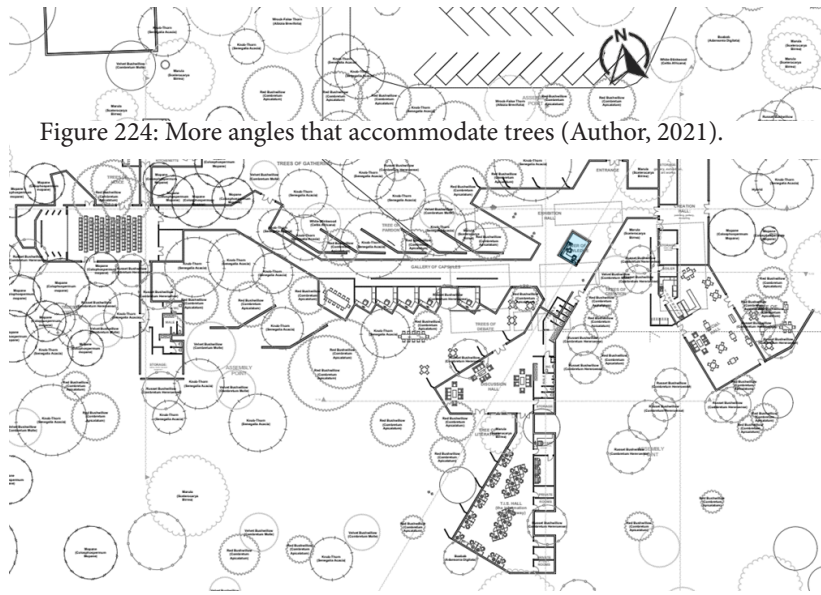


Figure 225: Flipping the restaurant and creation hall (Author, 2021).

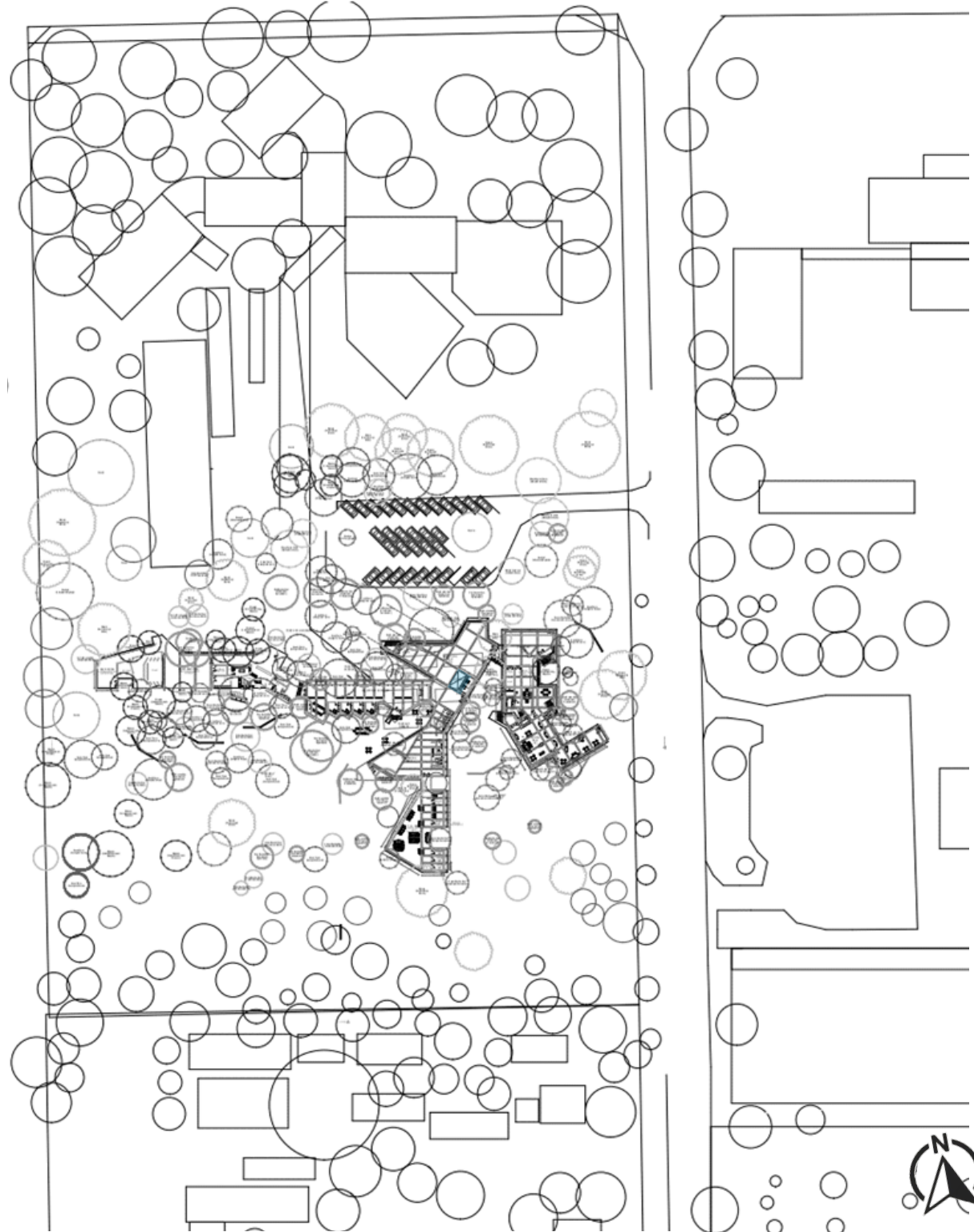


Figure 226: External review 3 Plan in relation to context (Author, 2021).

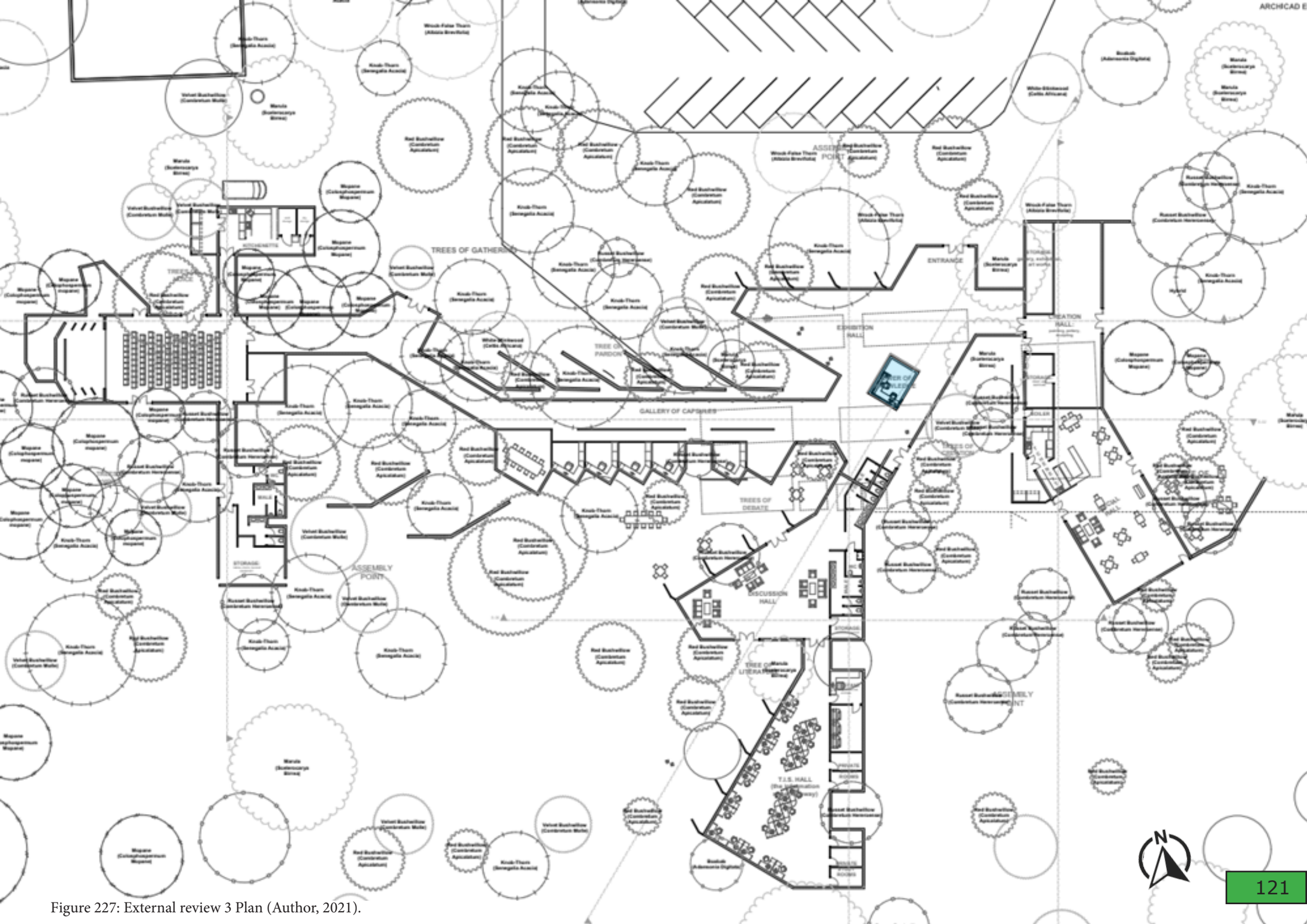


Figure 227: External review 3 Plan (Author, 2021).



Figure 228: External review 3 Model top view (Author, 2021).



Figure 229: External review 3 Model entrance (Author, 2021).



Figure 230: External review 3 Adaptable hall (Author, 2021).



Figure 231: External review 3 Model Social and Creation hall (Author, 2021).



Figure 232: External review 3 Model Perspective (Author, 2021).

C  
l  
u  
b  
h  
o  
u  
s  
e  
  
D  
r  
i  
v  
e

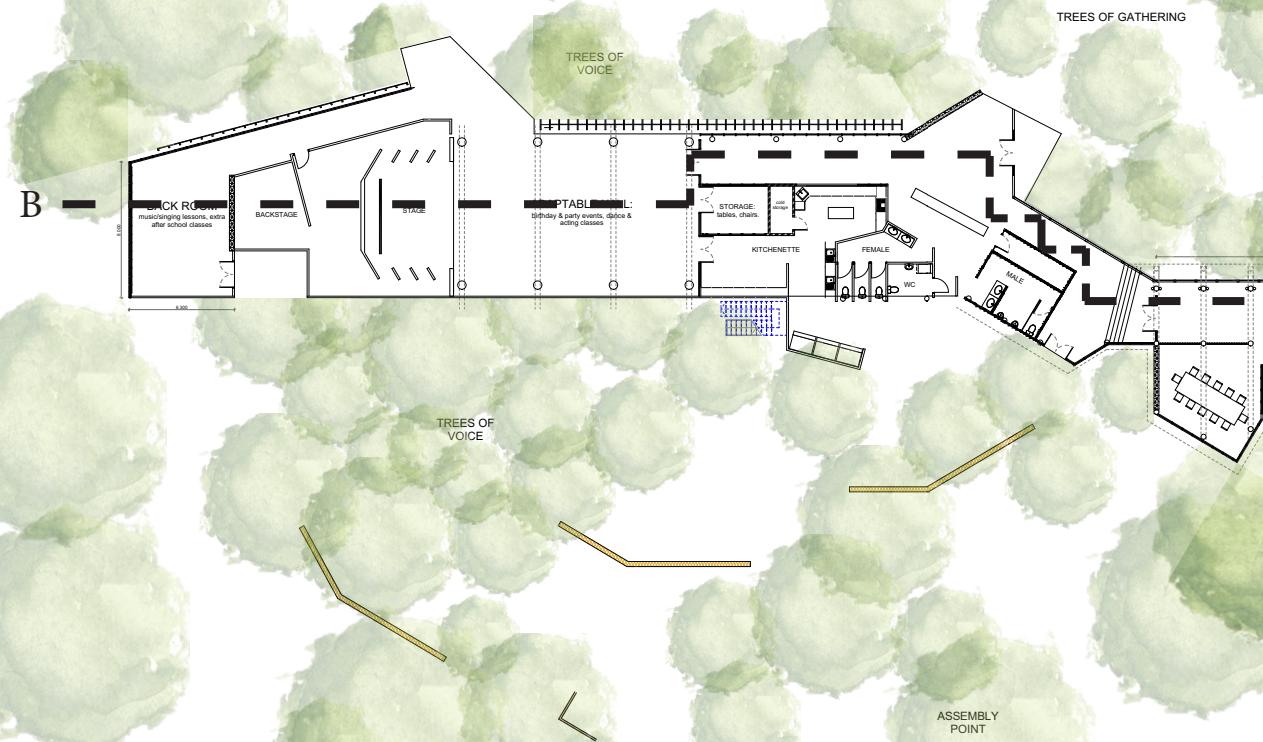
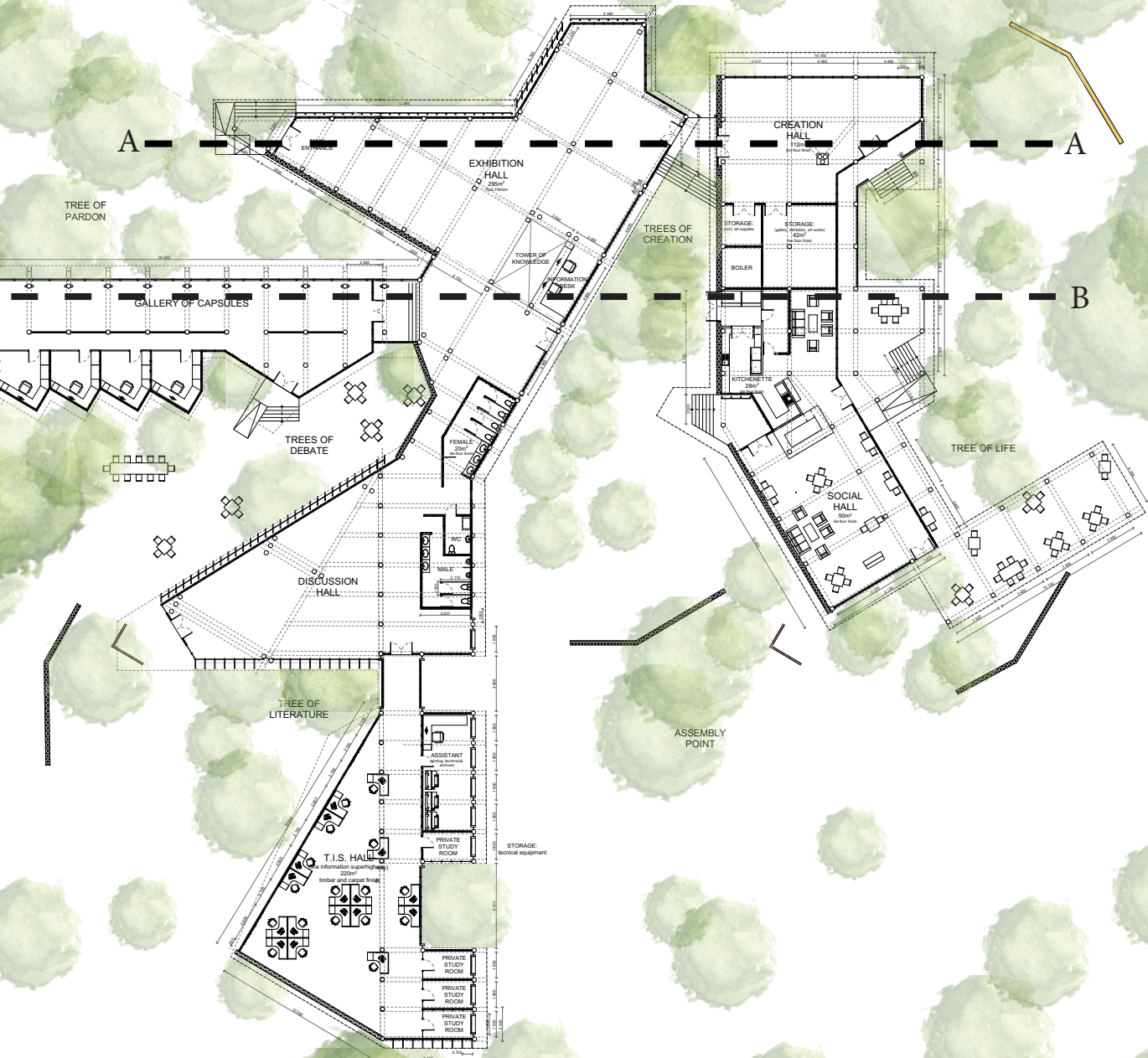


Figure 233: Prelim Plan (Author, 2021).

D  
o  
w  
n  
w  
a  
t  
e  
r  
W  
a  
y



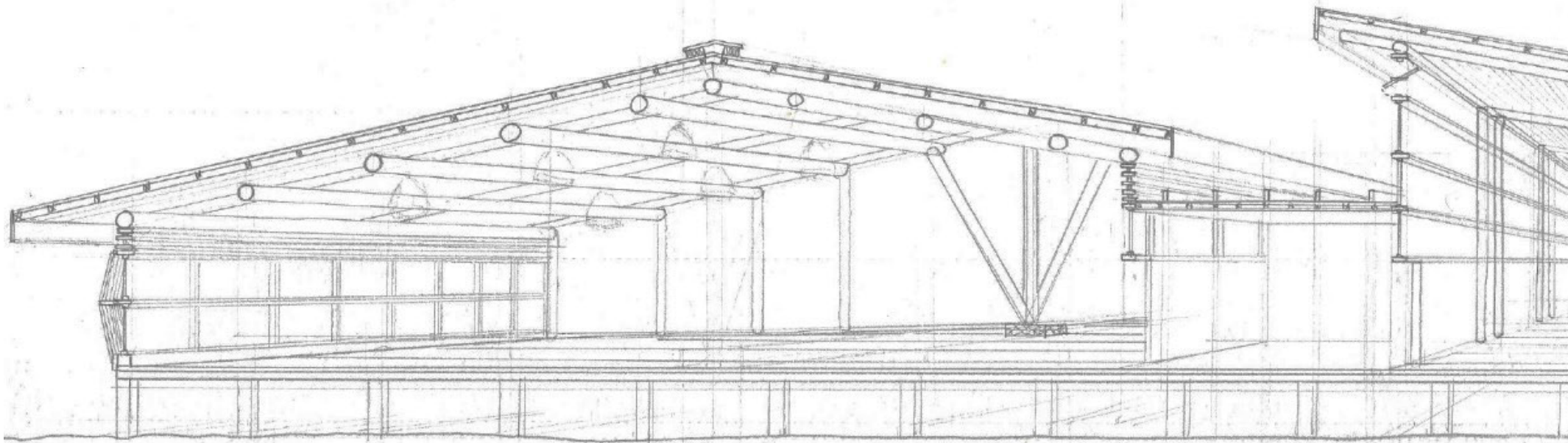
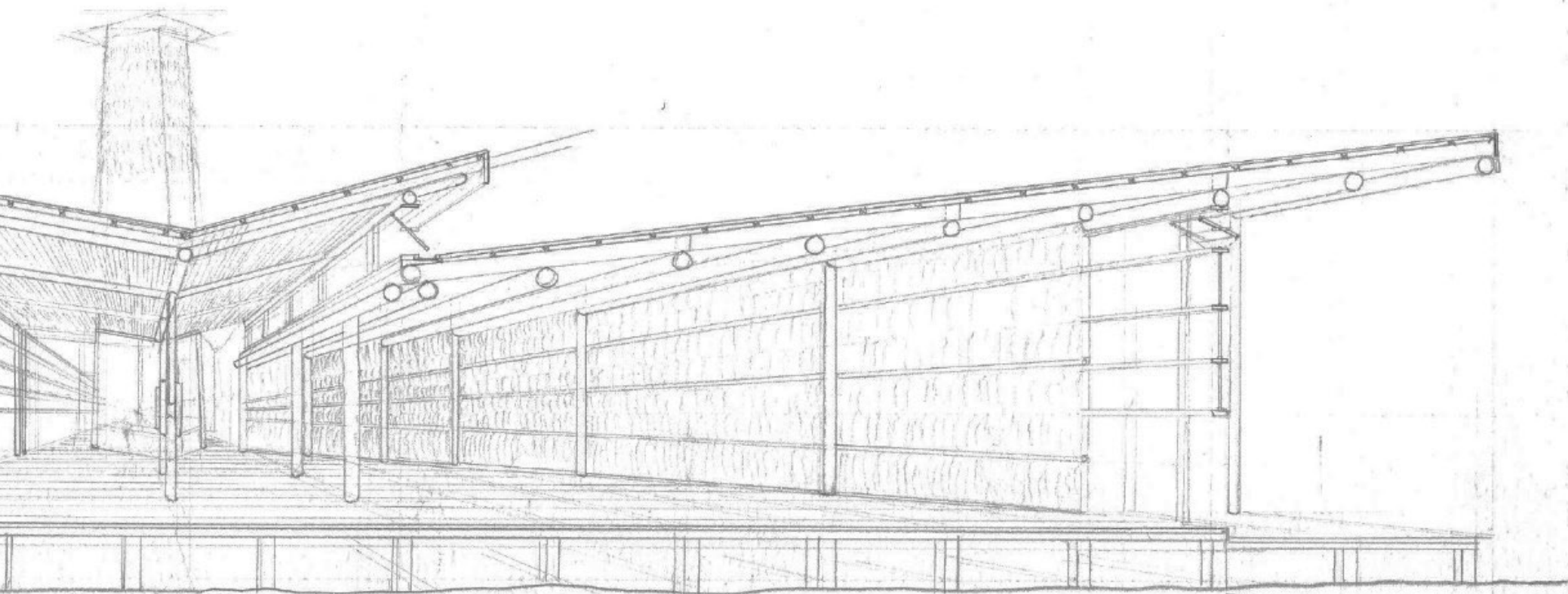


Figure 234: Section A-A on Prelim Plan (Author, 2021).



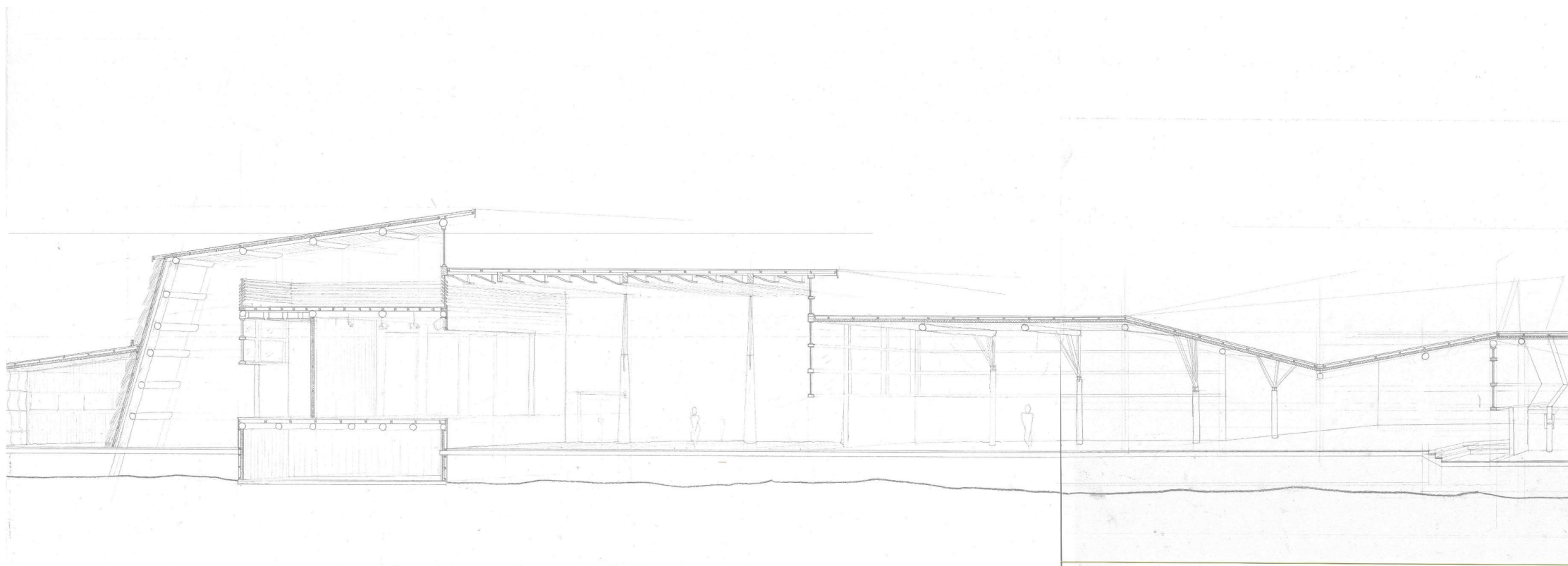


Figure 235: Section B-B on Prelim Plan (Author, 2021).

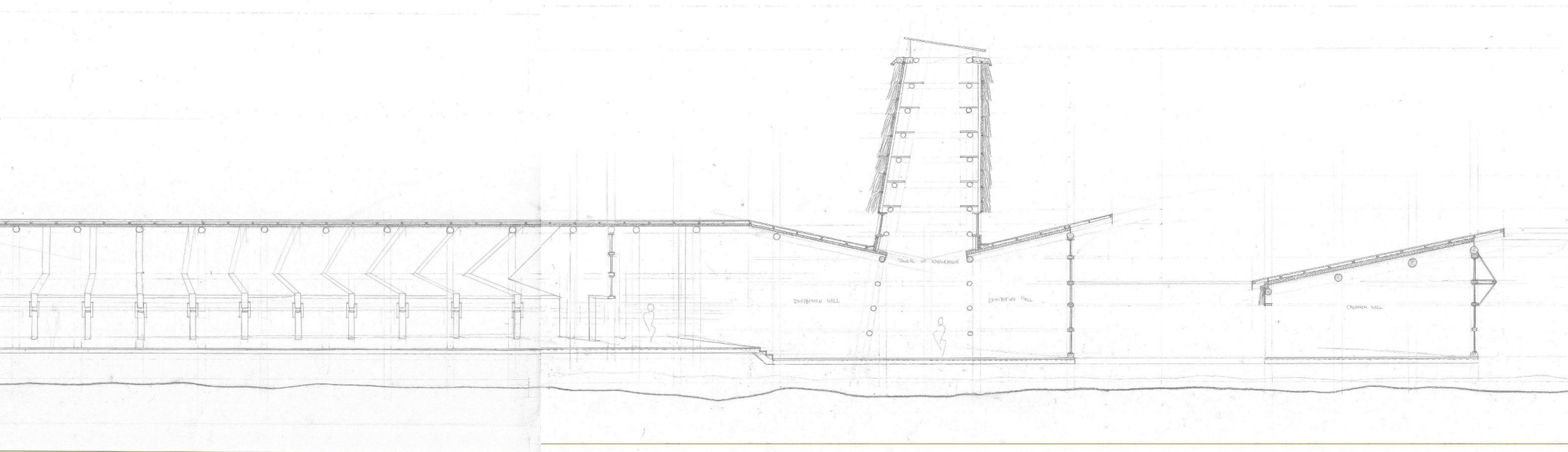




Figure 236: Prelim model rendering of East entrance to site without additional trees (Author, 2021).



Figure 237: Prelim model rendering of East entrance to site with trees (Author, 2021).



Figure 238: Prelim model rendering of entrance to exhibition from parking area without additional trees (Author, 2021).



Figure 239: Prelim model rendering of entrance to exhibition from parking area with trees (Author, 2021).

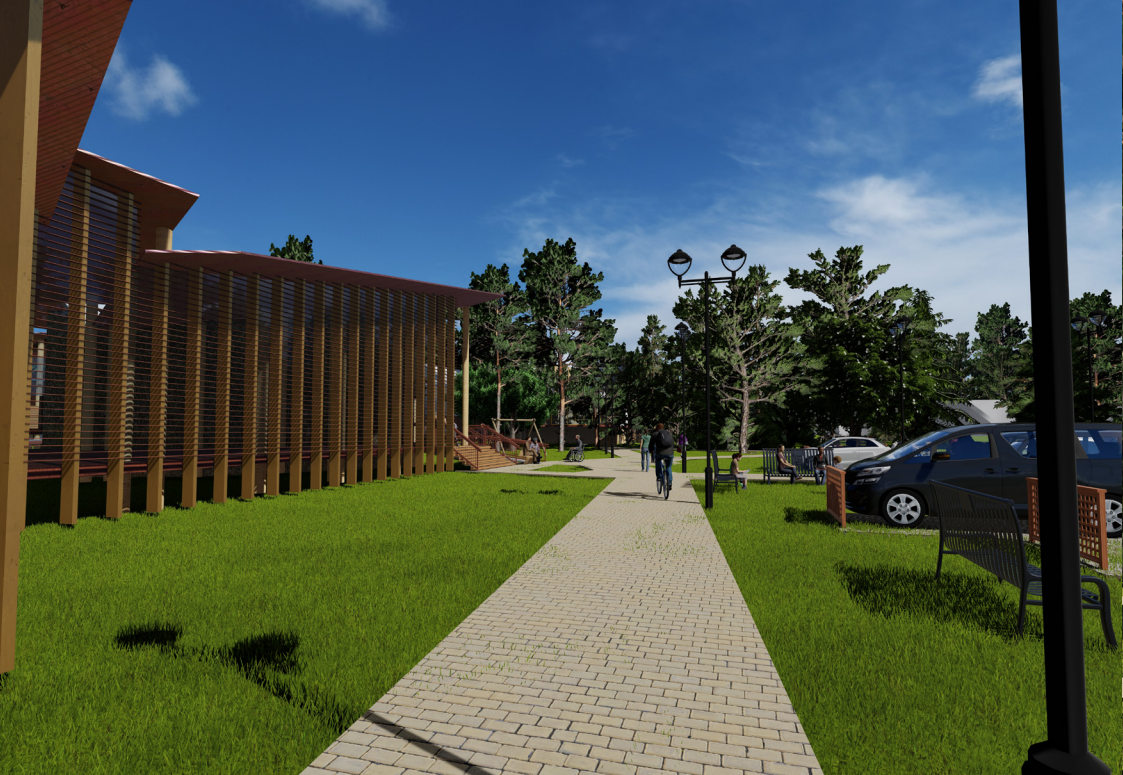


Figure 240: Prelim model rendering of Northern walkway without additional trees (Author, 2021).



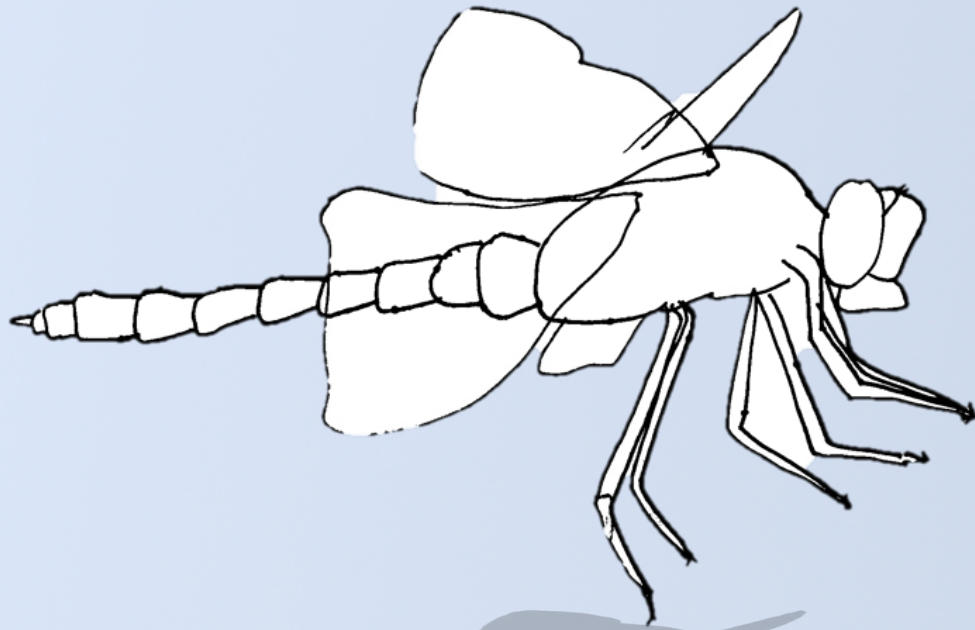
Figure 241: Prelim model rendering of view to parking without additional trees (Author, 2021).



Figure 242: Prelim model rendering of Northern walkway with trees (Author, 2021).



Figure 243: Prelim model rendering of view to parking with trees (Author, 2021).



## Tectonics

The structural integrity of the project asks how the design will be assembled. This section is dedicated to the process of understanding how the design will transform when the assemblage of structure becomes more prominent in the design by making use of structural theory, structural philosophy and precedent/case studies.

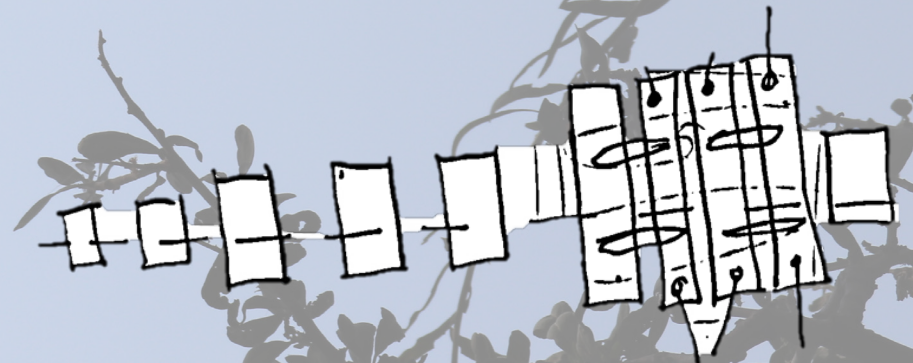


Figure 244: Construction Exploration (Author, 2021).

### Case Study in Lephalale, Limpopo vs Precedent study in Tzaneen, Limpopo:

This is an investigation of indigenous and rigid gum pole construction methods in Africa in comparison with other international ecologically based construction methods, focusing more on timber. The use of gum pole structures in Lephalale and surrounding areas is a very common and familiar site. Some uses are very unique, especially those on the game farms. The integrity of the bushveld identity is celebrated through the use of gum pole designs, which celebrates the trees who lived and reviving the trees who died.

Near the project site is the Mogol sport centre and one of the buildings on the premises was constructed in the 1970s and uses gum poles for its main column and roof structure. The building is currently used as a bar, known to locals as Plan B. Massive gum poles are used here and one can almost see a similarity to what Ora Joubert architects has achieved in their gum pole structure design for House Tzaneen in Limpopo (2001). The difference however is that the team made the decision to darken the appearance of the wood with varnish, which does preserve the material, but it does not preserve the raw aesthetic that the builders of the Mogol sport centre achieved.



Figure 245: Joint detail at House Tzaneen (Swanepoel, 2010: online).

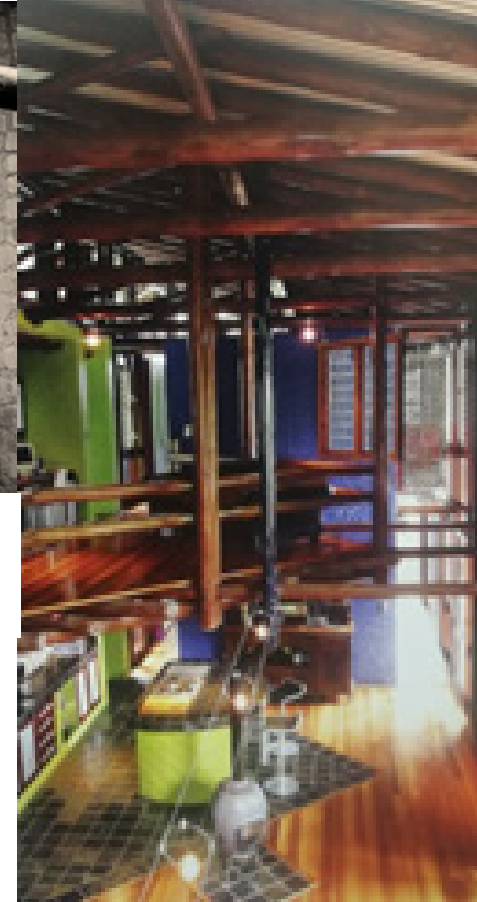


Figure 246: House Tzaneen Interior (Swanepoel, 2010: online).



Figure 247: South Elevation House Tzaneen (Joubert, 2009: 58).

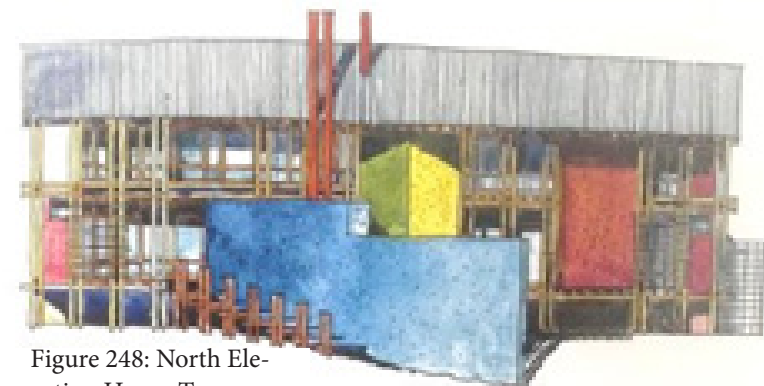


Figure 248: North Elevation House Tzaneen (Joubert, 2009: 58).

Weight is a factor to consider in both buildings where the horizontal beams are screwed to the columns via nuts and bolts only. The structural system requires a series of the same method on a datum line in order to assist in ensuring that the beam remains intact. Another element that the two buildings have in common is the use of corrugated sheeting for the roof. They do use this material differently, but both materials can embrace the sound of rainfall. This is important as it projects the memory of rain. XXXXX

Figure 253: Plan B exterior (Janse van Rensburg, M: photographs, 2021).



Figure 254: Plan B exterior (Janse van Rensburg, M, 2021).



Figure 255: Plan B exterior (Janse van Rensburg, M, 2021).



Figure 249: West Elevation House Tzaneen (Joubert, 2009: 58).



Figure 250: East Elevation House Tzaneen (Joubert, 2009: 58).

Figure 251: Plan B structural drawing (Author, 2021).

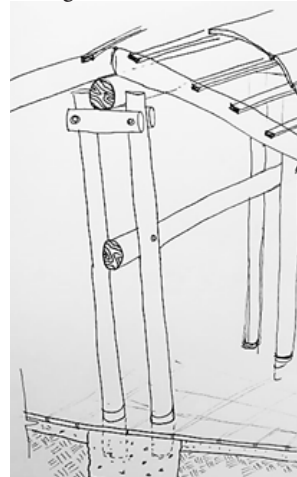
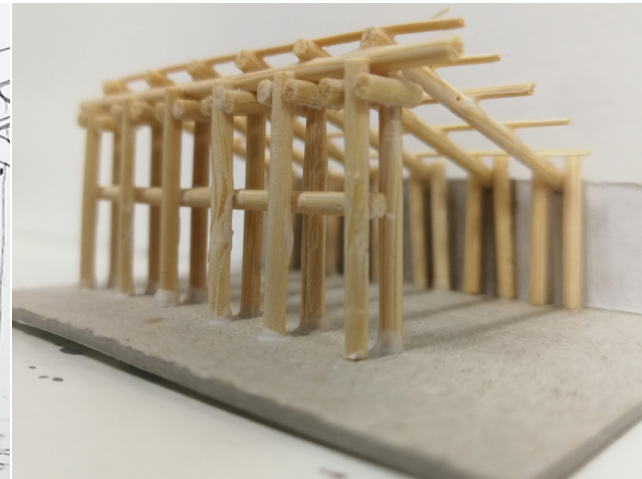


Figure 252: Plan B exterior Primary structural model (Author, 2021).



## The Detailing in Combining Steel and Timber

Lengau Lodge, Vaalwater:

This building is another example in the Limpopo region, about 50km from the project site. Langau Lodge in Vaalwater is located on a hunting game reserve in a drier bushveld landscape in comparison to Lephalale which possesses an abundance of trees.

### NEMACOLIN WOODLANDS SKI LODGE

Africa centre for health & population studies, Somkhele



Figure 257: Africa centre, section (unkown, 2010: 120).



Figure 258: Africa centre (Jaceni, 2010: 120).



Figure 259: Africa centre (Jaceni, 2010: 120).



Figure 260: Lengau Lodge (Venter, 2014: online).



Figure 261: Steel column Lengau Lodge (Venter, 2014: online).



Figure 262: Gum pole column Lengau Lodge (Venter, 2014: online).



Figure 256: Columns of Ski Lodge (unkown, 2012: online).

## Construction Touchstone

The concept investigates on how architecture can be used as a mediator for the in-between space, pores and the interwoven. Preserving the environment is a challenge in the design process, especially because the site is in abundance with trees and has a few ant hills and animal nesting spaces. Investigating which trees are allowed to be removed allows for more flexibility in the design. The concept of pores as an architectural realm allows the builder not to harm nature, but to build around it. The site is based in a coal mining town and thus suggests that one can construct beneath the natural ground level and create possible usable spaces.

On the surface however, we face many obstacles identified as trees on site. The building can either avoid the trees, thus allow for in-between spaces or it can allow the trees to develop as part of the structural system. There is always at least one link between the experiences in one person's story, compared to another. The beginning and ending of every person's narrative remains the same, life to death. The tales of Lephale connects in various ways from start to date. The aim is to locate those in-between spaces where people are connected and how architecture can allow for these in-between spaces.

Another method of constructing around the trees is by building "in the sky", thus develop-

ing a layer above the trees. Thus, creating a distinct threshold between the natural environment and human made structures.

"People will become animals" just as buildings will form part of nature. human-made structures, ideas and rituals can in one way or another be connected or influenced by the environment they're in. The art is in how these two worlds unite like when the stereotomic merges into tectonic structures. Thus, the natural environment will adapt according to external influences, therefore people should work with the environment and not against it.



Figure 263: Construction Touchstone (Author, 2021).



Figure 264: Construction Touchstone (Author, 2021).

SITE =

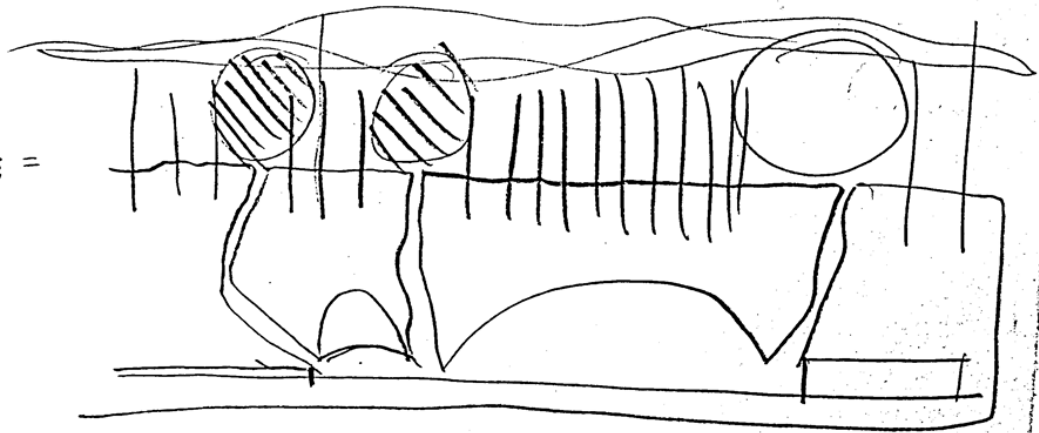


Figure 265: Construction Touchstone concept sketch (Author, 2021).



Figure 266: Construction Touchstone concept sketch (Author, 2021).

Kinetic device suggests the community engagement and interaction.

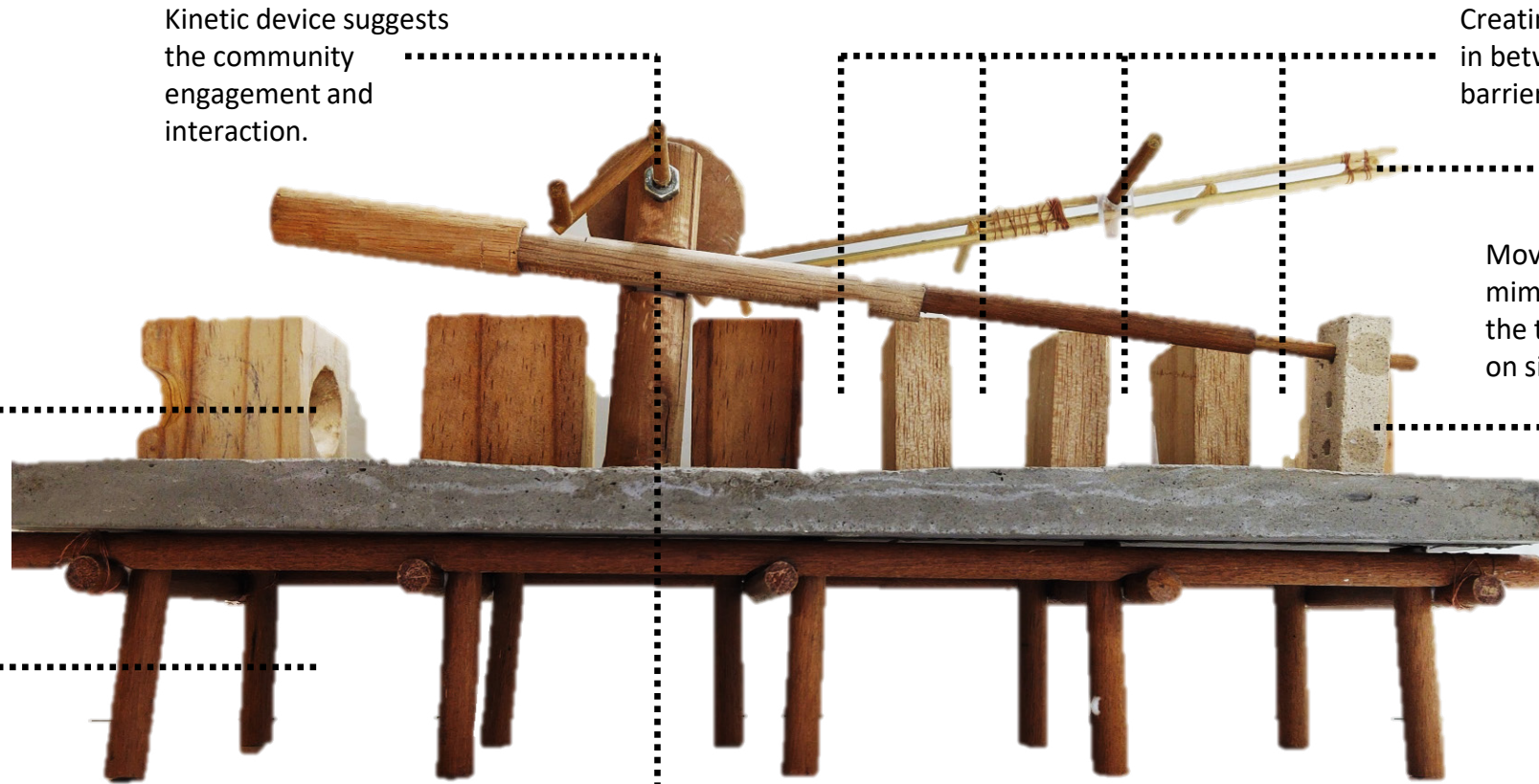
Creating spaces in between barriers on site.

Cubes not below the movable device (shade) allows to create spaces inside.

Movable device mimics the shade the trees make on site.

Creating spaces below dense areas.

Considering the materiality of the context and morphology around site.



This connections voices a connection between structure and nature. Working with the environment.

Figure 267: Construction Touchstone (Author, 2021).

## Exploration Model

An exploration of possible gum pole and other timber structural methods are investigated in the model on the left. The gum pole column forms a base of a possible external structure where the column 'grows' in between the basic timber construction next to it. The column thus mimics the suggestive idea of a tree in the bushveld, remaining true to the project site and landscape.

Ora Joubert Architects' detail in figureXXXX is flipped upside down in the model and the element is used in a new light. A single thick column is used at the base, just as a tree would grow and towards the top the column "branches" into two separate columns holding up the main beam to the possible roof connection. The evenly spaced out 'trees' also takes into account the lessons learnt from both Ora Joubert Architect and the builders of Plan B as it suggest a datum on which the beams are carried throughout the structure.

The separate timber design investigates of alternate uses of timber construction and to create a distinction between gum pole architecture and every day manufactured timber construction. It allows for a contrast of elements, as the structure has the potential to still be made out of a material other than timber.

The screen connects to the gum pole columns as an extension of the 'trees': It represents the filtered light that leaves create on the site. The angle is linked to the east elevation roof shape of House Tzaneen on pageXXXX

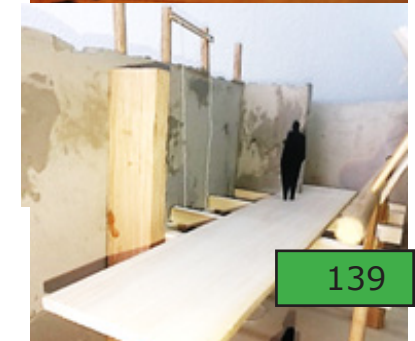


Figure 268, 269, 270, 271:  
Exploration Model  
(Author, 2021).

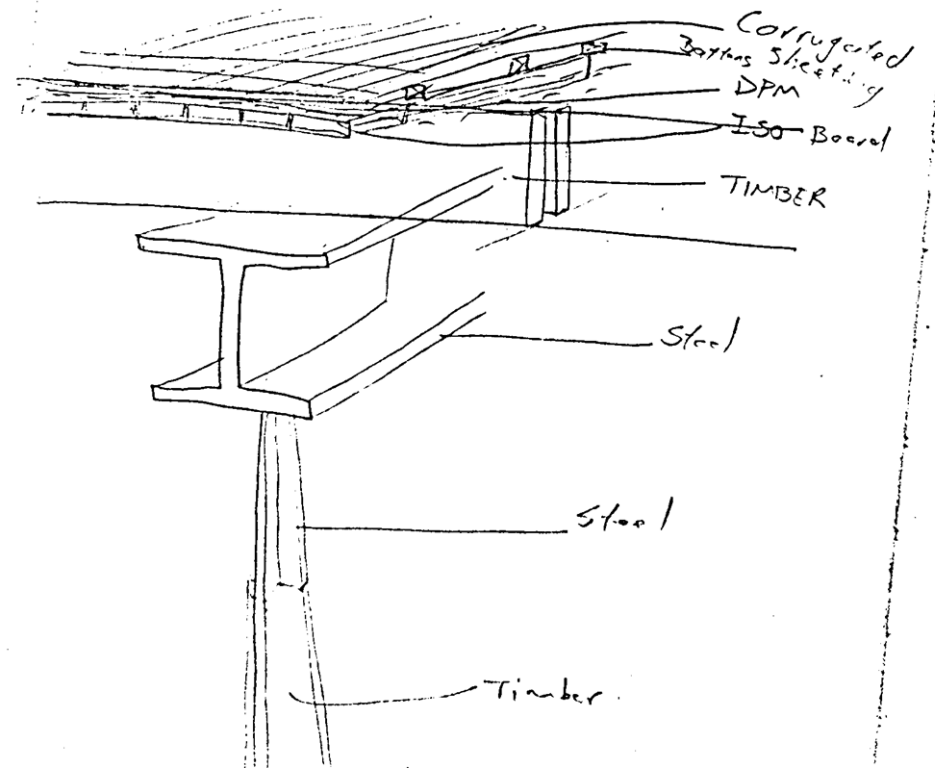


Figure 272: Combining steel and timber (Author, 2021).

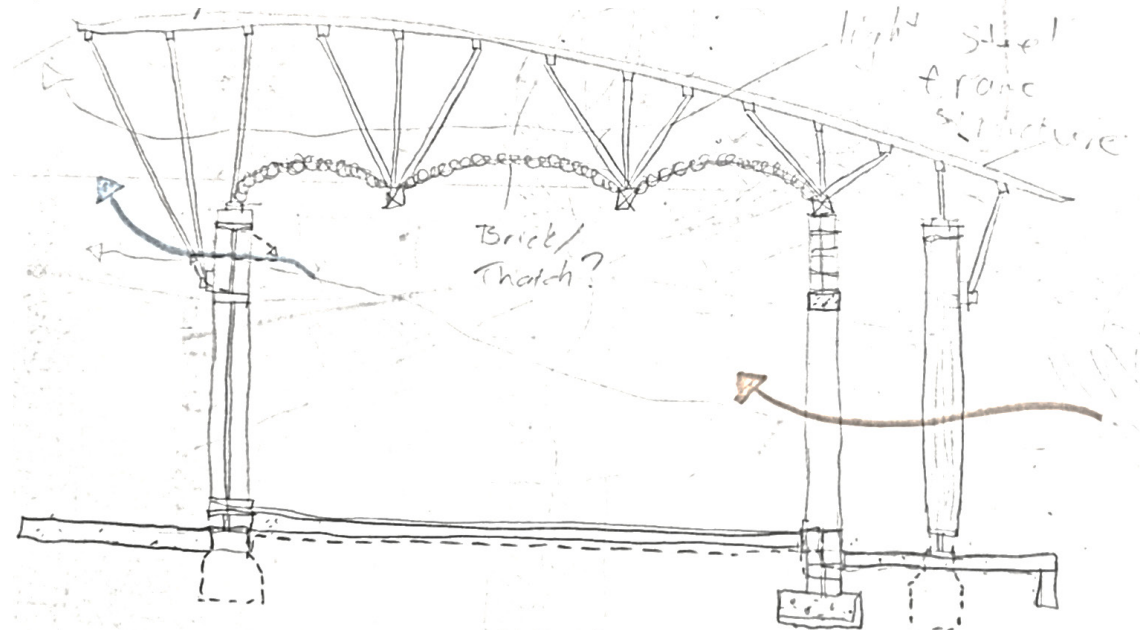


Figure 273: Francis Kere inspiration in a hot interior region (Author, 2021).

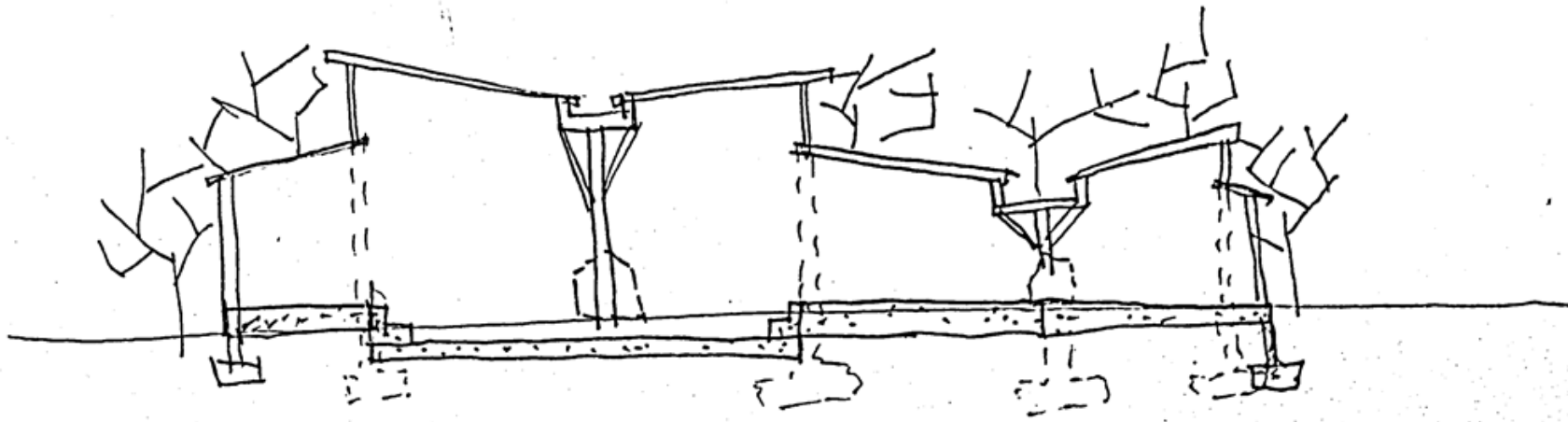


Figure 274: Rain water collection system(Author, 2021).



Figure 275: Raw materials and open structures (Author, 2021).

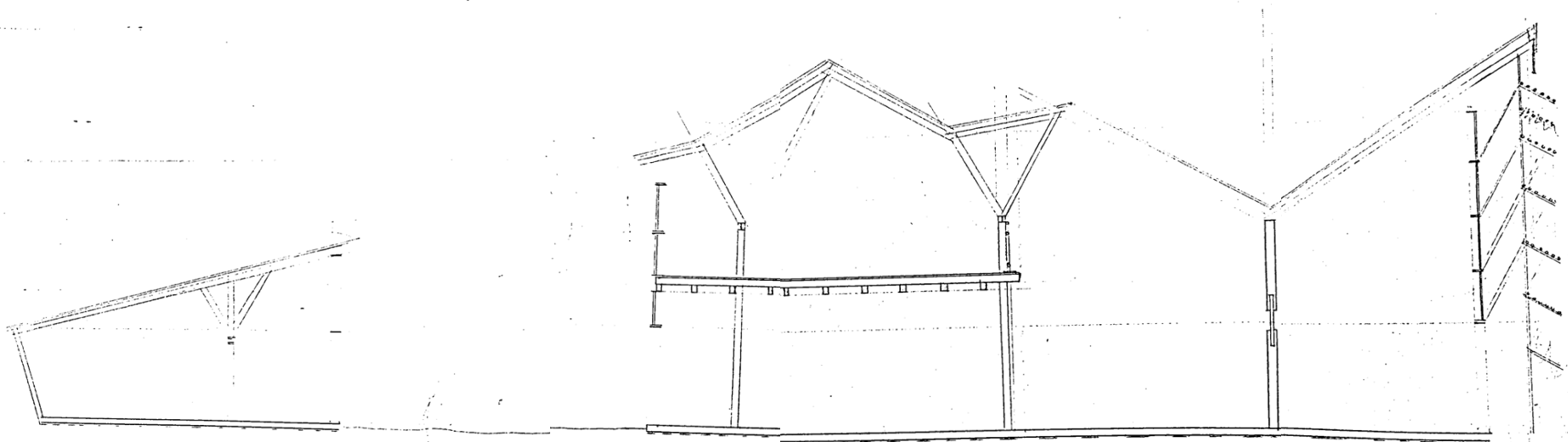


Figure 276: First section of culmination of elements already mentioned (Author, 2021).

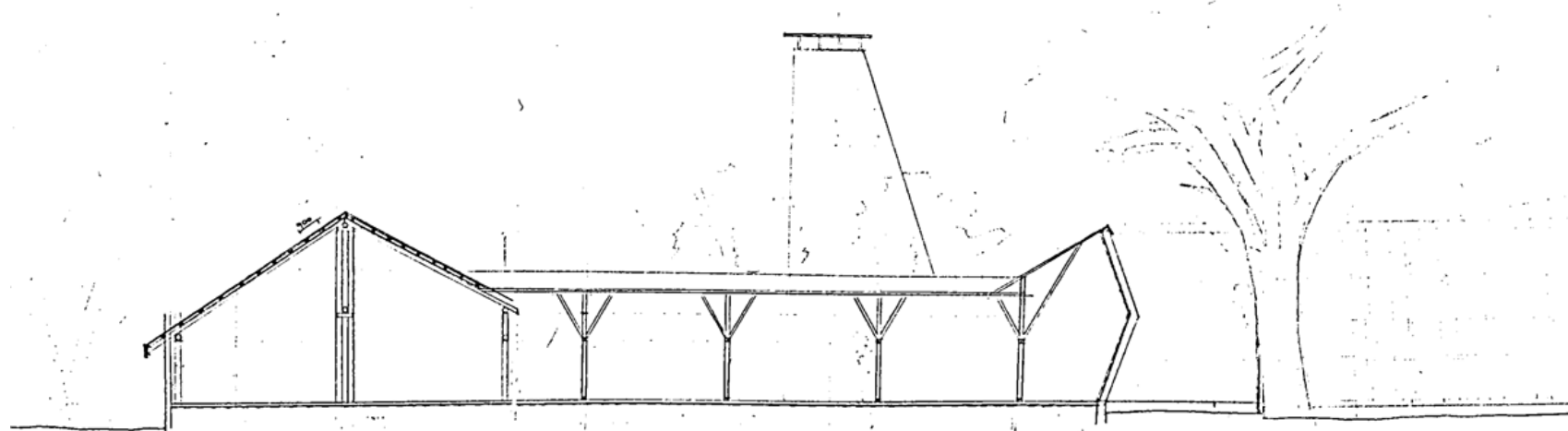


Figure 278: Third section and grounded to the earth (Author, 2021).

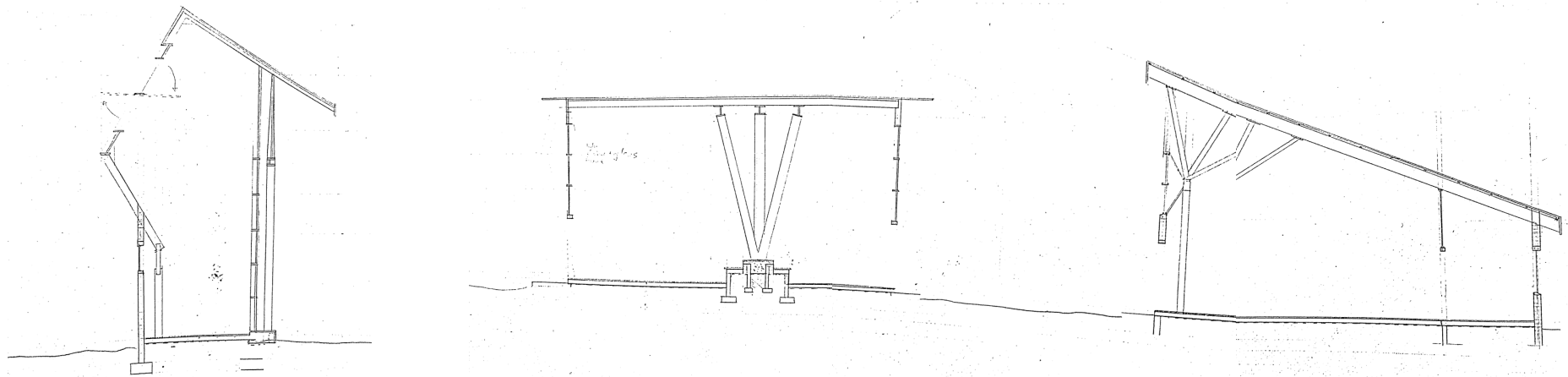


Figure 277: Second section and grounded to the earth (Author, 2021).



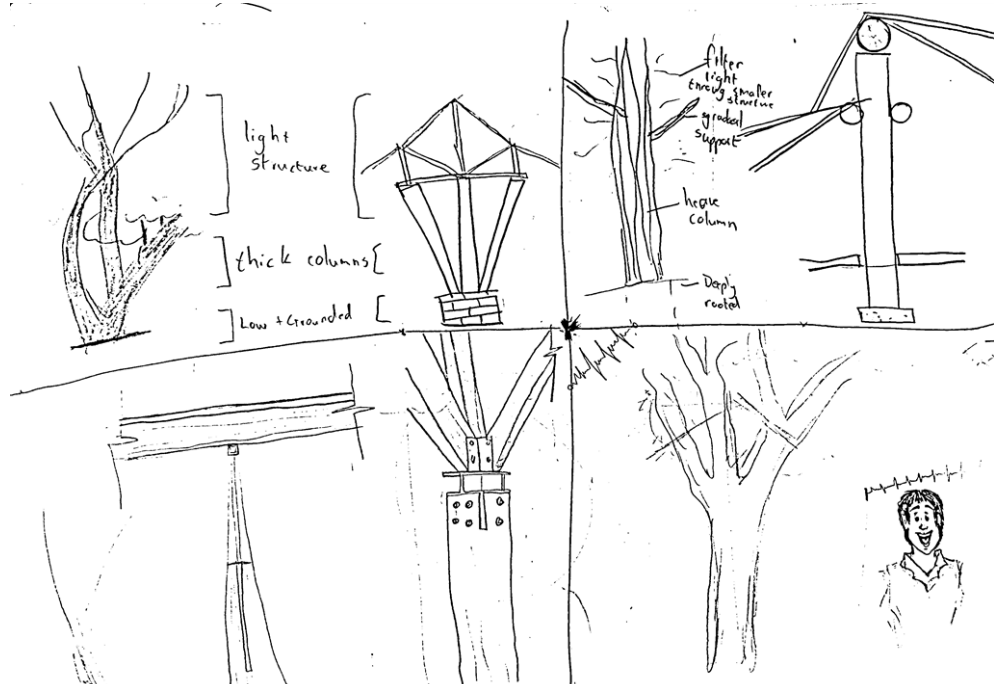


Figure 279: Trees become Columns (Author, 2021).

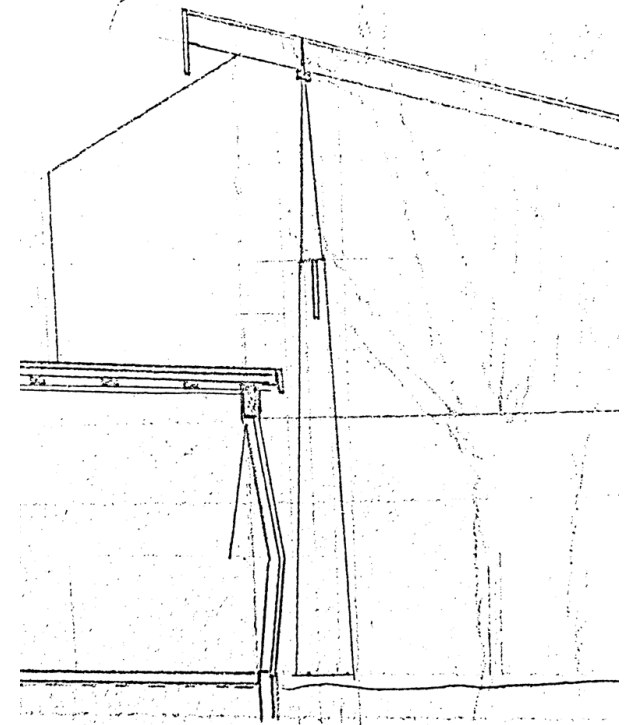


Figure 280: Timber, steel and thatch (Author, 2021).

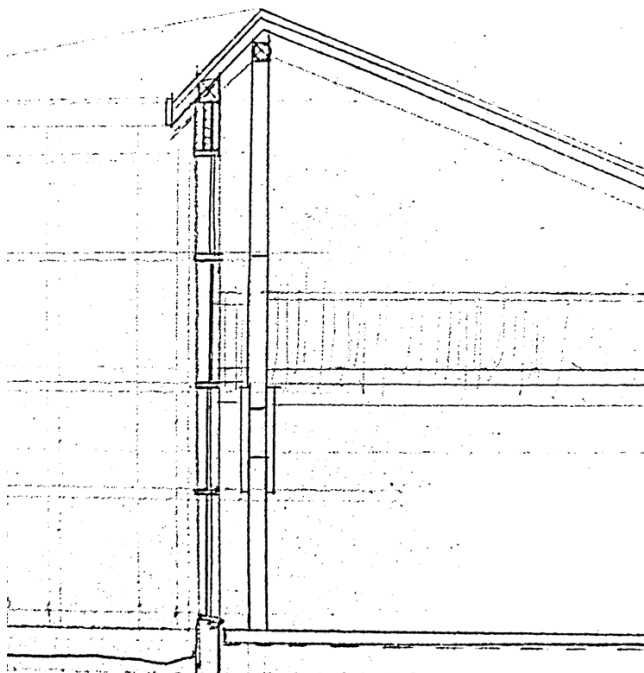


Figure 281: Steel substructure (Author, 2021).

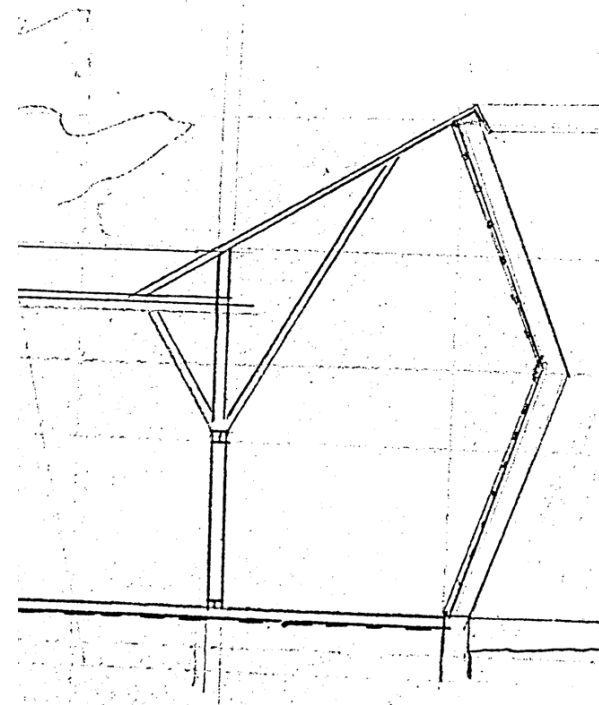


Figure 282: Eucalyptus, I beam and angled thatch wall (Author, 2021).

## Part 3: Design Development and Technical Synthesis

The building resolution is provided in this section along with the technical report, technical resolutions and the conclusion for the project.

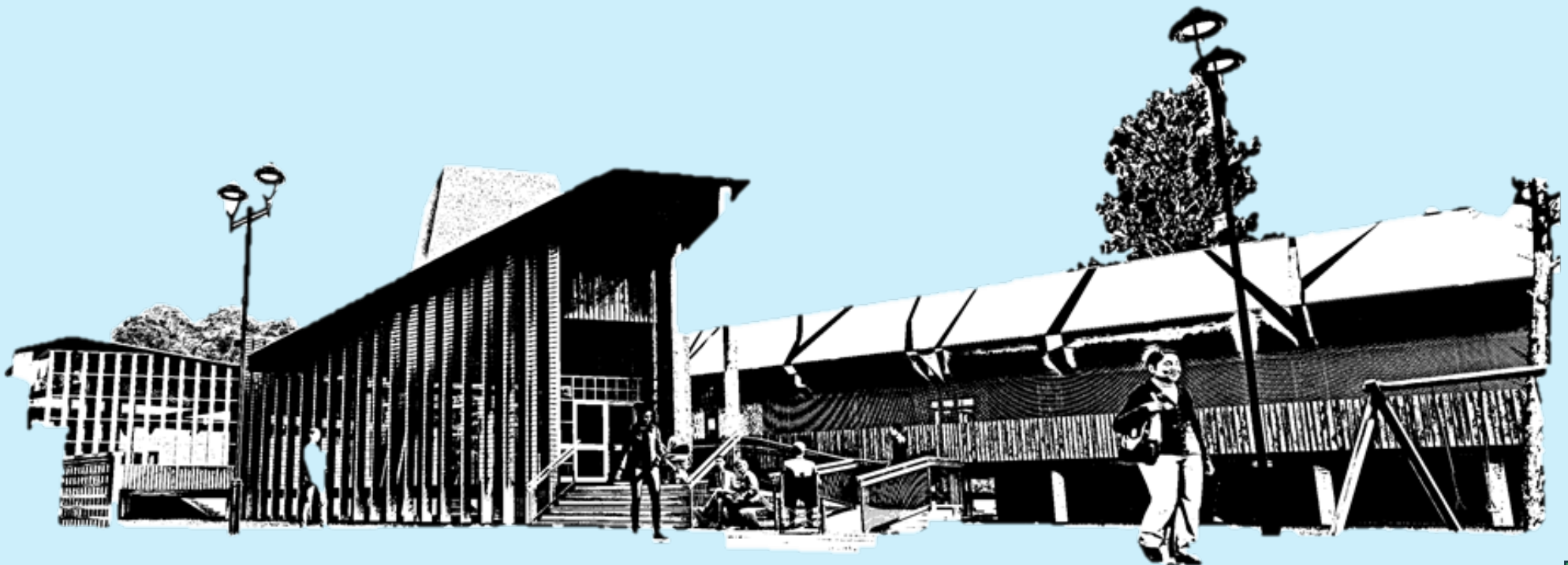




Figure 283: Building in context with surrounding buildings (1map, 2021: online adapted by author).

# A Final Summary

In January of 2021 I was visited by my late Grandfather in a dream. Our conversation lead to me visiting his grave in my hometown after which I visited all graveyards even the scattered graves up town. Oupa Rooi provided me with the understanding the impact each person who has passed had on the growth and development of the community. My late aunt visited me the next day and I visited the site where we scattered her ashes. She reminded me of the beauty and potential of the town and its people.



Figure 284: Site Context (1map, 2021: online adapted by author).

From replacing the tree to remembering moments and reacting to creation, the replanting and growing of spaces is required for a continuous exchange of narrative. The way different people connect in different spaces and finally capsulating those moments to be revealed again later. The people of Lephale requires the felt-real model to improve an exchange of memories.

The proposal is aimed at improving the community engagement and to allow a space that offers a form of ritual, cultural and knowledge exchange. Thus, providing a space where people can freely express their knowledge in the arts exhibit their work, discuss experiences and improve their education and feel connected to people they never thought they would.

When we zoom in on the site in Onverwacht the three living areas in Lephale, it is surrounded by dense vegetation. The ecology of the town and the trees in the area play a vital role in the culture of the community.

To the north of the site is the local library to the South is the old age home the West is occupied by sports grounds and the east is unactive parking and retail spaces. The yellow circle indicates unutilized asbestos office blocks to be removed. The blue is Guinea fowl nesting grounds an important animal linked to the culture of Lephale. This animal often crosses zebra crossings in between the golf course spread through town to the West of the site.

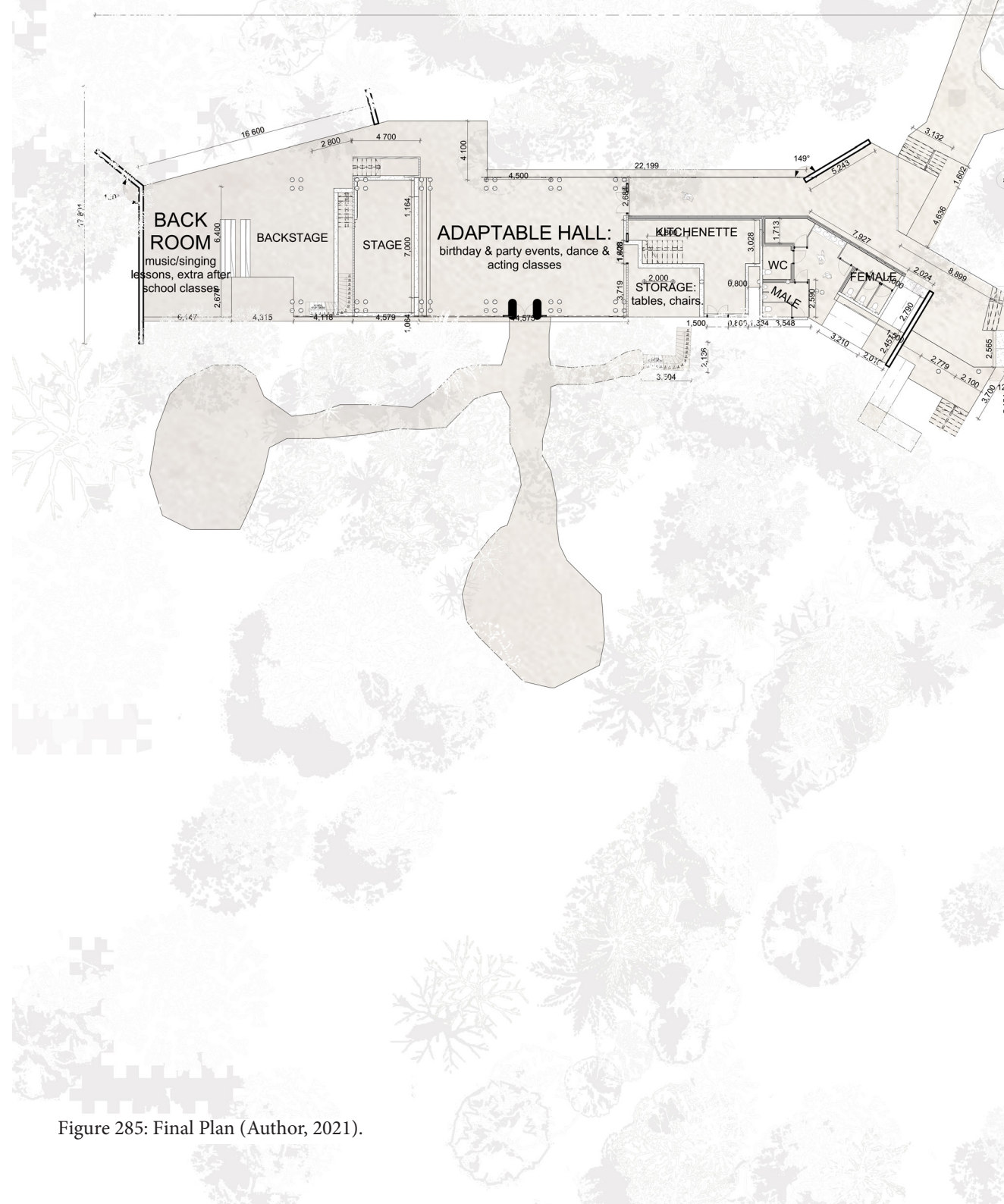
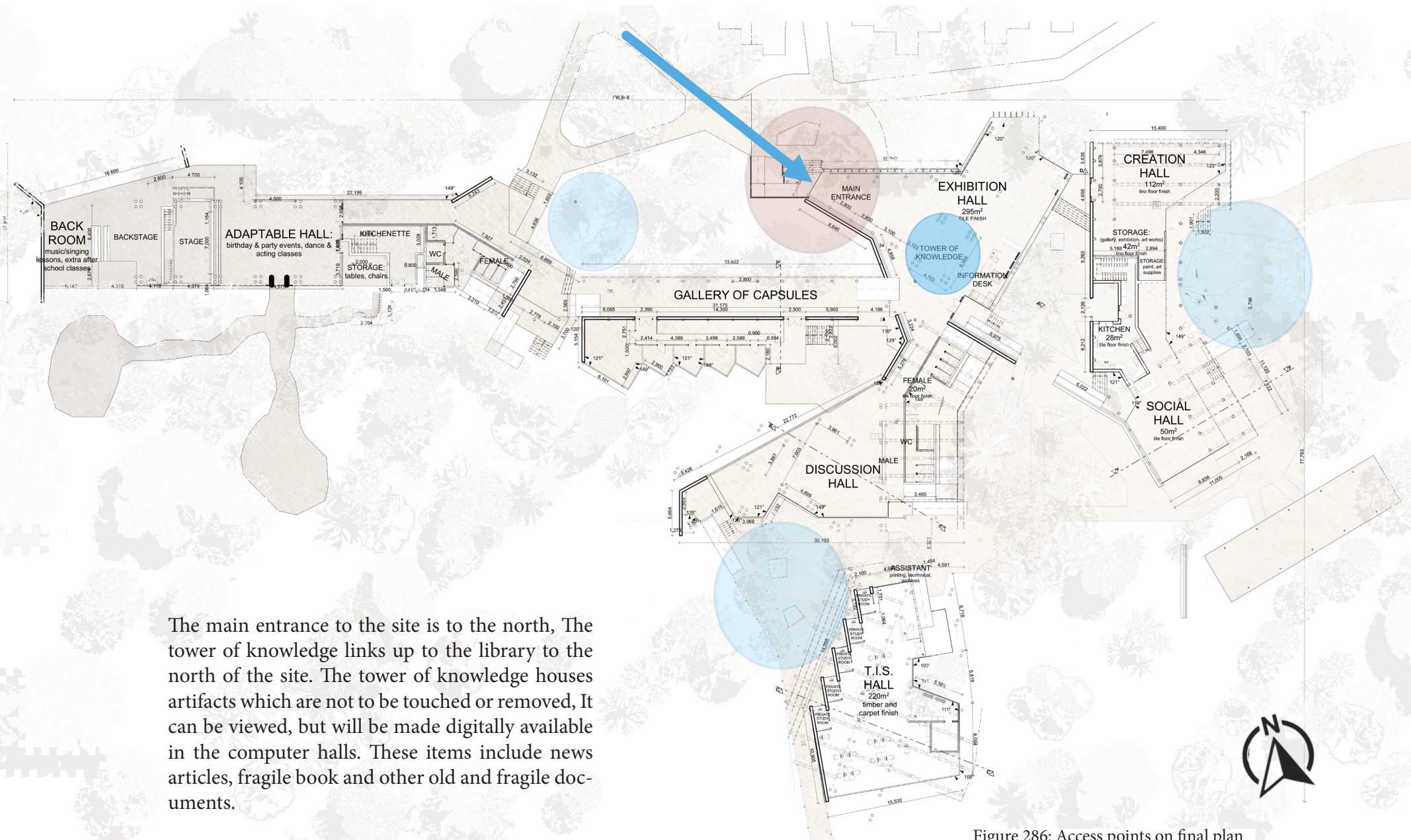


Figure 285: Final Plan (Author, 2021).



The site has large indigenous trees like Boabab, Knob thorn and Marula. The people of the town have always been very connected and respectful of the ecology and often compare themselves to some of these trees. Combining 3 concepts, I preserve every tree especially trees with a trunk diameter of 10cm. The design offers spaces for shared narrative and interweaves the people of Lephalale to the environment.

The building is situated on a quiet site in town in between the community engagements thus activating this part of town. The secondary construction is linked to the history of the mines and the skill the townspeople have with working with the material of steel. The choice of material is fundamental in the memory the people have of the place. Thus, sandstone is also included where the building is required to touch the earth, these are mainly services.



The main entrance to the site is to the north, The tower of knowledge links up to the library to the north of the site. The tower of knowledge houses artifacts which are not to be touched or removed, It can be viewed, but will be made digitally available in the computer halls. These items include news articles, fragile book and other old and fragile documents.

Figure 286: Access points on final plan (Author, 2021).

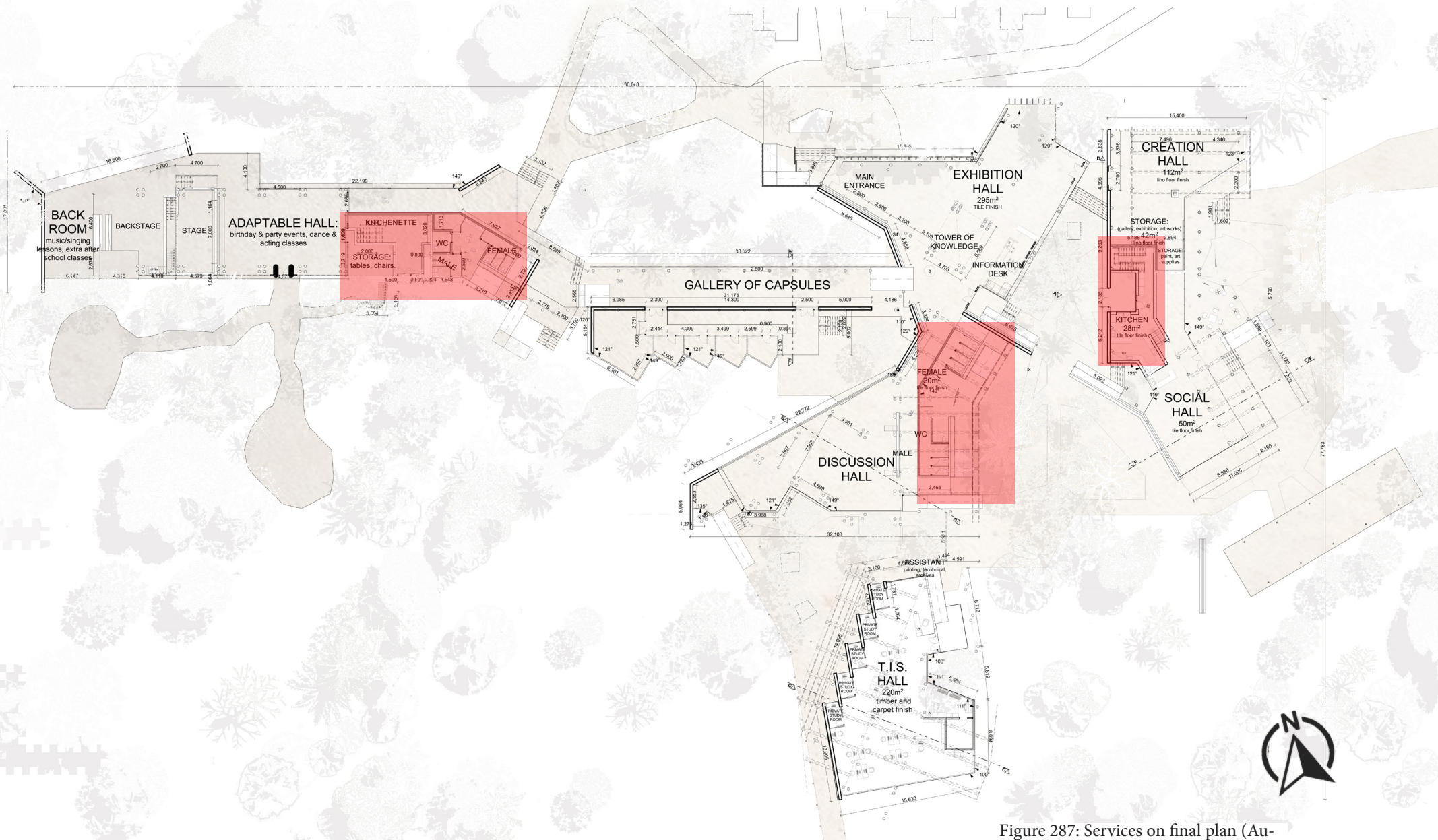


Figure 287: Services on final plan (Author, 2021).



Figure 288: West view of site (Author, 2021).



Figure 289: Tower of Knowledge (Author, 2021).



Figure 290: West view of site (Author, 2021).

The tower of knowledge is located in the exhibition hall which is also linked to the creation hall to the east and it was designed to create a point of orientation and identification - a way to access the memories. The gallery of capsules houses artifacts like that of Claris Dryer, a geologist in town. The preservation of memories of people become encapsulated in the gallery of capsules. The detail is inspired by the disjoint-

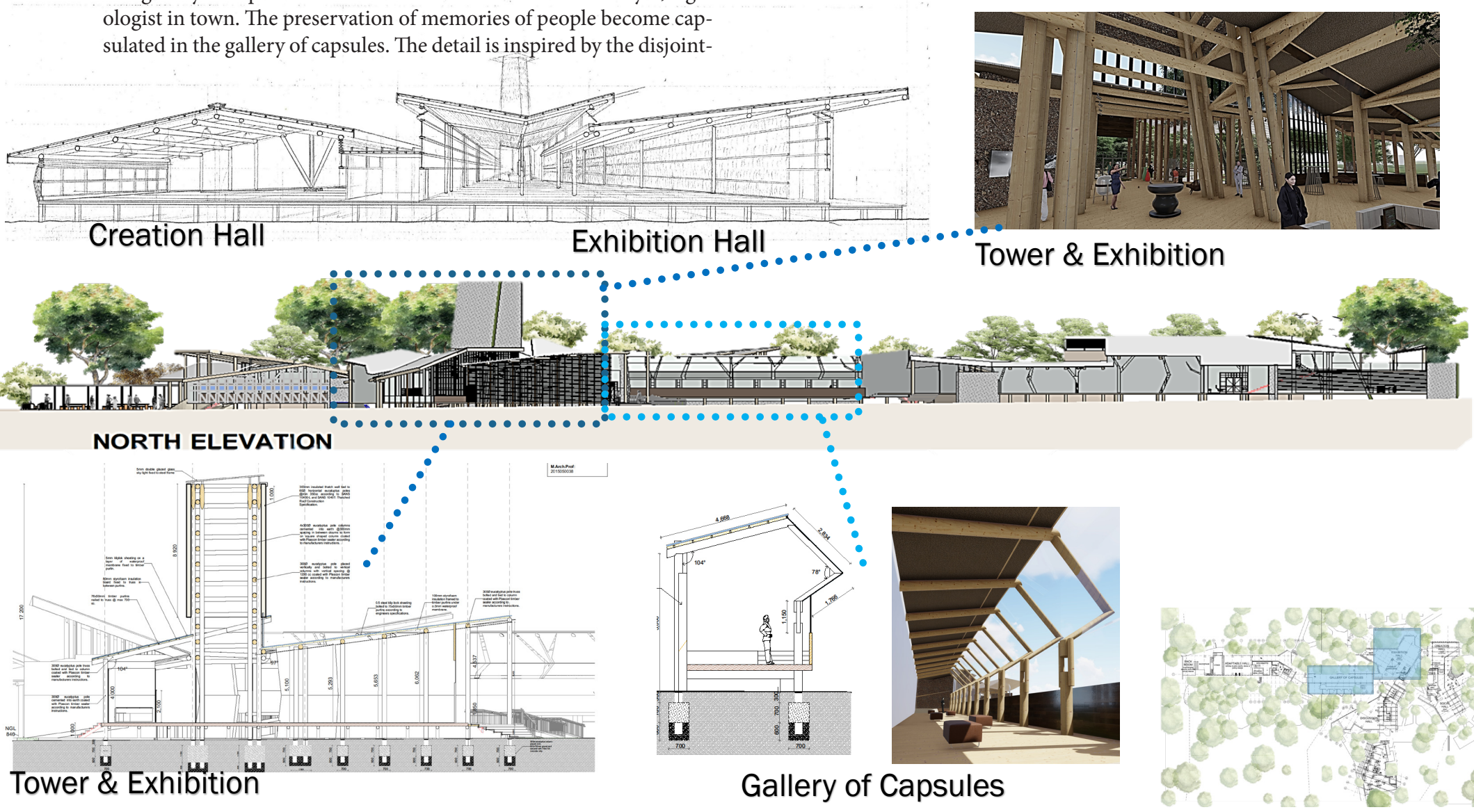
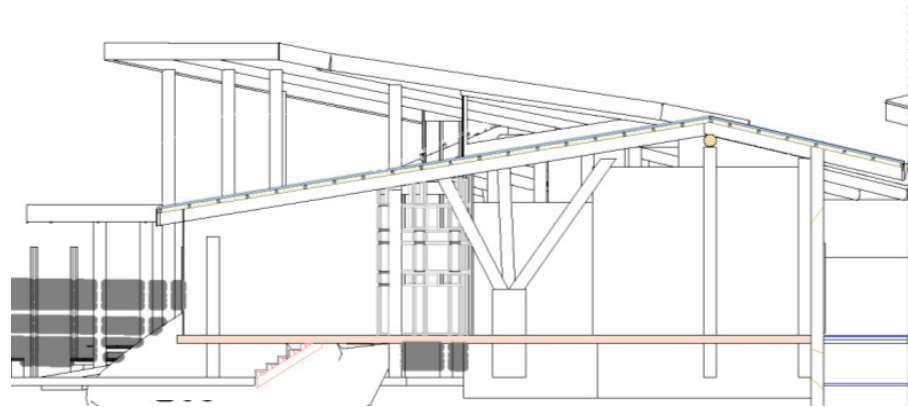


Figure 291: Creation hall, Exhibition hall and Gallery of Capsules (Author, 2021).



**EAST ELEVATION**



**East Entrance to Social Hall and Creation Hall**

ed community and creating a link to connect people. The east of the site houses the creation hall and the social hall. The creation hall is linked to the exhibition hall. The detail of the construction mimics the large Marula tree, carrying the weight of the community's desire to create, which is fitting as the community makes use of the marula fruit to create new products.

The social hall connects the hospital, the old age home and the rest of the community. The elderly residents used to have a space nearby space to go have breakfast, but since the owner of the previous shop passed away this new one would bring back that lost memory.

The use of thatch walls is also very prominent, it insulates building and is connected to the memory of a commonly used material in the area. The computer hall and discussion hall to the South of the site creates a connection between the youth and the elderly. The youth does not have computer facilities in town as required and this also links the building to the library again. The elderly also have a space to better connect themselves to the rest of the community without traveling far.

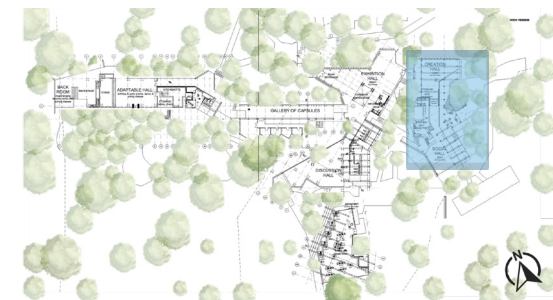
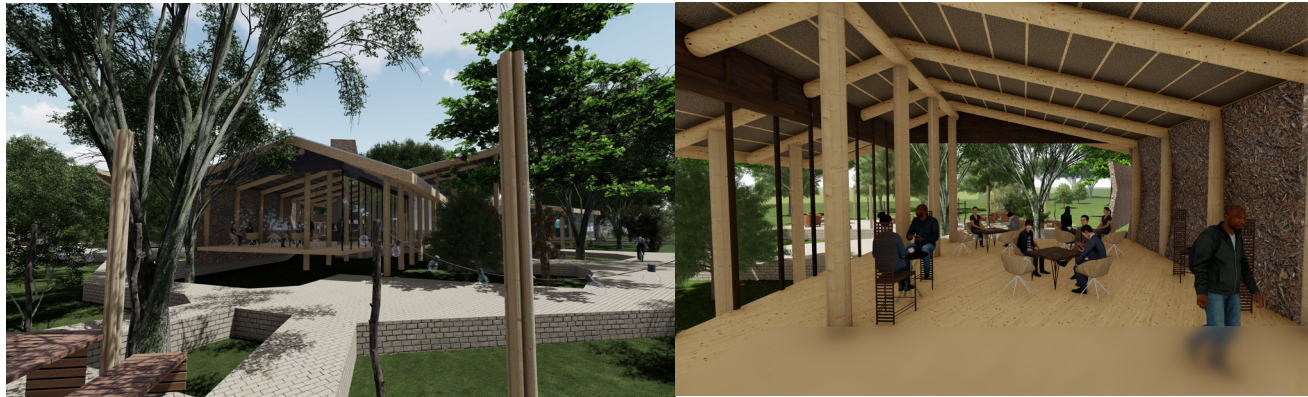
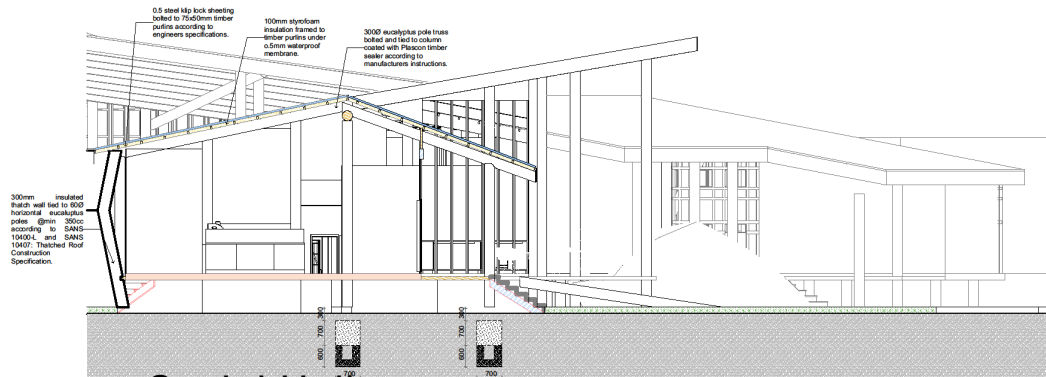
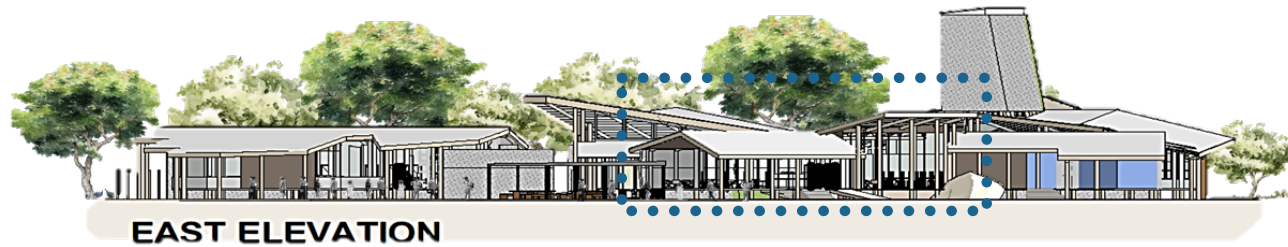


Figure 292: Creation hall images(Author, 2021).



South of Social Hall



Social Hall

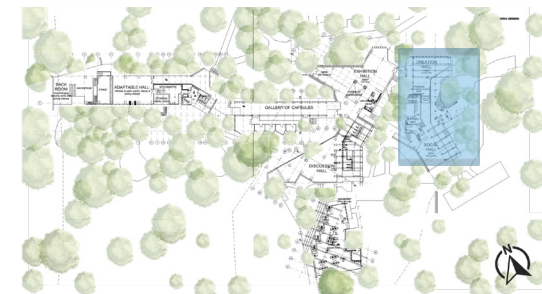
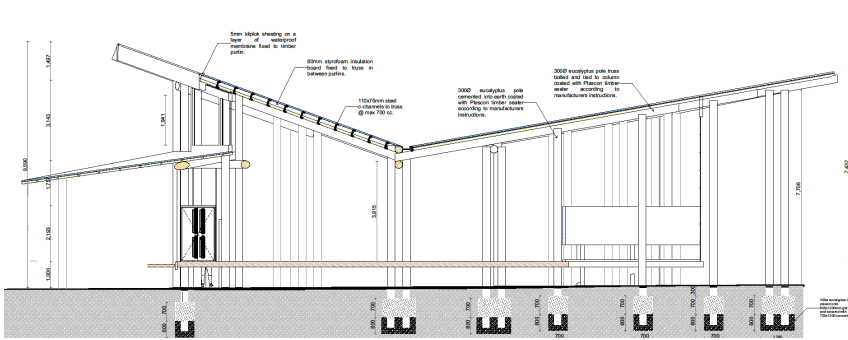
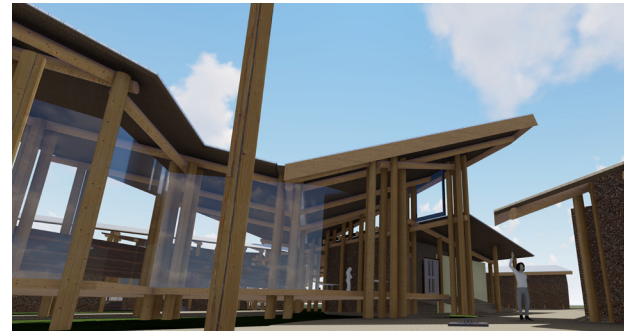


Figure 293: Social hall images(Author, 2021).



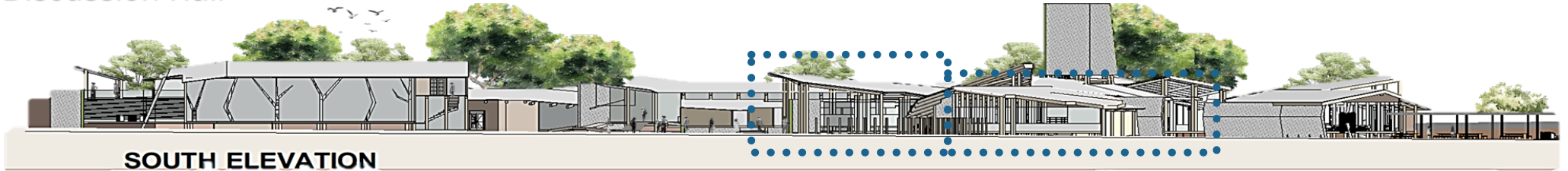
Discussion Hall



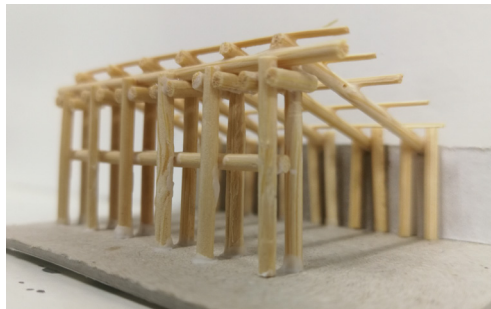
Discussion Hall



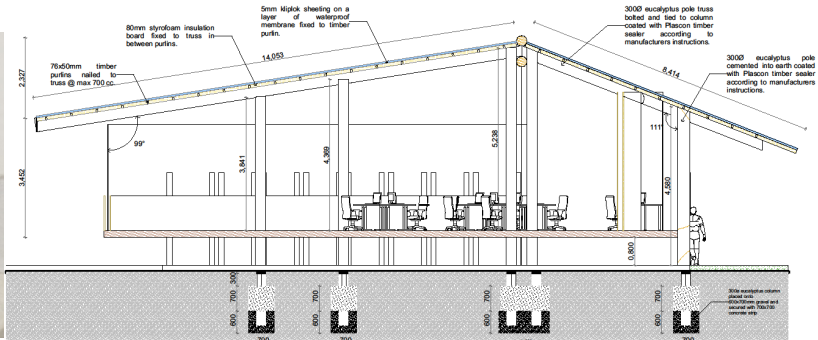
Discussion Hall



SOUTH ELEVATION



Primary Structure of Computer Hall



Computer Hall

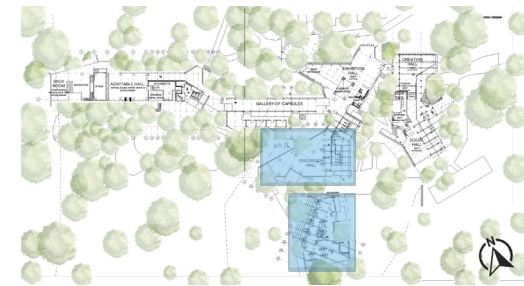
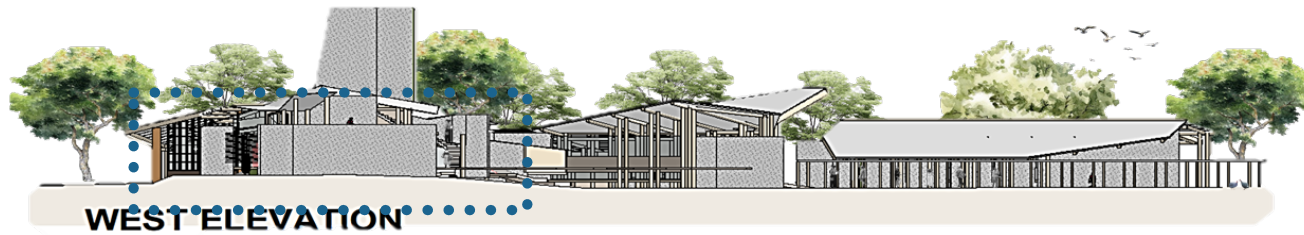
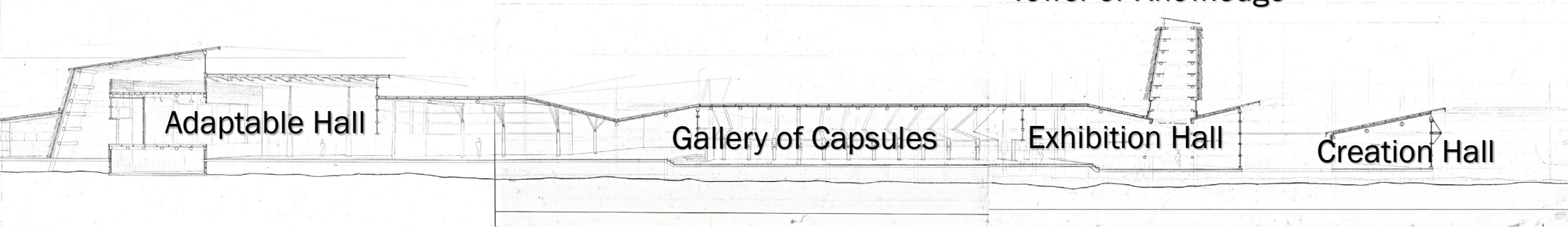


Figure 294: Discussion hall and Computer hall images(Author, 2021).

# Tower of Knowledge



Adaptable hall and music rooms are located to the West close to the sports grounds. The adaptable hall can be used for community gatherings, classes or events. The music room will be used as teaching facilities for people who travel out of town to come and teach the community skills not offered in town.

The building is about reliving memories in a new post-apartheid South Africa and continuing the exchange thereof. The project succeeds in providing a space where the reliving of crafted memory can be attained and embraced in a different cultural setting.



Platform facing Nesting



Adaptable Hall

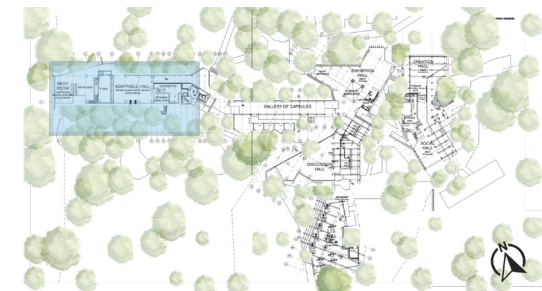


Figure 295: Adaptable hall images(Author, 2021).





Figure 297: Final model; entrance (Author, 2021).



Figure 298: Final model; parking (Author, 2021).



Figure 299: Final model; site view from North (Author, 2021).



The hub does not romanticize the past, it does however lay the foundation that accentuates the dialogue of Lephalale and its community for the future and the present. The building is thus constructed memory in writing and finally as lived space, offering a new way for the community to connect.



Figure 301: Final model; social and creation halls (Author, 2021).



Figure 302: Final model; parking (Author, 2021).



Figure 303: Final model; path to social and creation halls (Author, 2021).



Figure 304: Final model; exhibition (Author, 2021).

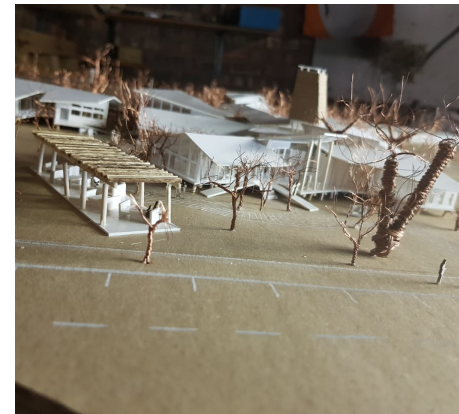


Figure 305: Final model; exterior of social hall (Author, 2021).



Figure 306: Final model; Roof view (Author, 2021).



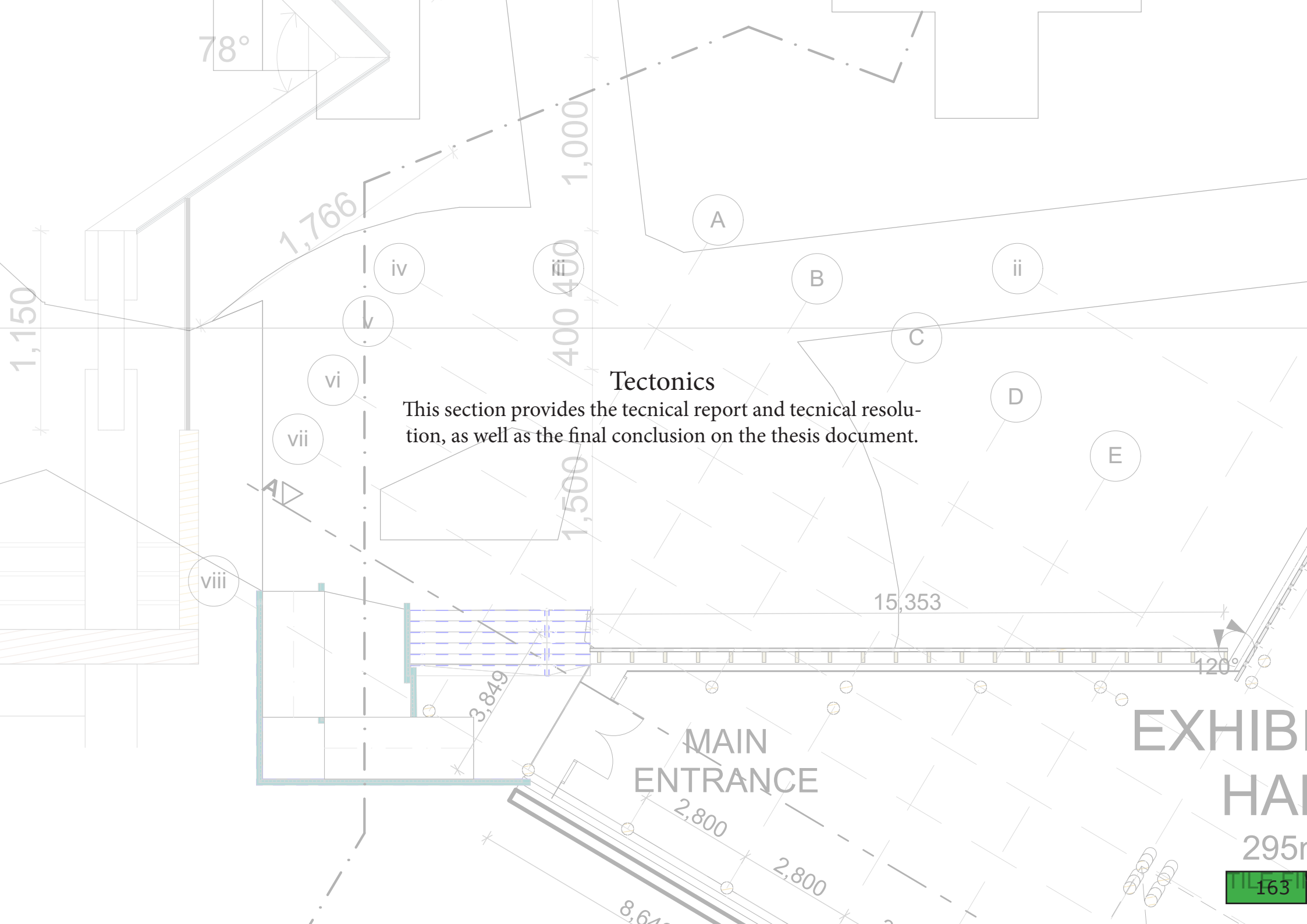
Figure 307: Final model; view from guinea fowl nesting (Author, 2021).



Figure 308: Final model; view outside adaptable hall (Author, 2021).



Figure 309: Final model; Western view (Author, 2021).

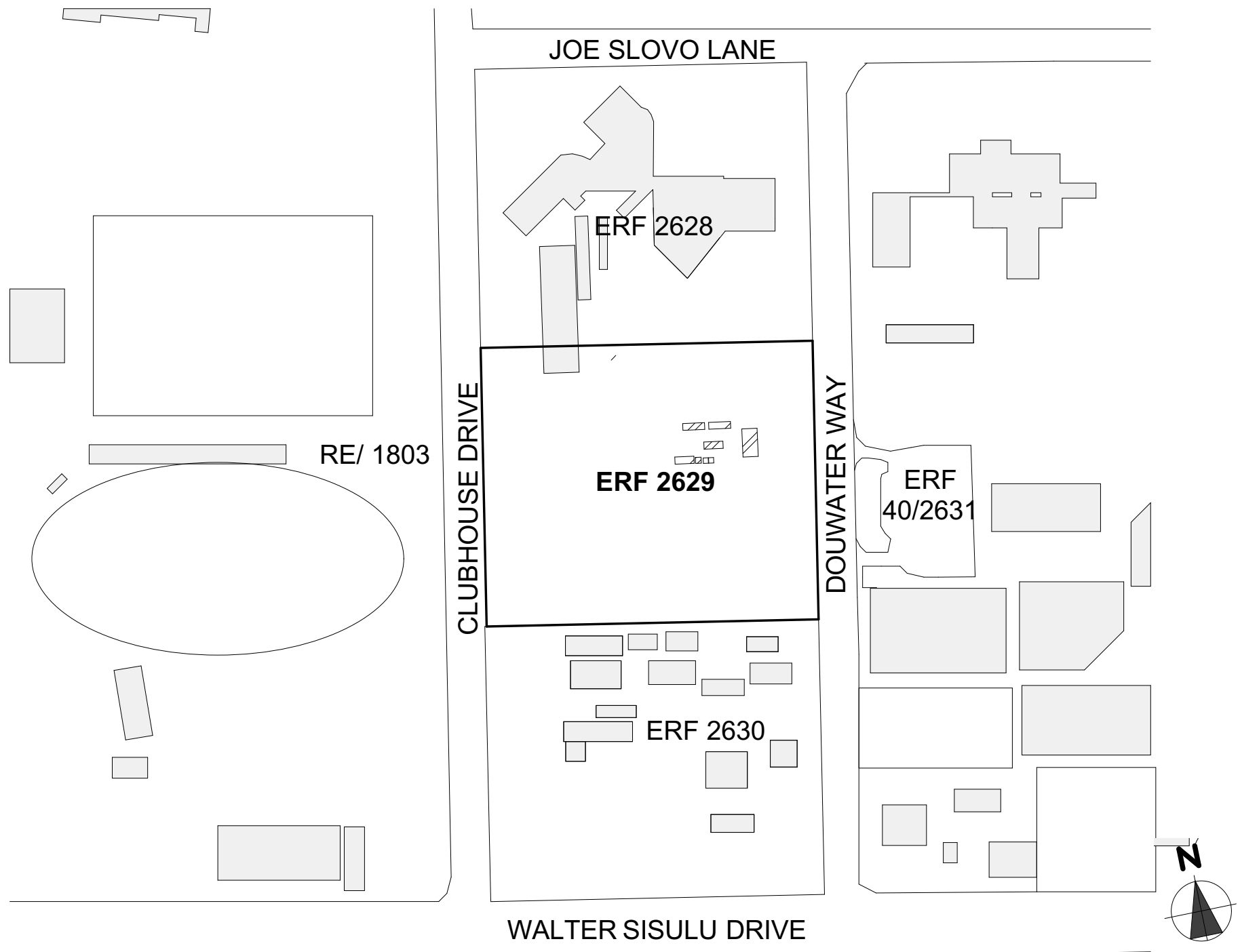


### Tectonics

This section provides the technical report and technical resolution, as well as the final conclusion on the thesis document.

EXHIBIT  
HALL

295m



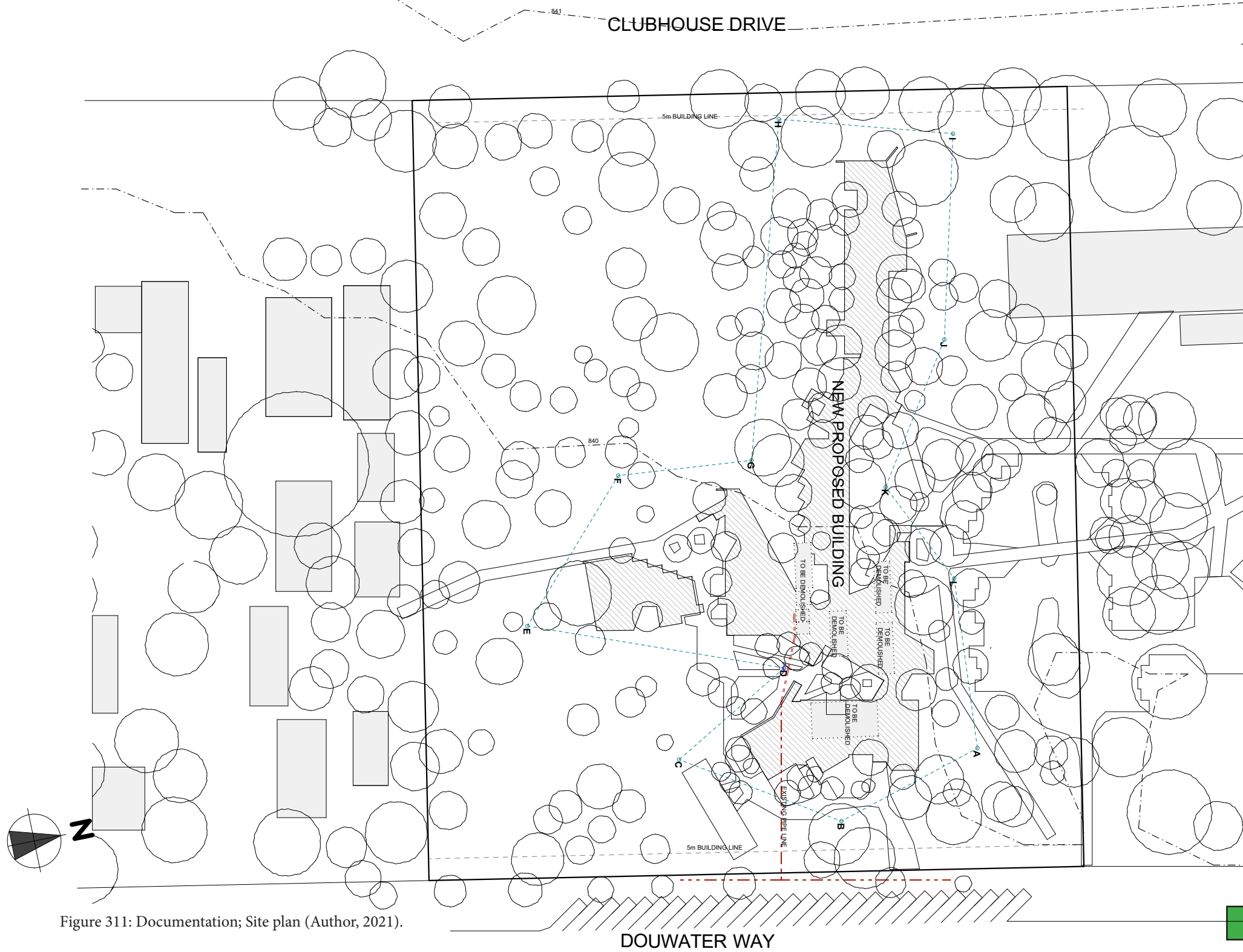


Figure 311: Documentation; Site plan (Author, 2021).

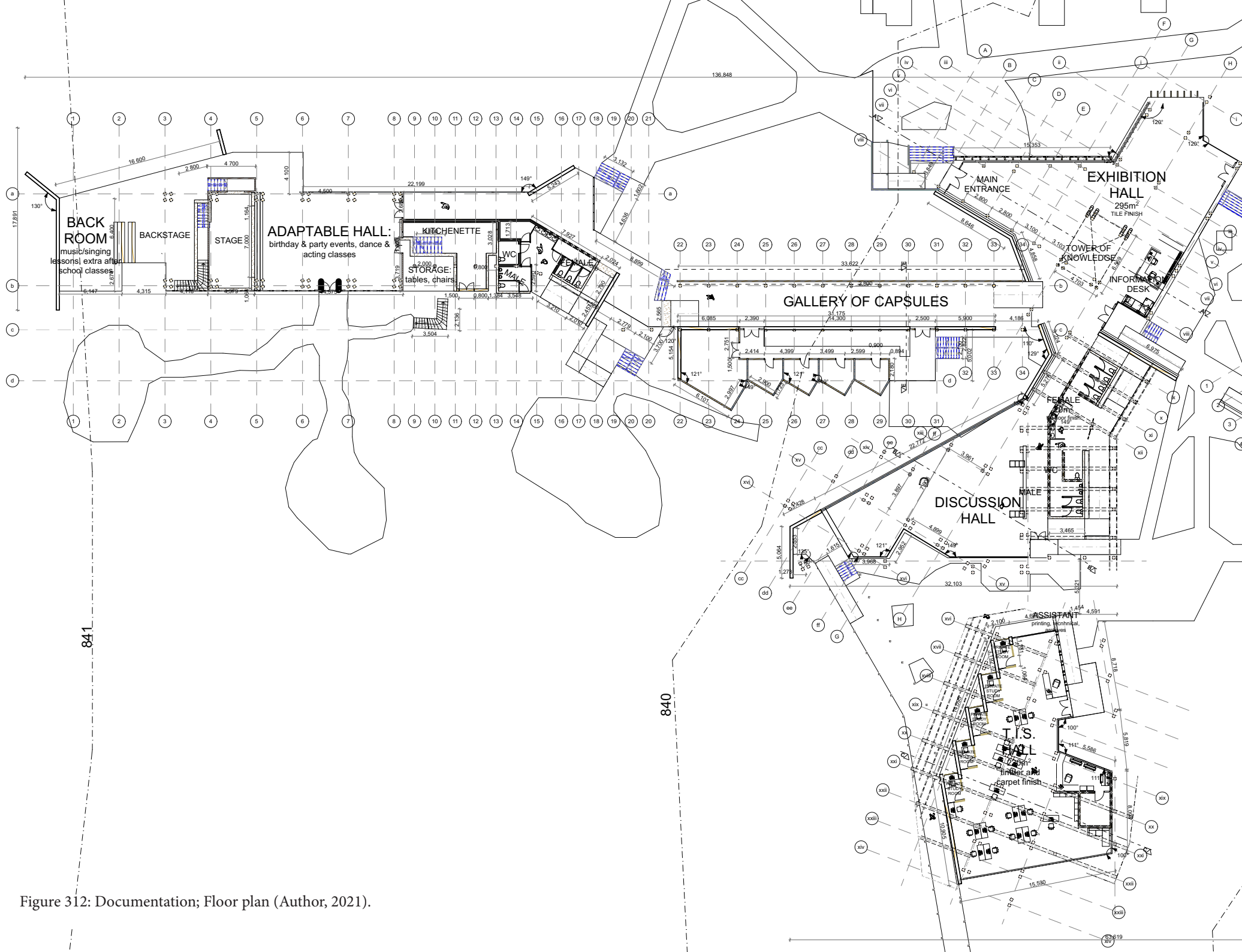


Figure 312: Documentation; Floor plan (Author, 2021).

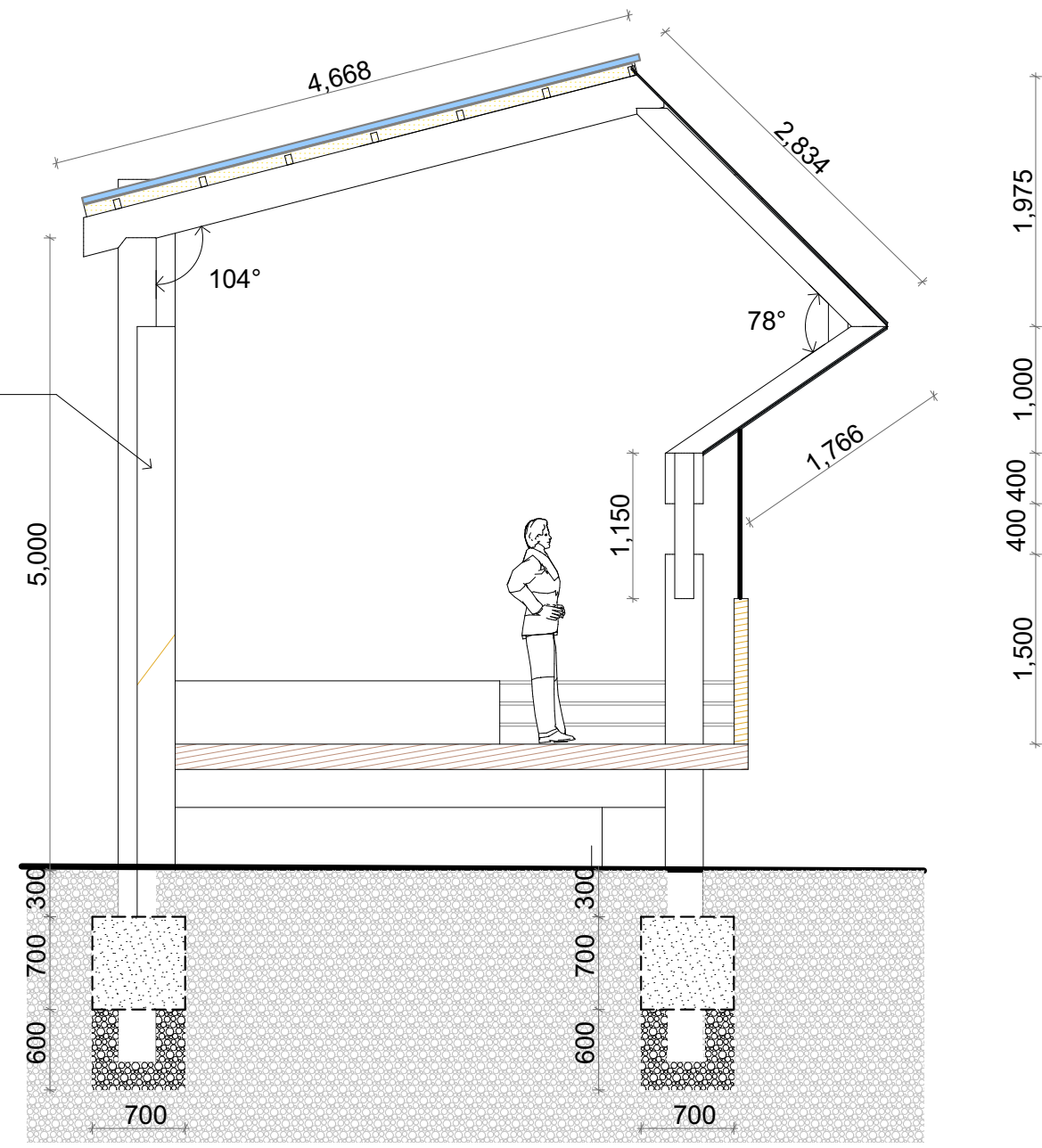
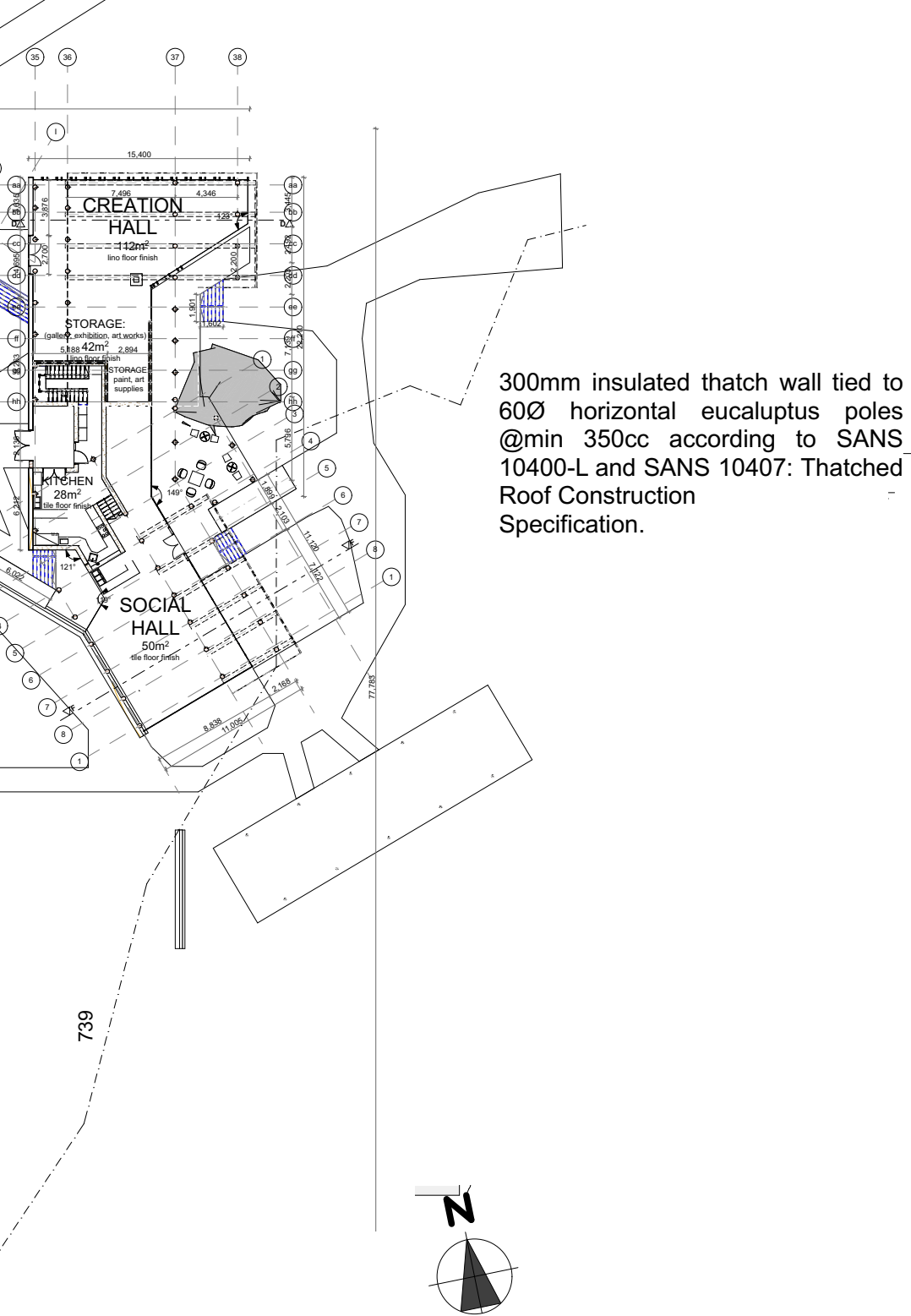


Figure 313: Documentation; Section E-E (Author, 2021).





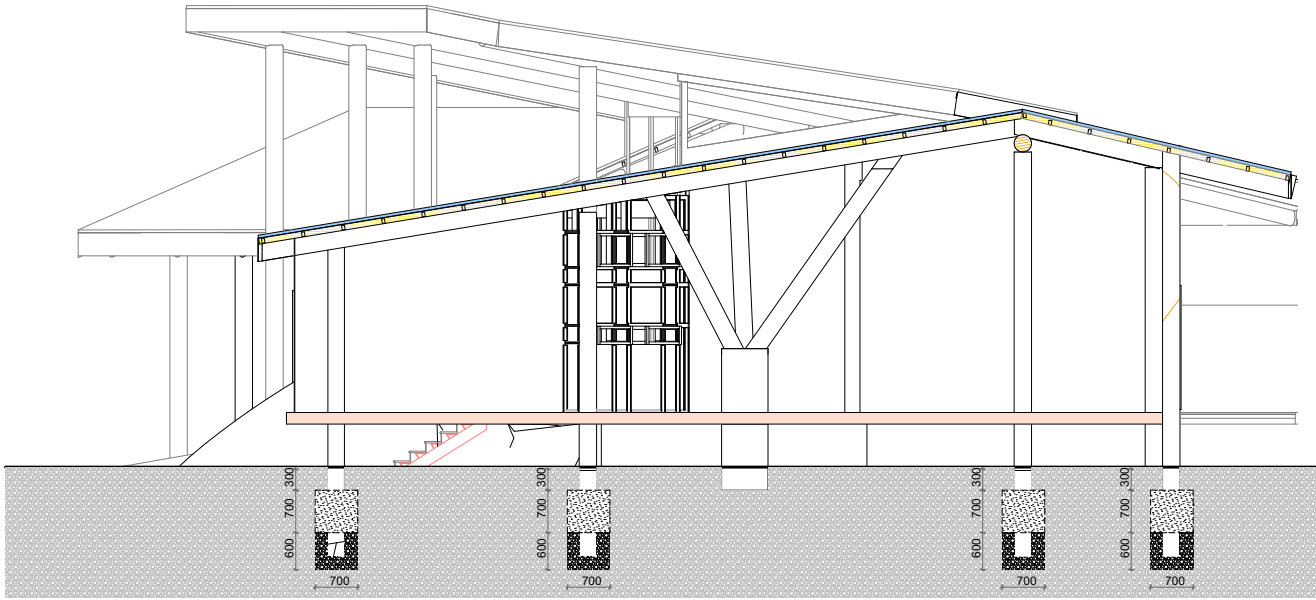


Figure 317: Documentation; Section D-D (Author, 2021).

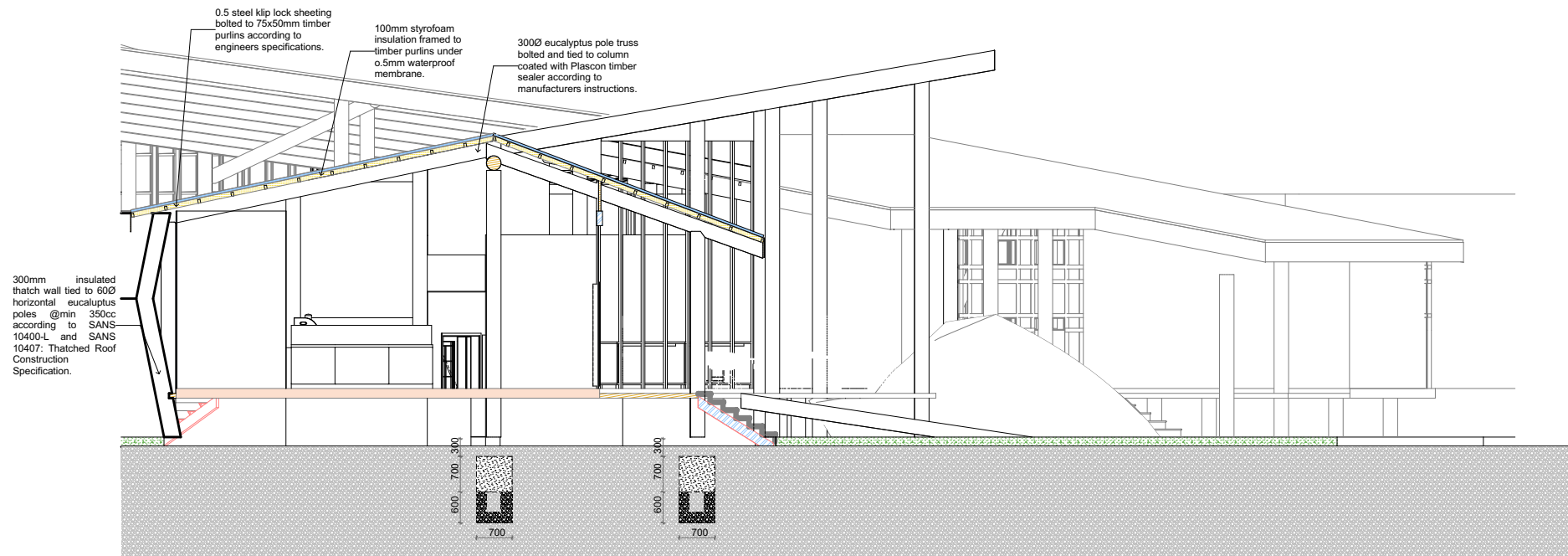


Figure 318: Documentation; Section F-F (Author, 2021).

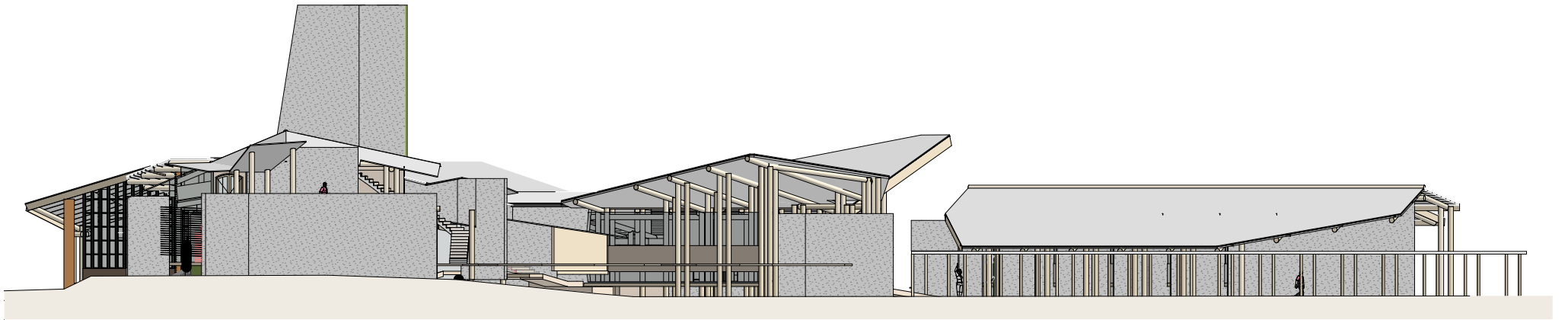


Figure 319: Documentation; West elevation (Author, 2021).

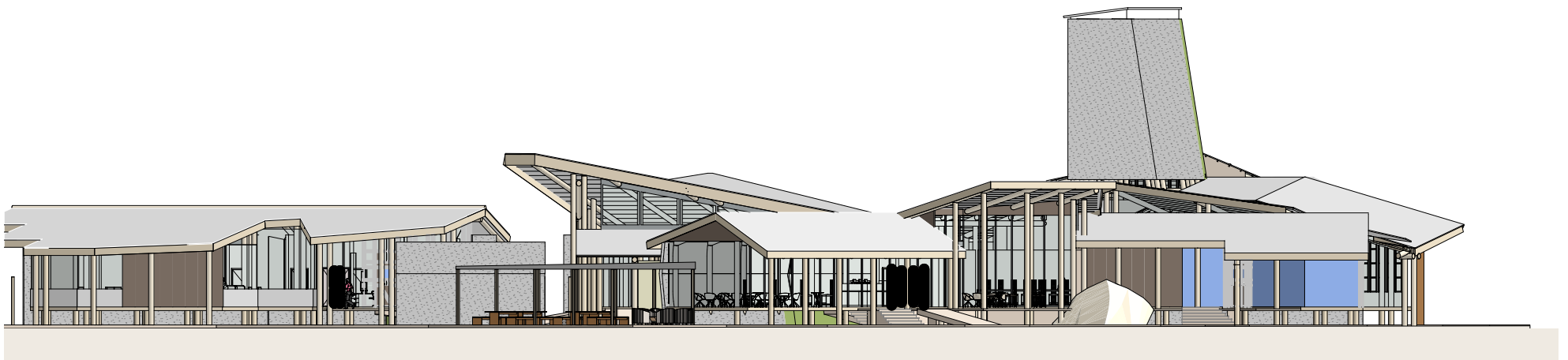


Figure 320: Documentation; East elevation (Author, 2021).

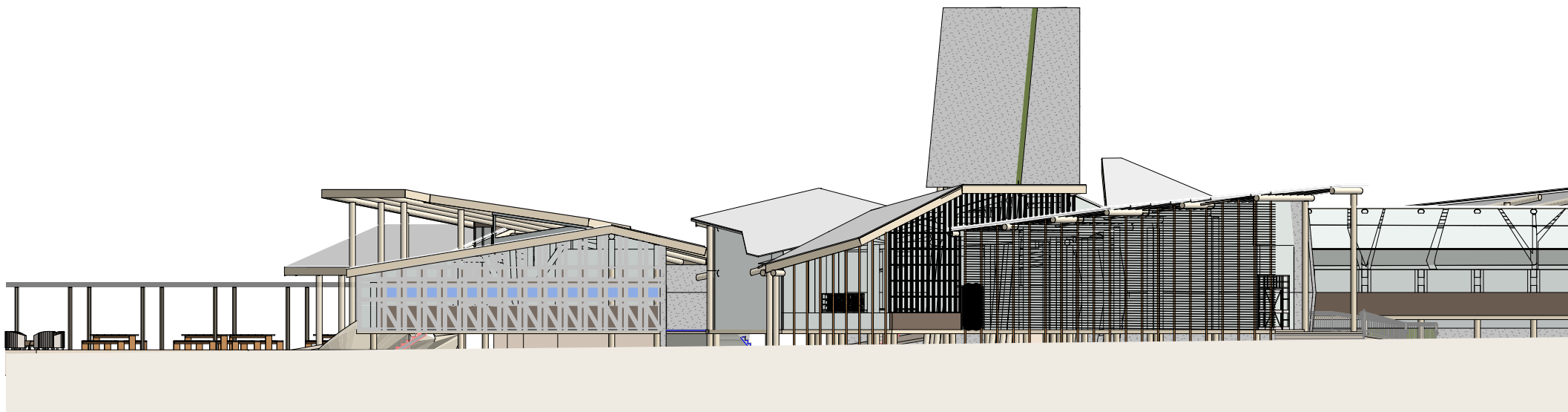
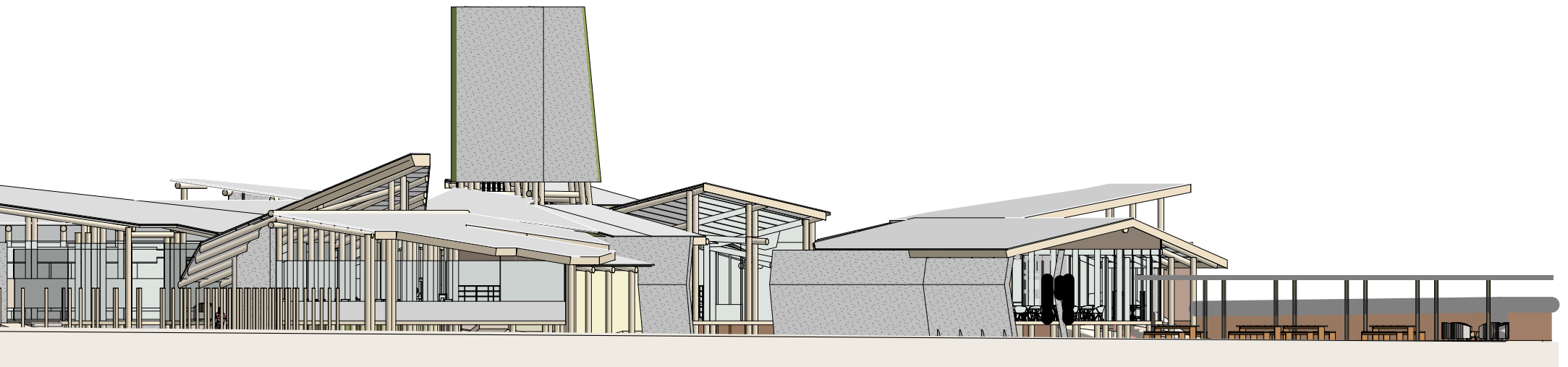
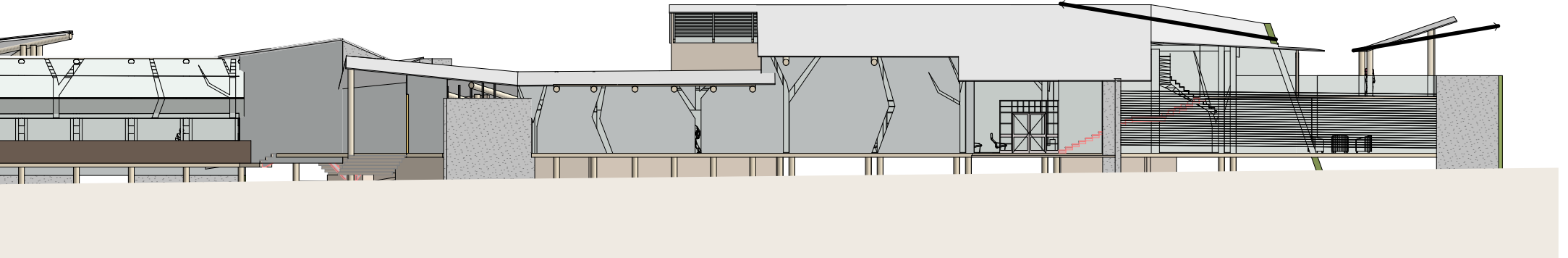


Figure 321: Documentation; North elevation (Author, 2021).



Figure 322: Documentation; South elevation (Author, 2021).



## Conclusion

The building is a space where nature, community and knowledge is celebrated and promotes the reliving of memory exchange. The memory exchange hub is an educational building as it offers learning tools that are not provided anywhere else in the public facilities in the Onverwacht ara. The building also combines functions that are far away from one another and allows these activities to cohesively function on a single central site in the town's developing sector. These functions each accommodate a series of different forms of memory exchanges to occur, like that of spiritual memory, place memory, subsequential memory, collective memory, emotional memory and action memory. Each one the forms of memories allows the structural possibilty through the felt-real model where the memory exchange hub becomes a metaphysical as well as a physical model for interactive share of knowledge, narratives and experiences.

The building is fixed between the retail sector and the sports and recreational facilities, thus cotributing to an escape where people can learn, create and socialise with other members of the community.

Designing a building with a minimum carbon footprint is achieved by making use of gum pole construction as primary structure, as it does not require heavy machinery. The trees are not an indigenous and therefore does not harm the direct environment and the concept of preserving the trees on site. The secondary structure consist of light steel frame structure which contributes to the town's skill set with working with the material.

The building achieves its purpose as it provides a space where people from Lephallale can connect through reliving and recreating memories and also share knowledge.

## Part 4: Reflection

No one could fully prepare me for this year was going to entail. Firstly, I experienced internal spiritual growth, I speak to my ancestors more now than I ever did. I don't always trust their guidance, but they care over me.

I thought this project would be about honouring the memory of the dead, but in actuality it's all about reliving memories in a new post-apartheid South Africa and continuing the exchange thereof. The project succeeds in providing a space where the reliving of crafted memory can be attained and embraced in a different cultural setting.

The design process was challenging because I did not move on to sections and elevations quickly enough. Most of my focus went into planning as I did not have much past experience in working with a natural landscape. Even though the site was situated in the centre of a town, establishing it as an urban context, it was challenging to cohesively accommodate the people, animals and preserve trees in a public building in town.

The hub does not romanticize the past, it does however lay the foundation that accentuates the dialogue of Lephale and its community for the future and the present. The building is thus constructed memory in writing and as lived space.

I have however prepared for this year through gathering materials that I could reuse as I create all of my work from recycled models and material thrown out. This year has seen me lose loved ones, but also created new memories and stronger bonds with the loved ones around me.

I hope that one day it would be possible to create a built project like this for my community. Until then, I am thankful for the lessons I learned and the change that is to come after 2021.

## References

- 1map. 2021. [online]. Available from: < <https://www.1map.co.za/apps/onemap2020> > [Accessed on 2 March 2021].
- Assmann, J. & Czaplicka, J. 1995. Collective memory and cultural identity. *New german critique*, (65), pp.125-133.
- Andargie, G. 2014. Challenges and prospects of lake Tana island monasteries as a tourist site since 1950s: The case of Kebran Gabriel. *African Journal of History and Culture*, 6(4), pp.45-52.
- Bergh, J.S. 1999. *Nuttige naslaanwerk keurig uitgevoer*.
- Bastéa, E. (Ed.). 2004. *Memory and architecture*. UNM Press.
- Boritz, T., Barnhart, R., Angus, L. & Constantino, M.J. 2017. *Narrative flexibility in brief psychotherapy for depression*. *Psychotherapy Research*, 27(6), pp.666-676.
- Boylston, T. 2017. From sickness to history: evil spirits, memory and responsibility in an Ethiopian market village. *Africa: The Journal of the International African Institute*, 87(2), pp.387-406.
- Bouman, O. and Möhn, A. [online]. Available from: < <https://divisare.com/projects/244543-mohn-bouman-thatch-building> > [Accessed on 5 May 2021].
- Casey, E.S. 2001. Between geography and philosophy: *what does it mean to be in the place-world?*.
- Clingerman, F. Treanor, B., Drenthen, M. and Utsler, D., 2013. *Interpreting nature: the emerging field of environmental hermeneutics*. Fordham University Press.
- Cordua, C.H. & Hensel, M. 2015. *Constructions: An Experimental Approach to Intensely Local Architectures*. John Wiley & Sons.
- Drenthen, M. 2017. *Environmental hermeneutics and the meaning of nature*. Gardiner, S. &.
- Engelkamp, J. & Cohen, R.L. 1991. Current issues in memory of action events. *Psychological Research*, 53(3), pp.175-182.

- Engelbrecht, H. unknown. *Ellisras my dorp*. Published by Ellisras Nuus. Lephale: Onverwacht Library.
- Genet, A. & Kebede, M. 2021. Collections, local interactions, conservation and tourism aspects of monastic heritage sites in the Lake Tana region of Ethiopia: the case of Mandeba Medahinealem Monastery. *Journal of Cultural Heritage Management and Sustainable Development*.
- Gxaba, X., Kanyerere, T. & Pietersen, K. 2016. *The interrelationship between coalbed methand and produced ground water in the Lephale Basin, South Africa*. University of the Western Cape.
- Hallowes, D. & Munnik, V. 2018. 'Boom and bust in the Waterberg: a history of coal mega projects'. groundWork Report: Pietermaritzburg.
- Halbwachs, M. 1950. The collective memory. *Space and the collective memory*, pp.128-156.
- Hensel, M. & Cordua, C.H. 2015. *Constructions: An Experimental Approach to Intensely Local Architectures*. John Wiley & Sons.
- Hildner, C. 2013. Dancing Trees, Singing Birds. Hiroshi Nakamura & NAP Architects| Tokyo 2007. In: *Future Living* (pp. 98-103). Birkhäuser.
- Hunter, E. 2010. *Pioneers of the Waterberg: A photographic journey*.
- Itzkin, A. 2015. *Health in the Waterberg, up in smoke?* Animal, Plant and Environmental Sciences. Thesis (MSc). University of Witwatersrand.
- Joubert, O. (Ed.). 2009. *10 Years+ 100 Buildings: Architecture in a Democratic South Africa*. Bell-Roberts.
- Kearney, R. 2007. Exchanging Memories. In: Caicco, G. (Ed.). *Architecture, ethics, and the personhood of place*. UPNE.
- Konietzko, B. & DiMartino, M.D. 2013. *Avatar: The Last Airbender-The Art of the Animated Series*. Dark Horse Comics.
- Koriat, A., Ben-Zur, H. & Nussbaum, A. 1990. Encoding information for future action: Memory for to-be-performed tasks versus memory for to-be-recalled tasks. *Memory & Cognition*, 18(6), pp.568-578.
- Magol Commando. 1987. *Ellisras: Freedom of entry*. September: 9.
- Meiring, A. 1989. *Pioniersbagraafplaas*. Engraved Stone. Fourie Street, Lephale.
- Manatsha, B. T. 2012. The Historical and Politico Cultural Significance of Nswazwi Mall in Francistown. *Botswana Society*. Vol. 44: 70-80.

Matlala, R, R. 2021. Domestic Worker. [Personal Interview]. 4 March 2021.

Mokgolodi, N.C., Ding, Y.F., Setshogo, M.P., Ma, C. and Liu, Y.J., 2011. The importance of an indigenous tree to southern African communities with specific relevance to its domestication and commercialization: a case of the marula tree. *Forestry Studies in China*, 13(1), pp.36-44.

Monama, E., 2020. Governing mining towns: the case of Lephalale. *Transformation: Critical Perspectives on Southern Africa*, 103(1), pp.103-126.

Munisipale en openbare dienste. 1991. Ellisras, Maart: 48. Lephalale: Onverwacht Library.

Ngwepe, D. 2021. Traditional Healer. [Personal Interview]. 5 March 2021.

Olick, J.K. 1999. Collective memory: The two cultures. *Sociological theory*, 17(3), pp.333-348.

Pappas, F. 2019. [online]. Available from: < <https://www.archdaily.com/943751/house-of-the-big-arch-frankie-pappas> > [Accessed on 5 May 2021].

Pelser, A.J. 2012. Draft report on a Phase 1 HIA for the Peerboom Farm Opencast Coal Mine, near Lephalale and Marapong, Limpopo Province.

Rasekgala, M., Mabitsi, T.M., Madela, M., Makola, M.C. & Maliavusa, M. 2012. Report on Racism in Schools: The Case of Hoërskool Ellisras. Report for Department of Basic Education.

Ricoeur, P. 1994. *Oneself as another*. University of Chicago Press.

Russell, T. 2017. 'People will no longer be people but will have markings and be animals': investigating connections between diet, myth, ritual and rock art in southern African archaeology. *Azania: Archaeological Research in Africa*, 52(2), pp.192-208.

Senkfor, A.J., Petten, C.V. & Kutas, M. 2002. Episodic action memory for real objects: An ERP investigation with perform, watch, and imagine action encoding tasks versus a non-action encoding task. *Journal of Cognitive Neuroscience*, 14(3), pp.402-419.

Thatchers Association of South Africa. 2016. *A guide to thatch construction in South Africa*. First edition.

Trevitt, C. & MacKinlay, E., 2006. "I am just an ordinary person...": Spiritual reminiscence in older people with memory loss. *Journal of Religion, Spirituality & Aging*, 18(2-3), pp.79-91.

Tshabalala, E.K. 2020. Corporate social responsibility: impact of Exxaro mine's social and labour plan in the community (Doctoral thesis, North-West University (South Africa)).

Unknown. 1983. *Bylaag tot die Noord-Transvaler: Ellisras*. April: 2-11.

Unknown. 1992. *Ellisras Nuus*. 11 December.

Unknown. 2012. Nid Vu, Nid Connu. [online]. Available from: <<https://architizer.com/projects/nid-vu-nid-connu-the-nest/>> [Accessed 16 April 2021].

Unkown. *Algemene beskrywing van die Ellisras- Kaartvel*. Lephallale: Onverwacht Library.

Unkown. *Bosveld Toerisme Inligtingsgids: Ellisras*. Lephallale: Onverwacht Library.

Unkown. Ellisras- Die Streeksentrum van Noordwes- *Transvaal toon Dinamiese Groeikrag op pan na 2000*. PA 109 A. Lephallale: Onverwacht Library.

Unkown. *Algemene Inligting Ellisras*. 1990. 1-8. PA 105 B. Lephallale: Onverwacht Library.

Unkown. Stadsraad van Ellisras. 26-35. PA 105 B. Lephallale: Onverwacht Library.

Viarnés, C. 2007. Cultural Memory in Afro-Cuban Possession: Problematizing Spiritual Categories, Resurfacing” Other” Histories. *Western Folklore*, 66(1/2), pp.127-159.

Vollenhoven, A. C. 2008. *A report on a cultural heritage impact assesment for the proposed housing development at ERF 1522 Ellisras on the farm Onverwacht 503 LQ*, Lephallale, Limpopo Province.

Vollenhoven, A. C. 2008. *A report on a cultural heritage impact assesment for the proposed housing development at extension 88 and 90 Ellisras on the farm Onverwacht 503 LQ*, Lephallale, Limpopo Province.

Wadley, R. 2019. *Waterberg echoes*. Protea Boekhuis.

Werczberger, R. 2011. Memory, land, and identity: visions of the past and the land in the Jewish spiritual renewal in Israel. *Journal of contemporary religion*, 26(2), pp.269-289.

Wojciechowski, A. 2020. [online]. Quote. Available from: <<https://ifunny.co/picture/when-i-want-to-be-held-i-sit-with-the-MfkmTQr98>> [Accessed on 10 September 2021].

Wood, E.H. and Kenyon, A.J., 2018. Remembering together: The importance of shared emotional memory in event experiences. *Event Management*, 22(2), pp.163-181.

## List of figures:

Figure 1: Janse van Rensburg, N. 2021. *Site View Collated*. Photograph. Lephallale: South-Africa.

Figure 2: Google Earth. 2021. *Site location in Onverwacht*. [online]. Available from: < <https://earth.google.com/web/@-23.6884394,27.70038,841.45711627a,1177.59782639d,35y,4.83431767h,0t,0r> >. Accessed on 10 March 2021.

Figure 3: Steenberg, A. 2011. *Oupa Rooi*. Photograph. Mookgopong: South-Africa.

Figure 4: Steyn, D. 2018. *Tannie Meisie*. Photograph. Vanderbijlpark: South-Africa.

Figure 5: Janse van Rensburg, M.C.J. 2012. *Oupa Rooi*. Photograph. Vanderbijlpark: South-Africa.

Figure 6: Google images. 2021. [online]. Limpopo Province. Available from: < [https://www.google.com/search?q=limpopo+province&rlz=1C1CHBD\\_en-ZA957ZA957&ssxsf=A0aemvJTWAtOgUWoBn8BAWP24U6WzlvH-2Q:1642674234197&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjPxNex-jsD1AhXwg\\_0HHd0tCZcQ\\_AUoAnoECAIQBA&biw=1536&bih=722&d-pr=1.25#imgsrc=xW1Na8A\\_BotPsM](https://www.google.com/search?q=limpopo+province&rlz=1C1CHBD_en-ZA957ZA957&ssxsf=A0aemvJTWAtOgUWoBn8BAWP24U6WzlvH-2Q:1642674234197&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjPxNex-jsD1AhXwg_0HHd0tCZcQ_AUoAnoECAIQBA&biw=1536&bih=722&d-pr=1.25#imgsrc=xW1Na8A_BotPsM) > Accessed on 4 April 2021.

Figure 7: Google Maps. 2021. [online]. Site view. Available from: < <https://www.google.com/maps/@-23.6879307,27.6997263,663m/data=!3m1!1e3> > Accessed on 4 April 2021.

Figure 8: Janse van Rensburg, N. 2021. *Lephallale as a model 1*. Ink on paper.

Figure 9: Janse van Rensburg, N. 2021. *Lephallale as a model 2*. Physical model.

Figure 10: Go Limpopo. n.d. [online]. *Lephallale Cave paintings 1*. Available from: < <https://www.waterberg-information.co.za/region/town/671> > Accessed on 27 July 2021.

Figure 11: Go Limpopo. n.d. [online]. *Lephallale Cave paintings 2*. Available from: < <https://www.waterberg-information.co.za/region/town/671> > Accessed on 27 July 2021.

Figure 12: Janse van Rensburg, M. 2020. *Kudu 1*. Photograph. Lephallale: South-Africa.

Figure 13: Wildlife Photographs around Lephallale (M. Janse van Rensburg, 2020).

Figure 14: Meiring, A. 1989. *Pioniersbagraafplaas*. Engraved Stone. Fourie Street, Lephallale.

Figure 15: Janse van Rensburg, N. 2021. *Lephallale Narratives*. Ink on paper.

Figure 16: Janse van Rensburg, N. 2021. *Onverwacht library interior 1*. Photograph. Lephallale: South-Africa.

Figure 17: Janse van Rensburg, N. 2021. *Onverwacht library interior 2*. Photograph. Lephallale: South-Africa.

Figure 18: Janse van Rensburg, N. 2021. *Mogol river and the Mogol flood line*. Photograph. Lephallale: South-Africa.

Figure 19: Janse van Rensburg, N. 2021. Watercolour series. Ink on paper.

Figure 20: Janse van Rensburg, N. 2021. *Capsulating oneself*. Ink on paper.

Figure 21: Janse van Rensburg, N. 2021. *[re]Place*. Ink on paper.

Figure 22: Janse van Rensburg, N. 2021. *Nest*. Ink on paper.

Figure 23: Janse van Rensburg, N. 2021. *[re]Member*. Ink on paper.

Figure 24: Janse van Rensburg, N. 2021. *[re]Acting*. Ink on paper.

Figure 25: Janse van Rensburg, N. 2021. *Oupa Rooi*. Ink on paper.

Figure 26: Janse van Rensburg, N. 2021. *Bafedile Masasa*. Ink on paper.

Figure 27: Janse van Rensburg, N. 2021. *Knob-thorn tree*. Photograph. Lephallale: South-Africa.

Figure 28: Janse van Rensburg, N. 2021. *Boabab tree*. Photograph. Lephallale: South-Africa.

Figure 29: Janse van Rensburg, N. 2021. *Delsinia Ngwepe*. Ink on paper.

Figure 30: Janse van Rensburg, N. 2021. *Mari van Lingen*. Ink on paper.

Figure 31: Janse van Rensburg, N. 2021. *Marula tree*. Photograph. Lephalale: South-Africa.

Figure 32: Janse van Rensburg, N. 2021. *Knowledge of site*. Photograph. Lephalale: South-Africa.

Figure 33: Janse van Rensburg, N. 2021. *Trees plotted on site*. Computer generated image.

Figure 34: Studio 1984. 2011. *The Nest before*. [online]. Available from: < <https://www.archdaily.com/293112/ecologic-pavilion-in-alsace-studio-1984> > Accessed on 8 May 2021.

Figure 35: Studio 1984. 2011. *The Nest after 1*. [online]. Available from: < <https://www.archdaily.com/293112/ecologic-pavilion-in-alsace-studio-1984> > Accessed on 8 May 2021.

Figure 36: Studio 1984. 2011. *The Nest after 2*. [online]. Available from: < <https://www.archdaily.com/293112/ecologic-pavilion-in-alsace-studio-1984> > Accessed on 8 May 2021.

Figure 37: Janse van Rensburg, N. 2021. *Ring around the Tree*. Ink on paper.

Figure 38: Unknown. 2011. *Ring around the Tree*. [online]. Available from: < <https://www.detail-online.com/blog-article/ring-around-a-tree-by-tezuka-architects-25561/> > Accessed on 9 May 2021.

Figure 39: Pappas. 2019. [online]. *Wine cellar*. Available from: < <https://www.e-architect.com/south-africa/house-of-the-big-arch-in-waterberg-south-africa> > Accessed on 13 May 2021.

Figure 40: Pappas. 2019. [online]. *Arial view*. Available from: < <https://worldarchitecture.org/article-links/efvpz/frankie-pappas-built-incredibly-narrow-brick-residence-that-disappears-in-waterberg-mountains.html> > Accessed on 13 May 2021.

Figure 41: Janse van Rensburg, N. 2021. *House of the Big Arch*. Ink on paper.

Figure 42: Janse van Rensburg, N. 2021. *House of the Big Arch exterior*. Ink on paper.

Figure 43: Janse van Rensburg, N. 2021. *House of the Big Arch entrance*. Ink on paper.

Figure 44: Janse van Rensburg, N. 2021. *Municipality North facade*. Photograph. Lephalale: South-Africa..

Figure 45 : Janse van Rensburg, N. 2021. *Boabab tree on site*. Photograph. Lephalale: South-Africa.

Figure 46 : Google images. 2021. [online]. *Lephalale Limpopo*. Available from: < [https://www.google.com/search?q=limpopo+province&rlz=1C1CHBD\\_en-ZA957ZA957&sxsrf=AOaemvJTWAtoGtUWoBn8BAWP24U6WzlvH-2Q:1642674234197&source=Inms&tbn=isch&sa=X&ved=2ahUKewjPxNex- jsD1AhXwg\\_0HHd0tCZcQ\\_AUoAnoECAIQBA&biw=1536&bih=722&dp=1.25#imgrc=xW1Na8A\\_BotPsM](https://www.google.com/search?q=limpopo+province&rlz=1C1CHBD_en-ZA957ZA957&sxsrf=AOaemvJTWAtoGtUWoBn8BAWP24U6WzlvH-2Q:1642674234197&source=Inms&tbn=isch&sa=X&ved=2ahUKewjPxNex- jsD1AhXwg_0HHd0tCZcQ_AUoAnoECAIQBA&biw=1536&bih=722&dp=1.25#imgrc=xW1Na8A_BotPsM) > Accessed on 4 April 2021.

Figure 47 : 1map. 2021. [online]. *Macro view*. Available from: < <https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 48: 1map. 2021. [online]. *Compilation of 3 regions*. Available from: < <https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 49: 1map. 2021. [online]. *Compilation of 3 regions*. Available from: < <https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 50: Janse van Rensburg, M. 2021. *Guinea fowl in a tree*. Photograph. Lephalale: South-Africa.

Figure 51: Janse van Rensburg, M. 2021. *Signal tower*. Photograph. Lephalale: South-Africa.

Figure 52: Janse van Rensburg, N. 2021. *Site option 1*. Photograph. Lephalale: South-Africa.

Figure 53: 1map. 2021. [online]. *Site option 1*. Available from: < <https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 54: 1map. 2021. [online]. *Site option 3*. Available from: < <https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 56: Janse van Rensburg, N. 2021. *Site option 3*. Photograph. Lephhalale: South-Africa.

Figure 57: 1map. 2021. [online]. *Site option 2*. Available from: < <https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 58: 1map. 2021. [online]. All site *options considered*. Available from: <<https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 59: 1map. 2021. [online]. *The project site*. Available from: < <https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 60: 1map. 2021. [online]. *Onverwacht area*. Available from: < <https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 61: Janse van Rensburg, N. 2021. *Meso context*. Photograph and computer generated drawing. Lephhalale: South-Africa.

Figure 62: 1map. 2021. [online]. *Retail sector*. Available from: <<https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 63: 1map. 2021. [online]. *Sports and recreational facilities*. Available from: <<https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 64: 1map. 2021. [online]. *Wind direction*. Available from: <<https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 65: 1map. 2021. [online]. *Obstacles on site*. Available from: <<https://www.1map.co.za/apps/onemap2020> > Accessed on 4 April 2021.

Figure 66: Photograph of Municipality staff entrance (Author, 2021).

Figure 67: Photograph of Municipality North view (Author. 2021).

Figure 68: The Four sites (Google maps, 2021: online adapted by author).

Figure 69: Photograph of View towards existing parking from Library entrance (Author, 2021).

Figure 70: Photograph of office units to be removed (Author, 2021).

Figure 71:

72: Photograph of the consistent watered vs naturally grown scene (Author, 2021).

Figure 73: Photograph of guineafowl nesting area (Author, 2021).

Figure 74: Photograph of axis from site to Library (Author, 2021).

Figure 75: Photographs of ant hill on site (Author, 2021).

Figure 76: Photograph of offices to be removed from site (Author, 2021).

Figure 77: Collated photographs of Clubhouse Drive (Author, 2021).

Figure 78: Collated photographs of Douwater Way (Author, 2021).

Figure 79: Photograph of a flock of Guineafowls on site (Author, 2021).

Figure 80: Photograph of Mongoose on site (Author, 2021).

Figure 81: Illustration of Memory Exchange Hub (Author. 2021).

Figure 82: Design Touchstone Model (Author, 2021).

Figure 83:

84: Design Touchstone Model, Closed and Open (Author, 2021).

Figure 85: Below, Above, In-between; Illustration (Author, 2021).

Figure 86: Illustration of Pores (Author, 2021).

Figure 87: Model of Concept 1, top view (Author, 2021).

Figure 88: Model of Concept 1, angled (Author, 2021).

Figure 89: Model of Concept 1 side view (Author, 2021).

Figure 90: Watercolour of Concept 1 (Author, 2021).

Figure 91: Transformation; Illustration (Author, 2021).

Figure 92: Model of Concept 2 (Author, 2021).

Figure 93: Reformation; Illustration (Author, 2021).

Figure 94: The mark; watercolour (Author, 2021).

Figure 95: Connect, Engage; watercolour (Author, 2021).

Figure 96: Transience in time; Illustration (Author, 2021).

Figure 97: Model of Concept 3 (Author, 2021).

Figure 98: Model of Concept 3 (Author, 2021).

Figure 99: Photograph of Main facade (unknown, 2014: online). <https://www.archdaily.com/779788/pumanque-community-centre-the-scarcity-and-creativity-studio>

Figure 100: Photograph of Timber detail (unknown, 2014: online). <https://www.archdaily.com/779788/pumanque-community-centre-the-scarcity-and-creativity-studio>

Figure 101: Extrapolation of Model (unknown, 2014: online). <https://www.archdaily.com/779788/pumanque-community-centre-the-scarcity-and-creativity-studio>

Figure 102: Main thatch facade (van Vlijmen, 2008: online).

Figure 103: Front desk (van Vlijmen, 2008: online).

Figure 104: Interior thatch wall (van Vlijmen, 2008: online).

Figure 105: The first plan (Author, 2021).

Figure 106: Buildings gathering (Author, 2021).

Figure 107: Initial thoughts on structure (Author, 2021).

Figure 108: Centralizing a fire place (Author, 2021).

Figure 109: The dance of trees and structure (Author, 2021).

Figure 110: The dance of trees and structure (Author, 2021).

Figure 111: The marula Tree as node (Author, 2021).

Figure 112: Weaving through the courtyard (Author, 2021).

Figure 113: Activate East; Douwater road (Author, 2021).

Figure 114: Passage ways (Author, 2021).

Figure 115: Platforms (Author, 2021).

Figure 116: Nature lover (Author, 2021).

Figure 117: A site reference (1map, 2021: online adapted by author).

Figure 118: Breaking Units, possible park (Author, 2021).

Figure 119: Dragonfly Form (Author, 2021).

Figure 120: First thoughts on sizing (Author, 2021).

Figure 121: Under the building; under the tree (Author, 2021).

Figure 122: Elevated (Author, 2021).

Figure 123: Noticable; Hidden (Author, 2021).

Figure 124: The wall (Author, 2021).

Figure 125: Reference to site (Author, 2021).

Figure 126: Reference to site: horisontal axes (Author, 2021).

Figure 127: Activating Douwater Way (1map, 2021: online adapted by author).

Figure 128: Three possible entrances to site (1map, 2021: online adapted by author).

Figure 129: Educational kitchen (Author, 2021).



