

BOTSHABELO

land
people

symbiosis

The site
Botshabelo, Mpumalanga.
25041'58.53" S
29024'28.21" E

The Program
Productive Landscape

Research Field
Human Settlement and
Urbanism

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DECLARATION

In accordance with regulation 4(e) of the General Regulations (G. 57) for dissertations and thesis, I declare that this thesis, which I hereby submit for the degree Master of Architecture (Professional) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that no part of my thesis has already been submitted for any such degree, diploma of other qualification.

I further declare that this thesis is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.

Anita Janeke



ACKNOWLEDGEMENTS

THANK YOU

My Heavenly Father, my 'place of refuge', for guiding me through the deepest waters and never forsaking me - Isa 43:2

To my family, thank you for your prayers and love, for believing in me and encouraging me. I love you with all my heart. I praise God for giving me you.

Nicola, Chanel, Barend, Mia, Jason, Stephanie, Megan, Wilme, Jan Diederleff, Walter, Jean-mari, thank you for making this journey bearable. You guys are my home, away from home.

Prof. Arthur Barker and Jan Hugo for your valuable guidance throughout this year.

For anyone battling with the struggles of life (and architecture) know that He delights in you, you are beautifully and wonderfully made and lacking nothing to achieve what He has called you to. He gives strength and grace which surpasses all understanding.

Let your light shine - Matt 5:14-16

ABSTRACT

Hidden, 12 km from Middelburg, lies the historic mission village Botshabelo. Named Botshabelo, meaning “place of refuge” in the Pedi language as a symbol of a place that became a refuge for the people who fled from Sekhukhune land because of their faith.

Within 10 years of its establishment, Botshabelo was self-sustainable and it served as a trading post throughout the surrounding farmlands. Education was also seen as one of the driving factors behind the success of Botshabelo, however, the education system was severely affected by the Bantu Education Act, implemented in the 1950s. The apartheid legislation had many negative effects on Botshabelo, whose population predominantly consisted of Bapedi and Bakopa people, and

eventually led to the forced removal of 100 families from the site. The site was then turned into an open air museum. In 2005 the families who were forcibly removed won a land claim in relation to Botshabelo and since then the site has been unused and its future is still uncertain.

This dissertation addresses the reintroduction of the Botshabelo Community Trust¹ to the site, thereby creating a new narrative for the site, while evoking memories of the past.

The intention of this project is to protect Botshabelo’s value for the future, while creating continuity of experience between the past, present and future by using its narrative as a research method.

SAMEVATTING

Versteek 12km buite Middelburg lê die historiese sendingdorpie Botshabelo. Benoem “Botshabelo, plek van toevlug” ’n simbool van ’n plek van toevlug vir die mense wat van Sekhukhune-land gevlug het weens hul geloof oortuiging.

Binne 10 jaar van sy vestiging was Botshabelo selfonderhoudend en het dit ’n soort handelspos geword in die omliggende omgewing. Onderwys was ook gesien as een van die bestuursfaktore wat die sukses van Botshabelo behels, maar die onderwysstelsel is ernstig benadeel deur die Wet op Bantoe-onderwys, wat in die 1950’s geïmplementeer is. Die apartheidswetgewing het baie negatiewe gevolge vir Botshabelo gehad, waarvan die bevolking oorwegend bestaan uit die Bapedi- en Bakopa-mense, wat uiteindelik gelei het tot die gedwonge verwy-

dering van 100 gesinne van die terrein. Die werf is daarna in ’n opelugmuseum omskep, maar in 2005 het die gesinne wat tydens die Apartheid era verwyder is, ’n grondeis in verband met Botshabelo gewen. Sedertdien is die terrein ongebruik en die toekoms daarvan is nog onseker.

Hierdie proefskrif handel oor die hervestiging van die Botshabelo gemeenskap na die terrein, met die skep van ’n nuwe narratief vir die terrein, wat herinneringe uit die verlede terugroep.

Die bedoeling van hierdie projek is om Botshabelo se toekomstige waarde te beskerm. Deur gebruik te maak van ’n narratief navorsings metode is kontinuïteit van ervaring tussen die verlede, hede en toekoms geskep.



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CHAPTER 1

introduction



1.1 PROPOSED CONTEXT

Botshabelo as study field:

Botshabelo is a heritage resource that has immense national value. It is a place associated with both events of historical importance relating to apartheid and the diversity of cultures and their interactions.

Established in 1865, 12 km outside of Middelburg, by the German missionary Merensky and 245 native people of his congregation, Botshabelo quickly became a success of the Berlin Mission Society (Mminele 1983:32).

Within ten years, this community was completely self-sustainable and thirteen different types of schools and training facilities had been established. It was the mission's vision to educate the native people of the congregation.

The implementation of the Bantu Education Act, the Anglo-Boer wars and the World Wars eventually led to Botshabelo's decline as a community. The remaining missionaries at Botshabelo had to leave and in 1972 the remaining 100 Bakopa and Bapedi families of the congregation were forcibly removed from the site. This resulted in a period in which Botshabelo was opened to the public as an open air museum, with the addition of a Ndbele tribal village.

In 2005, the 100 families who were forcibly removed from the site successfully won a land claim case and plans are currently being established to reinstate these families at Botshabelo.



Fig. 1.1: Collage of Historical Photos and Sketches of Botshabelo (Hoffmann 2011)

1.2 RESEARCH PROBLEM

It is argued through this dissertation that there is a pattern of static monument preservation in South Africa and a lack of understanding of the intangible heritage of places. This becomes evident at Botshabelo, a site which once consisted of a culturally diverse community of up to four thousand people, which now stands abandoned due to a lack of portrayal of its complex history.

Botshabelo is confronted with the unique situation of reintroducing the 100 families of the Botshabelo Community Trust to the site, while still maintaining its cultural and heritage value within the cultural heartland of Mpumalanga.

1.3 RESEARCH QUESTION

- How can Botshabelo be rehabilitated in order to protect its heritage significance, in both tangible and intangible measures?
- How can Botshabelo be regenerated as a socio-economic hub for the people of the Botshabelo Community Trust?
- How can architecture be used to find the commonality between preservation and regeneration in a cultural heritage landscape?

1.4 HYPOTHESIS

Architecture can regenerate public space at Botshabelo by hosting socio-economic activity.

It is argued that by reintroducing the 100 families of the Botshabelo Community Trust back into the historic village, this could be used to reinterpret Botshabelo's future use, but it could also be used to portray a new interpretation of what life at Botshabelo used to encompass.

To be able to support this hypothesis a thorough understanding has to be gained about the heritage of the site, as well as the current conditions of the site, in support of its potential future development.

1.5 RESEARCH INTENTION

In response to the problem statement and research question, this dissertation will be guided by the following theoretical studies to inform an appropriate design response.

Heritage preservation

Botshabelo is currently an example of a heritage site that has become a static monument as a result of the way in which it has been preserved. The narrative of Botshabelo has been forgotten as a result of not creating a dynamic, interactive relationship between people and the heritage of the site.

This is a result of the lack of guidance in the South African legislation (Bakker & Muller 2010).

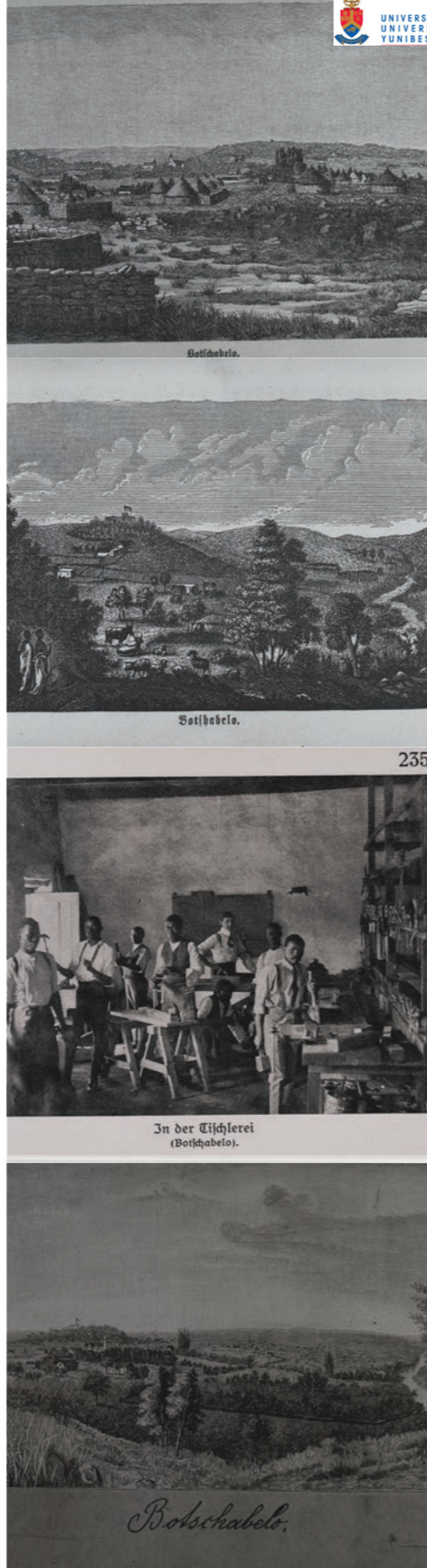
Storytelling as a model for Planning

The stories of Botshabelo are to be used to reclaim the inheritance of creativity and productivity of the old mission station.

Architecture and Nature

Using the landscape of Botshabelo as a means to create economic activity through the production and consumption of fruits and vegetables which can be grown on site, and through this creating a platform for interaction.

It becomes a system that facilitates the interaction of man with nature and man with man. The architecture becomes a mediator between man and nature, past and future.



▲ **Fig. 1.2:** Collage of Historical Photos and Sketches of Botshabelo (Hoffmann 2011).

1.6 RESEARCH METHODOLOGY

In order to formulate an appropriate architectural response, the following methods of research will be followed:

Historical Development of Botshabelo (Mapping: documentary, oral, physical)

An in-depth analysis will be conducted by the author of both the physical heritage of Botshabelo as well as the narrative of Botshabelo as a means of understanding the site's tangible and intangible narratives. There have also been a number of articles written by parties concerning the Botshabelo Community Trust's house development scheme at Botshabelo which will form part of the understanding of the future use of the site.

Theoretical Exploration

The theoretical approach taken is one through which an understanding is gained of the heritage significance of Botshabelo (its identity and narrative) and how it could be developed to create a resilient community once again.

Precedents

A number of case studies will be discussed to gain an understanding of different heritage preservation and regeneration strategies, to inform the design approach of this project.

1.7 LIMITATIONS, DELIMITATIONS, ASSUMPTIONS

Although Botshabelo will be studied as a precinct, the design focus will be on the historical centre, which was identified as the third of zone of development throughout Botshabelo's narrative.

It is assumed that the Botshabelo Community Trust will have ownership of the land and, as they have stated, are in favour of the protection of the heritage of Botshabelo (South Africa, 2015). Although Botshabelo has not officially been declared a national heritage site, it remains under the protection of the National Heritage Act (South Africa 1999).



CHAPTER 2

article

B O T S H A B E L O

T H E S Y M B I O S I S B E T W E E N T H E P E O P L E A N D T H E L A N D

Botshabelo's narrative reimagined through socio-economic activation of the cultural landscape. Commemorating its people through the everyday ritual of the land.



Fig. 2.1: Botshabelo Location (Author 2017)

Introduction

Botshabelo's significance as a cultural heritage landscape should be protected to secure its future value. By understanding the narrative of Botshabelo, one gains a collective understanding of how it became a sustainable community and economic core of its time. By the use of this knowledge a future narrative is created to safeguard its future.

The general issue is that Botshabelo is confronted with the re-introduction of 100 families, who were forcibly removed in 1972, onto the site. This issue is used

to challenge the static preservation¹ of architectural heritage by creating an environment that would facilitate social and economic growth for the families who are being re-introduced to the site.

Simultaneously, Botshabelo is confronted with the reintroduction of African people into a predominantly colonial heritage site and the need arises to find a synthesis between the existing heritage value, while creating a new architectural language of an African context. Botshabelo also presents the opportunity of creating

awareness of biodiversity in a province which is largely confronted with extreme disruption of the landscape by coal mining industries.

Botshabelo Statement of Significance

Botshabelo is a heritage resource that has immense national value. It is a place associated with both events of historical importance relating to apartheid and the diversity of cultures and their interactions.

Botshabelo embodies the history of both the Berlin Mission Society's evangelistic endeavours in Southern Africa and the diversity of cultural groups that constitutes the people of South Africa. Subsequently the Mission Station was provisionally declared a national monument in 1979

(Le Roux, Fisher & Botes 2001: 57).

The study by Le Roux, et al (2001) states the significance of Botshabelo being:

- It embodies the histories of many of the diverse cultural groups which comprise the peoples of South Africa.
- Extensive lands and associated infrastructure relating to the sustenance and administration of a Berlin Mission Station present a concrete record of their ways and practices.
- The palimpsest of routes and infrastructure relating to the place as one for rest and repairs on the trade route to the Zoutpansberg as recorded in the written histories of the early pioneers.
- Extant buildings (now dilapidated) associated with the higher learning of the education in the black community.

- A site associated with the historic event of land claims.

- Buildings (now derelict) associated with the first translation and printing of the Bible into Northern Sotho (Pedi).
- Buildings associated with black Christian missionaries.

Botshabelo has developed as a palimpsest of cultures and events. Which precinct define direct socio-cultural and historic assumptions and connotations. It is also consists out of significant landscapes, from wilderness areas to cultural landscapes.



◀ **Fig. 2.2:** Botshabelo's Location within the cultural heartland (Author 2017)

Problem Statement

The general issue

Botshabelo represents both the heritage of the Berlin Mission Society as well as the native African people who were part of the congregation and were forcibly removed from the site in 1972. However, currently most heritage commemoration is directed towards the German missionaries and not towards the native families who lived in the Motse.

Also, the 100 families comprising the Botshabelo Community Trust² successfully won a land claim of Botshabelo in

2005 and plans have been made to re-settle them at Botshabelo. However, these families would currently have no income to sustain themselves and would have to travel to surrounding towns for job opportunities.

Architectural issue

Since the forced removal of the remaining residents of Botshabelo in 1972, endeavours have been made to create a museum of this once thriving establishment. However, as a result of poor guidance in South African heritage legislation regarding intangible heritage, landscape, place, association and memory an emphasis has been placed on the static preservation of heritage sites (Bakker & Muller 2010:50). This approach avoids the complex narratives and the cultural dimensions that influence landscapes, resulting in a lack of

interpretation of place (Bakker & Muller 2010:50). At Botshabelo the possibility of transferring the intangible values inherent to the site and which are imperative in understanding its traditions and formation of identity, is lost.

Regional Issue

Botshabelo is situated within the cultural heartland of Mpumalanga, a place renowned for being a multi-cultural historical area, but its potential to provide a deeper understanding of Mpumalanga and its cultural history as well as its identity in post-apartheid South Africa, is being lost.

Botshabelo also offers the opportunity of showcasing the beauty and importance of biodiverse landscapes. This becomes important in Mpumalanga which is known for the vast coal mining industry.



▲ **Fig. 2.3:** Collage of past and present conditions at Botshabelo (Author 2017)

The Narrative of Botshabelo

With the objective of understanding the development of Botshabelo, it becomes important to understand its historical and physical context. The intention of this dissertation is to gain a deeper understanding of what led to the success and destruction of Botshabelo in order to understand the lives of the people that once occupied it. Then the narrative should be used to create an appropriate architectural response in commemoration of all the people and the development of its cultural landscape.

Botshabelo's biographical development is intertwined with the broader socio-economic, socio-political and cultural shifts of South Africa as a country (Swanepoel 2015:4). The lives of its people were shaped as much by the Mission Station as by the unstable social and political con-

text of its time. This includes the National Party victory in 1948, the Anglo-Boer Wars (1880-1882 and 1899-1902) and the two World Wars (1914-1918 and 1939-1945).

Understanding the narrative of the landscape requires the understanding of traces of activities and events that occurred in the past, as documented and presented in the work of Mminele (1983) and the studies done by Le Roux, Fisher and Botes (2001) and Swanepoel (2015). The chronological development of the landscape as it has developed over such a long period is complex. However, the intention of this dissertation is not to reconstruct specific events, but rather to gain an understanding of patterns of how the landscape developed, linked to historical events.

The Structure of the Article

The article is structured by describing the historical and physical context of Botshabelo, which is used as a tool to gain an understanding of what made Botshabelo prosper and what led to its eventual decline and gaining knowledge of its complex narrative. This information is then used to aid the understanding of what would be needed to create an environment which would commemorate the past, but simultaneously create a sustainable future. Theory is then reviewed that would be able to guide a conceptual development of an appropriate response to the context, followed by an appropriate suggestion of a program and clients which would facilitate the future sustainable development of Botshabelo.



First Settlement



Production of Landscape



Education and Workshops



Forced Removals



Three Zones of Development

▲ **Fig. 2.4:** Collage of three zone development pattern of Botshabelo (Author 2017)

Historical Context:

The Establishment of Botshabelo

Botshabelo was established in 1865 as a "place of refuge" when the German missionary, Alexander Merensky, fled from Sekukuni land as a result of the tribal chief not agreeing with the conversion of his people to Christianity (Le Roux, Fisher & Botes 2001:30).

Merensky at once sought out a place where he and the people of his congregation could settle. He was told by an agent that the perfect land had been found, but upon his arrival in Middelburg, he noted that the landscape became "depressingly flat and dry and dusty" (Le Roux et al 2001:30). However, when he was taken onto a small dirt road through the bush, "the path dipped down towards a river, and in an incredible short time the surrounding changed. The grass stood high and green and the trees cast a soft shade over the wild flowers and little streams that meandered next to their path. The whole scene was placid and appealing. Merensky knew at once that he wouldn't be doing any more searching. This was his new home, and he would call it "Botshabelo" – which meant 'Refuge'." (Le Roux et al 2001:30).

From the first structures build at Botshabelo, it becomes apparent that the landscape was an informant for the settlement pattern.

The Fort, which was the first structure to be built, was built on the highest point of the site to allow for surveillance.

The first settlement of houses occurred along the ridge surrounding the fort. Here, huts were built as closely as possible. This layout, typical of the native's village planning, was implemented as

a security measure. If enemies attacked, they would not find the houses dispersed and easy to pick off one at a time.

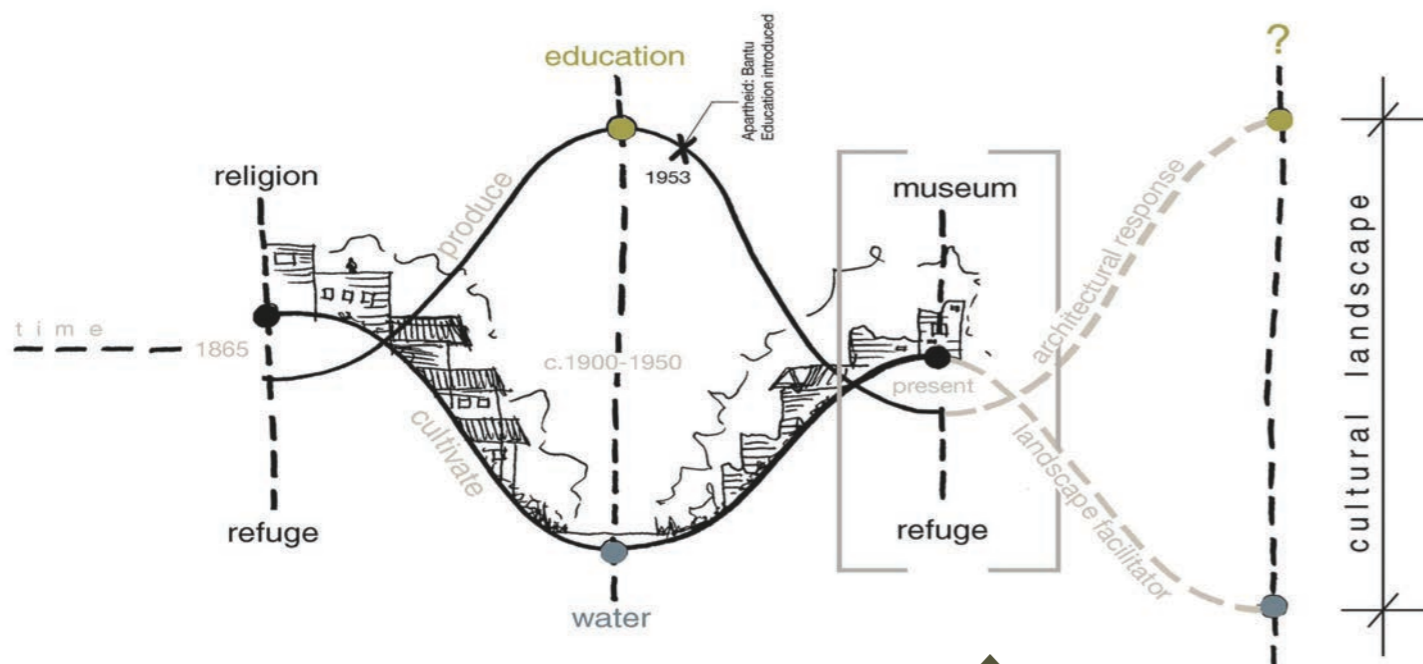
The houses surrounded open spaces in which their cattle could be kept safe from wild animals and their enemies. The houses were unified by the use of low courtyard stone walls, which is typical of Basuto settlements, also allowing their clans to be grouped together as was their custom (Le Roux et al 2001:19).

Another informant of the landscape on the settlement pattern was the two streams leading to the Klein Olifant River. Initially the streams caused their surrounding land to be "swampy". So the river's water level was lowered by the removal of rock from the riverbed, by between 4 – 6 feet, as a result the stream's water levels lowered and their surrounding land could be used for agriculture (Swanepoel 2015:11).

The Production of Land at Botshabelo

As people where permanently settling at Botshabelo, Merensky allowed the chiefs of each tribe to choose and develop the land they wanted (Le Roux et al 2001:19).

Once land was allocated to a family they started to clear the land immediately to plant orchards, vegetable gardens and corn, and the land was fertile enough to produce the required amount to sustain the community. They were able to grow a diverse amount of vegetables and fruits ranging from potatoes, beans, peas, cabbage, melons, sweet potatoes and fruits trees in their orchards; twenty different kinds of peaches, apricots, figs, quince, granadilla, apples, pears, plums, grapes and orange trees (Le Roux et al 2001:26).



▲ **Fig. 2.5:** Influences of success and decline of Botshabelo (Author 2017)

Education at Botshabelo

Education was an important aspect of the development of Botshabelo. A school was one of the first buildings built and when the site was fully developed, there was a formal high school and teachers' training college. It was said that, "it was one of several reputable mission boarding schools which were nurturing the future intellectual elite of the country, providing them with a quality and style of education which was sadly lacking elsewhere during the later apartheid era." (Langhan 2000:25). Within 10 years, 13 types of schools had been opened at Botshabelo (Mminele 1983:54).

The missions ideology supported the belief that the native community members had as much potential for spiritual and intellectual improvement as the white community members (Langhan 2000:25).

Amongst the people that were educated at Botshabelo are, "the actor Ken Gampu, the artist Gerard Sekoto, the poet

and novelist Wally Serote, the radio and television personality Justus Tshungu, and the 1998 mayor of Johannesburg, Isaac Magotse." (Langhan 2000:25). Thus, education was an important aspect of the success of Botshabelo - it was what empowered the people.

The trade school

The trade school was another aspect which aided in the success of Botshabelo. The aim of this school was to give the native people the opportunity to learn hand-crafts which also assisted in the growth and development of Botshabelo. Besides products being made for the mission station, products were also sold to residents and farmers from the surrounding areas. As a result the trade school was able to financially support itself and Botshabelo became known as a trade post on routes between Lydenburg and Pretoria (Mminele 1983: 72).

This form of education was successful as

the focus was placed on the transfer of skills and knowledge from the missionary artisans who came to Botshabelo. The mission supported the development of different trades such as stonemasonry, bricklaying and carpentry and there was also a strong focus on agricultural development. These all contributed to making the community self-sustainable (Le Roux et al 2001:25).

The Effect of the World Wars on Botshabelo

By 1909, Botshabelo was in a phase of educational expansion, the building of the new seminary became important as it expanded from 4 students during the 1890s to 115 students by 1915, with many students coming from smaller Berlin Mission Stations in the Transvaal to study at Botshabelo. The opening of the new seminary was a significant event at Botshabelo, attracting a variety of people, from white dignitaries from Middelburg to natives who travelled "from near

and far" (Swanepoel 2015:11) to see the opening of the new building.

However, the excitement of this new expansion was quickly halted due to the breakout of World War I. The world was had immense impact on the German Mission Societies throughout the world, as in most cases they were cut off from funding and material support of their mission societies. The training institute at Botshabelo thus had to be closed during the wars.

With the inception of the Union of South Africa in 1910, the mission stations had to comply with new policies, both educational and political. The state became involved with the subject matter of what was taught. The state was now in charge of all educational outcomes and if the missionaries intended to continue with their endeavour to educate the people of Botshabelo, they needed to adhere to the new policies (Mminele 1983:137).

The foundation of Botshabelo's role as education provider was abolished in the 1950s with the introduction of the Bantu Education Act of 1953 by the National Party Government, which did not support the equal education of all people. The black natives of the community were no longer allowed to be educated as they used to be and many students had to leave the mission station to seek work elsewhere.

Eventually, in 1970, Botshabelo could no longer be sustained and was sold to the Middelburg Municipality. In 1972 the remaining 200 families were forcibly removed from the site, as a result of laws³ passed by the Nationalist Party Government. The Apartheid-era legislation can thus be seen as the final event that moulded the form and destiny of Botshabelo (Swanepoel 2015:15).

The training college remained open until 1979, after which it was shut down and Botshabelo became a museum and nature reserve (Swanepoel 2015:15).

Museumification of Botshabelo

The period after the forced removals can be characterised as the museumification of Botshabelo and has been coined the "white endeavour" (Swanepoel 2015:15). The buildings were restored with the interpretive focus being on the role of Merensky, as opposed to the areas which represent the African residents' lives throughout the settlement.

The renovations that occurred throughout this period further developed the narrative of Botshabelo. The fort was considerably reconstructed and the 19th century buildings were renovated with modern elements, such as brick pillars being replaced with wooden supports (Swanepoel 2015:15). Also introduced to the site during this time is the open air Ndebele Village, which was constructed on the southern side of the Klein Olifants River. Originally this was a relatively popular attraction within the cultural heartland, but interest has waned over time and the museum is currently unstaffed.

2005 land claims and current state of Botshabelo

Botshabelo was not under the control of the Transvaal Provincial Administration, as the eight farms which made up the whole of Botshabelo, was subject to a land claim in the 1990s from the families that were forcibly removed from the site. In 2005 the land was officially handed over to the Botshabelo Community Trust. However, to date, there have not been

any final decisions pertaining to the future of Botshabelo. It is said that all parties have agreed that the historic core of Botshabelo should be maintained as a heritage attraction and be kept open to the public (Swanepoel 2015:15).

At the time of doing the research for this dissertation, plans have only been made to move the families⁴ back, but there have been no conclusive statements made as to when this will occur. The Botshabelo Community Trust have decided to keep the site open to the public, however much of the built heritage is not being maintained and the gardens have returned to their natural state over time and are only recognisable by the low rock walls which were used to separate them from the built environment. Also, many buildings that were constructed in the first phase of Botshabelo's development, are only still present as relics.

Physical Context:

Three zones of development

The built environment of Botshabelo is organised according to features of the landscape. There are two stretches of escarpment surrounding the mission village, one running north-south and the other west-east. The terrain is further defined by the Klein Olifants River which makes a horseshoe bend on the Southern edge of the mission village, further emphasised by a flat plain in an easterly direction and the Keerom Spruit flows into the Klein Olifants River from the east, dividing the landscape into northern and southern areas.

Three zones of development can thus be identified. Zone 1, which is north of the Klein Olifants River and above the Keerom Spruit, can be identified as the heart of the mission station. This is where the first huts were constructed, followed by the Fort and the first church and later on a parsonage for Merensky and a second church. The first settlement occurred between the Fort and Merensky's house and only remnants are left today of these Basotho dwellings (Swanepoel 2015:8).

On the southern side of the Keerom Spruit is zone 2, which was the land designated to the Bakopa and Bapedi tribes and was named the Motse. Situated further south of the Motse is the graveyard (Swanepoel 2015:8).

Zone 3, which is this dissertations study area, is on the western side of the stream which runs north-south into the Klein Olifants River, the first structure to be built there is a house for the missionary and master stonemason, Kupfernagel. This area became known as the workshop precinct, as this is where the trade school was situated (Le Roux et al 2001: 18).

Development Pattern

As stated in the historical context, Botshabelo's settlement pattern occurred as a response to the possibility of being attacked by Sekhukhune, resulting in the circular homesteads where houses would not be able to be picked off one at a time, in the case of an attack.

However, when the threats of attacks ceased, the circular homesteads were broken up to allow for streets and better access. This is also when the Motse was established, across from the Keerom Spruit (Le Roux et al 2001:18).

The residential areas were built far enough away from the streams so as not to encroach on valuable arable land. The production of food was very important to sustain the community, having been described as starving for the first few months until the first harvest. Farm and garden lands were divided amongst the heads of each clan, keeping to the traditions of the people, these clan leaders were then responsible to distribute the land equally among the people (Le Roux et al:18).

The typology of the buildings and the landscape

Buildings constructed during the first phase of development, in zone 1, were built out of packed stone with thatched roofs, which were in some cases later replaced by corrugated iron sheeting. The first settlement that occurred along the ridge adjacent to the fort is the most dilapidated and in most cases there are only remnants of walls and foundations. These huts were originally built with timber from the surrounding vegetation, however that led to

the destruction of many trees in the area and as a result people were encouraged to build house walls with rock and roofs with thatch⁵(Le Roux et al 2001:18).

Additionally, areas surrounding the houses were cleared to create "lapa's" or inner courtyards (Le Roux et al 2001: 18). The buildings were also arranged close to each other, end-to-end, so in case of an attack only the outer homesteads were in direct danger (Le Roux et al 2001:18).

Only two years after settling they discovered clay on the site, which they then used to make fired bricks in kilns and Merensky's parsonage was the first building to be constructed with brick (Le Roux et al 2001:18).

Three buildings which were built in zone 3 were built in the same time period as those in zone 1, as they resemble the existing typology, of stone walls with thatch roofs. These three buildings are the labourers' houses, the gardener's house and the wagon-making workshop. The wagon-making workshop once was the most dilapidated building on the site and is assumed to have been restored, as it currently has a corrugated steel roof and it's walls have been plastered (Swanepoel 2015:15), this can be viewed as an addition as one can see the original brickwork behind the peeling plaster.

There are a total of 84⁶ buildings which were constructed at Botshabelo, of which only a number still exist, representing only a few of the building styles that once existed, as can be seen in figure 2.7 (Naude 1981:7). All the buildings should be deemed as important for heritage protection as it is important to bring



Fig. 2.6: The three zones in which Botshabelo developed (Author 2017)

to remembrance the whole of Botshabelo and the diversity that once existed. Each building which was constructed had a purpose in its time (Naude 1981:7). The diverse use of architectural building types of Botshabelo is one of the aspects which makes it unique.

Another aspect which is unique to the landscape of Botshabelo is the use of low stone walls and terraces, which is assumed to have been used as elements which defined spaces from each other, for example, separating gardens and crops from the built environment. The mission station was also clearly developed on a ruitnet⁷, with all the roads and walkways being placed along main routes, marked

out on the landscape by means of avenues of trees, hedges, low rock walls, water channels and buildings defining these routes (Naude 1981:8).

Botshabelo can also be viewed as an engineered landscape (Swanepoel 2015:10). Land had to be cleared from stones and boulders, to allow space for the development of the roads and structures. The lowering of the levels of the streams so that the land could be used for agriculture is also an example how the landscape has been engineered.

The natural landscape was further transformed by the planting of European tree species, which were often associated

with missionary residences and spaces such as graveyards. After settling the land was soon filled with fruit trees, which are characteristic of mission stations in South Africa in general, however most of these trees do not currently exist on the site anymore (Swanepoel 2015:11). The landscape can be visually divided between the natural, untouched land, the fruit tree and vegetable gardens and larger crops, clearly defined by the grid patterns and the use of low stone walls.

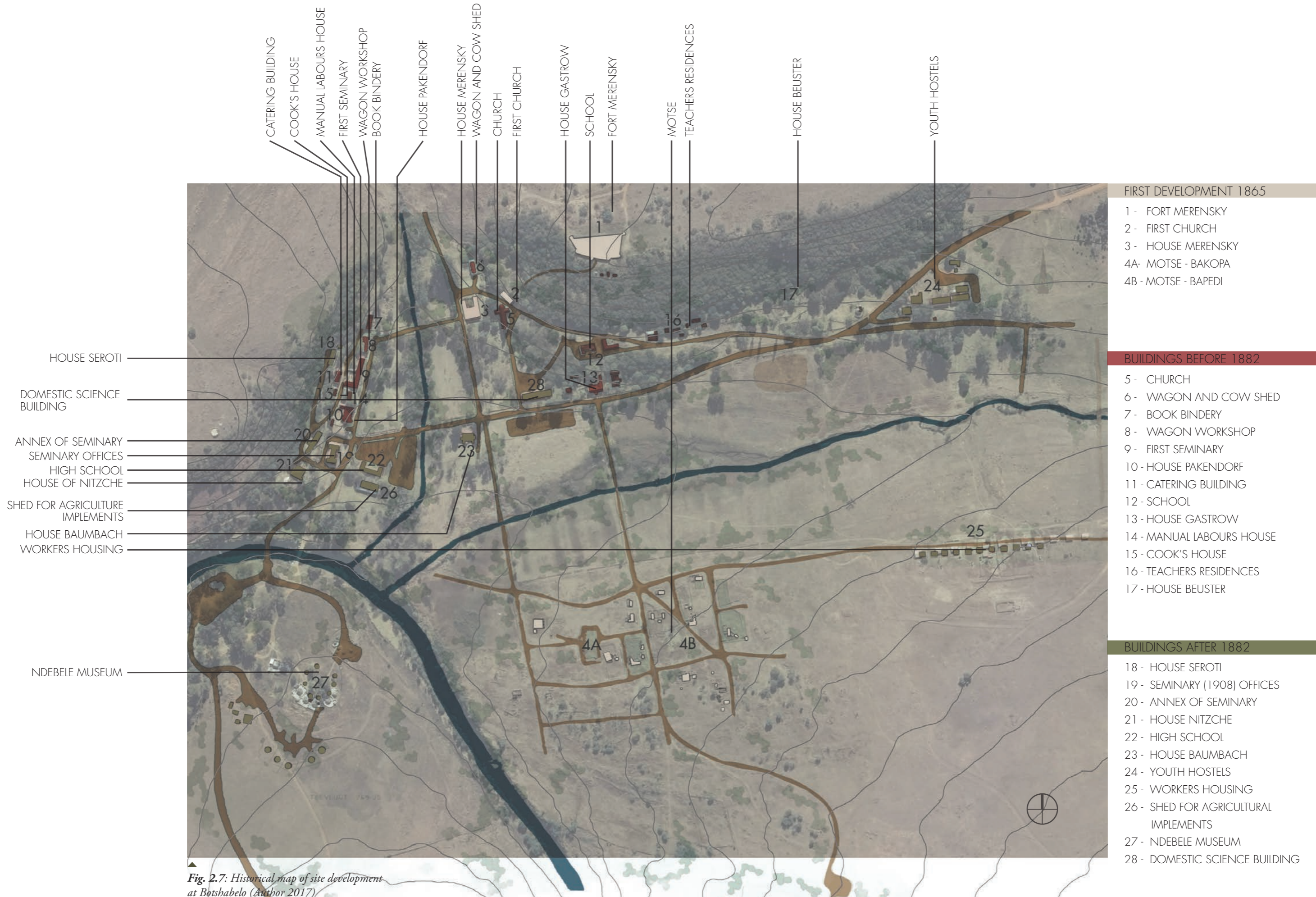


Fig. 2.7: Historical map of site development at Botshabelo (Author 2017)

Study field photographic documentation



Fig. 2.8: Site documentation of Botshabelo in its current condition (Author 2017)



Urban Proposal as a response to
Context
Genadendal as development precedent

Location: Genadendal, Western Cape
Architect: Braaksma and Roos

Genadendal is used as a precedent to illustrate the conservation and regeneration of a historic mission station.

There are three areas that form the essence of Genadendal, each relating to the other, but also having individual significant value. These are the valley, the werf and the mountain. The three hearts of Genadendal (Du Preez, Van Oers, Roos & Verhoef 2009:26).

The valley was where the original agriculture occurred and can be seen as the historical agricultural heart of Genadendal. However, it is hardly in use today, with only traces of the weaving paths and bridges remaining of which only some are still being used today. The valley has the potential to become an agricultural and tourist attraction (Du Preez et al 2009:26). The valley is not isolated and is connected to the werf at the heart of the horse shoe with the mountains behind it.

The werf is the historical religious heart of the settlement and thus the highest priority of restoration was focused here. It became important not to view the church and buildings as being the most important but to commemorate the importance of the overall layout of the werf, including the surrounding gardens, the windmill and the irrigation system (Du Preez et al 2009:27).

The mountains across from the mission werf is the historical natural heart of Genadendal and also have the potential for drawing visitors through hiking and cycling trails and also creating opportunity

for agriculture (Du Preez et al 2009:27).

These three hearts each have individual value, but only as a whole do they represent the spirit of Genadendal. The focus of redevelopment was therefore focused on these three hearts to reveal the rich historical context of the place.

The following principles were used to guide the design process of the conservation of Genadendal (Du Preez et al 2009:29):

- Ecological significance conservation.
- Focusing on the settlement development areas.
- Main routes and paths.
- Enhancing the spirit of the place by restoring the cultural and religious heart.
- Introduction of new programmes.

These principles were used to develop a feasible urban vision for Botshabelo.



Fig. 2.9: Three hearts at Genadendal (Author, 2017)



Fig. 2.10: Genadendal during the first half of the 19th century (Du Preez, Van Oers, Roos & Verhoef 2009)



Fig. 2.11: General view of missionaries premises and part of the village Genadendal (Du Preez, Van Oers, Roos & Verhoef 2009)



Fig. 2.12: Garden allotments at Genadendal (Du Preez, Van Oers, Roos & Verhoef 2009)



Fig. 2.13: Construction of sidewalk and water drain (Du Preez, Van Oers, Roos & Verhoef 2009)

Reinterpreting the future narrative of Botshabelo

Evident in the development pattern of Botshabelo is the importance of the landscape and how it was used for agriculture to sustain its people. With the 100 families of the Botshabelo Community Trust returning, an opportunity is presented to use the ritual of cultivating the land, which used to be a feature of everyday life at Botshabelo, to commemorate the past, but also to use agriculture to create a new narrative for Botshabelo's future.

The intent is to reactivate the historical core of Botshabelo by using activities that are able to show visitors of the site a glimpse of how it used to be, but now using the land to teach visitors both about Botshabelo's people and the value of the land which provides sustenance for man.

The historic core will thus be activated by reintroducing activity that is generated through convivial food spaces and by reintroducing the community in close proximity to the core, allowing visitors to learn about the land and the people. Galleries are also introduced throughout the site, in existing buildings, to commemorate people who grew up and were educated at Botshabelo.

These elements are activated by a heritage route that leads visitors through the three zones of development which have been identified, allowing for an overall experience of Botshabelo.



Fig. 2.14: Proposed master plan indicating the programmatic possibilities (Author 2017)

Precinct vision



Fig. 2.15: Proposed master plan for Zone 3 indicating programmes (Author 2017)

Theoretical Approach Heritage Theory

The built heritage of Botshabelo is seen as being a representation of its people and the diversity of cultures that once existed here. Therefore it becomes important to view all the buildings as important resources that should be protected. There are also pragmatic advantages of adapting existing structure, such as a significantly lower impact on the environment when compared to the development of new structures. However, these buildings' value extend beyond their physical usefulness to the identity of Botshabelo and their contribution to the development of the history of this very specific context.

Adaptations to the built fabric allows the opportunity of creating a new "layer" of identity in the old structures, using new elements to highlight the existing identity. It provides the context for users to identify with the old identity and the opportunity for the public to become aware of and learn from the identity that used to exist.

The intention of this dissertation is to re-introduce socio-economic activity at Botshabelo, which would in turn create the possibility to maintain the built historic environment, through creating employment and ownership of the built environment. The proposed outcome is re-activating the historical core of Botshabelo to allow for interaction with the built environment and its narrative.

Approaches to adapting heritage

The Barra charter and Philippe Robert's seven principles are used to guide the architectural intervention within this project and gaining an understanding of the cultural significance of Botshabelo.

The Burra Charter (2000:5) provides the following guidelines when working in culturally significant heritage environments:

- The amount of physical change done to existing structures should be reduced to only what is necessary and should not alter the cultural significance.
- The degree of cultural significance determines the level of impact on the existing.
- Any adaptations must ensure that a multitude of cultural values and identities are able to co-exist.
- The original intended experience and meaning of spaces are retained.
- Adaptations must provide some contrast, so as to provide legibility.

Philippe Robert in "Adaptations: New uses for old buildings" provides seven formal principles with regards to adapting heritage buildings (Robert:1989):

1. The building within
2. The building over
3. The building around
4. The building alongside
5. Recycling materials and vestiges
6. Adapting to a new function
7. Building in the style of

These principles are used throughout this project. Within the built heritage the approach taken is to build within, with elements such as the roof or low walls extending out of the existing buildings. This is done to create continuity between interior and exterior, the built environment and the landscape. The existing buildings' functions have also been adapted.

Also, the new interventions are placed within the landscape alongside the existing heritage stone wall, becoming extensions of the wall.

Conceptual Theory

Nature is used as an informant, for architectural intervention, to create within the visitors of the site a sense of place. Nature is used as the mediator between the past and the future.

"A structure in the landscape, like a frame or a acoustic mirror, can help to mediate between ourselves and nature simply by standing in between. Creating a very personal resonance. Like a magic key that unlocks our memories, reminding us that we are part of it all and not separate from nature." (James 2013:117).

Marcus Tullius Cicero⁸, in *De natura deorum*, writes about two natures: the first nature being characterised as "the natural world", the "primal nature" (Cicero cited in Hunt 2000:34) which to pre-historic man was seen as the wilderness. The second nature is characterised as "the world of citrus and olive groves, orchards and green pastures" (Hunt 2000:34). This nature is representative of culture through being physically changed through organised agriculture and human habitation from the "wilderness" it once was.

It was Bonfadio⁹ that coined the term "terza natura" (Cited in Hunt 2000:33). The third nature, the art of the garden, is depicted as the unique amalgamation between nature and culture:

"For in the gardens...the industry of the local people has been such that nature incorporated with art is made an artificer and naturally equal with art, and from them both together is made a third nature." (Bonfadio as cited in Hunt 2000:33).

Nature 1 (natural landscape)

Nature 2 (built environment)

Nature 3 (productive landscape)



Fig. 2.16: Plan showing application of conceptual theory at Botshabelo (Author 2017)

Throughout Botshabelo's landscape, these three natures become visually apparent. Through the use of low stone walls, these three natures have been intentionally separated from each other, keeping each as a separate entity. This can be understood by understanding the expression of a "building in a landscape", where there was an understanding of nature and humankind existing as an interconnected living system (Rios 2013:200).

Then, in the 20th century, buildings were built 'on the landscape', revealing modern man's ideals as humans and their built environment being sovereign over nature (Rios 2013:201).

However, as human intervention in nature continually increased, extracting what is needed to support man's rapidly grow-

ing and ever changing needs, human influence on climate change could no longer be ignored (IPCC 2014:47). The response to this realisation was to view nature as a force that could be controlled by the use of technology and science. By controlling nature we could "address" the problems which have been inflicted on man by the "external limits" of nature (Du Plessis 2012:8).

Thus, a new building typology "for a landscape" was developed. Although it might have contributed, to some extent, to a solution for man's impact on nature, architecture has been reduced to a set of rules and checklists which have to be complied with to achieve the desired "green" and "sustainable" architectural outcome. This has led to a standardised typology (Du Plessis 2012:10), preventing effective

engagement with nature and its complexities, resulting in an even greater divide between nature and humankind.

This dissertation identifies an architecture that mediates between these three natures, creating an environment that considers the building in relation to nature and the landscape to become synonymous with one another. This intervention is further used to emphasise the value and awareness of the existing built heritage on site.

Program

By understanding the narrative of Botshabelo, it is clear that it was successful as a result of the land providing the means for the people to become self-sustainable and the educational focus of the mission institution, which empowered the people.

The proposed program for this dissertation is therefore one that hosts both social and economic activity through the production of the land. The landscape provides the possibility for the cultivation of fruits and vegetables, however, as a response to the colonial built heritage, the landscape will be used to re-imagine the heritage of the African landscape. The gardens are therefore planted with African orphaned crops¹⁰.

The social nature of the programmes allows for the interaction between visitors of the site and the Botshabelo Community Trust, allowing for the intangible transfer of heritage through shared conversations.

The proposed programmes are:

- a culinary cooking studio
- a botany research facility
- a botany library
- a herbarium
- a tea making facility
- a restaurant
- a deli and tasting facilities
- a product production facility.



Clients

Three clients are identified who will be involved throughout the site ranging from everyday visitors to researchers and permanent staff.

Client 1:

The Botshabelo Community Trust

The Botshabelo Community Trust will be involved throughout the project at various levels. The residents will be permanently living on the site, with their residence identified in the urban vision. Their involvement with the productive landscape provides the opportunity for economic activity to be generated through the culinary school, restaurant and deli.

Client 2:

Slow Food International (Researchers)

Slow Food is an organisation that is working around the world to protect food biodiversity, creating links between producers and consumers and raising awareness of critical topics affecting our food systems. Their projects are aimed at promoting agriculture that is based on local biodiversity and respect for the land and the local culture in harmony with the environment. Another aim is to provide food sovereignty and access of good food sources to all communities (Slow Food International 2017).

Their education projects differ from most food education as they are rooted in the idea that food means pleasure, culture and conviviality. Their food classes take many different forms: school gardens, guided tastings, knowledge exchange between generations, practical workshops and meals with producers (Slow Food International 2017).

Client 3:

The general public and partakers of the cooking school

The intention of this dissertation is to create an understanding of what the daily rituals of Botshabelo used to be, allowing the visitor to gain an understanding of the intangible heritage of the site while creating a new narrative by which the heritage can be celebrated and experienced, while also creating an awareness of the biodiversity which still exists at Botshabelo and connecting each visitor with the three natures present at Botshabelo.

Fig. 2.17: Diagram of implemented programmes (Author 2017)

Precedent studies

Four precedent studies are used as informants to guide the design development. These are programmatic informants, conceptual informants and technical informants.

These precedents were either chosen to guide the production of convivial food space or creating mediation between the built environment and nature.

Slow Food Pavilion

Informant: Programmatic

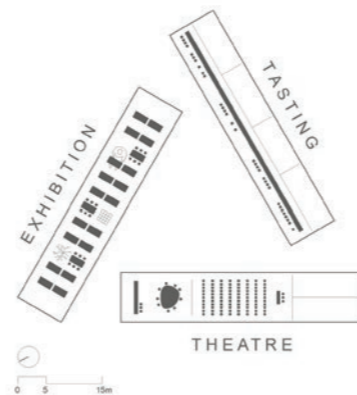
Location: Milan

Architects: Hertzog and De Meuron

The purpose of this pavilion is to allow visitors to discover the significance of agriculture and food biodiversity. This is achieved by creating a platform through which the variety of products that are protagonists of biodiversity can be explored and to create awareness of the need of adopting new consumption habits (Archdaily 2015).

The pavilion exists of three wooden structures, which are archaic and almost primitive in design that define a triangular space which can be used as a courtyard or market space.

Fig. 2.18: Collage of Slow Food Pavilion (Slow Food International 2017)



17 Glen

Informant: Conceptual

Location: Cape Town

Architects: StudioMAS

Throughout this project simple systems and materials have been applied to the design of these dwellings. This is done to blend in with the presence of Table Mountain, which is a backdrop to the site. The prominent curved seeping wall of the design is used to relate sculpturally to the form of Lion's head and the curve of the boundary road (StudioMAS 2017).

The open spaces surrounding the building have been densely planted so that over time the house will become lost in a layer of plant life that provides an escape from the built-up city areas of Cape Town to

create a natural sanctuary, being viewed as a sculptural extension of the landscape (StudioMAS 2017).

The building is intentionally designed to be engulfed by nature; trees, plants and small endemic wildlife that migrate between it and Table Mountain (StudioMAS 2017).

Fig. 2.19: Collage of 17 Glen (StudioMAS 2017)



DENSE PLANTING TO ALLOW OVERGROWTH OVER TIME



Oudebosch Eco Cabins

Informant: Conceptual and Technical
Location: Kogelberg Sonchem Link Nature Reserve, World Heritage Site
Architects: Architecture Co-op

The guiding principle of this project was to “touch the earth lightly”. This was achieved by making simple buildings situated on a place that would allow the interventions to blend into the landscape (Architecture co-op 2012).

A simple palette of materials is used, the structure being clad with timber latte, texturing the surface to blend in even further with the surrounding landscape. Stone gabion walls are used to mirror the peaks of the Cape Fold Mountains, while implementing passive design systems (Architecture co-op 2012).

The design was aimed at reducing the impact of construction on the site by minimising the use of cementitious materials, or materials that could be toxic. This resulted in the use of a prefabricated timber frame and panel system being used to design the envelope of the building. The roofs are planted with succulents and sedges, softening the visual impact and the biodiversity of the site (Architecture co-op 2012).



Fig. 2.20: Collage of Oudebosch Eco Cabins (Architecture co-op 2012)

Babylonstoren

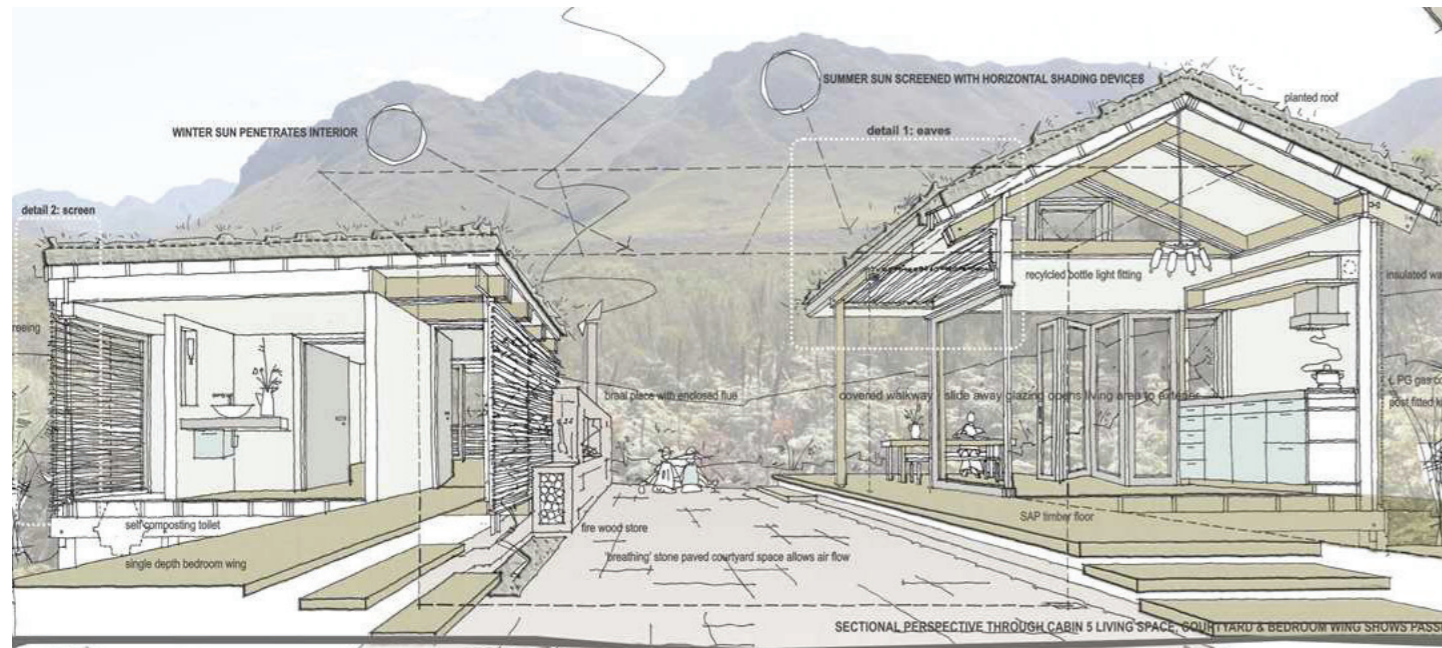
Informant: Programmatic
Location: Franschhoek
Architects: Malherbe Rust

At Babylonstoren the new architectural intervention retains the character of the existing buildings. The existing buildings were also restored and new guest housing was built on the footprint of old workers housing. Dilapidated outbuildings have been reprogrammed as restaurants and a new wine cellar has been constructed, being sunken into the ground to not disturb the overall scale of architecture on the site (Kotze, 2014).

In these examples, care was taken to reinforce and enhance the existing, while adding new elements along similar design principles (Kotze, 2014).



Fig. 2.21: Collage of Babylonstoren (Kotze 2014)



Contribution

A chronological understanding of Botshabelo is developed by synthesising a variety of narratives that were obtainable about Botshabelo and by gaining an understanding of the complex narrative that created this cultural landscape. This dissertation seeks to find an appropriate heritage response towards both the European heritage and the African heritage of the site.

An approach to dealing with land claims is developed that can sustainably facilitate a community of people that need to be socially and economically stimulated. At Botshabelo, the return of the families who were removed from the site allows the opportunity for visitors to the site to become directly involved with the rituals and people who used to exist there. This creates the opportunity for the transfer of intangible heritage by the interaction of the people.

The intangible heritage of Botshabelo also leads to the acknowledgement of the land. Botshabelo developed as a result of the landscape providing the possibility for agriculture. A distinct pattern was

developed of buildings situated within the landscape for the optimal use of agricultural land, resulting in Botshabelo being sustainable within 10 years of first settling. Botshabelo is also situated within a biome which is classified as highly important and protected.

Therefore the heritage of the land also becomes important, as acknowledged through the introduction of Botany studies and creating gardens which are planted with African orphaned crops and plants that can be foraged. This allows for the introduction and study of indigenous plants within this African landscape, striving to create a biodiversity "hotspot" within Mpumalanga.

Conclusion

Botshabelo has the power to change the negative perception about land claims by creating an environment in which the past heritage of the site can be commemorated, but a new narrative can be used to strengthen the value of the past while creating a future for the Mission station as a core attraction within the cultural heartland of Mpumalanga.

By re-introducing the Botshabelo Community Trust into the mission station, the opportunity is provided to use the past narrative of an educational, sustainable, economically efficient community to inform its future narrative. Here visitors to the site will be able to experience every aspect of the heritage of Botshabelo; the colonial built heritage, the African heritage of the landscape and Botshabelo as a biodiversity hub within Mpumalanga.

Botshabelo's future narrative therefore becomes one where visitors are able to learn of its diverse history through the productive landscape and through the direct interaction with its people, creating interaction with the tangible and intangible heritage of the site.



▲
Fig. 2.22: Conceptual image of design concept
(Author 2017)



CHAPTER 3

concept and design development

3.1 DESIGN CONCEPT

Chapter 6 discusses the concept and expression of how the three natures present at Botshabelo are used to re-establish Botshabelo's future value.

"The ecological worldview is that the separation between humans and "nature" is an illusion and that we (humans) are nature too...If we are to find a way of development leading towards a thriving future, it is essential that we reconnect to nature, that we re-learn to be natural." (Hes, D. & Du Plessis, C. 2015:45).

The intent of the architectural intervention

is to create a series of moments throughout the site where the three natures, identified in the Theoretical Approach as outlined in Chapter Two, are experienced throughout the experience of the site. Connecting the person visiting the site with the original state of the landscape, the human intervention and an architectural response of how these elements of nature could merge.

The design exploration will be discussed as a response to the informants extracted from the previous chapters and the conceptual approach.

From the article in Chapter Two, several key informants have been established that were used to guide the conceptual and design exploration. These informants include the projects intentions, the site's context, the theoretical approach and the precinct framework as well as the programmatic requirements. The culmination of these aspects provide guidance for design choices and together lead to the overall concept and the resulting architectural language.

For greater clarity, these six aspects will be reiterated.

3.1.1 ARCHITECTURAL INTENTION

The intention of this project is to rehabilitate Botshabelo in order to protect its heritage significance and future value. Guided by this premise, the architectural intention is to:

- Create new architectural language that can be easily differentiated from the existing, but is used to create a continuous experience of the site through showcasing both tangible and intangible qualities of the site's heritage.
- Create an environment which draws humans closer to nature.
- Create architecture that seeks to advance the biodiversity and ecology of the site.

3.1.2 THEORETICAL APPROACH

In brief, the theoretical heritage approach taken is an interpretation from the Burra Charter: change as much as possible to take care of the place and make it useable, but otherwise change as little as possible to retain its cultural significance.

The architectural response is thus:

- To create a typology that relates to an African landscape, whilst respecting the existing architectural heritage.
- Architecture that is clearly differentiated from the existing typology. It is respectful to the heritage and cultural value by retaining the same scale of intervention and strives to create continuity between building and landscape, as to not intrude visually on the existing built fabric.

3.1.3 THE SITE AND CONTEXT

The aspects taken into consideration considering the context are:

- The intentional separation of the three natures discussed in the theory.
- The introduction of the 100 families back onto the site (the intent of this project is to create an environment through which stories can be shared between the locals and the visitor to the site, taking part throughout the project so that the intangible heritage of Botshabelo is shared with every visitor of the site, through tasting, cooking classes, agricultural workshops, etc).
- Contrasting the colonial architecture, by emphasising the importance of the African landscape.
- The conceptual intention of creating a link between the three natures and using this to exhibit the heritage value of Botshabelo.

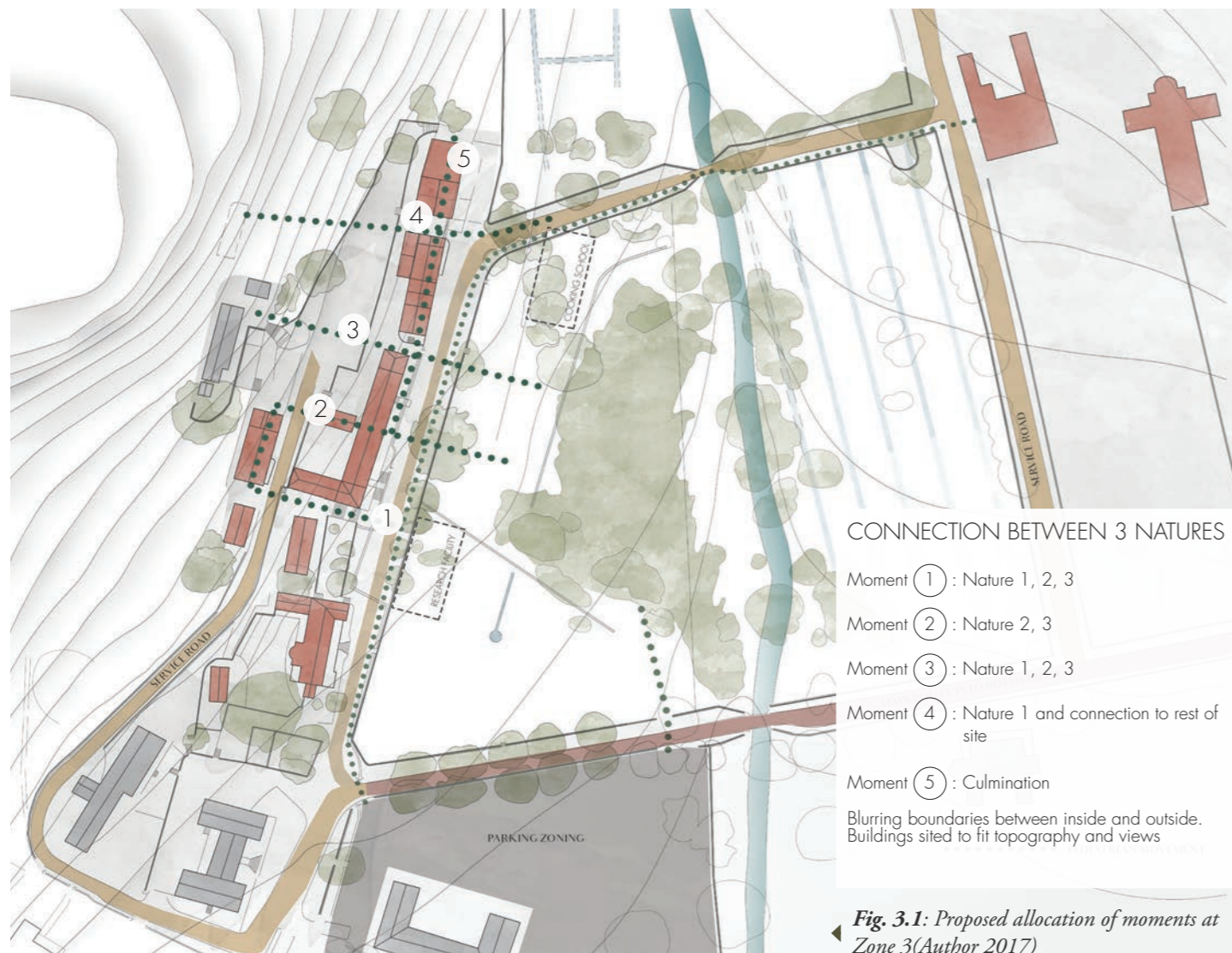


Fig. 3.1: Proposed allocation of moments at Zone 3 (Author 2017)

3.1.4 URBAN AND PRECINCT VISIONS

The design should respond appropriately to the precinct framework, which intends to activate the core of the historic village and creates a flow of movement through the chosen site to the rest of the precinct.

The intervention is situated predominantly within the landscape to draw the visitor into the landscape into interaction with the people tending the fields and bringing the visitor closer to nature.

3.1.5 PROGRAMMATIC INFORMANTS

The programme creates the opportunity for socio-economic activity to be generated within the historic core of Botshabelo. It becomes a system that facilitates the interaction of man with nature and man with man. The architecture becomes a mediator between man and nature, past and future.

3.1.6 THE CONCEPT

The unique story of Botshabelo and how its people responded to the place, culture and nature created a narrative onto which the author intends to add a new narrative to ensure that the heritage value of the site is maintained and the future value is ensured. The tangible and intangible heritage of the site forms part of the concept of the contemporary narrative of the site, exposing the intangible and tangible heritage of Botshabelo in order to ensure the resilience of this historic place.

This results in architecture that allows for the culmination of social, economic and ecological systems.



▲ **Fig. 3.2:** Sketch of walkway through the heritage buildings (Author 2017)

3.2 EXPERIENCING THE SITE

The program requirements describe the range of people who would be visiting Botshabelo, each with their own intentions of activity on the site. The main route into Botshabelo therefore terminates in a parking area, which acts as a point of dispersal to the rest of the site. From this point, visitors could decide to take a meandering walk throughout the landscape to the research facility, cooking studio, restaurant or various product tasting rooms, or alternatively they could take a more direct route to these facilities on a walkway adjacent to the guiding heritage stone wall.

The route guided by the stone wall becomes a sort of pilgrim walk which narrates the value of Botshabelo. On this route, visitors encounter different thresholds to draw their attention to the surrounding landscape and built heritage. Simultaneously the intention of this route is to accentuate the existing heritage, which is viewed as being colonial, while introducing an African narrative back into the landscape of Botshabelo, one where all space is seen as being public and architecture is drawn into nature.

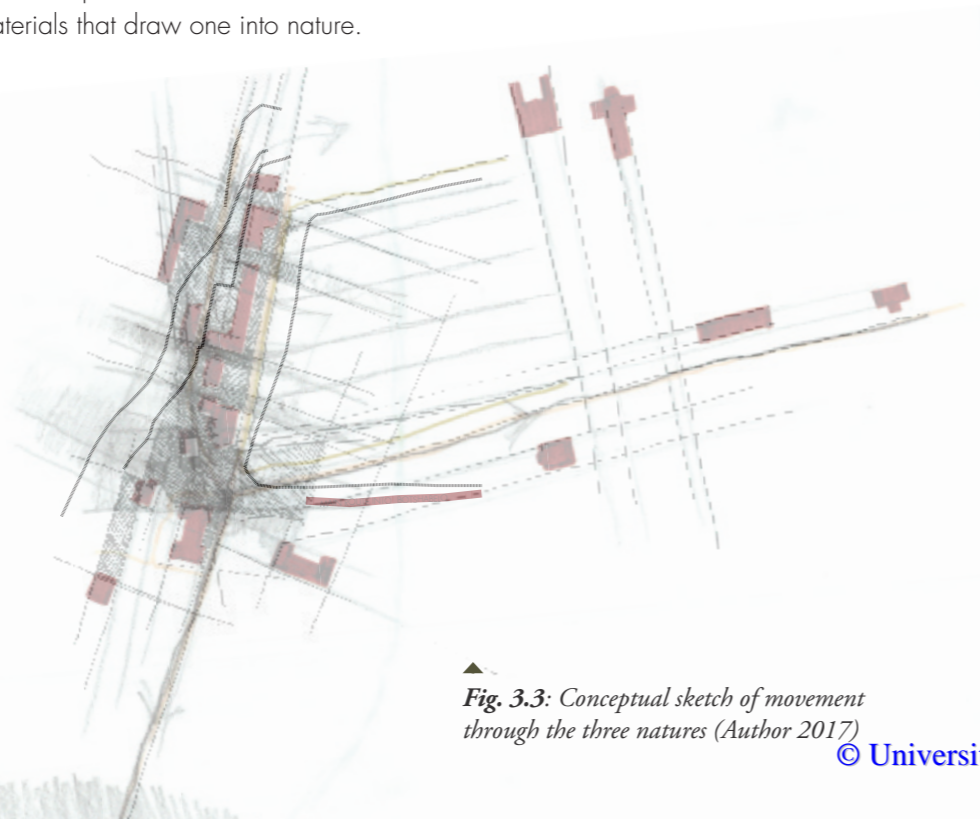
Spatial Intentions

Given the intention to create an awareness of the natural environment and the interaction with people tending to the agricultural fields and the nature of the programs, it was decided to place the new architectural intervention within the agricultural fields.

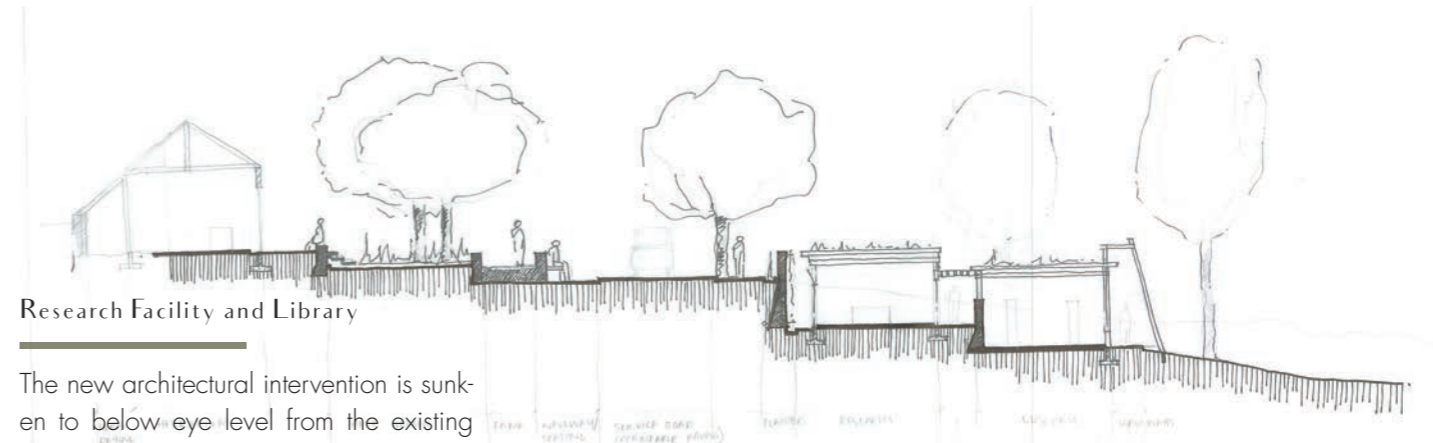
This allows the direct interaction with plants that are being researched within the research facility and also provides the opportunity for the cooking studio to become an interior (cooking) and exterior (foraging) experience.

Within the heritage fabric, elements of intervention are used to guide the visitor throughout the site, from nature one: the "wilderness", through nature two: the built environment and into nature three: the agricultural fields.

The architectural intention is to reintroduce an African identity to Botshabelo, through the reinterpretation of the use of African materials that draw one into nature.



▲ **Fig. 3.3:** Conceptual sketch of movement through the three natures (Author 2017)

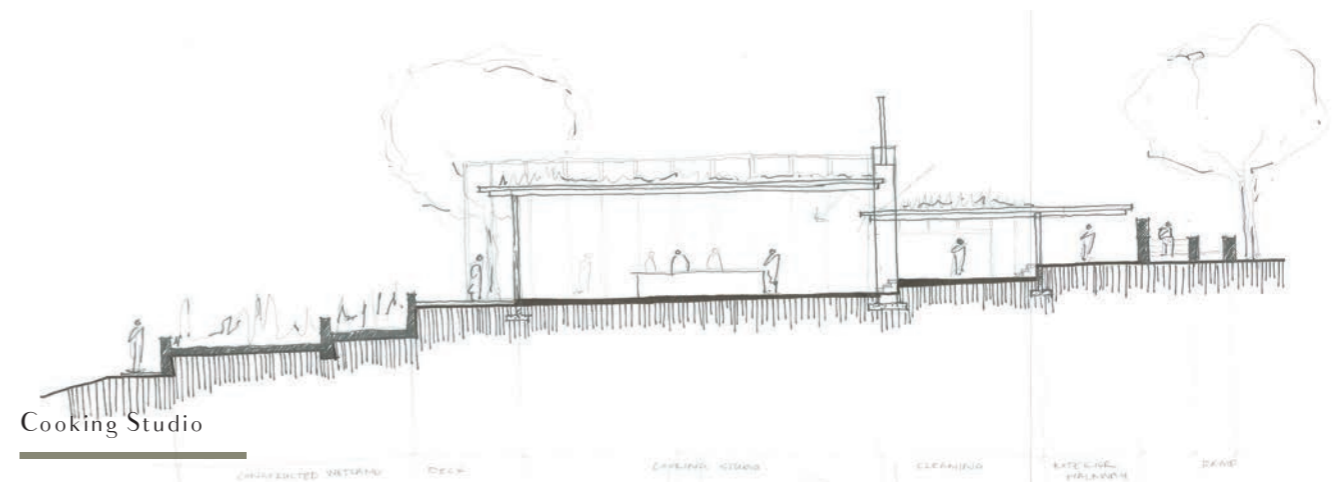


Research Facility and Library

The new architectural intervention is sunk in to below eye level from the existing walkway to allow it to be unobtrusive against the existing heritage. It also intends to draw the users of the facilities into the landscape. As a result of this, the roof becomes a fifth elevation, to create transition between the view of the roof and the landscape.

▲ **Fig. 3.4:** Conceptual Section of Research Facility and Library (Author 2017)

The scale of the new intervention is respectful towards the existing, retaining the same proportions. However the building construction creates a contrast between the existing and the new architecture.



Cooking Studio

The architectural intention with the cooking studio is to create learning spaces and tasting and workshop experiences within the landscape, which is then drawn into the building. This transition is achieved by having gardens surrounding the cooking studio, with a permeable timber pergola structure that leads into the building where the food is cooked.

The cooking studio also becomes an extension of the walkway that leads to the rest of the site. The roof plane is extended over the walkway to draw people into the cooking studio and adjacent nursery.

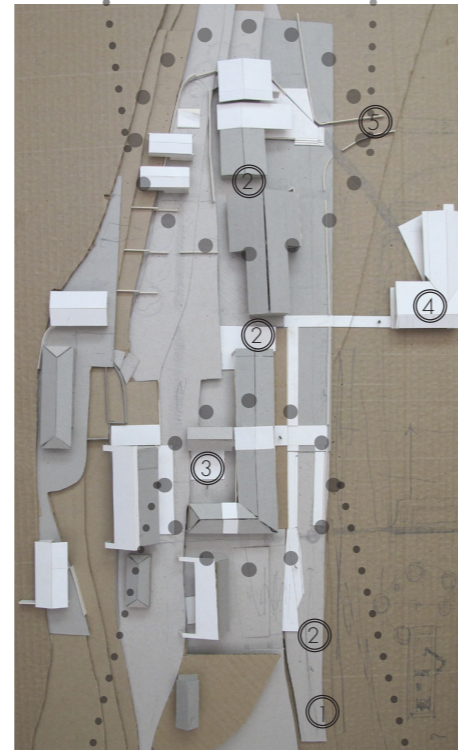
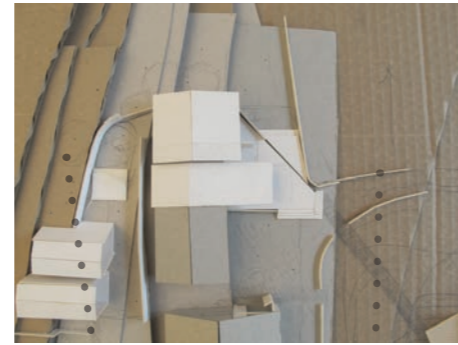
▲ **Fig. 3.5:** Conceptual Section of Cooking Studio (Author 2017)

3.3.1 ITERATION ONE

Botshabelo's historic village core is arranged in a unique manner and with the addition of new programmes, the following informants guided the layout of the routes which can be taken throughout the site:

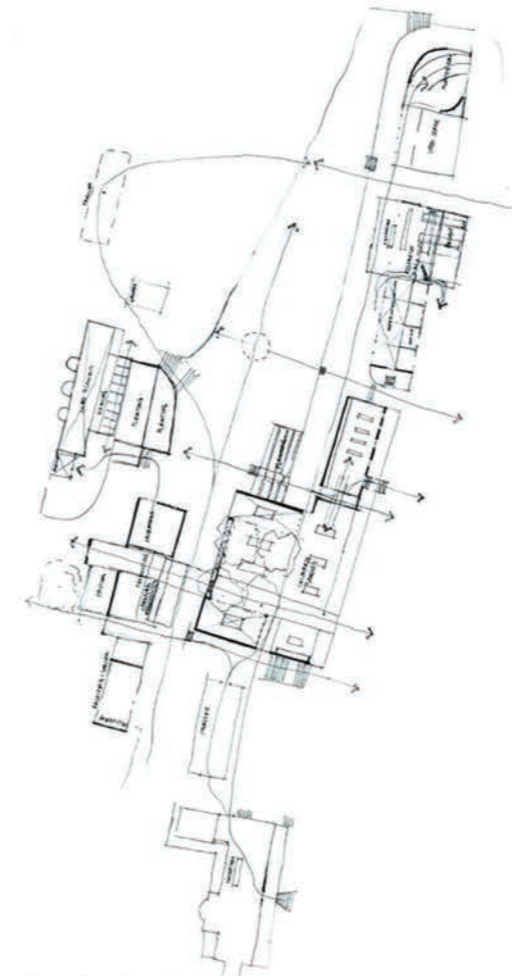
- 1 -The site is approached from the south.
- 2 -There is a hierarchy of routes, the landscape route and the "pilgrim walk" being the two most important routes, with smaller routes branching off of them to create an experience of the whole site and all three natures, as discussed in the theoretical approach.
- 3 -Access to the existing heritage buildings.
- 4 -Integration of new interventions within the landscape and within the heritage buildings:
 - The integration of all three landscapes throughout the routes
 - Visual access (vistas) of vocal points.
- 5 - Access to the rest of the site.

This first exploration resulted in a spatial layout that encourages the experience of the whole site. As can be seen on the model there are various new interventions throughout the site, which becomes necessary as a result of programme requirements. However, there is a lack of hierarchy of importance and the additional building (cooking studio within the landscape) becomes an object in the landscape, instead of becoming an extension of the landscape within a built environment.

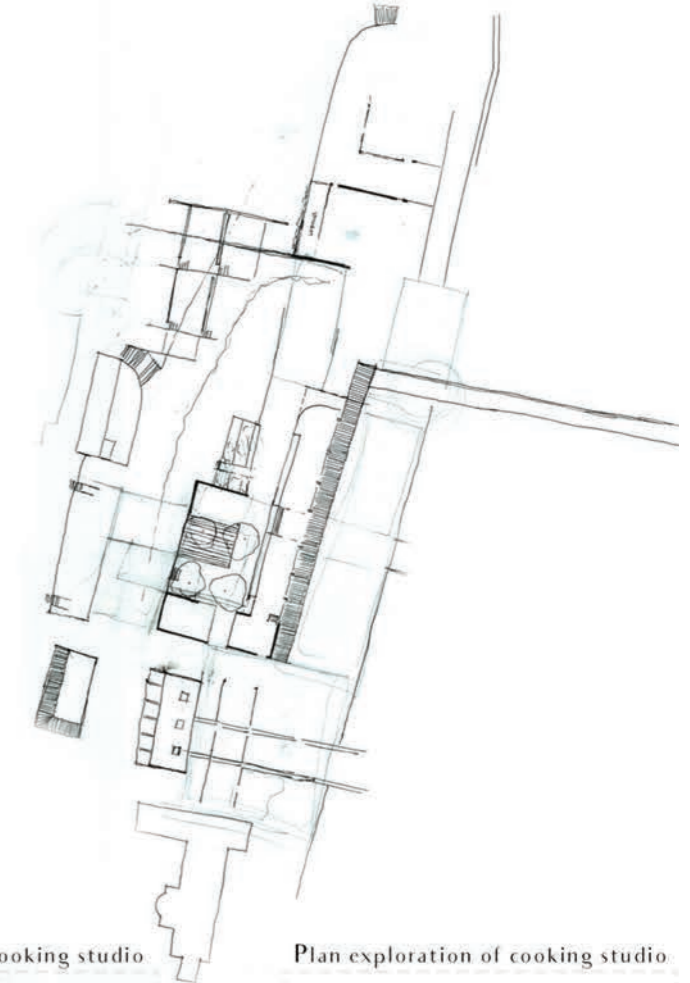


▲ **Fig. 3.6:** First model exploration to understand spatial arrangement (Author 2017)

Exploration of movement through site



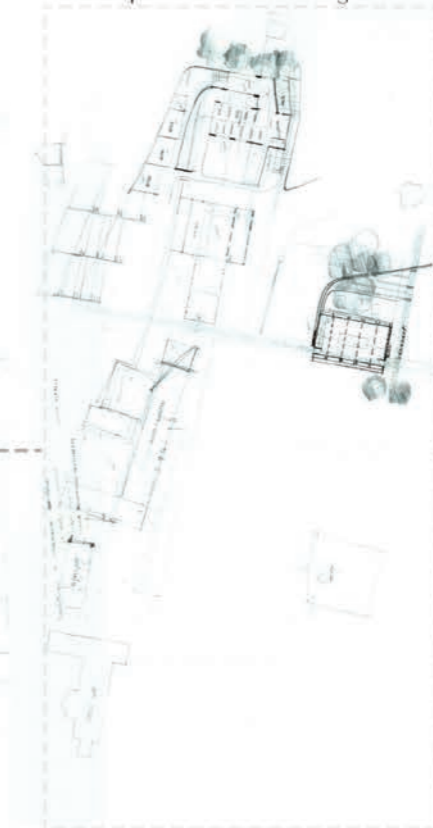
Movement from production facility to cooking studio



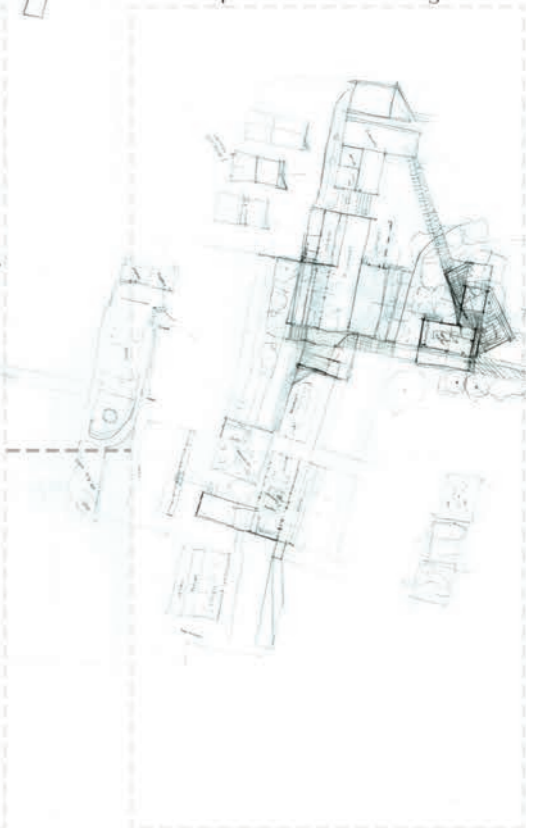
Plan exploration of production facility



Plan exploration of cooking studio



Plan exploration of cooking studio



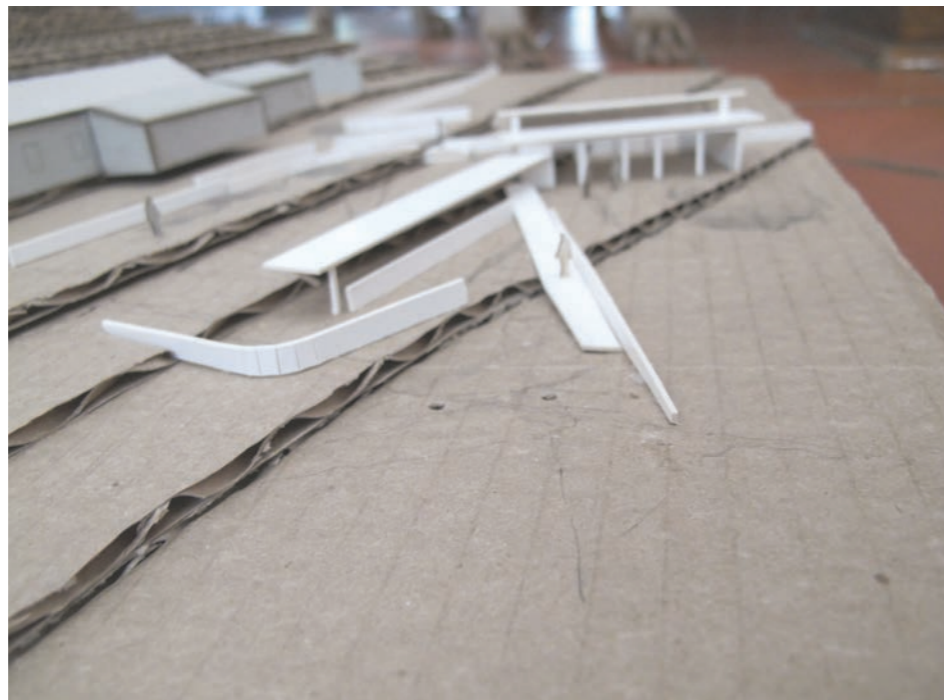
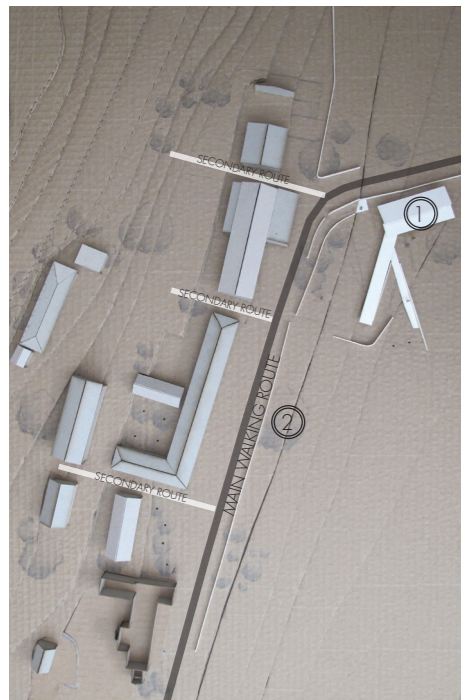
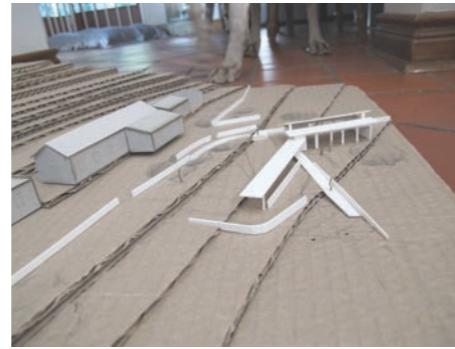
▲ **Fig. 3.7:** Layout and planning exploration (Author 2017)

3.3.2 ITERATION TWO

1 - As a response to the first iteration, it became apparent that the architectural intervention should be better integrated within the landscape and there should be a hierarchy of routes which guide the visitor throughout the site.

2 - The circulation throughout the site was reconsidered as to make the user aware of certain elements of the "three natures" at specific moments throughout the route.

The intentions of this iteration was to use the stone walls throughout the site and specifically the main stone wall adjacent to the main route, as sculptural elements that guide the user of the spaces into the building. It uses the walls to guide and form the architectural intervention throughout the heritage fabric as well as the new interventions.



▲ **Fig. 3.8:** Model exploration of iteration two (Author 2017)

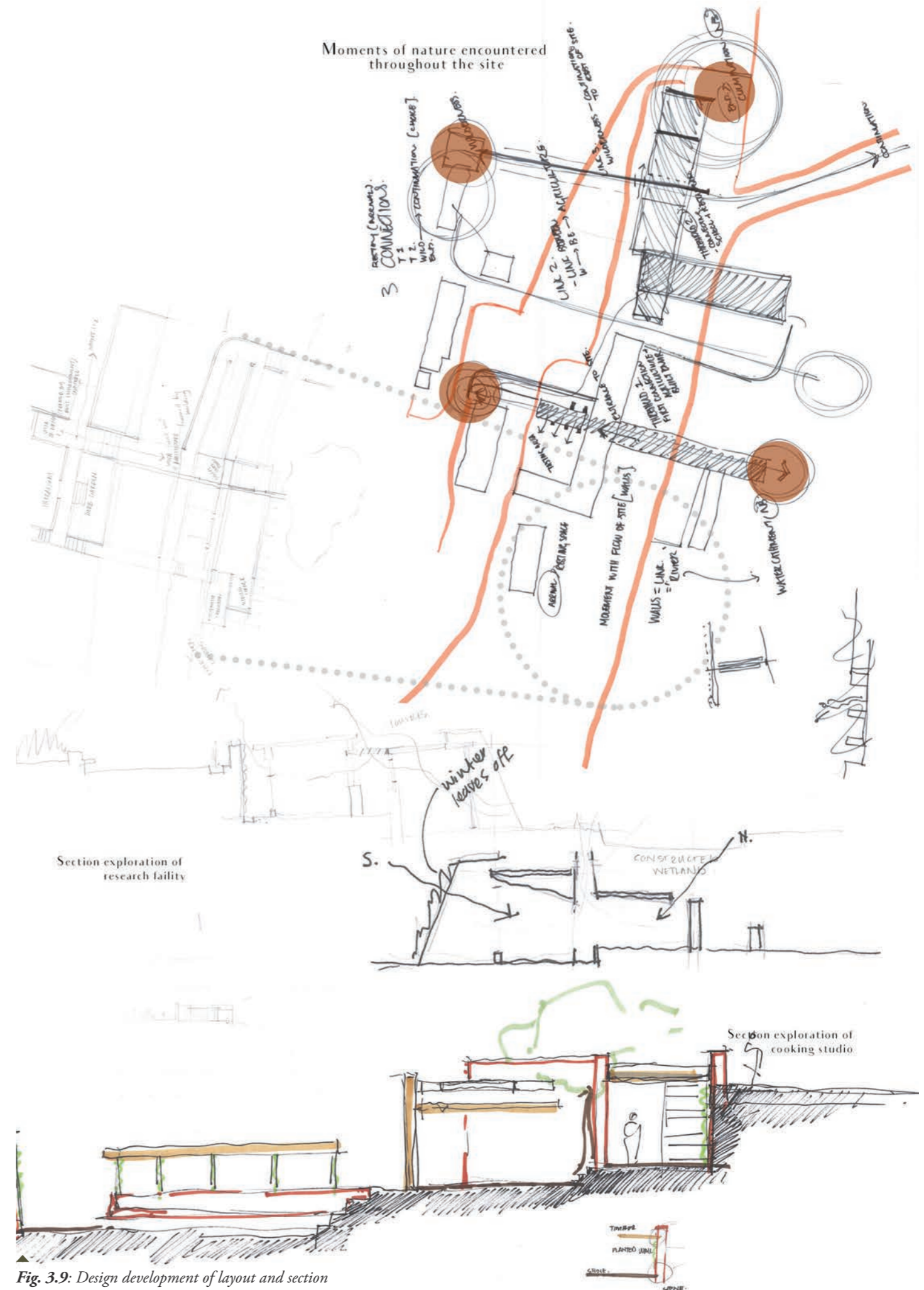


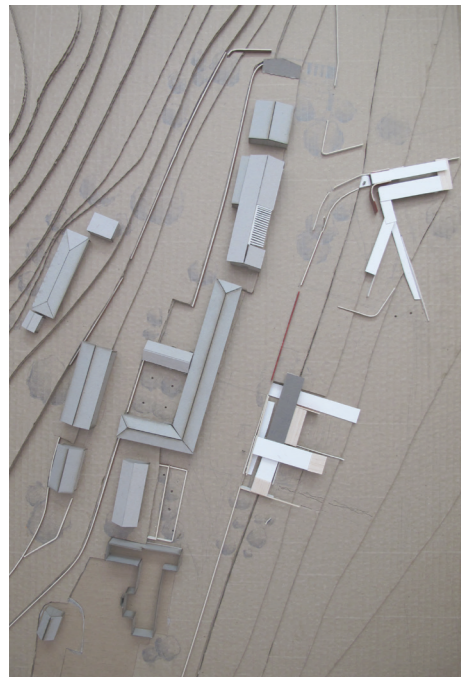
Fig. 3.9: Design development of layout and section development of iteration two (Author 2017)

3.3.3 ITERATION THREE

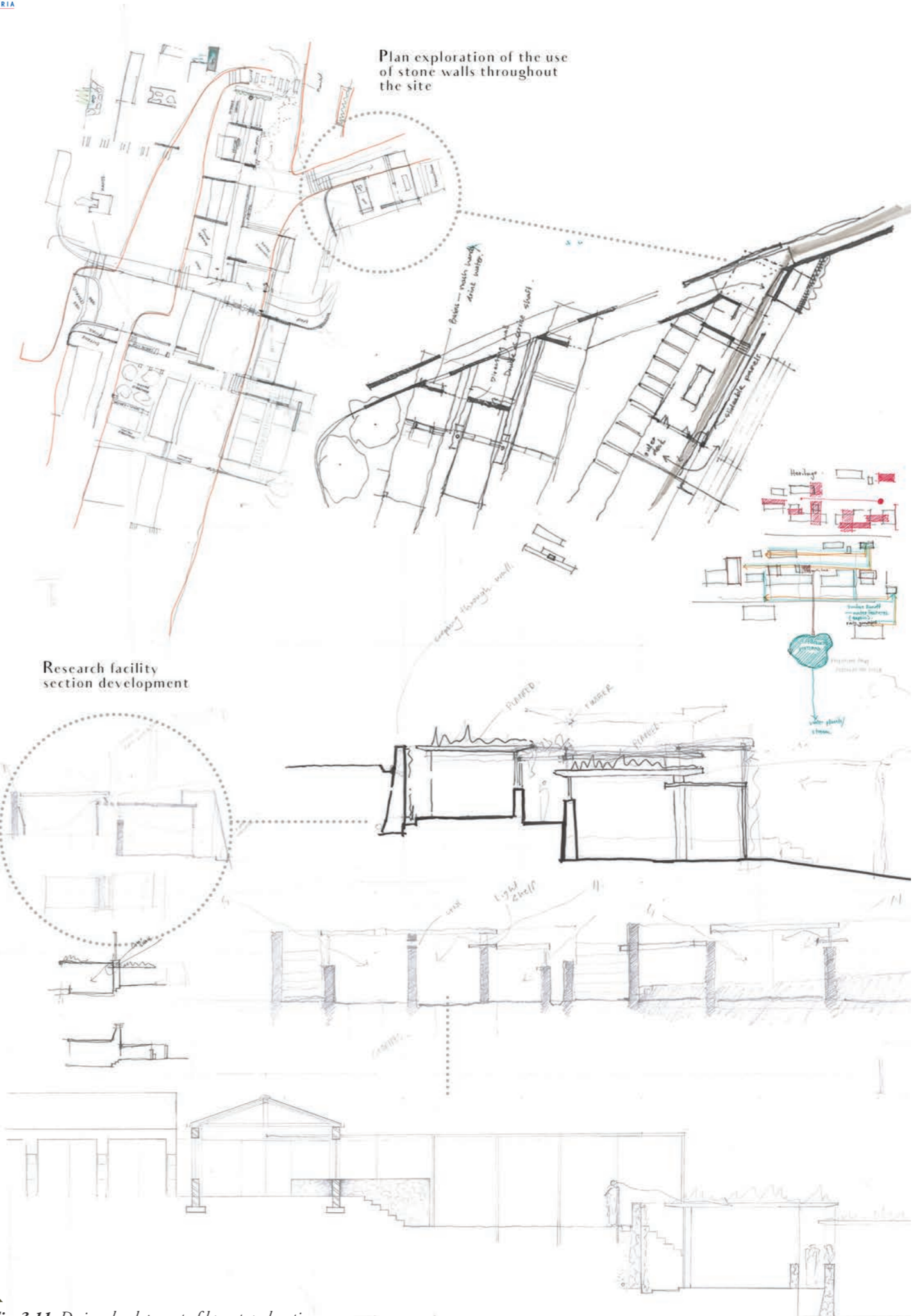
The desired interaction with the landscape had not been fully realized in iteration two.

In this iteration there is an intention to draw the visitors into the landscape. Either to the pavilion (1) overlooking the whole site or placing the visitor within a space that allows visual access to all three natures (wilderness, built environment and agricultural landscape) to draw the user out into the agricultural landscape (2) and allowing the user to be immersed within the natural and agricultural landscape.

This is achieved by directing the movement throughout the site firstly into the heritage fabric, but then drawing the user out into the landscape through main walkways and programmatic experiences. This will facilitate activities such as guided produce tastings within the landscape to practical workshops within the landscape.



▲ **Fig. 3.10:** Model exploration of iteration three (Author 2017)

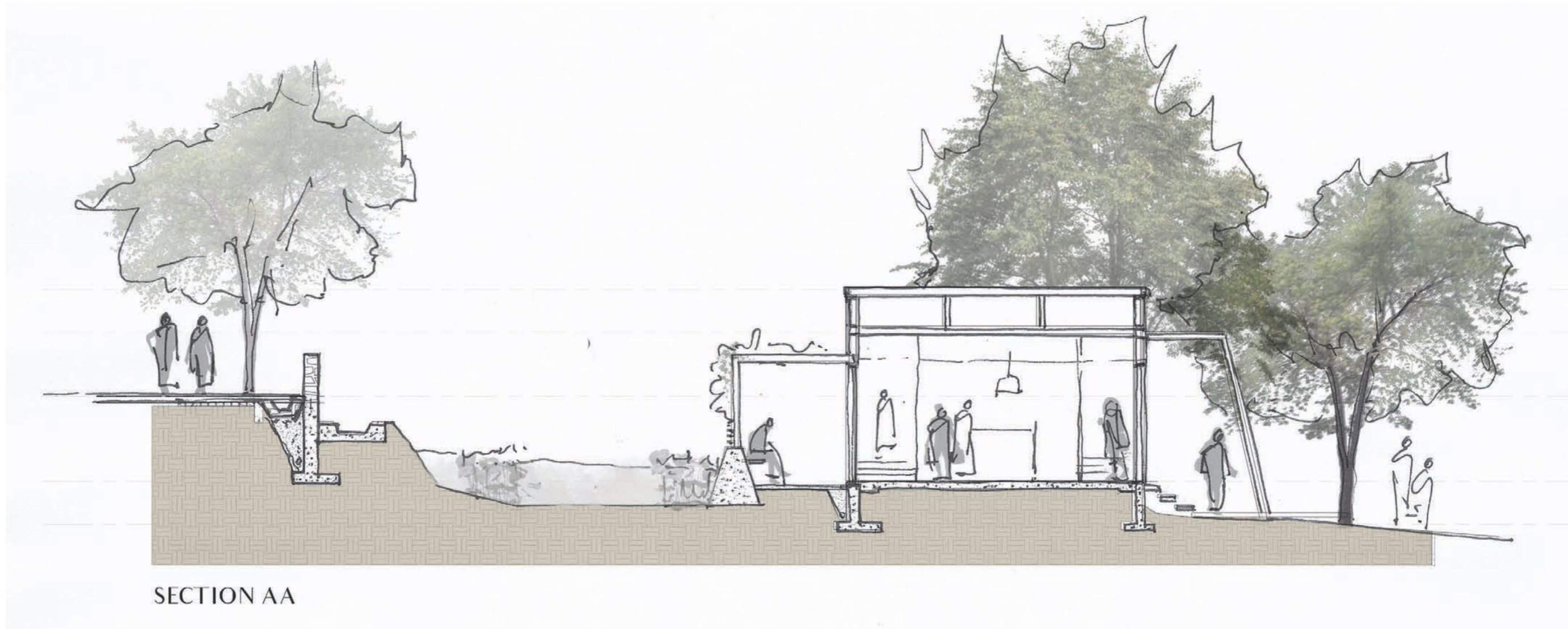


▲ **Fig. 3.11:** Design development of layout and section development of iteration three (Author 2017)

DESIGN RESOLUTION



▲
Fig. 3.12: Section exploration of production facility, pedestrian walkway and botany research facility (Author 2017)



▲
Fig. 3.13: Section exploration of cooking studio (Author 2017)



Fig. 3.14: Plan development of herbarium, production facility, restaurant and tea making facility (Author 2017)



Fig. 3.15: Plan development of botany research facility, library and cooking studio (Author 2017)



CHAPTER 4

techné

4.1 TECTONIC CONCEPT

As Botshabelo is viewed as being a colonial heritage site, the tectonic approach taken is one that honours an African identity. This intends to create a contrast between the existing and the new architectural intervention. This juxtaposition becomes the tool used to create continuity of architectural intervention throughout the site.

The approach of contrasting the existing heritage is taken to emphasise the existing while introducing an African identity throughout the site. The success of this approach lies in the degree of contrast between the existing and the new intervention and how they are successful as individual entities when they function apart.

Bloszies (2012:45) argues that there are three approaches that can be taken when contrasting existing built heritage (extreme, refrained and referential) and that each approach could be equally successful. The only main objective should be that there is a degree of contrast, to be able to distinguish between old and new.

The degree of contrast throughout the new architectural intervention is determined by the programmatic requirements. Throughout the site the same scale and pattern of intervention is retained, therefore materiality becomes an important detail of differentiation between old and new.

4.2 HERITAGE CONSERVATION

The heritage village of Botshabelo has not officially been declared a national monument, however it remains under the protection of the 1999 Heritage Act that protects any building older than 60 years. Adaptive reuse is used as a means of justifying alterations made to the existing heritage fabric, with the guidance of the Burra charter (The Burra Charter 2000), to change as little as possible while attaining the most desirable effect.

The intention is to preserve the existing structure and only intervene architecturally where new programmes require change. Furthermore, to create a new intervention within the landscape, which relates to the programmatic requirement of providing facilities for the research of African plant species and crops under the threat of extinction and in this way preserving the heritage of the land.

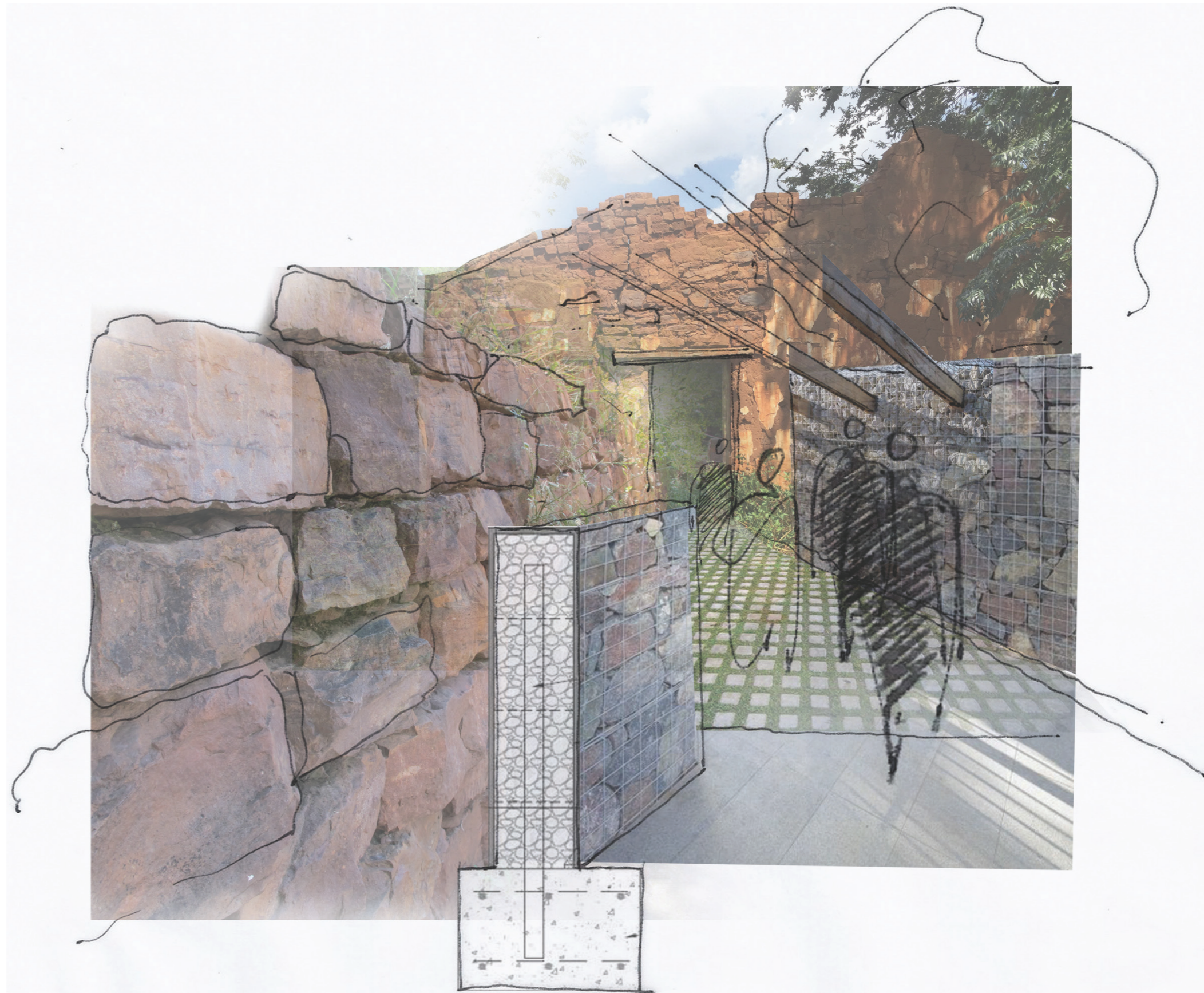


Fig. 4.1: Conceptual collage of tectonic approach
(Author 2017)

4.3 STRUCTURE AND MATERIALITY

Materiality

"Natural materials - stone, brick and wood allow our vision to penetrate their surfaces and enable us to become convinced of the veracity of matter. Natural materials express their age and history, as well as the story of their origins and their history of human use. All matter exists in the continuum of time; the patina of wear adds the enriching experience of time to the materials of construction..." - Pallasmaa (2005:31).

Pallasmaa argues that people are intrigued by being placed within processes that go beyond the span of individual life, that we have a need to feel that we are rooted within the continuum of time and that architecture has the ability to facilitate this experience.

Therefore, both the substructure and superstructure become elements that are derived from natural materials which over time show the use of the space as the materials age. This places the users of these spaces in the continuum of time and allows a new narrative to be expressed through the use of these materials.

Substructure

The substructure of the new becomes a new interpretation of the existing. The rock walls which can be found throughout the site were used as elements which differentiated between spaces. These are reinterpreted as rock walls which now guide the visitor throughout the site and the buildings become extensions of the existing rock walls.

New walls become either guiding elements throughout the site or retaining structures, because of the lowered level of the new building. The new intervention becomes a representation of an African identity, using materials that have a cyclical nature resulting from an African perspective of the built environment. These materials become an extension of nature and the natural cycle of building and decay creating continuity throughout the use of materials that place one in the continuum of time and creates a narrative of use over time (Noble 2011:40).

Materiality thus becomes an important aspect of contrast between old and new and the creation of narrative over time.

Superstructure

The superstructure further develops the architectural intention of using materials that become an extension of nature and are of a cyclical nature by using a timber frame structure and a copper roof.

Experiencing the Site

The intention of the architectural intervention within the built heritage is to intervene only where necessary to create the desired experience of the three natures discussed in the theory chapter.

The connections between the existing and new intervention becomes important to convey the concept of creating continuous experience of the site as a whole, with the new intervention being subtle at first and becoming more apparent as one moves through the site.

ROOF CONSTRUCTION

Copper roof
(local manufacturer: Copalcor trading)



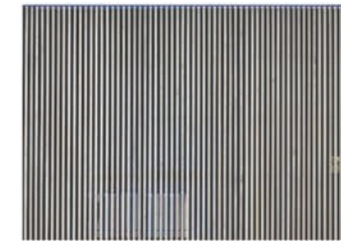
SUPERSTRUCTURE

Timber stud frame structure
pergola structures for shading
and creeping plants



EXTERIOR CLADDING

The invasive poplar trees on site
are used to make vertical timber
cladding.



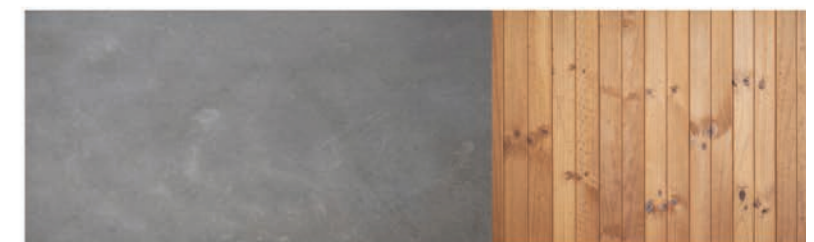
SUBSTRUCTURE

300-600mm structural gabion walls
300mm reinforced concrete retaining walls
white plastered brick walls



INTERIOR FLOOR FINISH

Power floated screed on concrete surface bed
32mm SA Pine t&g timber planks



EXTERIOR FLOOR FINISH

permeable paving
13mm grey stone aggregate on compacted soil
exposed aggregate concrete



▲
Fig. 4.2: Proposed material palette (Author 2017)

4.4 ENVIRONMENTAL STRATEGIES

Given the history of Botshabelo as being a self-sustained community, it becomes important to create architecture that responds to this intangible heritage of the site. This is achieved by implementing passive design strategies such as the use of natural light, cross ventilation and creating a closed loop energy and water system.

Daylighting

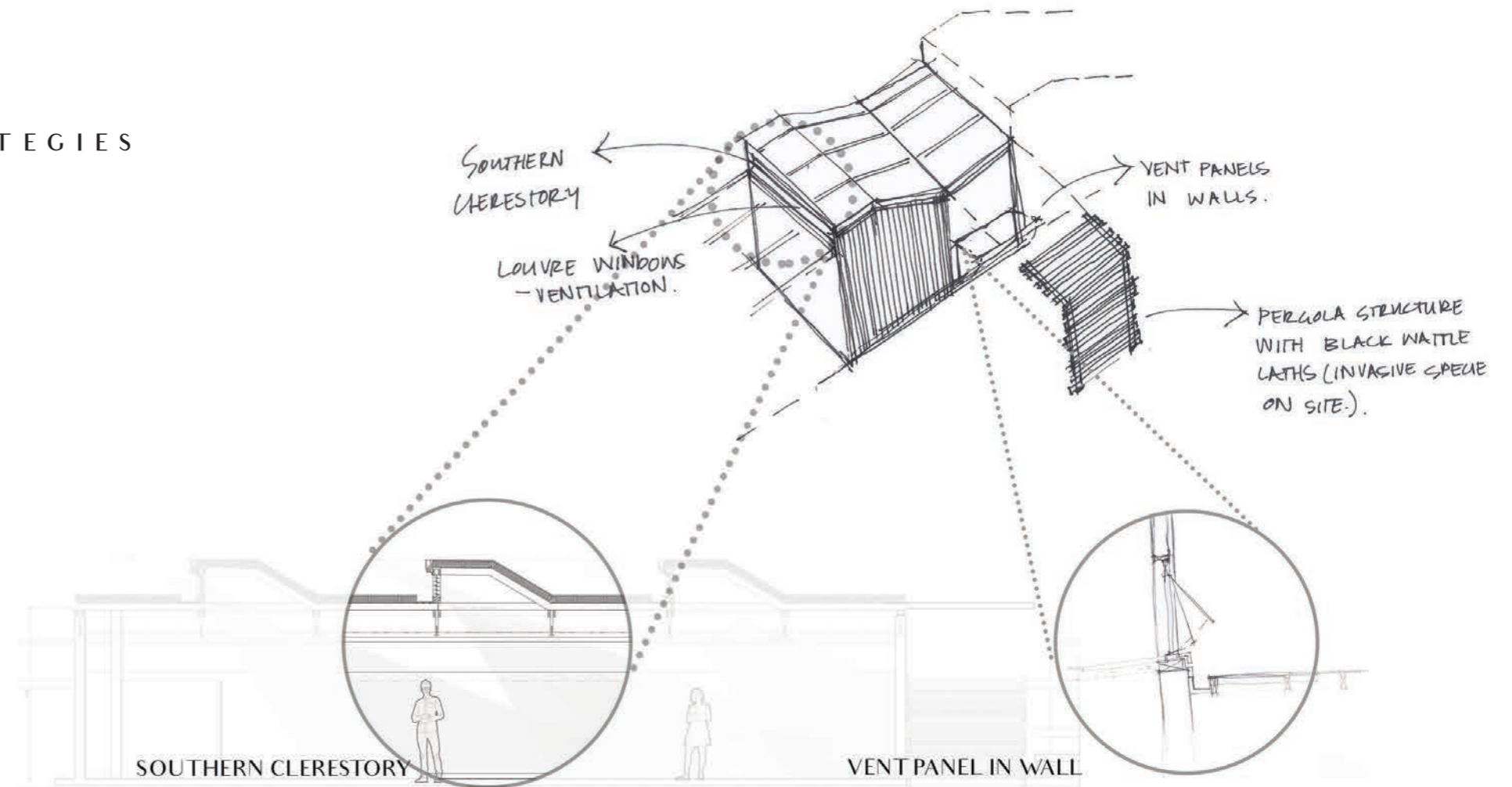
The building is predominantly angled to the West and East as a response to the existing heritage. Therefore the new intervention allows for natural light through southern clerestories within the research and library spaces.

Windows exposed to harsh eastern and western sun exposure will be shaded by pergola structures with slatted screens.

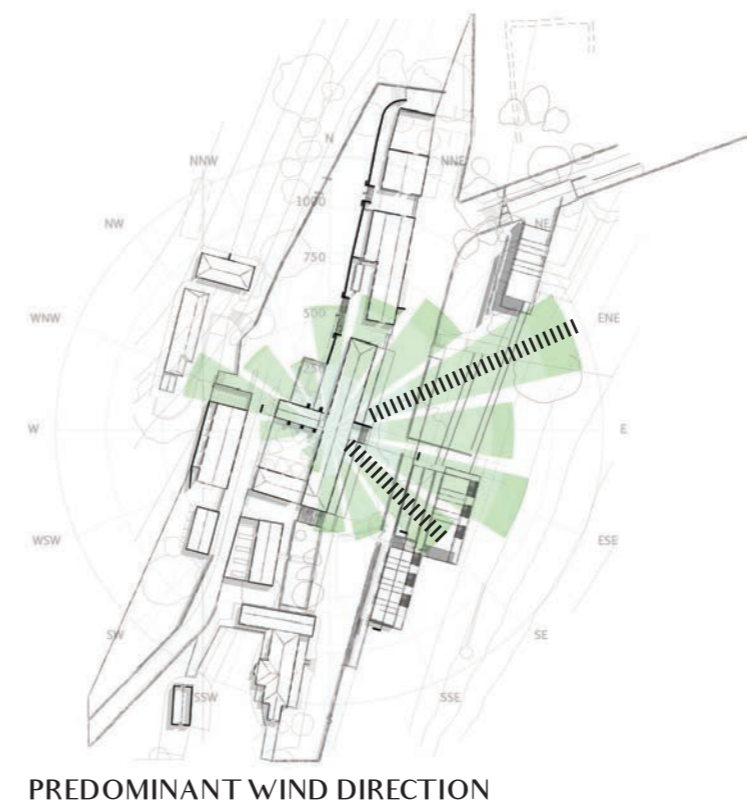
Natural Ventilation

The predominant wind comes from the North East and South East.

The buildings are orientated in such a way that the facades with the most openings are orientated within this range of wind direction to increase the effectivity of cross ventilation within the single volume spaces.



▲ Fig. 4.3: Conceptual sketch of Daylighting and Natural ventilation application (Author 2017)



◀ Fig. 4.4: Diagram depicting predominant wind direction at Botshabelo (Author 2017)

Water Management

Throughout this project the practical and haptic use of water becomes an important aspect of the design. Rainwater that is harvested on the site is used to increase the haptic experience of space. This is done by creating water walls, a retention pond at the restaurant and cooking school and by using the heritage water furrows to direct water to cleaning and storage tanks.

The water is circulated in a semi-closed systemic loop. Water collected from roofs and external surfaces runs through the site by the existing heritage water furrows and is taken through multiple treatment chambers before being stored in a water reservoir. (1, 2 and 3).

Grey water is passed directly through a fat trap and pumped to the wetland, where the water is then filtered by the plants and redirected into the stream leading to the Mholotsi River.

Black water is directed to a septic tank which then leads into a soak away.

Water required for the irrigation of the agricultural fields is stored in a retention pond adjacent to the cooking studio and is taken through a series of water channels to irrigate the fruits and vegetable gardens.

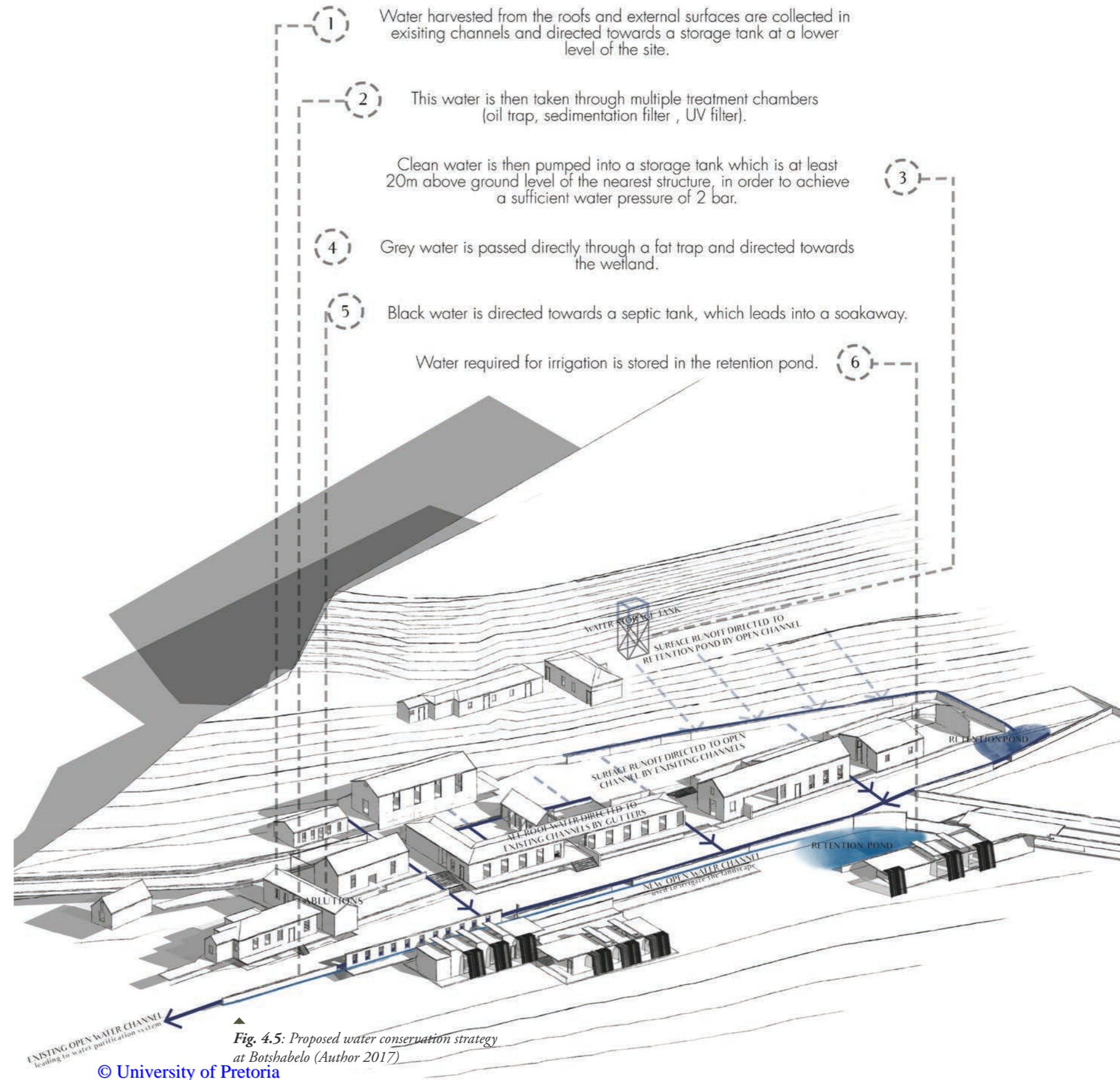


Fig. 4.5: Proposed water conservation strategy at Botshabelo (Author 2017)

Water Calculations

FUNCTION (users)	m ²	WATER DEMAND (l/day)	RAIN WATER HARVEST(m ²)
Research facility: 6 staff (5 researchers, 1 receptionist)	83m ²	wc - 8L (3x4 flush) hwb - 2L (6x4) urinal - 1L (3x4) kitchenette - 4x30 total = 276 L/day	Roof catchment 92m ² Surface catchment 126m ²
Library: 20 daily users	94m ²	wc - 8L (10x1 flush) hwb - 2L (10x1) total = 108 L/day	Roof catchment 102m ² Surface catchment 172m ²
Cooking School: 15 occupants	104 m ²	wc - 8L (7x2) hwb - 2L (15x4) urinal - 1L (8x2) kitchen - 65L (15) total = 1223 L/day	Roof catchment 112m ² Surface catchment 303m ²
Restaurant: 50 daily users	250m ²	wc - 8L (25x1) hwb - 2L (50x1) urinal - 1L (25x1) kitchen - 65L (50 seats) total = 3575 L/day	Roof catchment 275m ² Surface catchment 1086m ²
Production: 6 staff	194m ²	wc - 8L (3x4) hwb - 2L (6x4) urinal - 1L (3x4) kitchen - 65L (6) total = 546 L/day	Roof catchment 330m ² Surface catchment 990m ²
Total black water/day 584L/day		total requirement: 5728 L/day	total roof catchment 911m ² surface catchment 2677m ²

Average monthly precipitation for Middelburg (mm)

Jan 109mm
Feb 90mm
March 81mm
April 51mm
May 17mm
June 6mm
July 5mm
Aug 7mm
Sept 23mm
Oct 68mm
Nov 115mm
Dec 111mm

Average harvest per month (90% of surfaces)

3588m² x 0.109m = 391.092 m³
3588m² x 0.090m = 322.92 m³
3588m² x 0.081m = 290.628 m³
3588m² x 0.051m = 182.988 m³
3588m² x 0.017m = 60.996 m³
3588m² x 0.006m = 21.528 m³
3588m² x 0.005m = 17.94 m³
3588m² x 0.007m = 25.116 m³
3588m² x 0.023m = 82.524 m³
3588m² x 0.068m = 243.984 m³
3588m² x 0.115m = 412.62 m³
3588m² x 0.111m = 398.268 m³

TOTAL WATER: 2450.604m³

(2450.604 x 1000 = 2450604 L) /365 = 6713.98L/day)

<http://www.wrc.org.za/Knowledge%20Hub%20Documents/Research%20Reports/1536.pdf>

<https://en.climate-data.org/location/10646/>

Waste and Composting

Organic waste accumulated on the site through the waste of agriculture is stored in the composting pits, where it will be treated to produce decomposed organic matter to be later used as plant fertilizer.

Organic waste with higher embodied energy, such as the waste from the kitchens, will be taken directly to the bio digester.

The bio digester is located at the back edge of the historic village, which used to be used as a refuse dump. The composting pits will also be located here.

The bio digester uses anaerobic bacterial processes to convert organic waste products into methane gas as well as nutrient sludge. The sludge can be used further in the composting pits, while the methane gas is redirected through a flame trap that is connected to burner ovens in the kitchens.

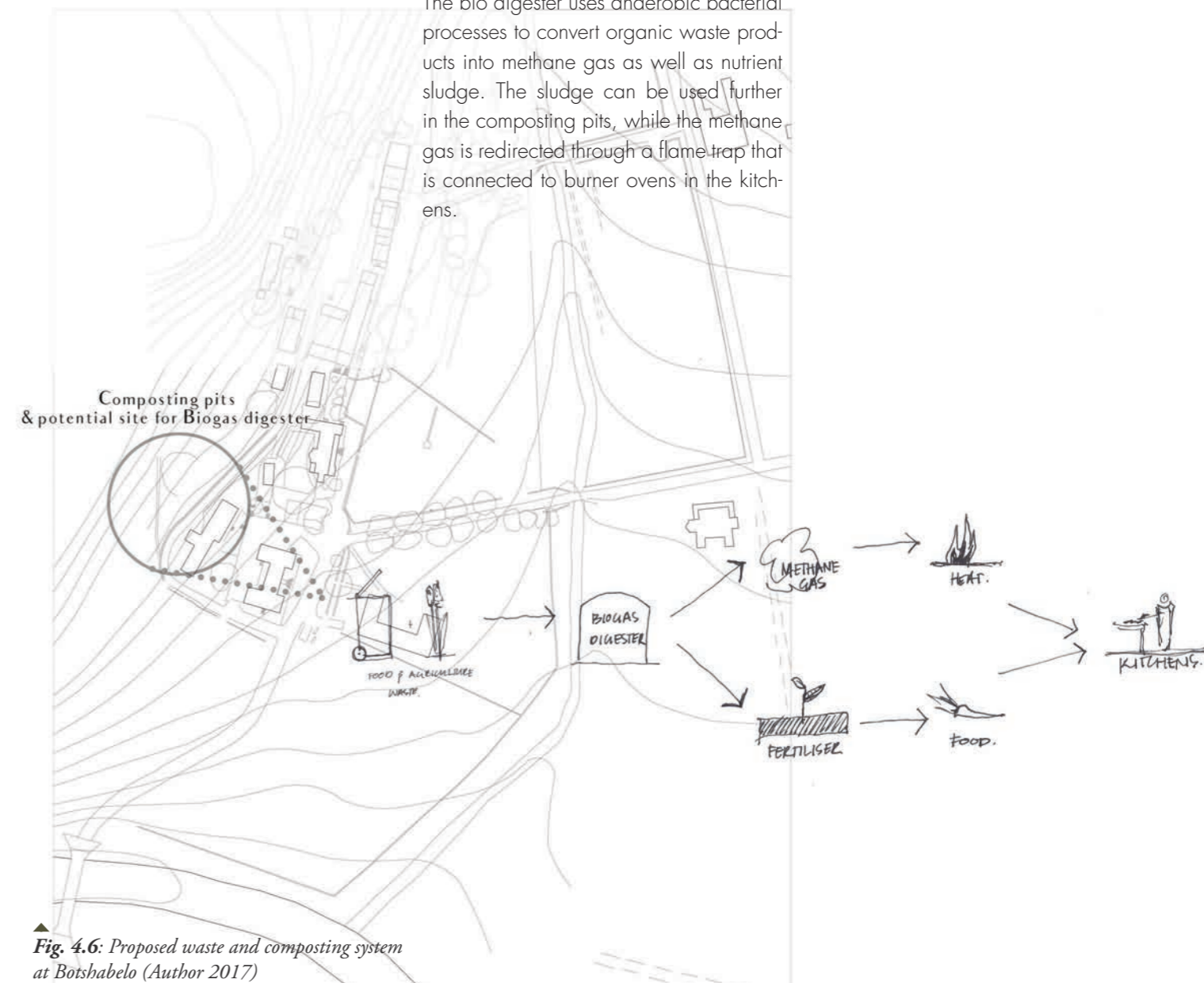


Fig. 4.6: Proposed waste and composting system at Botshabelo (Author 2017)

4.5 SBAT RATING

SUSTAINABLE BUILDING ASSESSMENT TOOL RESIDENTIAL

1.04

SB SBAT REPORT	Achieved
	3.7

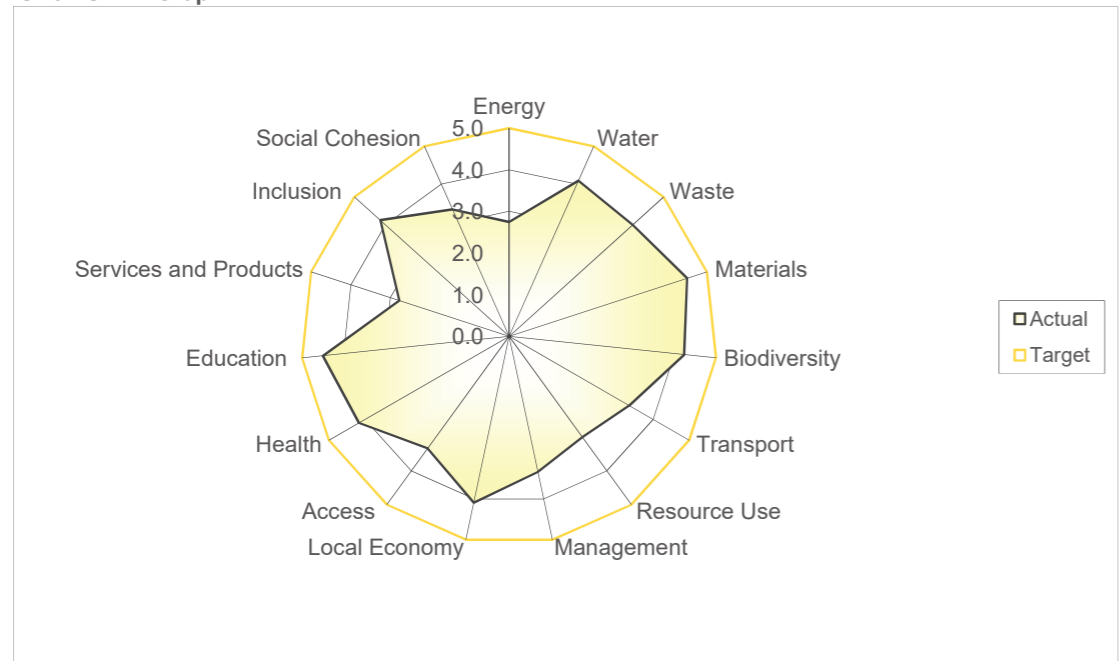
SB1 Project

Botshabelo: The Symbiosis of the land and the people.

SB2 Address

25041'58.53" S , 29024'28.21" E

SB3 SBAT Graph



SB4 Environmental, Social and Economic Performance	Score
Environmental	3.9
Economic	3.4
Social	3.8
SBAT Rating	3.7

SB5 EF and HDI Factors	Score
EF Factor	3.5
HDI Factor	4.2

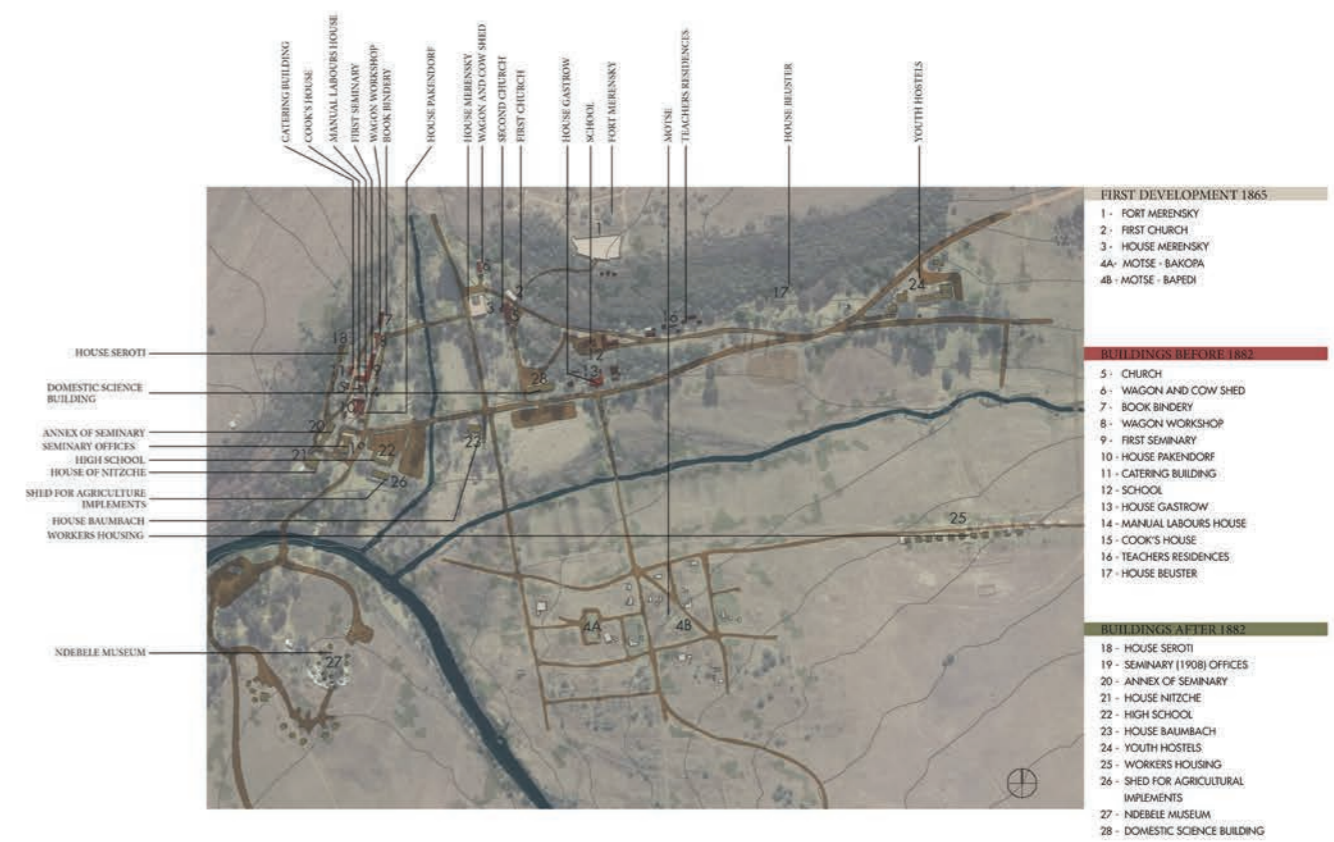
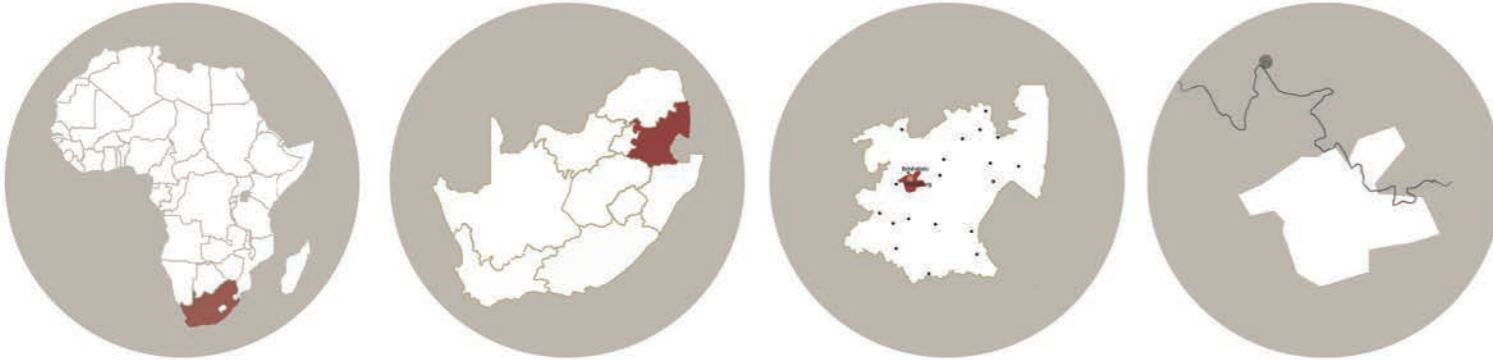
SB6 Targets	Percentage
Environmental	78
Economic	68
Social	76



CHAPTER 5

appendix: final presentation

LOCATION INFORMANTS

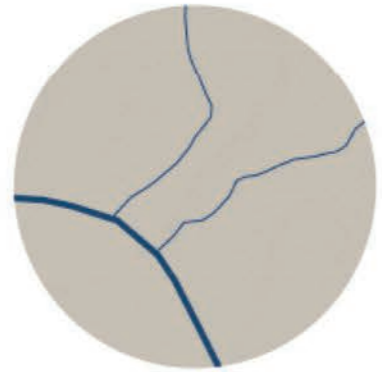


Landscape as informant of settlement



SLOPE

Development occurred upon the flattest areas that were far enough away from the water which caused the ground to be 'swampy'.



MOHLOTSI (KLEIN OUFANTS RIVER)

The three zones of development occurred as a result of the natural division of the land by the streams. Two zones residential and one craft and economic based. The river was made deeper so that the streams had less water in and the surrounding ground could be used for agriculture.



ARABLE LAND

The development of houses occurred at a reasonable distance from the streams, to be able to use the land in between for fruit and vegetable gardens. The gardens were also situated on the flattest ground areas.



FIRST SETTLEMENT



PRODUCTION OF LAND



EDUCATION AND WORKSHOPS

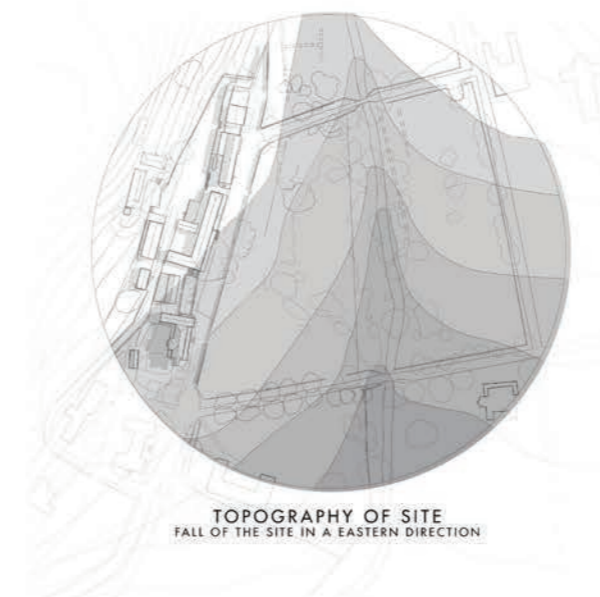
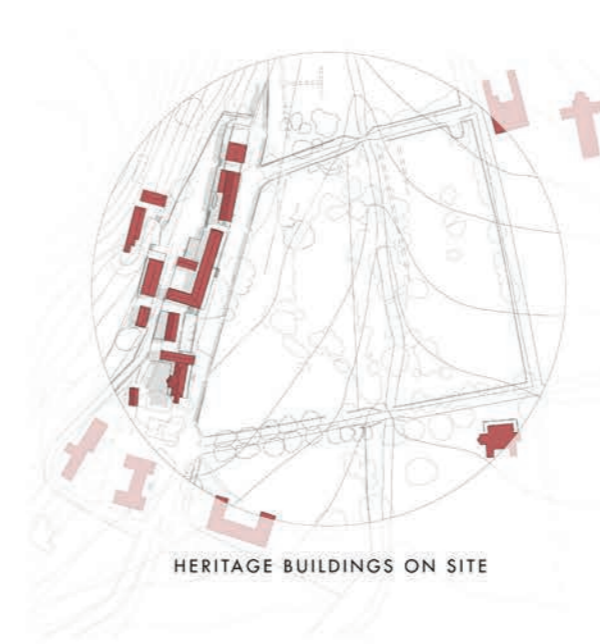


FORCED REMOVAL

HERITAGE CONTEXT



SITE ANALYSIS



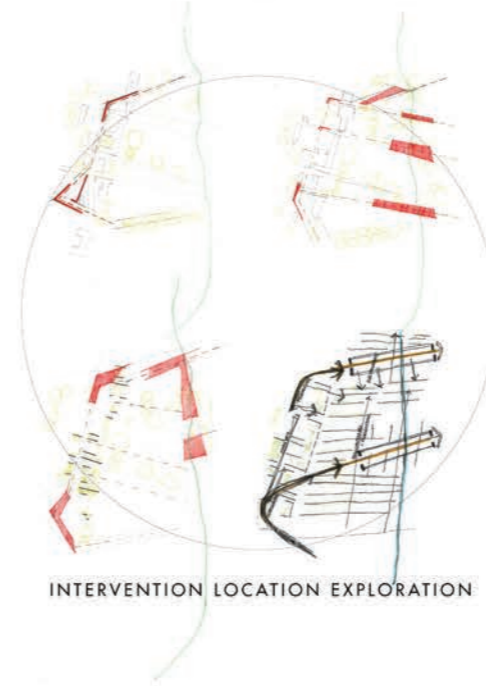
URBAN VISION



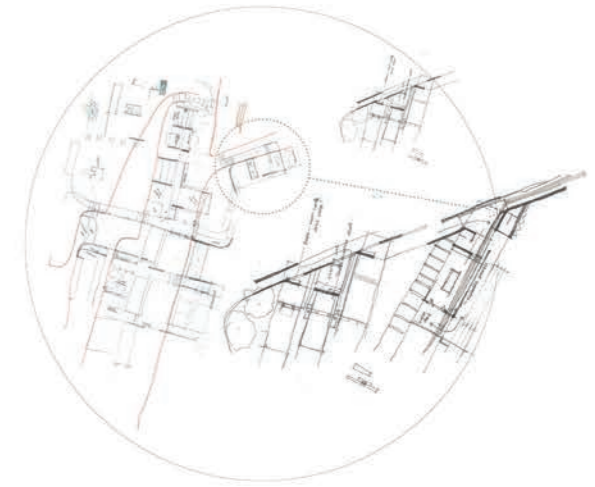
PRECINCT VISION



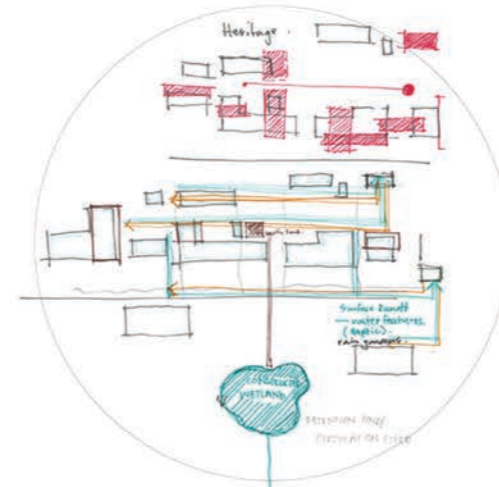
DESIGN DEVELOPMENT



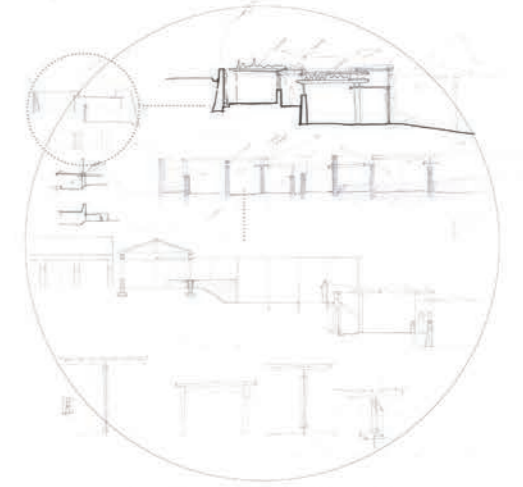
INTERVENTION LOCATION EXPLORATION



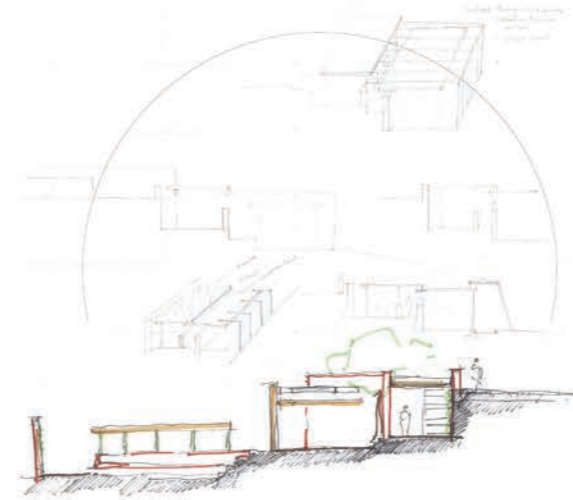
COOKING SCHOOL ENTRANCE DEVELOPMENT



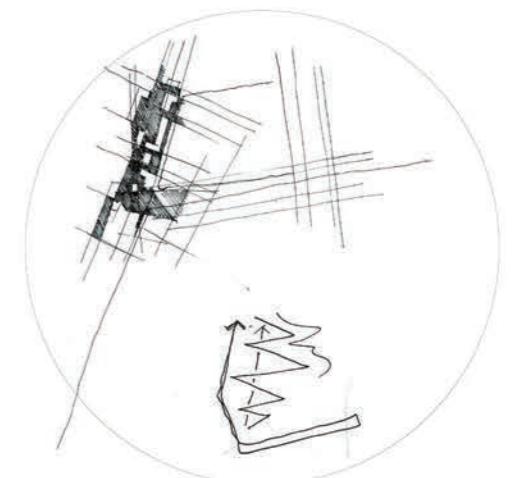
HERITAGE INTERVENTION AND WATER FLOW



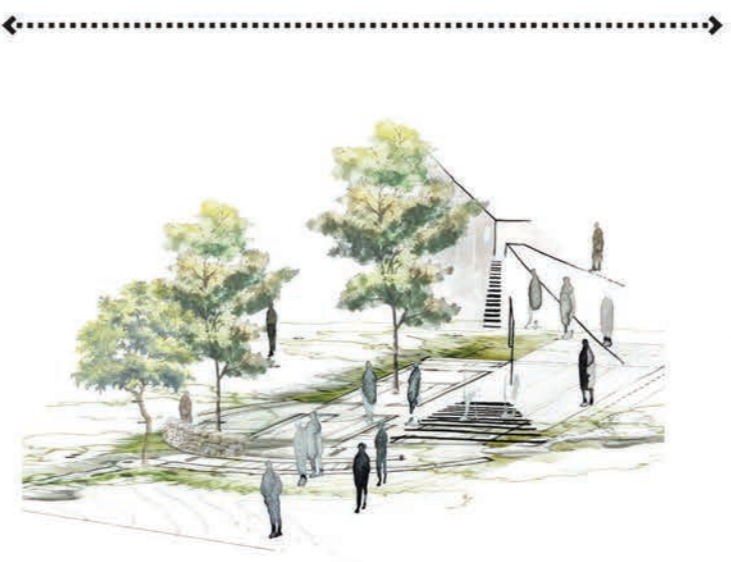
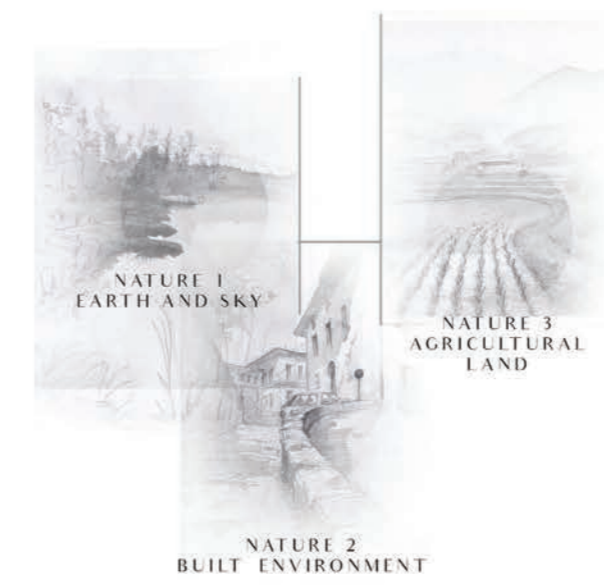
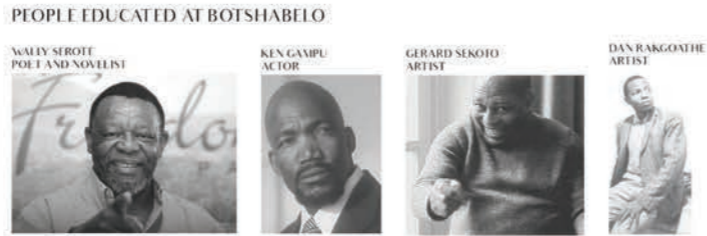
SECTION EXPLORATION



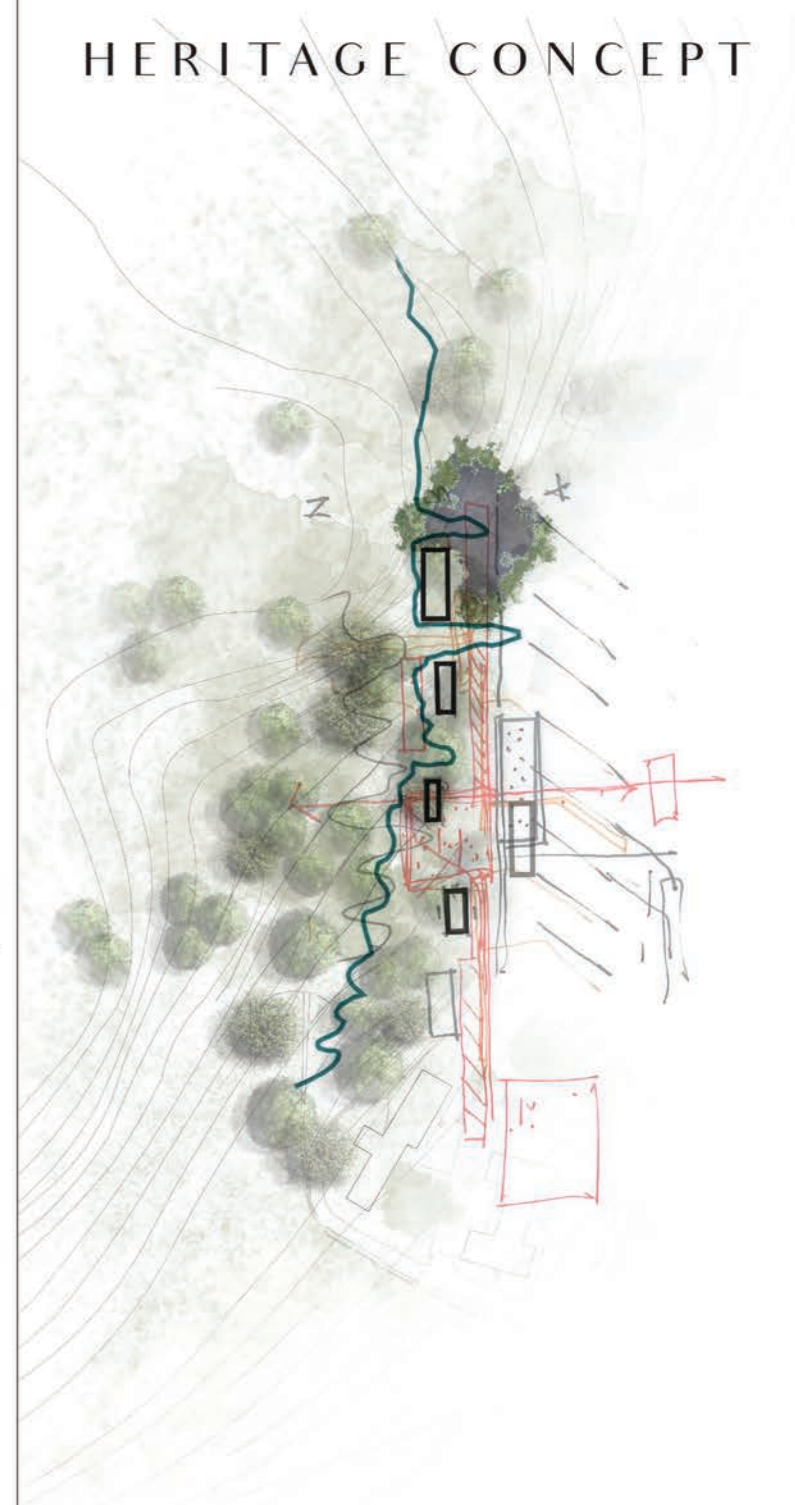
SECTION EXPLORATION



ENERGY FLOW THROUGH SITE



CONTINUUM OF ARCHITECTURAL THINKING



BOTSHABELO STATEMENT OF SIGNIFICANCE

Botshabelo is a heritage resource that has immense national value. It is a place associated with both events of historical importance relating to apartheid and the diversity of cultures and their interactions.

Botshabelo embodies the history of both the Berlin Mission Society's evangelistic endeavours in Southern Africa and the diversity of cultural groups that constitute the people of South Africa. Subsequently the Mission Station was provisionally declared a national monument in 1979 (Le Roux et al 2001: 57).

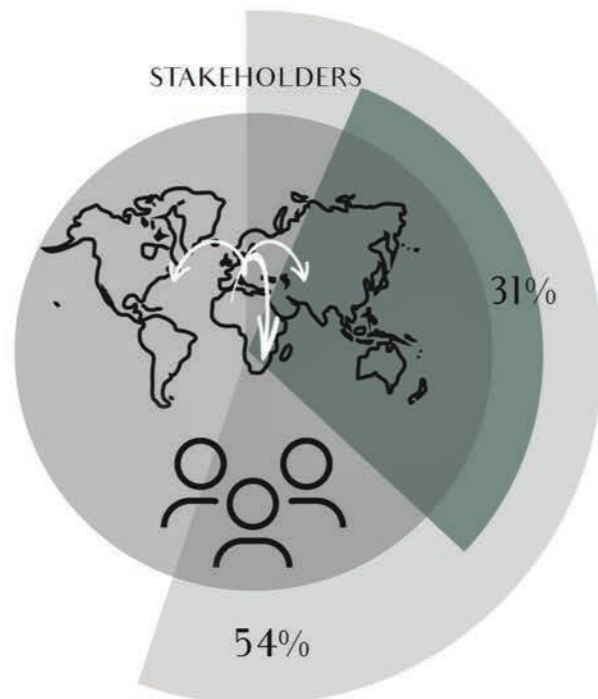
- It embodies the histories of many of the diverse cultural groups which comprise the peoples of South Africa.
- Extensive lands and associated infrastructure relating to the sustenance and administration of a Berlin Mission station as concrete record of their ways and practices.
- The palimpsest of routes and infrastructure relating to the place as one for rest and repairs on the trade route to the Zoutpansberg as recorded in the written histories of the early pioneers
- Extant buildings (now delapidated) associated with the higher learning of the education in the black community
- A site associated with the historic event of land claims
- Buildings (now derelict) associated with the first translation and printing of the Bible in Sotho
- Buildings associated with black Christian missionaries

The site is a palimpsest of cultures and events. Each precinct has direct socio-cultural and historic assumptions and connotations.

The site is a place of significant landscapes, from wilderness areas to cultural landscapes.



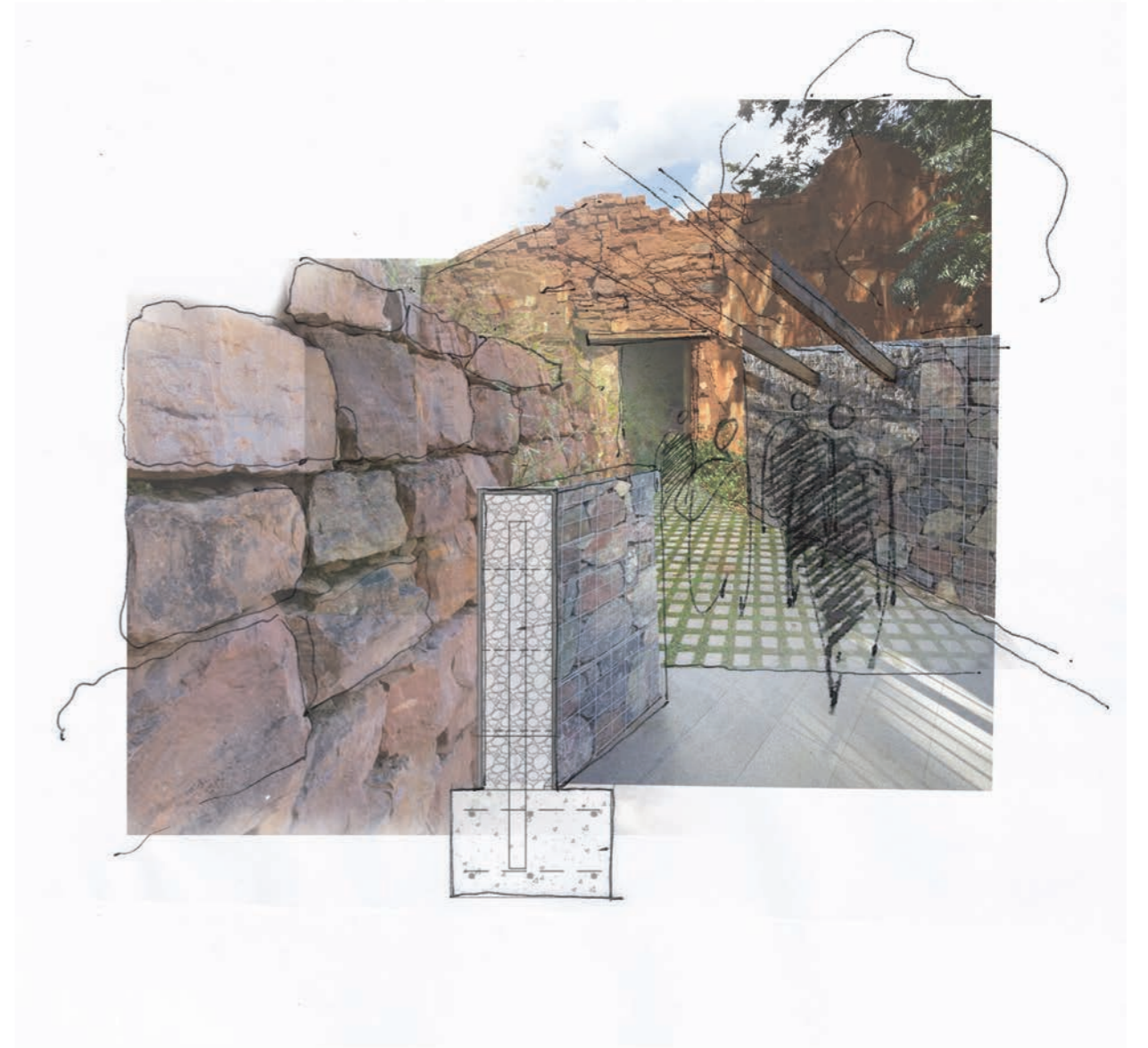
RESEARCH AND DOCUMENTATION
PUBLIC EDUCATION



CULINARY SCHOOL AND FOOD PRODUCTION
INTERACTION WITH PUBLIC AND TRANSFER OF INTANGIBLE HERITAGE



TECH CONCEPT



MATERIALITY

EXISTING

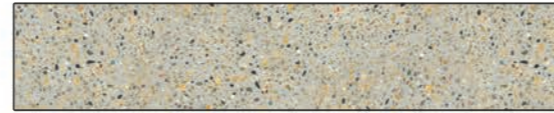
NEW INTERPRETATION

INTERIOR FLOOR FINISH

dung floors



diamond polished concrete



EXTERIOR WALL FINISH

plastered brick



facebrick and bagged brick



ACCENT WALLS

dry stacked stone walls



reinforced gabion walls

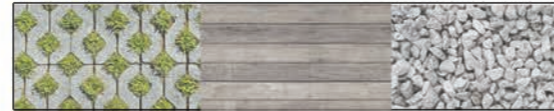


EXTERIOR FLOOR FINISH

grass and ground walkways



permeable paving, Rhino wood decking, grey stone aggregate



ROOF FINISH

corrugated metal roof sheeting



standing seam copper, gravel-ballasted



CREEPING PLANTS

Jasminum angulare (Wild Jasmine)



Evergreen, has scented white flowers, attracts birds

Combretum bracteosum (Hiccup Nut)

Evergreen and produces fruit that attracts birds

Mondia whitei (White's Ginger)

Medicinal use

HERBS

Summer Autumn Winter Spring

<i>Carpobrotus edulis</i>				
<i>Zingiber officinale</i>				
<i>Mentha longifolia</i>				
<i>Nigella sativa</i>				
<i>Origanum majorana</i> L.				
<i>Pelargonium graveolens</i>				
<i>Salvia africana-lutea</i> L.				
<i>Artemisia afra</i> Jacq. ex				
<i>Tulbachia violacea</i>				
<i>Erioccephalus africanus</i> L.				
<i>Hibiscus sabdariffa</i>				
<i>Agathosma betulina</i>				

VEGETABLES

Summer Autumn Winter Spring

<i>Phaseolus lunatus</i>				
<i>Allium cepa</i>				
<i>Basella alba</i>				
<i>Cucurbita maxima</i>				
<i>Cyphomandra betacea</i>				
<i>Ipomoea batatas</i>				
<i>Lens culinaris</i>				
<i>Plectranthus esculentus</i>				
<i>Solanum aethiopicum</i>				
<i>Talinum fruticosum</i>				
<i>Tylosema esculentum</i>				



EAST ELEVATION

scale 1:200



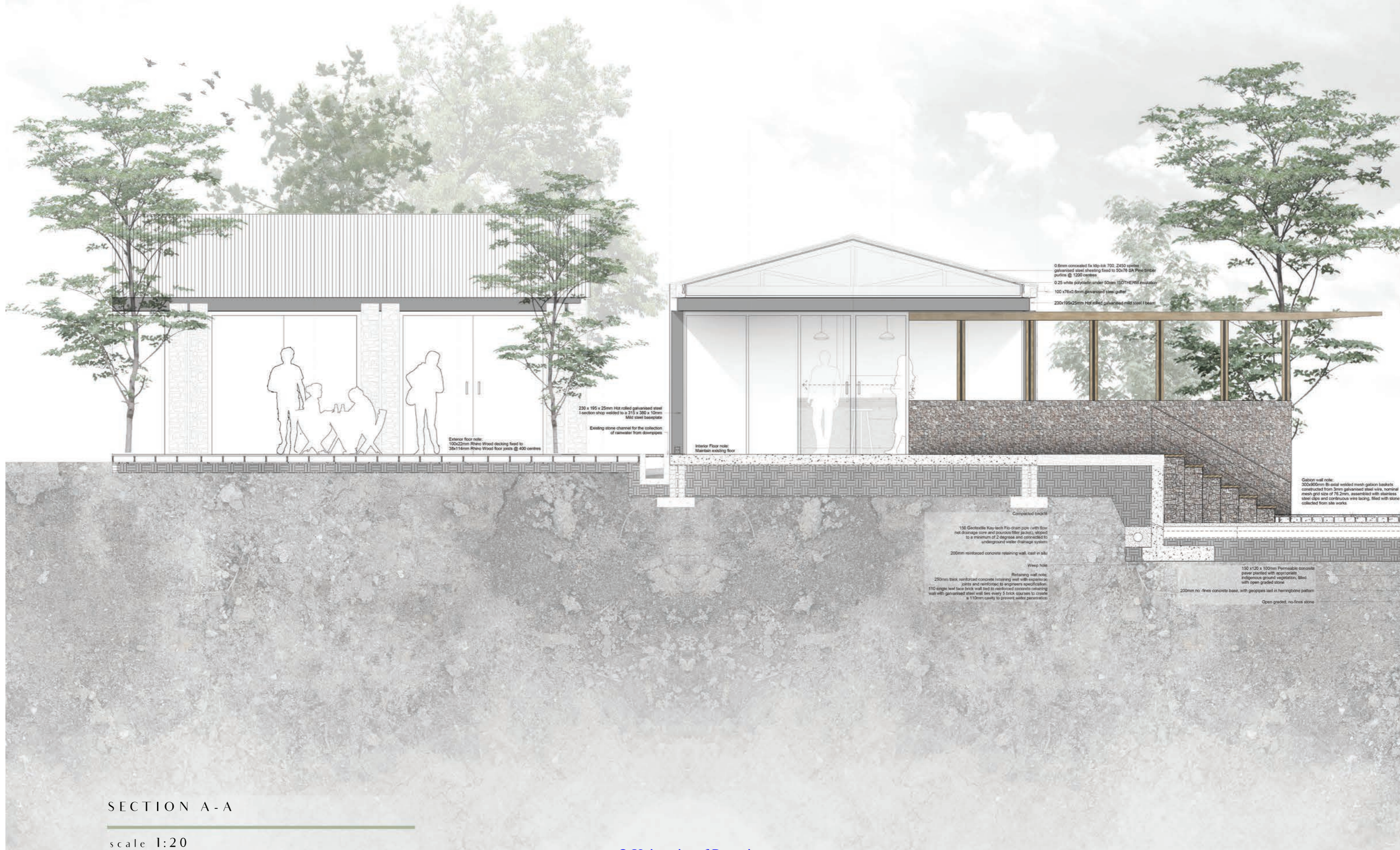
WORKSHOP ZONE PLAN

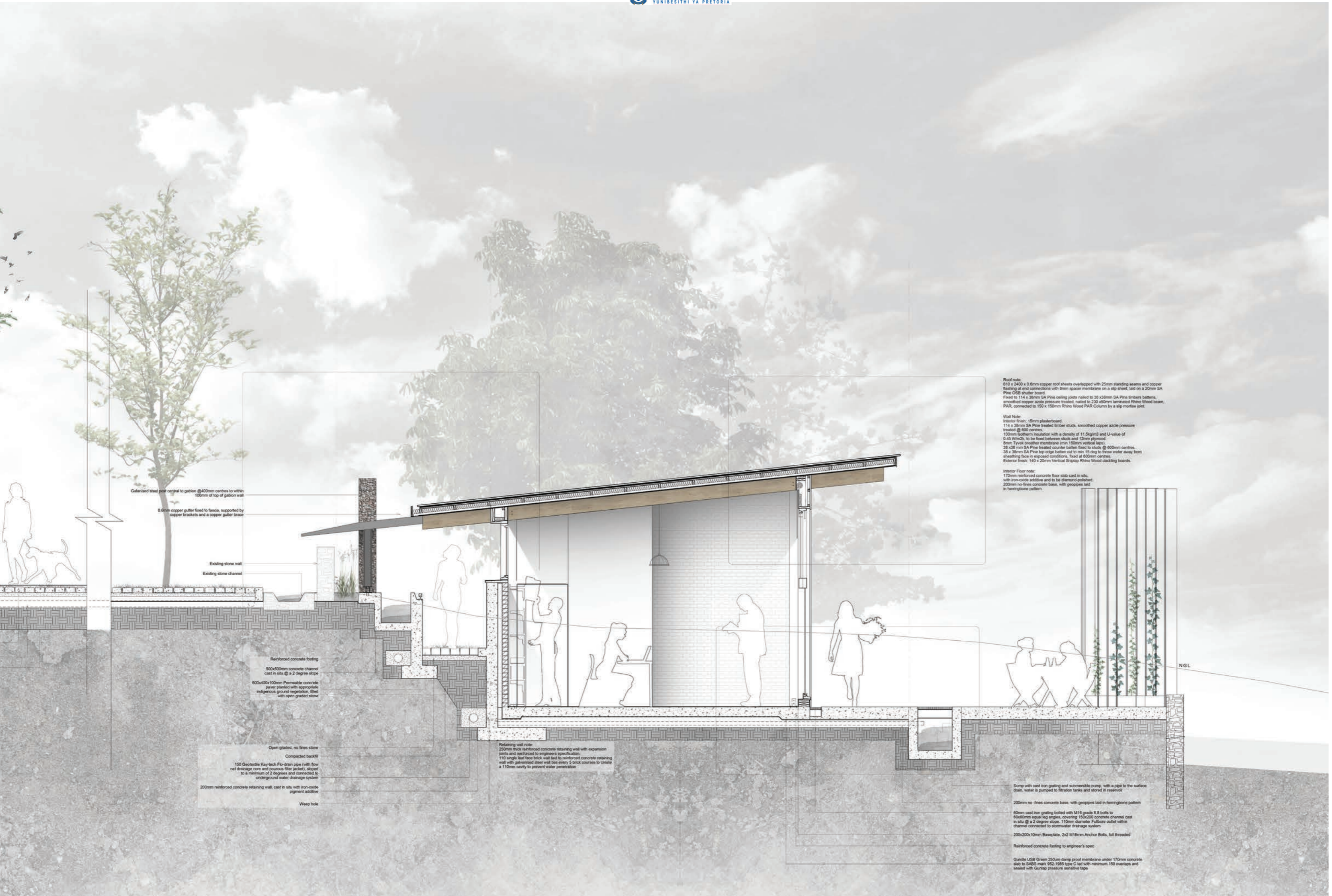
scale 1:200



RESEARCH ZONE PLAN

scale 1:200





Roof note:
 810 x 2400 x 0.6mm copper roof sheets overlapped with 25mm standing seams and copper flashing at and connections with 8mm spacer membrane on a slip sheet, laid on a 20mm SA Pine OSB shutter board.
 Fixed to 114 x 38mm SA Pine ceiling joists nailed to 38 x38mm SA Pine timber battens, smoothed copper azole pressure treated, nailed to 230 x50mm laminated Rhino Wood beam, PAR, connected to 150 x 150mm Rhino Wood PAR Column by a slip mortise joint.

Wall Note:
 Interior finish: 15mm plasterboard.
 114 x 38mm SA Pine treated timber studs, smoothed copper azole pressure treated @ 600 centres.
 100mm Isotherm insulation with a density of 11.5kg/m³ and U-value of 0.43 W/m²K, to be fixed between studs and 12mm plywood.
 5mm Tyvek breather membrane (min 150mm vertical laps).
 38 x38 mm SA Pine treated counter batten fixed to studs @ 600mm centres.
 38 x 38mm SA Pine top edge batten cut to min 15 deg to throw water away from sheathing face in exposed conditions, fixed at 600mm centres.
 Exterior finish: 140 x 20mm Vertical Gripap Rhino Wood cladding boards.

Interior Floor note:
 170mm reinforced concrete floor slab cast in situ, with iron-oxide additive and to be diamond-polished.
 200mm no-fines concrete base, with geotextiles laid in herringbone pattern.

Sump with cast iron grating and submersible pump, with a pipe to the surface drain, water is pumped to filtration tanks and stored in reservoir.

200mm no-fines concrete base, with geotextiles laid in herringbone pattern.

60mm cast iron grating bolted with M16 grade 8.8 bolts to 60x60mm equal leg angles, covering 150x200 concrete channel cast in situ @ a 2 degree slope, 110mm diameter Fullflow outlet within channel connected to stormwater drainage system.

200x200x10mm Baseplate, 2x2 M16mm Anchor Bolts, full threaded.

Reinforced concrete footing to engineer's spec.

Durable USB Green 250um dampp proof membrane under 170mm concrete slab to SABS mark 952-1985 type C laid with minimum 150 overlaps and sealed with Gunlap pressure sensitive tape.

Galvanised steel post central to gable @400mm centres to within 100mm of top of gableon wall

Ø 6mm copper gutter fixed to fascia, supported by copper brackets and a copper gutter brace

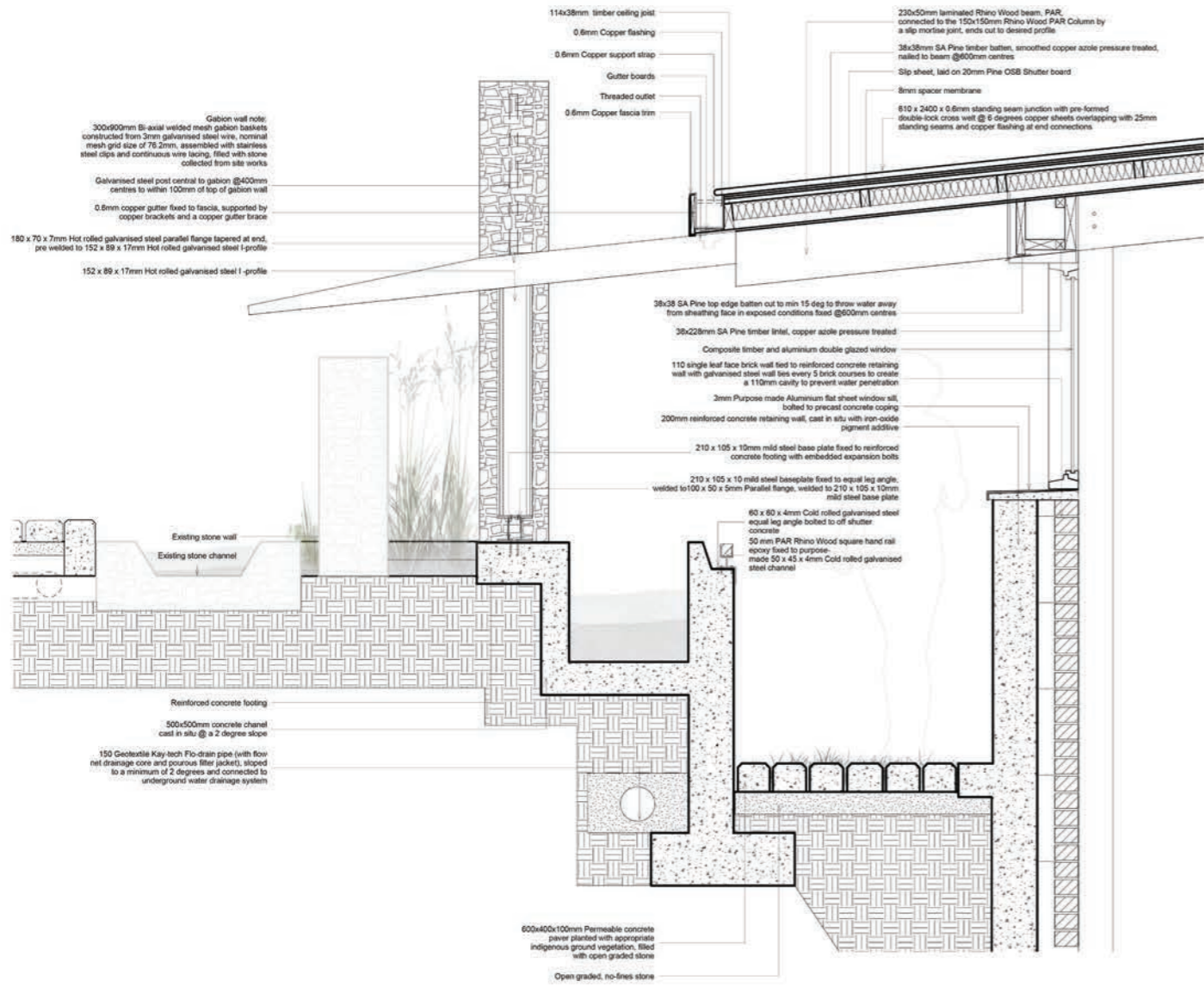
Existing stone wall
Existing stone channel

Reinforced concrete footing
500x500mm concrete channel cast in situ @ a 2 degree slope
600x400x100mm Permeable concrete paver planted with appropriate indigenous ground vegetation, fixed with open graded stone

Open graded, no-fines stone
Compacted backfill
150 Geotextile Key-tek Fibre-drain pipe (with flow net drainage core and porous filter jacket), sloped to a minimum of 2 degrees and connected to underground water drainage system
200mm reinforced concrete retaining wall, cast in situ with iron-oxide pigment additive
Weep hole

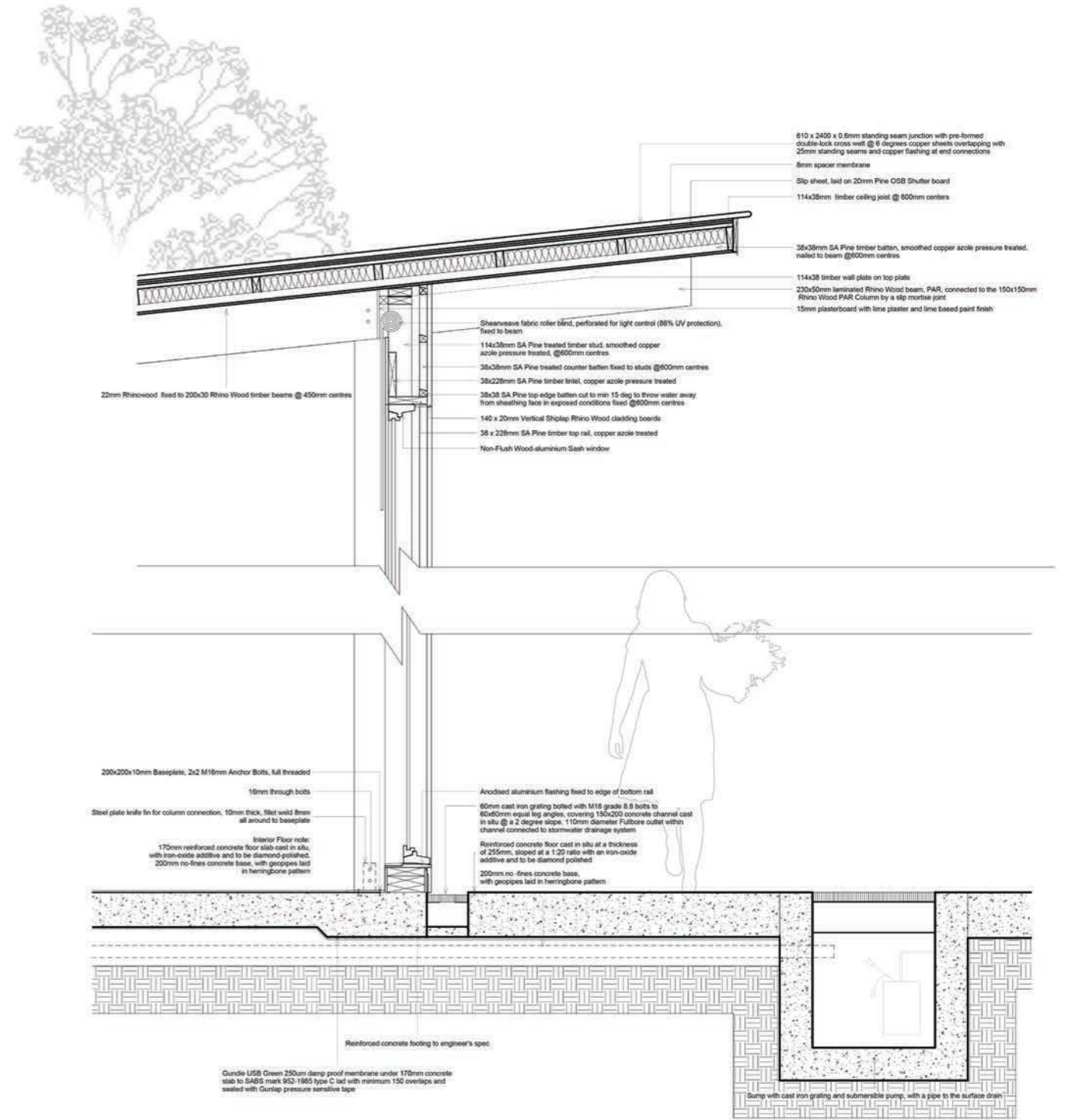
Retaining wall note:
 250mm thick reinforced concrete retaining wall with expansion joints and reinforced to engineers specification.
 110 single leaf face brick wall fixed to reinforced concrete retaining wall with galvanised steel wall ties every 3 brick courses to create a 110mm cavity to prevent water penetration.

NGL



GUTTER DETAIL

scale 1:10



ROOF AND WALL DETAIL

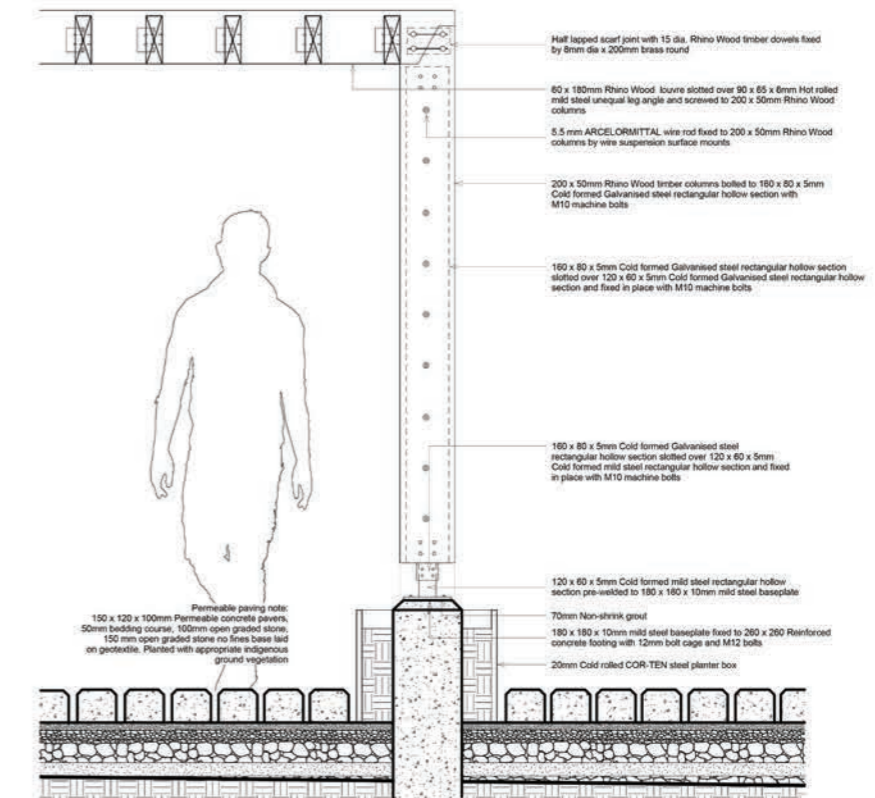
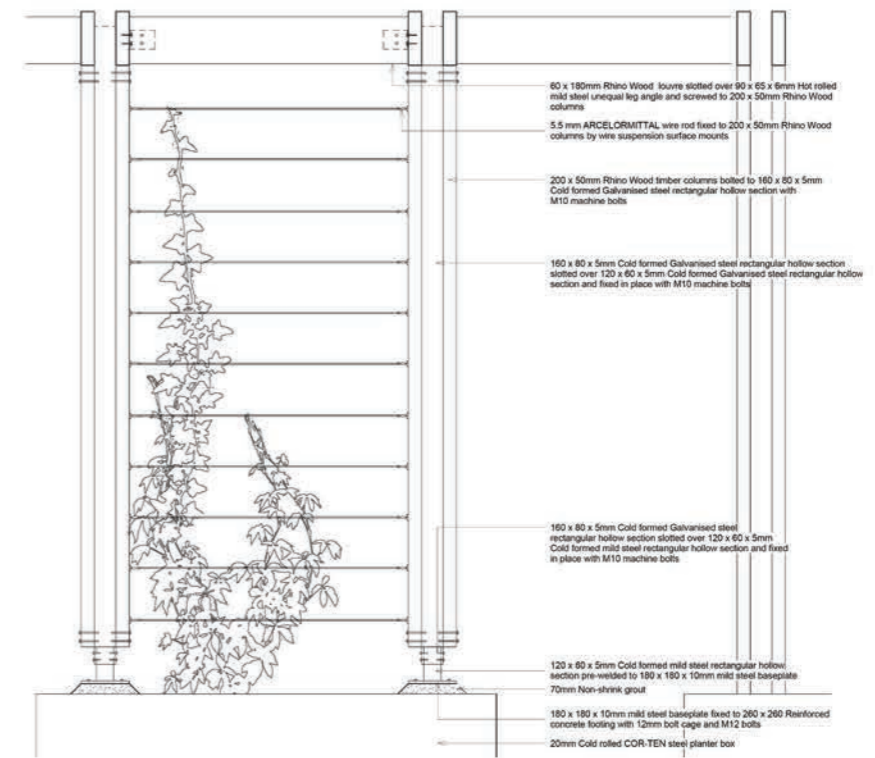
scale 1:10





SECTION B-B

scale 1:50



PERGOLA DETAIL

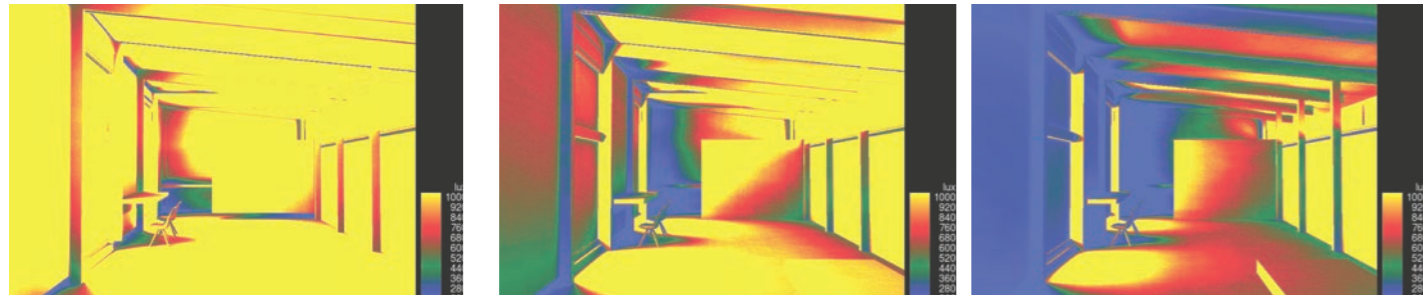
scale 1:10

Daylighting

The building is predominantly orientated to the West and East as a response to the existing heritage. Therefore precautions had to be taken on the Eastern and Western facades to prevent glare and overheating of the buildings.

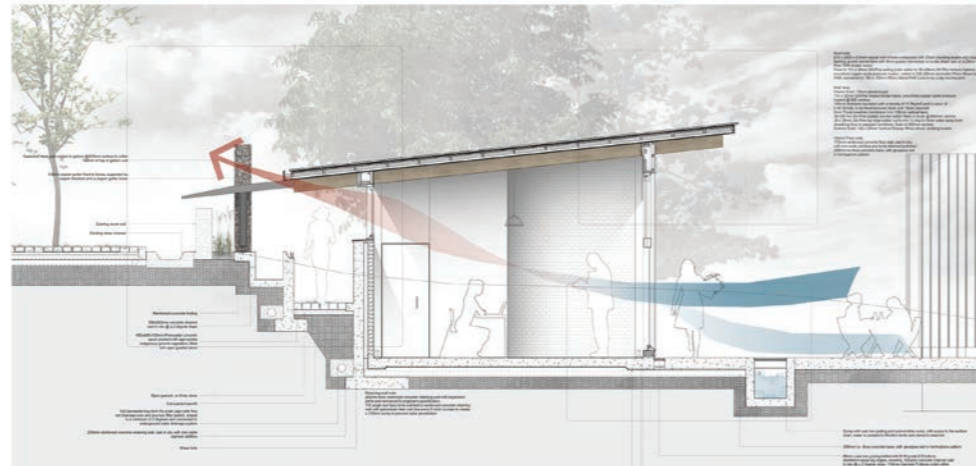
Windows exposed to Eastern sun are shaded by pergola structures with evergreen creeping plants and built in Shearweave fabric roller blinds, which are transparent while providing 86% UV protection and overheating of the buildings.

Daylight Simulation (Required Light Intensity 700 - 1000 Lux)
Revit Daylighting Analysis



Ventilation

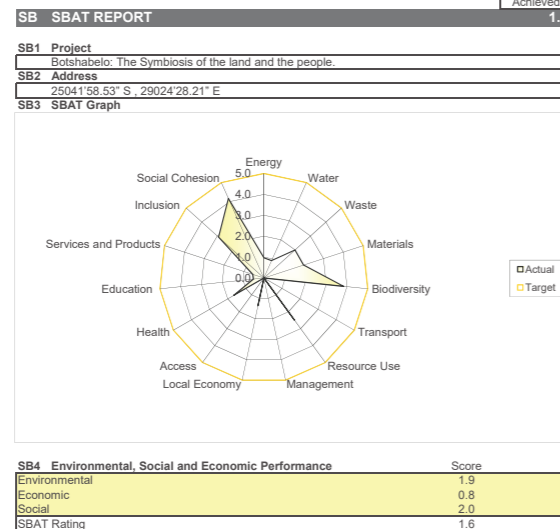
The predominant wind comes from the North East and South East. The buildings are orientated in such a way that smaller openings are located on the Eastern facade and larger openings on the Western facade, creating a stack effect. A sump is also located on the Eastern side of the buildings, allowing for evaporative cooling.



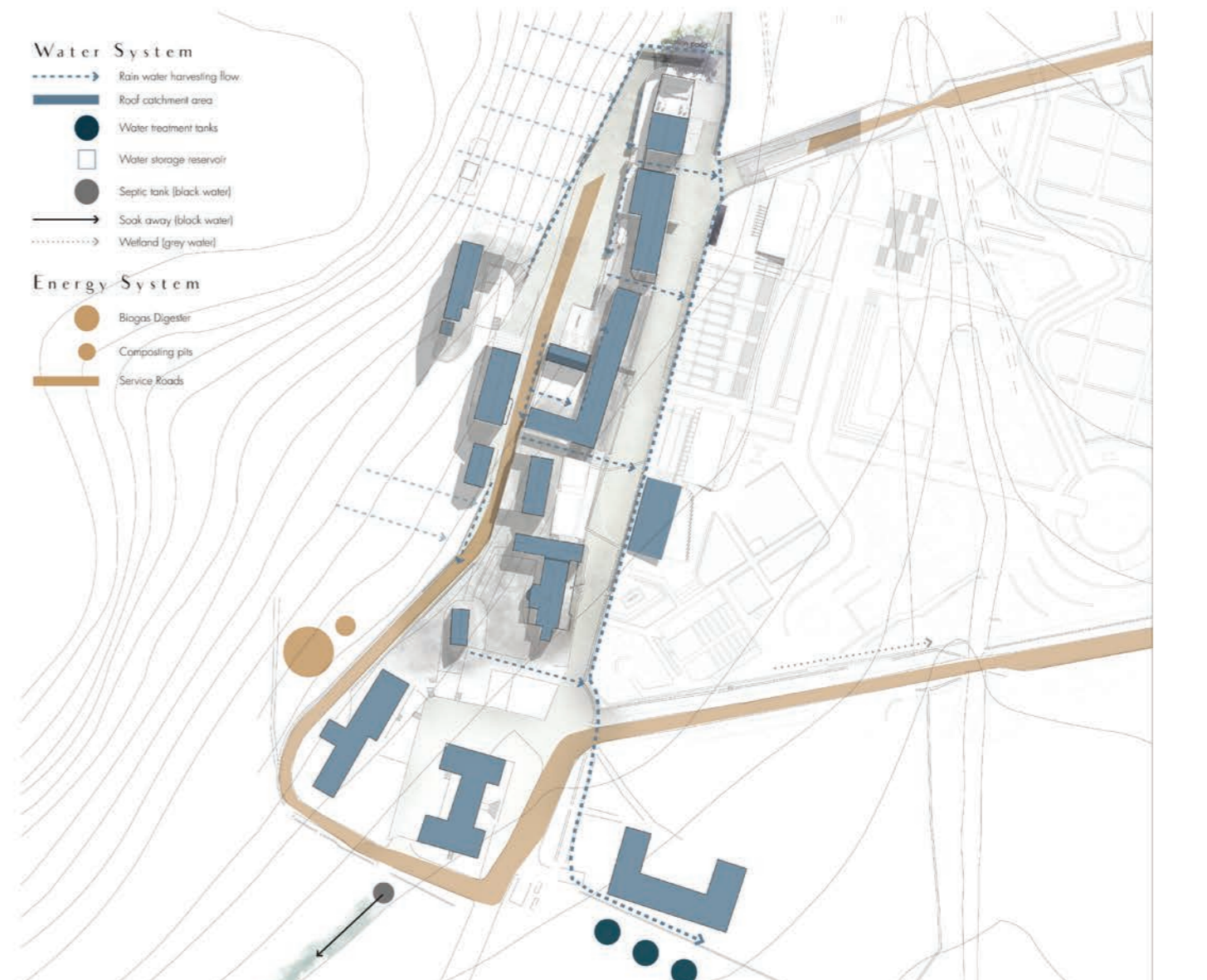
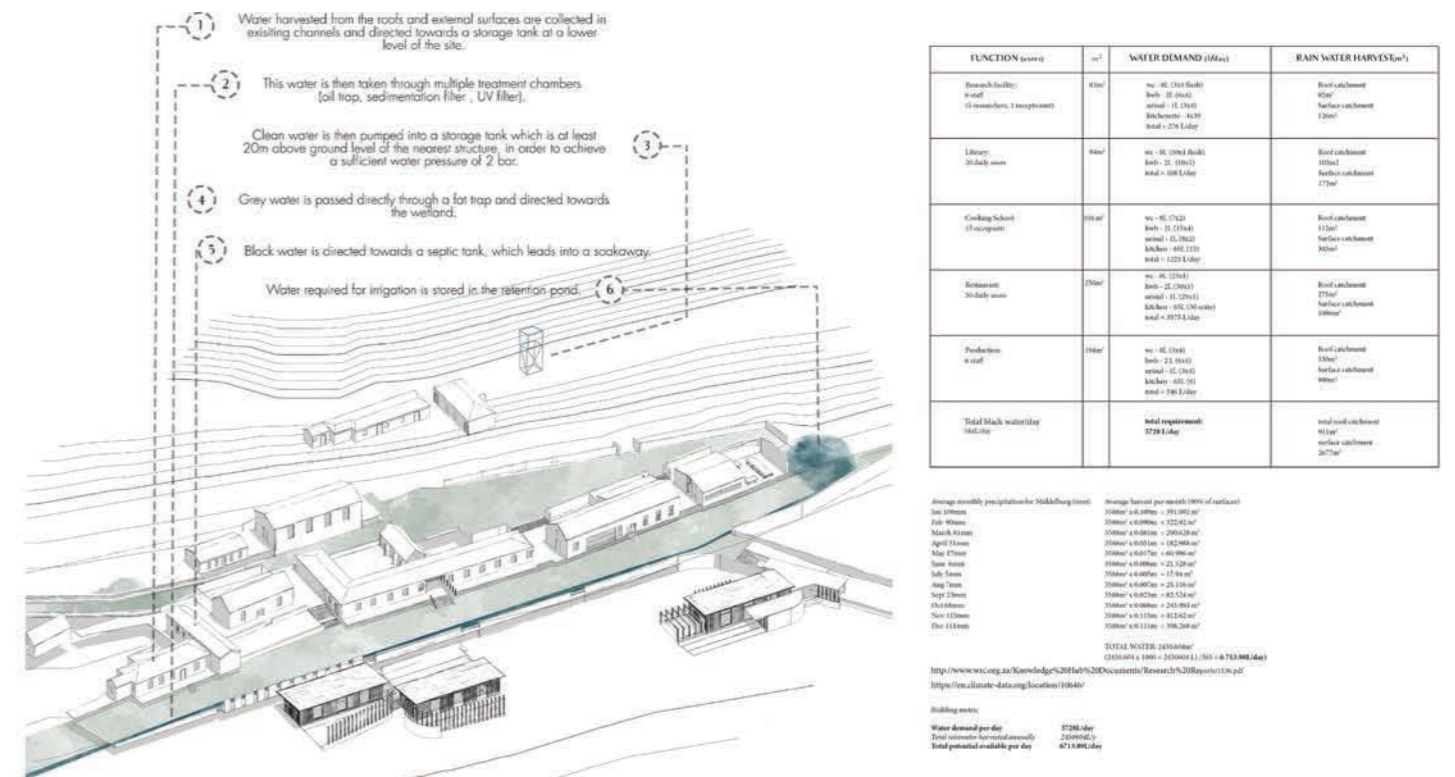
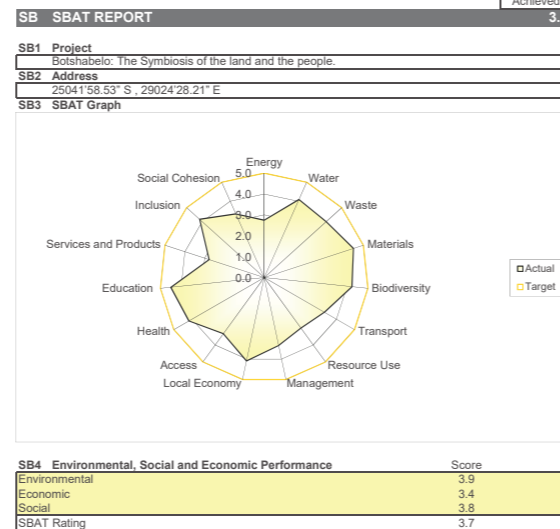
SBAT Analysis

The SBAT analysis was a useful tool to showcase the problems and opportunities that Botshabelo are facing. The first graph represents the current Botshabelo. With the implementation of the new development for the Botshabelo Community Trust, the results show that there is the possibility to host a thriving community, however the overall connection to the public is absent. By activating the site through the use of the fertile landscape, it generates the socio-economic activation of the site.

SUSTAINABLE BUILDING ASSESSMENT TOOL RESIDENTIAL 1.04



SUSTAINABLE BUILDING ASSESSMENT TOOL RESIDENTIAL 1.04









CHAPTER 6

conclusion

CONCLUSION

The intentions of this dissertation was to explore a means of rehabilitating Botshabelo, in order to protect its tangible and intangible heritage significance and ensure that its future value would be secured by the sustainable re-introduction of the Botshabelo Community Trust to the site.

The site context of Botshabelo is the most important aspect of consideration throughout the project. A thorough understanding of both the historical and physical context were required to enable a deeper understanding of the site's intangible heritage. This ensured that an appropriate architectural response was undertaken.

This dissertation sets out to identify an architectural response that mediates between humans and nature, and the past heritage of Botshabelo and its future. A narrative approach was used to ground the architectural response and create a future narrative as response to the existing.

Botshabelo could thus once again become a refuge for the Botshabelo Community Trust, while opening its gates to the public. In this way the public are able to learn about Botshabelo's past while contributing to the sustainability of its future.

As one moves throughout the site the architecture becomes a means through which the three landscapes present at Botshabelo are explored. The proposed architecture intends to maintain the integrity of the existing, while introducing a new architectural language that makes use of the weathering of materials that place visitors in the continuum of time.

By creating a continuous experience between the heritage fabric, nature, new architectural intervention and the productive landscape a new narrative is formed to create a vision of what Botshabelo used to be like. Celebrating its past, while ensuring the protection of its future value.



*Fig. 5.1: Sketch of walkway through the heritage buildings
(Author 2017)*

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Endnotes

1. As understood by the article “Intangible heritage and community identity in post-apartheid South Africa” by Karel Bakker (Bakker & Muller 2010).
2. Who are the remaining families or decendants of the families who were forcibly removed from the site in 1972.
3. For a discussion of the act, see W. Beinart and P. Delius, ‘The Natives Land Act of 1913: A Template but not a Turning Point’, in B. Cousins and C. Walker (eds), *Land Divided, Land Restored: Land Reform in South Africa for the 21st Century* (Johannesburg: Jacana Media, 2015), pp. 24-38.
4. Mpumalanga Provincial Legislature. Department of Culture, Sport and Recreation. 2015. 4th Quarterly Report. Mpumalanga, pp. 6-8.
5. The roofs were initially built with thatch, because of the practicality relating to rapid temperature change (Le Roux et al 2001: 18).
6. This is only an estimate as many buildings are not recognisable within the landscape anymore (Naude 1981: 7).
7. A grid system used by the German missionaries to order the development of Botshabelo (Naude 1981: 7).
8. Marcus Tullius Cicero was a Roman statesman, scholar and writer (Balsdon unknown).
9. Bonfadio was an Italian philosopher (Thomas 2002).
10. Crop species which are being studied and are believed to have potential economically and nutritionally for Africa (African orphan crops 2017).