

STEEPING THE INTANGIBLE

An Experiential Rooibos Tea House in the Wupperthal Valley, unearthing the intangible cultural heritage of the Khoi and San.

VICKO VENTER | 2017010147



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Department of Architecture, Faculty of Natural and Agricultural Sciences,
University of the Free State.

Cover Figure 1.1: Abstract depiction of Wupperthal's cultural heritage (Author, 2022).



Figure 1.2: Wupperthal 1 (Isabel le Roux, 1981: painting).

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Dissertation submitted in fulfilment of the requirements for the Master of Architecture Professional Degree, M.Arch (Prof).

In the Faculty of Natural and Agricultural Sciences, University of the Free State Bloemfontein.

November 2022

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I, Vicko Venter declare that the Master's dissertation that I herewith submit at the University of the Free State, is my independent work and that I have not previously submitted it for qualification at another institution of higher education.



20 November 2022

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20 November 2022

This document is dedicated to those who made the journey possible through their guidance and support.

Prof J. D. Smit, P Smit, H. Raubenheimer and M. Bitzer for their continued support and expert advice throughout the year.

My wonderful wife, Marinette, for her revering patience and unwavering support from the start. Pierre and Comine Venter for their continued motivation and support throughout the years.

The architectural dissertation aims to contextualise the Tea House typology in the South African Cederberg landscape by envisioning a Rooibos Tea House. The Critical Regionalist contextualisation specifically considers the *genius loci* of Wupperthal as the expression of cultural heritage intimately linked with place to appropriately synthesise a Rooibos Tea House, which celebrates the intangible Khoi and San Rooibos cultural heritage. Consequently, the dissertation aims to conceptualise a Rooibos Tea House as a region- and culture-specific architectural response to a foreign typology in South Africa. In order to successfully contextualise the typology, it was essential to extract the *genius loci* of Wupperthal through a contextual analysis focused on the culture and lived narratives of the town. Through various interviews with locals, personal experience and historical research, the dissertation embodies an understanding of the *genius loci* of Wupperthal and aims to express the understanding in an architectural expression supported by other case studies. The architectural dissertation envisions a Rooibos Tea House in Wupperthal, South Africa, rooted in the intangible Rooibos cultural heritage of the Cederberg Khoi and San to unearth the poetics of the herbal tea.

Figure 1.3: Cederberg Mountains with Rooibos plantations at the foothills in oil paint (Author, 2022).



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DIS BERGE BLOU,
EN RAMPTE VAAL.
DIE BERGPAS SAK STYL AF NA WUPPETRHAL
TEEN KOUBERG, WAT 'N GEVAAR,
MAAR DIE HERE SE GENADE, DIE BRING JOU DAAR.
JY STAAR EN STEL DIE VRAAG VERSTOM;
HOE HET DIE MENSE HIER GEKOM, WANT
DIS BERGE, DIS VAALTE, DIS KAALTE
EN IN DIE HARTJIE VAN NERENS, 'N OASE VIR RAARTE.

- HERNICE HEYNS, RESIDENT OF WUPPERTHAL

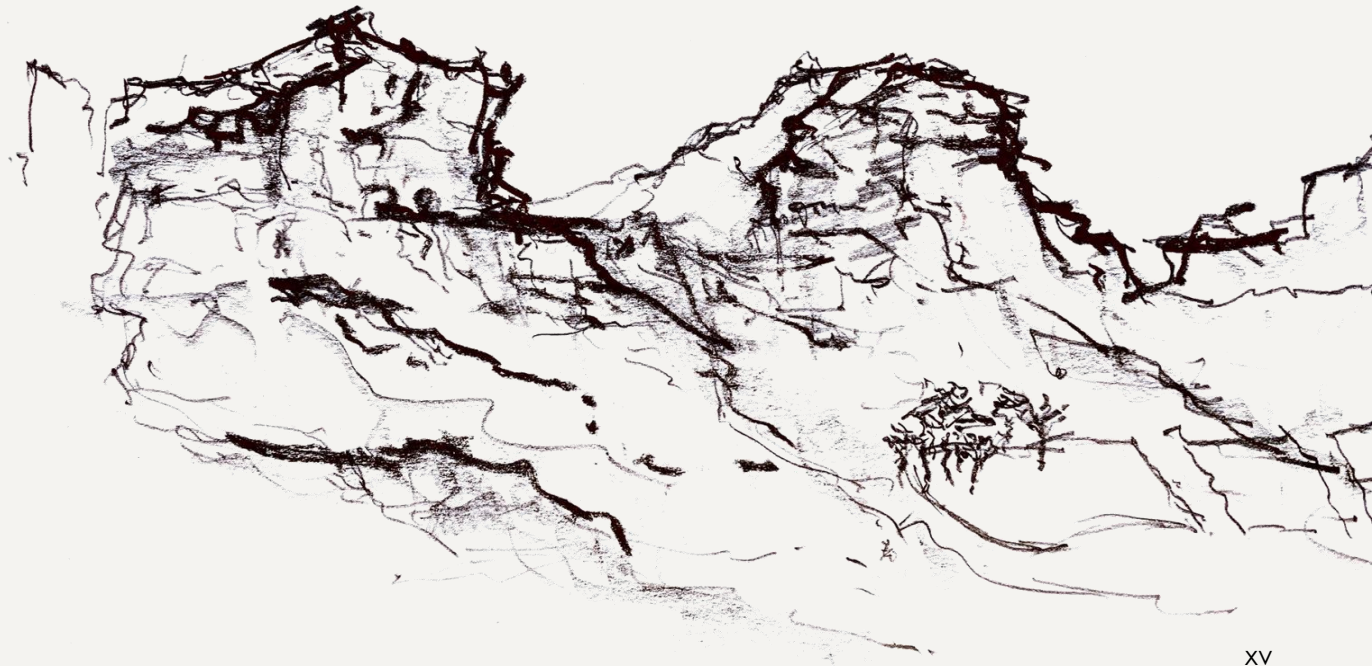


Figure 1.4: Cederberg Mountains (Author, 2022).

IT'S MOUNTAINS BLUE,
AND EARTHEN TONED.
THE MOUNTAIN PASS STEEPLY DESCENDS TO WUPPERTHAL
ALONG THE SIDE OF KOUBERG AND ITS DANGER.
THE LORD'S GRACE, TAKES YOU THERE.
GAZINGLY YOU ASK THE QUESTION, STUNNED,
HOW DID THE PEOPLE COME TO BE HERE, BECAUSE
IT'S MOUNTAINS, IT'S EARTHEN TONED, IT'S RAW.
AND IN THE HEART OF NOWHERE, AN OASIS FOR THE RARE.

- AUTHOR INTERPRETIVE TRANSLATION

The architectural dissertation aims to contextualise the architectural typology of a Tea House within the South African landscape. As a result, the dissertation pays specific consideration to the local cultural heritage and landscape underpinning the ritualised cultivation (see p. 204) of Rooibos (*Aspalathus linearis*) as a South African herbal tea. Rooibos received Geographical Indicator (GI) status in 2014, meaning that only *Aspalathus linearis* grown in its indigenous Cederberg Region may be labelled as Rooibos (Zietsman, 20: online).

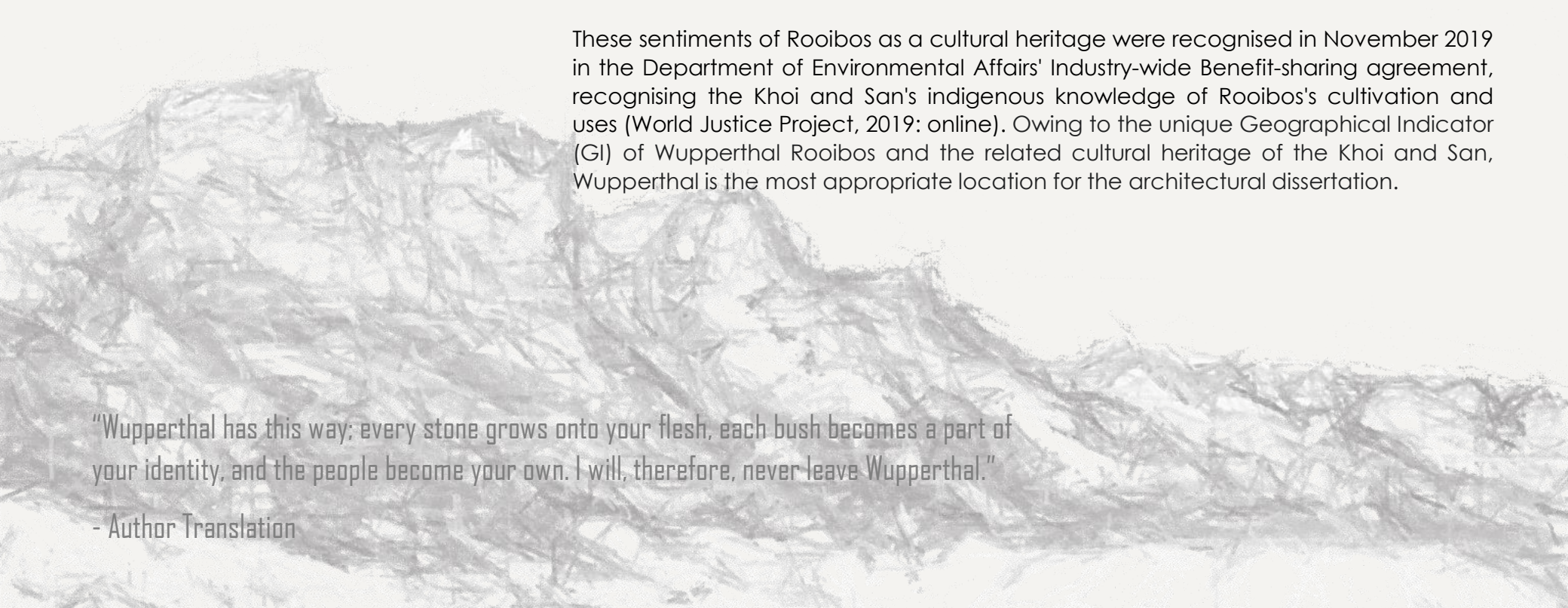
Among all the Rooibos regions in the Cederberg, the quaint town of Wupperthal has its own unique GI due to the specific *terroir* (see p. 204). The Wupperthal *terroir* produces Rooibos with a chemical composition different from all other Rooibos (Heinrich Böll Foundation, 2018: online). According to the CEO of the Wupperthal Original Rooibos Co-Operative, Barend Salomo, the Co-Operative is in the process of registering Wupperthal Rooibos for international protection, such as in the case of wine produced in the Champagne region in France (Salomo, 2022: interview).

“Wupperthal het die manier, dat elke klip kom groei aan jou vas, elke bos word deel van jou, die mense word jou eie, so ek verruil Wupperthal vir niks” (Heinrich Böll Foundation, 2018: online).

- Hernice Heyns, Resident of Wupperthal

Rooibos is not only a unique agricultural commodity but also deeply rooted in the Cederberg's Khoi and San cultural heritage. In an Ethnographic investigation completed by Boris Gorelik (2017: 7), it was concluded that "It was the indigenous inhabitants of the Cederberg who first discovered the pleasure of drinking an infusion made from the leaves of *A. linearis*". As a Khoi inhabitant of Wupperthal, Barend Salomo believes that the people of Wupperthal have a special connection with Rooibos and that it is part of their identity (Heinrich Böll Foundation, 2018: video).

These sentiments of Rooibos as a cultural heritage were recognised in November 2019 in the Department of Environmental Affairs' Industry-wide Benefit-sharing agreement, recognising the Khoi and San's indigenous knowledge of Rooibos's cultivation and uses (World Justice Project, 2019: online). Owing to the unique Geographical Indicator (GI) of Wupperthal Rooibos and the related cultural heritage of the Khoi and San, Wupperthal is the most appropriate location for the architectural dissertation.



"Wupperthal has this way; every stone grows onto your flesh, each bush becomes a part of your identity, and the people become your own. I will, therefore, never leave Wupperthal."

- Author Translation

Figure 1.5: Cederberg Mountains (Author, 2022).



Figure 1.6: Wuppertal 2 (Isabel le Roux, 1981: painting).

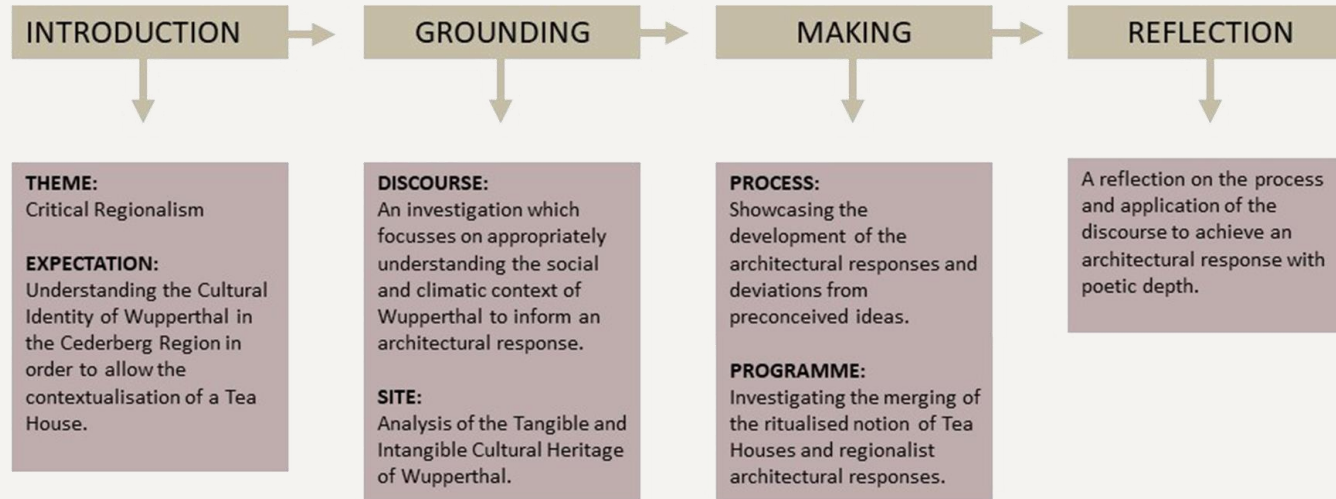


Figure 1.7: Dissertation layout diagram (Author 2022).

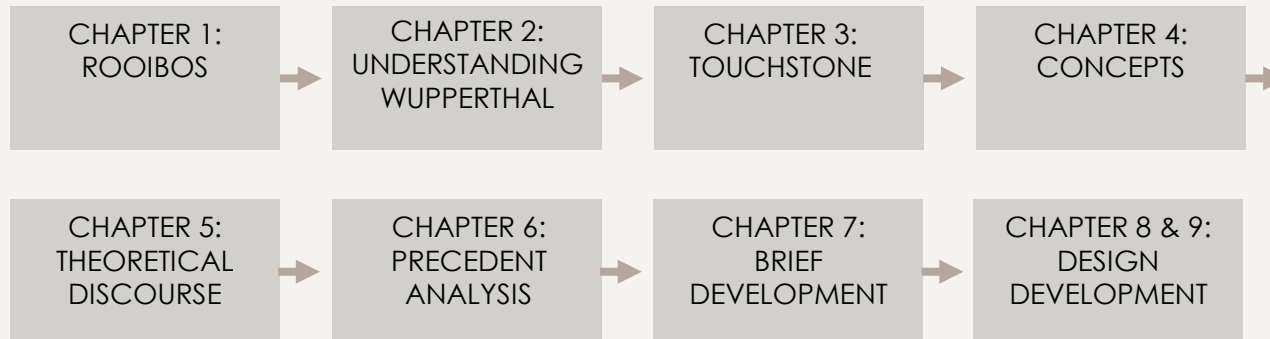


Figure 1.8: Chapter layout diagram (Author 2022).

How may a Critical Regionalist architecture, unearthing the intangible Khoi and San cultural heritage related to Rooibos Tea, contextualise a Tea House within Wupperthal in the Cederberg region?

The architectural dissertation grapples with the contextualisation of the architectural Tea House typology within the South African context through a Critical Regionalist approach (see p. 203). Wupperthal, as a town deeply rooted in its Khoi and San cultural heritage, stemming from before 1830, has a unique Geographical Indicator (GI), resulting in a town that represents the uniqueness of Rooibos as a South African herbal tea. These unique cultural and landscape characteristics bind the people of Wupperthal with the *genius loci* (see p. 203), ultimately making the separation between place and inhabitant impossible.

Consequently, to contextualise a Tea House in Wupperthal, it is essential to understand the reciprocity between the local cultural heritage and the landscape of Wupperthal in the Cederberg region. Understanding the emplaced cultural heritage and its reliance on the landscape underpins the architectural response towards a ritualised Rooibos Tea House. Throughout the architectural dissertation, the narratives of individual and collective inhabitants are used as gateways into the *genius loci*. In transforming the critical understanding of the emplaced cultural heritage into architecture, the objective is to endeavour to unearth the intangibility of Rooibos' cultural heritage.

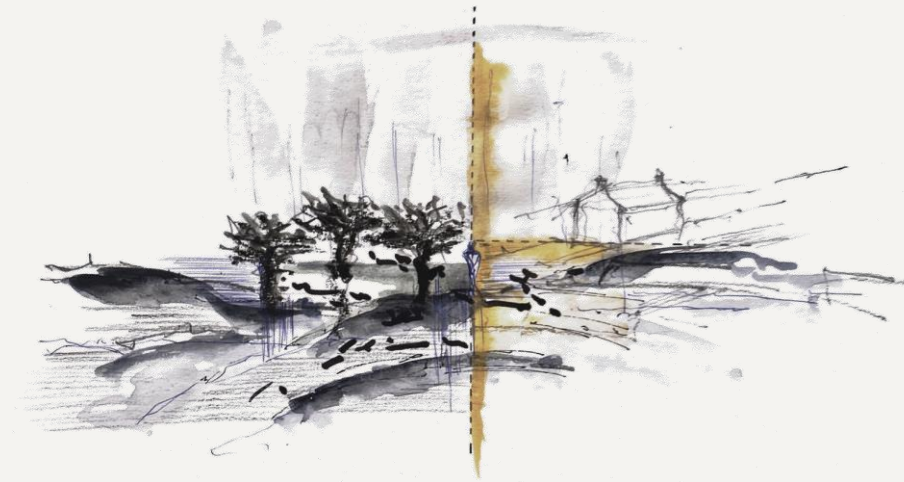


Figure 1.9: Architecture as an extension of nature into the manmade realm (Author, 2022).

Each chapter in the book aims to progressively build a deeper comprehension of the intricacies of the research question and, in doing so, aims to formulate an answer. Chapter one investigates the Khoi and San cultural sensibilities related to Rooibos in a historical overview before Chapter two investigates Wupperthal as a missionary station established in 1830 and the current lived realities. Moreover, Chapters Three and Four grapple with abstract understandings, through heuristic devices (see p. 203), of the cultural heritage steeped into the fabric of Wupperthal, ultimately constituting the *genius loci*.

Chapter Five continues the theoretical discourse established in Chapters Three and Four by investigating Critical Regionalism and how its understanding can assist in synthesising an emplaced ritual. Chapter Six aims to support the architectural synthesis through a comparative precedent analysis of two cultural agrotourism architectural typologies. Chapters Seven, Eight and Nine document the design development based on the influences of the theoretical discourse and other investigation methodologies.

Ultimately, the dissertation investigates the contextualisation of an architectural typology in the South African landscape while celebrating the cultural heritage of the Cederberg Khoi and San living in Wupperthal.

1. CLIENT AND BRIEF

The architectural intervention aims to extend the Wupperthal Original Rooibos Co-Operative's infrastructure while adding an experiential component to celebrate their cultural heritage. The client, the indigenously owned Wupperthal Original Rooibos Co-Operative, was established in 2009 as a formal agreement between farmers who started cultivating Rooibos commercially as a collective in the 1990s (The Rooibos Heritage Route, 2015: online). The Wupperthal Original Rooibos Co-Operative attained Fairtrade certification in 2010, guaranteeing a minimum price higher than the market price, ensuring profitability for the small-scale farmers. The Co-Operative initially started with 53 members and has since increased to 93 members (The Rooibos Heritage Route, 2015: online).

The architectural brief, accordingly, consists of an extension to the Co-Operative's infrastructure used to process the Rooibos while celebrating the cultural heritage of the Khoi and San in an experiential Rooibos Tea House. The following functions are proposed:

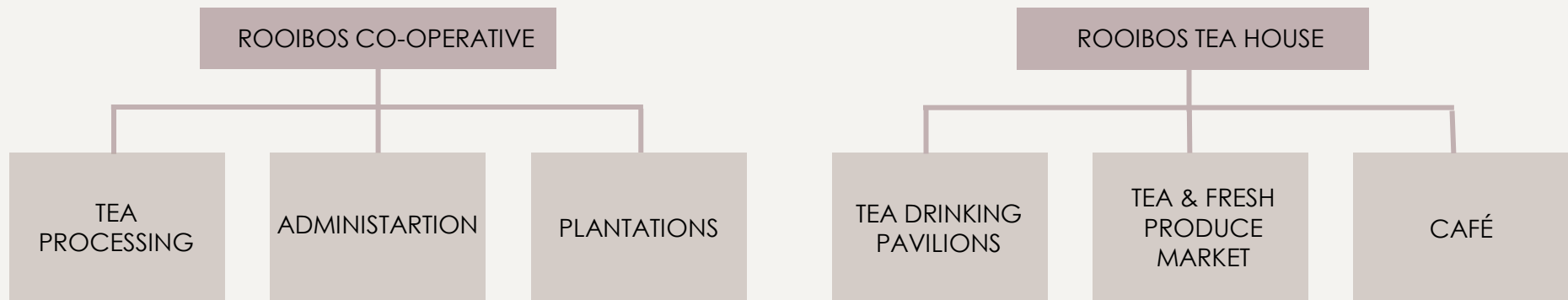


Figure 1.10: Program diagram (Author, 2022).

2. SITE AND LOCATION

The architectural dissertation investigates the contextualisation of the architectural typology of a Tea House in South Africa. As it has been established in the Statement of Significance, Wupperthal is the most appropriate town for the architectural dissertation due to the unique Geographical Indicator (GI) of Wupperthal Rooibos.

Wupperthal, established in 1830, is a small rural town in the Western Cape Province, falling under the Cederberg Local Municipality (Municipalities of South Africa, [n.d.]: online). Wupperthal forms part of the ecotourism region of the Cederberg Wilderness Area and, as a result, has unique Fynbos *flora* synonymous with the Cederberg region (Western Cape Government, 2014: online).

The Wupperthal Original Rooibos Co-Operative is located on a relatively flat site identified for Rooibos-related development, according to documents archived by the Cederberg Local Municipality (Neethling, 2022: email). In contrast, the Rooibos Tea House is located on a sloping site close to the residential area of Wupperthal, linking with the domestic nature of drinking Rooibos.



Figure 1.11: Map of South Africa indicating the Cederberg Wilderness Region and Wupperthal (Lucas Map Viewer, 2022: adapted by author).



Figure 1.12: Wupperthal local structure plan (TV3 Architects, 1999: adapted by author).

Figure 1.13: Harvested Rooibos (Author, 2022).



1. HISTORY

As indigenous inhabitants of the Cederberg region, the Khoi and San were the first people to drink Rooibos tea as a decoction. The Khoi and San harvested wild Rooibos in the Cederberg mountains and used decoctions as medicine for various ailments (Gorelik, 2020: online; The Whistling Kettle, 2021: online). It is believed the Khoi and San appreciated the healing characteristic of Rooibos and the sweet smooth flavour of the tea (The Whistling Kettle, 2021: online). Oxidised Rooibos is known for its honey, woody and floral notes with a subtle astringent taste (Gorelik, 2020: online).

In 1772, the European settlers at the time were increasingly intrigued by the harvesting and preparation of Rooibos due to the possibility of replacing expensive imported black tea. The interest amongst Cape-Dutch settlers grew due to the European botanist Carl Thunberg who first started drinking Rooibos after observing the Khoi and San on mountain expeditions to harvest wild Rooibos and the processing of the plant into a herbal tea (Gorelik, 2020: online; The Whistling Kettle, 2021: online). As a result, of the popularity and the fact that it was cheaper than expensive black teas imported from Asian countries, larger-scale production and farming later started to develop based on the indigenous knowledge the Khoi and San shared (Gorelik, 2020: online; The Whistling Kettle, 2021: online).

Figure 1.14: Dried Rooibos (Author, 2022).





In 1904, the involvement of Benjamin Ginsberg, a Russian immigrant who moved to the Cederberg, expanded the tea market of Rooibos (Gorelik, 2020: online; The Whistling Kettle, 2021: online). Ginsberg, a skilled marketing expert, increased the interest in Rooibos as he marketed Rooibos based on its health benefits. At the time, the Rooibos market was still limited and primarily based on the harvesting of wild Rooibos, as the large-scale cultivation and production of Rooibos were under-researched (Gorelik, 2020: online; The Whistling Kettle, 2021: online).

Dr Pieter LeFras Nortier, a medical doctor and botanist, was the first to develop a method of propagating Rooibos seeds by scarring the legume seeds to increase the germination potential (The Whistling Kettle, 2021: online). LeFras Nortier soon cultivated a strain of Rooibos that could be used to farm Rooibos (The Whistling Kettle, 2021: online). LeFras soon partnered with a local farmer, Olaf Bergh, to expand the agricultural potential of the Cederberg and soon after, the mountain slopes were covered in rows of Rooibos plantations (The Whistling Kettle, 2021: online).

2. CULTURAL HERITAGE

The commercial farming of Rooibos would not have been possible without the indigenous knowledge of the Khoi and San. The collection of Rooibos seeds was difficult due to the tiny light-grey seeds that are dispersed onto the soil once the pods produced by the Rooibos flower split (Gorelik, 2020: online). Once the seeds fall to the ground, it is nearly impossible to find them as they are merely a spec of grain on the soil. A single gram of seeds is composed of more or less 250 individual seeds; consequently, a kilogram of seeds cost £160 in 1930 (Gorelik, 2020: online). The success of seed collection lies in the story of Hans and Tryntjie Swart, who used the Khoikhoi method of scouring the inside of anthills for their collection of seeds after seeing the ants collecting the Rooibos seeds. As a result, the couple could collect significantly more seeds than their competition, using matches with a wetted tip to collect seeds individually from the ground.

Around 1950, it was recorded that the local people of Wupperthal brewed Rooibos leaves in blackened pots over open fires, drinking the herbal tea with no milk or sugar added as it masks the unique flavours (Gorelik, 2020: online; Louw, 2020: online). The Rooibos tea in the blackened pots would be steeped from sunrise to sundown in Wupperthal, allowing the flavour and aroma to build throughout the day as the tea only gets better with time (Gorelik, 2020: online)



Figure 1.15: Abstract depiction of Wupperthal's cultural heritage (Author, 2022).

3. CULTIVATION AND PROCESSING

Rooibos is only grown in the Cederberg region with a winter rainfall between 200mm and 450 mm annually and a temperature range between 0 degrees Celsius in the winter months and 45 degrees Celsius in the summer. The Cederberg region has deep coarse and acidic sandy soils perfect for the cultivation of Rooibos (Louw, 2018: online).

3.1 PLANTING AND GROWING

Rooibos is planted in the late summer months of February and March, where the tiny seeds are planted in well-prepared soil. The seeds are wetted regularly to ensure the optimal conditions for germination (The Rooibos Industry, 2022: exhibition). During the cooler months of June and August, after the season's rainfall, the seedlings are transplanted into the plantations (The Rooibos Industry, 2022: exhibition).

3.2 PRUNING AND HARVESTING

About 19 months after the establishment of the plantation, Rooibos bushes are pruned for the first time, after which they are harvested annually. During the annual harvesting, the leaves are cut 50 cm above the ground and bundled before being transported to the processing facilities (The Rooibos Industry, 2022: exhibition).



Figure 1.16: Rooibos plantations (Author, 2022).



Figure 1.17: Harvested Rooibos (Author, 2022).

3.3 CUTTING AND OXIDISATION

The Rooibos sheaves are then bundled in smaller groups before being fed into the 'carving' machine, which cuts the sheaves into uniform lengths, depending on the required grade (Klip Op Mekaar, 2022: online). The cut Rooibos is mixed with water and spread out on the tea processing platform. The wet Rooibos is then bruised and left to oxidise during fermentation for 24 hours (Klip Op Mekaar, 2022: online). The fermentation process allows the Rooibos to change from green to the signature red, building its trademark flavour and aroma (Klip Op Mekaar, 2022: online)

Traditionally, the cutting and bruising of Rooibos were done on a specially made stool or *bankie* the Khoi and San would take into the mountains. These stools were passed down generations, such as the Stool of Barend Salomo, which he inherited from his great grandfather, who lived in the Wupperthal region before its establishment in 1830 (Salomo, 2022: interview). The fermentation and drying stages were completed in the Cederberg mountains on the natural rock, and it is still believed that this process adds to the flavour of Rooibos (Salomo, 2022: interview).



Figure 1.20: The hereditary stool is used to cut the newly harvested Rooibos (Salomo, 2022: online).



Figure 1.18: Freshly cut Rooibos (Author, 2022).



Figure 1.19: Rooibos heaped for fermentation (Author, 2022).

3.4 DRYING AND COLLECTING

After the Rooibos has fermented for 24 hours, the Rooibos is spread out evenly on the processing platform to dry naturally in the African sun. Once the tea is dried, it is collected in bags to be transported for further processing and packaging (Klip Op Mekaar, 2022: online).



Figure 1.21: Dried Rooibos (Author, 2022).

Figure 2.1: Wupperthal in the Tratra valley (Swilling, 2022: online).



How may a Critical Regionalist architecture, unearthing the intangible Khoi and San cultural heritage related to Rooibos Tea, contextualise a Tea House within Wupperthal in the Cederberg region?

“Wupperthal is surely the Cape’s most unforgettably situated village. It is also one of the most remote. To approach it from Clanwilliam via Pakhuis Pass, over a none-too-easy gravel road through the fairly bare but spectacular Cedarberg, slowly descending into the Tratra valley, is breathtaking. There far below lies a tiny green oasis, the white of the church and other buildings shimmering through the foliage.” (Fransen, 2006: 133).





INTRODUCTION

The following chapter investigates the tangible heritage of the museum town in the Tratra valley, as subsequent chapters grapple with unearthing the interpretive depth of the intangible cultural heritage. It is also argued that the cultural significance of Wupperthal lies beyond the initial heritage buildings, but that the intangible living heritage of the Khoi and San enhances the value of the heritage resource.

The British architect and theorist Kenneth Frampton alludes that to conceive an appropriate architectural intervention; it has to be rooted in a comprehensive understanding of place and culture. Frampton elaborates that a Critical Regionalist investigation into the site-specific culture and material establishes an attunement to the possible constraints and opportunities (Patteeuw, & Szacka, 2019: online). These constraints and opportunities, whether tangible or intangible, influence the appropriateness of an architectural response. Breed & Franklin (2017: online) supports this notion by stating that Wupperthal's complexity lies in the intimate relationship between man and nature while proudly standing as a tangible object in the Cederberg landscape.

Accordingly it has been established, that to understand the emplaced cultural heritage of Wupperthal, it is essential to comprehend the relationship between the inhabitants and the landscape. The following chapter investigates the relationships between people, place, landscape and climate. Creative exercises supported by research, function as the heuristic methodology to conceive an appropriate and sensitive understanding of Wupperthal. Accordingly, the following chapter is a contextual analysis of Wupperthal, Farm 168 Clanwilliam, owned by the Moravian Church (Neethling, 2022: email).

1. HISTORY OVERVIEW

1.1 TANGIBLE HERITAGE

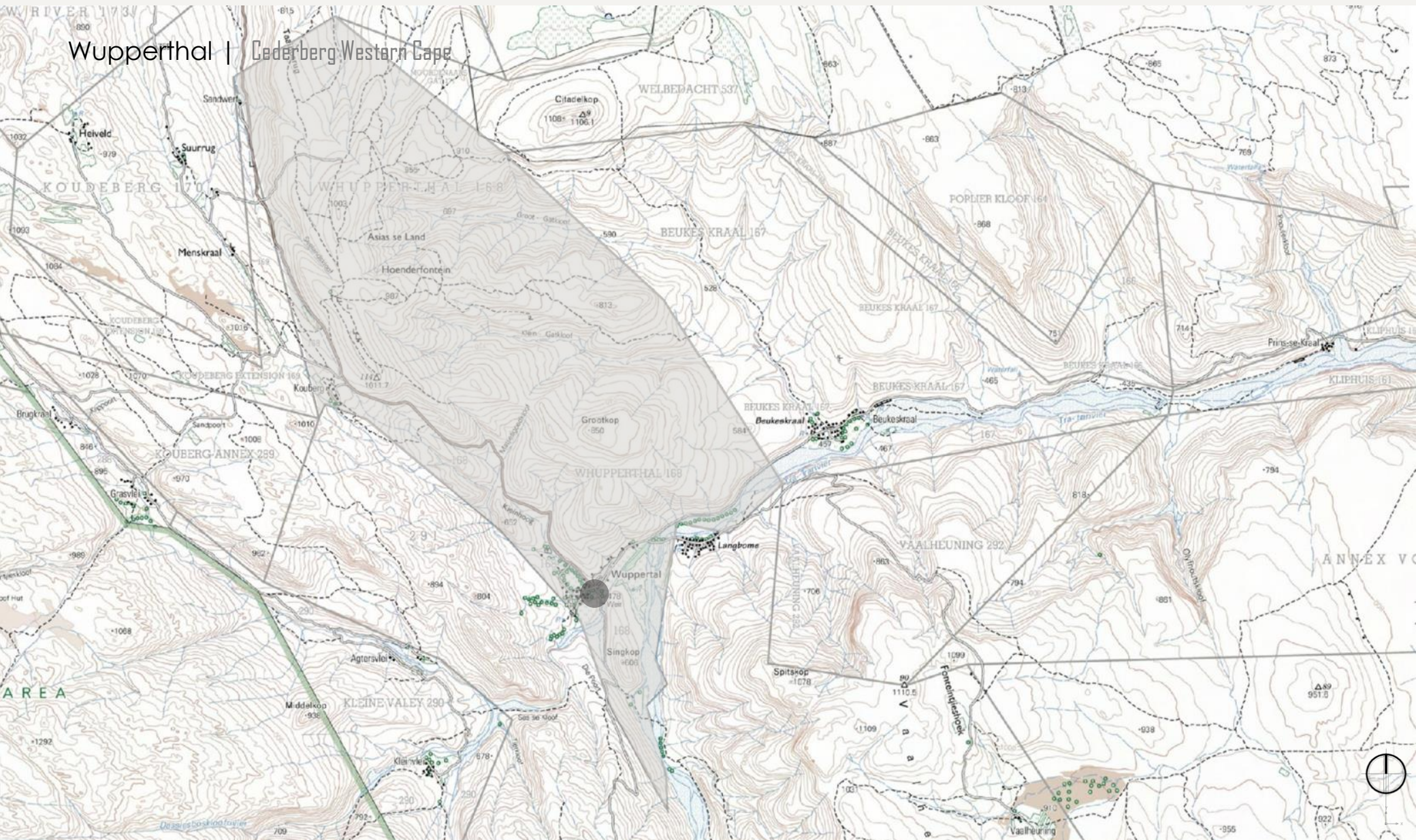
Wupperthal was the first Rhenish Mission station in South Africa, established in 1830 by two German Rhineland missionaries, Theobald von Wurmb and Johan Gottlieb Leipoldt (Fransen, 2004: 363). Johan Gottlieb Leipoldt was the grandfather of C Louis Leipoldt, a South African doctor and poet (South African History Online, 2022: online).

After arriving in the Cape, the two missionaries acquired the Koudeberg and Rietmond farms and settled amongst the seven indigenous families already living in the valley (Fransen, 2006: 133; South African History Online, 2022: online). The missionaries named Wupperthal after the river Wupper in the region of Germany from where they originated (Fransen, 2006: 133).

It is estimated that by the end of 1830, there roughly lived 100 Khoi and San in the valley surrounding the mission (Bilbe, 1999: 33). During the formative years of the mission station, the population of Khoi and San grew steadily, expanding the population of Wupperthal. Bilbe (1999: 43) attributes the growth to the effects of Ordinance 50, passed by the British Administration in 1828, which declared that the Khoi and San "were free to own land and move around without having to adhere to the restrictive Pass Laws". As a result, Ordinance 50 contributed to the Khoi and San settling in Wupperthal as part of the indigenous Cederberg region.



Figure 2.3: Map of Wupperthal farm (highlighted) and the surrounding farms, Western Cape, South Africa (CGA. 2022, adapted by author).



At the time of establishing the mission, the T-shaped homestead, now known as Leipoldt House, and the Smitswinkel with its circular threshing floor were the only structures in Wupperthal (Fransen, 2006: 133; Platteland, 2021: online). The town soon developed under the guidance of German planning principles such as the layout of German street villages, fitting as many people as possible into an area, and the agricultural fields laid out according to a *hufe*; the distance an ox can plough in a day (Franklin, 2015: 49). The town developed into two distinct districts, namely the German-inspired street village and the *werf*.

On 17 January 1830, the first church service was held under a tree behind Leipoldt House (Franklin, 2015: 47), and it is estimated that by the end of 1831, roughly 15 Khoi and San had been baptised (Bilbe, 1999: 33). Due to the growth of the mission, a small rectangular thatched church was built in 1834 and inaugurated in 1835. The small church was later enlarged to a cruciform layout around 1850 (Fransen, 2004: 363; Fransen, 2006: 133).



Figure 2.4: Leipoldt House with Smitswinkel in the background (Author, 2022).



Figure 2.5: Smitswinkel and the circular threshing floor (Author, 2022).



Figure 2.6: The cruciform church in Wupperthal (Author, 2022).

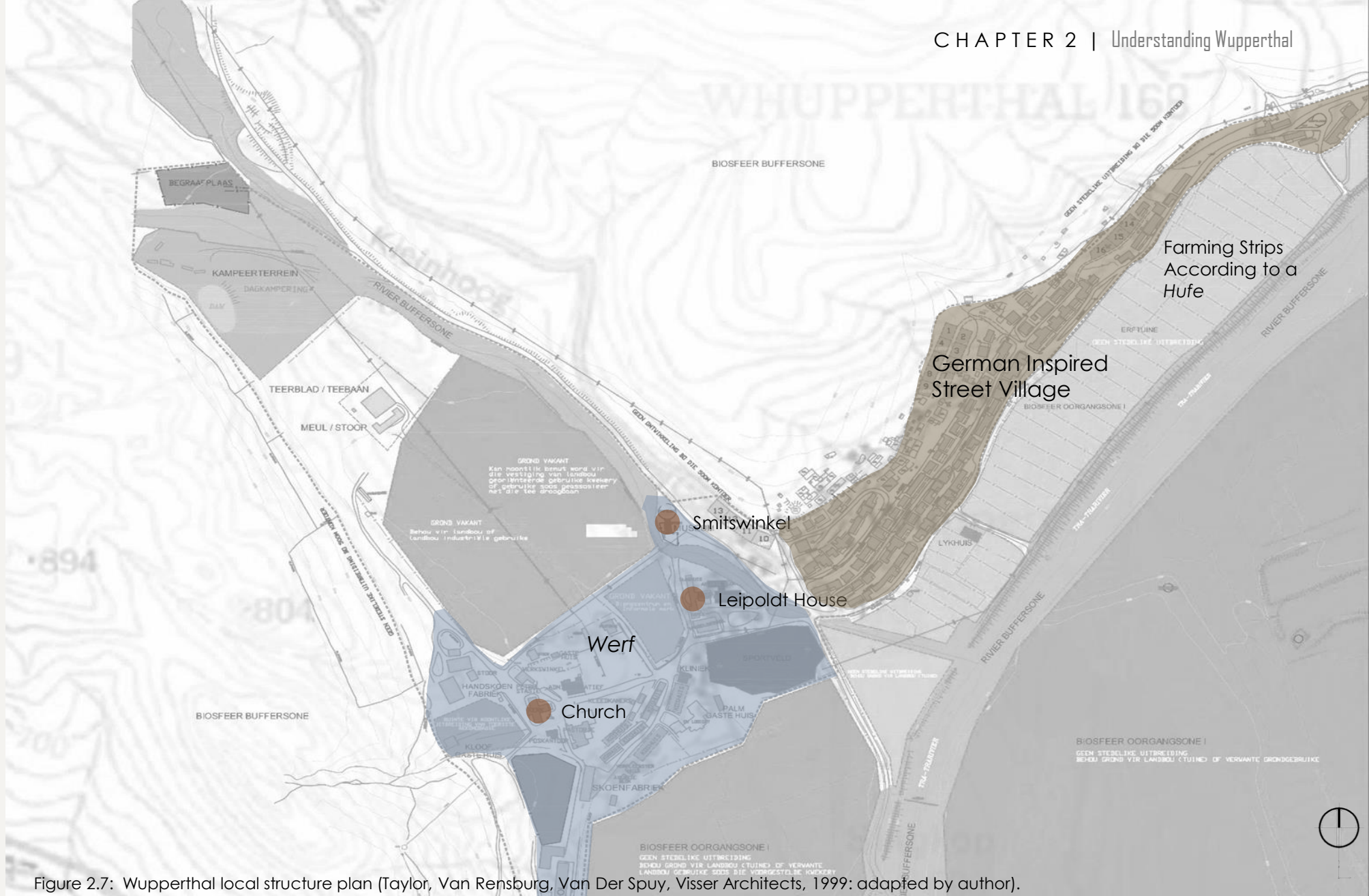


Figure 2.7: Wupperthal local structure plan (Taylor, Van Rensburg, Van Der Spuy, Visser Architects, 1999: adapted by author).

In the 1840's a parsonage and a school was also built in Wupperthal (Fransen, 2004: 364; Fransen, 2006: 133). The missionaries not only established the mission for the spiritual upliftment of the inhabitants but also taught carpentry and shoemaking skills to establish a source of income. Leipoldt was a cobbler by profession and established the famous Wupperthal Shoe Factory (Fransen, 2006: 133; South African History Online, 2022: online).

Additionally, due to the well-watered strip next to the Tratra river, the inhabitants were encouraged to farm the land, a practice still visible in Wupperthal (South African History Online, 2022: online). In 1965, Wupperthal was bought by the Moravian mission Society and has been a Moravian Mission ever since. Later in 1981, a Town Hall was added to the town square (South African History Online, 2022: online). The rich history and cultural significance of Wupperthal ensured that the small Cederberg town is considered as a national heritage resource in accordance with the National Heritage Resources Act no. 25 of 1999 (Neethling, 2022: email).



Figure 2.8: The parsonage of the church (Author, 2022).



Figure 2.9: The shoe factory (Author, 2022).

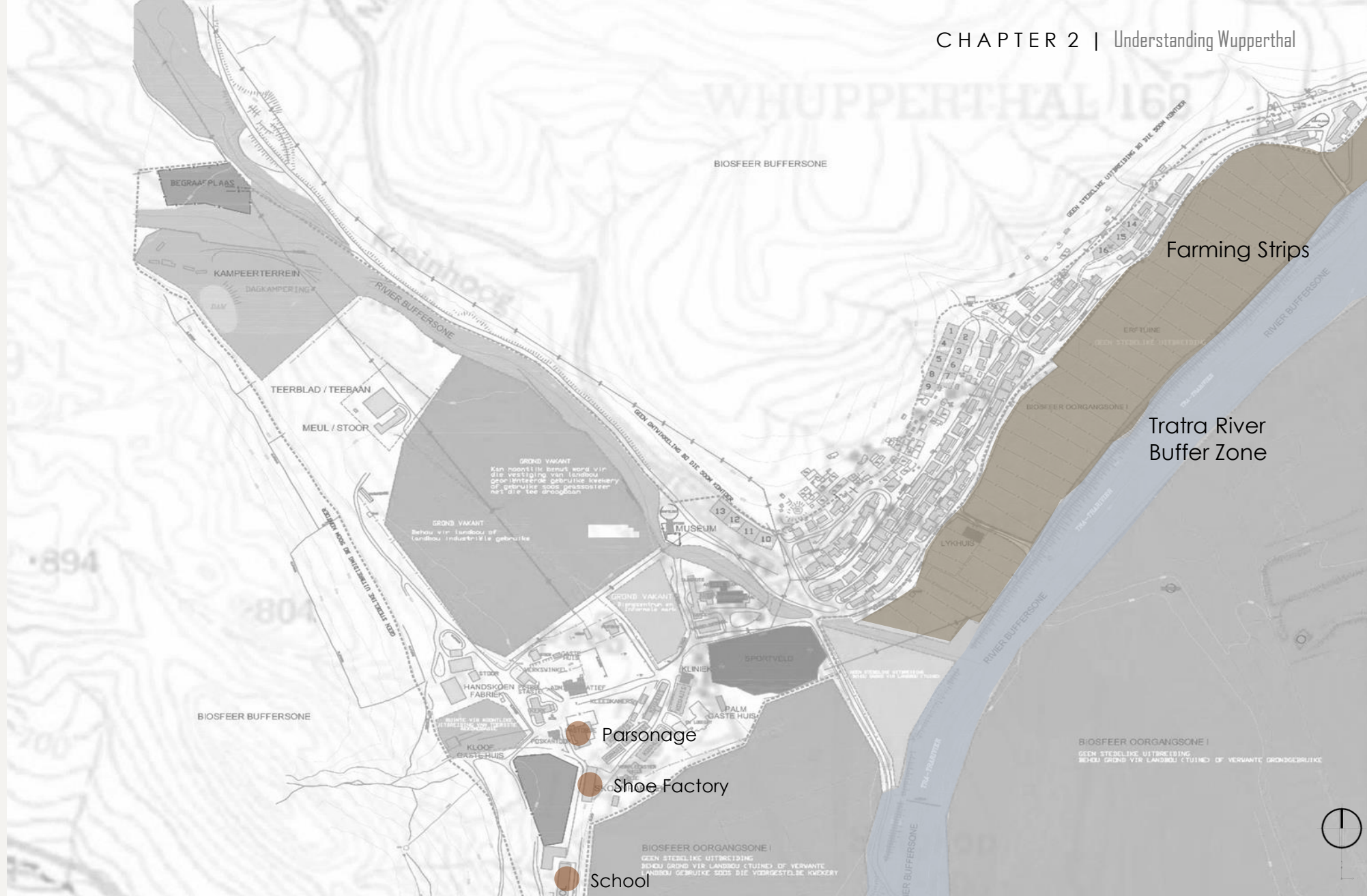


Figure 2.10: Wuppertal local structure plan (Taylor, Van Rensburg, Van Der Spuy, Visser Architects, 1999; adapted by author).

1.2 HERITAGE APPROACH

As stipulated in the following excerpt from the National Heritage Resources Act, Wupperthal qualifies as a heritage resource due to its cultural significance and value for present and future generations:

"3. (1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

(2) Without limiting the generality of subsection (1), the national estate may include—

(a) places, buildings, structures and equipment of cultural significance;

(b) places to which oral traditions are attached or which are associated with living heritage;

(c) historical settlements and townscapes;

(d) landscapes and natural features of cultural significance" (South Africa. The National Heritage Resources Act 1999: 13).

Therefore, Wupperthal's significance lies in the historical buildings and the overall reciprocal composition of the town, landscape, culture and living heritage. It is evident that Wupperthal's significance consists of tangible and intangible resources, as opposed to the notion of Wupperthal as a museum town consisting of heritage buildings. In light of recognising Wupperthal as a national heritage resource, the following principles as highlighted in the Act, must be comprehended:

"(a) Heritage resources have lasting value in their own right and provide evidence of the origins of South African society, and as they are valuable, finite, non-renewable and irreplaceable, they must be carefully managed to ensure their survival;

(b) every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations, and the State has an obligation to manage heritage resources in the interests of all South Africans" (South Africa. The National Heritage Resources Act 1999: 16).





Figure 2.11: Oil painting of the street village in Wupperthal (Author, 2022).

The conservation of Wupperthal as a national heritage resource plays a vital role in safeguarding the cultural heritage of the Khoi and San. In accordance with the Act and the Burra Charter (The Australia ICOMOS Charter for Places of Cultural Significance 2013), the following conservation approach towards Wupperthal was conceived.

The Burra Charter proposes a cautious intervention towards heritage resources by doing as much as possible to advance the resources while, on the other hand, doing as little as possible to alter the cultural significance (The Australia ICOMOS, 2013: 1). As published by the Burra Charter and the National Heritage Resources Act, the cultural significance has value for the past present and future generations. In considering the future generations, a conservational approach is preferred above preservation (The Australia ICOMOS, 2013: 1). Heritage Western Cape recently grappled with the future of Wupperthal, after a devastating fire in 2018, and whether the correct restoration of the heritage resource consisted of preservation or conservation (Jacobs, 2022: interview).

1.3 RESTORATION

After the fire on 30 December 2018, the value of Wupperthal as a national heritage resource was evident as the Rupert Foundation sponsored the restoration of the werf containing the early 19th century buildings (Jacobs, 2022: interview; Swilling, 2022: online). The restoration of the werf is completed, while Heritage Western Cape is currently involved in restoring the street village. The restoration of the street village consists of mitigating the reality of conserving the heritage while assisting the residents with rebuilding their homes as funds are limited (Jacobs, 2022: interview).

The fire started in one of the palm trees close to the Smitswinkel, after which it rapidly spread into town (RoepTV, 2019: video). The fire spread to most of the street village on the slope of Grootkop and the werf leaving devastation in its path. Most residences and community buildings, except the church, were destroyed (Jacobs, 2022: interview).

The following section catalogues additional heritage buildings and resources in Wupperthal, among which most of the buildings were damaged in the fire and restored:



Figures 2.12 -2.16: Photo collage of the damage caused by the fire (Pather, 2019: online; Solomons-Johannes, 2018: online).

WERF MAP: IN TOWN SQUARE

Legend

1. Moravian Church
2. Post Office
3. Pastorie (Rectory)
4. Winkelhuis
5. Mission Stores
6. Leipoldt House
7. Smitswinkel
8. Library
9. Town Hall
10. Info
11. Palms Guesthouse
12. Old Tannery
13. Hostel Building 01
14. hostel Building 02
15. Shoe Factory
16. Ablution
17. Clock Tower



Figure 2.17: Photograph of the werf map located in Wupperthal, showing all public buildings (Author 2022: photograph).

MISSION STORE AND TOWN HALL



Figure 2.18: Mission store (Author, 2022).



Figure 2.19: Town Hall built in 1981 (Author, 2022).

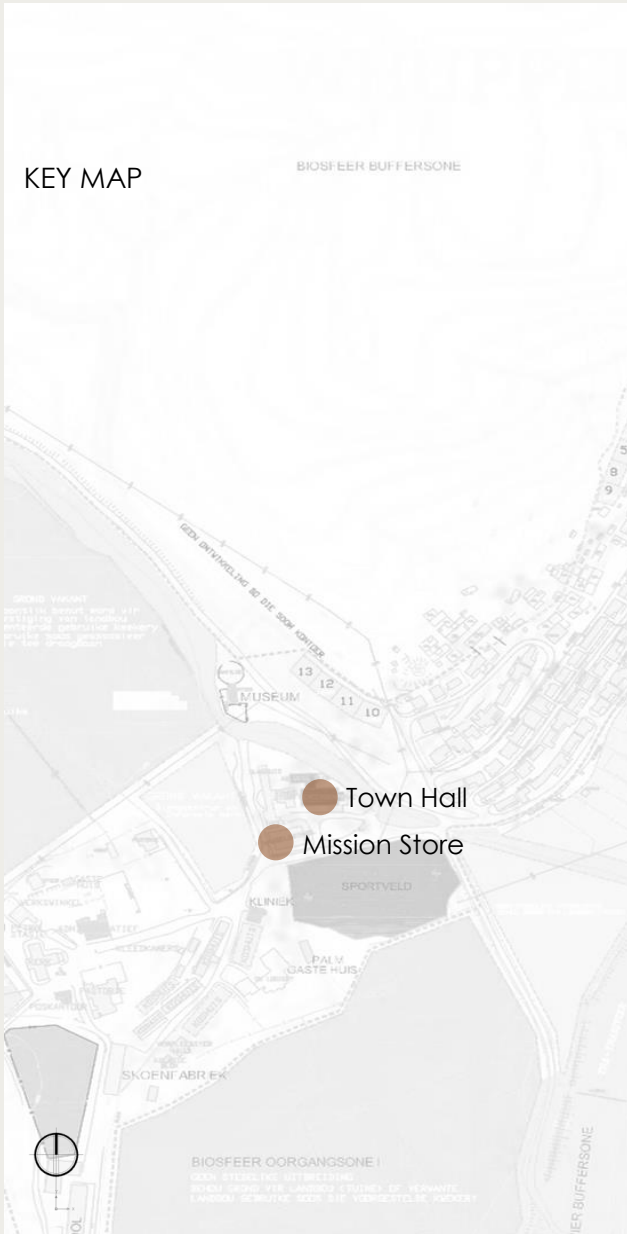


Figure 2.20: Wupperthal local structure plan (TV3 Architects, 1999; adapted by author).

HOSTELS AND PALMS GUESTHOUSE



Figure 2.21: Hostels (Author, 2022).



Figure 2.22: Palms guesthouse (Author, 2022).

KEY MAP



Figure 2.23: Wupperthal local structure plan (TV3 Architects, 1999; adapted by author).

STREET VILLAGE



Figures 2.24 – 2.27: Photographs of the street village and some residences (Author 2022).



2. CONTEXT ANALYSIS

The following section investigates the significance of Wupperthal through a series of lenses aimed at identifying and understanding the reciprocal composition of the town, landscape, culture and living heritage. The context analysis will investigate the Macro, Mezzo and Micro contexts of Wupperthal.

2.1 MACRO ANALYSIS

West Coast District

Wupperthal falls under Cederberg Local Municipality, located in the West Coast District of the Western Cape Province, roughly 200 km from Cape Town. The West Coast District is geographically situated between the Cederberg Mountains in the east and the Atlantic Ocean to the west (Municipalities of South Africa, [n.d.]: online). The Cape-Namibia Corridor and the N7 National Road run through the district. Nearby towns in the municipality include Citrusdal, Clanwilliam, Elands Bay and Lamberts Bay (Municipalities of South Africa, [n.d.]: online).

Ecotourism

The primary economic sector in the Cederberg Local Municipality consists of Agriculture, Forestry and Fishing, but due to the natural resources and beauty, the municipality prioritises the potential of expanding ecotourism (Municipalities of South Africa, [n.d.]: online). The West Coast is the fourth most visited region in the Western Cape after Cape Town, Cape Winelands and the Garden Route (Cederberg Municipality, 2021: 131).

The Tourism Development Framework for the Cederberg Local Municipality, including Wupperthal, focuses on developing tourism infrastructure including hiking trails, the already established Donkey Tracking Route in Wupperthal and unlocking region-specific tourism products (Cederberg Municipality, 2021: 129).



Figure 2.28: Map of South Africa indicating the Cederberg Wilderness Region and Wupperthal (Lucas Map Viewer, 2022; adapted by author).

Figure 2.29: Cederberg Region, Western Cape, South Africa (CGA. 2022, adapted by author).

Climate, Geology and Vegetation

Wupperthal lies to the east of the West Coast District and is geologically situated on the edge of the "Table Mountain Supergroup" formation and the "Karoo Supergroup" formation, resulting in a composition of mostly sandstone and shale (Franklin, 2015: 83). The unique geological composition and vegetation of the Cederberg Wilderness Area contribute to its unique *terroir* sustaining the presence of the region-specific Fynbos vegetation. The Cederberg Wilderness Area falls under the Cape Floral Region, which is classified as one of the eight UNESCO World Heritage Sites in South Africa (Western Cape Government, 2014: online). Due to the unique climate, geology and vegetation, it is possible to attribute a Geological Indicator (GI) to Rooibos, protecting the heritage of the South African Fynbos (Heinrich Böll Foundation, 2018: online).

Wupperthal Outposts

The town of Wupperthal is the central point of the greater mission community that spreads out over the entire Wupperthal farm, no 168 Clanwilliam (Neethling, 2022: email). The Wupperthal mission community consists of 14 outposts which include Heuningvlei, Koudeberg, Kleinvlei, Langkloof, Eselbank amongst others all forming part of the greater Wupperthal community (Bilbe, 1999: 24; Franklin, 2015: 50).

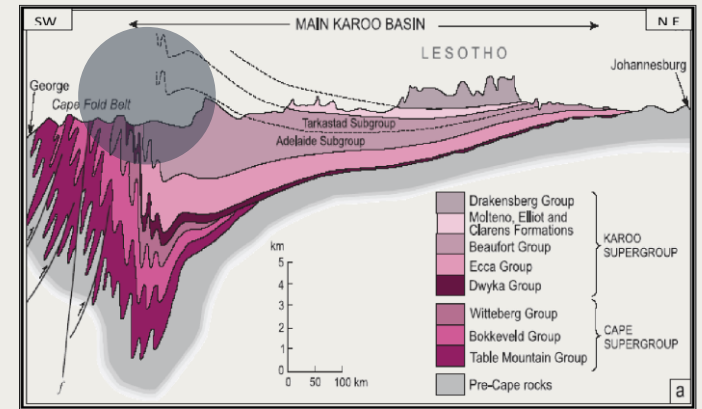


Figure 2.30: Stratigraph of major South African supergroups (Nyathi, 2014: adapted by author).



Figure 2.31: Oil painting of Rooibos plantations (Author, 2022).

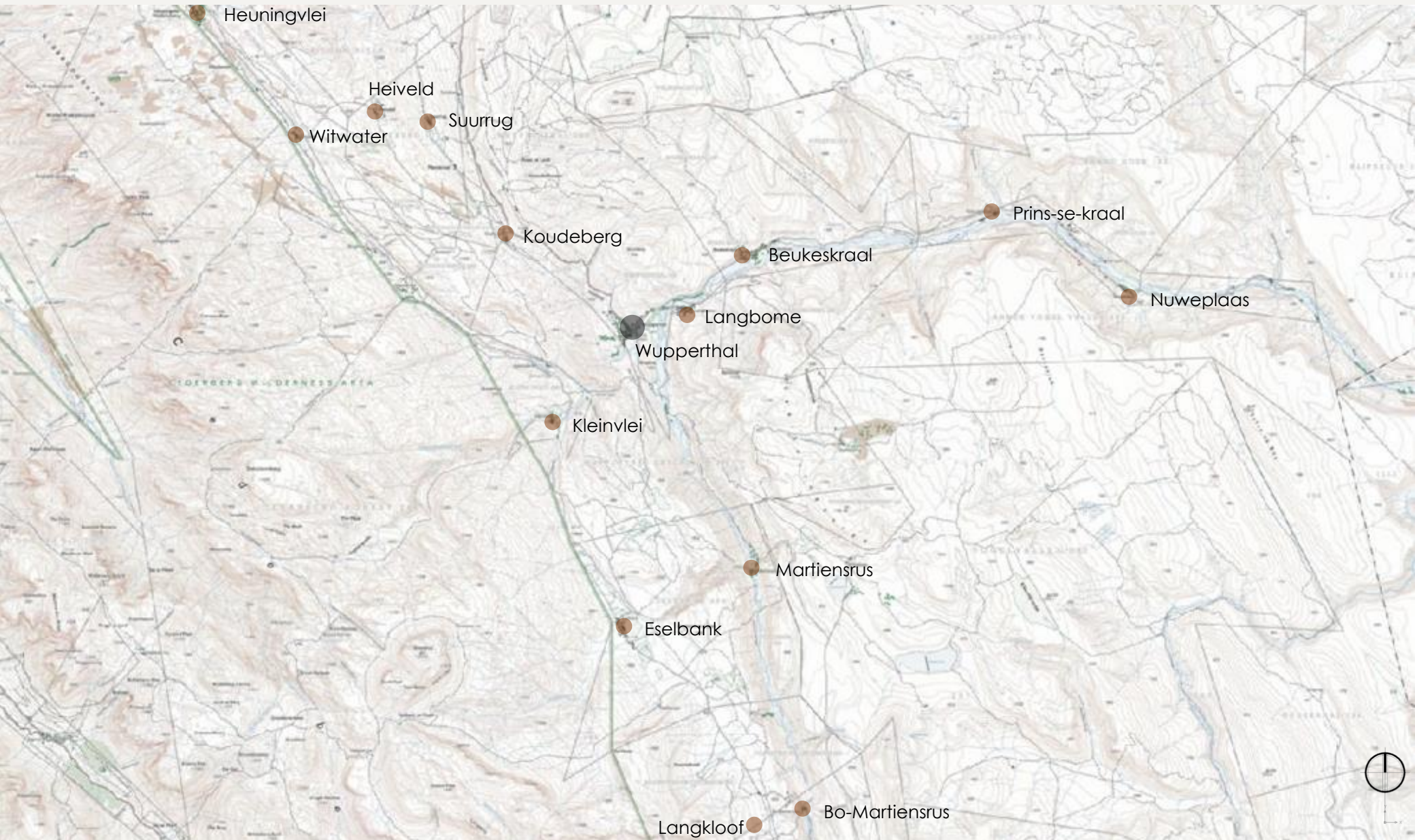


Figure 2.32: Outposts of Wupperthal (CGA. 2022, adapted by author).

2.2 MEZZO ANALYSIS

Layout

Wupperthal lies within the Tratra valley, maintaining an intimate relationship with the landscape. This relationship is evident in the separation between the *werf*, with the church and public buildings, and the street village. This separation is attributed to the reaction towards the landscape, as the *werf* lies in a flat-lying site amongst the mountains with ample space. As opposed to the *werf*, the street village is terraced along the slope of Grootkop, creating an entirely different Morphological response.



Figure 2.33: Wupperthal Street village against slope of Grootkop (Kardoesie, 2022: online).



Figure 2.34: Section through street village cutting into the landscape (Author, 2022).

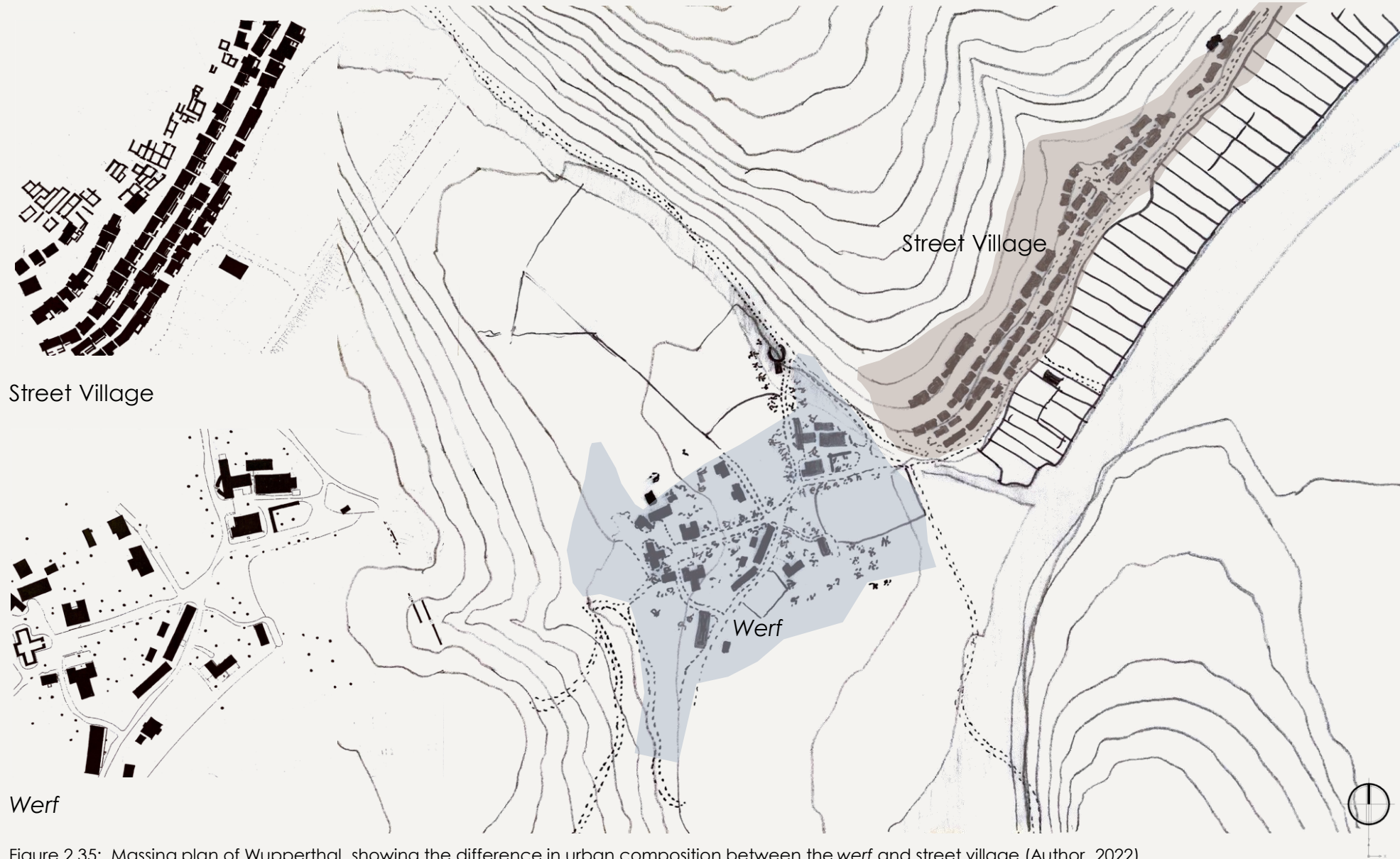


Figure 2.35: Massing plan of Wupperthal, showing the difference in urban composition between the werf and street village (Author, 2022).

Placemaking

In comparing the urban grains of the two distinct areas in Wuppertal, it is evident that the two areas are separated by functions and by way of making place. The distinction does not aim to alienate the two areas from one another but celebrates the difference in intimacy between the areas. Furthermore, the analysis shows that the social and spatial interplay between the werf and street village tells the story of a dense social community in the street village, and a more communal social approach in the werf, forming part of the cultural heritage of Wuppertal.

The social interplay of Wuppertal seems to manifest in the terraced stoeps and narrow streets of the street village while spilling out into the open stretches of land in the werf.

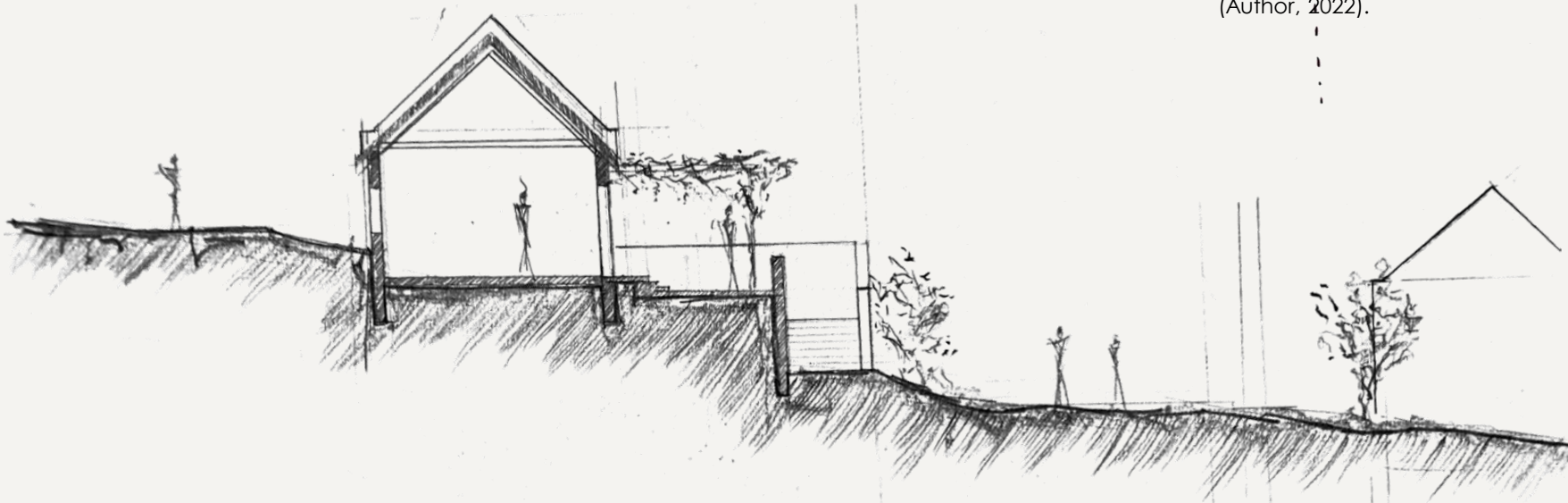


Figure 2.37: Section through street village showing the social interplay (Author, 2022).

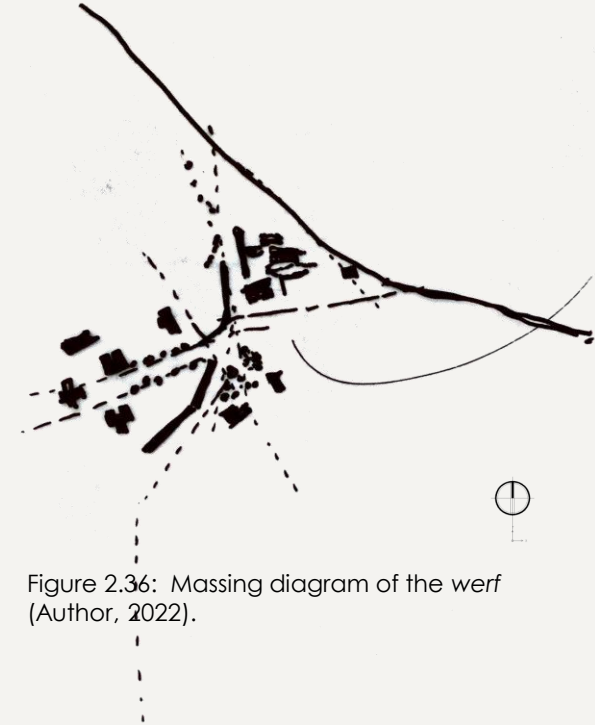


Figure 2.36: Massing diagram of the werf (Author, 2022).

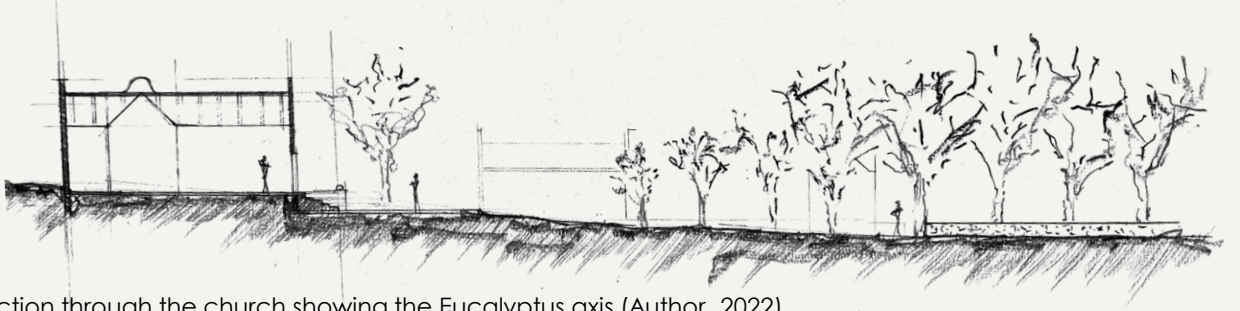


Figure 2.38: Section through the church showing the Eucalyptus axis (Author, 2022).

Initially, it seems as if the *werf* has a somewhat scattered building placement and lacks defined public squares. The two primary organisational factors consist of the Eucalyptus-lined avenue leading to the church and the courtyard at the town hall (Fransen, 2006: 133). Although after a deeper analysis of the *werf*, it is evident that placemaking primarily consists of linear elements contrasted by solid massing and a permeable edge.

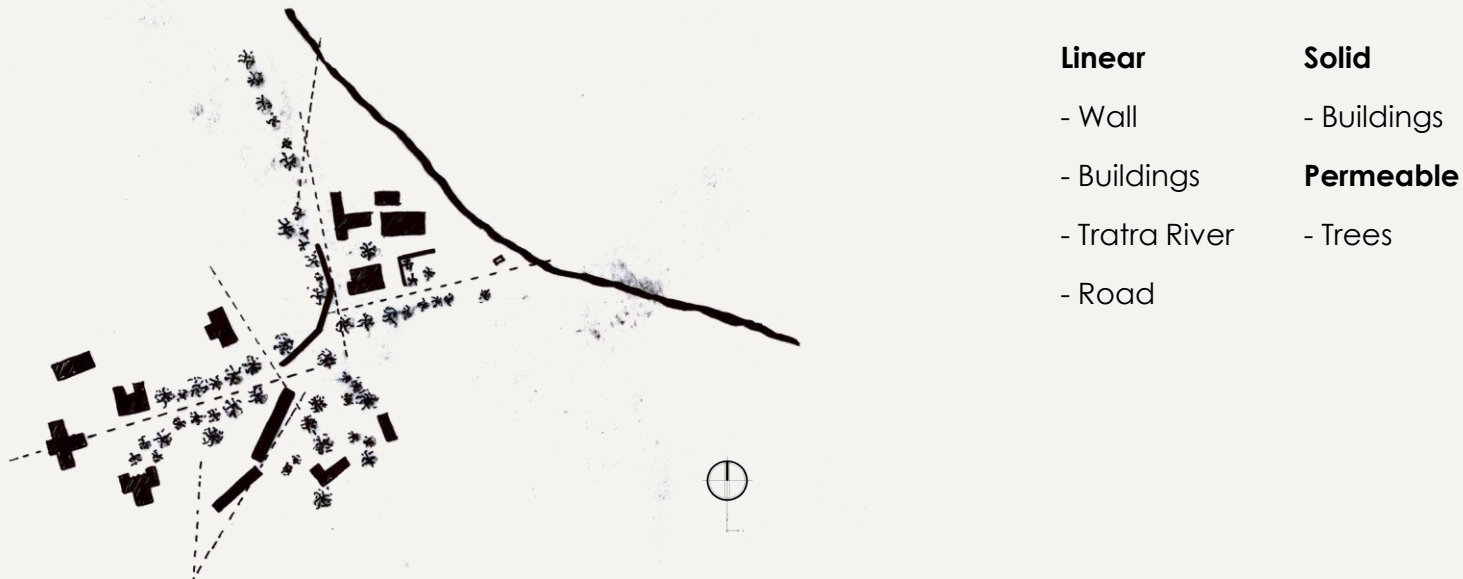


Figure 2.39: Massing diagram showing the organization of the *werf* (Author, 2022).

Rainfall

Wupperthal received a median of 275 mm annual rainfall, mainly during the winter, making it a relatively lower rainfall area than the surrounding Cederberg areas (Cape Farm Mapper, 2022: online). The lower rainfall significantly contributes to the unique Geographical Indicator (GI) of Rooibos grown in Wupperthal (Salomo, 2022: interview).

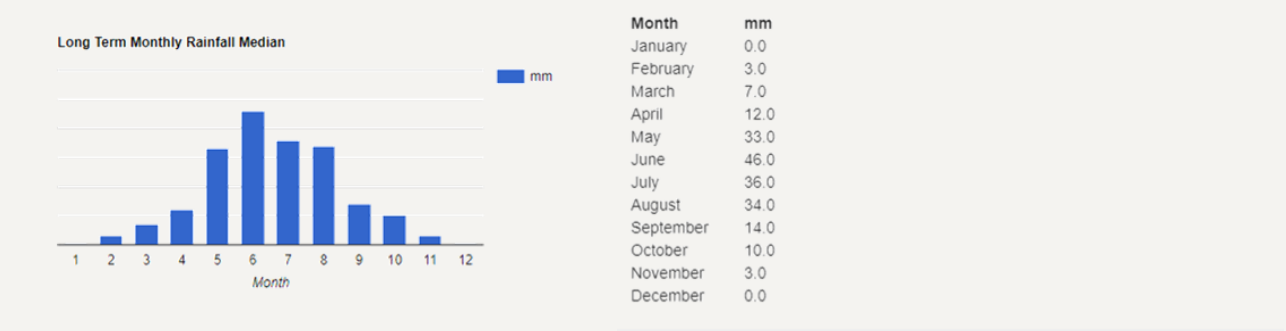


Figure 2.40: Chart of median annual rainfall in Wupperthal (Cape Farm Mapper, 2022: online).

Tratra River and Agriculture

The Tratra river on the Eastern edge of Wupperthal provides fertile soil for farming. The river functions as a natural boundary in Wupperthal's placemaking while functioning as life support. The agricultural fields are laid out according to the German agricultural concept of a *hufe*; the German influence is still visible today in the farming lands used by the residents.

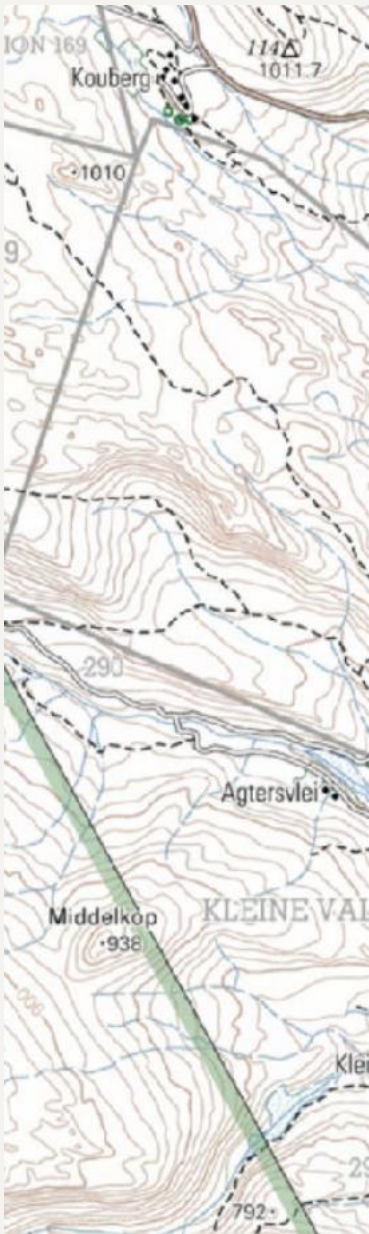
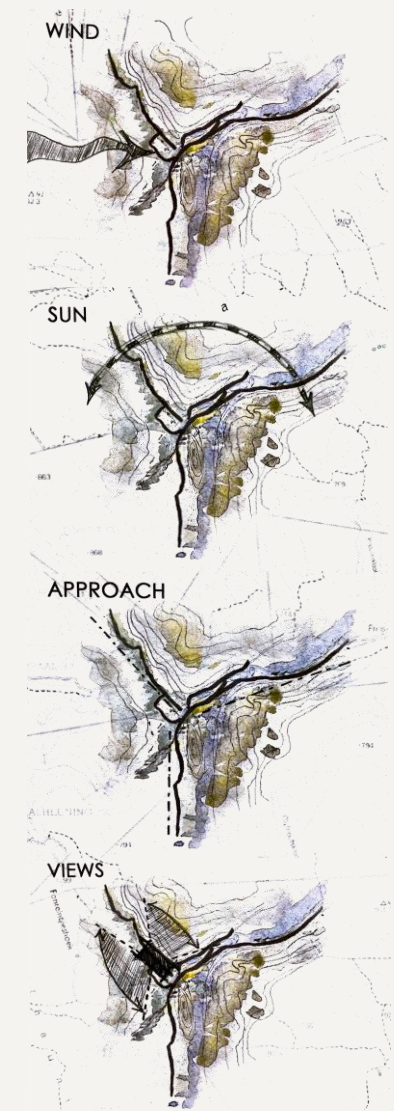
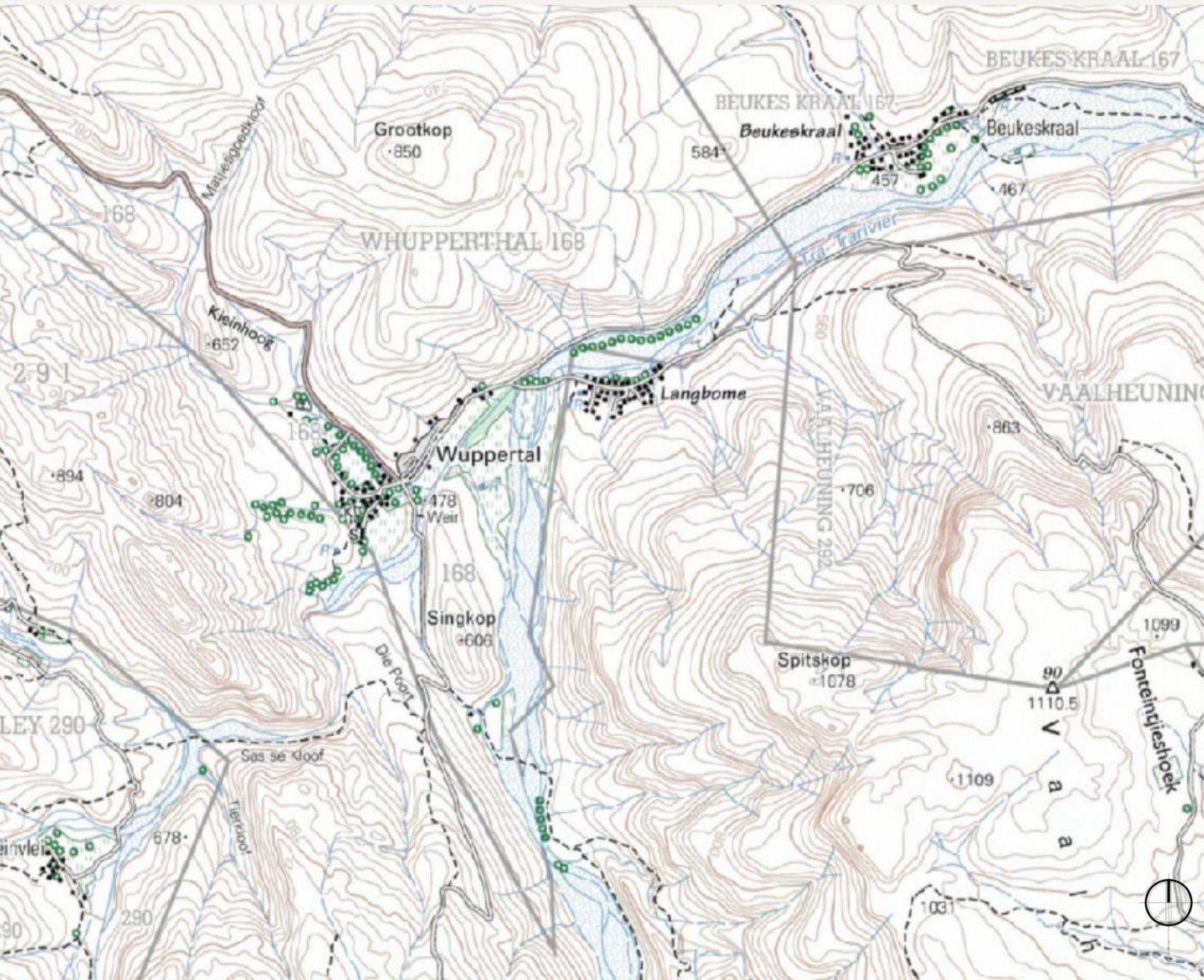


Figure 2.41: Wupperthal in the Tratra valley (CGA. 2022, online).



Figures 2.42 – 2.45:
Analysis of Wupperthal (Author, 2022).

2.3 MICRO ANALYSIS

The reaction to the micro context is divided into two responses, one for the Tea House and the other for the Rooibos Co-Operative while sharing buildings in the immediate vicinity. These buildings include the Smitswinkel and the threshing floor, as well as the town square with Leipoldt House, the Mission Store and the Town Hall.

Tea House

The Rooibos Tea House is situated on the North West slope of Grootkop, on a strip of land nestled in-between the street village and the werf. The Tea House aims to celebrate the Rooibos cultural heritage of the residents while establishing a new economic activity. To this end, the site allows the Tea House to react to the intimate nature of the Rooibos heritage while also commenting on the economic development of Wupperthal. As a result, the Rooibos Tea House aims to reflect a mitigation of the two distinct urban grains and morphological scales.

Rooibos Co-Operative

The Rooibos Co-Operative is situated on land identified, by documentation in the archives of the Cederberg Local Municipality, to be developed for Rooibos-related activities (Neethling, 2022: email). The site reacts to the corridor formed in the town square. Other site elements include the row of Eucalyptus trees functioning as a permeable barrier and the low stone wall demarcating the site.



Figure 2.46: Sectional interpretation of Tea House Site (Author, 2022).



Figure 2.47: Wupperthal local structure plan, showing locations of the Tea House and the Rooibos Co-Operative (Taylor, Van Rensburg, Van Der Spuy, Visser Architects, 1999; adapted by author).

3. CONCLUSION

The history of Wupperthal tells a story of a unique Cederberg gem hidden in the Tratra Valley. Being the first Rhenish mission station in South Africa, established in 1830 amongst the indigenous families of the Cederberg, Wupperthal was destined as a palimpsest (see p. 204) of cultural heritage. Through the analysis, it is evident that Wupperthal's cultural significance ranges from the apparent tangible architectural heritage situated in a UNESCO World Heritage Site to the intangible cultural heritage of the Khoi and San living in a German-influenced town. The intricacies of Wupperthal's history and development, assist in understanding the emplaced cultural heritage to conceive an appropriate architectural intervention rooted in an understanding of the place. Even though the chapter focused on the tangible qualities of Wupperthal, the latent and intangible qualities were also exposed as it is impossible to separate the two. The subsequent chapters focus on developing an abstract understanding of the intangible cultural heritage of Wupperthal.

Figure 2.48: Harvested Rooibos at the Wupperthal Original Rooibos Co-Operative (Author, 2022).



Figure 3.1: Dried Rooibos on the drying platform (Author, 2022).



CULTIVATING ROOIBOS AS A CULTURAL IDENTITY

Chapter two highlighted the fundamental intricacies of the *genius loci* of Wuppertal to allow an observer to understand the quaint missionary town and its indigenous inhabitants. In response, the essence of the touchstone is to unearth a conceptual understanding of the *genius loci* underpinning the ritualised cultivation of Rooibos in Wuppertal.

The ritualised cultivation tells the story of a sensitive relationship between man and nature where the one gives, and the other receives as a reward for partaking in the ritual. When entering the sacred realm of the asynchronous reciprocal engagement, the engager “...establishes, maintains, and develops” their reward, which transcends expectations, “by focusing on strengthening [the mutual] relationship...” (Kristina, 2011: online). The engagement does not favour the one above the other but is contained in an alternating dynamic, allowing each to shine at the optimum moment. This notion is seen in the cultivation of Rooibos, which relies on the ebb and flow of active engagement and passive *Gelassenheit* (see p. 203) as the Rooibos leaves grow, oxidise, dry and infuse.



Figures 3.2 – 3.6: The cultivation of Rooibos as it is processed from the plantation (3.2) to harvesting (3.3) after which it is cut and allowed to ferment (3.4), and after fermentation, the Rooibos is dried and gathered (3.5 & 3.6) (Author, 2022).



Figure 3.7: Barend Salomo, Managing Director of the Wupperthal Original Rooibos Co-Op, standing in a building damaged by the fire of 2018 (Isaacs, 2019: online).



Figure 3.8: The stool Barend Salomo inherited from his great grandfather who carved it from a solid piece of Cedarwood (Salomo, 2022: online).



Figure 3.9: The hereditary stool is used to cut the newly harvested Rooibos leaves as the first step in preparing Rooibos as a cultural identity (Salomo, 2022: online).

The process of *Gelassenheit* desires and asks for a Revering Patience (see p. 204). Barend Salomo's inherited Rooibos cutting stool acts as a gateway to understanding Wupperthal through its embodied *genius loci*. The revering patience for the ritual is manifested within the hereditary stool of Barend Salomo. Where the stool asks the engager to respect the meticulous process by either actively cutting Rooibos or letting nature run its course while melancholily passing time on the stool.

The touchstone aims at abstracting the ritualised 'cultivation' and the revering patience required within reciprocal engagement between man and nature. Like wise, the *genius loci* of Wupperthal lies in the interrelation between man and nature. Sculpting the form from solid timber signifies an active engagement as an appropriation while letting things be. The final product places the active engagement as a counterbalance to the revering patience as the water allows the Rooibos Tealeaves to infuse and slowly ingrain its stain into the fibres of its cultural existence.



Figure 3.10: Abstraction of cultivating a cultural identity (Author, 2022).





The touchstone unearthed the abstract notion of the interrelation between man and nature as a reciprocal dialogue which ultimately constitutes an understanding of Wupperthal's *genius loci*. Chapter Three aims to abstract how Wupperthal expresses this interrelation between man and nature by investigating the embodied placemaking that has developed over the years and forms part of the cultural heritage of Wupperthal.

Figures 3.11 – 3.13: Images of the final touchstone (Author, 2022).

Figure 4.1: The street village (Author 2022).

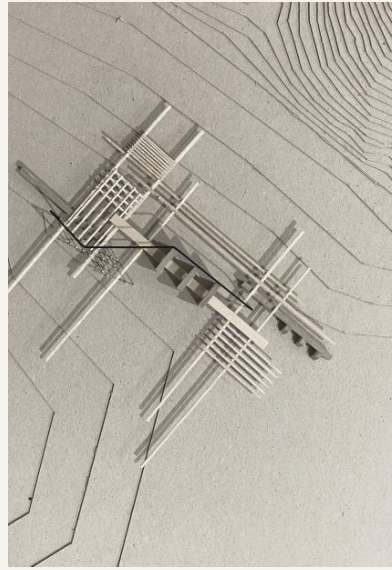


The Touchstone in Chapter Three unearthed the abstract notion of the interrelation between man and nature as a reciprocal dialogue. This interrelation, ultimately, constitutes an understanding of the *genius loci* of Wupperthal. Chapter Four aims to abstract how Wupperthal expresses this interrelation between man and nature by investigating the embodied placemaking that has developed over the years and forms part of the cultural heritage of Wupperthal. The three conceptual investigations consisting of model building and abstract graphic representations aim to make the abstract notion of the interrelation accessible to the reader.

SOCIAL INTERPLAY



LANDSCAPED EDGES



STEEPED CULTURE

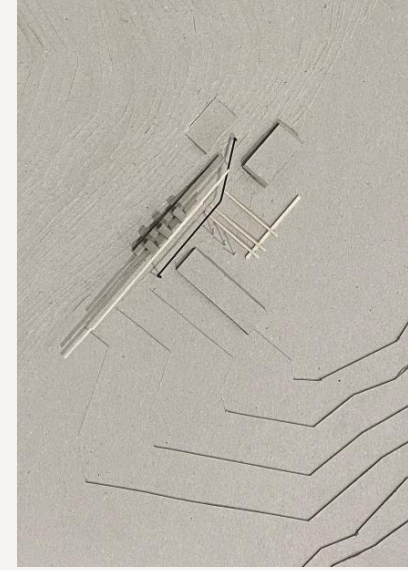
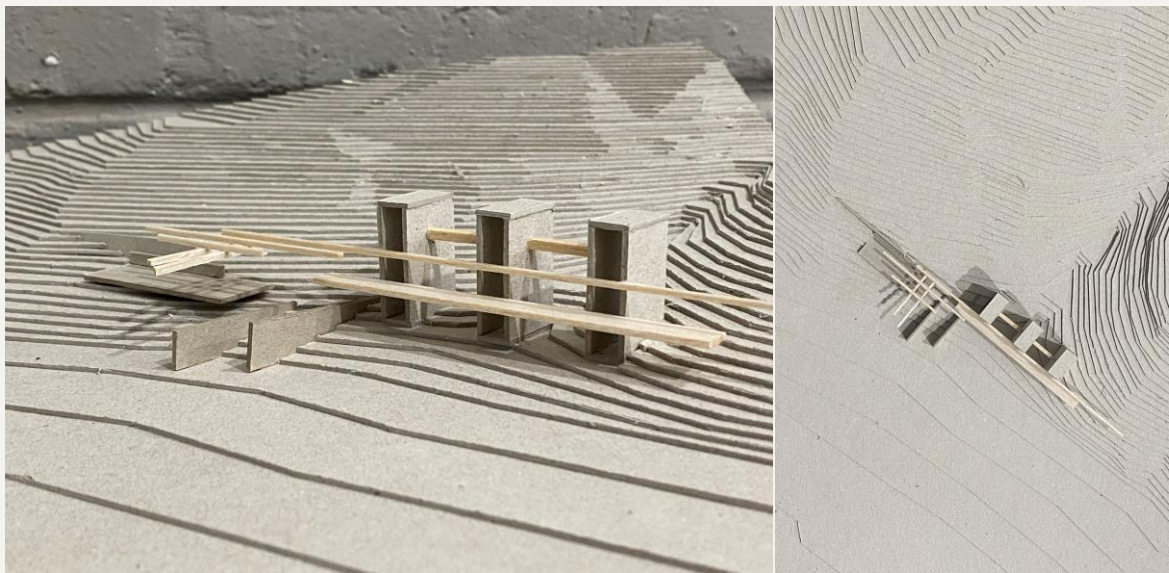


Figure 4.2: Explorative concept models (Author, 2022).

SOCIAL INTERPLAY

The concept aims at abstracting the lived social interplays that exist within the residential fabric of Wuppertal. These residences are located on the South-Western slope of Grootkop, cutting into the earth and creating terraces. Among these terraced homes, the numerous stoeps and alleys carve the social fabric of Wuppertal into the landscape.

Therefore, the concept focuses on the socially-packed voids between the residences while allowing these narratives to continue on the abstracted terraces cutting into the landscape. It is in the delicate yet haphazard interplay between shade, terrace and alleys where the richness of Wuppertal's social existences resides. These in-between moments in Wuppertal were highlighted by Breed & Franklin (2017: online) as the areas where the “everyday life of the people are celebrated and made tangible”.



Figures 4.3 & 4.4: Images of the Social Interplay concept model (Author, 2022).

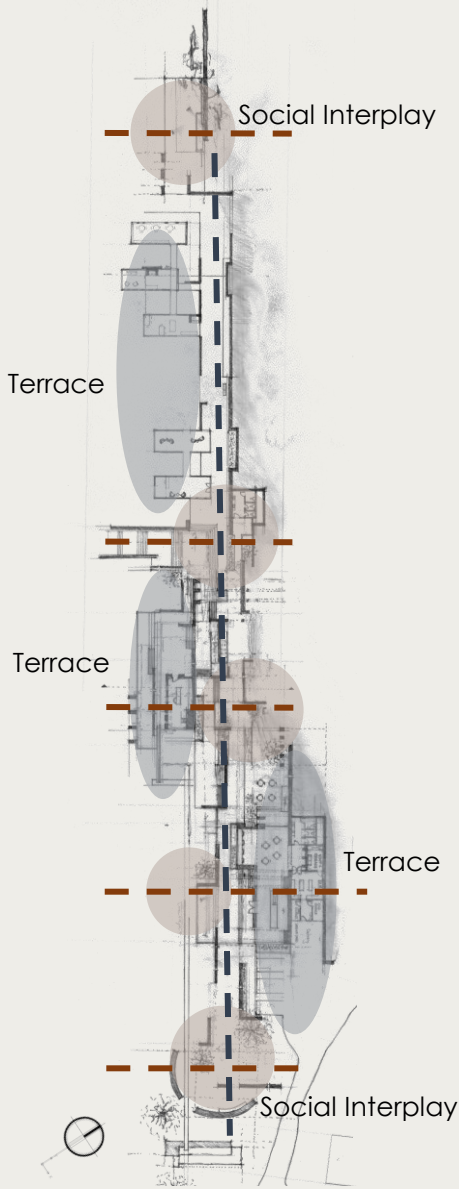
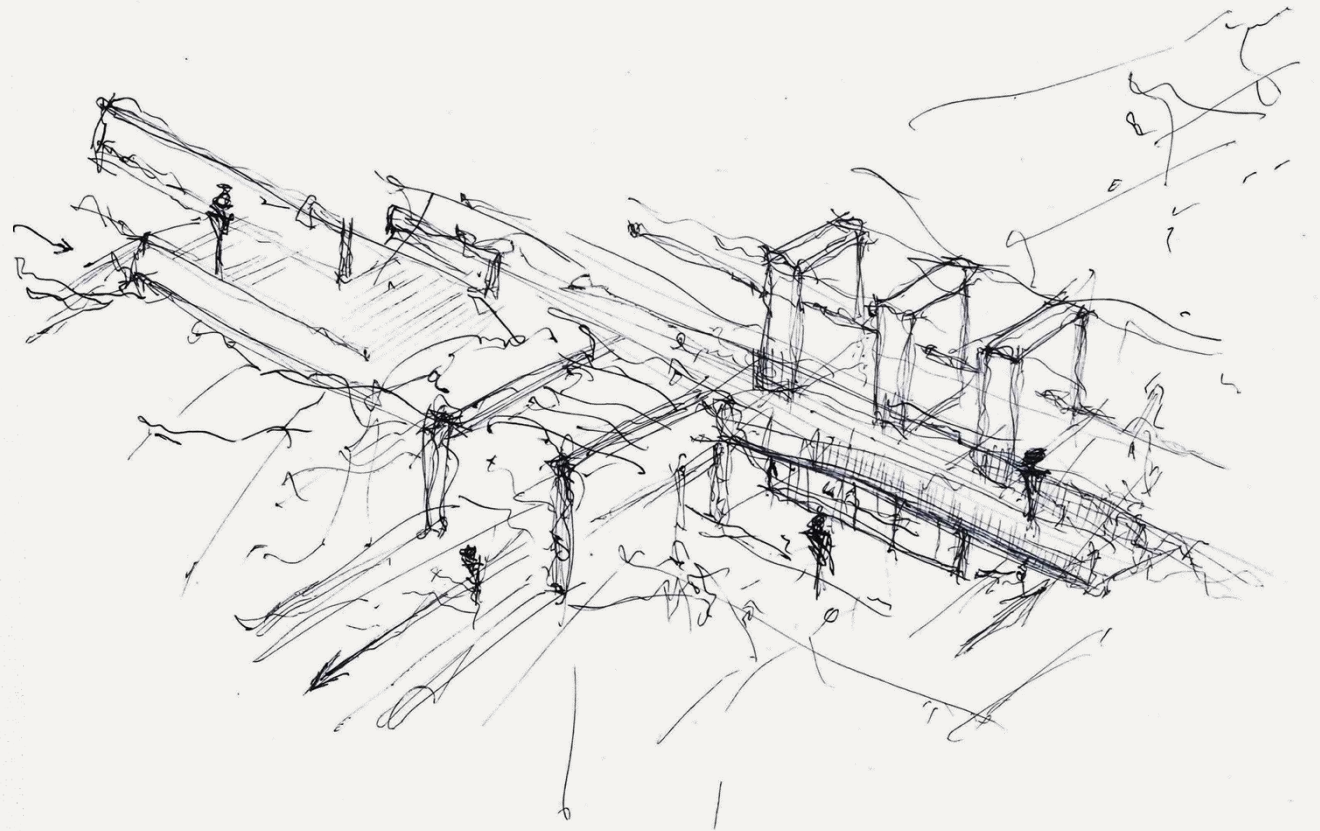


Figure 4.5: Social Interplay's influence on the design (Author, 2022).

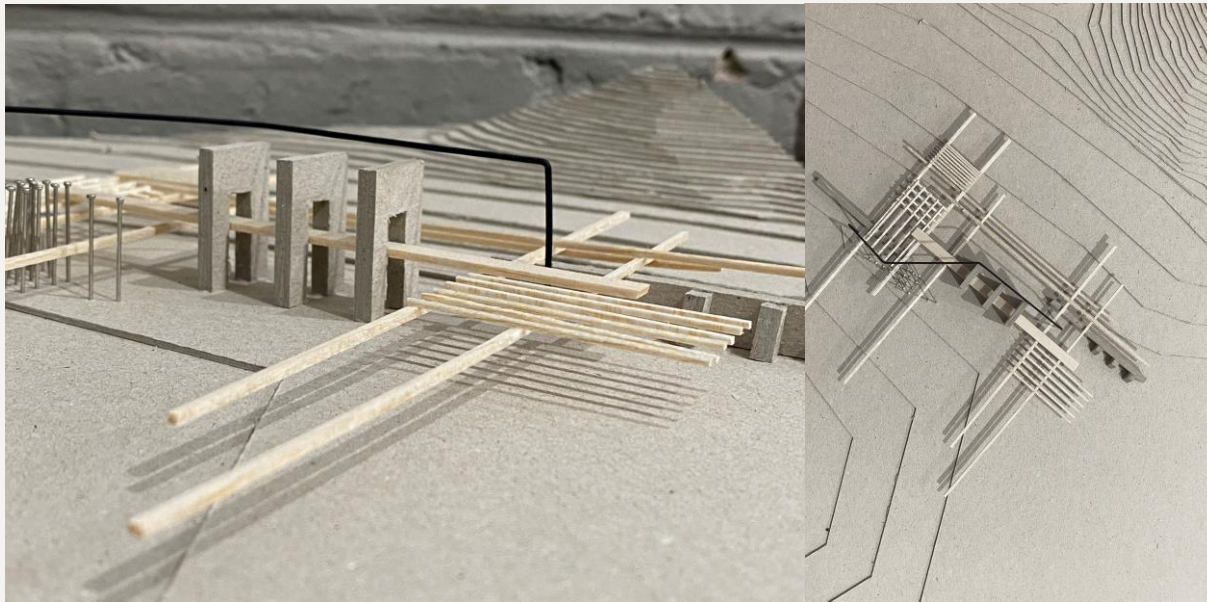


Figures 4.6 & 4.7: Abstraction of the social interplay in the Wupperthal residences (Author, 2022).

LANDSCAPED EDGES

The concept abstracts the integration of landscape and place through the lens of the German Economic Agricultural Composition. These gardens are characterised by 'strips' of demarcated land, sized according to a *hufe*, which coincides with the distance an ox can plough in one day (Franklin, 2015: 49).

The repetition of the German-inspired edges becomes apparent when the curvilinear edges are highlighted. These natural edges counterbalance the foreign organisation as it dissipates into the natural order of the landscape. The concept, therefore, focuses on the integration of place and landscape by understanding the balance between rectilinear and curvilinear edges as a way of sensitively integrating manmade-place and the Cederberg landscape.



Figures 4.8 & 4.9: Images of the Landscaped Edges concept model (Author, 2022).

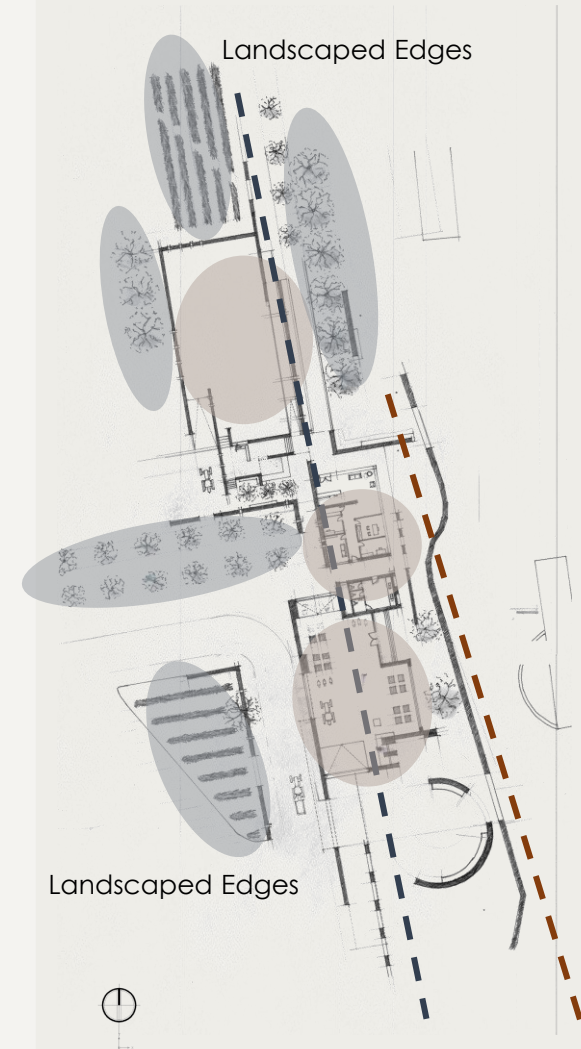
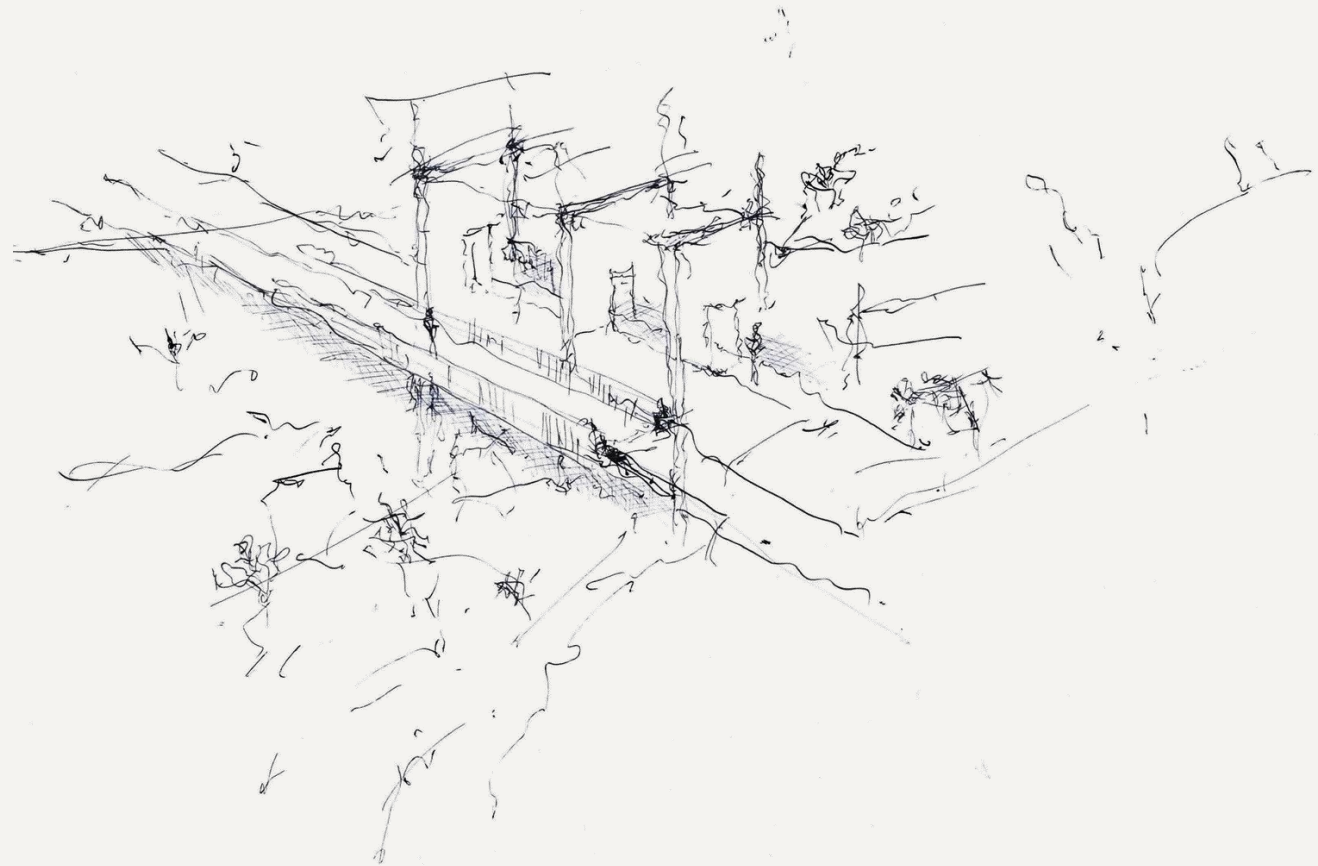


Figure 4.10: Landscaped Edges' influence on the design (Author, 2022).

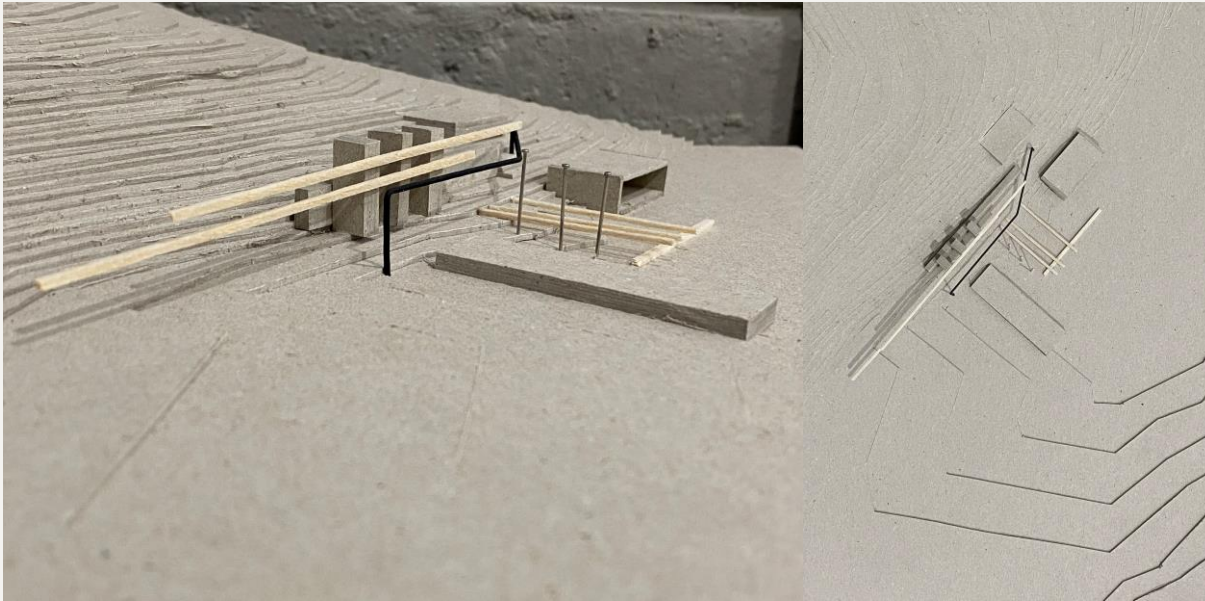


Figures 4.11 & 4.12: Abstraction of the repetitive edges of the community gardens, contrasted by the curvilinear (Author, 2022).

STEEPED CULTURE

This concept is derived from the previous two concepts as integral parts of the tangible and intangible Heritage and Cultural Identity of Wuppertal. Amongst numerous aspects of the cultural identity of Wuppertal, the symbiotic relationship between the Cederberg landscape and Socially activated places is 'steeped' to achieve a stronger cultural tea.

Ergo, the concept integrates the abstracted social interplay of the residences and the balance between rectilinear and curvilinear edges to achieve a social- and landscape-inspired interplay. This notion aims at placemaking under the sway of cultural sensitivity and harmonious landscaping.



Figures 4.13 & 4.14: Images of the Steeped Culture concept model (Author, 2022).

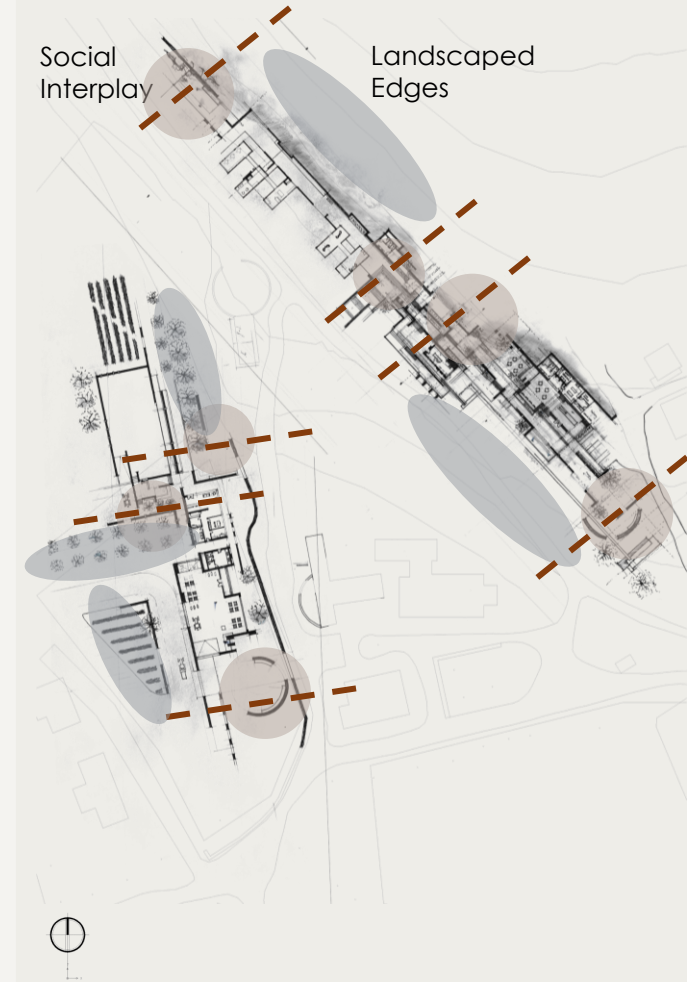
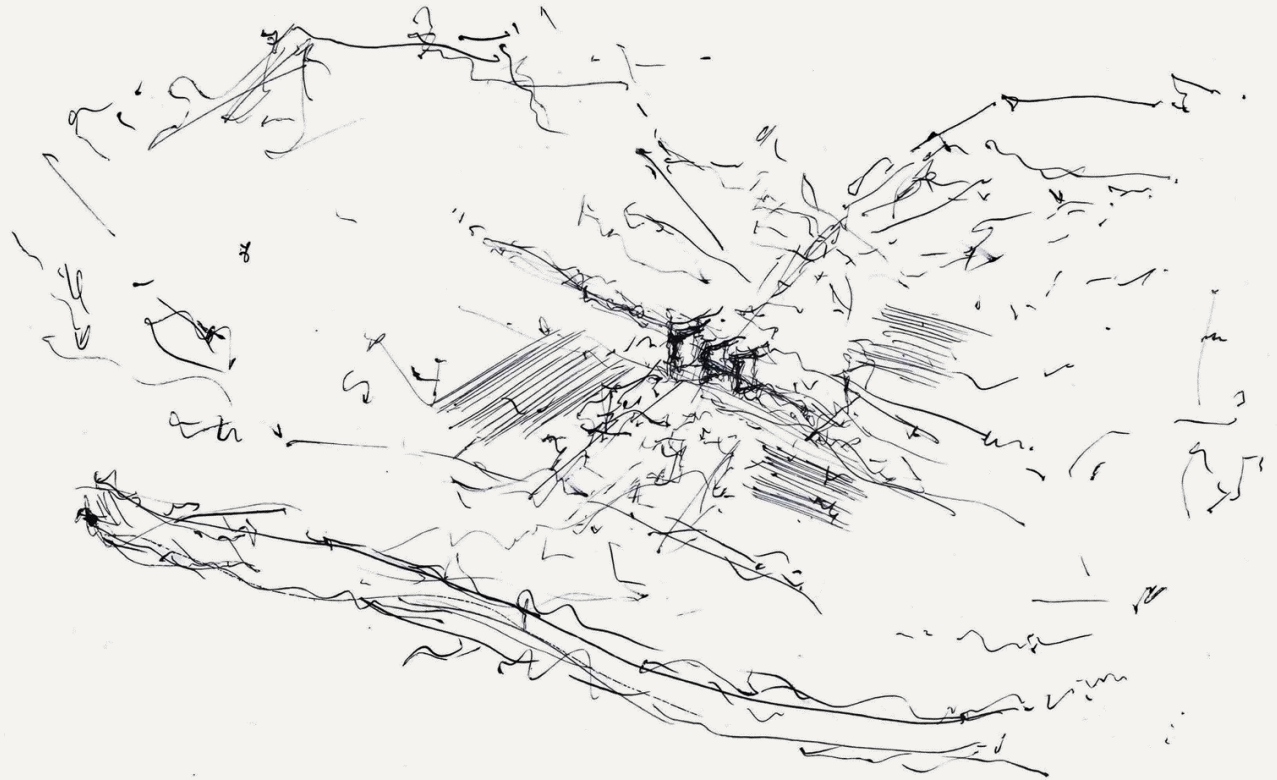


Figure 4.15: Steeped Culture's influence on the design (Author, 2022).



Figures 4.16 & 4.17: Abstract combination of the social interplay and landscaping to 'steep' culture from Wupperthal (Author, 2022).

The three conceptual investigations aim at establishing an understanding of the Cultural heritage steeped in the fabric of Wuppertal by highlighting the tangible expressions of the interrelation between man and nature. The Social Interplay allows the sensitive integration of social spaces within the Rooibos Tea House, ultimately linking the Social Interplay with the Street Village. Landscaped Edges allows the softening of thresholds of the Rooibos Co-Operative while paying homage to the German-inspired agricultural heritage. Steeped Culture concludes the conceptual investigations by combining the social and natural identities of Wuppertal.



Figure 5.1: Dappled light against Leipoldt House (Author, 2022).

How may a Critical Regionalist architecture, unearthing the intangible Khoi and San cultural heritage related to Rooibos Tea, contextualise a Tea House within Wupperthal in the Cederberg region?

" It's the people; Wupperthal's people is just unique; it's different. And that is why I say there is really a link between Wupperthal and the Rooibos; it is just different, something special." (Heinrich Böll Foundation, 2018: video).

- Barend Salomo, Resident of Wupperthal

Figure 5.2: Harvested Rooibos (Author, 2022).



INTRODUCTION

The Khoi and San, as the recognised holders of indigenous knowledge related to the cultivation and uses of Rooibos (*Aspalathus linearis*), embody the longstanding philosophical debate of man's relation to nature which alludes to the understanding and shaping of culture. In Chapter Two, Understanding Wupperthal, it has been established that Wupperthal developed as a mission station amongst the indigenous Khoi and San families, focusing on the spiritual upliftment of these families. Accordingly, Wupperthal as a town developed in close connection to the cultural heritage of the Khoi and San, as the majority population.

Wupperthal not only embodies the cultural heritage of the Khoi and San. In conjunction with Rooibos as an indigenous protected cultural heritage and the unique Geographical Indicator (GI) of Wupperthal Rooibos, it embodies unique *genius loci* (see p. 203), connecting man's heritage with nature. The sentiments of the connection between man and Wupperthal's *genius loci* ultimately make the separation between place and inhabitant impossible. Consequently, the inseparability of culture and place renders the emplaced Khoi and San of Wupperthal a unique and specialised cultural heritage.

The Critical Regionalist (see p. 203) investigation stems from the necessity of understanding the emplaced cultural heritage, as place is evidently in an undeniably reciprocal dialogue between culture (tectonics), topography, and climate. In transforming the critical understanding of the region of concern into architecture, the objective is to endeavour to unearth the intangibility of Rooibos' cultural heritage to be celebrated in architectural ritual. The celebration is achieved by changing the intent of engagement towards everyday habits through architectural intervention. To conceptualise rituals related to Rooibos, it is important first to understand the cultural identity of the Wupperthal Khoi and San and how to respond architecturally.

1. CRITICAL REGIONALISM AND THE COMPLEX WHOLE

Critical Regionalism tries to conceptualise an architectural response that counters the universality and lack of identity synonymous with the contemporary era through a critical understanding of the region of concern. Critical Regionalism does not aim to develop a methodology but instead opens a way of thinking that allows an architectural response rooted in the identity of the region of concern (Patteeuw, & Szacka, 2019: online). Critical Regionalism, therefore, broadly investigates the place-specific cultural architectonics, topographical influence and existential experiences connected with the place to produce emplaced architecture (Patteeuw, & Szacka, 2019: online). In light of a globalising society, the British architect and critic Kenneth Frampton maintained in a 2018 interview that Critical Regionalism is as essential in safeguarding cultural identity in 2018 as it was in 1980 when he started writing on Critical Regionalism (Crudeli, 2018: online). Frampton expressed a growing notion toward celebrating specific cultural identities as opposed to an umbrella approach to cultivating cultural globalisation (Crudeli, 2018: online).

Ergo, In attempting to contextualise a foreign typological response in Wupperthal, it becomes essential to identify the core principles of the emplaced cultural identity in Wupperthal. In support of the above-mentioned perplexity, understanding the place, culture, and landscape of an emplaced Khoi and San culture should shape the response in more ways than one. To understand the perplexing whole of the Wupperthal Khoi and San, the architectural thought-process of critically analysing the local as opposed to the global while internalising the cultural methodologies (Frampton, 1983: 151) underpins the architectural investigation. Hence, Critical Regionalism extends beyond space and ventures into the realm of place enriched by phenomenological aspects of the *genius loci* and cultural heritage.

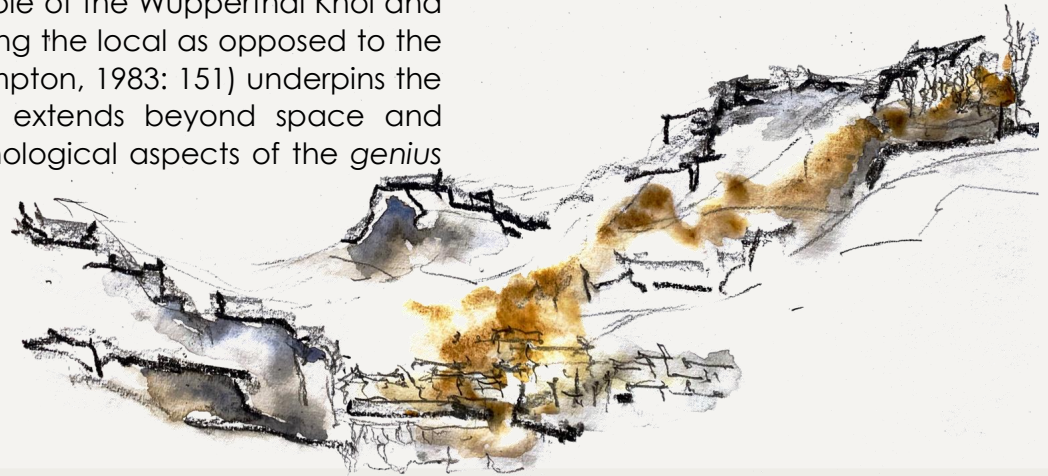


Figure 5.3: Steeping the cultural heritage from the Cederberg mountains (Author, 2022).

1.1 MITIGATION OF THE CONTEMPORARY PARADOX

As the British architect and critic Kenneth Frampton explored, Critical Regionalism aims to understand the complexity of technological universality and traditional regionality (Miller, 2014: 20). Frampton refers to this complexity as the 'paradox' of Critical Regionalism (Frampton, 1983: 148). In mitigating the 'paradox', it is possible to synthesise an architecture that poetically engages the specifics and particularities of its time and place (Miller, 2014: 20). Ergo, Critical Regionalism aims at adapting to the ever-changing world while maintaining the essentiality of cultural identity in a mediative expression of the two opposing entities.

Considering the cultural significance of Wupperthal and the heritage approach discussed in Chapter Two, the following question arises. How does one conceptualise a sensitive reaction towards the Cape Dutch architecture, already present in Wupperthal, without resorting to a nostalgic recreation?

Critical Regionalism should accordingly be seen as a method of mitigating the 'paradox'; remaining relevant in the contemporary context while reviving and maintaining the sources of cultural identity (Frampton, 1983: 148). The mitigation of the 'paradox' not only applies to the conservation of cultural heritage but equally so to the emphasising of an intangible cultural heritage so easily overlooked.

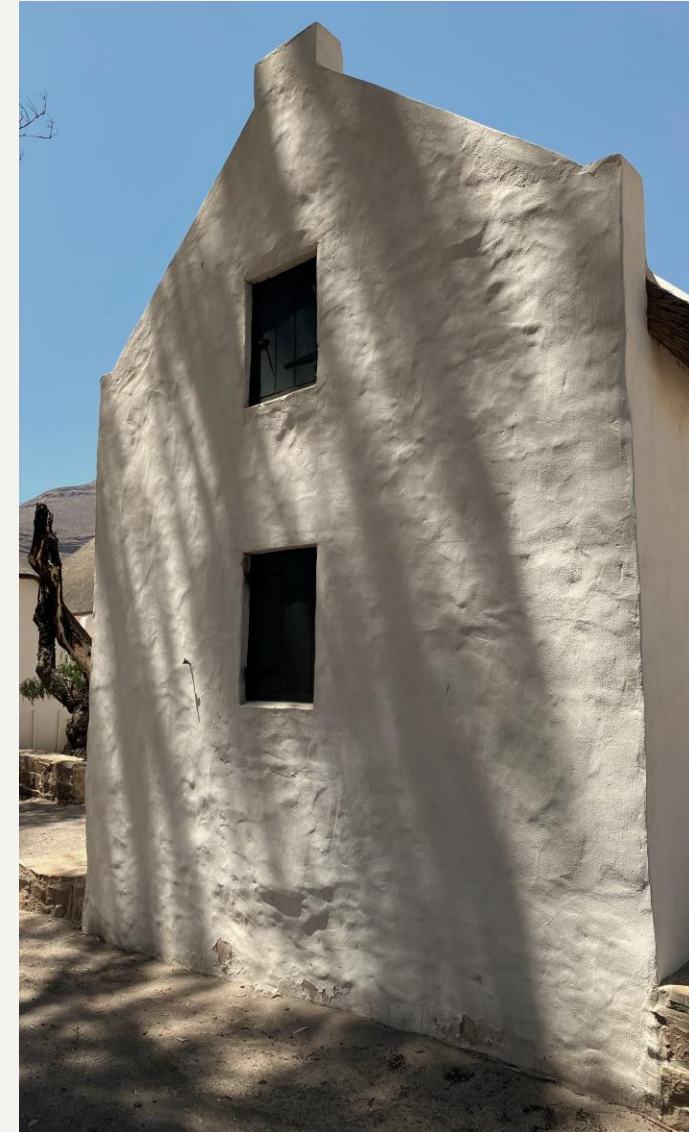


Figure 5.4: Sculptural qualities of the white Cape Dutch walls as expression of *genius loci* (Author, 2022).

1.2 CRITICAL REGIONALISM AS THE ENDEAVOUR TO UNIFY NATURE, CULTURE AND CLIMATE

The British architect and theorist Mohammad Reza Shirazi reiterates the notion of Critical Regionalism as the mitigation between two opposing elements. Shirazi refers to Critical Regionalism as situated in the "...in-between [as a] setting [of] a 'site of confrontation and dialogue' where two poles of extremes could exchange, interact and unite" (Shirazi, 2018: 41). Here, Shirazi (2018:41) specifically refers to Frampton's (1983: 148) 'paradox' between the contemporary and the cultural. However, it could also easily be applied to other regions of critical concern. As maintained by Kate Nesbitt (1996: 48-49), it is evident that there is a longstanding philosophical debate concerning man's relation to nature which alludes to the understanding and shaping of culture. Nesbitt (1996: 49) further elaborates that understanding the dialogue between nature and culture, influences the specificity of man's spatial and existential experience related to place.

As a result, it is argued that Critical Regionalism's region of the 'in-between' extends beyond the mere relation between cultural and contemporary but to the entire construct of being existentiality interwoven with place. For the purpose of this dissertation, Wupperthal's Khoi and San's cultural heritage is considered to be interwoven with the specific emplacement. Arguing that the *genius loci* of Wupperthal are an interwoven mix of place, landscape and culture unbound by time. A notion supported by Norberg-Schulz and philosopher Martin Heidegger as the drawing of relations between place, culture and nature, emphasising the existential importance of the primordial elements constituting a cultural emplacement (Nesbitt, 1996: 49).

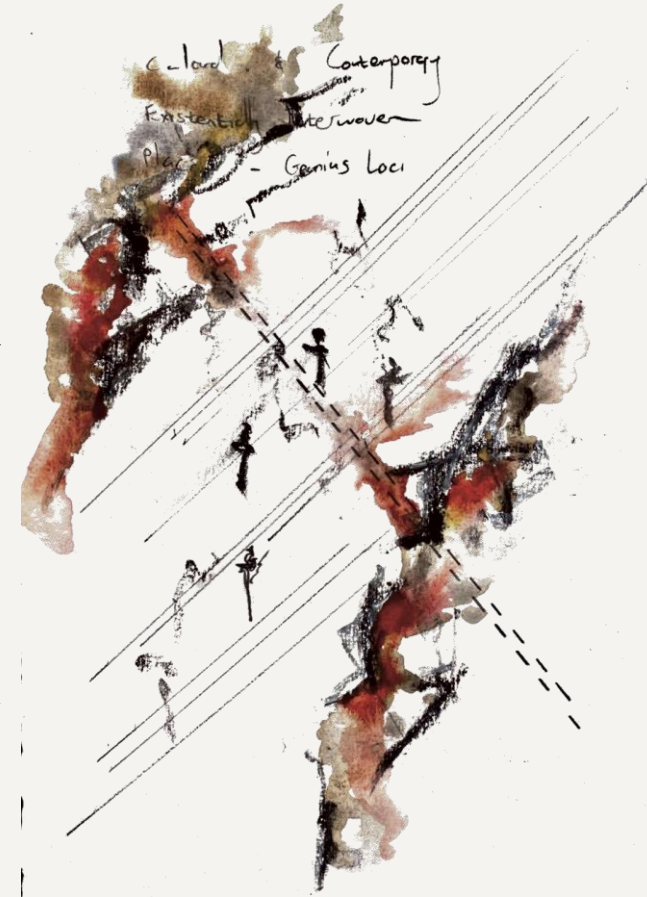


Figure 5.5: Dwelling in the in-between as residence of the *genius loci* (Author, 2022).

1.2.a Topography – Nature

As it has been sustained, understanding the *genius loci* of a region of concern in architecture focuses on nature and the topography of a site as the origin of cultural heritage. Martin Heidegger was supportingly of the opinion that the relation to nature is paramount in enriching man's experience as it exposes the *genius loci* and assists in 'place-making' (Nesbitt, 1996: 49).

As a response, Norberg-Schulz acknowledged Heidegger's notion of nurturing the earth to free its own essence; by reasoning that man's architectural intervention should accompany nature by situating and utilising the landscape harmoniously (Nesbitt, 1996: 49). Consequently, the transformation of the topographical nature reestablished the ontological roots of architecture, emphasising the cultural architectonics (Nesbitt, 1996: 59-50).

The street village in Wuppertal is an expression of the above-mentioned cultural architectonics. The established tectonics of terracing the mountain slope to allow dwelling on the slope is ingrained into the residential fabric of Wuppertal. The Rooibos Tea House draws on the intimate nature of the established residential fabric in a terraced architectural response.



Figure 5.6: Section through street village showing the social interplay (Author, 2022).

1.2.b Tectonics – Culture and Craftmanship

Architecture that manifests its ontological root through the topographical transformation draws on the embedded prehistory of culture, cultivation and transformation of a place, unbound by time (Nesbitt, 1996: 49-51; Shirazi, 2018: 37). As a consequence, the tectonics of a place are synthesised as a pragmatic response to the given conditions and, in its innocent reaction, embody the emplaced 'poetics of construction' (Shirazi, 2018: 36). Through this notion, architecture is believed to be the expression of tectonics which embodies the sustained tension between man and nature as a cultural sensibility (Nesbitt, 1996: 50).

The established tectonic culture and morphology related to Cape Dutch architecture lies at the root of Wupperthal's *genius loci*. Abraham Ockhuis, an inhabitant of Wupperthal, emphasised that the clay walls and steep thatched roofs is part of their heritage and has been used for generations (Rudner, 2015: video).

1.2.c Climate – Light

Frampton argues that for constructing architecture with greater existential and experiential meaning, it is essential to dissect the regional sensitivity to light, wind, and temperature (Nesbitt, 1996: 50). This attunement allows the conception of architecture with greater tactility and sensitivity towards the region of concern, exposing the related existential meanings (Nesbitt, 1996: 50).

Figure 5.7: Cape Dutch architectural response towards light quality [plastered walls] and climate [roof slopes] (Author, 2022).



Abraham Ockhuis continued by alluding that the architectural tectonics of Wupperthal stems from climatic conditions. He maintained that the thick clay walls and thatched roofs play an essential role in keeping their homes warm during the winter and cool during the summer. Ockhuis also emphasised that the steep thatched roofs are essential during the winter when they receive a lot of rain and snow (Rudner, 2015: video).

Amongst the climatic reactions, the whitewashed walls embody a deeper connection with light. The uneven surface creates an intimate play of light on elevation, synonymous with Cape Dutch architecture.

Ultimately, Critical Regionalism becomes a thought process underlining the extraction and understanding of the tangible and intangible cultural heritage rooted in place. Once a more profound understanding is obtained, architecture can preserve and emphasise the local and particular in a world leaning towards a global and universal expression. However, it is essential to mention that some architectural scholars oppose a Critical Regionalist approach. The American Professor of architecture, Keith Eggner, considers Critical Regionalism as a "revisionary form of nostalgia", merely recreating past architectural expressions through a set methodology (Eggner, 2002: 233 -235). Eggner's opposition heeds as a warning and cautions against the preconceptions connected to a region of concern. Therefore, each region should be dissected for its own merits and *genius loci*.

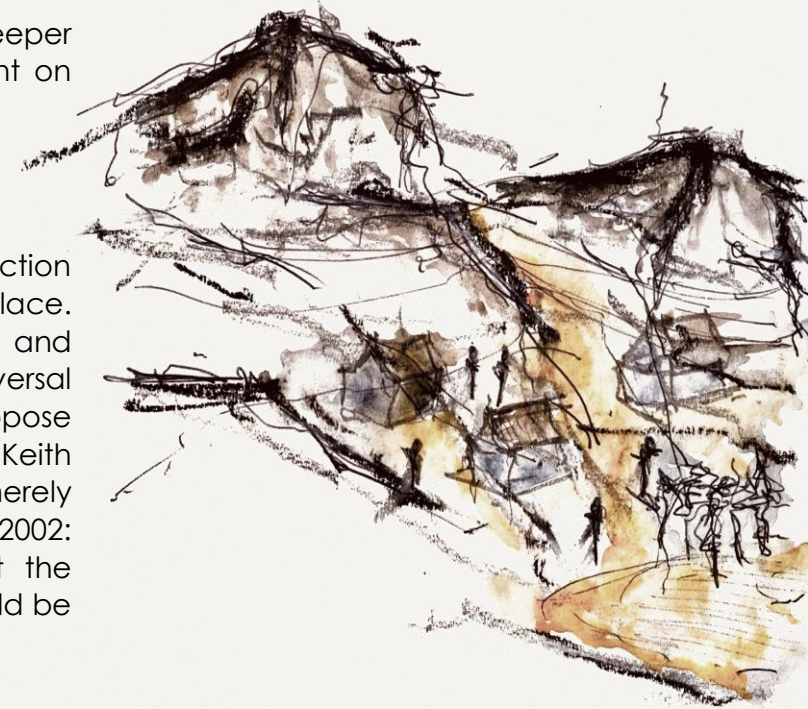


Figure 5.8: An awareness that *genius loci* flow from the relation between man and place (Author, 2022).

1.3 DEFAMILIARISATION

In addressing Eggener's cautionary opposition, Defamiliarisation (see p. 203) plays an essential role in keeping Critical Regionalism critical and devoid of nostalgia. According to Alexander Tzonis & Liane Lefaivre, Defamiliarisation is the act of critical self-reflection against Romantic Regionalism's familiarisation, which employs nostalgic picturesque elements from the past (Wu, 2006: 3).

Defamiliarisation consists of identifying regional elements contributing to the *genius loci* and incorporating them in a novel way that seems unfamiliar yet enhanced (Wu, 2006: 3). The ultimate goal of Defamiliarisation lies in breaking the sentimental link between the building and the place while searching for a deeper existential connection to the element (Wu, 2006: 3-4). As an example, the fireplace and chimney of the parsonage and other residences embody a particular morphology. In defamiliarizing the chimney, the focus would be placed on the existential meaning embodied by the chimney as the hearth of making tea and baking bread for the family. Ergo, the particular morphology is not merely tiered for aesthetics but expresses the existential utility and *genius loci*.

In an attempt to defamiliarise the strong Morphology in Wuppertal, the following investigations aimed to abstract Leipoldt House, the Smitswinkel and the Parsonage into an unfamiliar composition of elements.

Figures 5.9 – 5.11: Buildings identified for defamiliarisation (Author, 2022).



LEIPOLDT HOUSE



SMITSWINKEL



PARSONAGE

LEIPOLDT HOUSE



Figure 5.12: Defamiliarisation of Leipoldt House (Author, 2022).

SMITSWINKEL



Figure 5.13: Defamiliarisation of Smitswinkel (Author, 2022).

PARSONAGE

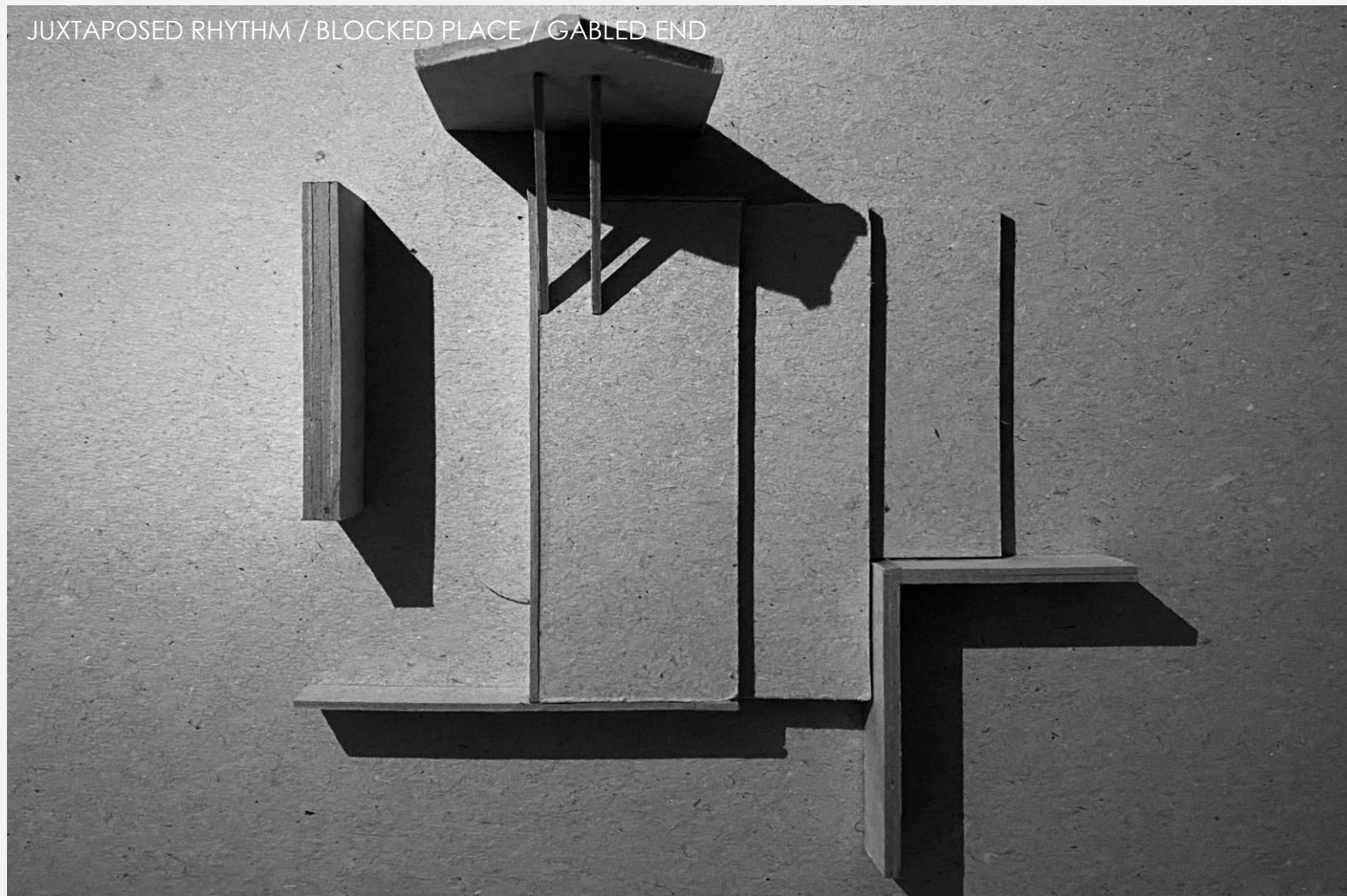


Figure 5.14: Defamiliarisation of Parsonage (Author, 2022).

1.4 COMMITMENT TOWARDS PLACE

Under the sway of Heidegger, Frampton simplifies the overarching notion of Critical Regionalism as the "commitment to place rather than space" (Shirazi, 2018: 32). The Finnish architectural theorist Juhani Pallasmaa (2012: 77) extends the notion that architecture, as the art of place-making, is "...essentially an extension of nature into the man-made realm...", and as a domicile, it becomes inseparable from our self-identity. Pallasmaa (2012: 77) continues by arguing that place becomes part of our body and being, as ingredients of our very existence. If it is believed that architecture is an extension of nature into the man-made realm shaping our self-identity, it is possible to argue that architecture can concretise the intangible cultural heritage of Rooibos. In consequence, a Critical Regionalist architectural intervention can embody and express the identity of Wuppertal's inhabitants and their Rooibos cultural heritage.



Figure 5.15: Architecture as an extension of nature into the manmade realm (Author, 2022).

2. DIALECTIC OF LINKING EXISTENTIAL METAPHORS WITH PLACE

Juhani Pallasmaa (2012: 76) argues that architecture has the timeless task of becoming an artefact that embodies lived and existential metaphors to concretise and structure our being in the world (Pallasmaa, 2012: 77). Pallasmaa (2012: 76) continues that architecture, furthermore, "...enables us to perceive and understand the dialectic of permanence and change...". The dialectic of permanence and change ultimately alludes to understanding why people settle in space to create place; as a measure of change.

Through the comprehension and acknowledgement of the continuum of culture and time, bound by a specific place (Pallasmaa, 2012: 78), it becomes evident why the inhabitants of Wupperthal not only settled in the unique region of the Cederberg but also considers the landscape and unique Rooibos variant as part of their flesh and cultural heritage. These sentiments are reiterated by the local inhabitants of Wupperthal as expressed by Barend Salomo and Hernice Heyns:

" It's the people; Wupperthal's people is just unique; it's different. And that is why I say there is really a link between Wupperthal and the Rooibos; it is just different, something special." (Heinrich Böll Foundation, 2018: video).

- Barend Salomo, Resident of Wupperthal

"Wupperthal het die manier, dat elke klip kom groei aan jou vas, elke bos word deel van jou, die mense word jou eie, so ek verruil Wupperthal vir niks." (RoepTv, 2019: video).

- Hernice Heyns, Resident of Wupperthal

"Wupperthal has this way; every stone grows onto your flesh, each bush becomes a part of your identity, and the people become your own. I will, therefore, never leave Wupperthal."

- Author Translation of Hernice Heyns

The endeavour to understand the fundamental existentiality of Wupperthal's inhabitants through architecture is related to the embodied memory of the Khoi and San's Rooibos cultural heritage 'steeped' into the grain of Wupperthal. As passionately expressed by Barend Salomo, the inhabitants, Wupperthal and Rooibos, have fused, becoming a single cultural heritage with an innate tangibility and various intangible cultural routines (Heinrich Böll Foundation, 2018: video). Referring to the research question of unearthing the intangible Khoi and San cultural heritage related to Rooibos Tea, the focus shifts towards the intangibility of the culture to understand the significance of the undocumented cultural routines related to the production and use of Rooibos.

Professor Roger Lewis, an American architect and urban planner, confirms that these day-to-day acts and routines 'steeped' into the use of Rooibos amongst the inhabitants of Wupperthal are ritualistic in nature (Lewis, 1992: online). Lewis (1992: online) continues that when the ritualistic natures of these routine acts are explicitly celebrated through architecture, the significance and pleasure derived from these recurring rituals can be enhanced and emphasised. Considering that architecture, as a concretised artefact, should embody lived and existential metaphors of being in the world, it is essential to identify the extraordinary and mundane rituals which constitute an emplaced cultural heritage. Identifying and celebrating the extraordinary and mundane Rooibos Tea rituals of the Khoi and San assists in defining the cultural heritage as an entity of permanence amongst change.



Figure 5.16: Wupperthal residents in the town square (Vollenhoven, 2019: online).



Figure 5.17: Wupperthal residents harvesting Rooibos (GlobeIn, 2022: online).

3. RITUAL

All existential experiences imply the embodied acts of recollecting, remembering and comparing, through which we internalise and project our understanding of being in the world (Pallasmaa, 2012: 76). This notion relies on the comprehension of the cultural continuum of the Khoi and San against the objectives of permanence and change.

Suppose the Khoi and San cultural heritage is seen as a set of relatively unchanging habits and practises, as opposed to the permanence of place. Then, through the cultural continuum, we can derive a unique cultural heritage and identity with its own unique cultural rituals that progressively developed over generations. Consequently, the cultural use of Rooibos and all the related practises constitutes a truly Wupperthalesque Rooibos Tea Ritual.

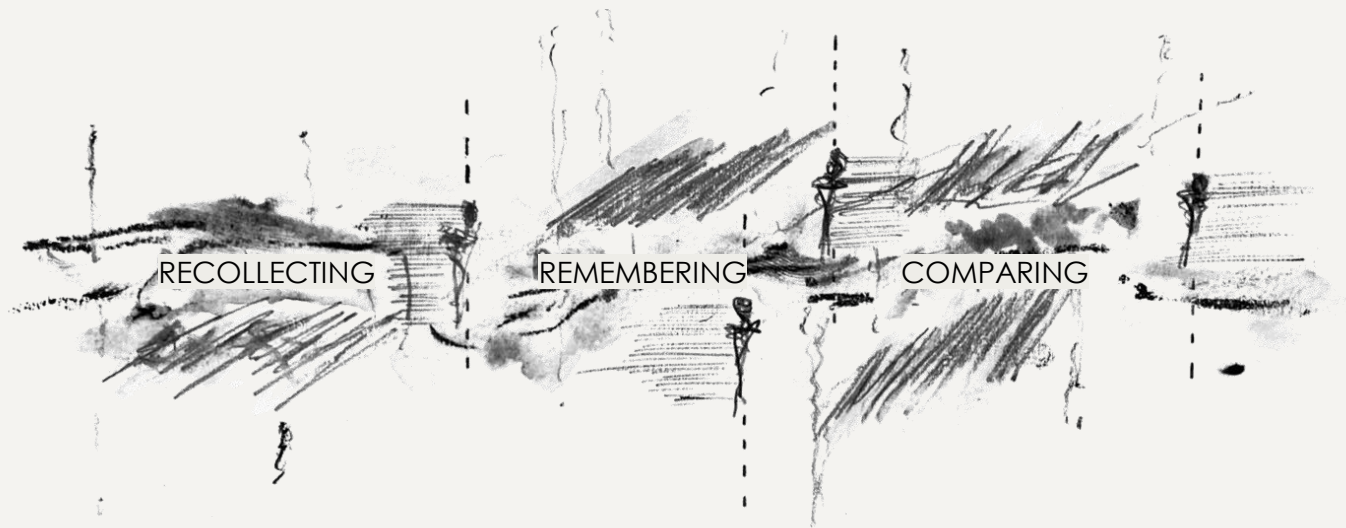
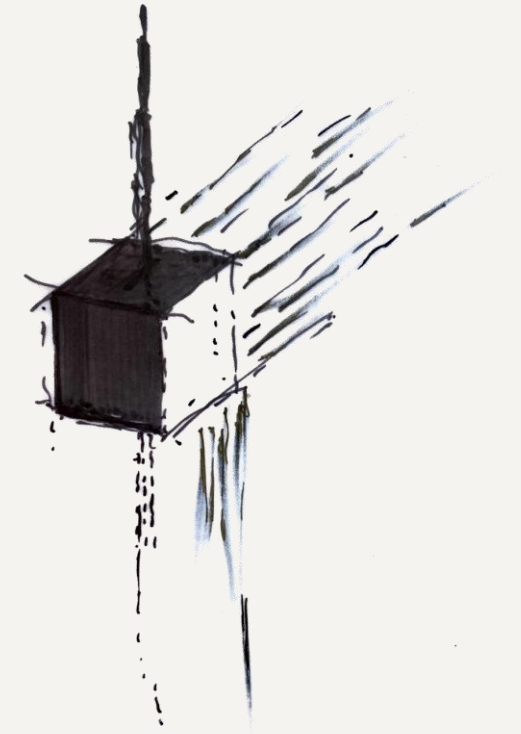


Figure 5.18: Dwelling in the midst of Recollecting, Remembering and Comparing (Author, 2022).

3.1 THE SIGNIFICANCE OF CONTEMPORARY RITUAL

Mircea Eliade, the Romanian historian of religion, contends that even the most habitual act has the potential to become a ritual, ultimately transforming the unquestioned into a symbolic and almost spiritual engagement (Joubert, 2012: 10). Eliade's reasoning makes it evident that the most mundane routines and habits have the potential to become experiential occurrences with existential meaning. In response, the architectural pair Mariabruna Fabrizi and Fosco Lucarelli (2016: online) advocate for the development of contemporary rituals on the basis that there are a plethora of evolving scenarios for which an architectural language could be invented. Based on the manifesto of 'form connected to the interpretation of the ritual', it is argued that the ritualistic is hidden in the so-called 'mundanity of everyday life', waiting to avail the deeper existential meaning (Fabrizi & Lucarelli, 2016: online). Ergo, the question arises as to which mundane activity is best suited for the transformation of its existential meaning?



3.1.a When Habit Becomes Ritual

Suppose Fabrizi and Lucarelli's notion of developing architectural typologies based on the translation and transformation of Eliade's everyday habits becoming ritual is indeed possible. The predicament, then, is to understand at what point a habit attains enough meaning to be ritualised? Alternatively, at what point does a habit become a ritual with existential meaning?

Figure 5.19: Releasing the ritual-mundane (Author, 2022).

In a religious sense, rituals aim to maintain a status quo as they are ceremonies structured around creating a sense of belonging and continuity of a culture or religion (Razzetti, 2020: online). Apart from the emotional and experiential meaning attributed to these religious rituals, there seems to be an underlying principle that makes rituals appropriate for contemporaneous application to achieve mindfulness (Razzetti, 2020: online). A sentiment supported by the sociologist Robert Wuthnow when he defines rituals as any embodied engagements or actions that manifests spiritual meaning in man's life (Schreiber, 2020: online).

On the other hand, habits are automated behaviours completed without even thinking, directly contrasting rituals as the meaningful celebration of life (Razzetti, 2020: online). In essence, our brains quickly pick up set patterns and disregard the events' significance due to the repetitive and automated nature of habits. Accordingly, the main distinction between habits and rituals is based on intent and engagement (Razzetti, 2020: online). In summary, it is not the habit itself that is meaningless but rather the engagement. Therefore, through deliberate intention and focus, a series of habits can become ritualistic once it gains momentum, which refers back to Fabrizi and Lucarelli's notion of developing architectural typologies manifesting these moments of emplaced momentums.

Figure 5.20: Dried Rooibos (Author, 2022).



Consequently, rituals are emplaced habits that have attained a level of sacredness due to attaining deeper meaning for those involved (Razzetti, 2020: online) and, therefore:

1. Rituals increase appreciation,
2. Rituals transform the mundane, and
3. Rituals help celebrate life (Razzetti, 2020: online).

In conclusion, considering the use of Rooibos among the inhabitants of Wupperthal, the discourse supports the establishment of a Rooibos ritual. If the Wupperthal penchant for steeping the day's pot of Rooibos tea from sunrise to sundown is celebrated through architecture, the inhabitants would have an increased appreciation for the task of preparing Rooibos tea as the mundane habit is transformed into a celebration of life. Through the accommodated ritual, meaning is attributed to the increasing aroma and taste of the Rooibos tea as it steeps for hours on end, signifying the day's progression.

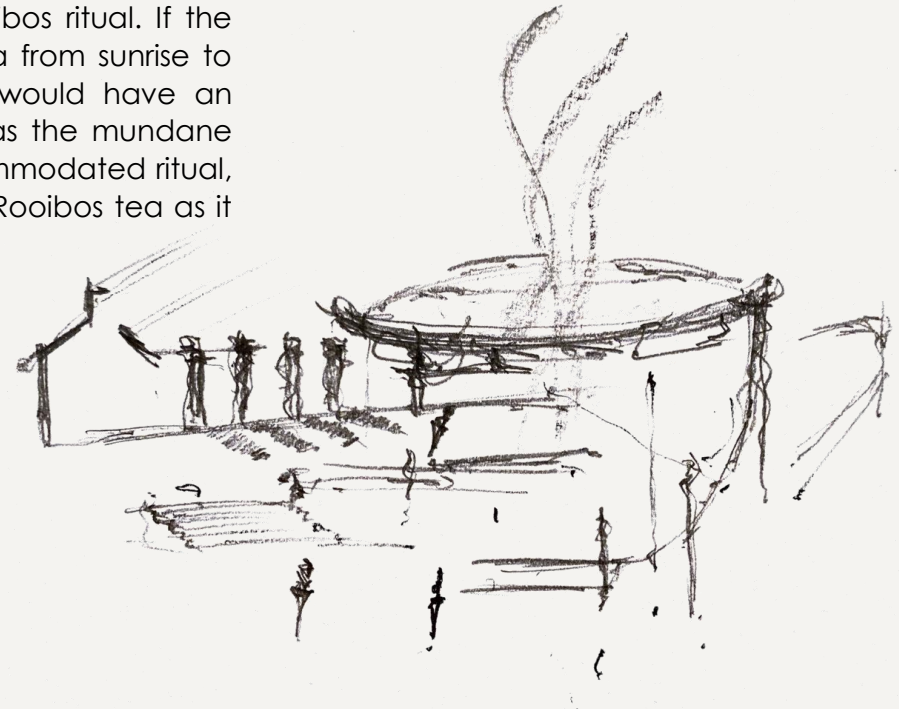


Figure 5.21: Architecture as the celebration of mundane habits (Author, 2022).

3.2 PHASES OF A RITUAL MUNDANE

In order to ritualise the mundane, it is beneficial to summarise Rituals as sequences of events, habits or activities that are performed in a particular place (possibly an architectural typology) in accordance with a set progression to achieve meaningful mindfulness (Razzetti, 2020: online). The set progression of rituals archetypically goes through a beginning, middle, and an end which can further be understood as:

- 1. separation from the old identity or state,
- 2. transition as the interstitial phase of uncertainty, and
- 3. incorporation as the acquiring of the new identity or state (Razzetti, 2020: online).



Figures 5.22 – 5.26: The cultivation of Rooibos as it is separated from the old identity (5.22 & 5.23) into an interstitial state of uncertainty during fermentation and drying (5.24 & 5.25), ultimately acquiring a new identity (5.26) (Author, 2022).



Figures 5.27 – 5.29: People of Wupperthal (Vollenhoven, 2019: online).



3.3 THE TEMPORAL

From the ritualised steeping of Rooibos tea in Wupperthal and the temporal nature of cultivating and processing Rooibos (see Chapters One and Three), it is evident that temporality guides the rituals. Conversely, rituals can also serve as markers within time, allowing the participant to identify points from which to reflect on their life to understand their being in the world (Joubert, 2012: 13). In light of culture's permanence and change, it also allows the participant to locate themselves in a specific culture and time (Joubert, 2012: 13).

Adding the dimension of the temporal to architecture, through the play of light under the sway of the sun's movement, can enhance the meanings attributed to the ritual (Lewis, 1992: online). In allowing the architectural measurement of time through light, the architecture comments on the steeping tea or the freshly cut leaves drying in the sun building its flavour.

3.3.a Architectural Promenade

Defining rituals as the repetitious movement and activities bound within space leads to ritual becoming a measured yet concentrated exhibition of existential meaning (Joubert, 2012: 10). Juxtaposing the repetitious movement with the temporal through an architectural intervention leads to understanding ritualised space as an architectural promenade. The promenade manifests the temporal measure and counterpart of a ritual in a typological response.



Figure 5.30: Rooibos Tea Pavilion light investigation (Author, 2022).

The architectural promenade applies the malleability of space as an object to script orientation and movement as prescribed by the ritualist and the temporal (Lewis, 1992: online). By manipulating visibility and hinting at a presence, the promenade can celebrate the existential significance of a ritual or habit, possibly transforming the act of looking out a window into a transcendental experience (Lewis, 1992: online).

The Rooibos Tea House is a terraced promenade along the slope of Grootkop, measuring the participant's movement with a stream of water as it runs from the small batch tea processing platform to the watering hole. As the visitor meanders along the promenade, the water stream creates a rhythm as existential measurement as it falls, rushes and pools along the terraces.

The experiential qualities of the promenade are reliant on the atmospheric ambience. Placing the atmospheric ambience and mood under the temporal sway combined with architectural interventions can shape the ritualistic experience (Lewis, 1992: online). Consequently, as the expression of temporal atmospheric ambience, light manipulated by architecture and water becomes a measuring device within the promenade (Lewis, 1992: online).

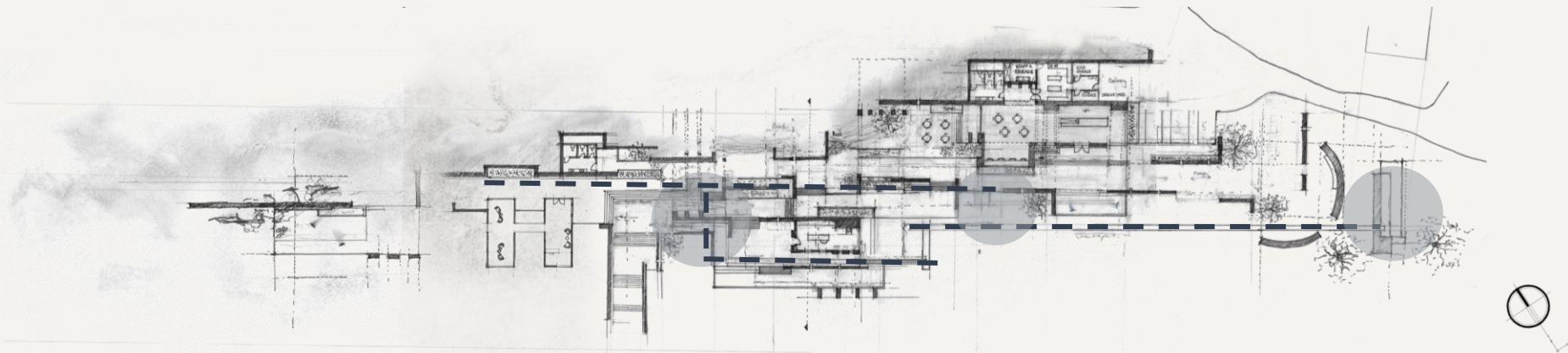


Figure 5.31: Tea House development plan, showing the promenade and water stream as temporal measure (Author, 2022).

3.3.b *Quenching Thirst as a Ritual Governed by Time*

Similarly, as the architectural promenade functions as a measuring device of the temporal expressed in place, the body is the device measuring the existential temporality. As discussed by Armstong and Kavouras (2019:online), social and behavioural psychologists view the notion of thirst as an expression of temporality related to certain time-based motivations such as hunger and meal times. In a ritualised frame of view, the bodily experience of thirst and habit of quenching thirst is deeply rooted in survival and initially functions on a primal level. However, it has been proven that the satisfaction of quenching thirst does not stem from the physiological definition of being hydrated but rather from the act of drinking itself (Frank, 2019: online).

Quenching one's thirst, thereupon, seems to manifest satisfaction beyond the primal inclination of survival but alludes to deeper existential meanings. The act of drinking to quench one's thirst releases dopamine, enhancing man's experiential meaning attached to the habitual act by deepening the significance of the act on a psychological level (Frank, 2019: online). It can hence be argued that thirst is not only a measure of the temporal, but quenching one's thirst can become a ritualised experience through a deliberate and mindful approach.

The addition of a watering hole near the street village draws on the existential meaning of quenching one's thirst. This is achieved by referring to the past generation of Khoi and San that found solace in Wupperthal while functioning as a communal watering hole for present and future generations.



Figure 5.32: Watering hole near the street village as a reference to past generations of Khoi and San in Wupperthal (Author, 2022).

3.3.c Existential Meaning of Gathering and Opening One's Home

Activities such as gathering around a fireplace, sitting and talking with a cup of tea seem to have a ritualistic inclination and are ideally suited to be incorporated into ritualised spaces (Lewis, 1992: online). These activities of gathering have cultural significance and attribute existential meaning when quenching the soul's thirst for community. In conjunction with the deepened existential meaning related to quenching the body's thirst, gathering in community for that very act leads to a transcendental experience open to the manipulation of a Critical Regionalist architectural promenade.

Where the watering hole celebrates the act of quenching thirst as an existential act, drinking Rooibos tea fulfils the notion of quenching one's social thirst. As a result, the Rooibos Tea Pavilions are placed in juxtaposition to the Watering Hole while connected through the stream of water sharing the same existential foothold.

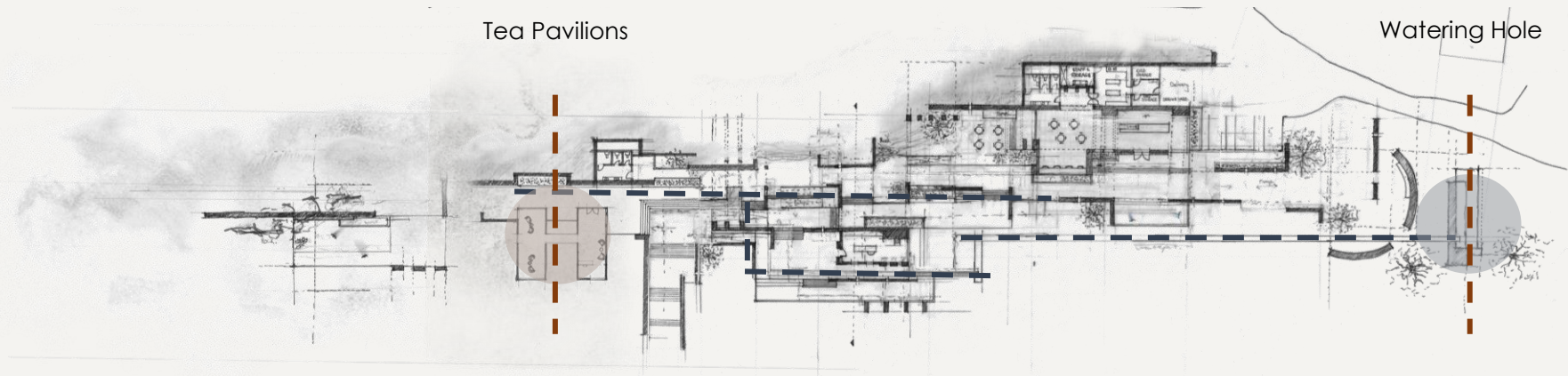


Figure 5.33: Tea House development plan, showing juxtaposition between Tea Pavilions and Water Hole (Author, 2022).

4. RITUALISED WUPPERTHAL

The intimacy of the Wupperthal Rooibos Tea ritual emanates from the unquenchable poetics of gathering as a social anthropological occurrence. It is a gathering not merely for the sake of getting together but a deeply rooted humanist experience that draws the participant into a mutual engagement between community and the temporal. Temporality unearths the emotive depth of drinking Rooibos, as the ritual is bound in a limitless expression of time while counterintuitively reaching towards its full potential only to find more potential to be 'steeped' from the expansion of time.

Community, as the invitation to enter the intimacy of one's home, is embodied through the endearing Wupperthal penchant for steeping the day's Rooibos-Tea pot from the first glimmer of sun reaching over Spitskop before spilling into the earthly toned Tratra valley, as preparation for any visitor. Essentially ceremoniously opening one's home to be shared with the community. It is this amalgamation of habit and the temporal realm where the embodied aromatic experience takes shape, making the habit a sacred ritualised experience of Wupperthal hospitality to be shared with visitors.



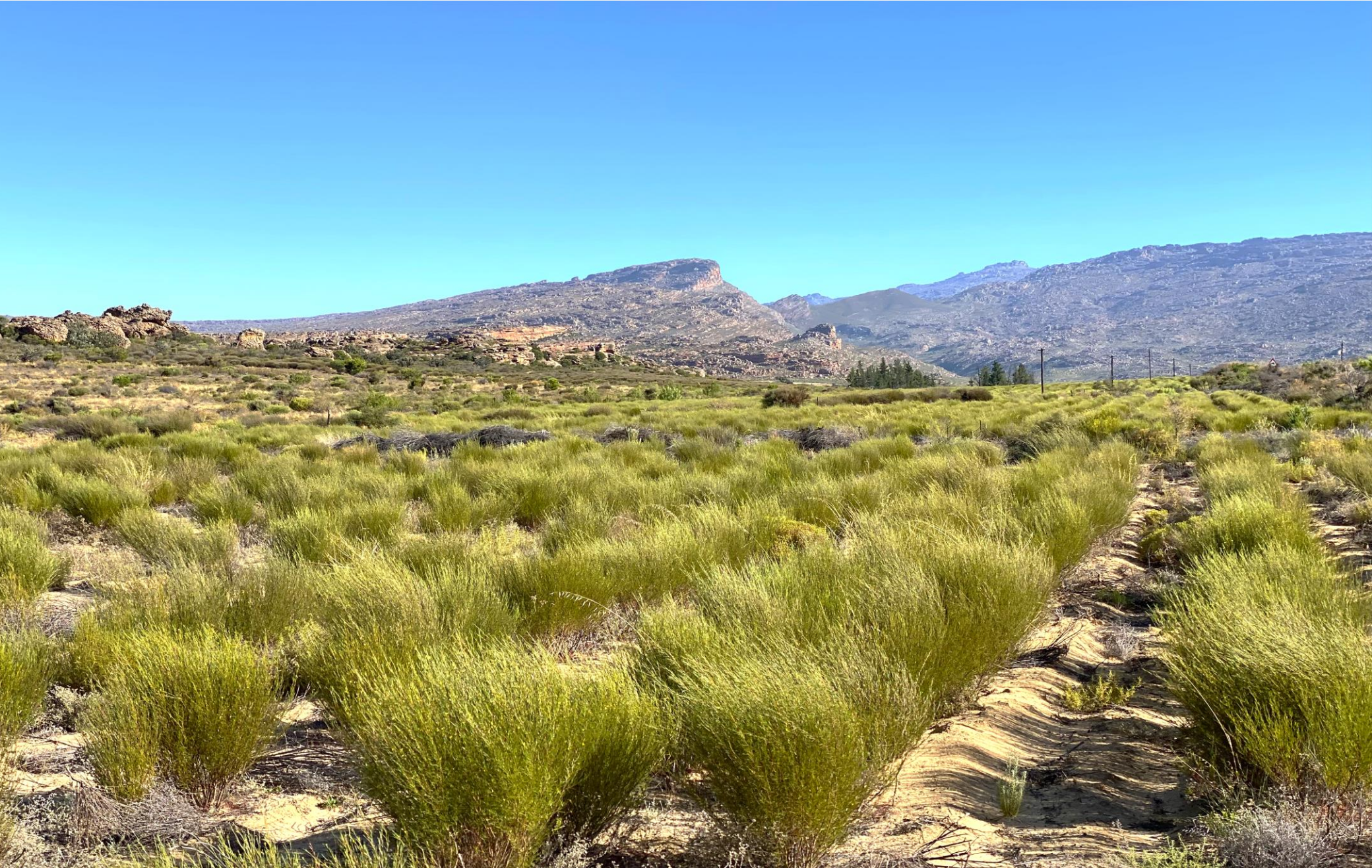
Figure 5.34: Steeping the cultural heritage from the Cederberg mountains and opening Wupperthal as an act of hospitality (Author, 2022).

CONCLUSION

Wupperthal developed amongst the area's indigenous inhabitants, closely connected to their cultural heritage and the use of Rooibos. This development expresses the philosophical debate of man's relation to nature that underpins the essence of their culture. This sentiment is emphasised through Wupperthal Rooibos' unique Geographical Indicator (GI), making nature a specialised and identifiable aspect of Wupperthal's Khoi and San cultural heritage.

From the unique relationship between nature and the emplaced Khoi and San, a Critical Regionalist architectural investigation was conducted to instil a deeper and appropriate understanding of the *genius loci* of Wupperthal. The investigation unearthed the existential meanings attributed to the typical architectural responses toward the Topography, climate and light. Which ultimately culminates in an understanding of a Morphological and Topological architectural response that aims to Defamiliarise the context while remaining committed to the *genius loci*. In understanding an appropriate architectural response to the relation between man, nature and culture, the question arose as to how to celebrate seemingly insignificant habits? It is concluded that the significance does not necessarily lay in the act but rather the intent of engagement. Consequently, accommodating and celebrating the act in an appropriate architectural Typology can enhance the significance for both the participant and the observer.

Figure 6.1: Rooibos plantations in the Cederberg Region (Author, 2022).



INTRODUCTION

The following chapter investigated two projects in conjunction, with the ultimate goal of contextualising a cultural tea centre in the South African context. The analysis, therefore, aims at understanding the essence of the Duichuan Tea Yards as a cultural centre while relating it to the closest South African Typology of an agrotourism working farm, namely Babylonstoren.



Figure 6.2: Aerial view of Babylonstoren, South Africa (Malherbe Rust Architects, 2013: online).



Figure 6.3: The Duichuan Tea Yards in Foshan, China (Shuangyu, 2020: online).

BABYLONS TOREN | South Africa

Paarl, South Africa

2013

Restoration by Malherbe Rust Architects

Garden by Patrice Taravella



Figure 6.4: Aerial view of Babylonstoren (Malherbe Rust Architects, 2013: online).

DUICHUAN TEA YARDS | China

Foshan, China

2020

By O-office Architects



Figure 6.5: The Duichuan Tea Yards in Foshan, China (Shuangyu, 2020: online).

1. GENERAL

Babylonstoren is the remaining piece of a 1692 VOC grant which includes the historic 'werf' as well as the original Cape Dutch farm. Babylonstoren is located in the Drakenstein Valley and retained its delicate architectural character while functioning as a working farm (Kotze, 2014: online). The project consists of numerous restorations, including the manor house, cellar and Kroonhuis, and new additions such as the guest accommodation built on the footprints of previous worker housing, restaurants and the garden development (Kotze, 2014: online). Most of the restoration work has been completed by Malherbe Rust Architects, and the garden was designed by the French architect Patrice Taravella (Wetu, [n.d.]: online).

1. GENERAL

The Duichuan Tea Yards by O-office Architects was completed in 2020 in Foshan, China. The project consisted of converting three old tea plantation buildings into a cultural centre with the ultimate goal of reforming the Duichuan Tea Yards (Hamilton, 2021: online). The restoration of the old tea plantation and production facility in the Duichuan Village aims to revitalise one of the most productive tea yards in the Pearl River Delta (Shuangyu, 2020: online).

2. TOPOGRAPHY AND NATURAL ELEMENTS

Babylonstoren lies in the lower-lying and flatter terrain at the foot of majestic mountain ranges, which is currently dominated by the precision of intensive agriculture such as vineyards and orchards. As a reaction to the large-scale natural elements, architecture is usually a mediator between the mountain ranges and the smaller-scale agricultural activities (Kotze, 2014: online). Amongst the natural elements, a stream from Simonsberg to the Berg River creates a proverbial inside in conjunction with the manor house. As identified in a Heritage Impact Assessment (HIA), the natural composition of Babylonstoren forms part of the cultural landscape, making it a heritage resource in the region (Pentz, 2009: 10). Babylonstoren is a foreground for Signal Hill in the distance, making the overall composition of the farm and several mature oaks and olive trees protected entities, particularly the avenue surrounding the worker cottages (Pentz, 2009: 30).



Figure 6.6: Heritage Resources; trees and composition (Pentz, 2009: adapted by author).

2. TOPOGRAPHY AND NATURAL ELEMENTS

The site is centred around gently sloping hills surrounding the tea plantations, allowing the architects to evoke and enhance the connection between the natural surroundings and topographical contexts with the industry (Shuangyu, 2020: online). As a result, the buildings and plantations are positioned on a gently sloped hill in the centre of the surrounding reservoir. Beyond the reservoir lies numerous small hills covered in woodlands with scattered housing for the workers (Hamilton, 2021: online).



Figure 6.7: Culture Centre on top of the slope (Shuangyu, 2020: online).

3. FUNCTION AND UTILITY

Babylonstoren, as one of the best-preserved *plaaswerwe* in the Cape, primarily functions as an authentic working farm, cultivating grapes for the production of wine as well as various fruit and vegetables (Kotze, 2014: online). The functions accommodated at Babylonstoren include Guest accommodation, restaurants, vineyards and a public garden as the main attraction. The 3.5 hectares of fruit and vegetable garden is not only used for commercial cultivation but functions as an agrotourism attraction (Kotze, 2014: online).



Figure 6.8: Site plan of Babylonstoren (Smit, 2022: adapted by author).

3. FUNCTION AND UTILITY

The primary function of the Duichuan Tea Yard development is centred around the use of the Triassic acid red soil for tea plantations (Shuangyu, 2020: online) and the exhibition of the Duichuan tea culture and production (Hamilton, 2021: online). Interwoven into these main functions, the architects also incorporated several public spaces, such as the rooftop gardens, a fine-dining restaurant and several office spaces (Hamilton, 2021: online). Making the Tea Yards a multifunctional development, primarily focused on housing a cultural centre.



Figure 6.9: Position and connection between the plantation, nature and the architecture (Shuangyu, 2020: adapted by author).

4. SITE PLANNING AND CIRCULATION

The site is primarily ordered according to natural elements and existing heritage buildings, such as the manor house. The stream, flowing from Simonberg to the Berg River, runs along the Eastern edge of the site, binding the garden between the manor house and nature (Kotze, 2014: online). The garden is placed on an extension of the traditional East-West axis from the Cape Dutch farmyard (Wetu, [n.d.]: online). Rather than any individual elements, the overall composition of the built landscape attributes Babylonstoren its heritage status (Pentz, 2009: 13). The built landscape consists of the U-shaped arrangement of the manor house, and the flanking outbuildings forming a courtyard and the heart of the werf (Pentz, 2009: 13). Within the larger order, the garden is an extension of the werf, which is geometrically subdivided into 15 sections, each with a different character (Wetu, [n.d.]: online).

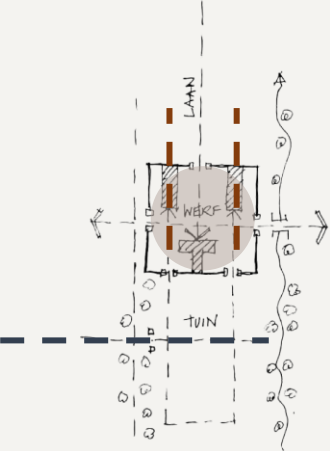
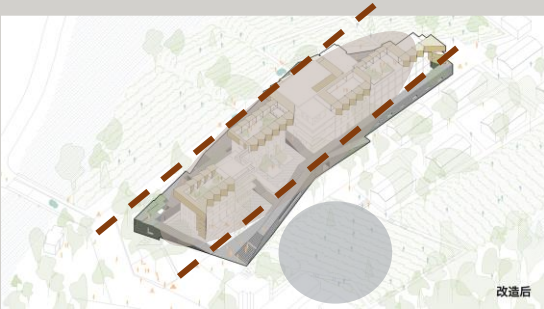


Figure 6.10: Heritage Resources; “laan, werf en tuin” [Diagrammatic] (Pentz, 2009: adapted by author).

4. SITE PLANNING AND CIRCULATION

As previously established under Topography, the building is located on an island surrounded by tea plantations and a reservoir. As an ordering principle, the architects designed a dark granite 'podium' surrounding the existing production buildings (Shuangyu, 2020: online). The podium shapes different public courtyards with trees and ponds on the interior while also serving as an exhibition space and viewing platform (Hamilton, 2021: online).



Figures 6.11 & 6.12: Granite podium surrounding the buildings and mitigating the engagement with the surrounding woods and plantations (Shuangyu, 2020: adapted by author).

5. USER BEHAVIOUR AND RITUALS

Babylonstoren aims to instil user behaviour related to the slow living on the agricultural farm, inviting the visitors to meander on the grounds. This allows the visitors to enjoy the natural beauty while picking their own healthy fruit and using the amenities such as the restaurants and accommodation (Wetu, [n.d.]: online).

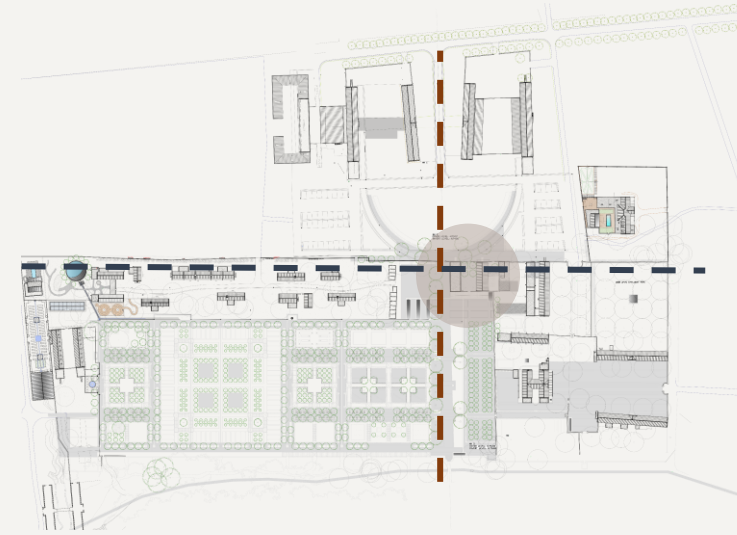


Figure 6.13: Site plan of Babylonstoren (Smit, 2022: adapted by author).

5. USER BEHAVIOUR AND RITUALS

The dark granite podium functions as a filtering device, rewriting the homage to the past production and craftsmanship. Therefore, the podium re-emphasises integrity and strengthens the organic connection between plantations on the outside and indoor production. As the observer meanders through the podium and the atmospheric spaces, the architecture should imbibe the observer with these past experiences of tea production (Shuangyu, 2020: online).



Figures 6.14 - 6.16: The atmospheric engagement within the granite podium and Duichuan Tea Yard buildings (Shuangyu, 2020: online).

DUICHUAN TEA YARDS

[illegible]

Figure 6.17: Restoration documentation indicating alterations and repairs identified by architects (Smit, 2022: adapted by author).

The project converted the three old tea production factories into a new development. The three tea production factories were abandoned at the start of the 21st century and fell into disrepair (Hamilton, 2021: online). The conversion, however, aimed at keeping as much of the traditional structural heritage by using, retaining and mimicking the concrete structure and marrow steel windows (Hamilton, 2021: online). Amongst the restoration of the three buildings, the project also restored the original tea plantations and surrounding forests to the former state before the site's abandonment. The viewing platforms play an important role in re-establishing a connection with the restored vegetation (Shuangyu, 2020: online).



Figure 6.18: image of historic tea production factory (Shuangyu, 2020; online).

7. MATERIALITY AND DETAIL

The material use at Babylonstoren is largely related to the traditional use of Cape Dutch architecture (Archilovers. 2011: online). The architects applied a skilful balance between preservation and restoration using the whitewashed walls in conjunction with contemporary materials (Archilovers. 2011: online). Additionally, the historical method of enclosing space with low walls contributes to the heritage-driven detailing of the additions (Kotze, 2014: online).



Figures 6.19 – 6.20: Restored interior (Malherbe Rust Architects, 2013: online).

7. MATERIALITY AND DETAIL

The architects used black granite attached to a reinforced concrete structure to build the viewing podium. The dark material contrasted with the porous structure allows the structure to 'disappear' while focussing the observer's attention on the plantations and the converted factory buildings. In contrast to the black granite, the architects used bamboo poles to construct four lightweight roof gardens' woven' to connect the three buildings (Shuangyu, 2020: online).



Figures 6.21 – 6.22: Additions to the existing building (Shuangyu, 2020: online).

8. ATMOSPHERE

The additions and conservation of Babylonstoren are aimed at conveying a timeless expression of the cultural heritage rooted in a contemporary take on the traditional Cape Dutch architecture (Archilovers, 2011: online). The conservation also remains conscious of the built landscape's relation to the natural elements, creating a serene atmosphere in the garden (Kotze, 2014: online).



Figure 6.23: Restaurant with herb garden (Malherbe Rust Architects, 2013: online).

8. ATMOSPHERE

Through the design, the architects aimed to evoke a sense of being in search of a lost time and, simultaneously, commenting on the rapid industrialisation. Through the podium as a reflective space and atmospheric experience enhanced by the manipulation of light, the architects play on the reminiscence of a lost era (Hamilton, 2021: online).



Figure 6.24: Light filtered through the granite podium and brises soleil details (Shuangyu, 2020: online).

9. CONCLUSION

Consequently, Babylonstoren and its relation to the natural environment shape the working farm's heritage value. The farm's dependence on the garden and other agricultural activities contributes to the farm's social contribution as an ecotourism destination, emphasising the necessity to protect the cultural heritage. Babylonstoren not only protects the agricultural heritage by conserving the garden but celebrates the traditional architectural interventions related to historically Cape Dutch farms.

Lessons Learnt

- Integration of garden and architecture
- Conservation approach based on composition of complex



Figure 6.25: Contemporary expression of the traditional composition (Malherbe Rust Architects, 2013; online).

9. CONCLUSION

The Duichuan Tea Yards celebrates the tea production culture related to the site by incorporating new possibilities within the abandoned factory buildings. The intervention emphasises the interrelation between industry and nature by allowing the inhabitants to reflect on the natural surroundings while incorporating new social spaces within the fabric. By celebrating the social engagement within the complex, surrounded by plantations, the architects pay homage to the tea production culture.

Lessons Learnt

- Revitalisation of historic buildings
- Celebration of cultural heritage through architecture



Figure 6.26: Combination of natural and artificial lighting enhances the atmospheric engagement (Shuangyu, 2020; online).

Figure 7.1: Harvesting Rooibos as part of the cultural cultivation (Bergh, 2021: online).



1. BRIEF

Considering the previous chapters' conceptual development and precedent analysis, the integration between functional cultivation and processing with leisure is essential. In conjunction with the theoretical discourse, the precedent analysis emphasises the interdependent dialectic between nature and the Khoi and San of the Cederberg. As a reaction to the ingrained cultural heritage of cultivating and drinking Rooibos Tea, the brief accommodates the following proposed functions into two integrated complexes.

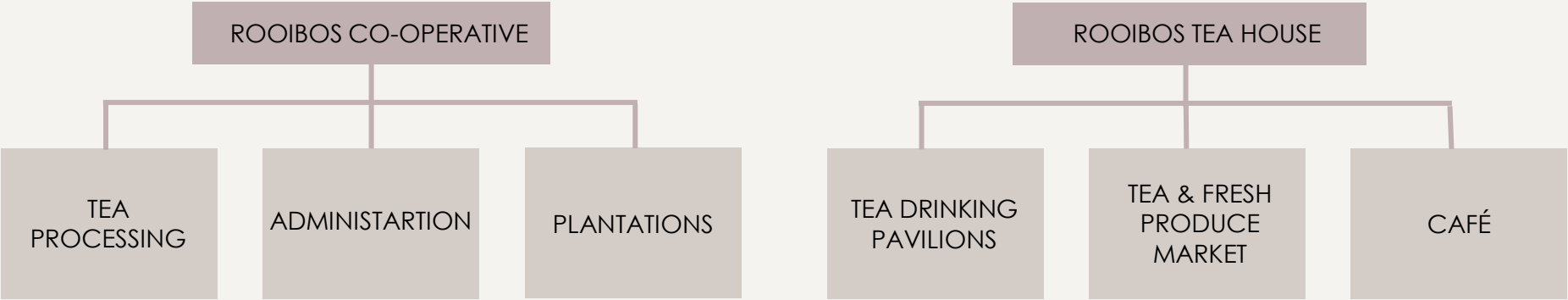


Figure 7.2: Program diagram of the two complexes (Author, 2022).

The Rooibos Co-Operative

The Rooibos Co-Operative is the functional heart of the project and serves as a celebration of the Khoi and San cultural heritage of cultivating Rooibos by extending the indigenously owned Co-Operative's infrastructure; accommodating the following:

Tea Processing - The Co-Operative require a Tea Market area, a shed for storage and a tea processing platform for fermenting and drying the Rooibos tea.

Administration - Admin offices for five administration personnel and a staffroom.

Plantations - The inclusion of Citrus and Olive orchards, as well as Buchu and Lavendar plantations, serves as an additional job creation opportunity. These plantations are based on crops suited for the climate and support the flavoured tea industry.

The Rooibos Tea House

The Rooibos Tea House serves as an experiential celebration of the intangible Rooibos cultural heritage of the Khoi and San.

Tea Drinking Pavilions - The Tea Pavilions are experiential moments placing the visitor in a secluded pavilion focussed on the Cederberg landscape while scripting the ritualised engagement with Rooibos Tea.

Tea and Fresh Produce Shop - The Tea Shop sells the locally produced Rooibos while also providing a platform to sell the products delivered by the plantations of the Rooibos Co-Operative.

Café - The Café, with views of the Cederberg landscape, provides light lunches and beverages to locals and visitors.

Figure 8.1: The parsonage in Wuppertal (Author, 2022).



The following chapter documents and analyses the design development of the Rooibos Tea House in Wupperthal. The developments are based on the application of precedent studies, the understanding of place and the theoretical discourse framed in the previous chapters. Ergo, Chapter 8 aims to portray the reasoning behind the design decisions to contextualise a Rooibos Tea House attuned to the *genius loci* of Wupperthal. The chapter firstly investigates Coromandel Manor House and Kogelberg Cabins as the initial driving forces within the design process.

Figure 8.2: Abstract depiction of Wupperthal's cultural heritage (Author, 2022).



COROMANDEL | Manor House

Lydenburg, South Africa
1975
By Marco Zanuso

Coromandel Manor House was identified as a South African precedent study attuned to its natural surroundings, seamlessly intertwining with the *genius loci*. The analysis furthermore focuses on the massing composition of the plan, as the built-form selectively radiates spatiality. The composition and placement of the built-form draw on the inherent properties of massing to have directional and rotational foci, guiding the spatial engagement of inhabitants. The compositional planning allows Coromandel Manor House to accommodate various courtyards and interior spaces without enlarging its visual impact on the landscape.

Lessons Learnt

- Spatial composition and massing.
- Incorporation of social interplays within the composition.
- Materiality and integration with the landscape.

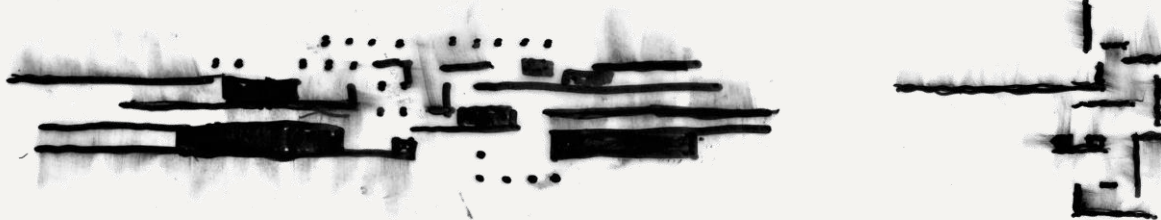
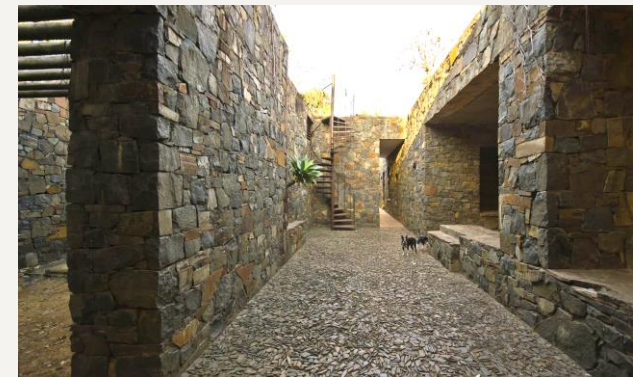


Figure 8.3: Analysis of spatial radiation in Coromandel Manor House's plan (Author, 2022).



Figures 8.4 – 8.6: Exterior perspectives of Coromandel (Hidden Architecture, 2016; online).



Figure 8.5: Coromandel Manor House blending into the landscape (Hidden Architecture, 2016: online).

KOGELBERG | Cabins

South Africa, South Africa
2020
By KLG Architects



Figure 8.6: Kogelberg cabins in the landscape (KLG Architects, 2020: online).



Figure 8.7: Entrance of the cabin (KLG Architects, 2020: online).

Kogelberg Cabins was identified as a South African precedent in the Cape Floral region, respecting the indigenous vegetation and surrounding nature. The analysis focuses on the tectonics of the architectural response and investigates the interaction between timber construction and stone gabion walls. The cabins' materiality is intended to change as nature takes its toll, ultimately allowing the timber and stone to blend with nature visually.

Lessons Learnt

- Sectional composition.
- Balancing the composition of timber and stone construction methods.
- Materiality and integration with the landscape.



Figure 8.9: Kogelberg cabin within the landscape (Author, 2022).

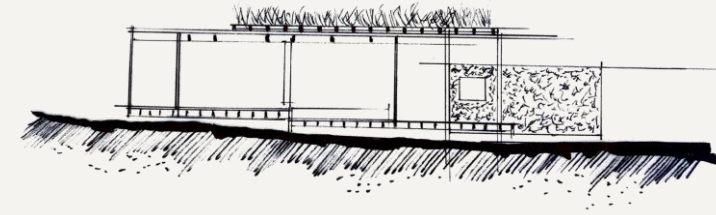


Figure 8.10: Kogelberg cabin section showing the relationship between the gabion wall and the light timber construction (Author, 2022).

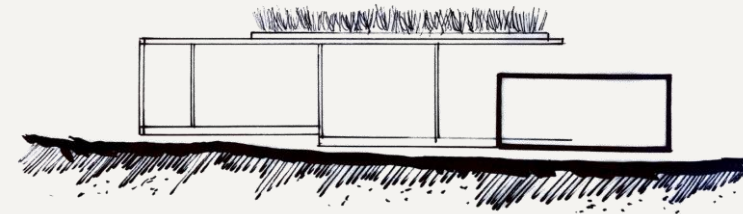


Figure 8.11: Kogelberg cabin massing section with gabion wall (Author, 2022).

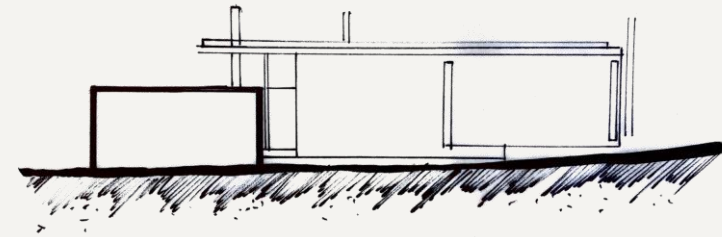


Figure 8.12: Kogelberg cabin massing elevation with anchoring gabion wall (Author, 2022).

The initial design response was rooted in locating the three concepts in Chapter 4 on the chosen site. After allocating the three concepts, functions were allocated in accordance. Spatial Interplay was identified as a pure experiential Tea Pavilion. Landscaped Edges embodied the plantations, and Steeped Culture was focused on the processing of Rooibos, housing the Wupperthal Original Rooibos Co-Operative.

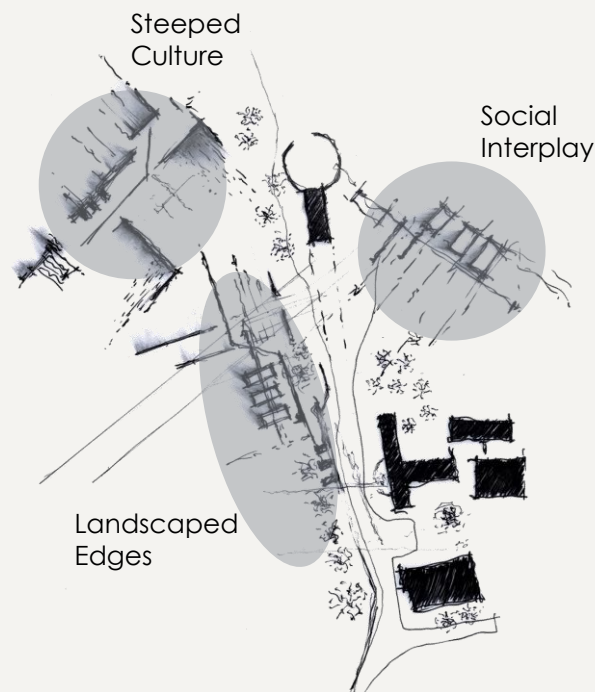


Figure 8.13: Conceptual overlay (Author, 2022).

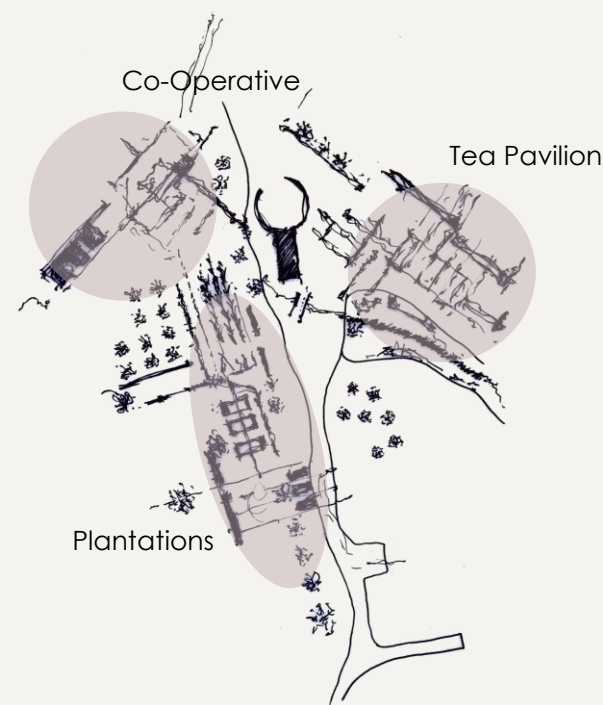


Figure 8.14: Function overlay (Author, 2022).

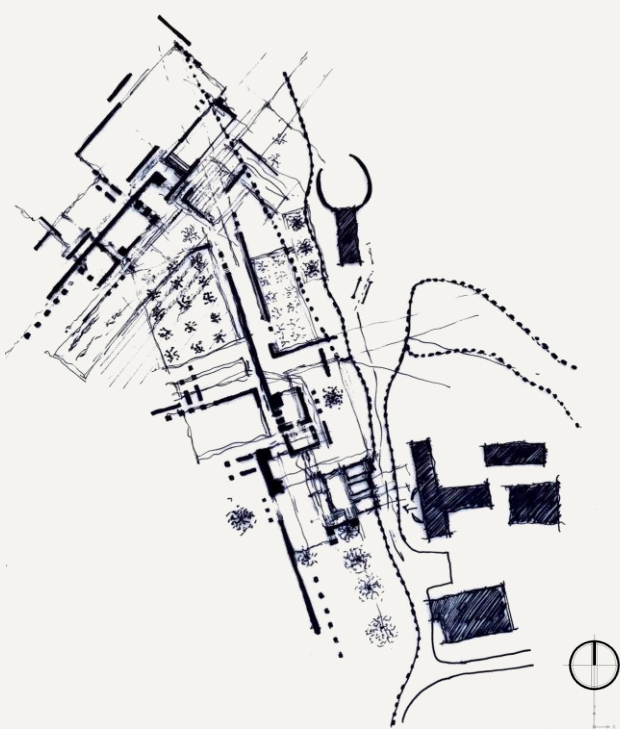


Figure 8.15: Planning diagram (Author, 2022).

After allocating functions, the analysis of Coromandel Manor House by Marco Zanuso largely influenced the initial spatiality of the Rooibos Tea House. The directional and rotational foci of built elements manifested the compositional approach toward space-making. From the onset, the notion of 'spatiality radiating from built-form' influenced spatial development by unearthing the spatial implications of placing mass, resulting in a proposal suggested with the placement of a few walls. The exaggerated spatial model was built after formalising the planning diagram. In conjunction with building the spatial implications of the walls, an initial morphological study based on the Kogelberg Cabins was investigated.



Figures 8.16 – 8.17: Model of proposal 1 (Author, 2022).

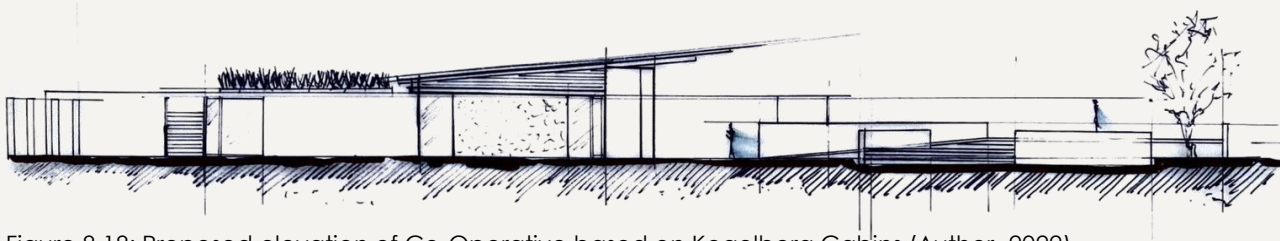


Figure 8.18: Proposed elevation of Co-Operative based on Kogelberg Cabins (Author, 2022).

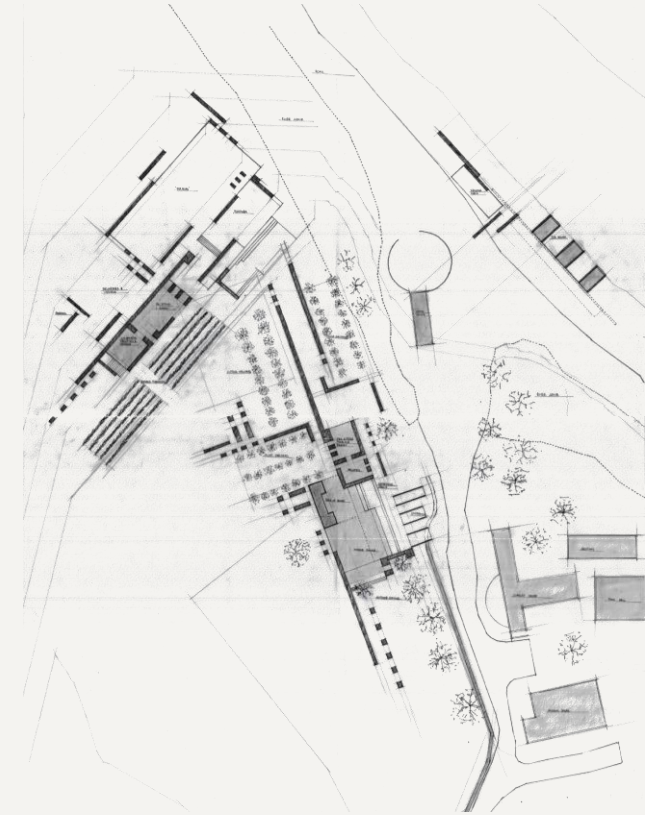


Figure 8.19: Plan of proposal 1 (Author, 2022).

The following design development focussed on combining the three entities of the previous proposal into two complexes. This resulted in a Tea House complex on the hill and an integrated Wupperthal Original Rooibos Co-Operative complex with plantations. The design would consequently investigate the Morphological relation between the intimate nature of the Rooibos Tea House and the agricultural nature of processing the Rooibos in a juxtaposition.

The development of the Rooibos Tea House was prioritised and focused on combining the proposed Tea Shop, Café and Tea Pavilions into one extended design. The process included the analysis of the social placemaking of Wupperthal in an attempt to understand the town's community spaces.



Figure 8.20: Diagram indicating the location of the two complexes (Author, 2022).



Figure 8.21: Sectional Elevation diagram of Tea House complex proposal (Author, 2022).



Figure 8.22: Diagram analysing Wupperthal's spatial composition (Author, 2022).

The Rooibos Tea House complex accommodates the Tea Pavilions, Tea Shop and Café as primary functions while, secondarily, accommodating a Tea Processing platform for small-scale traditional tea processing on the natural rocks and a Watering Hole for donkeys as a linking element between the generations of people that found solace in Wupperthal. A water stream draws on the thirst-quenching properties of water and social-quenching properties of Rooibos, runs through the complex linking the Tea Processing Platform and the Watering Hole. Ultimately, uniting the distinct ritualised methods of quenching.

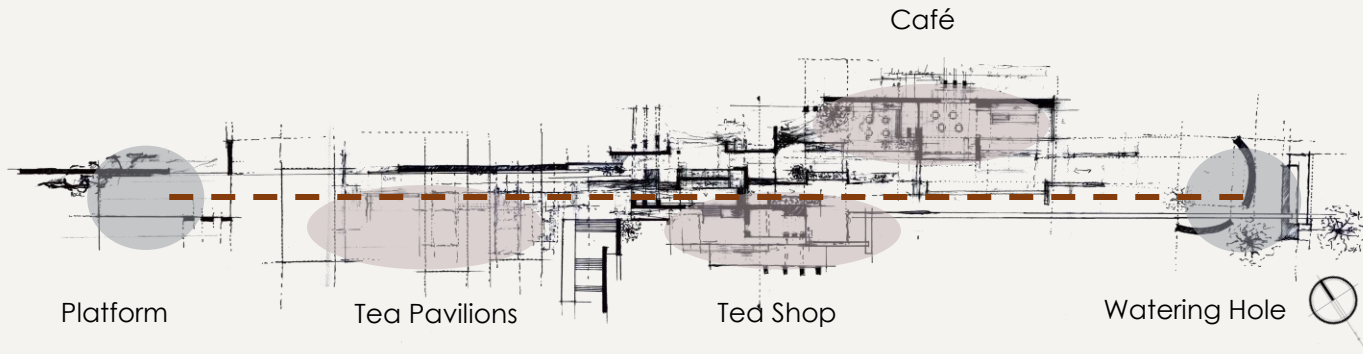
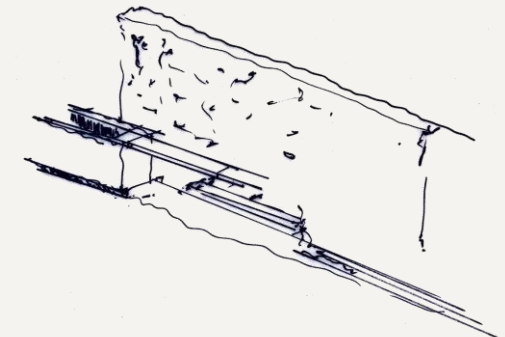
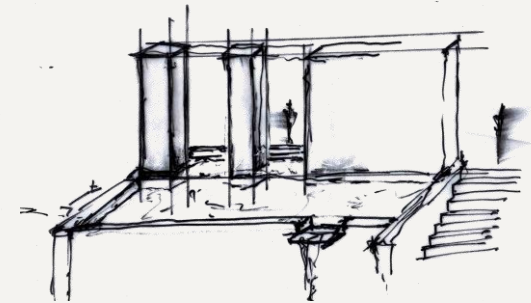
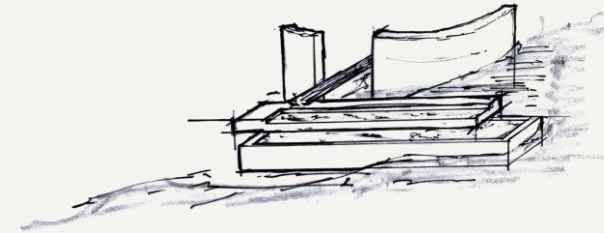


Figure 8.23: Plan indicating the primary and secondary functions (Author, 2022).



Figure 8.24: Working model of the Tea House complex (Author, 2022).



Figures 8.25 – 8.27: Water stream detail development (Author, 2022).

In the initial morphological resolution, the Critical Regionalist concept of Defamiliarisation assisted in maintaining the innate *genius loci* steeped in the architecture of Wupperthal. The Rooibos Tea House complex abstracts the terraced Street Village, shaping the Social Interplay on the terraced walkways as it meanders among the buildings. The low boundary walls surrounding the residences were defamiliarised with the column rhythm substituted with the play of light embodied by the Church's bell tower. Maintaining the rhythm of the traditional walls while manifesting the emotional and temporal response of the soft light within the boundary walls. The elevational development of the Tea Shop maintained the traditional proportioning system; however, mainly expressed in an asymmetrical composition.



Figure 8.28: Bell tower (Author, 2022).



Figure 8.29: Terraced social spaces in street village (Author, 2022).

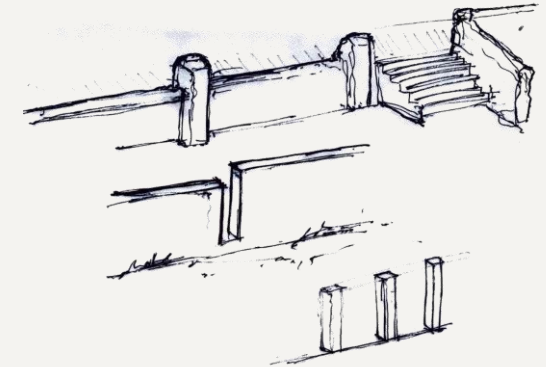


Figure 8.30 : Boundary wall development (Author, 2022).

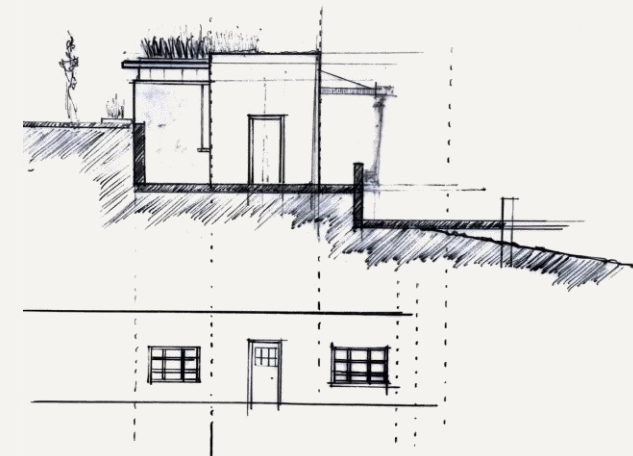


Figure 8.31 : Elevation development (Author, 2022).

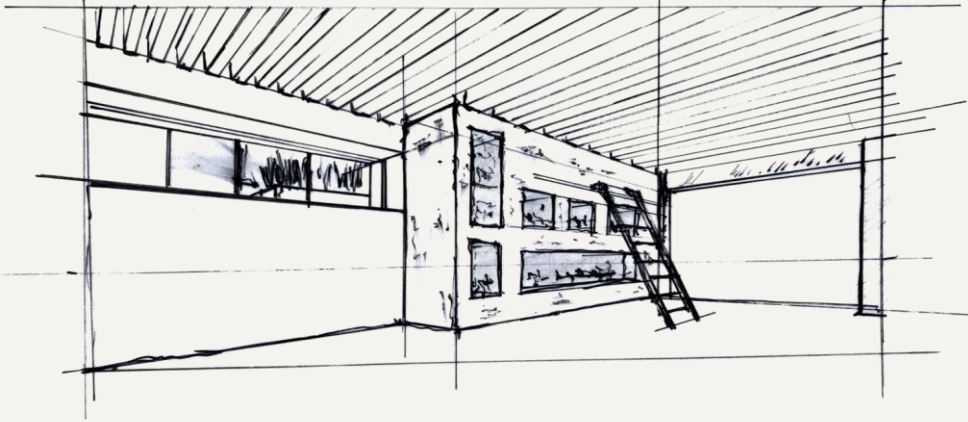


Figure 8.32: Interior development of Tea Shop (Author, 2022).

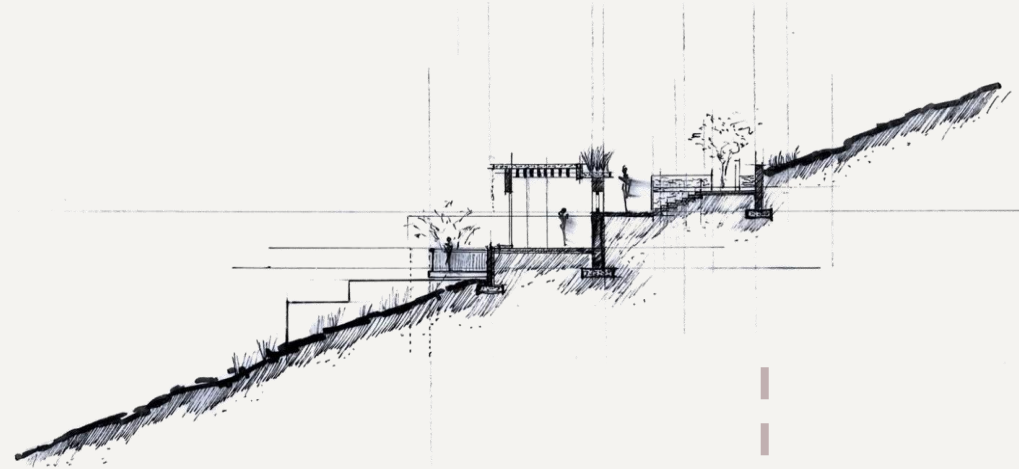


Figure 8.34: Section development (Author, 2022).

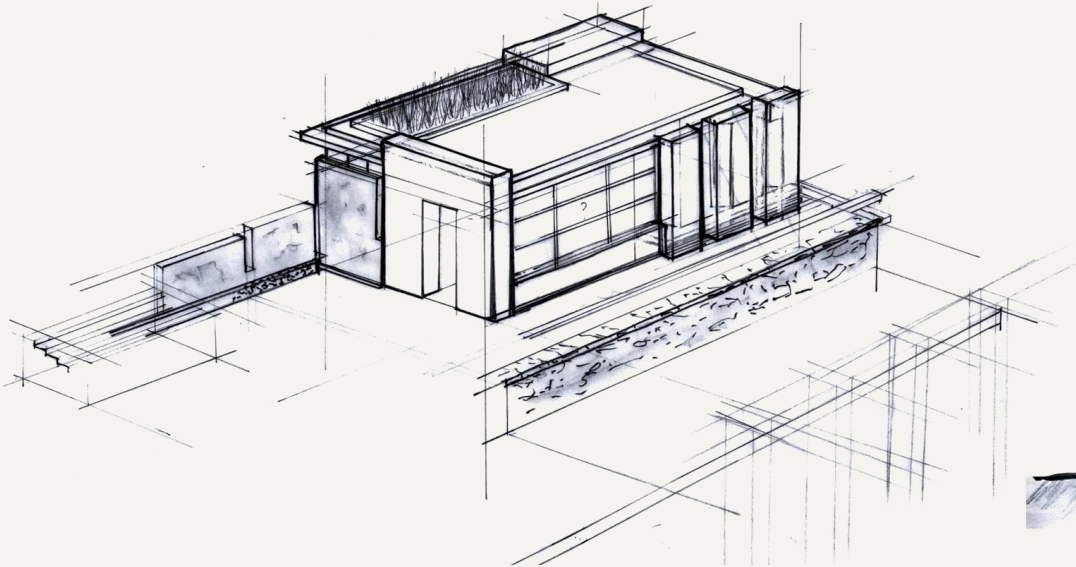


Figure 8.33: Elevation development (Author, 2022).

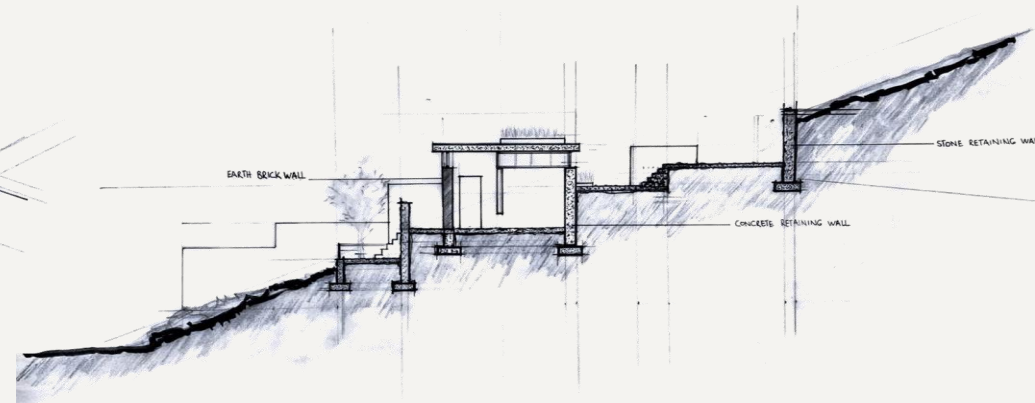


Figure 8.35: Section development (Author, 2022).

The Morphology investigation of the Café explored a contemporary application of the traditional Wuppertal thatched roof while also considering the possibility of a flat concrete roof. After building both explorations in models, the decision was made to further develop the pitched roof as a homage to the traditional thatch.

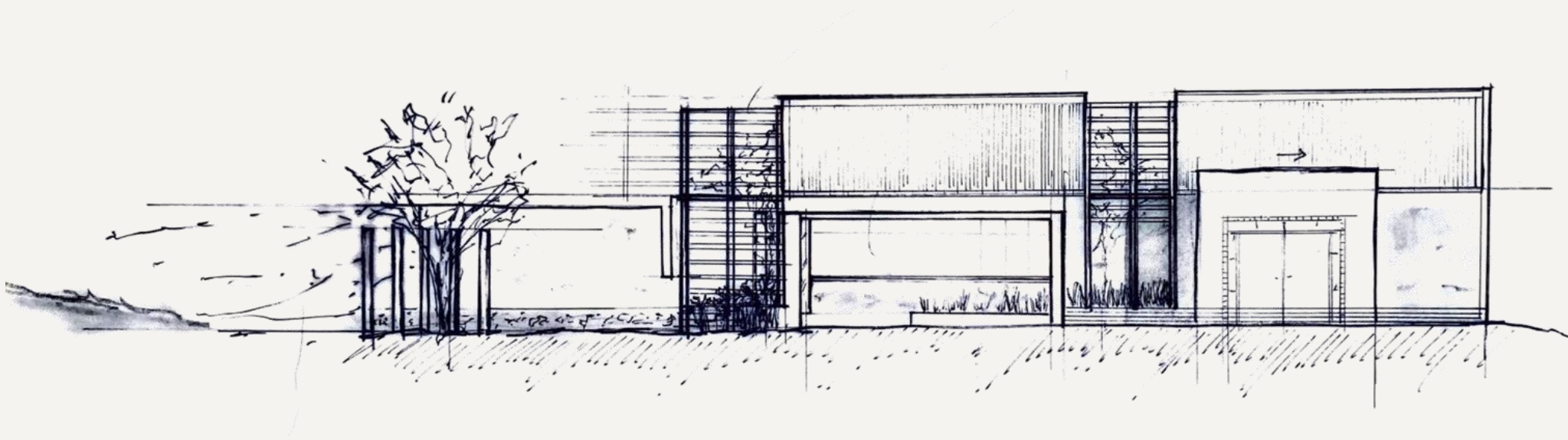


Figure 8.36: Elevation development with pitched roof (Author, 2022).



Figure 8.37: Elevation development sketch (Author, 2022).

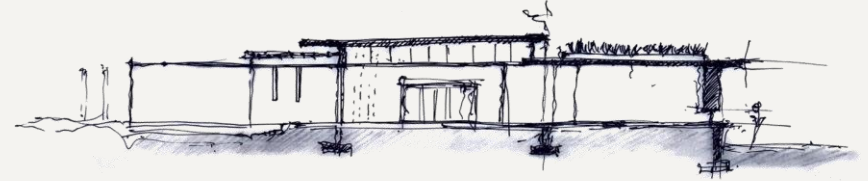


Figure 8.38: Section development sketch (Author, 2022).

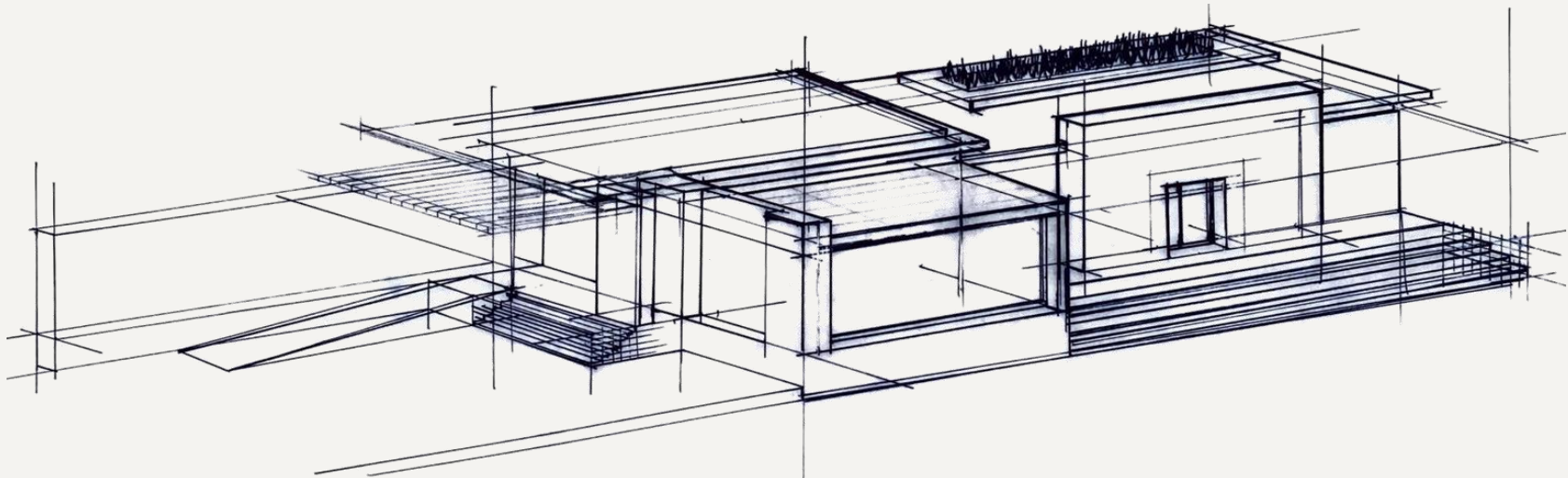


Figure 8.39: Three-dimensional development of Café with flat roof (Author, 2022).

After the morphological investigation and planning development, the model aimed at resolving the materiality of the architecture. Aiming to find a balance between the traditional materials such as the stone plinths and white-washed earth brick walls while adding contemporary materials such as concrete and weathering steel (Corten steel). The material exploration of the Tea Pavilions concluded that weathering steel boxes would be the most appropriate response considering the landscape.

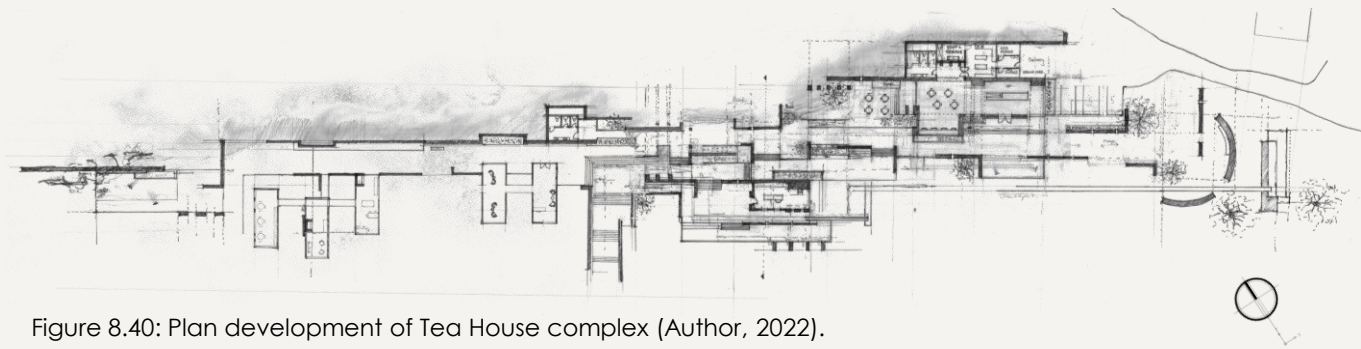


Figure 8.40: Plan development of Tea House complex (Author, 2022).

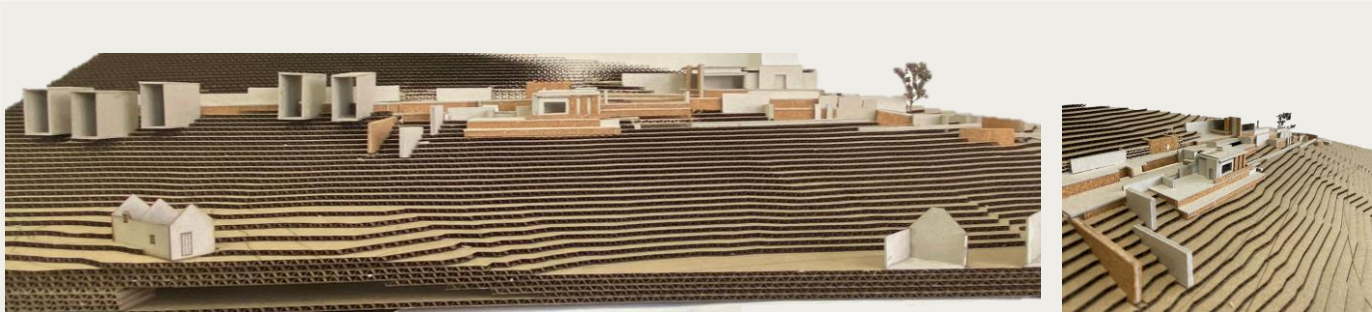


Figure 8.41: Model of Tea House complex investigating materiality (Author, 2022).



Figure 8.42: Weathering steel (Author, 2022).



Figure 8.43: White-washed (Author, 2022).



Figure 8.44: Combination (Author, 2022).

The structural concept model investigates the relationship between the built form of the Tea Pavilions and the landscape. The model abstracts the notion of nestling into the earth while projecting and cantilevering from within. Additionally, the concept investigates the addition of panels filled with Rooibos Tea leaves acting as an aromatic acoustic and thermal insulation.

The development of the Tea Pavilions investigated various types of functions being accommodated and various methods of constructing the sculptural pavilions. Ultimately, the Tea Pavilions concluded as three separate entities using steel construction clad in weathering steel.



Figure 8.45: Investigation of Tea Pavilion interior with hearth and tea panels (Author, 2022).



Figures 8.46 - 8.47: Structural concept model (Author, 2022).



Figures 8.48- 8.50 : Tea Pavilion development (Author, 2022).

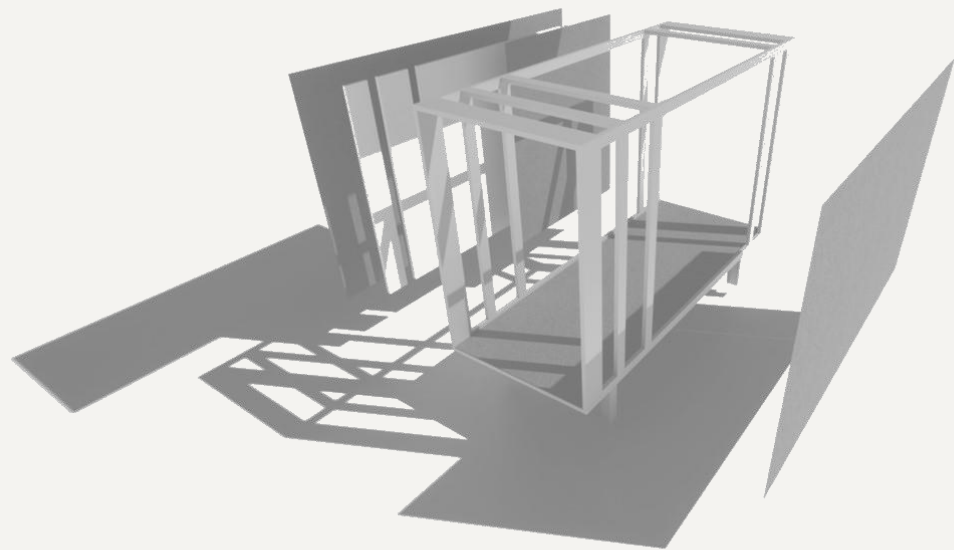
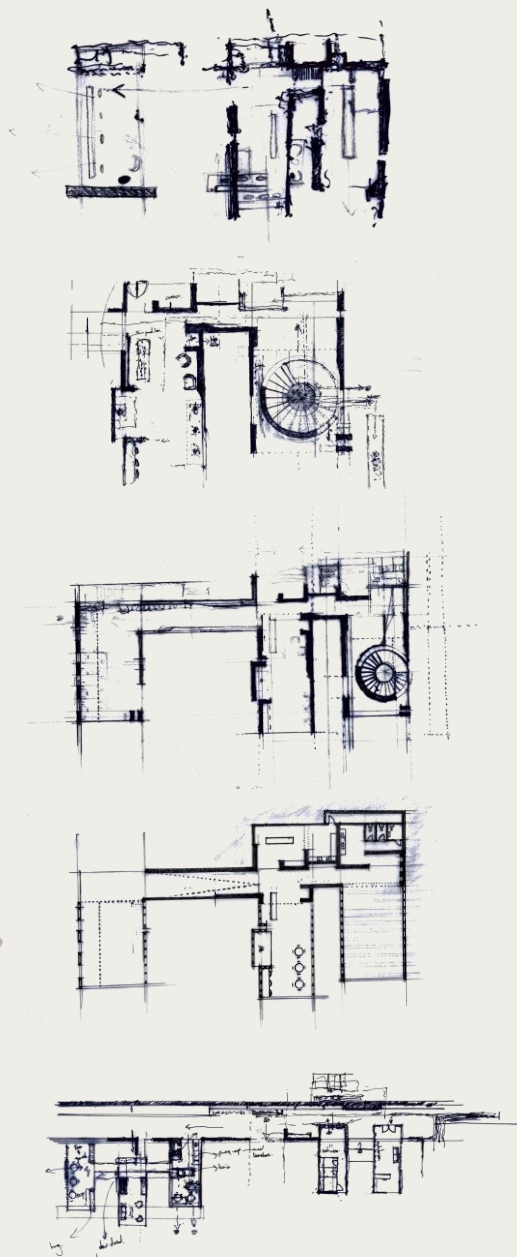
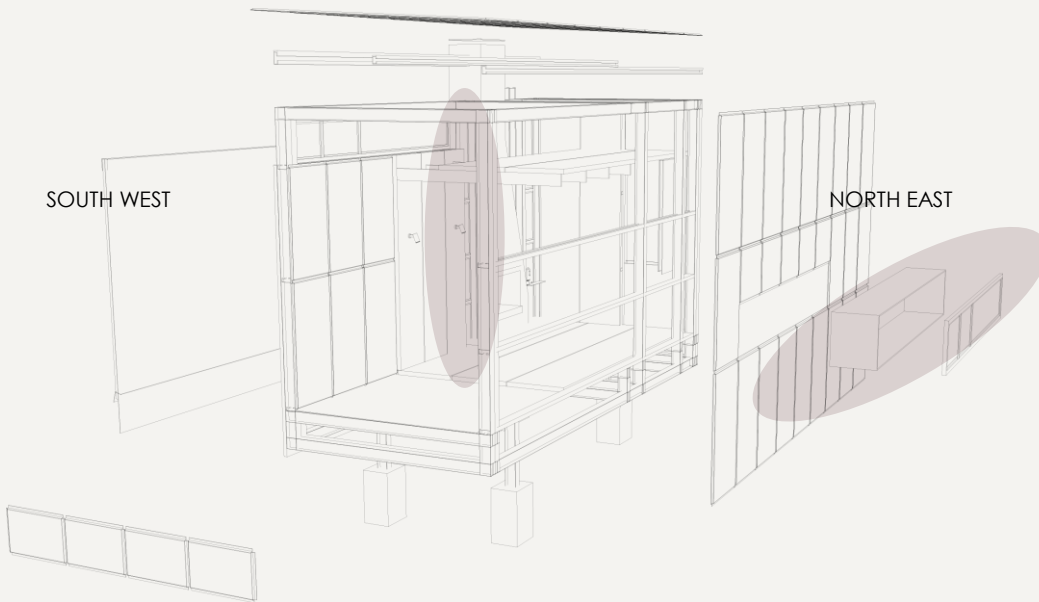


Figure 8.51: Exploded structural investigation (Author, 2022).



Figures 8.52 -8.56: Planning (Author, 2022).

The Pavilions play with the ritualised nature of the sun through the strategic placements of windows. A horizontal strip window on the North Eastern side allows the morning light to flood the space, signifying the time to start preparing the day's teapot. Throughout the day, the sun makes its way to the South Western side, where a vertical strip window allows a light strip to signify the end of the day and the steeping process. The temporality play through light emphasises the Rooibos ritual and its interdependence with nature, manifesting the relationship between man and nature.



Figures 8.57 – 8.58: Light study of Rooibos Tea Pavilion (Author, 2022).

The Rooibos Co-Operative reacts to the town square by establishing a community Tea Market, under historic Eucalyptus trees, for local small-scale producers. Additionally, the complex provides a shed, tea processing platform, and administrative functions for the Wupperthal Original Rooibos Co-Operative. Citrus and olive orchards, as well as buchu and lavender plantations, are incorporated within the complex, supporting the Tea House and small produce section of the Tea Shop. The Tea Market will initially serve as an earth brick production yard during construction. Therefore it is the origin from where it all radiates.

The Rooibos Co-Operative is located across from the Tea House, surrounded by fertile soil allowing further expansion of the plantations and economic growth. In juxtaposition, the Tea House is nestled between the Street Village's residential fabric and the town square. Mitigating the ritualised nature of using Rooibos amongst the Khoi and San of Wupperthal with the economic nature of cultivating Rooibos. Emphasising the interdependence between the two to ensure its future.

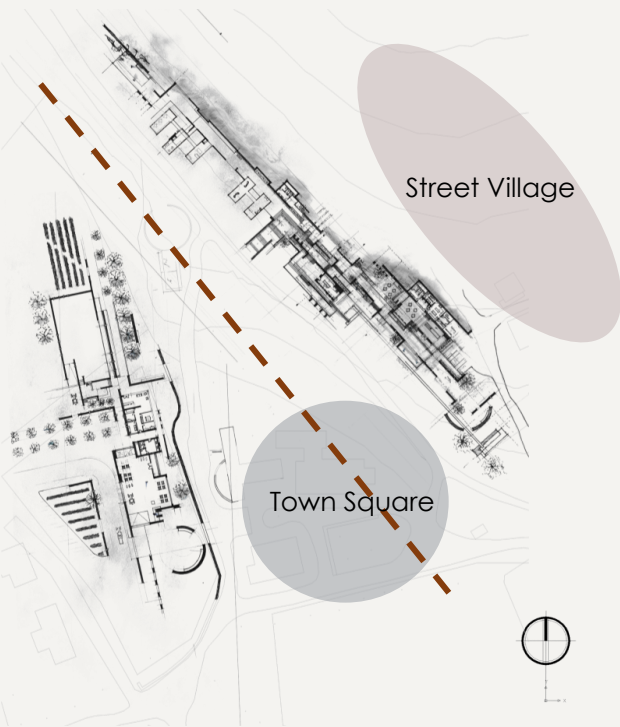
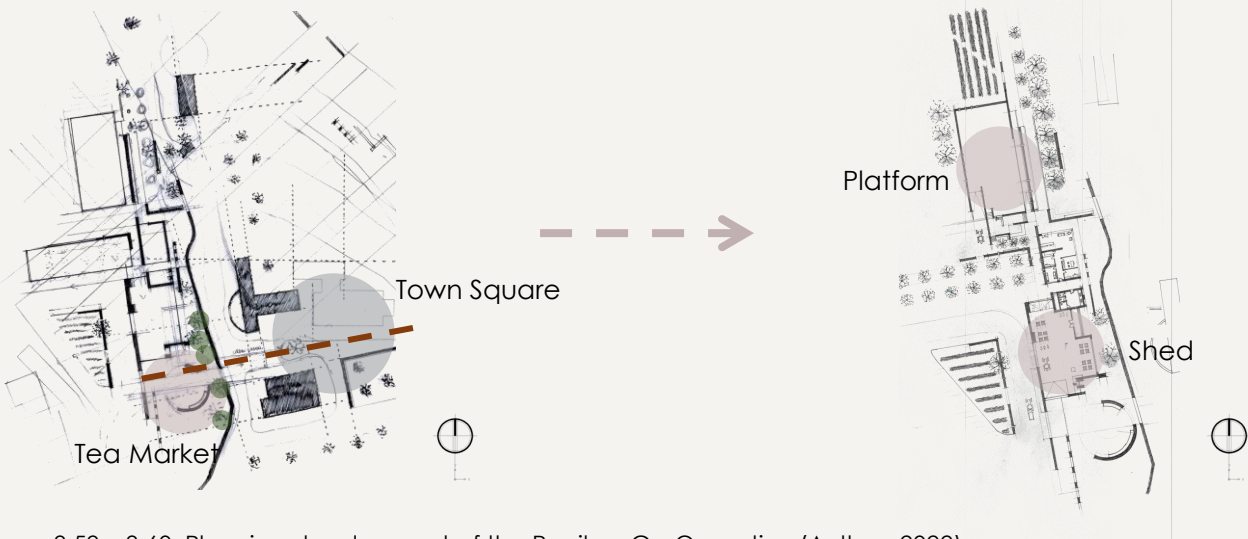


Figure 8.61: Site plan of the two complexes (Author, 2022).

Figures 8.59 – 8.60: Planning development of the Rooibos Co-Operative (Author, 2022).

The morphology of the shed draws on the regional agricultural architecture of gabled sheds with a 30-degree slope, opposing the 40-degree slope of the residential buildings. In softening the scale of the shed within the town, a concrete slab surrounding the pitched roof lowers the 6 500 mm height of the gable to a 3 000 mm high threshold.



Figure 8.62: Co-Operative process Model (Author, 2022).

The viewing platform allows visitors to observe the processing of Rooibos while drawing on the existentiality of the process itself. Using water in the oxidation process of Rooibos creates a stained runoff that must be drained to let the Rooibos dry. The visitor viewing deck utilises the poetic moment by celebrating the stain, making visitors aware of the stained water as it runs below their feet.



Figures 8.63 – 8.64: Rooibos stained viewing platform (Author, 2022).



BIRD'S EYE PERSPECTIVE – LOOKING SOUTH EAST



1. Rooibos Co-Operative
2. Rooibos Tea House
3. Parking
4. Church
5. Town Square
6. Road from Pakhuys Pass
7. Tratra River
8. Perennial Stream Buffer Zone

LOCALITY PLAN

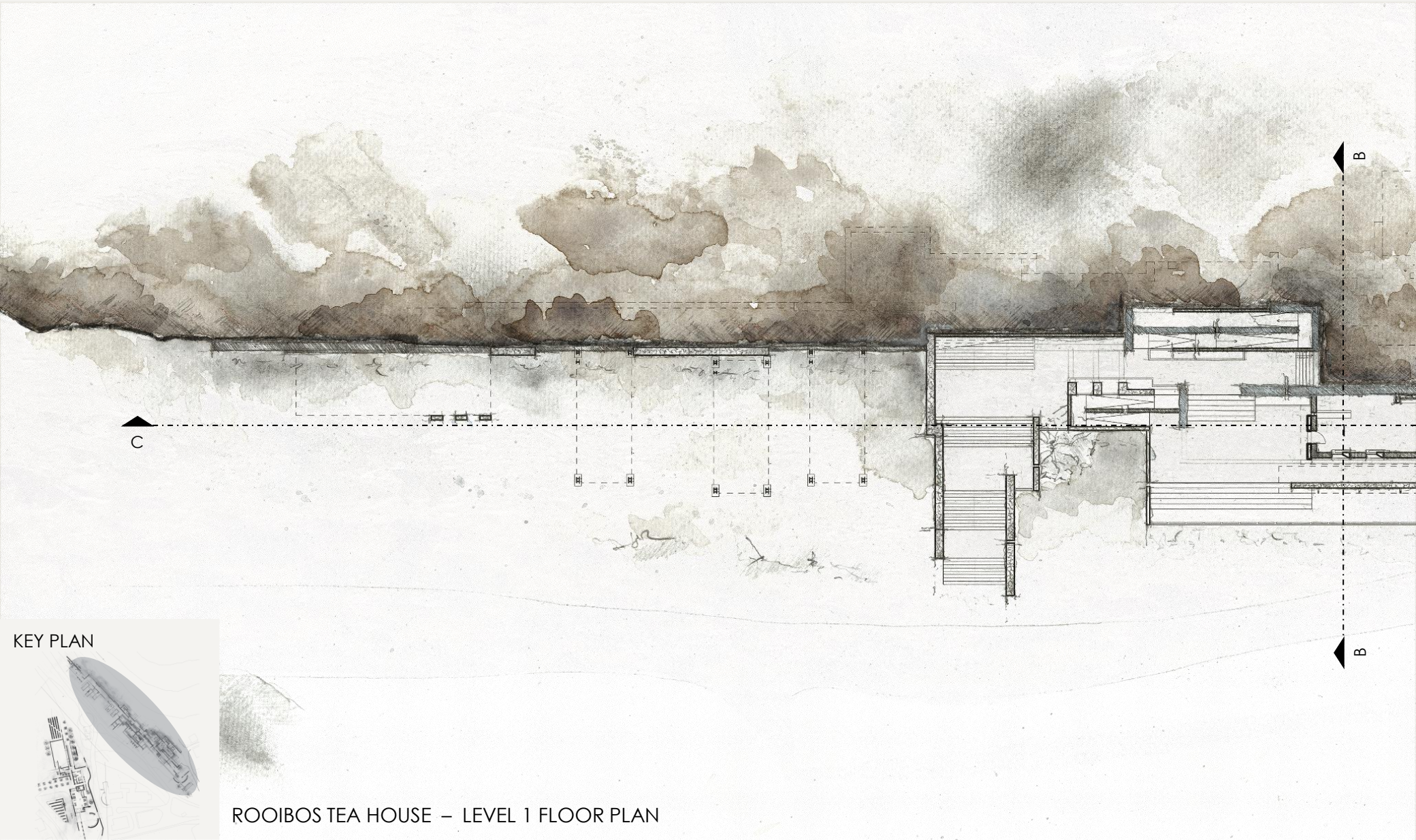
0 40 40
20 60 100 M



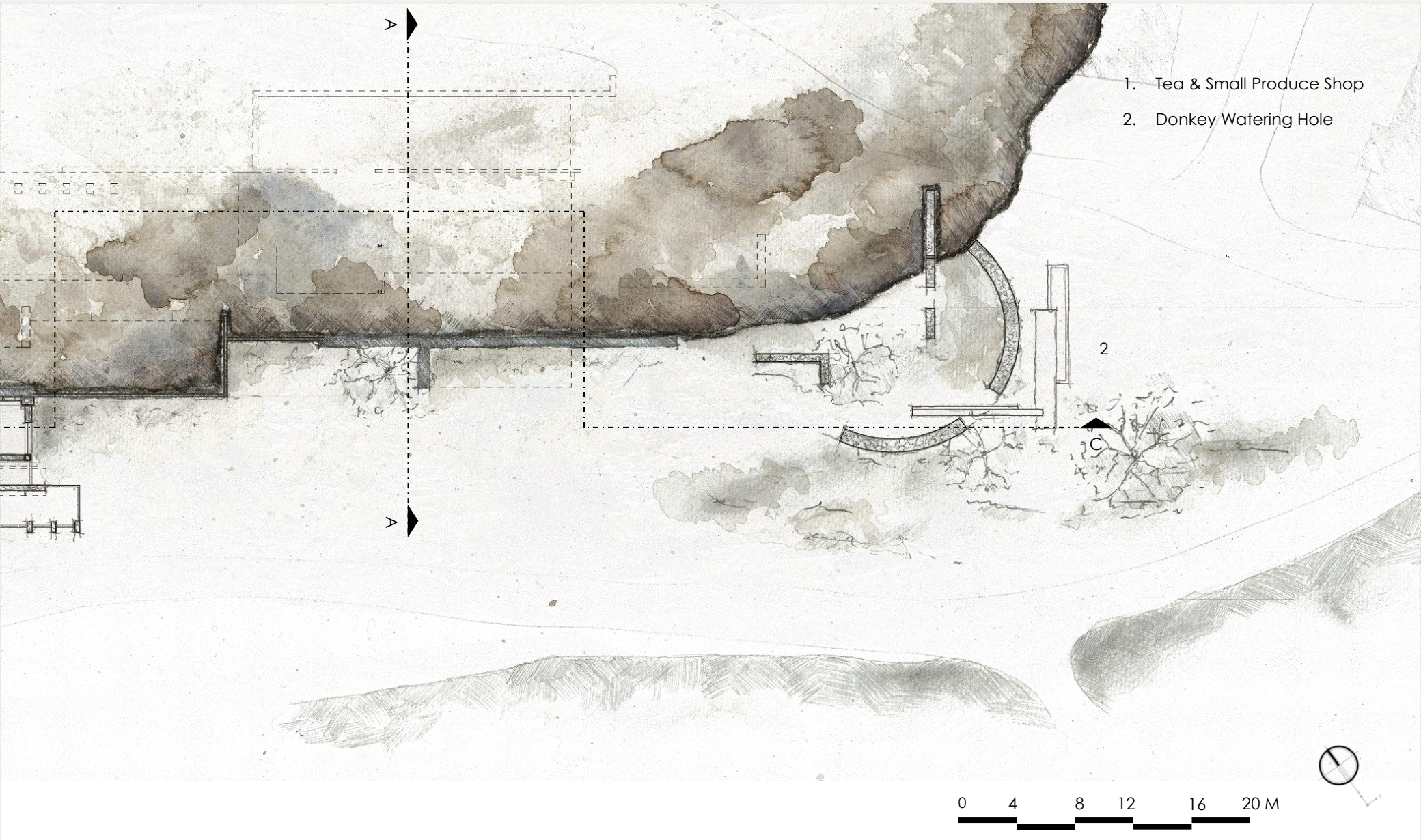
1. Tea Processing Platform
2. Post-Production Storage Shed
3. Administration
4. Pre-Production Storage Shed
5. Rooibos Tea Pavilions
6. Tea & Small Produce Shop
7. Café
8. Smitswinkel
9. Leipoldt House
10. Library
11. Town Hall
12. Mission Stores
13. Town Square
14. Street Village

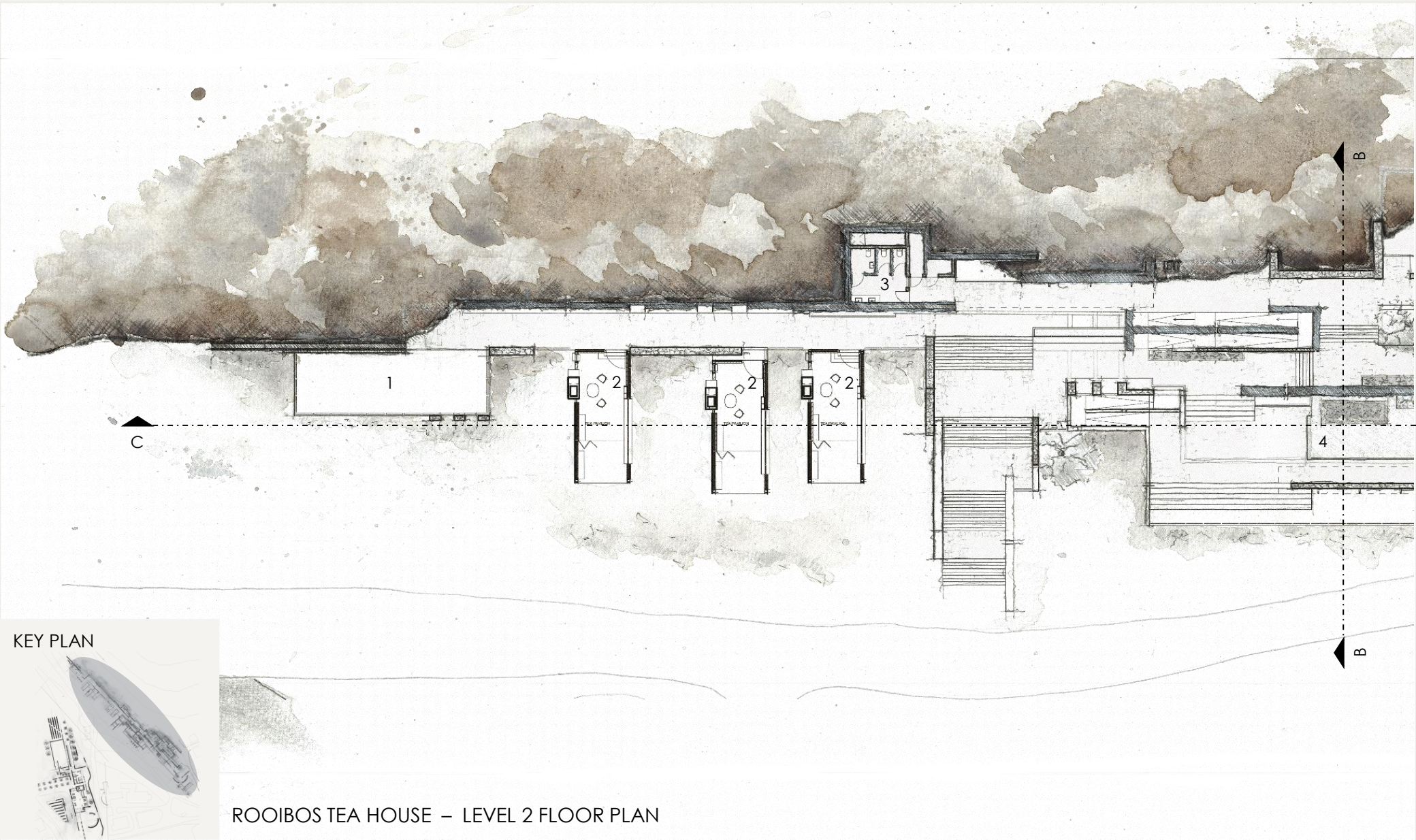


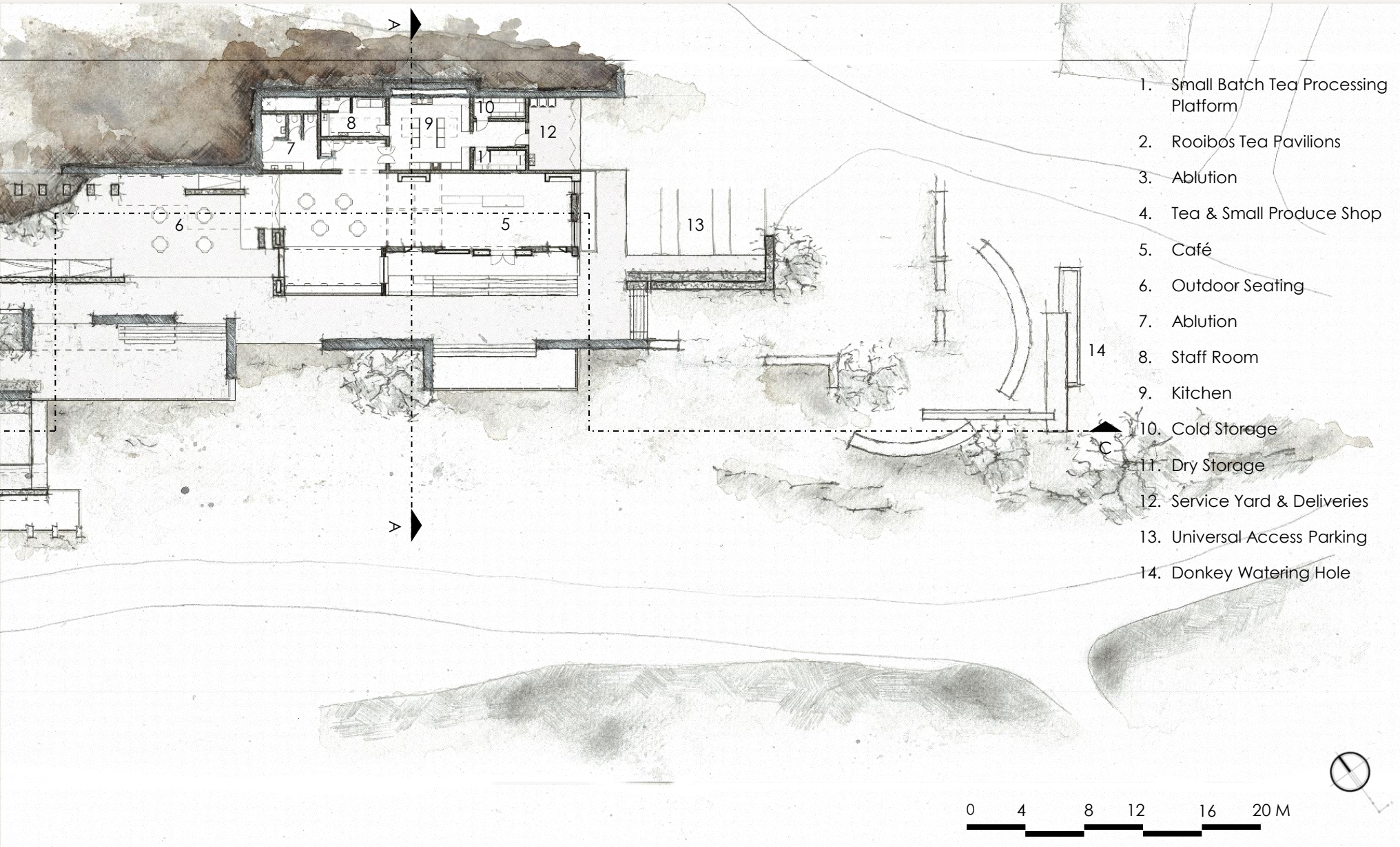
SITE PLAN

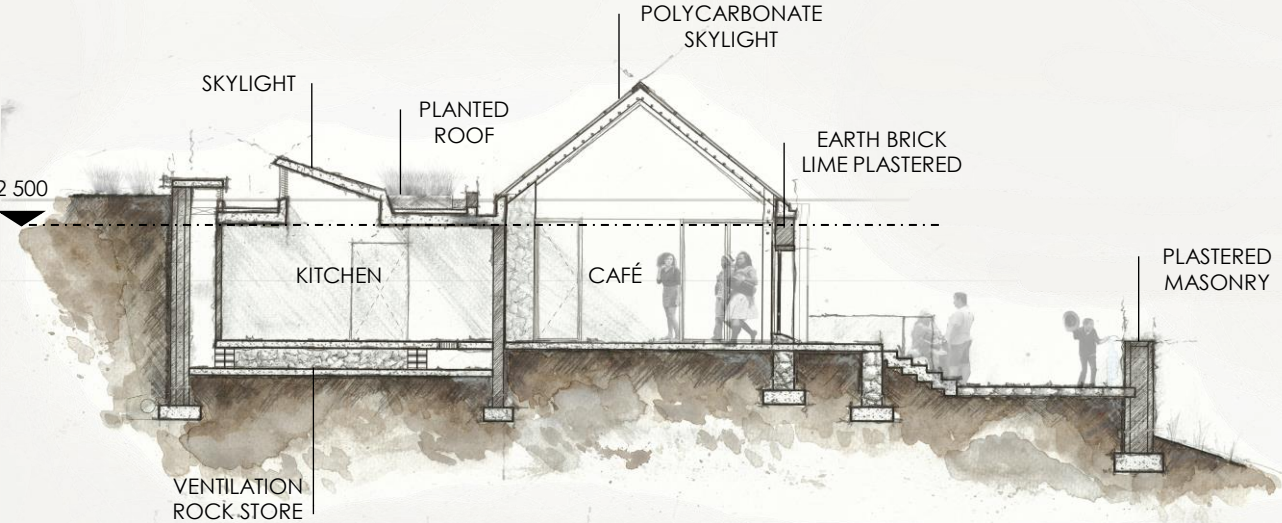


ROOIBOS TEA HOUSE – LEVEL 1 FLOOR PLAN

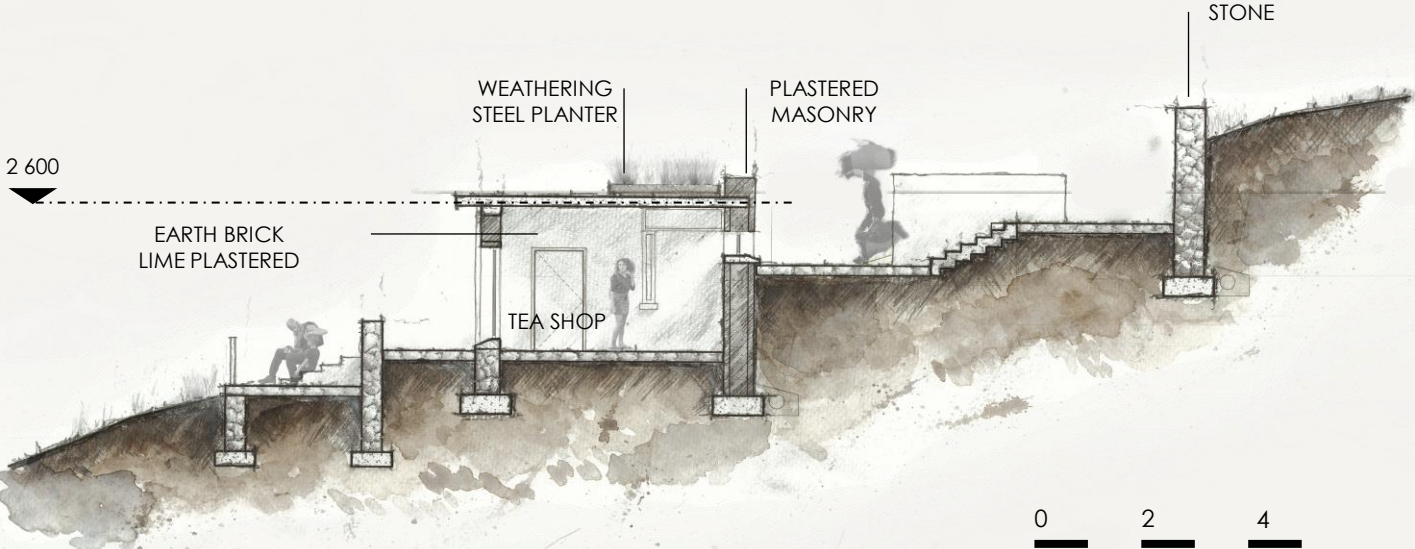




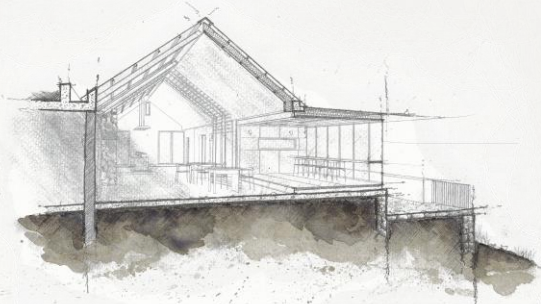
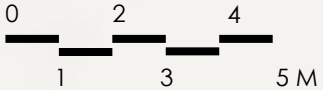




SECTION A - A



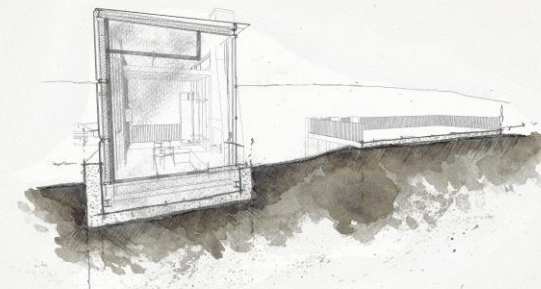
SECTION B - B



CAFÉ PERSPECTIVE SECTION



TEA PROCESSING PLATFORM PERSPECTIVE SECTION



TEA PAVILION PERSPECTIVE SECTION







ROOIBOS TEA HOUSE IN STREET VILLAGE CONTEXT – LOOKING NORTH WEST



INTERIOR PERSPECTIVE OF CAFÉ



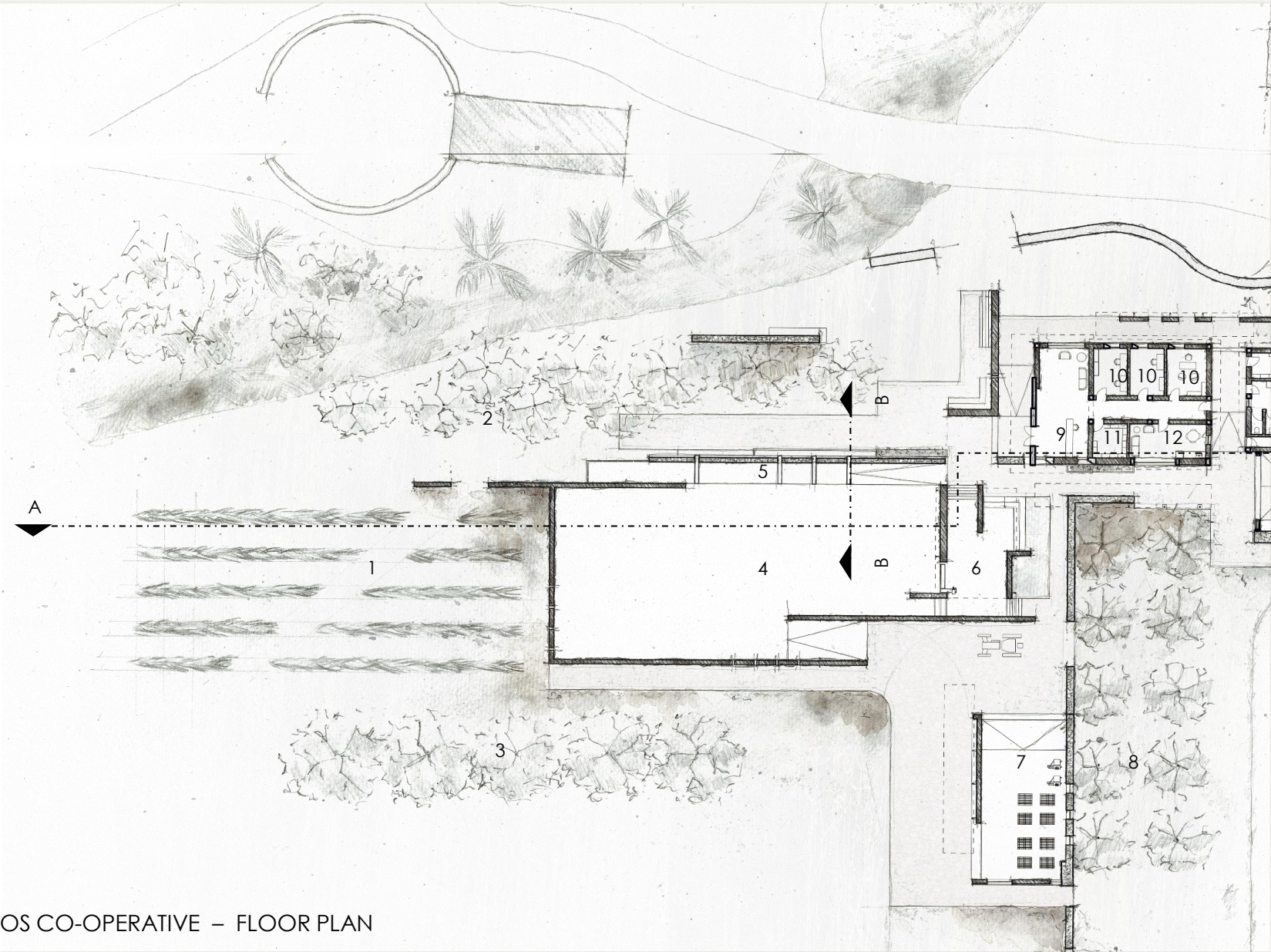
INTERIOR PERSPECTIVES OF ROOIBOS TEA PAVILION



ROOIBOS TEA SHOP – LOOKING EAST

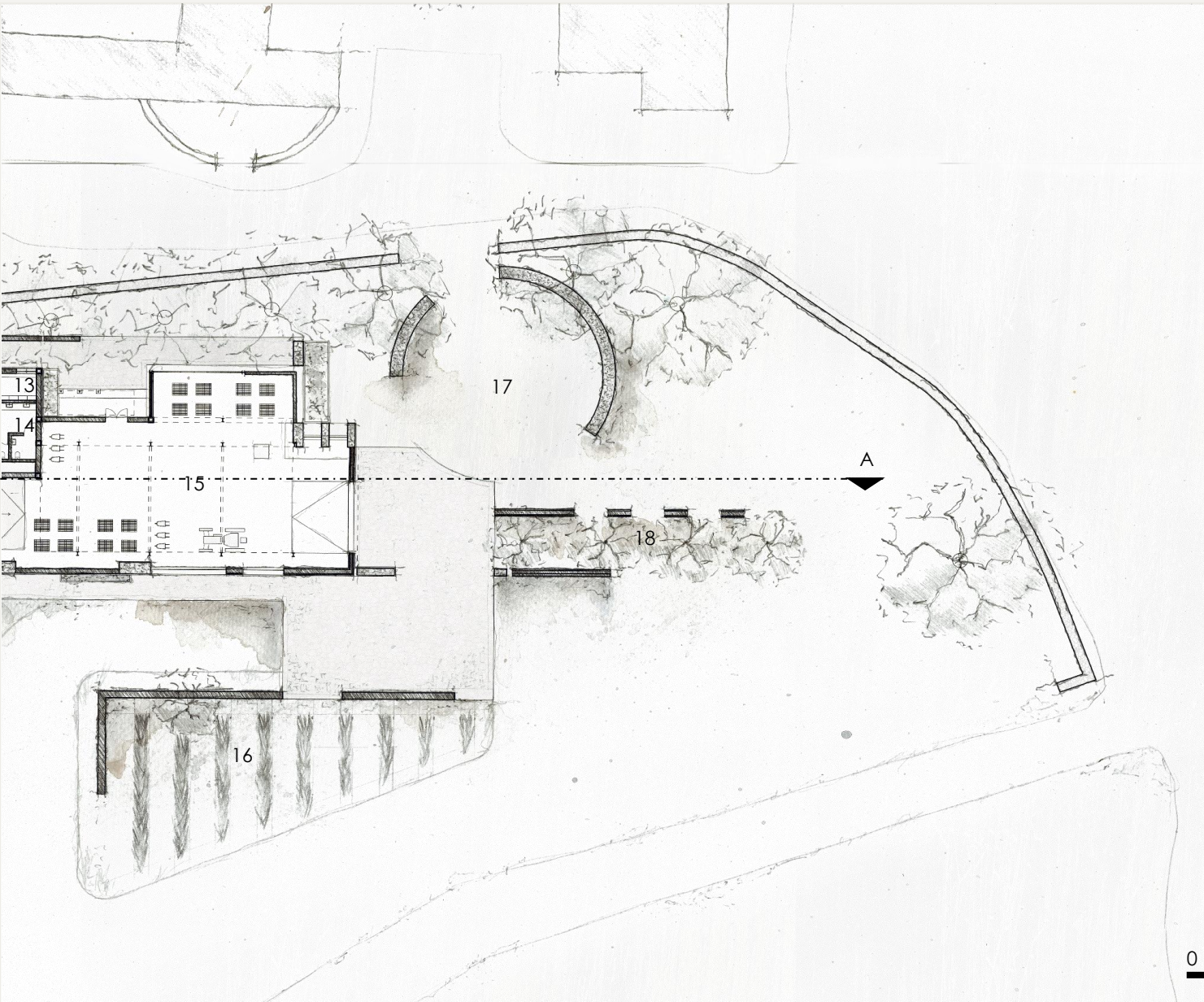


WATERING HOLE PERSPECTIVE - LOOKING NORTH WEST

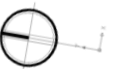
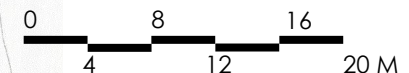


ROOIBOS CO-OPERATIVE – FLOOR PLAN





1. Buchu Plantation
2. Citrus & Olive Orchards
3. Citrus Orchard
4. Tea Processing Platform
5. Viewing Platform
6. Working Platform
7. Post-Processing Storage Shed
8. Olive Orchard
9. Reception
10. Office
11. Storage
12. Staff Room
13. Cloak Room
14. Ablution
15. Pre-Processing Storage Shed
16. Lavender Plantation
17. Tea Market
18. Citrus Orchard



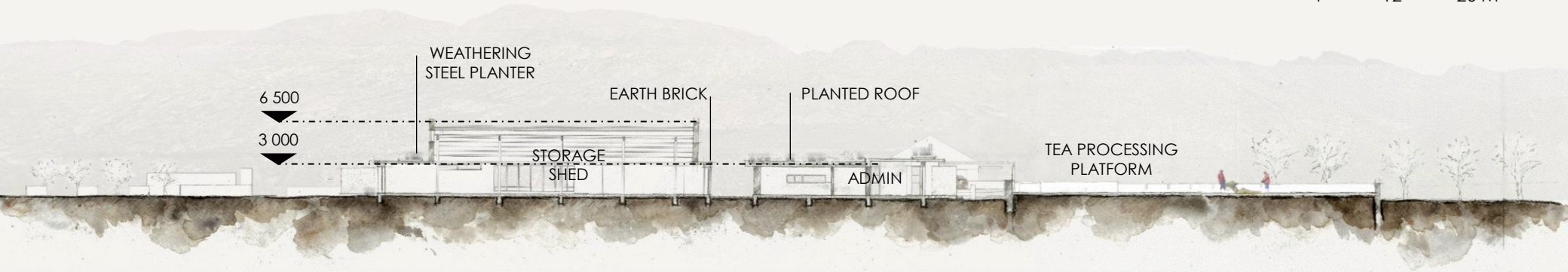


ROOIBOS CO-OPERATIVE – NORTH EAST ELEVATION

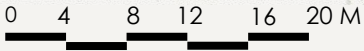




ROOIBOS CO-OPERATIVE – NORTH EAST ELEVATION



SECTION A - A



ROOIBOS CO-OPERATIVE – NORTH WEST ELEVATION





ROOIBOS CO-OPERATIVE – LOOKING NORTH EAST



ROOIBOS CO-OPERTAIVE – LOOKING NORTH WEST



FINAL MODEL

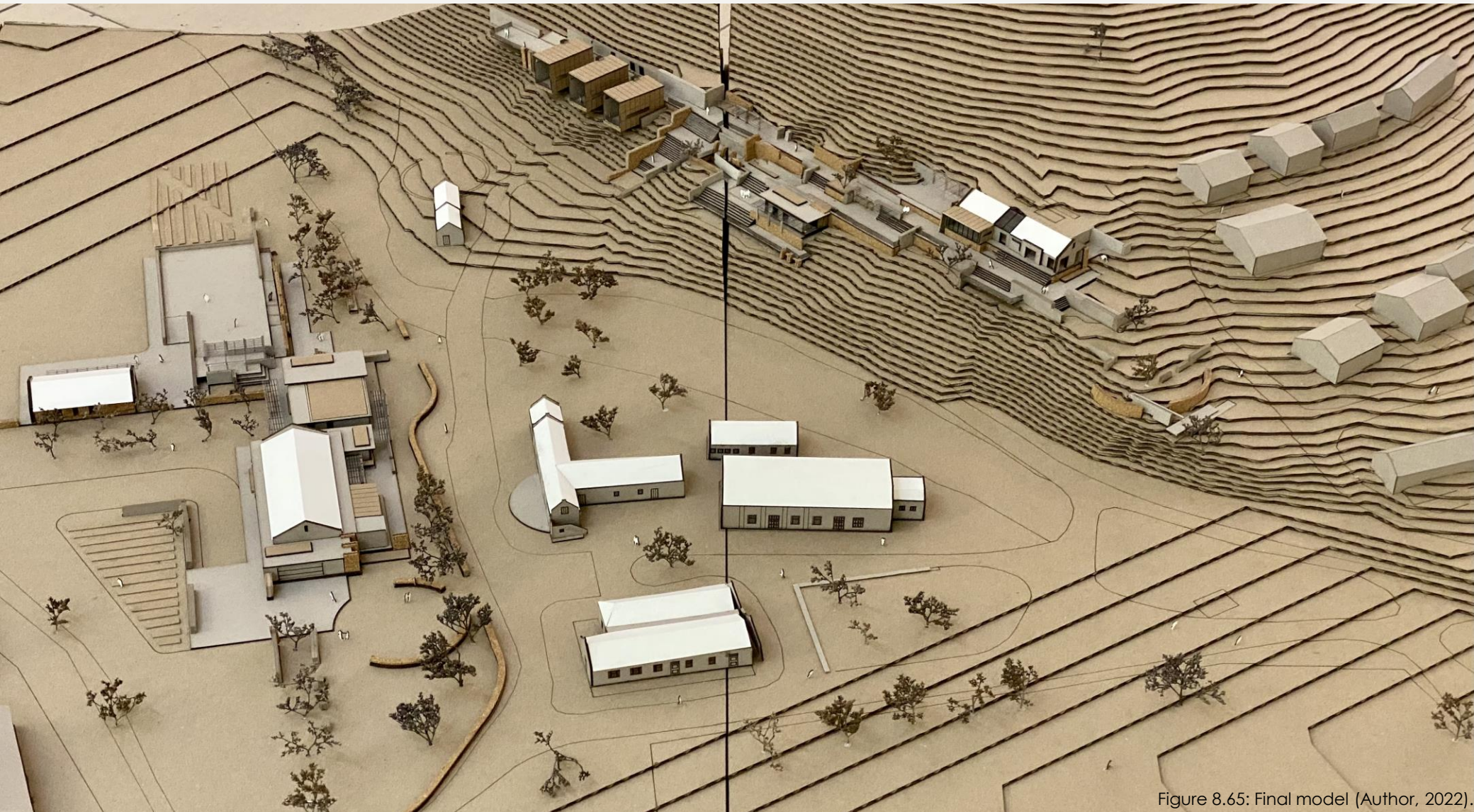
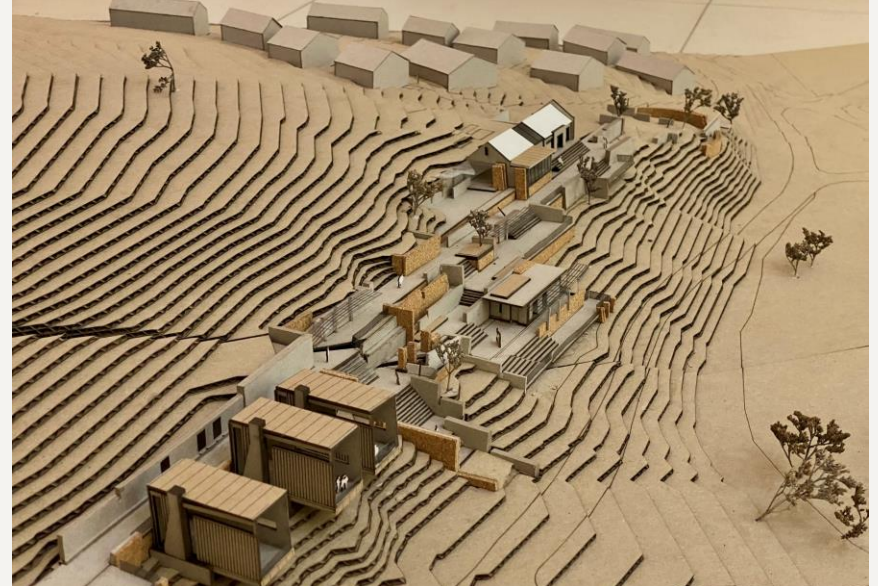
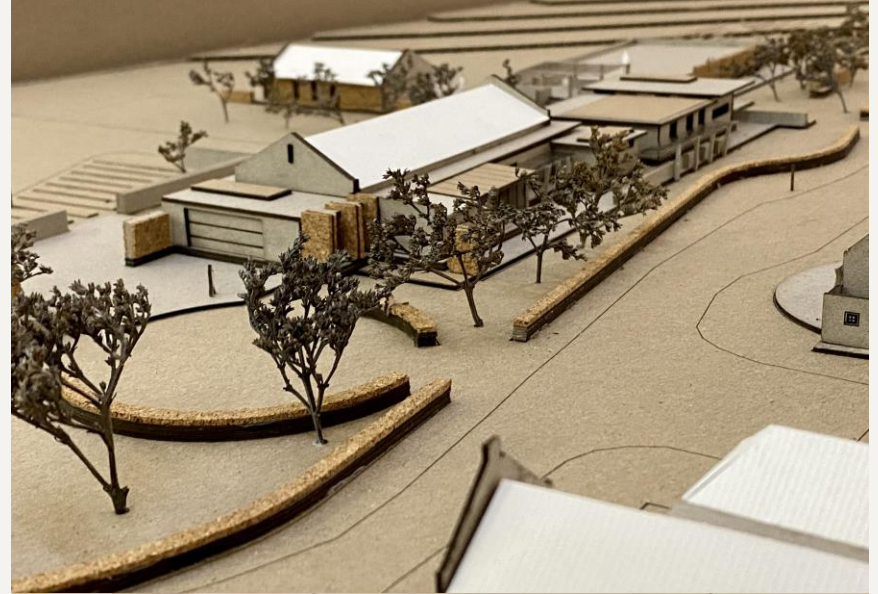


Figure 8.65: Final model (Author, 2022).



Figures 8.66–8.69: Final model (Author, 2022).

Figure 9.1: Road from Wupperthal to the Pakhuys Pass (Author, 2022).



INTRODUCTION

The Technical Investigation chapter is an in-depth discussion of the technical resolution of the Rooibos Tea House in Wupperthal regarding the cultural, environmental and conservational restrictions. The aim is to discuss the influence of materiality, social context and site conditions on the design resolution to synthesise an appropriate architectural response regarding its function and Wupperthal as context. In consequence, the chapter documents the strategies for applying theories, precedent studies and site restrictions in synthesising the Rooibos Tea House.

1. TOPOGRAPHY AND NATURAL ELEMENTS

Rooibos Tea House

The Rooibos Tea house complex is situated on the slope of Grootkop as a reaction to the urban grains of the Street village and the werf. Due to the ritualised nature of drinking Rooibos and its connection with the resident Khoi and San, the Tea House's response to the topography embodies that of the Street Village and its terraced spaces.

In considering the addition of the terraced walkway on the slope, the openings in the retaining walls allow the natural slope to intertwine with the walkways establishing a symbiotic relationship between nature and architecture. Similarly, the flat roof of the Tea Shop maintains the connection between man and nature, focussing the view onto the mountains.



Figure 9.2: Rooibos Tea House Plan nestled into the slope of Grootkop with opening in the retaining walls (Author, 2022).

Rooibos Co-Operative

The Rooibos Co-Operative complex is located on a relatively flat site amongst the historic Eucalyptus trees. The Eucalyptus trees function as a permeable boundary between the Town Square and the Rooibos Co-Operative. In conjunction with the plantations in the surrounding area, the complex creates place in a uniquely Wupperthal way between the natural and manmade, as analysed in Chapter 2.



Figure 9.3: Rooibos Co-Operative Plan with Eucalyptus trees as permeable barrier (Author, 2022).

2. FUNCTION AND USER BEHAVIOUR

Rooibos Tea House

The Rooibos Tea House complex accommodates Tea Pavilions, a Tea Shop and a Café, all stitched together with terraced walkways that manifest the Wupperthal social interplay of socialising between the residence and on terraced *stoeps*. The user behaviour consists of traditionally preparing small batches of Rooibos on the natural rocks for use in the Tea Pavilions. As a visitor to the complex, the user behaviour is left unscripted as exploration and meandering in the social interplay are essential to experiencing the interdependence between man and nature. The user is free to choose between visiting the Tea Pavilions, Tea Shop and Café or meandering in the landscape.

Along the terraced walkways, various stone walls and benches provide resting places with shading provided by steel pergola structures. The Weathering Steel details are coated with Everbrite™ ProtectaCoat to prevent the staining of clothing.

Figure 9.5: Resting places along the terraced walkways (Author, 2022).

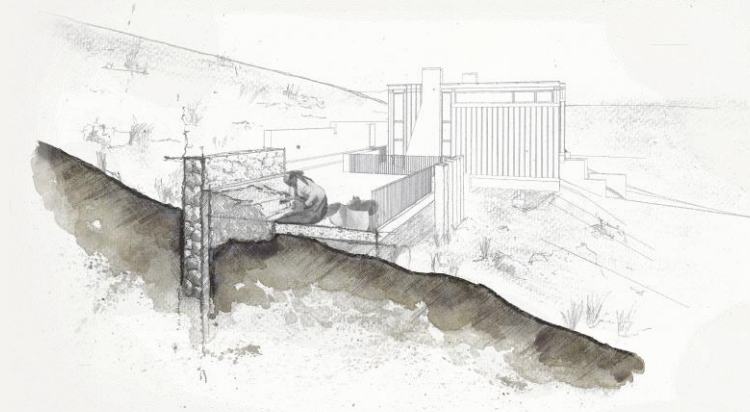
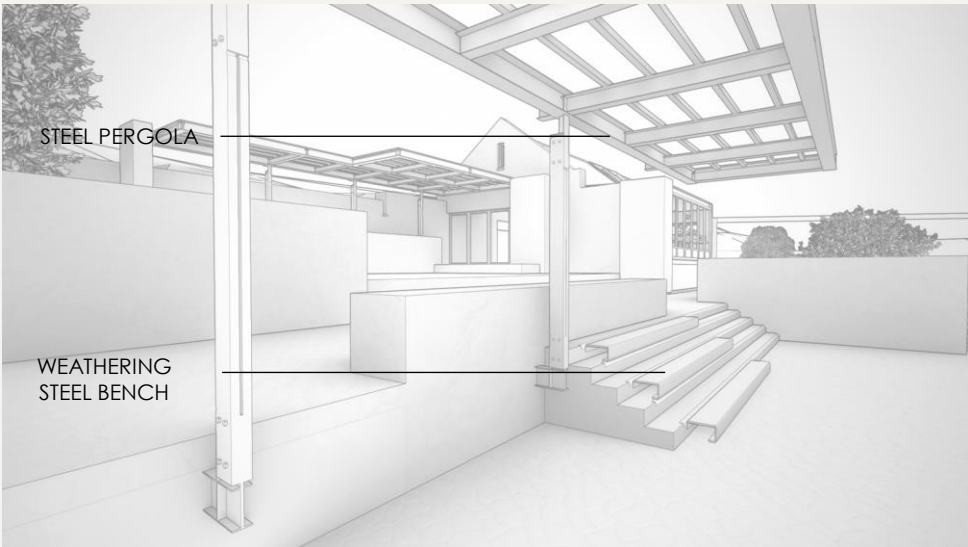


Figure 9.4: Traditional preparation of Rooibos on natural rocks (Author, 2022).



Rooibos Co-Operative

As an extension to the Wupperthal Original Rooibos Co-Operative, the complex accommodates the tea market, a shed for storing tea, administration functions, a tea processing platform and various plantations. The user behaviour related to the Wupperthal Original Rooibos Co-Operative usually starts with the arrival of freshly harvested Rooibos from a small-scale farmer. The delivery of the harvested Rooibos usually arrives by tractor before being weighed in the market area. One of the staff members archives the delivery before it is stored temporarily, as the processing usually takes place on the same day. The harvested Rooibos is then transferred by wheelbarrow to the Tea Processing Platform, and once the tea is dried, it is stored in the post-processing shed awaiting transport to the packaging warehouse in Clanwilliam.

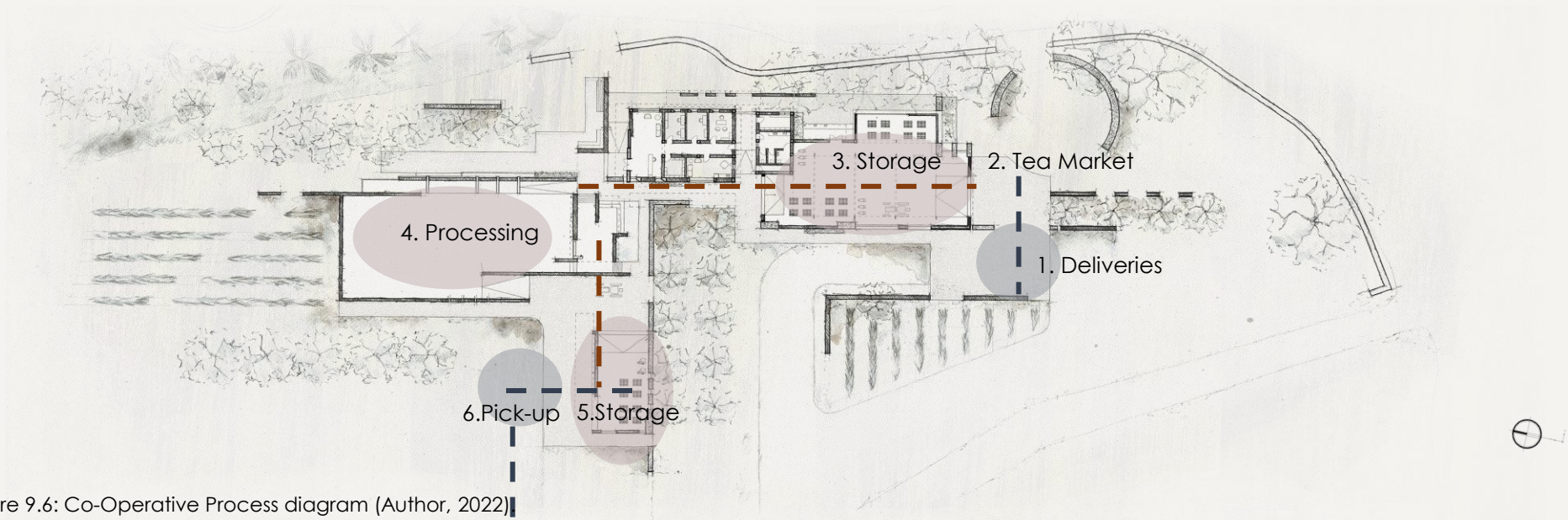


Figure 9.6: Co-Operative Process diagram (Author, 2022)

3. ACCESSIBILITY, PARKING AND CIRCULATION

Parking and Circulation

In maintaining the pedestrianised nature of Wupperthal, the Rooibos Tea House relies on the established parking lot for visitors in the werf (town precinct) to accommodate vehicle traffic. Ultimately linking the visitors with all the other functions and buildings of the town as they perambulate through Wupperthal.

Accessibility

Due to the terraced nature of the Rooibos Tea House complex, it was essential to ensure universal access throughout the complex. To ensure universal access to all functions, the complex accommodates universal access parking spaces near the Café, which directly links with the main circulation walkway. Various ramps on a 1:12 gradient link with the surrounding terraces and platforms. Universal Access ablution is also provided at all major ablution facilities.



Figure 9.7: Locality plan indicating parking (Author, 2022).

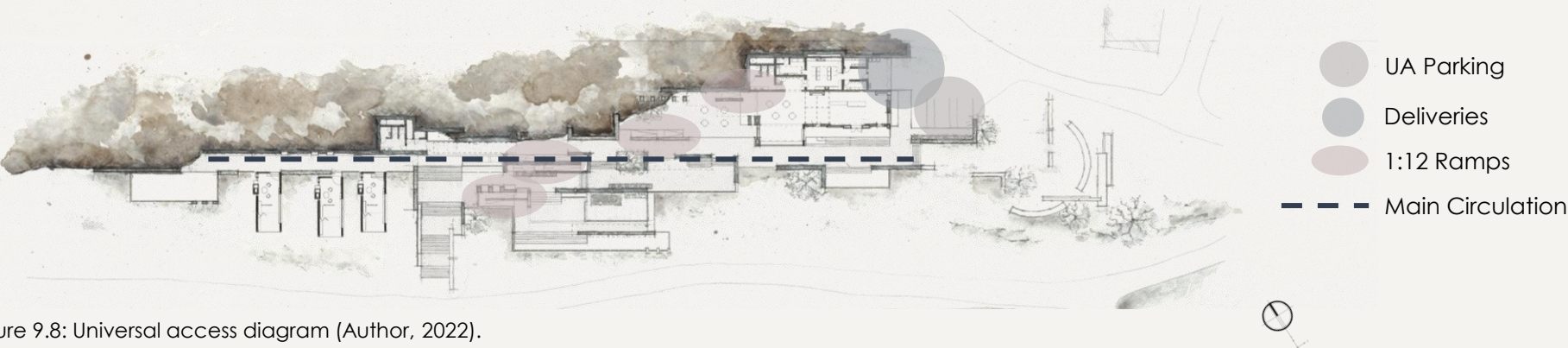


Figure 9.8: Universal access diagram (Author, 2022).

Deliveries

The Rooibos Co-Operative complex and the Rooibos Tea House complex facilitate deliveries by utilising established roads in the area and negates the necessity of new infrastructure.

4. LANDSCAPING

A perennial stream runs between the Rooibos tea House and Rooibos Co-Operative. As the central linking point between the two complexes, the dissertation proposes the landscape architectural intervention of restoring the biodiversity within the stream while also addressing the placelessness of the interstitial zone. The Landscape Architecture Thesis *Wupperthal* by Marike Franklin (2015: online) documents various indigenous plant species that can be used within Wupperthal. The restoration, therefore, aims at joining the complexes on a pedestrian level while celebrating the historic low water bridge.



Figure 9.9: Rehabilitated perennial stream linking the Rooibos Tea House and Co-Operative (Author, 2022).

5. CONSERVATION, STRUCTURE AND MATERIALITY

Due to the nature of excavation along Grootkop to make the terraced Tea House complex possible, a large amount of soil and stones are at the disposal of the builder. To ensure an appropriate architectural response to the disturbed landscape and the traditional use of earth bricks in Wuppertal, the proposal is to utilise the excavations for construction.

The stones can be used to construct the stone plinths for the terraces, while the soil can be used to make 200 x 300 x 100 mm stabilised earth bricks in the proposed brickyard preceding the Tea Market. Ergo, the construction mainly consists of earth brick walls with integrated load-bearing columns.

Earth Brick Construction and Waterproofing

Building on the slope of Grootkop requires the intervention of retaining walls to stabilise the slope. Using earth brick retaining walls is not advisable due to waterproofing considerations, and as a result, the structural resolution consists of masonry retaining walls reinforced with concrete cores. Apart from the retaining walls, stabilised earth bricks are used predominantly, leading to various structural detailing.

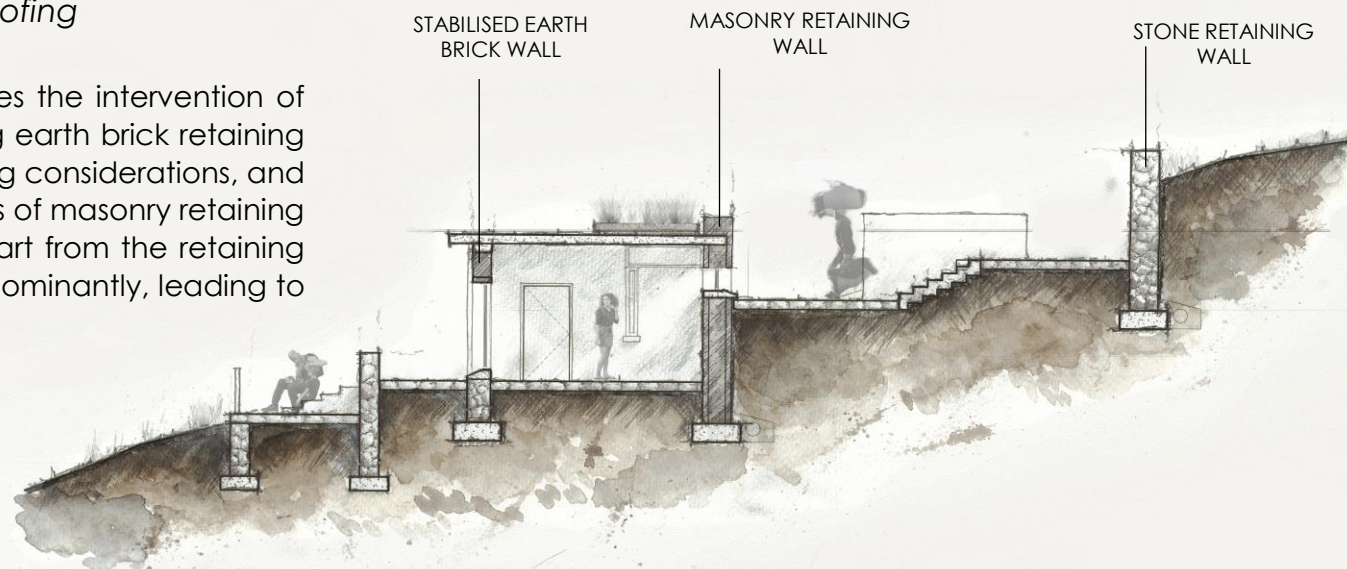


Figure 9.10: Material composition of the Rooibos Tea House (Author, 2022).

Due to the variation in thickness of masonry and stabilised earth bricks, the stone footing of the walls functions as a plinth of varying heights to ensure the top of both construction methods align horizontally.

Vertically, separation joints between the stabilised earth brick construction and masonry retaining walls are facilitated through the strategic placement of structural concrete columns

The stabilised earth bricks are mainly 200 x 300 x 100 mm with a few custom bricks to accommodate specific detailings. The fixing of doors and windows relies on an integral masonry brick column detailed with custom 80 x 340 x 100 mm stabilised earth bricks and a steel plate finish.

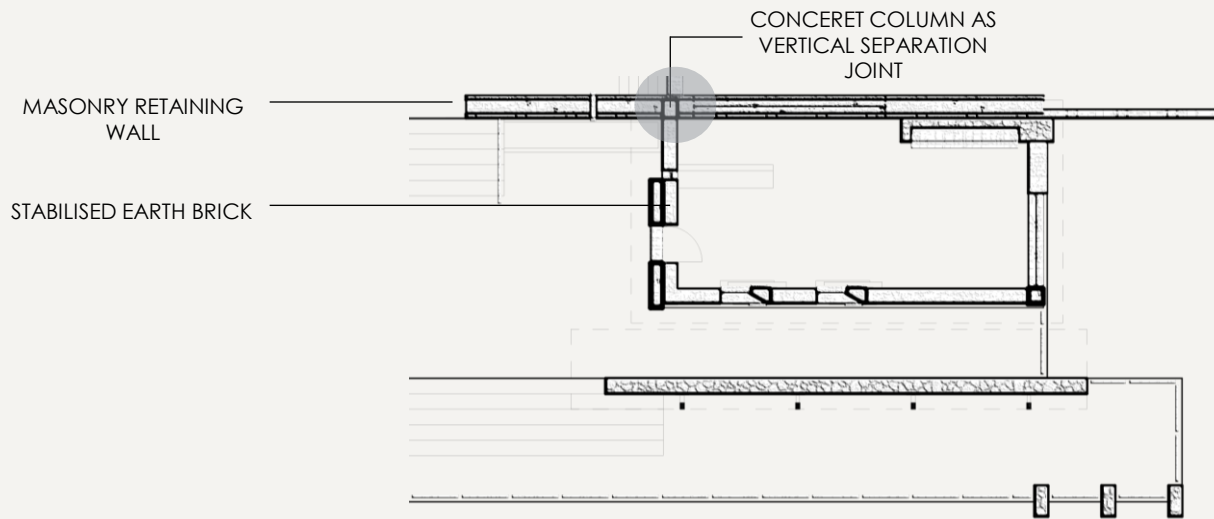


Figure 9.12: Plan of Tea Shop showing vertical connection between clay and earth bricks (Author, 2022).

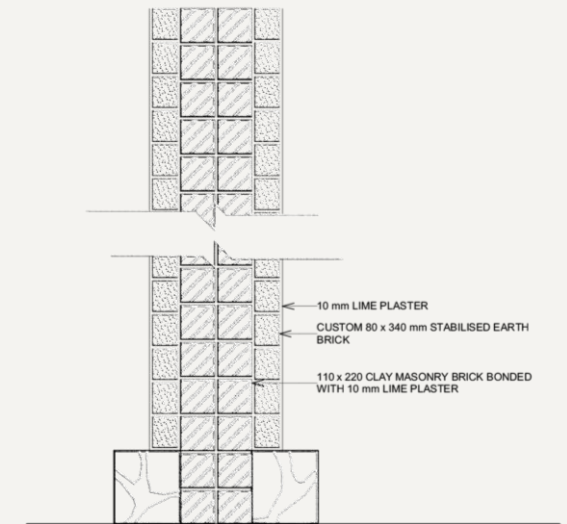


Figure 9.11: Stone plinth detail ensuring level brick work (Author, 2022).

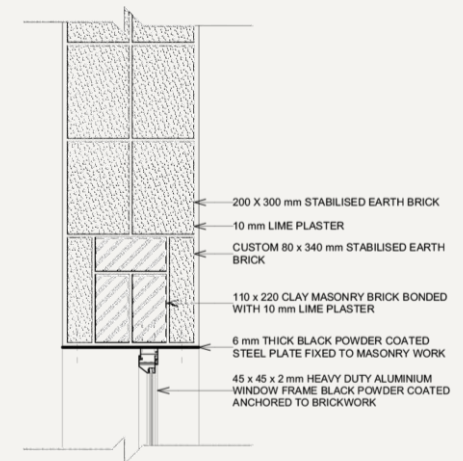


Figure 9.13: Custom stabilized earth brick window detail (Author, 2022).

Underground Structures

Due to the bermed nature of the Café's kitchen, ventilation and natural light were essential considerations. The solution consists of a ventilation rock-store underneath the floor and a skylight. The airflow is controlled by a cost-effective fan allowing hot air to cool when passing through the rock store before being released into the kitchen from the vents on the floor, while hot air escapes through the skylight, also allowing natural light into the space. The rock store cools down again for the next day during the cooler nights.



Figure 9.14: Section through the Café kitchen showing rock-store cooling system (Author, 2022).

Rooibos Tea Pavilions

The tea pavilions juxtapose the earth brick walls with a steel frame structure clad with Weathering steel on the exterior and the interior; a composite of 100 mm insulation and 88mm thick cross-laminated timber is used for its insulating properties. Furthermore, thermal breaks ensure lower thermal conductivity between the exterior weathering steel cladding and the internal steel structure.

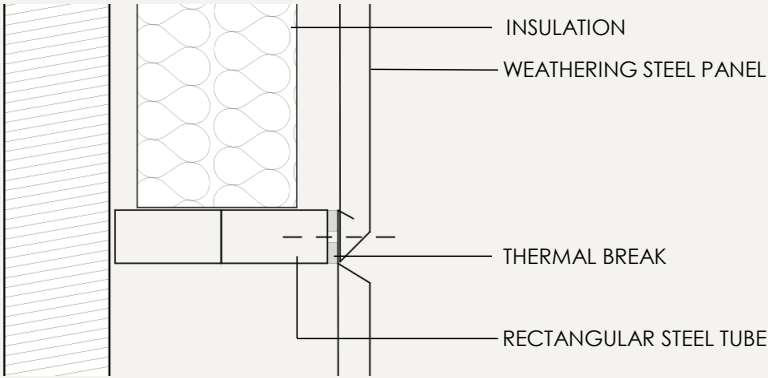


Figure 9.15: Thermal break detail (Author, 2022).

In addressing the Weathering steel Tea Pavilions' exposure to the South Western sunlight, the South West elevation is clad in a composite of timber panelling, insulation and an interior cross-laminated timber skin.

The Weathering steel structure is fixed to a concrete section where the pavilion penetrates the soil to avoid unnecessary rust and degradation of the steel structure due to water exposure in the soil.

Foundations

The soil conditions on site determined the following foundation types. The Rooibos Tea House is located on a slope mostly consisting of shale, and as a result, strip foundations are adequate. The clay conditions surrounding the Rooibos Co-Operative resulted in using a raft foundation.

CONCRETE SECTION



Figure 9.16: Section through Tea Pavilion (Author, 2022).

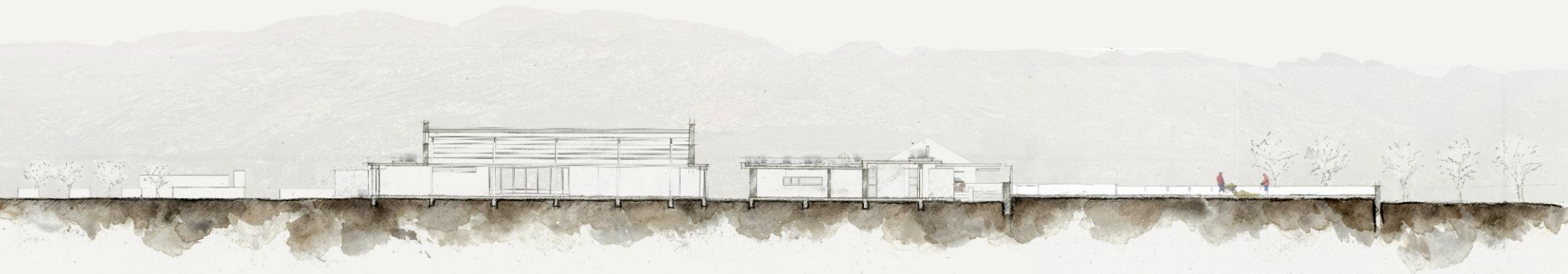


Figure 9.17: Section through Rooibos Co-Operative showing raft foundations (Author, 2022).

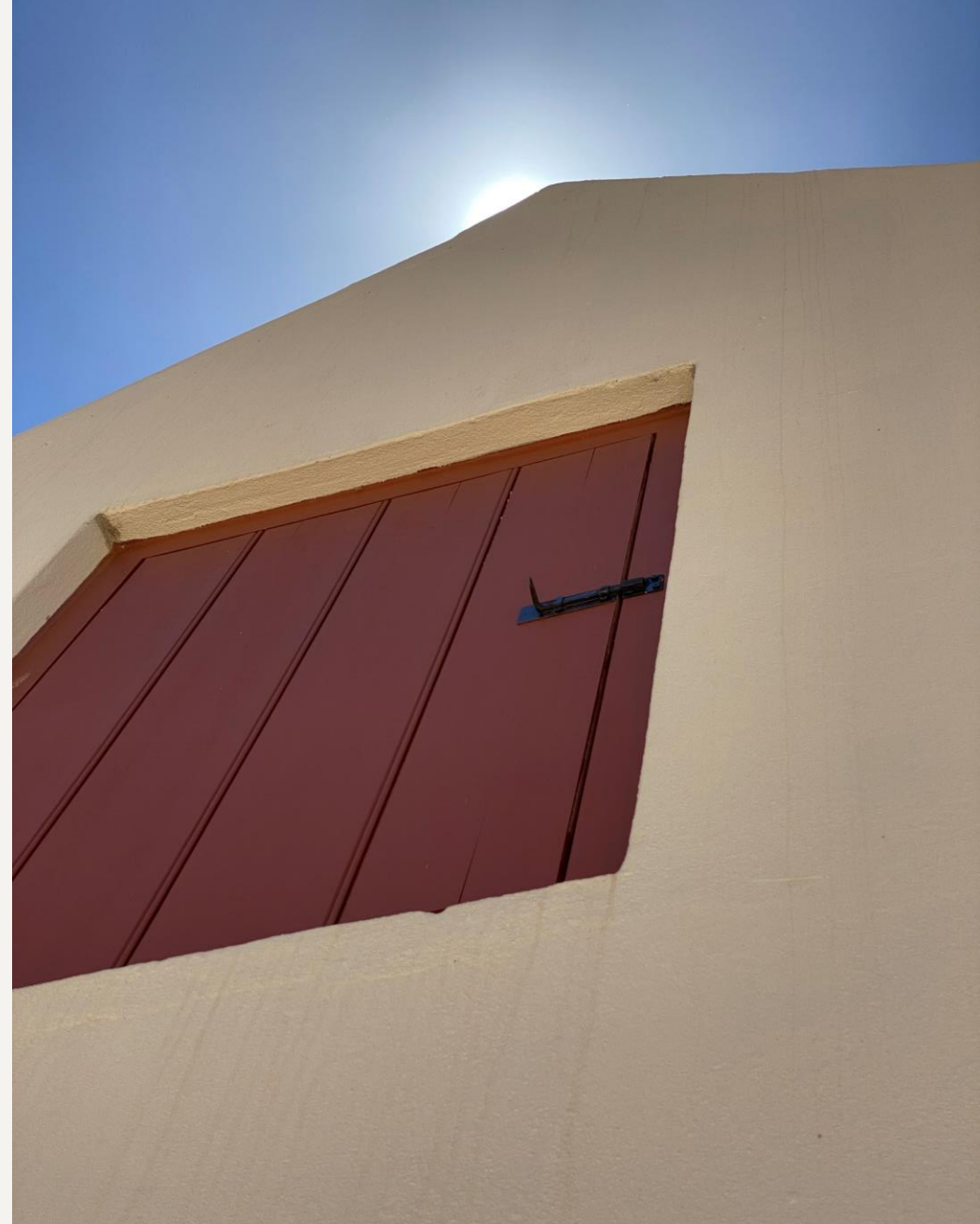


Figure 9.18: Hostel building in Wuppertal (Bergh, 2021: online).

CONCLUSION

As established in the architectural dissertation, to contextualise a Rooibos Tea House in Wupperthal, South Africa, it is essential to comprehend the interdependence and dialectic engagement between man and nature. Therefore, the Critical Regionalist architectural response is rooted in the emplaced Khoi and San of Wupperthal's cultural heritage and, consequently, the understanding of Wupperthal's *genius loci*.

Chapters One and Two analyse the tangible cultural heritage of Wupperthal through various methodologies in order to conceive a historical and cultural understanding of the place. Through the application of abstract and heuristic devices, Chapters Three and Four unearthed the intangible cultural heritage of the Khoi and San while celebrating the dialectic between man and nature as the origin of cultural heritage. Chapter Five elaborated on the *genius loci* as the driving force behind an emplaced cultural heritage and conceptualised a thought process to underpin the architectural investigation of celebrating an intangible Rooibos ritual. Moreover, Chapter Five started to synthesise the architectural response based on the notion of extracting and attributing existential meaning to Wupperthal's Rooibos habits.

Subsequently, Chapter Six analysed two cultural centres as typological responses to understand what a South African ecotourism cultural centre should aim to be before concluding with a brief development in Chapter Seven. Chapters Eight and Nine documented the architectural dissertation's development, synthesis and final proposal. In conclusion, the dissertation documents the intricacies of aiming to steep the cultural heritage interlinked with the *genius loci* of Wupperthal to contextualise a Rooibos Tea House. In understanding the *genius loci*, the Rooibos Tea House aims to celebrate the existentiality of the intangible Rooibos cultural heritage of the emplaced Khoi and San.

REFLECTION

The journey started with the notion of architecturally celebrating the uniquely South African *flora*, Rooibos (*Aspalathus linearis*), endemic to the Cederberg Region of the Western Cape Province. Throughout the initial conceptualising of the dissertation, all signs indicated Wupperthal as the cultural epicentre of Rooibos and opened the rich investigation into an emplaced Khoi and San Cultural Heritage. As a result, the architectural investigation of contextualising the Tea House Typology within South Africa shifted from merely celebrating the Cederberg landscape into an investigation expressing the Cultural Heritage of the Khoi and San living in Wupperthal. Ergo, the dissertation falls under the growing international awareness and recognition of the Khoi and San's indigenous knowledge of Rooibos, aiming to celebrate the reciprocity between Rooibos and the Wupperthal Khoi and San.

Within this framework, the dissertation aimed to contextualise the agricultural and intimate nature of Rooibos by becoming an expression of the social, cultural and architectural fabric of Wupperthal. Throughout the process, the questions of appropriateness and restraint shaped the architectural response. The aim was, therefore, to balance the opposing notions of preserving Wupperthal as a 'museum town' and celebrating the intangible cultural heritage of Rooibos in an architectural expression. As a result, the size and nature of the design fluctuated throughout the process while endeavouring to maintain cultural integrity. The final design consequently embodies various traces of Wupperthal and its social interplay while striving towards contemporary architectural expressions swayed by ritualised engagements.



PROJECT TITLE:
ROOIBOS TEA HOUSE,
WUPPERTHAL, CLANWILLIAM
WESTERN CAPE PROVINCE, 8138

CLIENT: WUPPERTHAL ORIGINAL
ROOIBOS CO-OPERATIVE



DRAWING NUMBER:
A 101



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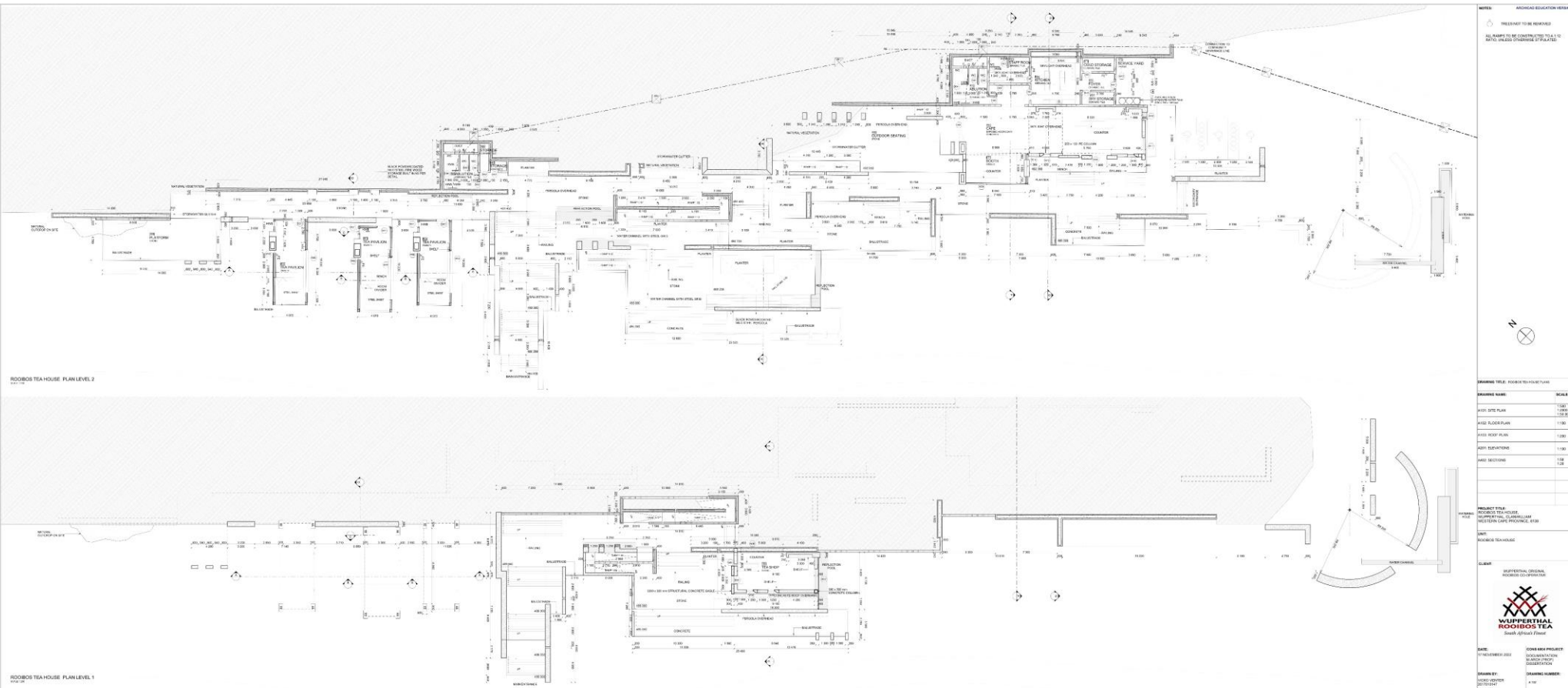
ROOBOS TEA HOUSE ROOF PLAN
SCALE: 1:200ROOBOS TEA CO-OPERATIVE ROOF PLAN
SCALE: 1:200

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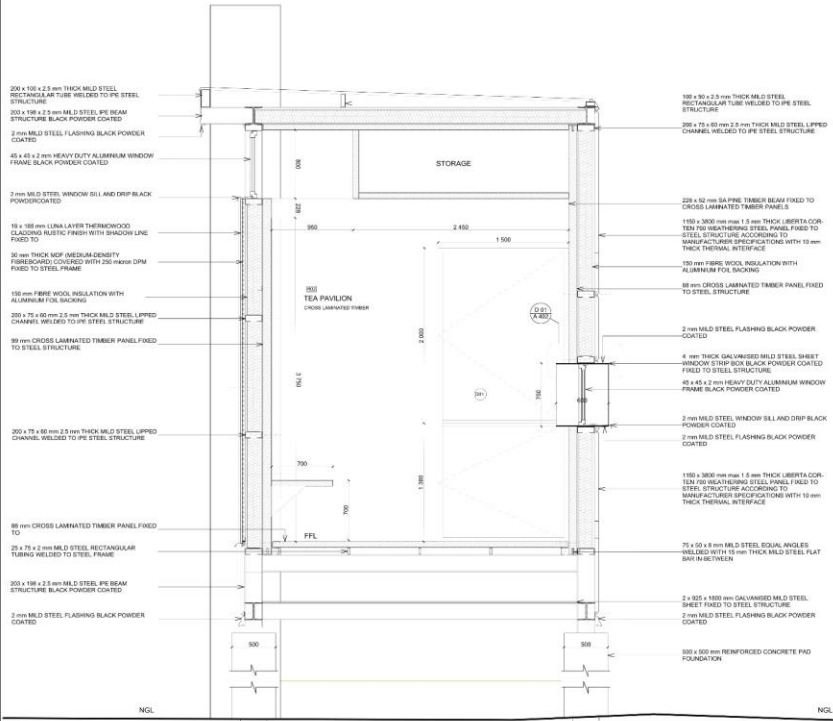
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A103 ROOF PLAN	1:200
A201 ELEVATIONS	1:100
A402 SECTIONS	1:50 1:20

PROJECT TITLE:
ROOBOS TEA HOUSE,
WUPPERTAL, CLANWILLIAM
WESTERN CAPE PROVINCE, 8138UNIT:
ROOBOS TEA HOUSECLIENT:
WUPPERTAL ORIGINAL
ROOBOS CO-OPERATIVEDATE:
17 NOVEMBER 2022CONS 8804 PROJECT:
DOCUMENTATION:
MARCH (PROF)
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VICKO VENTER
2017/01/147DRAWING NUMBER:
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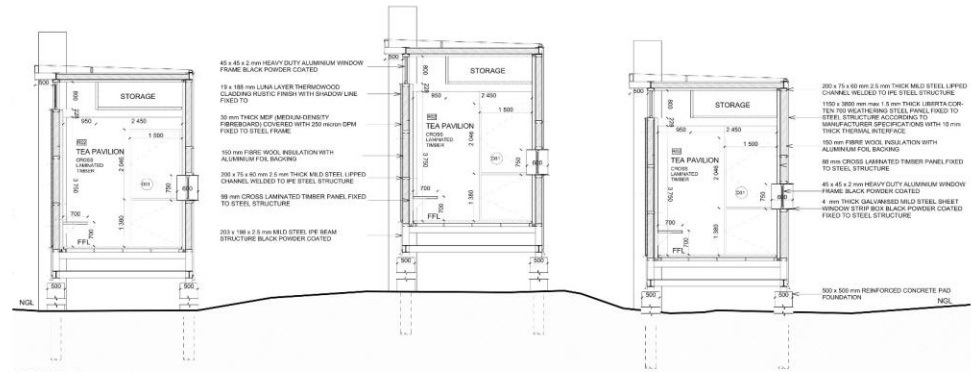




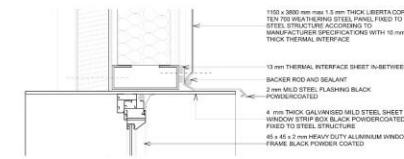
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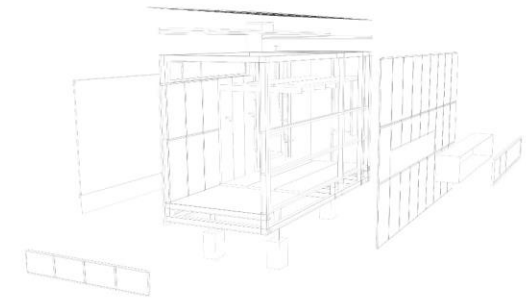
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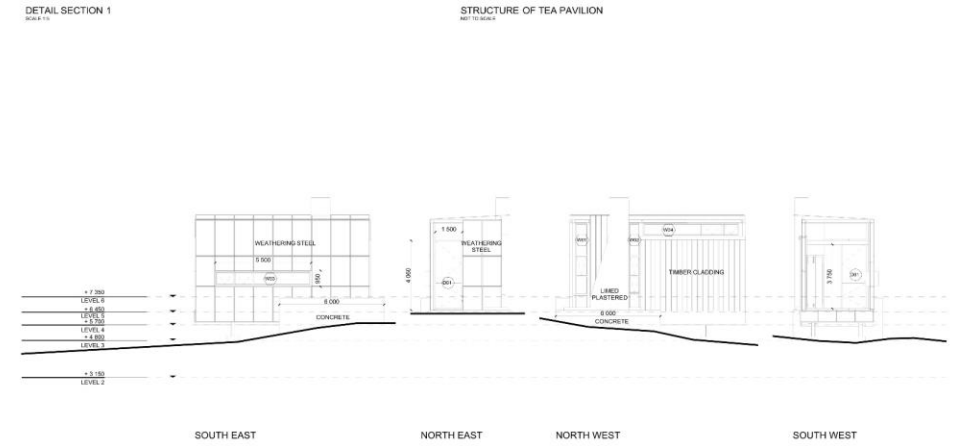
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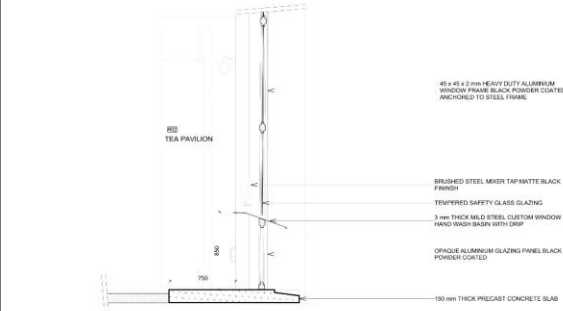
DETAIL SECTION 1
SCALE 1:10



STRUCTURE OF TEA PAVILION
NOT TO SCALE



TEA PAVILION ELEVATIONS
SCALE 1:50



DETAIL SECTION C
TEA PAVILION WINDOW BASIN DETAIL
SCALE 1:10

DRAWING TITLE:	SECTIONS
DRAWING NAME:	SCALE:
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A102 FLOOR PLAN	1:200
A103 ROOF PLAN	1:100
A201 ELEVATIONS	1:100
A402 SECTIONS	1:50
	1:20

PROJECT TITLE:
ROOBOS TEA HOUSE
WUPPERTHAL CLANWILLIAM
WESTERN CAPE PROVINCE, 8138

UNIT:
ROOBOS TEA HOUSE

CLIENT:
WUPPERTHAL ORIGINAL
ROOBOS CO-OPERATIVE



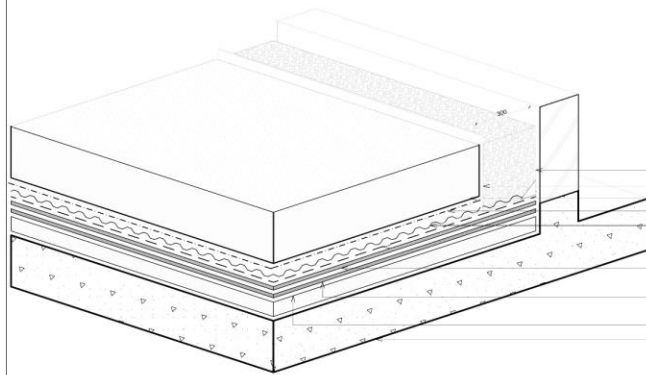
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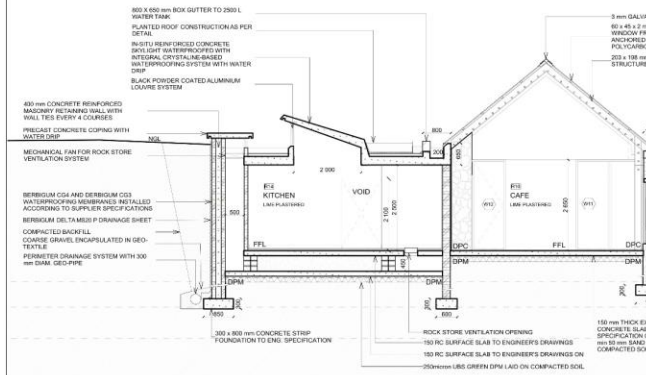
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2017/0147

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A 402

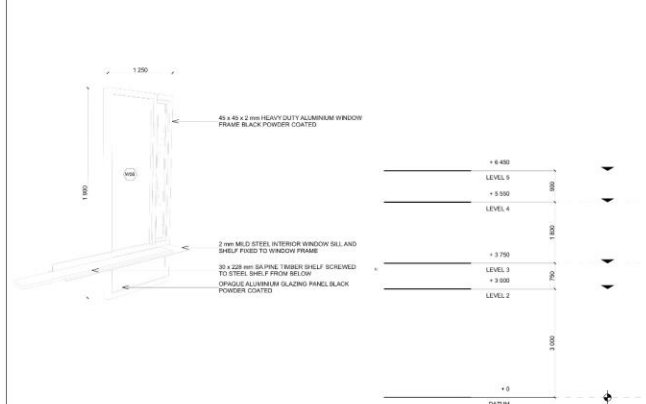
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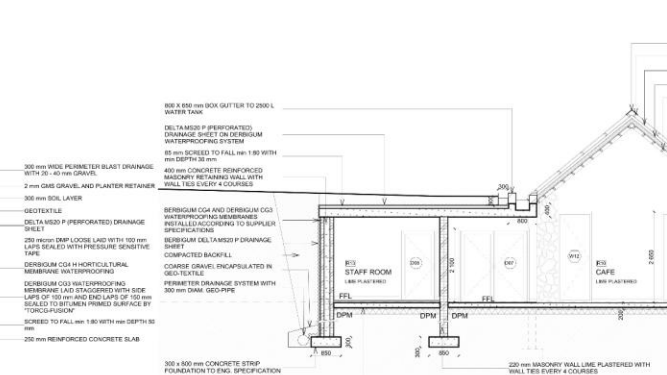
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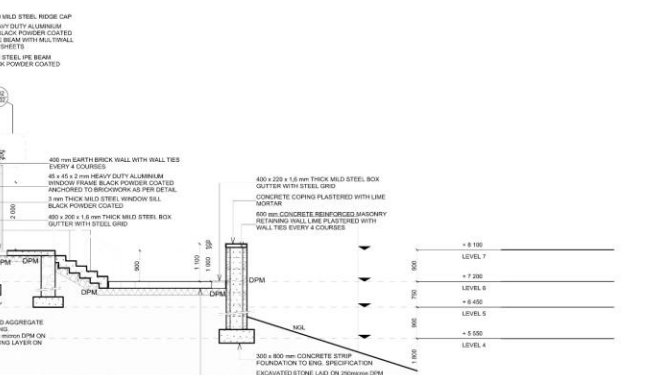
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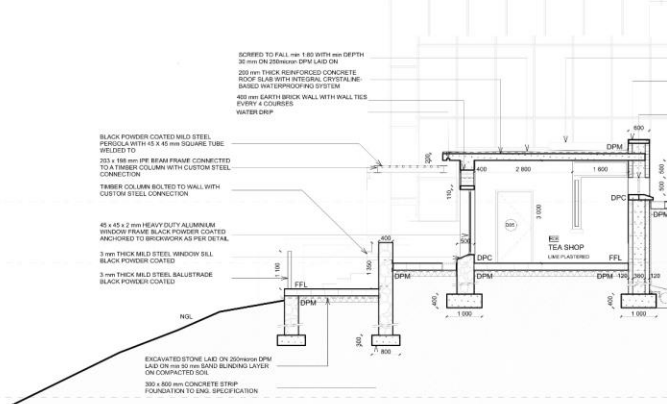
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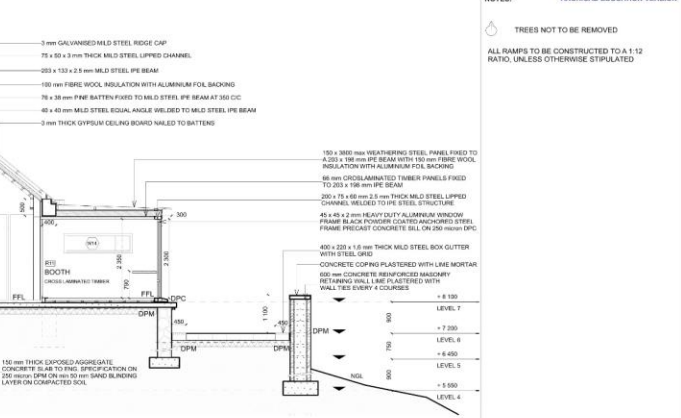
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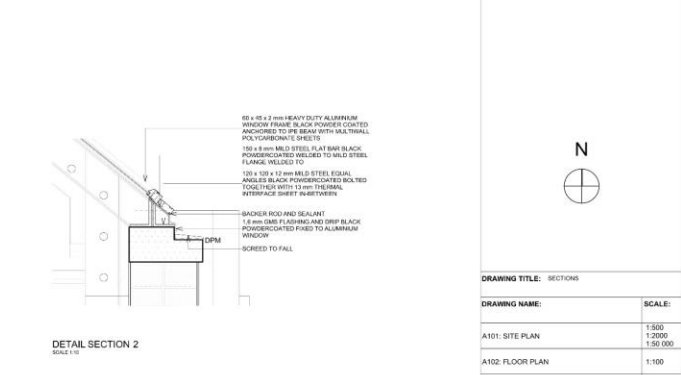
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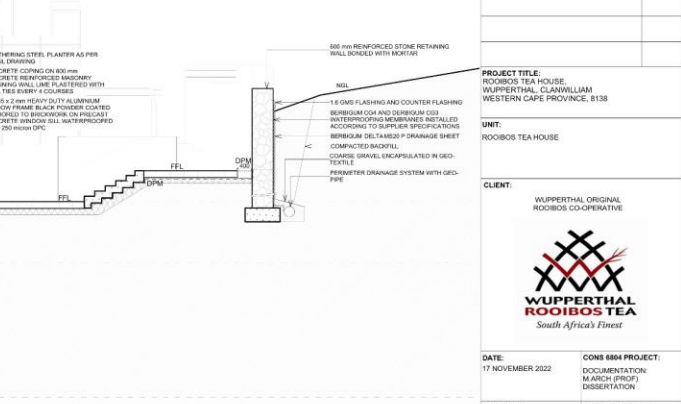
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DETAIL SECTION 2
SCALE 1:10



DETAIL SECTION 2
SCALE 1:10



DETAIL SECTION 2
SCALE 1:10

DRAWING TITLE: SECTIONS

DRAWING NAME:	SCALE:
A101 SITE PLAN	1:500
A102 FLOOR PLAN	1:2000
A103 ROOF PLAN	1:100
A201 ELEVATIONS	1:200
A402 SECTIONS	1:50
	1:20

PROJECT TITLE:
ROOBOS TEA HOUSE
WUPPERTHAL CLANWILLEM
WESTERN CAPE PROVINCE, 8138

UNIT:
ROOBOS TEA HOUSE

CLIENT:
WUPPERTHAL ORIGINAL
ROOBOS CO-OPERATIVE

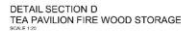


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17 NOVEMBER 2022

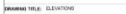
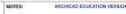
CONC 8884 PROJECT:
DOCUMENTATION:
MARCH (PROF)
DISSEMINATION

DRAWN BY:
VICKO VENTER
2017/0147

DRAWING NUMBER:
A 402



DATE: 17 NOVEMBER 2022	CONS 6804 PROJECT: DOCUMENTATION: MARCH (PROF) DISSERTATION
DRAWN BY: VICKO VENTER 2017010147	DRAWING NUMBER: A 402



DRAWING NAME	SCALE
A101 SITE PLAN	1/8" = 1'-0"
A102 FLOOR PLAN	1/8" = 1'-0"
A103 ROOF PLAN	1/8" = 1'-0"
A201 ELEVATIONS	1/8" = 1'-0"
A202 SECTIONS	1/8" = 1'-0"

PROJECT TITLE: ROOIBOS TEA HOUSE, NUPPERTHAL, CLANWILLIAM WESTERN CAPE PROVINCE, 8130	
UNIT: ROOIBOS TEA HOUSE	

CUBES
SUPERFICIAL ORIGINAL
RECOVERED CO-OPERATION



DATE: _____ CONSTRUCTION PROJECT: _____

17 NOVEMBER 2022	DOCUMENTATION MARCH (PROF) DISSERTATION
DRAWN BY: MICRO VERSION 000100042	DRAWING NUMBER: A261

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Critical Regionalism – an architectural theory that aims to conceptualise an understanding of site-specific cultural, material and regional factors to synthesise an appropriate architectural response rooted in its place. Critical Regionalism is seen as a reaction to the placelessness of Modernist architecture, aiming to introduce contemporary regionalist architecture (Patteeuw, & Szacka, 2019: online).

Defamiliarisation – Defamiliarisation consists of identifying regional elements contributing to the *genius loci* and incorporating them in a novel way that seems unfamiliar yet enhanced (Wu, 2006: 3).

Gelassenheit – Heideggerian term for Letting-be. Man's ability to engage with other beings, characterised by the notion of letting things happen as opposed to making them happen. *Gelassenheit* embodies the expression of restraint while listening and waiting for things to be (Auret, 2015: 221).

Genius loci – The spirit of the place, the expression of an emplaced cultural identity rooted in the ways of a place-specific being-in-the-world (Auret, 2015: 48-138).

Heuristic Device – a procedure or method used to conceive an abstract or conceptual understanding of a construct; to assist in exploring and grasping social phenomena we encounter (Oxford University Press, 2022: online).

Hufe – German agricultural field strips, sized according to the distance an ox can plough in a single day (Franklin, 2015: 49).

Palimpsest – the process of layering meaning while maintaining traces of past meanings, ultimately compiling an entity laden with traces of all past meanings. The compilation of memory in a single entity (Porter, 2004: 105).

Revering Patience – To feel deep respect or innate admiration for something (Lexico, 2022: online).

Ritualised Cultivation – The process of not merely growing Rooibos tea but cultivative relationships rooted in a deeper reciprocity between man and nature.

Steep – Soaking a tea bag to extract flavour and aroma from the tea solids (Schultheis, 2021: online).

Terroir – A French word referring to a set of specific regional growing conditions that affect the cultivated crop's quality. These conditions include the unique type of soil, micro-climates and other interactions between species and farming practices (Louw, 2018: online).

STEEPING THE INTANGIBLE

An Experiential Rooibos Tea House in the Wupperthal Valley, unearthing the intangible cultural heritage of the Khoi and San.

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