House of Memory
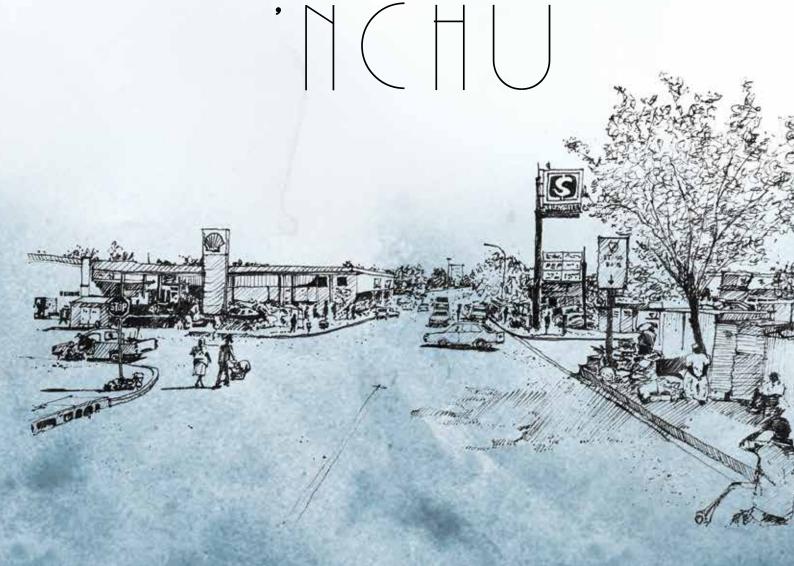
THABA 'NCHU

VOICING & TRACING DIFFERENT NARRATIVES THROUGH THE EXPLORATION OF PLACE

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This dissertation is submitted in partial fulfillment of the requirements for the degree M.Arch.(Prof). The research in this document is my own independent work, unless stated otherwise.

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Declaration of original authorship:

The work contained in this dissertation has not been previously submitted at this or any other institution of higher education. To the best of my knowledge, this dissertation does not contain material that has been previously published or written by another person except where due reference is made.
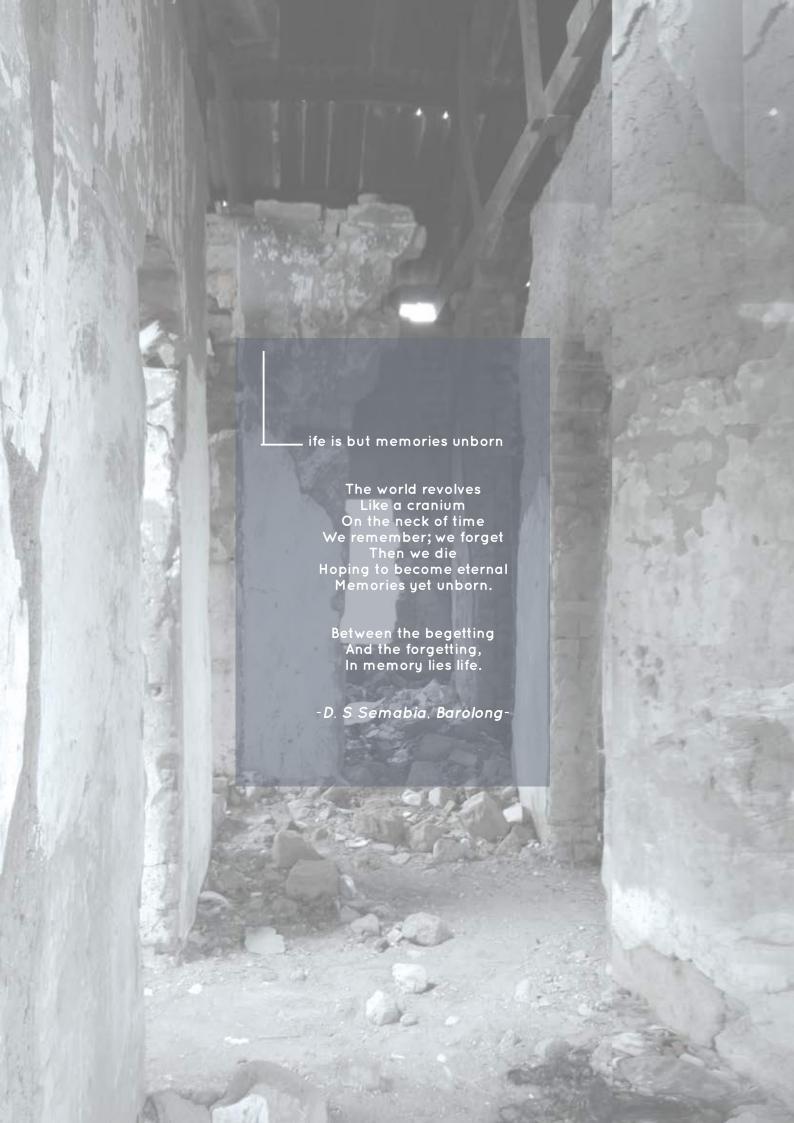
"As each one has received a gift, minister it to one another, as good stewards of the manifold grace of God." 1 Peter 4:10

Life is but memories unborn

The world revolves
Like a cranium
On the neck of time
We remember; we forget
Then we die
Hoping to become eternal
Memories yet unborn.

Between the begetting
And the forgetting,
In memory lies life.

-D. S Semabia, Barolong-

PREAMBLE

CREATE THE NEW OUT OF THE DAMAGED OLD

A House of Memory for Thaba 'Nchu, Free State

The Department of Arts and Culture, in collaboration with the National Museum of Bloemfontein's anthropology sector requires a house of memory committed to the resurgence of Thaba 'Nchu that will store and exhibit collected oral history from the 49 villages around Thaba 'Nchu. The memory house will protect and conserve historical documents gathered by the community (currently stored in the traditional council building) and give members of the public access to these documents through exhibitions and audio visual material.

Ultimately, the House of Memory will serve as a mechanism that brings together traces of different narratives of those who live or have lived in Thaba 'Nchu. The museum will also be the first to commemorate the Barolong tribe, specifically the Barolong boo-Seleka. In addition, the project requires offices with recording facilities, research space and space to store the recordings of the forgotten stories of ordinary people including their experiences of how Apartheid or colonialism affected them, which will either be exhibited in the museum or stored digitally in the archive.

Presently, the voice of Thaba 'Nchu has been forgotten as a result of the effects of colonialism and the apartheid regime which led to the forceful removal of people from a place they called home into a space with which they could not identify. The search for a forgotten identity by the younger generation has fueled the search for the history of Thaba 'Nchu, i.e.- who settled there, what the prominent cultures were, how the people lived, and the voice of Thaba 'Nchu that provides those who live in the settlement with an identity. In order for the place to be re-remembered, a relationship between the demands of modern life in Thaba 'Nchu and its diverse past may be established, to revive that which has died, to become an all-inclusive environment where (in terms of Norberg-Schulz, 1985) public, collective and private dwelling can take place.

The House of memory will remember Thaba 'Nchu by means of analysis of its social rituals, and existing architectural spaces,- and their tectonics, and re-interpreting them into inclusive spaces that are relevant to the present place, and which may aid in restoring its voice. In this regard, the proposed project will attempt to bring about a sense of permanence to a region in which everything appears to be transitory and fragile, and offer the community of Thaba 'Nchu much-needed social and educational resources pertaining to its history, as well as provide a space for anthropologists in which to gain knowledge with regard to the people living in the place.

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I N T R O D U C T I O N

During the course of my architectural studies at the University of the Free State, I became increasingly interested in ruined structures and the cultural narratives mysteriously buried within them. What was the cause of a structure's ruination within a place? What does the structure narrate about the place, time and people from which it came? Why were these structures rejected by society? And why is the devastation of ruins so intriguing?

While researching the history of Bloemfontein, it became apparent that I had little knowledge of the history of the place I have lived in my whole life. As the 'model' Apartheid city, I, a White Afrikaans girl from the suburbs of Bloemfontein, had the misconception that the small settlements around Bloemfontein, such as Thaba 'Nchu and Botshabelo had been developed as 'locations' because of the segregation between cultures enforced by Apartheid. My visit to Thaba 'Nchu together with the interviews I had conducted with inhabitants proved that there is a much deeper story behind my misconception as seen in the ruins scattered across the settlement which lead me to ask, what is the voice of Thaba 'Nchu?

The investigation was rationalised through exploring the history of Thaba 'Nchu; conducting interviews with its inhabitants (who came from different backgrounds and generations); investigating similar building typology's as precedent studies; considering ways in which the site could be remembered through realising the client's needs while, at the same time addressing the needs of the community in Thaba 'Nchu; and considering how a theoretical application could be realised in order to visualise a unique approach to the design of the House of Memory, as a museum and archive.

Chapters 1 and 2- which constitute the first half of this dissertation, are specifically structured according to architectural terms such as- typology, topology, morphology and tectonics. The study of typology in regards to this document refers to an investigation into similar building types in terms of more functional requirements that relate to the proposed project; an investigation into the topology of the project refers to the facts and qualities identified on the site and further into the context in order to gain a better understanding of the place. Morphology, which refers to the notions that lead to the realisation of the project, include the conceptual constructs which may lead to a unique approach pertaining to the typological and topological implications that arose out of the investigations. The tectonics of the project are realised through the use of structural systems with the aid of conceptual ideas that augment the morphological aspect of the project.

Chapter 3 synthesises the information gathered in Chapters 1 and 2. This includes all the considerations pertaining to the design and consequential structure. The chapter illustrates the developments that took place with regard to the realisation of the building, and explain the design and tectonic components. Chapter 4 concludes the dissertation with a discussion on how successfully I feel I managed to synthesize the project according to the initial challenges. This is done by means of an evaluation of and a reflection on the overall process of the dissertation.
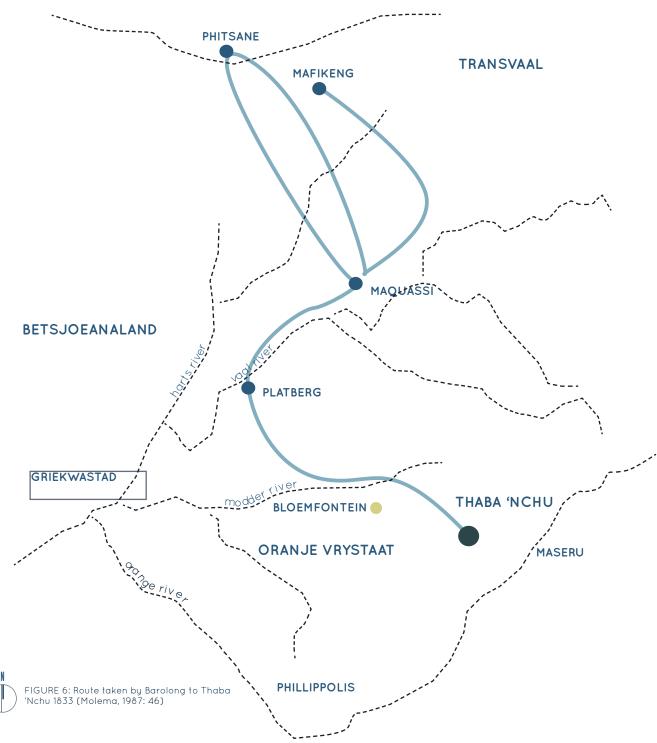
FIGURE 3-5: Residents & ruins in Thaba 'Nchu from my first visit in December 2015

"A NATION WITHOUT ITS HISTORY IS LIKE A PERSON WITHOUT THEIR MEMORY"

We were taught, sometimes in a very positive way, to despise ourselves and our ways of life. We were made to believe that we had no past to speak of, no history to boast of. The past so far as we are concerned, was just a blank and nothing more. Only the present mattered and we had very little control over it. It seemed we were in for a definite period of foreign tutelage, without any hope of ever again becoming our own masters. The end result of all this was that our self-pride and our self-confidence were badly undermined. It should now be our intention to try to retrieve what we can of our past. We should write our own history books to prove that we did have a past, and that it was a past that was as with writing and learning about as any other. We must do this for the simple reason that a nation without a past is a lost nation, and a people without a past is a people without a soul

- SIR SERETSE KHAMA (1970)

PHITSANE

MAFIKENG

TRANSVAAL

MAQUASSI

BETSJOEANALAND

harts river

vaal river

PLATBERG

GRIEKWASTAD

modder river

BLOEMFONTEIN

THABA 'NCHU

ORANJE VRYSTAAT

MASERU

orange river

PHILLIPPOLIS

N

FIGURE 6: Route taken by Barolong to Thaba 'Nchu 1833 (Molema, 1987: 46)

n the 6th of December 1833, the Barolong-boo-Seleka tribe arrived in a place they named Thaba 'Nchu. The group was led by Kgosi Moroka, accompanied by Wesleyan Missionaries under the leadership of Rev. James Archbell and Broadbent. The Wesleyan Missionaries assisted the Barolong in finding a safe, peaceful area which was in contrast to the war stricken areas in Mafikeng caused by

the Difiqane. The Barolong named the dominant hill in the landscape 'Swartberg', as a result of the indigenous bush species that gave the hill a black appearance. As the land belonged to the king of Lesotho, King Moshoeshoe I, Kgosi Moroka and the Missionaries went to the King to negotiate the purchasing of the newly found territory. The chief succeeded in purchasing the land once he signed the documents, which proved that Kgosi and the Barolong people were allowed to legally inhabit the land.

Thaba 'Nchu was established in 1873, today forming part of the Mangaung Municipality in the Free State.

FIGURE 7: Chief Moroka
(Molema, 1987:)

The name of the town can be translates as 'place of the leopard' and was known by the Voortrekkers as Blesberg. Originally, the boundaries of Thaba 'Nchu were set by the Leew-River to the East. The Mokopu Motseke Mountains and the Morojaneng hills near Dewetsdorp define the South Eastern boundaries. The 'Phata-ya-lobelo' hills constitute the Western boundary.

The Barolong-boo-Seleka along with the Ratlou Barolong and Tshidi Barolong, settled on three hills in the otherwise flat milieu. Each tribe was located on a specific hill, with the Seleka clan occupying the hill on the south side of the Sepane River (Molema, 1987: 39).

The missionaries built a mission station on a clearing between the tribes. The tribes built huts, which were arranged in a concentric manner, facing inwards towards the chief's kgotla fig. 10. The arc layout illustrates a central geometric principle which dominated the general layout of the town. Dr A. Smith explains that in the year 1834, the houses in Thaba 'Nchu were irregularly disposed, though more or less encircling the cattle kraals. According to Rev. Cameron, Thaba 'Nchu was said to have a very imposing effect in 1841. He describes the place as a, "vast assemblage of houses widely different to European settlements with no towers or public buildings, a heap of Bechuana huts jostled together without apparent order and their cattle folds make up the scene" (Molema, 1987: 39).

In the year 1835, the first group of Voortrekkers, lead by Louis Triechardt and Hans van Rensburg, arrived in Thaba 'Nchu. This arrival lead to the first known meeting of Bantu and White people settling together in the Free State. Thaba 'Nchu became a safe meeting place for Voortrekker leaders including Hendrik Potgieter (Fig. 11), Piet Uys and Gerrit Maritz. During the Difaqane wars, the Voortrekkers aided the Barolong tribes. Similarly, the Barolong helped the Voortrekkers by providing them with warriors and supplies at Vegkop. Chief Moroka provided the Voortrekkers with a 'refugee camp' known as 'Moroka's Hoek'. The tribal communities were severely influenced by the Afrikaans and English settlers in terms of administration, religion and education (Schuler, 1965: 2).

When Sir Harry Smith was announced as the new governor and high commissioner of the Cape Colony in 1848, he proclaimed British sovereignty over the Orange Free State. This proclamation restrained the African tribes and Dutch settlers by means of land limits (Molema, 1987: 67). Sir Smith declared complete rule over Chief Moroka, Moshoeshoe, Adam Kok, Moletsane and other chiefs in the area (Molema, 1987: 69). Following this declaration, Henry Warden was given the task of laying boundary lines and ensuring peace between the tribes and settled in what would later become Bloemfontein. By 1949 the British government sought to separate the Black people from the White people (Molema, 1987: 72). The British took the desirable land from the Barolong and other African tribes in the area, and gave it to the Dutch settlers, re-establishing the boundaries of Thaba 'Nchu, which lead to an impoverished people where only ruins of schools and missionary stations remained(Molema, 1987: 84).

FIGURE 8: Thaba 'Nchu 1830

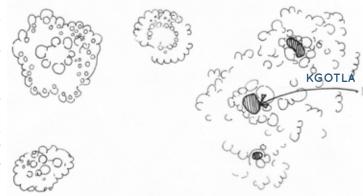FIGURE 9: Church assembly led by Rev. Archbell in Thaba 'Nchu 1834 (Schoeman, 1991:49).

FIGURE 10: Barolong settlement pattern

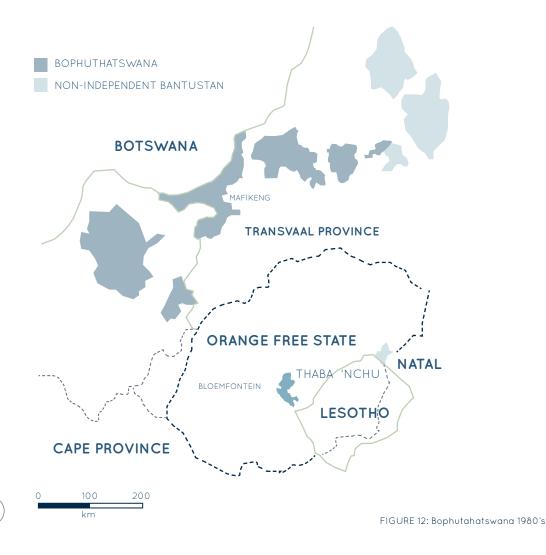FIGURE 11: General Andries Hendrik Potgieter (Molema, 1987:)

Thaba 'Nchu was considered to be a friendly, native state by the Boer-governed Orange Free State which was established in 1854 when the English abandoned the Free State. During the annexation of Thaba 'Nchu in 1884 by the President of the Orange Free State, president Brand, the size of Thaba 'Nchu was reduced considerably. Approximately 15 citizens were sent to Thaba 'Nchu by President Brand to mediate between the Barolong. Kgosi Moroka selected strong honest men among his tribesmen to provide security at the new boundaries of the land.
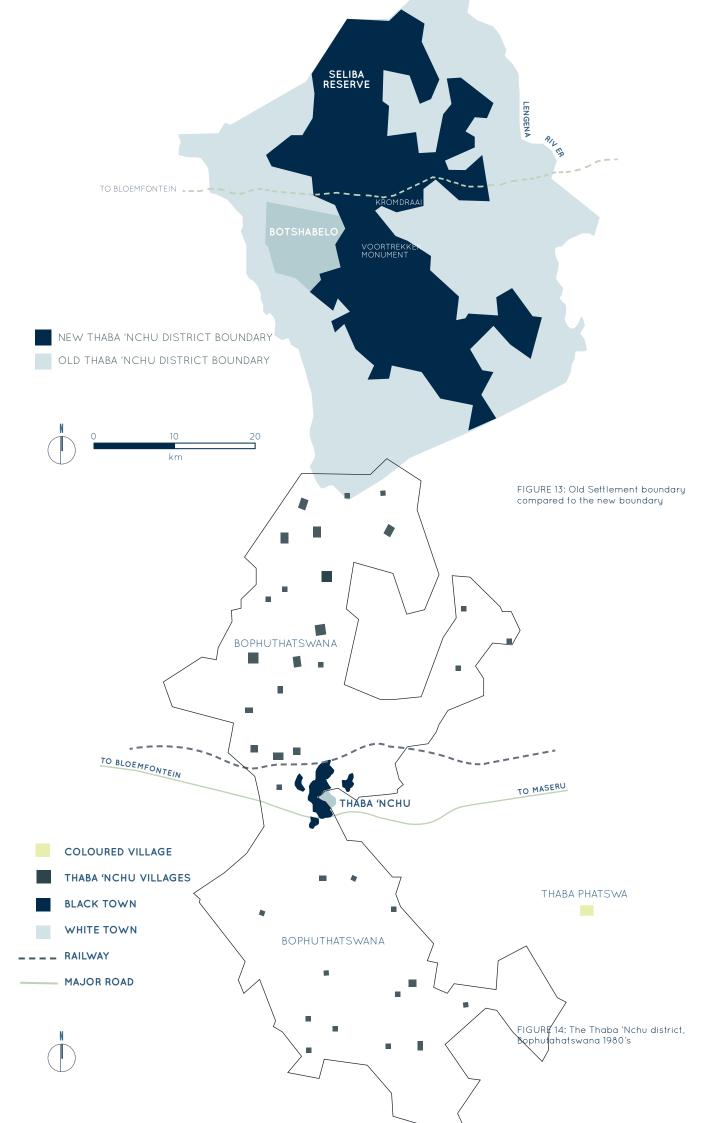
A law was passed by the Orange Free State Volks-raad that stated that no Black person could buy or sell farms, except to White settlers. This law had a devastating effect on the community of Thaba 'Nchu deeply and negatively. A sense of hopelessness, frustration and helplessness dominated the community; as many farms had been lost or taken, according to Amy (Goitsemodimo: interview 2016). The newly enforced law reduced Thaba 'Nchu to less than a quarter of the original farmlands and settlement. Rev. Mothibi says, "We are saturated and can no longer accommodate our own children as a result of the lack of necessary infrastructure which pertain to electricity, telephone lines and water" (Mothibi: interview 2016).
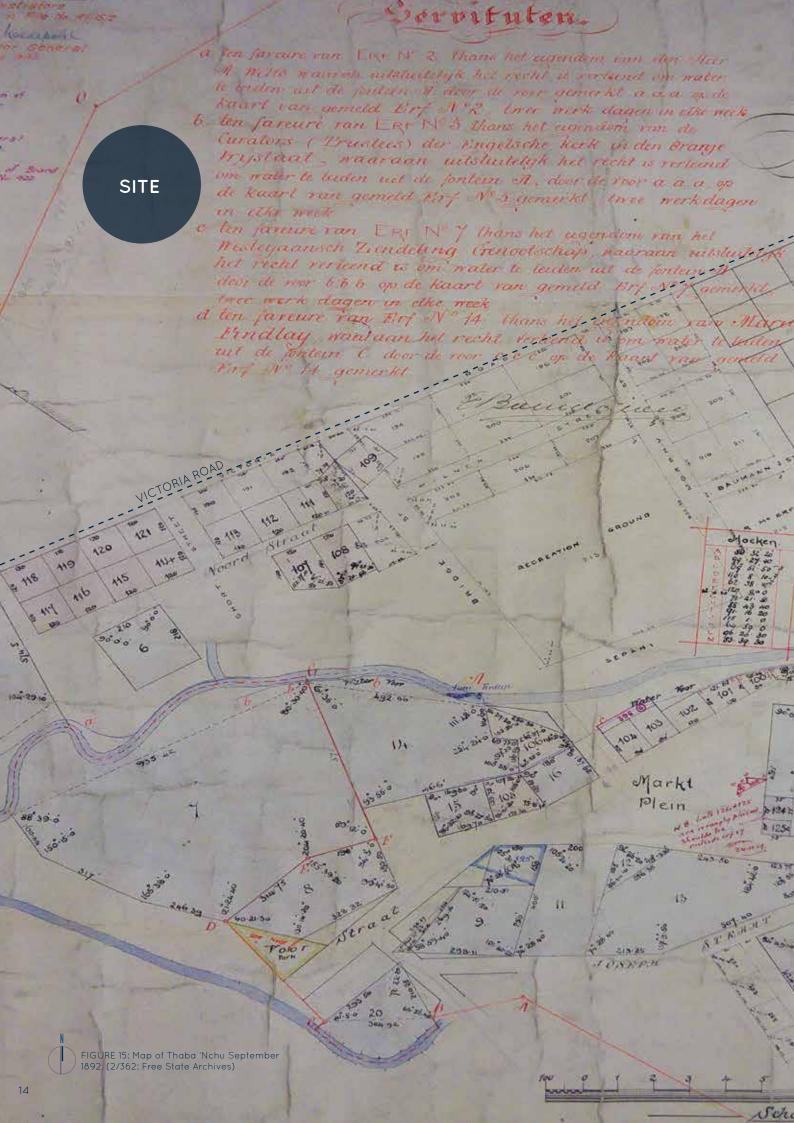
During the Apartheid era Thaba 'Nchu formed part of the area that had been set aside for the Bantustan of Bophuthatswana. During the 1940's, a request was made to the government to grant the people of Thaba 'Nchu more land to support their dying livestock and to reclaim the Tribal land that had once belonged to them. During the late 1960'-s and 1970'-s, the farmers in the Orange Free State instigated a reduction programme concerning their labourers. The labourers were dismissed on the grounds of old age and consequent lack of productivity, and were thus forced into the area of Thaba 'Nchu. This phenomenon led to the formation of Kromdraai in the Mokwena village, Thaba 'Nchu, an informal settlement. The considerable growth of Kromdraai resulted in a congested area which brought about health hazards and extenuating living conditions as there was no running water or sanitary facilities (SA history: online 2016).

Thaba Nchu is unique in its history, which is rooted in wars, tribal migrations and its unusual alliances. It is also unique in terms of its landscape as seen in its spiritual home for the Tswana culture, and in terms of the preservation of its tribal traditions. Throughout its existence, the place has been surrounded by different people of different races. The community of Thaba 'Nchu takes pride in its culture, traditions, customs, faith, rituals, social values; and above all, its language. Molema writes that a nation without its own language is a dead nation. Though these values are still vital to the culture, the westernisation of Thaba 'Nchu, as a result of colonisation and the Apartheid, has placed a great deal of strain on the practices, identity and memory of the culture because of a history of marginalisation and suppression.

BOPHUTHATSWANA
NON-INDEPENDENT BANTUSTAN

BOTSWANA

MAFIKENG

TRANSVAAL PROVINCE

ORANGE FREE STATE

NATAL

THABA 'NCHU

BLOEMFONTEIN

LESOTHO

CAPE PROVINCE

N

0   100   200
km

FIGURE 12: Bophutahatswana 1980's

SELIBA RESERVE

BOTSHABELO

KROMDRAAI

VOORTREKKER MONUMENT

LENGENA RIVER

TO BLOEMFONTEIN

■ NEW THABA 'NCHU DISTRICT BOUNDARY

■ OLD THABA 'NCHU DISTRICT BOUNDARY

N

0   10   20
km

FIGURE 13: Old Settlement boundary compared to the new boundary

BOPHUTHATSWANA

TO BLOEMFONTEIN

THABA 'NCHU

TO MASERU

THABA PHATSWA

BOPHUTHATSWANA

■ COLOURED VILLAGE

■ THABA 'NCHU VILLAGES

■ BLACK TOWN

■ WHITE TOWN

--- RAILWAY

— MAJOR ROAD

N

FIGURE 14: The Thaba 'Nchu district, Bophuthatswana 1980's

SITE

VICTORIA ROAD

FIGURE 15: Map of Thaba 'Nchu September 1892. (2/362: Free State Archives)

Generaal Plan

VAN ERVEN
in het Dorp

MOROKA

vroeger genaamd

THABANCHO

Gemeten door my

Gouw.t Landmeter

Current setting of Thaba 'Nchu with site

SITE

Old Markt Plein
in Figure 15
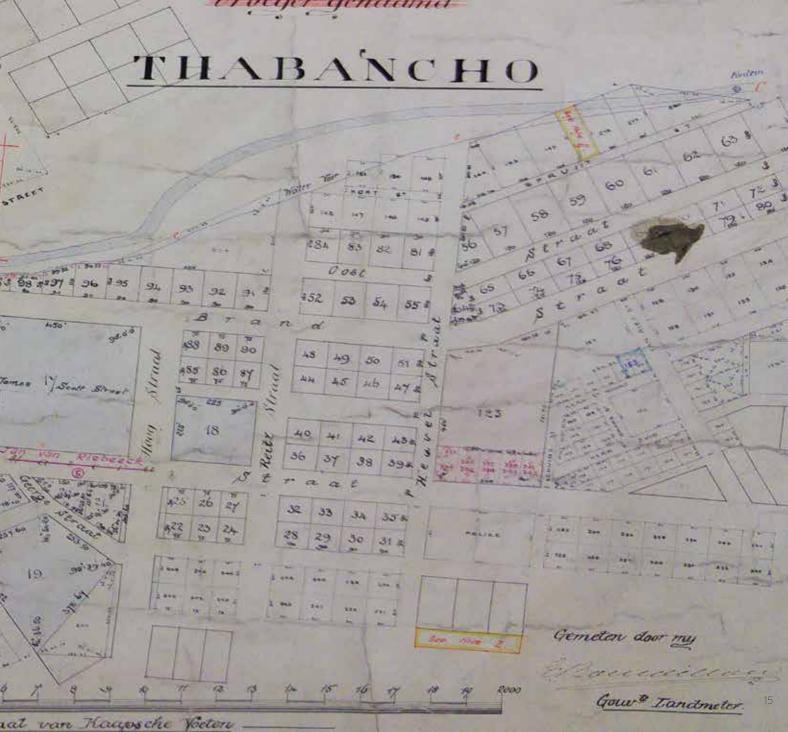
FIGURE 16: Map of Thaba 'Nchu during Apartheid,
August 1980. (3/353: Free State Archives)

	BUSINESSES
	BUSINESS CLOSED
	OFFICES & SIMILAR USES
	INDUSTRIES
	GARAGES
	HOTELS & FLATS
	STORAGE PLACES
	RAILWAY LINE
	CHURCHES
	HOUSES GOOD
	HOUSES UNDER CONSTRUCTION
	PREFABRICATED HOUSE
	RUIN
	HOUSE EMPTY
	WATER TOWER
	HOUSE REASONABLE
	HOSUE BAD

TIMELINE

FIGURE 17

Figure 18: View of Wesleyan mission station, Thaba 'Nchu in 1835 (Schoeman, 1991:49).

FIGURE 19

FIGURE 20

FIGURE 21

FIGURE 22

1823

Weslyan Methodist church established missionary station at Platberg by missionaries Broadbent and Hodgson for the Barolong boo Sekela. The tribe moved from Platberg to the Caledon River area for more space (Venter, 1960: 7).

1833

The Barolong and missionaries established themselves at Thaba Nchu (Venter, 1960: 7)

On the 6th of December King Moshoeshoe sold the land to the missionaries, on behalf of the Barolong, for 7 oxen, one heifer, 2 sheep and one goat. The land purchase was successful with the signature of King Moshoeshoe and Moseme as one party and Rev. James Archbell, Edwards and Jenkins as the parties on behalf of Chief Moroka (Molema, 1987: 36).

15 000 people left the Caledon area to Thaba 'Nchu, which included Barolong, Griquas, Koranas, and new Zealanders, under Chief Moroka. The group chose a site to settle 3.2km west of the hill Thaba Nchu, known back then as the black mountain, the highest hill in the Free State. Molema describes the mountain as majestically dominating the landscape, which seems to beckon silently. (Molema, 1987: 37)

1834

The missionaries helped in establishing infrastructure in the newly found settlement through the construction of schools, houses and churches. The first black shool in the Free state was built in 1834.

1835

Louis Trichardt led the first group of Voortrekkers through Thaba 'Nchu.

1836

Thaba 'Nchu had become a gathering space for the Voortrekkers. Missionary James Archbell and Chief Moroka welcomed Piet Uys and the Voortrekkers led by him. Piet Uys built a monument, a place known as Uys klip, as a symbol of their respect and gratitude for the Barolong (Venter, 1960: 8).

In May 1836, a friendship developed between Andries Potgieter and Chief Moroka. The group of Voortrekkers under Potgieter moved on to Vetrivier, where the battle of Vegkop occurred between the Voortrekkers and the Matabele. The missionaries and Barolong aided the Voortrekkers with sorghum and corn and brought them back to Thaba 'Nchu.

The Maritz trek arrived in Thaba 'Nchu by the end of 1836, who were also welcomed by the English and Barolong.

Wagon circles were frequently visited by the English and Chief Moroka. Smit writes that it is pleasant in Thaba 'Nchu. The people are welcoming with a good missionary house, printing business and school (Venter, 1960: 9).

X

1837

The Bechuana District came into being (Schoeman, 1991: 42). Thaba 'Nchu was claimed to constitute the largest settlement in South Africa after Cape Town, because of the large number of Barolong who settled there (Schoeman, 1991:31).

1839

The arrival of Giddy at Thaba 'Nchu was significant. He was a qualified printer that enabled the mission station to utilise its printing press and produce books, pamphlets and readers for the schools and congregations. The annual report states that the first printing press in the Orange Free State was set up in Thaba 'Nchu. Furthermore, it was noticed that many people exchanged the native kaross for the European dress and the decline of the practice of Bechuana customs and ceremonies are evidence of the colonial influence on the native people (Schoeman, 1991:38).

1840

Mr Giddy built a chapel from substantial brick walls, with a pole roof thatched with rushes. A broad building cannot be easily erected in this area because of the lack of wood in, therefore the chapel was built in the form of a cross (Schoeman, 1991:69). The walls are sufficiently high with no ceiling, and the whole is built in a style which accords with the views of Giddy as to what an African chapel ought to be. The plan of the church is in harmony with the character and habits of the native people (Schoeman, 1991:70).

1841

The Tshidi, Ratlou and Rapulane Barolong departed from Thaba 'Nchu (Schoeman, 1991:108).

1843

James Cameron described Thaba 'Nchu as having a very imposing effect. The settlement is a vast assemblage of houses teeming with inhabitants, but widely different from European town.

No splendid fanes, no towers or spires, no public buildings to serve the ends of other justice or benevolence greet the heavens, a heap of Bechuana huts jostled together without any apparent order and their indispensable appendages-cattle folds- make up the scene (Schuler, 1965: 21).

By 1843, the good relationship between the English and Afrikaans was forgotten. By this time, the Cape colony had an agreement with King Mosjesj to have the area between the Orange River and the Caledon, which included Thaba 'Nchu. This agreement was the start of boundary disputes between the Barolong and Basotho's.

1847

James Cameron was now stationed at Thaba 'Nchu Bechuana Mission Station. In this year another church was erected. Cameron appointed workers (inhabitants of Thaba 'Nchu) by classes, each class a week in rotation to quarry stones for the church walls (Schoeman, 1991:96).

FIGURE 23

1848

Sir Harry Smith started claiming land for the Colony, this action was not appreciated by the Boer community.

William Shaw wrote: 'the native town of Thaba 'Nchu has extended; the people have erected many stone walls and enclosures, and houses of a superior description' (Schoeman, 1991:97).

According to Cameron, (Schoeman, 1991:98) chief Moroka, Sikonyele and Karlous preferred to be under British authority as the only way of securing them the possession of their lands, of which the Dutch farmers seem disposed to deprive them.

FIGURE 24

1849

Henry Warden drew up the boundary lines between Basotholand and the English, also for Thaba 'Nchu. (Venter, 1960: 13).

1850

The 1850's prove to be the years of great unrest and distress for both missions of the Bechuana District and the area in which they are situated in (Schoeman, 1991:101).

Chief Moroka II succeeded in maintaining an independent Rolong state between the Boers and the Basotho's, eventually as an enclave in the Free State territory during unrest between the Boers and missionaries (Schoeman, 1991:121).

1853

As a result of the boundary disputes, many houses and kraals were left desolate, only the ruins remained.

The missionaries established new churches and schools were re-established. An article in *The Friend* claimed that the church has a gallery and has a chapel fit for functions (Venter, 1960: 29).

FIGURE 25

1854

Great Britain handed over its authority to the Transorange territory to the Boer population, and the Republic of the Orange Free State was established (Schoeman, 1991:118). Tension grew between the Republican Afrikaans and English, also among the among natives (Schuler, 1965: 15).

By now the Wesleyan era had ended and the Bechuana District ceased its independent existence (Schoeman, 1991:121).

FIGURE 26

1858

By 1858, the missionaries evacuated Thaba 'Nchu and left buildings in ruins because of the unrest between the Afrikaans and English.

FIGURE 27

1865

Anglicans established mission stations in Thaba 'Nchu (Venter, 1960: 15).

Schools were built from 'rousteen' (Venter, 1960: 31)

War was declared between the Free State republic and the Basotho's.

FIGURE 28

1960'S

1913

1884

Thaba 'Nchu was an-nexed by the Free State. Many of the Barolong left as a result of the annex-ation (Venter, 1960: 17).

A new church was built by Rev. Archbell, 30x6m, with gum poles, clay and carpets (Venter, 1960: 21).

Thaba Nchu was clas-sified as the homeland for Tswana people under the 1913 Natives Land Act, which resulted in the forceful removal of in-habitants. Farmers were denied claim to their fer-tile lands, with the most healthy livestock auc-tioned off for very little. The farmers were relo-cated to the undesirable lands, while the govern-ment claimed the more desirable lands for them-selves.

FIGURE 29

1940'S

A request was made by the traditional council to the governement to grant the people of Tha-ba 'Nchu more land to support their dying live-stock and to reclaim the Tribal land that once be-longed to them.

Farmers in the Orange Free State instigated a reduction programme concerning their labour-ers. The labourers that were let go because of old age influencing their productivity, were forced into the area of Thaba 'Nchu. This action insti-gated the formation of Kromdraai, a 'location', a product of Apartheid.

Since the devastating events that occurred in Thaba 'Nchu, residents have forgotten their voice. The voice of Tha-ba 'Nchu has been buried under the rubble of colo-nisation and Apartheid.

Presently, inhabitants know little of the past which could potentially give them a voice. The voice of the past should be heard inorder to re-store a forgotten identity and provide a hope for the future for the people living in the place. Every person has a right for their story to be heard, and not be muted to a generalized idea about a place.

FIGURE 30

RESEARCH

Centred around a method of exploratory re-search, the objective of this dissertation leads to investigations grounded in problem statements which sought to obtain a final design solution. The problem statements address for whom the design is intended, where the design will be- how the *gestalt* of the design is influenced and how the design is put together with regards to tectonics. These facets pertaining to the investigation will relate to the sources of knowledge that influence the sense of typology, topology, morphology and tectonics that relate to the structure itself.

The research originated from my curiosity about Thaba 'Nchu, including, the story behind the place, its history, inhabitants and their stories, why it is perceived by so many as a ruin or a product of Apartheid, and how the voice of Thaba 'Nchu can be heard. In order to address these questions, different sources of knowledge were explored in an attempt to develop a design methodology that is specific to this design project.

The exploratory research sources employ the following methods:

- An investigation into the history of Thaba 'Nchu gave rise to certain ideas and questions pertaining to the present situation in the place.

METHODOLOGY

- Interviewing three inhabitants of Thaba 'Nchu, all of whom are from different generations, highlighted the present challenges faced by the community. These interviews lead to conceptual notions that would augment the essence of the proposed project.

A touchstone, which identifies the essence of the proposed project's intentions was realized, which led to the development of certain concepts. In turn, this generated a conceptual framework.

The conceptual framework was used as a tool to organise initial ideas and concepts. These ideas were realized through precedent studies, explored and grounded in theory.

The analysis of the architectural precedent studies pertaining to the proposed project resulted in a literature review which includes a personal, cognitive and interpretive analyses that proved to reinforced the outcomes of this dissertation.

This analysis includes a investigation into the site that pertains to quantitative information and which deal with the real measurements I conducted on site. A cognitive analysis realized my personal experience of the site and context.

1.

P R O B L E M
S T A T E M E N T S
&
A I M S

INTRODUCTION TO THE PROJECT

DEFINING THE PROBLEM STATEMENTS
THROUGH AN UNDERSTANDING OF THE
THE VARIOUS ELEMENTS THAT ACCEN-
TUATE CERTAIN DESIGN CHALLENGES
NAMELY:

TYPOLOGY
TOPOLOGY
MORPHOLOGY
STRUCTURE

2.

R E S E A R C H
C O M P O N E N T S

**EXPLAINING THE INVESTIGATIVE
PROCESS:**

DEMONSTRATING A DISCOURSE RE-
GARDING RESEARCH, KNOWLEDGE,
COMPREHENSION, APPLICATION AND
ANALYSIS THROUGH THE INVESTIGA-
TION OF:

BUILDING TYPOLOGY
PROPOSED SITE & HISTORY
RELEVANT PRECEDENTS

4 .

EVALUATION &
REFLECTION

3 .

DESIGN &
TECHNICAL
SYNTHESIS

A PERSONAL REFLECTION OF THE DESIGN PROCESS

RECOLLECTING THE PERSONAL CHALLENGES FACED THROUGHOUT THE PROCESS OF THE DISSERTATION AND AN EVALUATION OF THE FINAL PROPOSED PROJECT.

A DESCRIPTION OF THE DESIGN PROCESS

AN ILLUSTRATION OF THE VARIOUS DEVELOPMENT PHASES WITH THE INTENTION OF MOVING TOWARDS A FINAL DESIGN PROPOSAL, BY USING THE KNOWLEDGE GAINED DURING THE INVESTIGATIVE PROCESS.
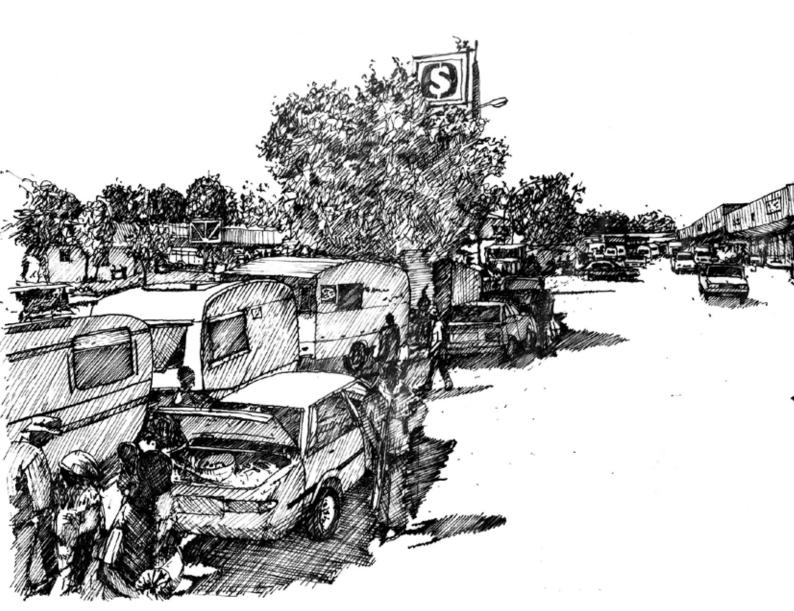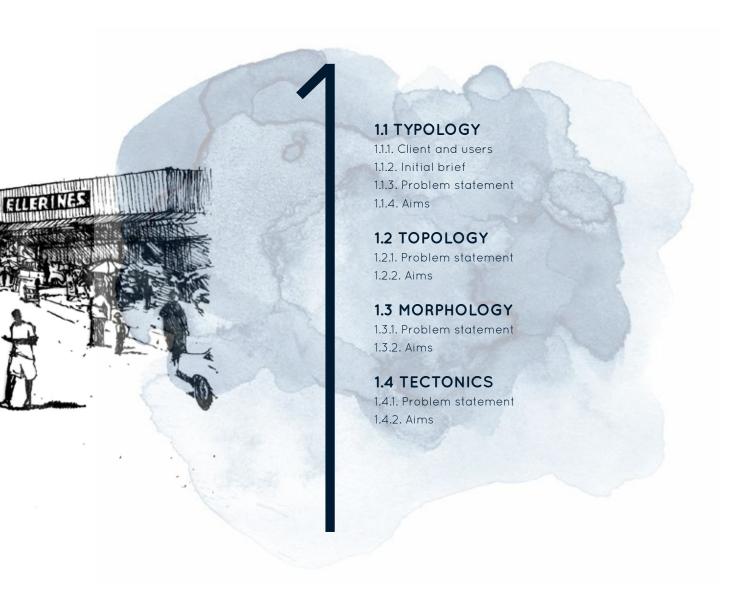
FIGURE 31: Perspective of Brand Street 2016

C H A P T E R

1

PROBLEM STATEMENTS & AIMS

An investigation into the history of Thaba 'Nchu, it's topology, as well as the typology of museums and archives in post- Apartheid South Africa was the start of defining the problem, as well as the aims of this dissertation. With regard to this treatise, the initial aim was to design a museum and archive in the context of Thaba 'Nchu which would be committed to the preservation of its historical documents, collecting oral history within the settlement, and showing how such an institute can be made relevant in a sparsely-urbanised setting by encouraging public interaction and a willingness to learn about their history.

The initial direction of the thought for this project originated from an analysis of the client's needs as well as the history of Thaba 'Nchu. Only once the user and site of this precinct had been investigated, were the consequential parameters, aims and challenges identified.

Significant consideration went into the selection of the site in order to accommodate and augment the intention of the proposed building typology. The challenges of the project which brought to light the parameters as well as the design of the precinct, were mostly presented by the site. The size and, nature of the site, as well

as the existing structures on it, led to certain decisions in order to be sensitive to the language of the context and its history, without losing requirements pertaining to the building type.

The investigation into the typology and topology of the proposed project resulted in certain indications that pertain to the morphology of the building. Further investigation into the morphology led to principles of form-giving that assisted in developing a unique approach, in contrast to the conformist ideas of designing museums and archives. This presented additional challenging in the design of the precinct. As far as the tectonics of the building are concerned, structural systems were selected with regard to their relation to the conceptual notions of the project, which reinforced the ideas on morphology.

This process of assessing and investigating was non-linear in that alternating between the disclosed implications and considerations of the topology, typology, morphology and tectonics moulded the decisions that would finally resolve and shape to the proposed project.

TYPOLOGY   +   TOPOLOGY   →   MORPHOLOGY

1.1 TYPOLOGY

The proposed typology is a museum and archive. The classification of the building type brings about certain standards and implications to be met or questioned. The client, who arose out of the building type and its content, proved to be vital in the project's brief development. A list of requirements, together with a mission statement received by the client, determined the aims of the project.

1.1.1 CLIENT

The National Museum of Bloemfontein, funded by the Department of Arts and Culture, requires a house of memory that will protect, conserve and exhibit the history of Thaba 'Nchu. The assignment of the institution will be to collect oral history from the Museum's Anthropology Department, as well as from the inhabitants of Thaba 'Nchu and the 49 villages surrounding the settlement.

USERS

The proposed project will provide a place for the historical documents of Thaba 'Nchu to be conserved and protected, for oral history to be recorded and processed, and provide an educational platform to present the histories to the public. The objective of the project is for the building to be utilised by anthropologists collecting the history of Thaba 'Nchu; volunteers to be trained to collect oral history; visitors researching the history of the place or people; and the general public who are interested in the heritage of Thaba 'Nchu or who want to share their stories. Once the history of a place is better understood, more importantly, the stories of its inhabitants can be heard and a better understanding of the character of a place is gained, ultimately adding to the identity of individuals who have been forgotten, as well as to the community of Thaba 'Nchu
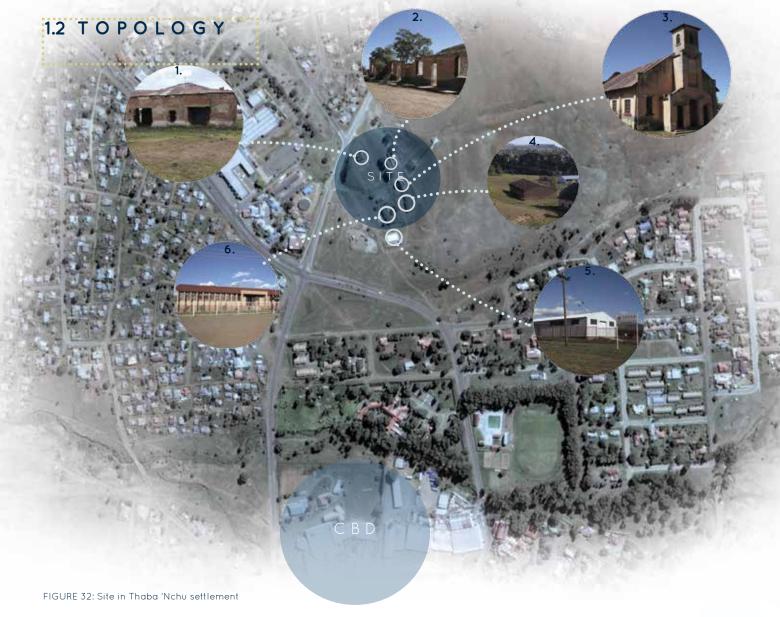
1.1.2 BRIEF

The client requested the design of a precinct with a House of Memory that would function as a museum and archive. The House of Memory comprises of exhibition spaces that narrate the history of Thaba 'Nchu and displays oral history by means of audio-visual components; facilities that are suitable for historical research as well as recording oral history and training persons to record oral history; administrative amenities that include space for the restoration, organisation and storage of historical documents; and an auditorium, a first for Thaba 'Nchu. The client also requires the project to infiltrate Thaba 'Nchu on an urban level, creating a historical awareness within the inhabitants of Thaba 'Nchu.

1.1.3 PROBLEM STATEMENT

The work conducted by qualified experts with regard to preservation and restoration, as well as the exhibition and storage spaces of the historical documents requires certain conditions to ensure that the material is conserved. These conditions include keeping the documents secure, and providing optimum temperature and light regulation to ensure that there is no deterioration of the historical documents. Conditions in exhibition spaces should take into account human comfort. The size and organisation of the museum and archive are relative to the number of historical documents and qualified staff utilising the building. As the project houses context/ locally specific content, it is crucial to consider the context and content during the design process. In addition, museums and archives, especially in a South African context, are introverted and only accessible to a select few in society, reinforcing the ill-informed notion that more rural and poor communities do not have history to tell, therefore distancing these communities from their heritage and part of their identity.

1.1.4 AIMS

The most significant objective of the project with regard to typology is to create a design that realises the client's needs concerning the functionality of the project, while addressing the preconceived ideas of museums and archives in a post-Apartheid South Africa. The museum and archive needs to be accessible to all members of society, and extend into Thaba 'Nchu to ensure that the community is educated on the local history that has contributed to the character of the place. The museum should attempt to create memorable spatial experiences, which vary relative to each story that is narrated.

1.2 T O P O L O G Y

FIGURE 32: Site in Thaba 'Nchu settlement

The proposed site for the project is on the corner of two major roads in Thaba 'Nchu. The site is located to the north of the CBD of Thaba 'Nchu, which serves as a threshold between the middle class of the settlement and the poorer class. The site itself consists of the ruins of an old chief house (1) the first Black school in the Free State (2) and the remains of the Ereskuld NG church (3). The structures presently functioning on the site are the tactic offices of the SAPS (4), the traditional council (6) and the SASSA offices (5).

1.2.1 P R O B L E M   S T A T E M E N T

The site itself poses direct challenges to the design as a result of the steep slope (approximately 15 m) on which it is situated. Another aspect to be considered with regard to the site is the old ruined structures which pose questions of conservation and necessity and which may present opportunities to be researched relating to re-purposing the ruined structures. The built context also presents challenges concerning the relationship between varying architectural languages, as well as the relationship between nature (prominent hills in Thaba 'Nchu) and the placement of structures on the topography which will directly influence the project. Furthermore, many pedestrians move through the site as it forms a connection between the residential area and the centre of Thaba 'Nchu, as well as the transportation nodes.

1.2.2 A I M S

The primary objective of the design in terms of topology is to ensure that the project engages responsibly with the topography of the site to guide the design, without the design dominating the landscape, the historical structures, or the culture and socio-economic profile of the people of Thaba 'Nchu. The proposed architectural intervention should relate to the built environment in terms of the architectural styles evident in the context. In addition, the pedestrians moving through the site should be considered by the development of public, interactive spaces that will enhance the daily rituals of the majority of the inhabitants of Thaba 'Nchu walking to the transportation nodes or to work.

1.3 MORPHOLOGY

1.3.1 PROBLEM STATEMENT

Traditionally, museums and archives are introverted structures. They are simple and predictable, uninviting and exclusively used by researchers or those who can afford the entrance fee. The post-apartheid milieu of South Africa has proved to disregard the stereotypical notion of these archetypes with more interactive and explorative structures relative to the place and context in which they are situated. Further investigation should be undertaken with regard to making museums and archives more accessible and relevant to those who live in more rural settlements, such as Thaba 'Nchu. Furthermore, Thaba 'Nchu comprises of various architectural languages that emanated from its dynamic past, including the colonial and apartheid influence on settlement. Architectural identity is no longer evident within the settlement, which may, ultimately, contribute to the character of the place.

1.3.2 AIMS

The main objective with regard to the morphology of the architectural intervention is to suggest a new architectural language to close the gap between the historical and modern architectural styles evident in Thaba 'Nchu, through the design of the House of Memory for the resurgence of Thaba 'Nchu. The aim of the new architectural language is, ultimately, to encourage meaningful place-making through extensive research on the various building styles found in the current building milieu in Thaba 'Nchu along with their history. Moreover, the contemporary ideas of museums in a post-apartheid context need to be integrated into the design to encourage social interaction, an absence of economic segregation, and the avoidance of the tendency of museums and archives to be introverted and exclusive.
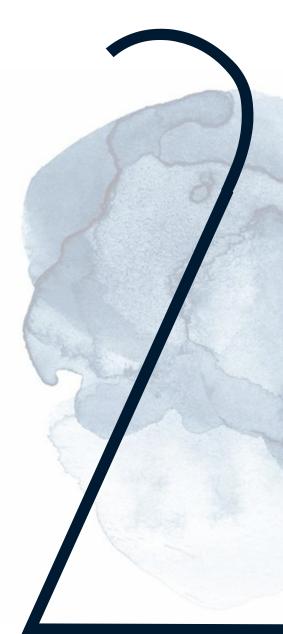
1.4 TECTONICS

1.4.1 PROBLEM STATEMENT

The structures of museums and archives as institutions are predictable in that they are predominantly built to represent the era in which they were constructed and the architectural vernacular of the place in which they are located. Challenges are posed as to the use of local material in innovative ways, while considering the level of local skill available. In addition, certain constraints pertaining to building height, construction boundary, etc. determined by the local municipality and requirements concerning construction, as well as safety and energy efficiency of the design, need to be met in an inventive way in order to overcome a repetitive design in the architecture of a place.

1.4.2 AIMS

The structure should be realised as a result of the concept of the design which will reflect and enhance the narratives portrayed within the museum. Every aspect concerning the tectonics of the project, namely the detailing and structural considerations, should portray the conceptual approach of the design. Furthermore, the structural components and materials should engage responsibly with the context in terms of using local material and labour, while adhering to the building and spatial requirements of a museum and archive, which will ensure responsible building in the community and a structure that functions at an optimum level relative to its function. Consequently, the main objective concerning the tectonics of the project will be finding a way to synthesise the conceptual approach with regard to the tectonics of the museum, and the practical aspects of construction.

2

FIGURE 33: City Centre of Thaba 'Nchu

2.1 INTERVIEWS

MASEGO MOROKA

Masego is the grandson of James Moroka, a descendant of the royal family. On 3 December 2015, he introduced the researcher to the tribal council and various historical beacons in Thaba 'Nchu. He emphasised the need for the inhabitants to be educated in their history and to voice their stories, which will contribute to the remembrance of a forgotten identity.
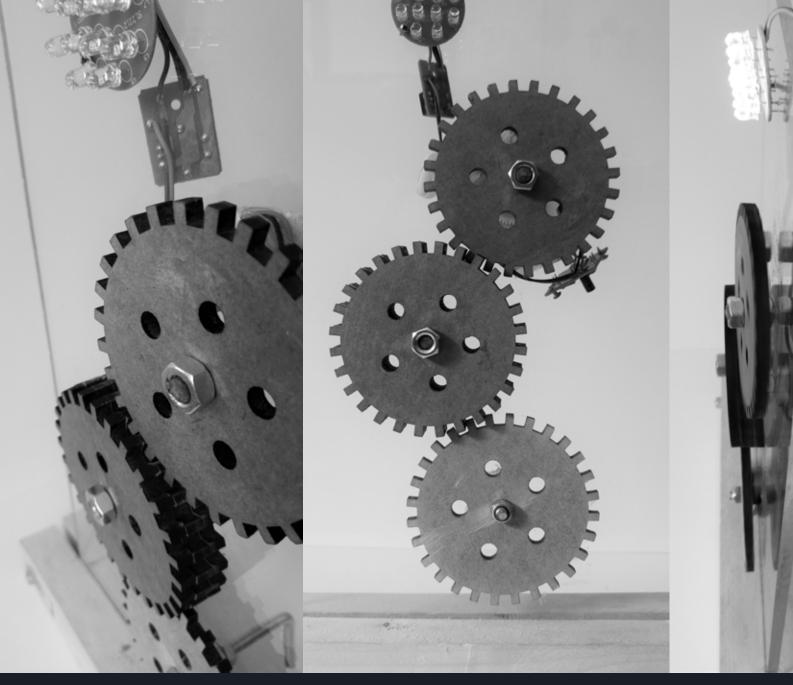
REVEREND MOTHIBI

On 22 January 2016, Rev. Mothibi took the researcher to every historically-significant place in Thaba 'Nchu. He spoke about the history of his people and highlighted some of the challenges faced by the place as a result of the Basotho wars, colonialism and apartheid, which led to land claims, forceful removal and relocation.

AMY GOITSEMODIMO

Amy Goitsemodimo, an anthropologist at the National Museum in Bloemfontein, instigated the project aimed at collecting oral history from the villages surrounding Thaba 'Nchu. Interviews conducted on 20 February and 16 April 2016 led to the development of the brief and project programme.

2.2 TOUCHSTONE

The Oxford Dictionary describes a touchstone as 'a piece of fine-grained dark schist or jasper formerly used for testing alloys of gold by observing the colour of the mark which they made on it' (Oxford Dictionary, 2016). In relation to this investigation, a touchstone is used to physically portray the essence of the proposed project in which every idea is tested by the touchstone.
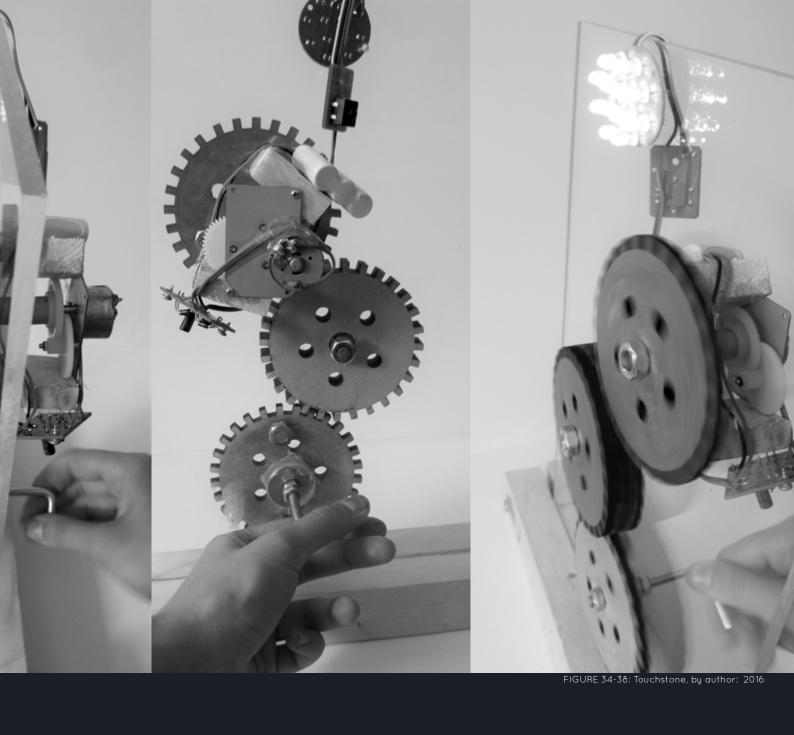
The main purpose of the House of Memory is to serve Thaba 'Nchu as 'Memory Machine'. This machine aims to revive the story of the place by collecting and preserving the past and present stories of the inhabitants that have been forgotten so that the voice of Thaba 'Nchu can be heard again.

The initial idea of this memory machine originated from the historical investigation into Thaba 'Nchu as well as from the interviews of those who live there. It became clear that fragments of memory related to the

place had been forgotten and that the inhabitants of Thaba 'Nchu had been in search of the forgotten pieces of their story and identity.

The touchstone has three gears that represent the past, present and future voice of Thaba 'Nchu. Presently, these facets are motionless or static. Palasmaa is of the opinion that we live in worlds where the past, present and future constantly fuse together (Pallasmaa, 1995:310).
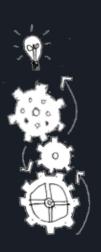
These facets need to fuse together in order to 'revive' the story of Thaba 'Nchu which will help to restore a forgotten and buried identity.
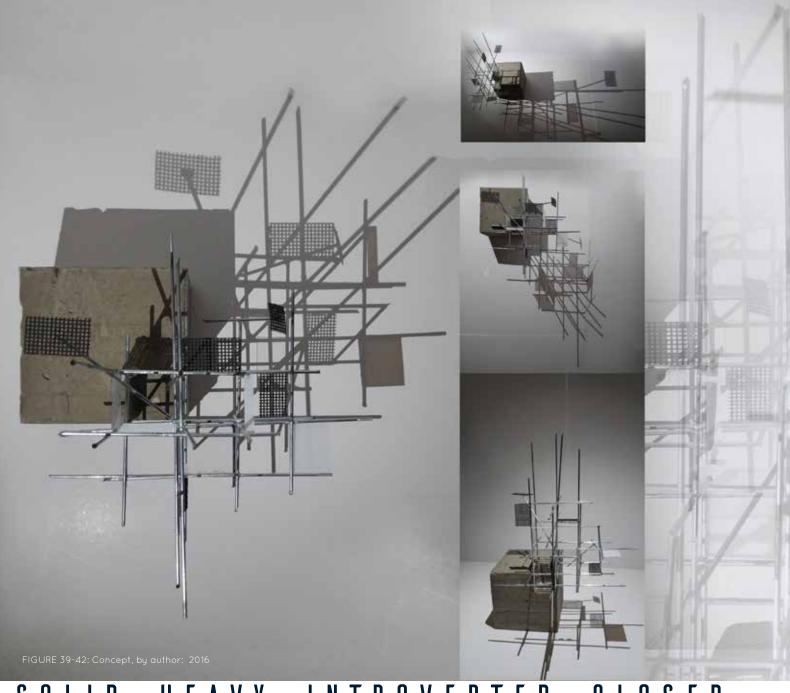
The 'voice' of the past is the lowest gear, connected to the lever of the memory machine, needed to set the other gears, or 'voices' in motion. The lever represents the proposed architectural intervention which is rotat-

ed by the ordinary stories of those who reside in Thaba 'Nchu. The motion turns the 'voice' of the past which, in turn, rotates the present and future gears. The power transferred by the stories which fuse the past, present and future together, finally illuminates a light. The light represents the story and identity of Thaba 'Nchu, lit up by the ordinary narratives of those who live in the place, through architecture.

The touchstone illustrates the mnemonic system needed to revive the identity of the place, forgotten as a result of the effects of colonisation and apartheid. In its motionless state, the system is dead, forgotten. Once the machine is set in motion through ordinary stories, the gears interlock with one another, resulting in motion that revives memories through stories which, ultimately, restores the story or identity of the place and which provides a sense of hope for the future, while the past is remembered and the present, celebrated.

FIGURE 39-42: Concept, by author: 2016

SOLID . HEAVY . INTROVERTED . CLOSED
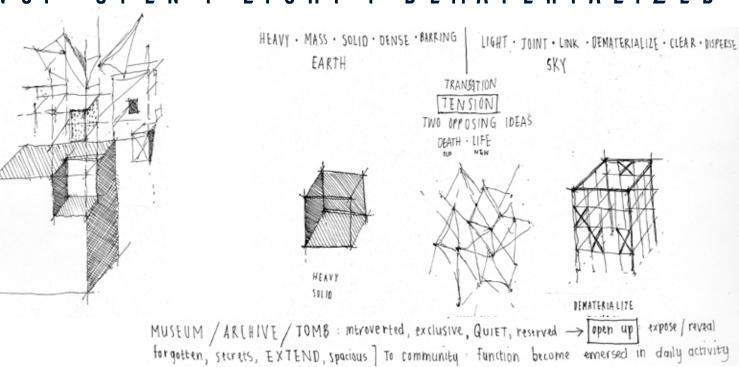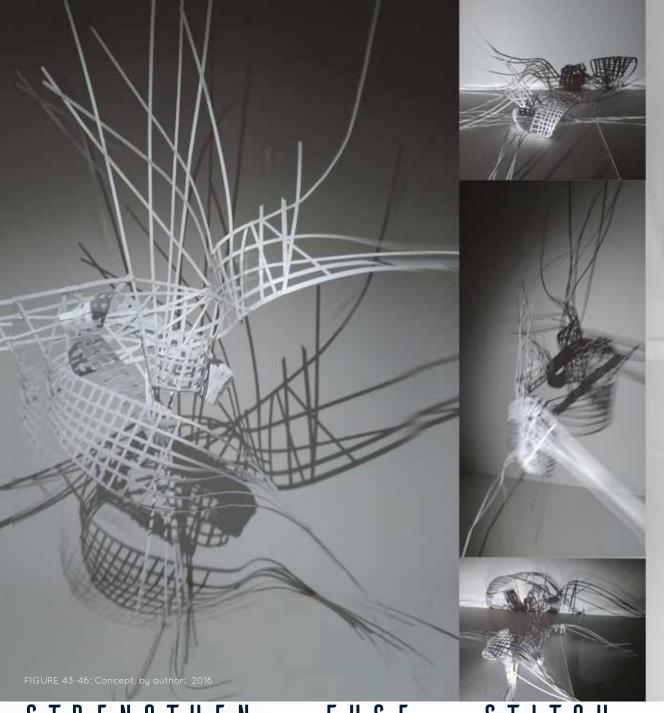
The conceptual ideas in regards to the treatise are the initial notions explored, which developed out of the touchstone that systematically revives that which is buried and forgotten in Thaba 'Nchu, through ordinary stories of those who live in the place.

The first concept is based on using that which is buried and forgotten as a foundation for the present and new. The concrete block represents the past, i.e. that which is buried. It is stereotomic, and illustrates that which cannot be changed (it is a given). The stereotomic block is needed as a foundation for the tectonic, from which the unpredictable new develops. The unpredictable new should be rooted in the past in order to remain stable and immovable, and to provide a space in which the future can develop.

The object also represents the way in which museums, which are typically introverted and bury the stories of the past even deeper, should fragment and extend into the place so that the function becomes part of the daily rituals and stories of the community in order to revive a buried identity by dematerialising the heavy and barring into that which is light and accessible.

VS. OPEN . LIGHT . DEMATERIALIZED

HEAVY · MASS · SOLID · DENSE · BARRING   LIGHT · JOINT · LINK · DEMATERIALIZE · CLEAR · DISPERSE
          EARTH   SKY

TRANSATION
TENSION
TWO OPPOSING IDEAS
DEATH · LIFE
   OLD   NEW

HEAVY
SOLID

DEMATERIALIZE

MUSEUM / ARCHIVE / TOMB : introverted, exclusive, QUIET, reserved → open up expose / reveal
forgotten, secrets, EXTEND, spacious] To community : function become emersed in daily activity

STRENGTHEN . FUSE . STITCH . KNOT

WEAVE__ BIND · INTERTWINE 3 CULTURES INTO STRONG FABRIC.¹ DIFFERENT PARTS= STRONG WHOLE

CONNECT · STRENGTHENING · ATTACH · LINK · STITCH · MEND · REPAIR
CULTURES WOVEN TOGETHER = COLLECTIVE STRENGTH OF COUNTRY

· Weaving as craft · cross cultural DIFFER in pattern + technique · overlapping systems · Beyond surface
DEEP. WEAVE old stories /RITUALS with NEW /present stories.

FUSION of OLD + NEW

INTERCONNECT
NETWORK
MOVEMENT?

The second concept relates to the first conceptual idea. The notion of weaving was derived from the gears in the touchstone that interlock with one another. The interlocking speaks of the relationships within the project which are presently absent in Thaba 'Nchu.

The stories of ordinary people, realised through the House of Memory, should be the element that brings together the old and the new, finally weaving them together.

To weave is to bring together, to link that which is different into a collective, and yet still be able to recognise that which is different. The House of Memory will attempt to weave the old stories of Thaba 'Nchu with the new stories of its inhabitants. The weave forms a knot which illustrates the whole story and forgotten identity of the place, formed by the independent pieces of forgotten old and new stories.

. JOINT . NETWORK . CONNECT . MEND
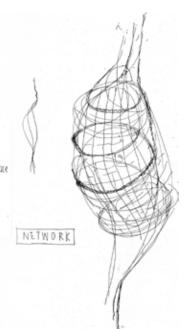
TIGHT STRONG

JOINT
PATTERN
CONNECT

→ STORIES
CULTURES WOVEN TOGETHER = COLLECTIVE STRENGTH OF COUNTRY
· Weaving as craft · cross cultural DIFFER in pattern + technique · overlapping systems · Beyond surface DEEP · WEAVE old stories /RITUALS with NEW / present stories.
FUSION of OLD + NEW

BIG KNOT
PRIMITIVE JOINT

NETWORK

FIGURE 47-50: Concept, by author: 2016

MOTION . RHYTHM . FREQUENCY . LAYER

DYNAMIC from STATIC | CREATE NEW FROM DAMAGED OLD
DEAD TO LIFE
OLD   NEW

MOVEMENT · VARIATION · MACHINERY · PROCESS

DYNAMIC   STATIC
ACTIVATING · ELECTRIC · LIVELY   CHANGELESS · CONSTANT · FIXED · STABLE · STAGNANT
· MOVING · LIGHT · LIFE   · FORGOTTEN · DEAD · STEREOTOMIC · HEAVY
· RHYTHM · FLOW   · STILL · LIGHT
· LAYERS · MOTION
LIGHT → SHADOW → MOVENT
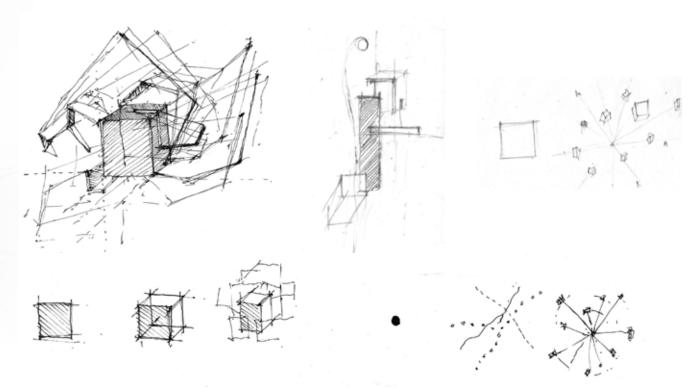
A narrative is a story or account of events, experiences, or the like, whether true or fictitious, presented in a sequence of written or spoken words or in a sequence of 'moving' pictures.

The third concept includes the notions of both the 1st and 2nd which were derived form the touchstone. The touchstone predominantly illustrates a system that requires motion in order to work and to switch on the light and, in so doing, to revive the forgotten. The last concept moves the dead, changeless, stagnant and forgotten into that which shows motion, time, change, movement, variation and frequency. The purpose of the House of Memory is to remember the buried narratives of the past, and to voice the present stories of the people of Thaba 'Nchu.

This object conceptually illustrates the proposed project as a mnemonic system which revives and restores the buried forgotten by becoming the connection between the old and new narratives, fragmenting into the landscape of the place itself. The proposed project is a narrative in itself, a knot, brining together the different stories in order to revive the story and identity of Thaba 'Nchu.

OLD STATIC STORIES INFUSED WITH PRESENT STORIES - REMEMBER
ARCHITECTURE - ADJUST TO LIFE - OUR NEEDS - CHANGE SHAPE - continuous motion = TIME
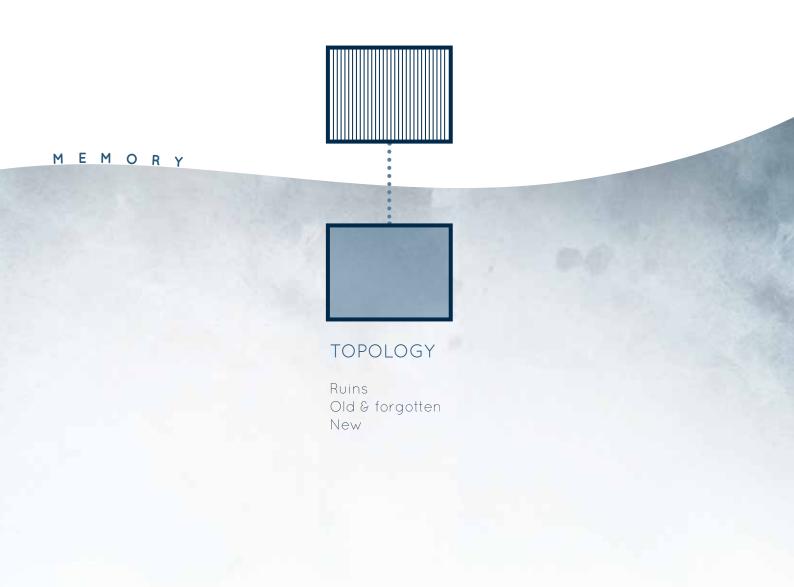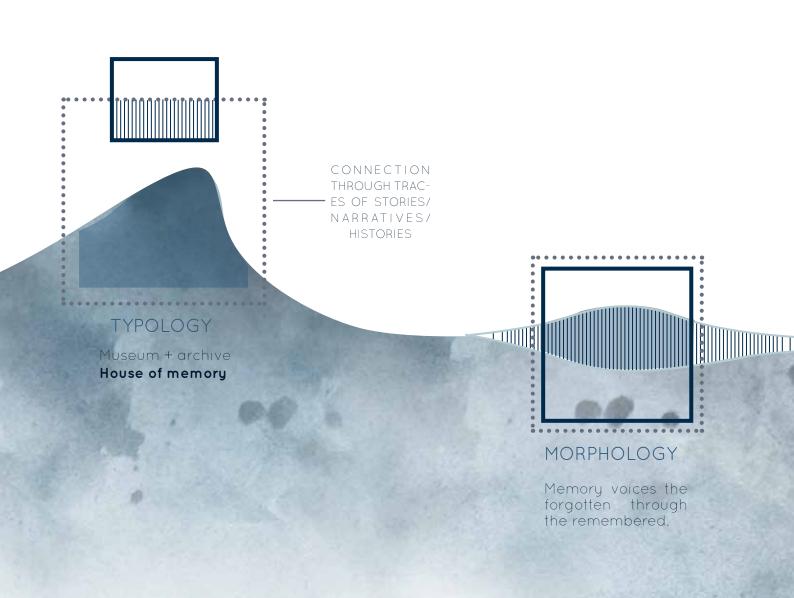↳ New stories
MOVEMENT · FREQUENCY

. LIGHT . MOMENTUM . TIME . RITUAL

2.4 CONCEPTUAL FRAMEWORK

During the investigations, namely research-
ing the history of Thaba 'Nchu, identifying
the challenges of the proposed project, the
interviews conducted, the touchstone and
the conceptual development, certain themes
and personal interests were increasingly em-
phasised. Further research was conducted
on these concepts, which led to the analysis
of certain precedents pertaining to typology,
morphology, topology and tectonics in re-
lation to the proposed project. These prec-
edents provided tangible solutions, which
may reinforce and assist in the development
and resolution of the project, and ensure
that the project is responsible and respon-
sive in its natural and built environment.

MEMORY

TOPOLOGY

Ruins
Old & forgotten
New

CONNECTION
THROUGH TRAC-
ES OF STORIES/
NARRATIVES/
HISTORIES

TYPOLOGY

Museum + archive
House of memory

MORPHOLOGY

Memory voices the
forgotten through
the remembered.

2.5 TYPOLOGY

2.5.1 THE CLIENT & USER

The Department of Arts and Culture (DAC) protects and promotes the heritage of South Africa in the form of monuments, theatres, museums and cultural centres. The vision of the DAC is to preserve and develop the culture of the country to guarantee unity across various cultures and communities, while providing economic growth through the creation of job opportunities in South Africa.

The DAC supports the country's constitution with regards to section 16, that encourages the right to freedom of expression, which includes: freedom of the press and other media; freedom to receive or impart information or ideas; freedom of artistic creativity; academic freedom and freedom of scientific research. Section 32 states that everyone has the right of access to any information held by the state and any information that is held by another person and that is required for the exercise or protection of any rights (DAC, 2016: online).

The DAC promotes Museums as 'windows to the natural and cultural heritage of a country' (DAC, 2016: online). There are more than 300 museums in South Africa, including the National Museum in Bloemfontein. The National Museum in Bloemfontein aims to provide heritage resources and a pleasant experience to visitors and academics through quality research, conservation, education and exhibitions. In conjunction with the DAC's Heritage Promotion and Preservation programme, the Anthropology sector of the Museum has instigated the project of collecting history that has never before been recorded in Thaba 'Nchu. The oral history of local inhabitants will be collected in an attempt to reinstate forgotten identity, by reconstructing the story of Thaba 'Nchu.

The process of collecting oral history will provide those working on the proposed project with job opportunities and attempt to encourage social cohesion.

It is for this reason that an additional institute is required in Thaba 'Nchu that will educate, preserve, promote and collect local histories that have never before been heard, a facility where anthropologists can research the historical and present social patterns of the community. The brief of the client involves the construction of a museum that is focused on collecting oral history from the inhabitants of Thaba 'Nchu that requires specialised equipment, as well as research on the history of the place and its people, by archiving historical documents collected from the community. It is essential that the facility provides suitable spaces for the staff, those who share their oral history, and visitors. Furthermore, it should provide suitable conditions for the historical materials that occupy the structure. In terms of architecture, the facility should, simultaneously, reflect the heritage of the place with the contemporary styles, in accordance with the DAC.

INTENDED USERS:

The **Anthropologist** employed by the institution, collecting oral history

The **student** anthropologist in training

The **researcher** interested in researching Thaba 'Nchu's history

The **every-day person** interested in telling their story

2.5.2 SIMILAR BUILDING TYPES

In order to understand the typological implications of the nature of this museum and archive which collects and exhibits history and oral history collected from the community of Thaba 'Nchu, and stores historical documents pertaining to the history of the place, existing architectural examples were studied, mostly in a post-Apartheid South African context.

SAMA, the South African Museums Association, describes museums as public institutions that shape and manifest the consciousness, identities and understanding of communities and individuals in relation to their natural, historical and cultural environments, through collection, documentation, conservation, research and education programmes that are responsive to the needs of society (2014).

Bearing in mind that museums address political and ideological issues that can form public opinions and shape collective memories, much consideration should be given to designing subjective exhibitions in a post-apartheid and post-colonial context that do not favour certain material.

Buildings considered include:

* The Apartheid Museum in Johannesburg
* Jean Marie Tjibaou Cultural Centre in New Caledonia
* Nelson Mandela Heritage Centre in the Eastern Cape

These buildings are analyzed with the proposed design in mind.

2.5.2.1 APARTHEID MUSEUM ROODT & BRITZ PARTNERSHIP, MASHABANE ROSE ARCHITECTS AND LINDA MVUSI
ARCHITECTS 2003 JOHANNESBURG

SIMILAR BUILDING TYPE & POLITICAL CONTEXT:

The Apartheid Museum is the first to narrate the story of Apartheid in South Africa. The Museum is an excellent example of how architecture is used as a tool to convey a certain message and experience to its users. The project extends beyond its '4 walls', where landscaping also becomes an important consideration. "The visitor weaves a route inside and outside of the museum, taking in the history of apartheid, being constantly bombarded by sights and sounds" (Davie, 2005: online).
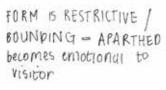
FIGURE 51: The bulk of the exhibition spaces in the building is in a wedge shape, widening toward the end, with walkways on either side (Mashabane & Rose, 2014:15).

FIGURE 54: Seperate entrances for races: architecture augments narrative (Joubert, 2009: 126).

FIGURE 52: 'Pillars' of the country (Joubert, 2009: 126).

FIGURE 53: Material contributes to the experiential quality of exhibitions (Joubert, 2009: 126).

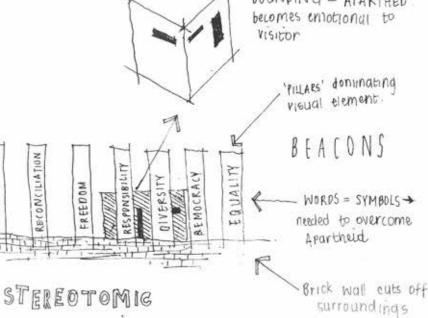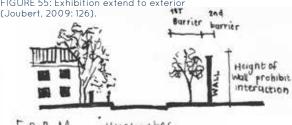FIGURE 55: Exhibition extend to exterior (Joubert, 2009: 126).

FIGURE 56: Stereotomic form (Joubert, 2009: 126).

FIGURE 57: Architectural elements portray parts of the narrative, sketch by author.
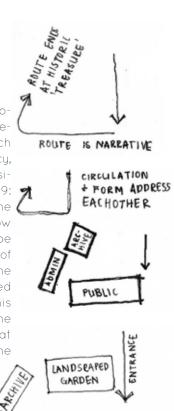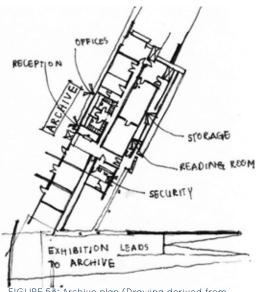
The museum is a definite route, connecting 22 exhibition areas which have been arranged to form a specific sequence. The route takes the visitor through a dramatic and emotional journey, telling the story of racial discrimination and the struggle to overthrow the government. The intention of the museum is to become a beacon of hope, illustrating that South Africa is coming to terms with its past and working towards a future (Joubert, 2009: 126). Artworks become part pf the exhibitions and landscape, voicing personal experiences of Apartheid (Mashabane & Rose, 2014: 14).

Materials used in the architecture becomes part of the Apartheid narrative, seen in the use of the stark contours of stone, the rusted steel, red brick, wood, glass and concrete (Davie, 2005: online).

The project has 7 dominant 'pillars' that represent the Constitution. The pillars represent the fundamental values towards which the country is striving, namely; democracy, equality, reconciliation, diversity, responsibility, respect and freedom (Joubert, 2009: 126). These pillars guide the visitor to the entrance of the museum, illustrating how the museum extends into the landscape and adding to the sensory experience of the Museum. The Museum confronts the visitor with the realities that were faced during Apartheid. Exhibitions augment this through photographs and documents. The museum also has an archive function that stores documents, portrayed visually in the museum.

ROUTE ENDS AT HISTORIC 'TREASURE'

ROUTE IS NARRATIVE

CIRCULATION + FORM ADDRESS EACHOTHER

ARCHIVE / ADMIN

PUBLIC

LANDSCAPED GARDEN / ENTRANCE / ARCHIVE / EXHIBITION / MEMORIAL / SECURITY / RECEPTION / AUDITORIUM

LESSONS LEARNT:

Route becomes the narrative

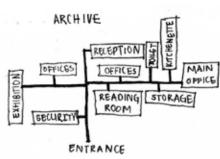Archive is separated from public exhibitions

Architecture is an experiential tool

Landscaping is vital to the sensory experience of the function

Scale and materiality reflect context and intended experience of spaces

Clear, definite route

Circulation design vital to projects success

FIGURE 58: Archive plan (Drawing derived from Joubert, 2009: 126).

FIGURE 59: Arrangement of functions (sketch by author).
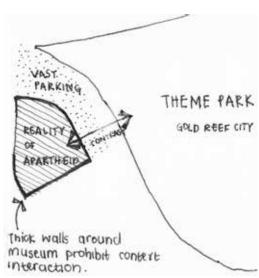
FIGURE 60: Museum plan (Joubert, 2009: 126).

FIGURE 61: Irony of context (sketch by author).

2.5.2.2 JEAN MARIE TJIBAOU CULTURAL CENTRE,
RENZO PIANO 1998 NEW CALEDONIA

SIMILAR BUILDING TYPE & EXPRESSING TRADITION IN A MODERN LANGUAGE

The Cultural centre celebrates the Melanesian Culture of the Kanaks. The project is inspired by this tradition, realized through modern technology. Piano illustrates how architecture can be a threshold between history and the present. An in depth investigation into the Kanak culture, particularly with regard to its history, environment and beliefs, informed the design process (Ondej Zloský: online).

A better understanding of the culture made it possible to design a structure that fit into its context. The culture's intimate relationship with nature is reflected in the way in which the architecture uses the climate and nature to inform its morphology and sustainability. The morphology was also derived from the traditional huts, realised through modern means of construction (Ondej Zloský: online). The project is a cluster of huts with surrounding spaces filled with trees, reminiscent of Kanak villages. The connection between the huts also played
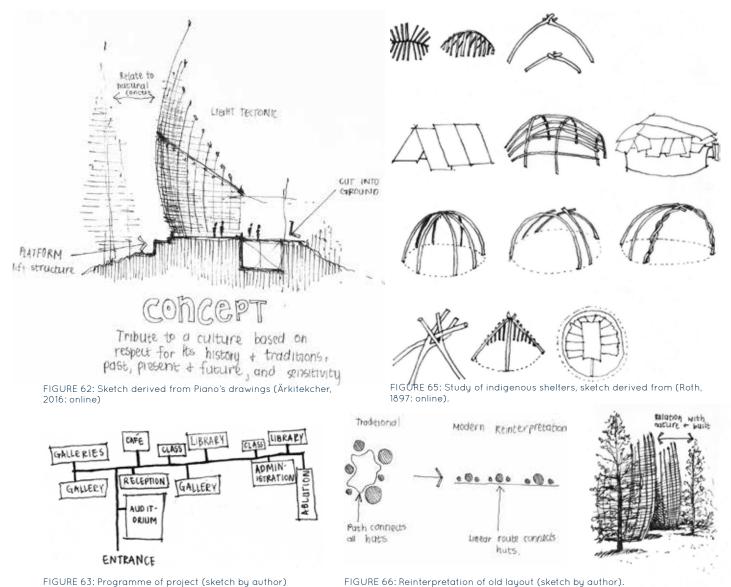

FIGURE 62: Sketch derived from Piano's drawings (Ärkitekcher, 2016: online)

FIGURE 65: Study of indigenous shelters, sketch derived from (Roth, 1897: online).

FIGURE 63: Programme of project (sketch by author)

FIGURE 66: Reinterpretation of old layout (sketch by author).

FIGURE 64: Plan layout (Clouter, 1998: online).

ACCOMMODATION

Exhibitions
Research
Library
Amphi-Theatre
Auditorium
Studio's for Painting,
Sculpting, Dance & Music

FIGURE 70: St
online).

'The return to tradition is a myth … . No people has ever achieved that. The search for identity, for a model, I believe it lies before us … . Our identity is before us': Jean-Marie Tjibaou

a vital role in the experiential quality of the village. The path gently curves, following the axis of the peninsula, introducing visitors to the flora of the area and its mystic meanings.

Each hut houses a different function that contributes to the success of the overall 'village'. The construction is termite-repellent iroko timber ribs and slats that require little maintenance (Ondej Zloský: online). The ribs are structurally joined by horizontal tubes and di-

agonal rod ties of stainless steel. The wood will gradually weather to resemble the colour of the tree trunks in the context (Ondej Zloský: online).

No mechanical air conditioning is necessary as a result of the highly efficient passive ventilation system, which includes a double outer facade, allowing air to circulate between the layers of slatted wood. Adjustable louvers regulate the air flow (Ondej Zloský: online).

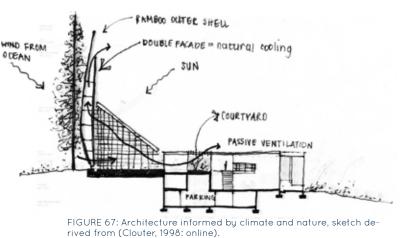FIGURE 69: Sketch derived from (Tsirangelos: online)

IMPORTANT CONSIDERATIONS:

Topography of land

Use of Indigenous plants

Addressing the climate through architecture

Architecture: a threshold between past and present

Initiate relationship with nature through design

Activation of spaces around structures
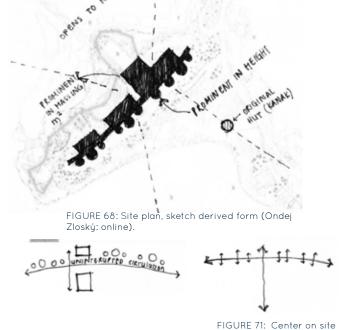
In-depth cultural investigation

Sustainability

Low maintenance

FIGURE 67: Architecture informed by climate and nature, sketch derived from (Clouter, 1998: online).

FIGURE 68: Site plan, sketch derived form (Ondej Zloský: online).

structure deconstructs vertically (Ondej Zloský:

FIGURE 72: Construction of 'huts' (Clouter, 1998: online).

FIGURE 71: Center on site (Clouter, 1998: online).

FIGURE 73: (Clouter, 1998: online).

2.5.2.3 NELSON MANDELA YOUTH & HERITAGE CENTRE

STAUCH & VORSTER ARCHITECTS, 2007, EASTERN CAPE

FIGURE 74: Sketch derived from (Joubert, 2009: 390).
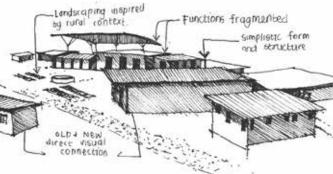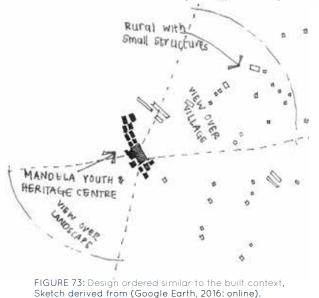

FIGURE 73: Design ordered similar to the built context, Sketch derived from (Google Earth, 2016: online).

The client undertook to have a building designed in honour of Nelson Mandela in the area in which he grew up. Mandela suggested that the building take the form of a community centre in which the local people could be involved, and that young South African children visit the centre and experience the rural way of life enjoyed by him in his youth (Joubert, 2009: 390).

The site bounds on the remains of his primary school buildings at upper Qunu and overlooks his home. Drawing from the local vernacular architecture, the buildings were designed in a language of steel framed support structures with soft-formed walls enveloping the back and sides with a view of the beautiful lower Qunu valley. Various natural textures were employed to imbue scheme with a sense of warmth and softness contrasting with the hard lines of the steel framework.

Accommodation:
Museum
2 Community Halls
Resource Centre
2 Craft manufacturing buildings
Administration Centre
Restaurant
Sports Hall
Ablutions
Single and Double Storey Rooms
Dining Hall.

RELEVANCE

Similar context
Strong Community Axis
Built among historical structures
19 Parking bays + 1 disabled
Fragmented functions reflected in context

FIGURE 74: Qunu village (Mtyeku, 2012: online).

FIGURE 78: Exhibition view over bert, 2009: 390).

FIGURE 79: Courtyard (Joubert,

FIGURE 75: (Mtyeku, 2012: online).

FIGURE 76: Landscape of QUnu village (Mtyeku, 2012: online).

FIGURE 80: (Joubert, 2009: 390

ROOF: hierarchy element
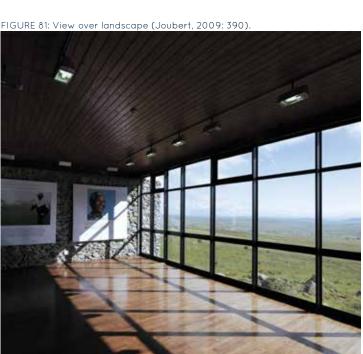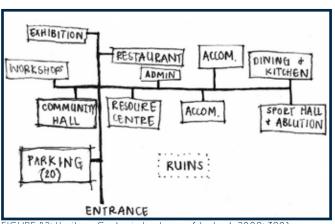Tectonic; largest area

Replica of built context?

simple structures surround
roof / communal space

STONE echo
RUINS on site

Minimal landscaping,
echo vast open context

EXHIBITIONS

WORKSHOPS

RESTAURANT

ADMIN

HALL

ACCOMMODATION

DINING +
KITCHEN

RESOURCE

PARKING

RUINS

SPORT
HALL +
ABLUTION

RUIN on site:
TIME
MATERIAL
EVIDENCE OF PAST
SIMPLE STRUCTURE

FIGURE 83: Sketch derived from (Joubert, 2009: 390).

PUBLIC ACCESS

community
circulation

main
circulation

PUBLIC

PUBLIC

EDUCATION

ADMIN.

EXHIBITIONS

WORKSHOPS

RESTAURANT

ADMINISTRATION

COMMUNITY HALL

ACCOMMODATION

PARKING
DISABLED

ENTRANCE RESOURCE CENTRE

SPORT HALL

DINING HALL

SCHOOL RUINS

Ablution

KITCHEN

VISITORS

COMMUNITY

landscape (Jou-

FIGURE 84: Site specific- the form encourages movement
Sketch derived from (Joubert, 2009: 390).

FIGURE 81: View over landscape (Joubert, 2009: 390).

2009: 390).

EXHIBITION

WORKSHOPS

RESTAURANT

ADMIN

ACCOM.

DINING +
KITCHEN

COMMUNITY
HALL

RESOURCE
CENTRE

ACCOM.

SPORT HALL
+ ABLUTION

PARKING
(20)

RUINS

ENTRANCE

FIGURE 82: Heritsge Center in landscape (Joubert, 2009: 390).

27

SITE

LOWER CLASS RESIDENCE CBD RIVER 3.7 KILOMETER

OLD NEIGHBOUR-HOOD

MUNICIPAL SPORT GROUNDS

OLD TOWN

N

PEOPLE

With the settlement's population mostly made up of Sotho and Tswana cultural groups, traditional rituals and customs are important for the community of Thaba 'Nchu. The transportation network, which is currently being updated, is one of the key mechanisms that drives the sparsely urbanised town today. A considerable percentage of people residing in the town works in Bloemfontein and uses buses or taxi's as transportation daily.

Due to the past effects of colonialism and Apartheid, the settlement has adapted to a westernied society. Where the settlement was once ruled by its chief, today, the government administrates the town, leaving little space for the traditional council to encourage the practice of culture and tradition in the settlement. As a result, the traditions of the community, along with its rich history are slipping away from the memory of the people.

FIGURE 85: Nolli diagram of context around site

FIGURE 86: View of site (2016).

THABA 'NCHU

Country: South Africa
Province: Free State
Municipality: Mangaung

Area : 36.39 km2

Population

Total	70,118
Density	1,900/km2

Racial makeup
Black	98.9%
Coloured	0.4%
Indian/Asian	0.3%
White	0.2%
Other	0.2%

First languages
Sotho	46.8%
Tswana	40.1%
English	3.9%
Xhosa	3.8%

SEPANE RIVER BED, GRAZING FOR CATTLE

NURSING HOME RUINS NEXT TO MOROKA HOSPITAL

CEMETRY: ROYALTY, SOLDIERS, RESIDENTS

BUS HOLDING SPACE

ENTER THABA 'NCHU: BRAND STREET

SITE WITH HISTORIC STRUCTURES

NALEDI SUN: TOURIST ATTRACTION

OLD TOWN, VICTORIAN HOUSES

CBD: TAXI HOLDING SPACE IN THE CENTRE

MISSION CHURCH

FIGURE 87: View of Thaba 'Nchu Mountain (2016)

Thaba Nchu, one of the oldest settlements in the Free State, is situated below the Thaba 'Nchu mountain. The town is located 60 km east of Bloemfontein and was settled in the 1830s. Thaba 'Nchu grew in size following the 1913 Natives' Land Act that declared Thaba 'Nchu as a homeland for Tswana people.

FIGURE 88: View of Thaba 'Nchu Mountain (2016)

Much of the surrounding land is arable, and which has been used for large-scale commercial and subsistence farming.

FIGURE 89: View of Thaba 'Nchu Mountain (2016)

The population is largely made up of Tswana and Sotho people. For the Community, Thaba Nchu and the mountain are their 'spiritual home' (Thaba 'Nchu: online).

FIGURE 90: View of Thaba 'Nchu Mountain (2016)

Though the town falls under the jurisdiction of the Bloemfontein centered Mangaung Municipality, it is still governed by the Royal family, the Moroka's, as tribal traditions are still practiced today.

FIGURE 91: Location of Thaba 'Nchu in the Free State (Google Earth: online)

FIGURE 92: Boundary of the town (Rev. Motibi, 2016: interview)

FIGURE 93: Thaba 'Nchu to the East of Bloemfontein with proposed plans to centralize the settlement.
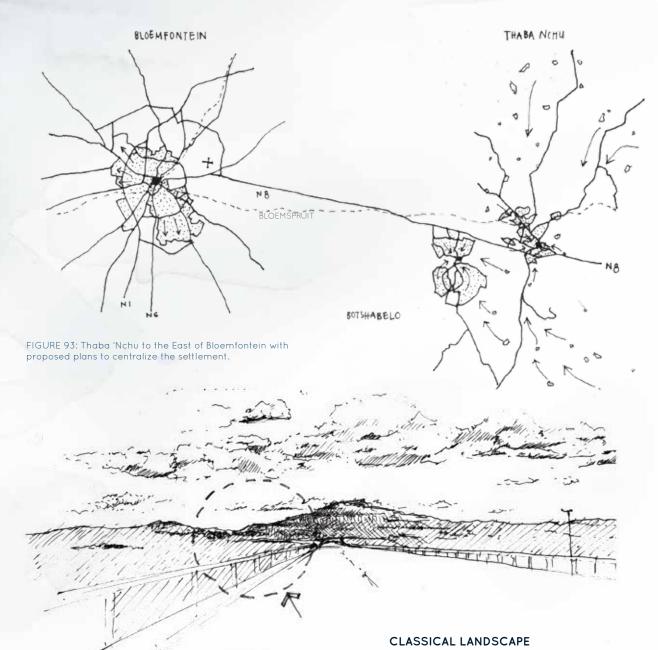
FIGURE 94: Settlement at the foot of the mountain
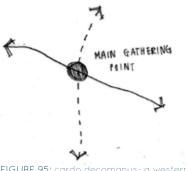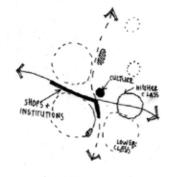
FIGURE 95: cardo decomanus- a western influence on the settlement

SCATTERED SETTLEMENT

CLASSICAL LANDSCAPE

The physical setting of Thaba Nchu can be classified as a classical landscape according to Christian Norberg-Schulz (1980:45-47). He describes this landscape as a composition of distinct elements that include mountains or hills that are clearly defined and rarely covered, apparent in Thaba Nchu Mountain and hills in the settlement itself, forming natural valleys that appear as natural worlds. The 'Black Mountain' (named for its shadow) presides over the town which is situated in an otherwise flat landscape. These distinct elements, with varied and continuous ground, and a high and embracing sky, generates light that is strong and evenly distributed. With the light and transparent air, forms are given a sculptural presence and the concrete presence of the landscape is not lost while it receives light. There is a significant relationship between humans and nature. Nature complements our being, and we settle where nature guides us to, seen in what appears to be disorder in Thaba 'Nchu. The settlement was formed around the rivers in the valley and on the hills for surveillance.

Thaba 'Nchu is a sparsely-urbanised area. The majority of the inhabitants grow their own crops on their land and own some cattle, sheep or chickens. The area surrounding the settlement has been used for large-scale farming, both commercial and domestic in nature. 49 villages surrounding the settlement functions independently from the town, yet comply with the tribal traditions set by the royal family.

DR MOROKA HOUSE
- now a museum

Ereskuld
Gift to Barolong
from
Voortrekkers

RUINS OF A
CHIEF HOUSE

SITE

The Barolong and English dwelled together and welcomed the voortrekkers as their allies. The settlement became the meeting place for the Voortrekkers, Barolong and English. These culture groups lived peacefully together for many years until the Basotho wars, colonization and the Apartheid regime devastated the relationship.
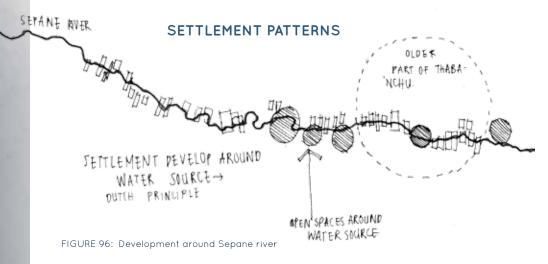
RUINS OF
HOUSE FROM
1800'S

MOROKA GRAVE

WESLEYA
CHURCH

KGOTLA

DR MOROKA PLACE OF BIRTH-
ironstone construction

BOO- SELEKA
SYMBOL- KUDU

N

SETTLEMENT PATTERNS

OLDER PART OF THABA-'NCHU.

SETTLEMENT DEVELOP AROUND WATER SOURCE→
DUTCH PRINCIPLE

OPEN SPACES AROUND WATER SOURCE

FIGURE 96: Development around Sepane river

MOST VEGETATION GROW AROUND RIVER

OLDER PART DENSE WITH LARGE / HIGH TREES

HOUSES DEVELOP AROUND RIVER
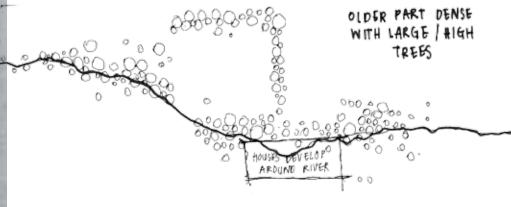
FIGURE 97: Growth around water source

BAROLONG VILLAGE PATTERN

Great hut

GREAT HUT

MIDWIFE HUT   SANGOMA

COURT

Followers

KRAAL

HORSE SHOE VILLAGE LAYOUT

MAIN HUT

ED
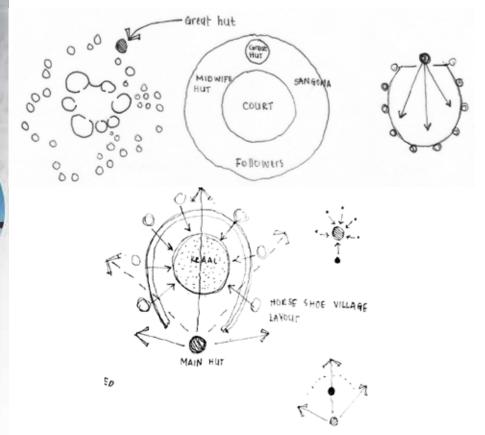
FIGURE 98: Barolong settlement pattern according to Rev. Mothibi (2016) No remnants remain of original hut settlement patterns in Thaba 'Nchu. Recently anthropologists discovered ruins at a village at the foot of the Thaba 'Nchu Mountain.

FIGURE 99: Voortrekker Monument on Moroka Farm

This memorial commemorates the voortrekker alliance with the Barolong Boo- Seleka and where the first voortrekker government was inaugurated.

FIGURE 100: Barolong & Missionary Monument at Kgotla

The marble monument is a re-minder of all the Barolong Boo-Seleka chiefs since Thaba 'Nchu was their homestead. The mon-ument includes the missionaries that helped establish the town.

FIGURE 101: Monument at Cultural Center

LAND USE

SPACTIAL PATTERN

Residential

Recreation

Commercial

Open Spaces

Cemetry

Ⓢ School

Ⓗ Hospital

Police Station

Space not accessible to pedestrians

Vehicle access

Buildings

Spaces accessible to pedestrians
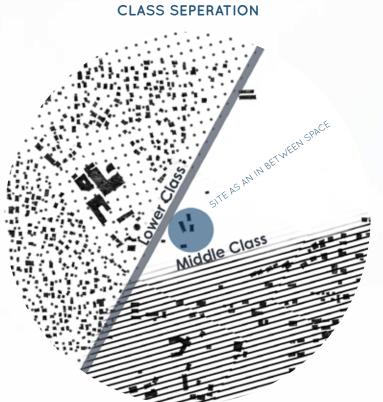
DERELICT AREAS

RUINS

ERVERN & LANDFORM

Layout of erven are determined by the landscape: where the land is more level, in this sense, erf boundaries seem random with no apparent grid

MAJOR ROADS:

The site is on the corner between two major roads

CLASS SEPERATION

SITE AS AN IN BETWEEN SPACE

Lower Class

Middle Class

RIVERS & DAMS

URBAN SPACE

Small shops develop on boundaries of major roads

STRUCTURES DISSOLVE INTO LANDSCAPE

FIGURE 102: Sparsely-urbanised context towards the site.

HILLS: CLASSICAL LANDSCAPE

POTENTIAL COLLECTIVE DWELLING

BUS STOP CLOSE TO SITE

NO DEFINED SIDEWALK
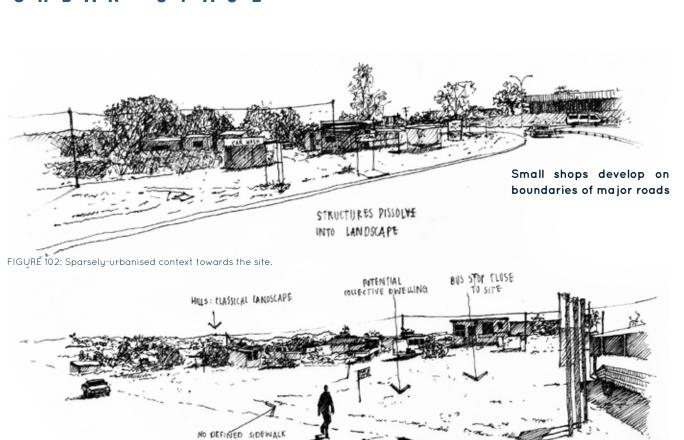
FIGURE 103: Open spaces in settlement used as taxi / bus stops

SITE

TREES

Enter Thaba 'Nchu with Brand Street into CBD

OPEN SPACE ON SETTLEMENT ENTRANCE: URBAN SPACE FOR COLLECTIVE DWELLING BUS STOP

FIGURE 104: Entering Thaba 'Nchu from Brand St

FIGURE 105:
Historic meeting place for tribe: Kgotla
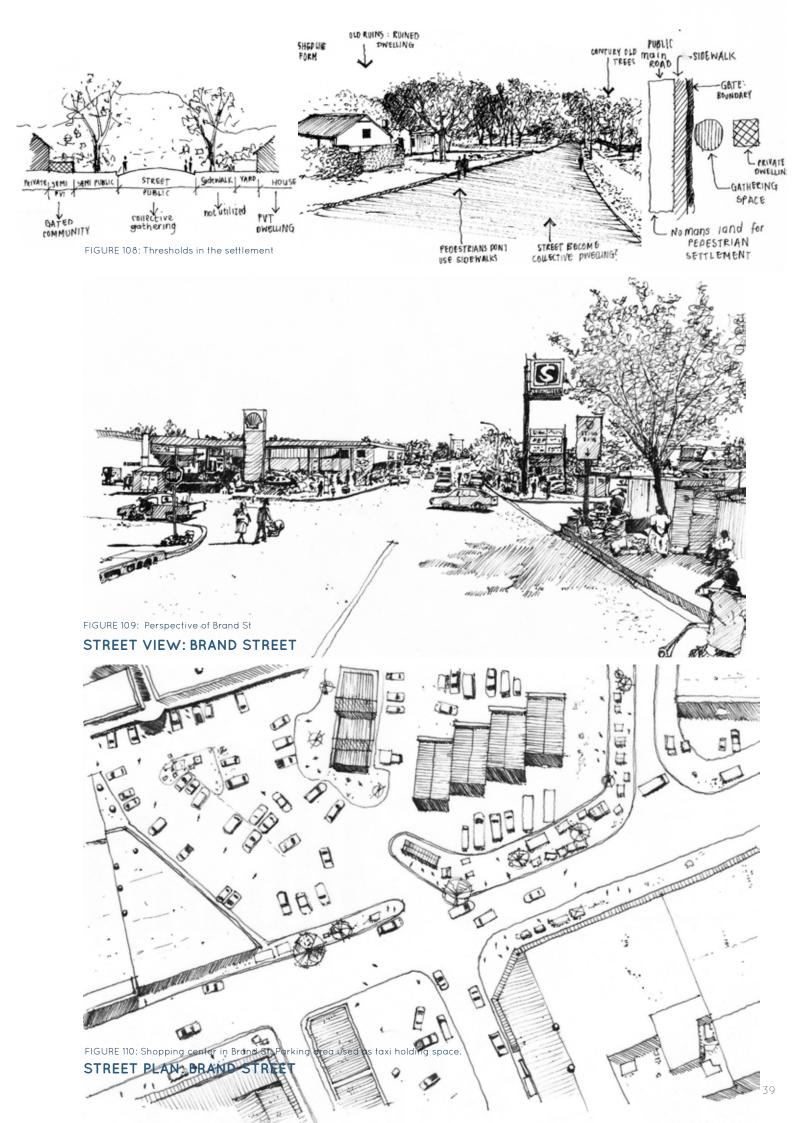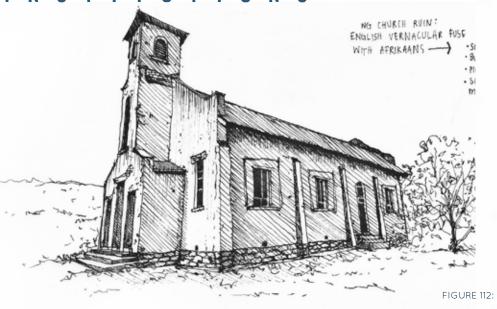
FIGURE 106:
Spaces close to trading areas are gathering space presently.

FIGURE 107:
Spaces close to taxi ranks also gather the community

FIGURE 108: Thresholds in the settlement

FIGURE 109: Perspective of Brand St

STREET VIEW: BRAND STREET

FIGURE 110: Shopping center in Brand St. Parking area used as taxi holding space.

STREET PLAN: BRAND STREET

INSTITUTIONS

NG CHURCH RUIN:
ENGLISH VERNACULAR FUSE
WITH AFRIKAANS →

FIGURE 112:

ERESKULD NG CHURCH: RUIN

FIGURE 111:

**NG CHURCH:
STILL UTILIZED**

ENGLISH VERNACULAR METHODIST CHURCH—
SIMILARITIES TO AFRIKAANS CHURCH
BUILT IN 1850's

FIGURE 113:

**OLD METHODIST CHURCH:
STILL UTILIZED**
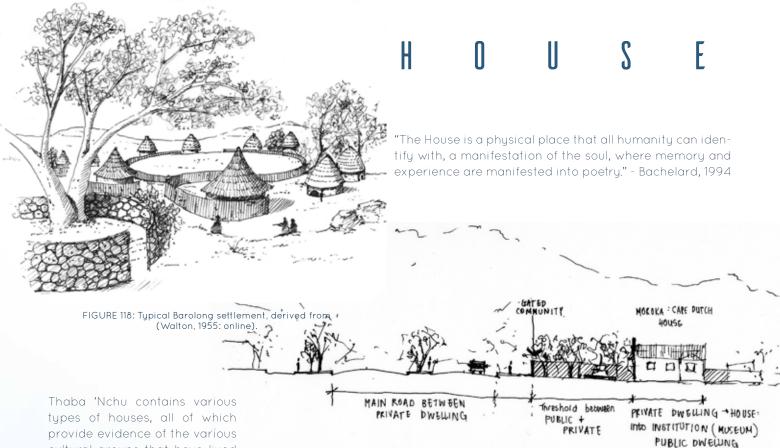
INSTITUTION 'walled' off.
obstruct collective dwelling

SCHOOLS

The missionaries and Barolong established the first Black school in the Free State. King Moroka encouraged education, emphasising the notion that it was the true lasting legacy that various generations must defend at all times (Rev. Mothibi: interview).

FIGURE 114: First Black School in the Free State

TRADITIONAL COUNCIL

In comparison with the government, the Traditional Council does not have any power over Thaba 'Nchu, yet it provides council and some rules to which the community has to adhere in an attempt to preserve its culture. The Traditional Council houses offices for leaders of the 49 villages as well as the Royal family. Cultural issues that pertain to marriage, grants, funerals and coming-of-age are dealt with at the Traditional Council.

CULTURAL CENTRE

The Mmabana Cultural Centre encourages local artists to depict works of life in the Free State under the supervision of Richard Letsatsi Bollers. The Centre is a place for the community in which to learn and voice their stories. It may be desirable for the proposed project to collaborate with the Cultural Centre to artistically voice stories of present-day Thaba 'Nchu.

FIGURE 115: Traditional Council

TOWN HALL

The Town Hall is located at the Southern edge of Thaba 'Nchu. Traditional leaders conduct meetings there with the community, and celebrate Moroka Day.

Moroka Day is celebrated annually on 6 December. It is common practice that on that day, the Barolong tribe comes together to share its history. Here, members of the tribe slaughter cows, brew African beer, and cook traditional food while performing traditional dances and songs.

FIGURE 116: Cultural Centre

The day celebrates the arrival of the Barolong in Thaba 'Nchu in 1833. On this day, the younger generation is taught about the history of the Barolong-boo-Seleka, their cultural practices, songs, respect and animals. This celebration ensures that the culture is preserved and passed on from one generation to the next. 'What better way is there of gaining self-assertiveness and identity than knowing your roots and therefore who you are?' asks Rev. Mothibi (2016).

FIGURE 117: Town Hall

41

HOUSE

FIGURE 118: Typical Barolong settlement, derived from (Walton, 1955: online).

"The House is a physical place that all humanity can iden-tify with, a manifestation of the soul, where memory and experience are manifested into poetry." - Bachelard, 1994

FIGURE 119: Sketch by author

Thaba 'Nchu contains various types of houses, all of which provide evidence of the various cultural groups that have lived here. Ruins of huts are evident in the villages around the settle-ment. The stone-hut villages in Thaba 'Nchu were demolished as a result of the forceful remov-als that started under the Colo-nial rule and continued under Apartheid. These demolished homes contained stories and memories that have been bur-ied along with the demolition.

Victorian and Cape Dutch style houses are found within the settlement, among the simple modern houses. Recycled cor-rugated iron homes are also scattered across the settlement.

FIGURE 120: Typical Barolong hut derived from (Wal-ton, 1955: online).
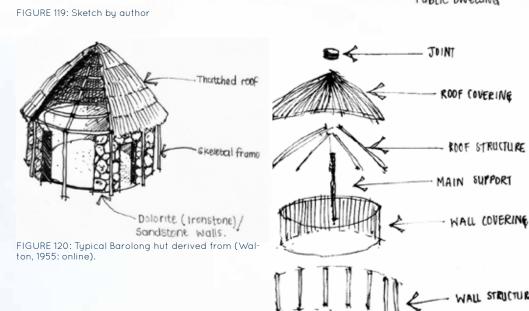
FIGURE 121: Extrapolating the hut, sketch by author.

FIGURE 122: VIEW OVER THABA 'NCHU FROM SITE (2016).

FIGURE 123: Parsonage- Victorian style in Victoria Street.

→ old structures : Fuse Architectural language
→ Amble urban space → not used, use street.
→ Settlement scattered = detachment
→ classical landscape
→ old structures = vernacular :- sandstone
    - dolerite / iron stone
→ new structure → Empty / forad - timber

FIGURE 126: Ruins of a house i Victoria Street

FIGURE 124: James Moroka old house- Cape Dutch style.

FIGURE 127: Modern houses in the settlement

JOINT

RORE

Kgotla for kgosi Moroka & Barolong Boo-Seleka.
House of Remembrance for the Barolong Boo-Seleka.

FIGURE 125: Extrapolating the hut, sketch by author.

SITE ANALYISIS

FIGURE 130:

1. CHIEF HOUSE

1.

2.

3.

4.

N

FIGURE 128: Proposed site

FIGURE 129: View over site

FIGURE 131:
2. FIRST FREE STATE BLACK SCHOOL

FIGURE 132:
3. ERESKULD NG CHURCH

FIGURE 133:
4. TRADITIONAL COUNCIL
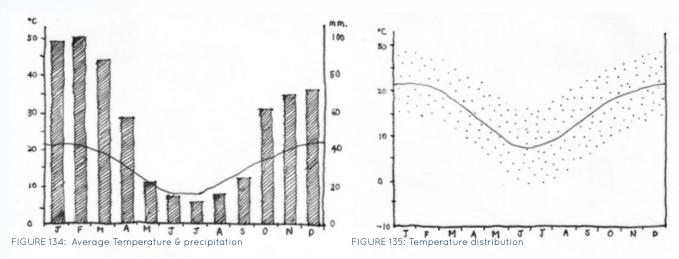
THE VOICE OF THE SITE

I am standing in front of ruins protected by a hill at the edge of Thaba 'Nchu. To my left I see an empty Victorian house with crumbling plastered brick walls and remnants of a corrugated iron roof that re-veals the timber construction underneath. The concrete floor peels away to make way for nature. Ahead of me the remains of a stone foundation are barely visible between the rubble and growth of the earth. What contribution did this building make towards the place? Behind these remains is a vacant school, elevated onto the side of the hill. The tiled floor is covered with debris and discards of plaster, peeling away from the fabric of the clay brick walls. To my right are the ruins of an NG church, the pale beige walls of which are stained by nature, the dust strewn floor with fragmented wooden floor boards is illuminated by the sun through a series of large grimy windows. The ruins are connected by a ground path of earth and debris of the ruins. The scene becomes picturesque with the backdrop of a hill and cattle, the ruined, dead 'things' unite and resurrect in their subliminal aesthetic.

TEXTURES

PLASTER CRUMBLES OFF THE RUINS TO REVEAL RED BRICK

RED FACEBRICK IS COMMONLY USED AS A BUILDING MATERIAL IN THABA 'NCHU

TIMBER DOORS I TRUSSES I FRAMES

THE REMNANTS OF RUINS ARE SCATTERED ACROSS THE SITE

NATURE EMERGES OUT OF THE RUINS ON THE SITE

IRONSTONE IS COMMONLY USED AS A BUILDING MATERIAL IN OLDER STRUCTURES

REPITITION & RHYTHM IN CONCRETE FENCE

CLIMATE

FIGURE 134: Average Temperature & precipitation

FIGURE 135: Temperature distribution

The climate in Thaba 'Nchu is warm and temperate with an average annual midday temperature of 28,5°C in summer and 15.4°C in winter. Rainfall is significant in Thaba 'Nchu, even during the driest months, with an average annual rainfall of about 629mm. Temperatures are at their coldest during July and at their warmest during January, with the majority of rainfall occurring during summer (Climate, Thaba 'Nchu: online). The climate in this region suggests certain design tools to be considered in the proposed project. Large roof overhangs that address the heat, passive ventilation, a well insulated structure to counter extreme temperatures, re-using or harvesting water are some design tools that may be considered.

FIGURE 136:
Elephantorrhiza
elephantina
(Baswortel)

FIGURE 137:
Searsia Erosa

(Besemkaree)

FIGURE 138:
Searsia Lancea
gracilis
(Karee)

FIGURE 139:
Bouteloua
dactyloides
(Blue Grama Grass)

FIGURE 140:
Bouteloua

(Buffalo Grass)
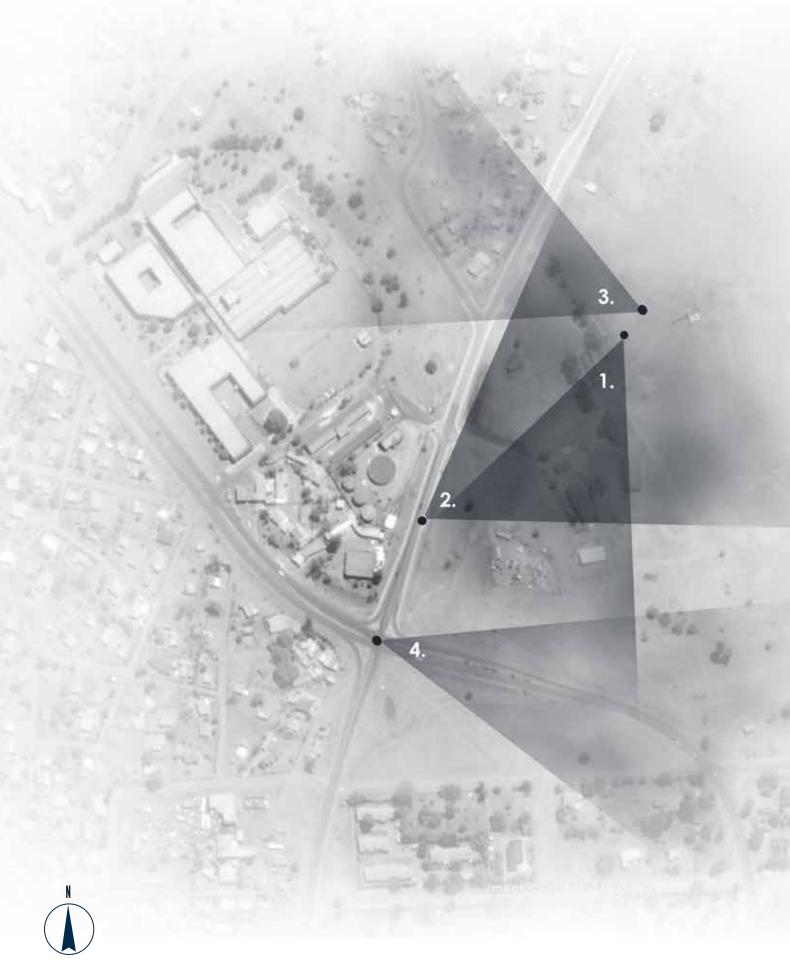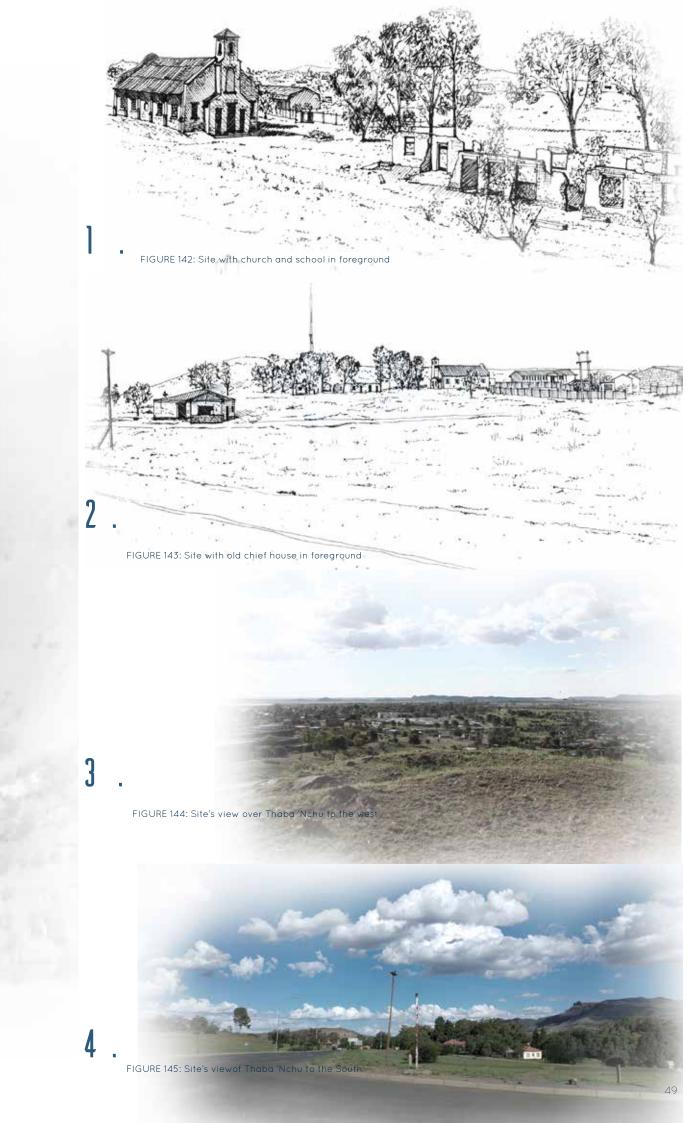
VEGETATION

The vegetation in Thaba 'Nchu is mostly classified as grassland, the main species being Hyparrhenia hirta and Sporobolus pyramidalis, among other grasses and herbs. Little trees and shrubs thrive as a result of heavy grazing and recurrent fires during the dry season, yet Thaba 'Nchu has a few adventitious trees that were planted by the Missionaries and Voortrekkers. Landscaping may become a significant design tool in the proposed project as a way of integrating the natural landscape with the built. In this regard, using vegetation that is indigenous to Thaba 'Nchu will consider the natural environment.

FIGURE 141: Site section

3.

1.

2.

4.

N

1.

FIGURE 142: Site with church and school in foreground

2.

FIGURE 143: Site with old chief house in foreground

3.

FIGURE 144: Site's view over Thaba 'Nchu to the west

4.

FIGURE 145: Site's viewof Thaba 'Nchu to the South

SITE SOLAR STUDY

FIGURE 146:
SUMMER 9AM

FIGURE 147:
WINTER 9AM

FIGURE 150:
VEHICULAR & PEDESTRIAN MOVEMENT GENERATORS

FIGURE 151:
AREA CLASSIFICATION

FIGURE 148:

SUMMER 5PM

FIGURE 149:

WINTER 5PM

Site is located on an area purchased by the NG Church

FIGURE 152:

LOCATION OF SITE IN
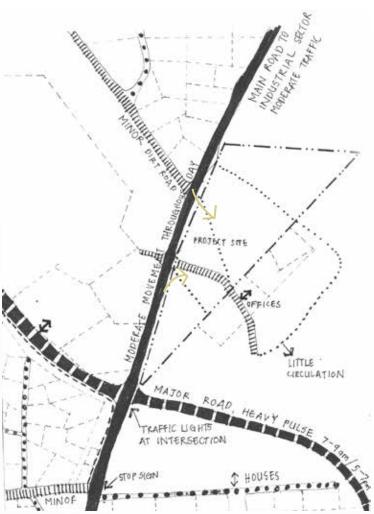
EXISTING USE OF EXTERIOIR SPACES

VEHICULAR CIRCULATION PATTERNS

SHOPPING CENTRE → single storey built in the 1980's. Facebrick with large glass facade. Exterior paved - give hard appearance.

Ruins of a chiefs' house on the site - influence from Wesleyan missionaries - late 1800's

HERESKULD NG CHURCH, another ruin on the site from the Afrikaans culture. Brick, plastered + painted, with maroon painted corrugated roof.

some houses are small corrugated iron sheet structures, constructed out of scrap material mostly

TRIBAL COUNCIL: built in 1980's rectangular shaped building, facebrick with maroon roof tiles. symmetrical

BRICK HOUSE - plastered and painted. Historic structure desperately needs repairs built in 1800's. Front door face street.

FIGURE 155:

ARCHITECTURAL STYLES IN THABA 'NCHU

CONDITIONS OF STRUCTURES ON AND CLOSE TO SITE

The site, i.e. Thaba 'Nchu, contains many ruins. A possible cause of this phenomenon may voice the devastation to which the settlement has been subjected. These ruins contain memories of what the structures have seen over time. They are evidence of the past that has been forgotten, and have become chapters in the story of the place, as they leave behind traces of past times, cultures, rituals and people. These ruins may pose both exciting opportunities and challenges in terms of the proposed project.

FIGURE 156

FIGURE 157

N

0   100   200
         m
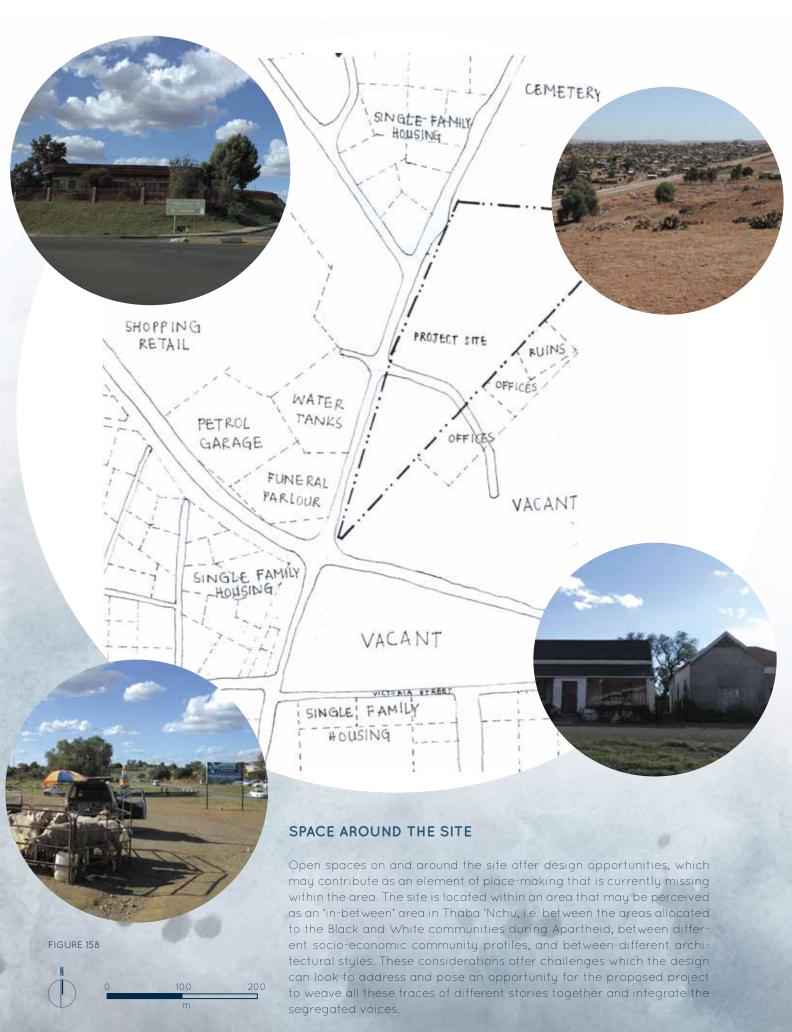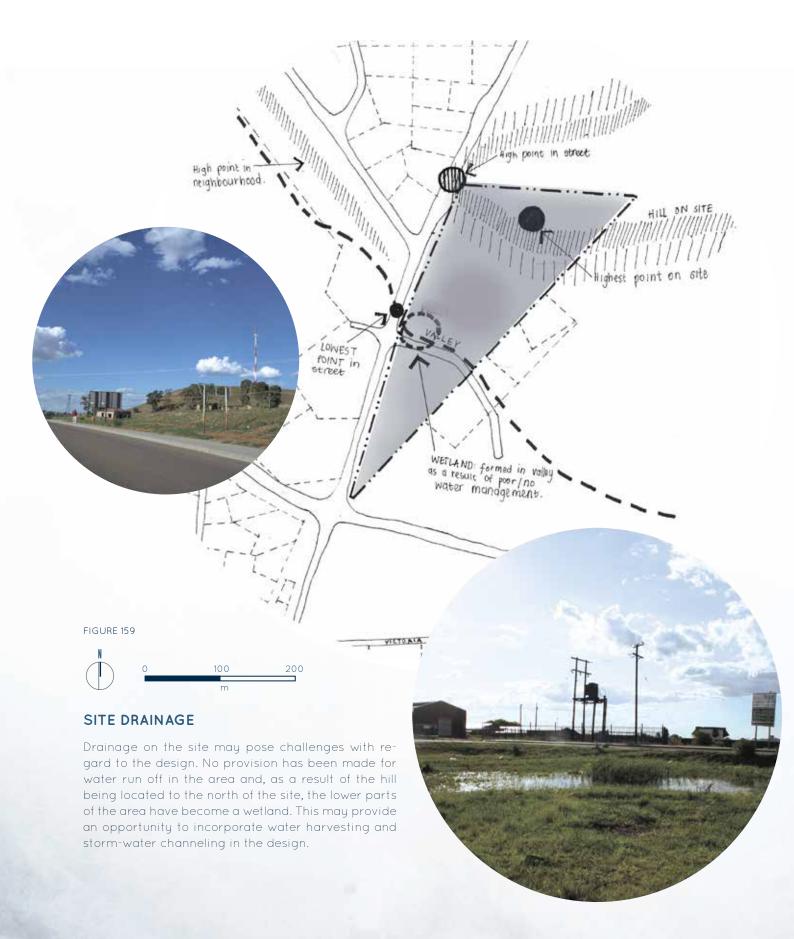
MOVEMENT & TRANSPORTATION ON AND CLOSE TO SITE

Pedestrian movement through the site is constant, though not considerable. The site becomes the bridge between the residential areas in the settlement, and the CBD where the taxi ranks are situated. Commuting is an important ritual in the lives of the residents of Thaba 'Nchu, as most use taxi's or buses to go to work in Bloemfontein. The daily ritual of walking to the bus station or taxi rank and waiting for transport should be considered in the project as these gathering spaces voice stories of present life in Thaba 'Nchu.

The community contributes to the movement on the site throughout the day to visit the Traditional Council for advice or permission for grants, and to the South African Social Security Agency (SASSA) building where grants are awarded. In this regard, attention should be drawn to circulation spaces in the design of the proposed project to augment the present functions and daily rituals on the site.

CEMETERY

SINGLE FAMILY HOUSING

SHOPPING RETAIL

PROJECT SITE

RUINS

OFFICES

WATER TANKS

PETROL GARAGE

OFFICES

FUNERAL PARLOUR

VACANT

SINGLE FAMILY HOUSING

VACANT

VICTORIA STREET

SINGLE FAMILY HOUSING

FIGURE 158

N

0   100   200
m

SPACE AROUND THE SITE

Open spaces on and around the site offer design opportunities, which may contribute as an element of place-making that is currently missing within the area. The site is located within an area that may be perceived as an 'in-between' area in Thaba 'Nchu, i.e. between the areas allocated to the Black and White communities during Apartheid, between different socio-economic community profiles, and between different architectural styles. These considerations offer challenges which the design can look to address and pose an opportunity for the proposed project to weave all these traces of different stories together and integrate the segregated voices.

High point in
neighbourhood.

High point in street

HILL ON SITE

Highest point on site

LOWEST
POINT in
street

VALLEY

WETLAND: formed in valley
as a result of poor/no
water management.

VICTORIA

FIGURE 159

N

0   100   200
                   m

SITE DRAINAGE

Drainage on the site may pose challenges with re-
gard to the design. No provision has been made for
water run off in the area and, as a result of the hill
being located to the north of the site, the lower parts
of the area have become a wetland. This may provide
an opportunity to incorporate water harvesting and
storm-water channeling in the design.

2.7 MORPHOLOGY

From the typological and topological investigations conducted thus far, morphological considerations arose which pertain to giving form to the building, which may assist in shaping the design. In terms of the conceptual framework identified in this dissertation, these considerations may be used as a point of reference in formulating ideas in order to approach the design of the project in a unique manner. Certain associated ideas and interests arose from these considerations which were investigated and grounded in literature and previous studies. An earlier study that communicates comparable morphological aims in terms of the proposed project was investigated as a way of gaining understanding with regard to how orthodox approaches to the design of museums and archives may be questioned.

2.7.1 MORPHOLOGICAL PRECEDENT: a new morphological approach to a house

COROMANDEL ESTATE MANOR HOUSE, Lydenburg, South Africa, Marco Zanuso 1975

The house - an intimate space, protecting the day-dreamer, allowing one to dream in peace - Gaston Bachelard (1994)
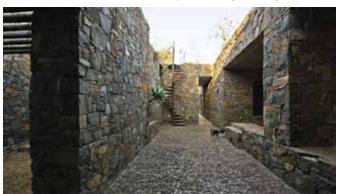
FIGURE 160: Thresholds between parts of the house (Hidden Architecture: online)

FIGURE 161: Architecture frames exterior environment (Hidden Architecture: online)

FIGURE 162: (Hidden Architecture: online)

FIGURE 163: (Hidden Architecture: online)

FIGURE 164: Materials from context (Hidden Architecture: online)

Architecture embodies our memories. Bachelard suggests that memories are anchored in space, where the house becomes an enclosed location of our memories (Van Schaik 2002: 9). In this sense, the house may be viewed as a 'safe' space that protects thoughts, dreams and memories.

The Coromandel House by Marco Zanuso is an example of such an intimate space. This farm may be viewed as an embodiment of a ruin that has seamlessly adapted to and fused with its natural environment. It is enigmatic in that it voices traces of stories, being part building, part landscape and part historical tragedy (Peres, 2016: 32).

The farm house is situated on the foothills of Mpumalanga's landscape. The milieu consists of extensive open fields, hills and rivers, similar to that of the proposed project, also located to the foot of a hill, with open fields to the north and a river to the south.

Contributing to the success of this house is the intimate relationship the architecture **shares with the** landscape. The architect reacted **to the harsh South** African climate by designing **a structure that provides** extensive shade through **courtyards and deep porch-** es, coolness, **greenery and water.**

The house appears to emerge from the foothill, its morphological approach emanating from the response to the landscape. Its long narrow form stretches into the landscape, with heavy arches anchoring the structure and becoming thresholds protecting the interior spaces from the vast surrounding veld (Peres, 2016: 34).

Local material is used, namely stone for the walls and timber for the floor finish which reinforces the dialogue between the built and the natural. Deep shaded veranda's and windows, respond to the harsh climatic variations of the area (Peres, 2016: 33).

The house can be described as a **dramatic manipu-** lation of the landscape that offers **practical, periodic** shelter within its organised **spaces and rational lines** Deeply rooted in Zanuso's **architectural ethos, his re-** gard for context, **typology, image, spatial organisa-** tion and rational **technical construction is revealed in** all layers **of the design (Peres, 2016: 33).**

The relevance of this house in terms of the proposed project relates to how the Coromandel House emerges from the landscape as a mysterious sculptural shelter, which captures the voice of the place in which it is located. Traces which contribute to the voice are found in the use of local material, the form and the scale of the structure, as well as its reaction to the climate.

FIGURE 165: GROUND FLOOR PLAN (Peres, 2016: 34).

1 - Parent's Wing
2 - Boy's Wing
3 - Girl's Wing
4 - Guest's Wing
5 - Iconic Arched Veranda
6 - Fish Pond and Swimming Pool
7 - Main Entrance via Driveway

Lessons learnt:
Architecture consults the _genius loci_ of the place
Unique interpretation of typology
Use of materials contribute to the story narrated by the architecture

FIGURE 166: Structure 'emerging' out of landscape (Hidden Architecture: online)

VOICING & TRACING DIFFERENT NARRATIVES THROUGH THE EXPLORATION OF PLACE

Considering the problems and aims that have been identified by the client and nature of the project in a specific milieu, a research statement is posed in order to clarify the intent of the dissertation, provide direction with regard to literary exploration, and realise a possible architectural solution. The research statement led to the investigation of certain relevant notions, quantitative and cognitive analysis, as well as precedents to reinforce the course of the design process to produce the best possible solution for the project.

This dissertation aims to voice and trace different narratives through the exploration of place.

The ideas identified in the research statement, which arose from the site analysis, called for a greater understanding of the notions of ruin, memory, place, and narrative identity. In order to understand the landscape of Thaba 'Nchu for this treatise, I studied the *Concept of Dwelling* by Norberg-Schulz (1985), who identifies a place through the analysis of the settlement itself, the urban space, its institutions and finally the house of its inhabitants. Though I understood Thaba 'Nchu better as a place by applying Norberg-Schulz identification and orientation of a place to the settlement, it neglected the main problems encountered in this study. Bloomer and Moore (1977) refocused my thoughts with regard to the importance of the individual within a place, the body as a container of memories, culture,

experiences, rituals, etc, just as ruins are containers architecturally. Furthermore, I became increasingly interested in the work of John Ruskin, an English critic of art, architecture, and society (1819-1900), and Robert Ginsberg, a Professor Emeritus of Philosophy & Comparative Literature, who suggest that ruins are aesthetic re-interpretations of the history of a place and its people; what seems to be dead or forgotten is revived by identifying new entities that may be enjoyed. Edward Casey, the author of Public Memory in Place and Time (1986), explains that there are various components of memory within a place and time, namely; individual memory, social memory, collective memory and public memory, these memories are concerned with the individual within a place, as well as the community as a whole. The memories become stories that allow the now to come to terms with the past, and suggest certainty for the future. Exchanging Memories by Richard Kearney (2007) brought the concepts I had of place, ruin and memory together in a narrative identity. Individual memories become 'stories', contributing to the identity of a place instead of a general meta-narrative. The story of Thaba 'Nchu could be remembered by the ordinary people who live in the place and portrayed architecturally through The House of Memory as the forgotten narratives of Thaba 'Nchu.

RUIN: A NARRATIVE

The Oxford Dictionary defines 'ruin' as permanent devastation. It is a way of reducing a building or place to a state of decay, collapse or disintegration (Ruin, 2016: Online). This negative connotation of the word is opposed by Ginsberg's definition. He argues that a ruin is the irreparable remains of a human construction that, by destructive act or process, no longer dwells in the unity of the original, but may have new unities that may be enjoyed (Ginsberg, 2004: 285).

Ruin is a mnemonic device used to remember the past: 'It becomes a reminder of what was, the original, by keeping the absent present and thus becomes a cultural representation, an unintended gift of destruction' (Ginsberg, 2004: 288). A ruin can be seen as a symbol that speaks of life that comes out of death and devastation, where the old becomes the foundation for the new, bringing that which is buried and forgotten back to life. Consequently, they became noble, truthful, and tangible results of the passing of time (Wheeler, 1992: 13), a contribution to the character of a place and evidence of man's existence in a certain context. A ruin is a 'treasury' waiting to be unlocked to reveal a narrative hidden within (Fig. 167). Similarly, the body can be seen as a 'container' of memories.
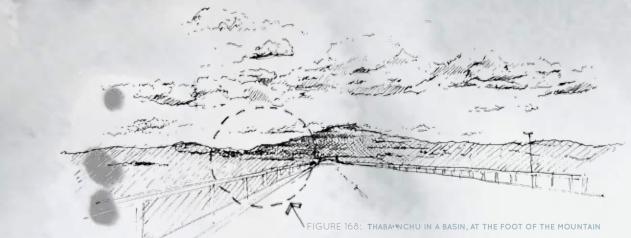
FIGURE 167: Ruin as a treasure chest (sketch by author)

IDENTITY IN MEMORY

We experience place and architecture through our bodies. Our bodies become the central point of experience, without which we would not be able to shape or define place. Merleau-Ponty describes place as the 'means whereby the position of things become possible' (Merleau-Ponty, 2006:284), while the theory of Bloomer and Moore (1977) suggests that architecture is the making of place by extending the inner landscape of human beings into the world in ways that are comprehensible, experiential and inhabitable. Individuals create an internal world which is not only distinct from and within an external world, but which is centred on landmarks and bodily memories that reflect a lifetime of events encountered outside the physical body as a boundary (Bloomer and Moore, 1978:11). Although we cannot see the inside of our bodies, we develop memories of an inside world that include a collection of experiences taken from the environment and etched into the feeling of our identities over a lifetime of personal encounters within the world. We populate our inside worlds with the people, places and events that we 'felt' at one time in the outside world. Our bodies become experiential containers that are unlocked through the memory of certain places and their architecture. In turn, the memory of places becomes central to our sense of self; they become an extension of and are woven into our personal identities.

It can be said that architecture and the making of place is a result of the inner world of humans, being projected to the outer world, physically in the form of structures and psychologically in the form of political ideals, etc. The inner world can therefore change the exterior world, leaving behind evidence of past worlds. Consequently, a place should not be considered according to a broad idea or reduced to a stereotype. Rather, it should become familiar through the stories and rituals of individuals who live there.

FIGURE 168: THABA 'NCHU IN A BASIN, AT THE FOOT OF THE MOUNTAIN

REVIVAL OF PLACE THROUGH STORIES

In order for humans to recognise or identify himself within a place, that which sustains a place, i.e. the character, or voice of the place should be better understood. Norberg-Schulz describes a place as a 'space which has a distinct character' (Norberg-Schulz, 1980: 5). Memory becomes part of the notion of place as illustrated by Lyndon who describes a place as a space that can be remembered, imagined, contained in the mind and be considered (Lyndon, 2009:6). This explanation advocates the idea that the voice of a place is its narrative, which is comprised of layers of history, culture, ritual, and people; ultimately, its unique character includes the relationship between natural ecosystems and people. What may be perceived as a ruined place for some may be regarded as home for others, relative to each individual's memory of the place.

To remember is to be emplaced, and to be emplaced is to remember (Cruz-Pierre and Landes, 2013 :71)

The body is an archive composed of memories of lived time and place. Accordingly, it serves to orientate and direct so as to better understand the self. Memory and place are dependent on one anoth- e r : memory begins in place, whereas place begins in memory. Casey defines a 'place' as   a physical location in which memories can be contained and preserved (Casey, 1986:36). Place never appears differently from how it has already been etched into memory, it is on the basis of memory that we are oriented, and it is only as we are oriented that we become placed. We therefore find ourselves in the world, which means that we only find ourselves in and through memory, and although

memory itself is only to be approached in and through place, we cannot approach place independently of memory. Consequently, memory is the narrative that brings about a greater connection between people and place.
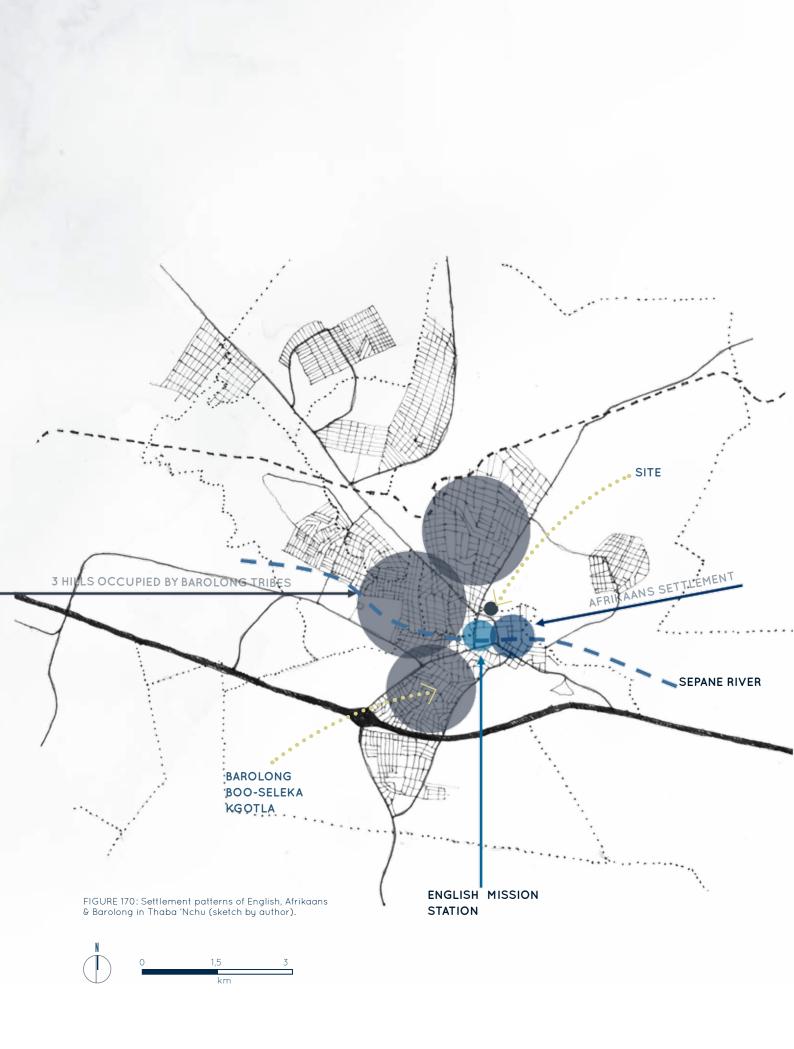
Remembering Place through Stories

In order to conceive of Thaba 'Nchu as a place, its people, history, buildings, natural environment and symbolic and existential meanings in the cultural landscape, need to be investigated on a personal level to prevent over-generalised opinions.

My initial perception of Thaba 'Nchu as a place was that it is a small, informal settlement that developed as a result of the Apartheid regime. I quickly realised, however, that my perception of the place had been highly inaccurate. Thaba 'Nchu should rather be identified and remembered by those who live there. Richard Kearney states that 'narrative identity operates at the level of both individual and communal identity' (Kearney, 1995:182). The voice of Thaba 'Nchu depends on the individual stories of those who live there. Kearney goes on to explain that 'stories proceed from stories,   just   as histories proceed from histories' (Kearney,   1995:182). Communities and individuals   within a community come to know and   visualise themselves in the stories they tell about themselves. These ordinary stories become sacred in that they are fundamental to the histories of Thaba 'Nchu and will serve to reinforce the identity and remembrance of the place.

FIGURE 169: Memory the 'glue' connecting a person and place.

62

SITE

3 HILLS OCCUPIED BY BAROLONG TRIBES

AFRIKAANS SETTLEMENT

SEPANE RIVER

BAROLONG
BOO-SELEKA
KGOTLA

ENGLISH MISSION
STATION

FIGURE 170: Settlement patterns of English, Afrikaans
& Barolong in Thaba 'Nchu (sketch by author).

N

0   1,5   3
km

63
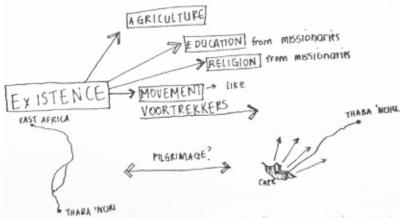
FIGURE 171: Thaba 'Nchu is built on Agriculture, Education and Religion according to Rev. Mothibi (2016) & Masego Moroka (2016)

THE NARRATIVE OF THABA 'NCHU

Thaba 'Nchu became a place of settlement in 1833 when it was occupied by the Barolong tribes together with Wesleyan missionaries. The classical landscape is emphasised by clearly-defined hills which are rarely covered, with the Thaba 'Nchu Mountain as the main landmark and backdrop for the settlement.

The Barolong settlements originated on three dominant hills which were used for the purposes of surveillance. Each hill was occupied by a different Barolong tribe, with the missionaries establishing their mission station in a valley between the hills, a distance from the foot of the Thaba 'Nchu Mountain. Later, Afrikaans people settled close to the Sepane River in the valley, evident in the use of water plots (Fig. 170). Nature, i.e. water supply, fertile land and surveillance, determined where man settled and is apparent in the structures scattered across the settlement.

Acropolis (Fig. 172): Narrative of Place

An historical example of man's reaction to a classical landscape is the Acropolis in Greece, where order is found in what appears to be chaos (Fig. 176). The topography of a site informed the architecture. The architecture was dependent on the natural environment, reinforcing the relationship between man and nature which is evident in the ruins that still exist today. The Acropolis is a place that provides direction and orientation, even though there seems to be no order. This precedent serves as an example of how architecture develops from a classical landscape (Fig. 177), a sincere relationship between man and nature, seen in the early establishment of Thaba 'Nchu, which has been forgotten along with its history.

ACROPOLIS	VS.	SITE
MARKET		
TEMPLE		CHURCH
PEDESTRIAN		PEDESTRIAN
HILL		HILL
CULTURE		TRADITIONAL COUNCIL
THEATRE		
STRUCTURES SITED		STRUCTURES SITED
RELATIVE TO LANDSCAPE		RELATIVE TO LANDSCAPE

FIGURE 172: Acropolis, gazing over Athens (The Acropolis in Athens Greece: online)

64

Architecture depends on physical site.

PARTHENON

NB: SITE INFORMS ARCHITECTURE
→ MATERIAL
→ SITING
→ FORM

cluster of buildings from diff. time periods inform each other

Entrance
· dominant
· point of reference

SCULPTURES ALONG ROUTE

Ramps + Stairs – dynamic, experiential entry.

CLASSICAL LANDSCAPE
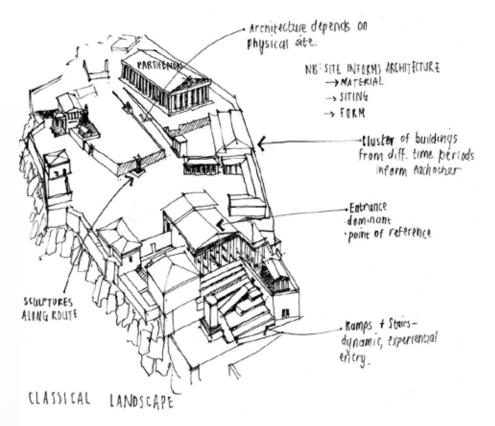
FIGURE 173: Sketch derived from (Mencher: online).

ENTRANCE: POINT OF ORGANIZATION

SITING SEEMS UNORGANIZED

BUILDINGS: PROPORTIONATELY ARRANGED
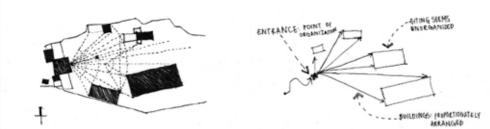
FIGURE 174: Sketch derived from (Mencher: online). FIGURE 175: Sketch derived from (Mencher: online).

Route: Circulation connects all functions, determined by landscape.

Temple on top of Hill walled off

ACROPOLIS VS. SITE
→ MARKET → CHURCH
→ TEMPLE → TEMPLE

· SITE SPECIFY ·
Nature informs architecture

STOA: Market connects theatre

Theatre sited according to landscape

N
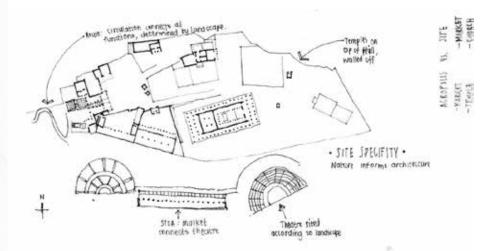
FIGURE 176: Layout appears random, yet ordered. Sketch derived from (Mencher: online).

FIGURE 177: Sculptural building in classical landscape. Sketch derived from (Mencher: online).

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THABA 'NCHU, AN UNINTENDED GIFT OF DESTRUCTION

Initially, a mutual relationship between man and nature appeared to exist in Thaba 'Nchu. However, according to Rev. Mothibi (interview: 2015), the Basotho wars, colonisation and the apartheid regime devastated the settlement. Presently, the effects of these events are still apparent in the place, particularly as seen in the mental and physical barriers in the town, as well as in the vast number of ruins throughout the settlement.

Thaba 'Nchu was set apart for the Tswana culture in Apartheid South Africa (Venter, 1960: 40). People in this area were forcefully removed from their homes and sent to desolate areas allocated to them, so that the more desirable lands could be used by the government (Goitsemodimo, interview: 2016). Thaba 'Nchu may be perceived as having been ruined through the forceful removal of people who 'dwelled' within the place. Bloomer and Moore (1977) are of the opinion that the external world is ruined by the removal of each internal world (individual with unique story) belonging to the place. As a result, the voice of the place represented by the individual stories, becomes buried and forgotten as a result of imposing political ideals onto a place.

On the other hand, a place in South Africa that may be perceived as having been ruined due to the destructive acts of Apartheid and colonisation may well result in unintended gifts of destruction. From a broader perspective, Thaba 'Nchu may be perceived as one of these ruined places. Even though Thaba 'Nch may no longer dwell in the unity of the original, the gifts of destruction are found in the stories of those who call this place home.

If one were to view Thaba 'Nchu as a puzzle (Fig. 179), every piece would represent a specific place that fits into other specific pieces (or places) in order to create a complete story. This story entails every part of the settlement, that fits together to form the narrative of the place. The phenomenon that occurred within Thaba 'Nchu is that pieces of the whole had been taken away forcefully. This process cast away layers of memory gained over time, ultimately changing the character, or story of the place written over time.
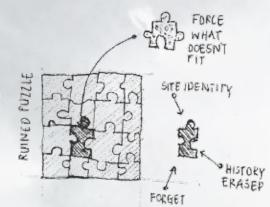
FIGURE 179: Thaba 'Nchu as a puzzle, Sketch by author.

Presently, the voice of Thaba 'Nchu, has been forgotten. Without investigating its history, few people know of its past. Pallasmaa (1995:310) states that 'we live in mental worlds in which the experienced, remembered and dreamed, and the past present and future constantly fuse together'. Where an individual lives becomes part of his or her identity and memory, and determines what, when and how it is experienced, shaping the foundation of his or her story. Forcefully removing a group of individuals from a place eradicates a measure of who they are, erasing parts of their story and, finally, a part of the narrative of the place. Michailidis (2013:2) suggests that memory is the 'foundation on which meaning is built. Every aspect of experience becomes enveloped in the process of memory, forming identity in individuals, ultimately bringing individuals to form the identity of communities'. In this regard, the individual gradually loses his or her sense of belonging to the place as a consequence of erasing parts of his or her memory of a place. This phenomenon is illustrated in the ruins and derelict spaces within the settlement, a by-product of the Colonial and Apartheid Regime, reflecting Lyndon's (2009:6) claim that 'ruins are a reflection of our inner landscapes'. These spaces need to be transformed into places that encourage the community to 'write' new stories and to retell the old ones, to remember the past in order to come to terms with it and to build on the future.

FIGURE 178:

TSWANA HOMELANDS

1913: The Native Lands Act gives 7.3% of the country's land to Africans, who make up 80% of the population. Africans are prohibited from owning land outside their region. Africans are allowed to be on white land only if they are working for whites

THABA 'NCHU

COLONIZATION

APARTHEID

VOICE OF THABA 'NCHU
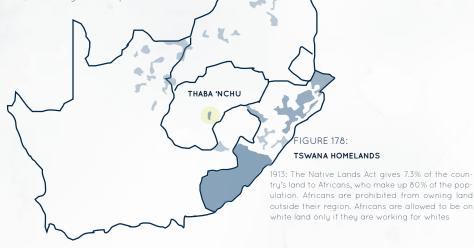
FIGURE 180: Burying the voice of Thaba 'Nchu.

The Scar: a Reminder

In order to accept the past and hope for the future, Lebbues Woods developed a metaphor called 'the scar'. This metaphor was extended onto war-damaged buildings in the ruined city of Sarajevo. An apartment building which had been ruined by the war was one

FIGURE 181: City during devastation (War and Architecture: online).

FIGURE 182: City before it was devastated (War and Architecture: online).

FIGURE 183: 'Scar' on apartment building (War and Architecture: online).

FIGURE 184: 'Scar' on apartment building (War and Architecture: online).

of the structures used by Woods as it had symbolic significance for those who resided there. Woods observes that it was impossible to restore the building to its pre-siege condition; that the destruction could not be erased, only surpassed. He designed a 'scar' (Fig. 183 & 184) on the building that would serve as a reminder of the wounds caused by the destruction of the war, and serve as a point from which to move forward (war and architecture: online). The physical represen-

tation of Woods' project does not relate to the character of Thaba 'Nchu, yet the metaphor significantly contributes to a settlement that had been devastated by the colonial and apartheid rule.

Extending Woods' scar metaphor as an architectural intervention in Thaba 'Nchu will remind its inhabitants of the devastation, while simultaneously promoting transformation and building an integrated society through the remembrance of local stories. Architecture should serve as an aesthetic embodiment of history. Woods (online) explains that architecture is a political act; it is part of the relationships between people and how they decide to change their conditions of living. It comes to be the agent of making that change, as it has to do with building the environment in which the community lives, and the relationships that exist in that environment. By implementing an architectural action, a transformation takes place in the social and political fabric.

Instead of erasing the past, as Woods explains, it has to be remembered and built onto. The inhabitants of Thaba 'Nchu should be able to revisit their history, to retrieve the forgotten parts of their stories and, ultimately, the forgotten story of Thaba 'Nchu, which contributes to the voice and identity of the place.

A House of Memory for the forgotten narratives of Thaba 'Nchu will revive parts of each person's story living in Thaba 'Nchu, finally completing story of the place and providing blank pages for the stories yet to be written. Bachelard (1994:9) asserts that a house is a physical place with which all humanity can identify; a manifestation of the soul where memory and experience are manifested into poetry. In this sense, an archive merged with a museum becomes the embodiment of this house of memories as their core purpose is to preserve the past in built form.
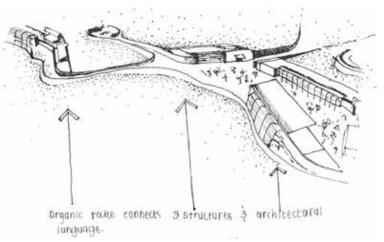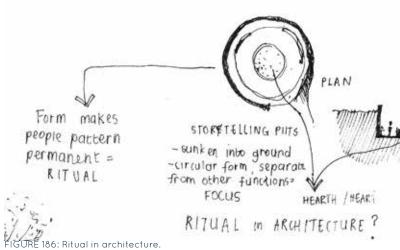
FIGURE 185: Architecture respects site by subtly sinking into the landscape. Sketch derived from (Wilkinson Architects: online)

FIGURE 186: Ritual in architecture.

The Sarah Baartman Centre of Remembrance in Hankey is an example of how architecture remembers the past in a South African context. The aim of the project is to create a place that narrates and documents the life of the Khoi-San culture, as well as that of Sarah Baartman through a museum and archive. The centre is defined by a circular route procession from the informal to the sacred through the memory, healing and celebration spaces. What makes the project successful is its sensitive approach to the landscape and climate seen in, e.g. using local labour and material – rammed earth, taking care in the preservation of indigenous plant life. The use of sensory experience and textures subtly refers to the San people rather than merely imitating the culture, making history relevant in a modern society. The San culture is embodied within the architecture and the architecture itself becomes a story.
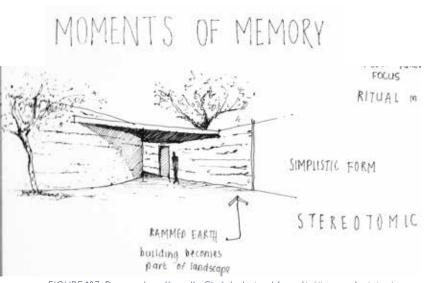
FIGURE 187: Rammed earth walls. Sketch derived from (Wilkinson Architects: online)
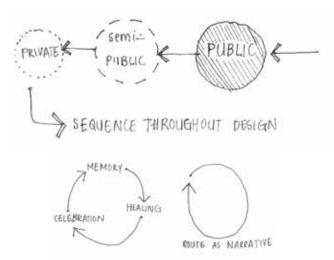
FIGURE 188: Sketch derived from (Wilkinson Architects: online)
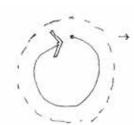
REPITITION
PATTERN → RITUAL

SECTION

ROUTE

central focus of design →
circulation enables person to
experience purpose of structure

→ FORM encourages Pattern →
associated with conversation
& spectating ceremonial event.

MUSEUM
ARCHIVE
AUDITORIUM
CLASS ROOMS
WORKSHOPS   • • • • • • • •   4804 m²
RETAIL
HEALING PONDS
STORY PITS
PRODUCTIVE GARDEN

← single entrance

Private spaces →

Main entrance

COMMUNAL SPACE
between nodes

PUBLIC

semi
public

pve

Embedded
in nature

Routes dominate
precinct

→ nodes
narrate khoi
culture

Built (structure) routes
and nature become a whole
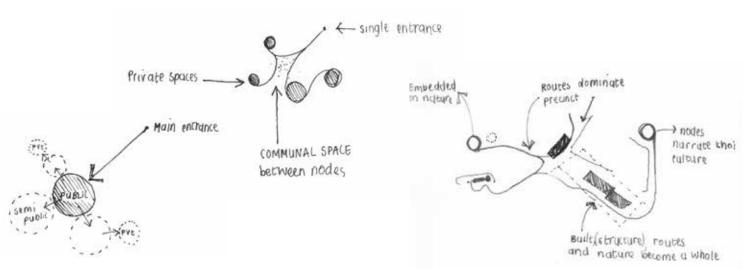
FIGURE 189: Public & Private spaces

FIGURE 190: Sketch derived from (Wilkinson Architects: online)

FIGURE 191: Classical style of old reflected in new (New Acropolis Museum: online).

FIGURE 192: New frames the old (New Acropolis Museum: online).

FIGURE 193: Architecture becomes part of the voice of the place (New Acropolis Museum: online).
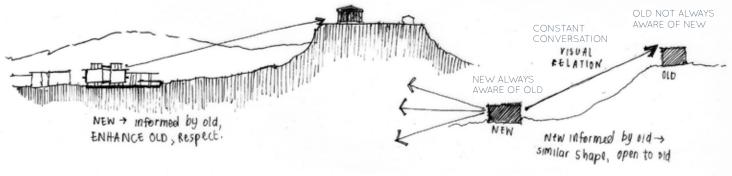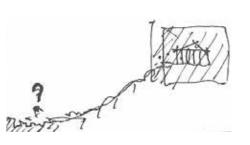
FIGURE 194: Sketch derived from (Minaretiz, 2015: online).

The Acropolis Museum by Bernard Tshumi is an example of how architecture is able to emphasise the old through the new. The museum is situated at the bottom of the Acropolis hill, providing views of the ruins, and calling attention to the history. The form is reminiscent of the historical structures, a rectangular mass composed of a series of columns on a heavy plinth. The structure itself is simple, built from modern materials and utilising modern techniques, and yet it still embodies the history of the place. The narrative of the ruined is viewed from the glass facades of the museum which also house ancient Roman ruins. Tschumi's contemporary museum frames the sacred old which, in itself, is a narrative.

FIGURE 195: Relationship between old & new. Sketch derived from (Minaretiz, 2015: online).

FIGURE 196: Sketch derived from (Minaretiz, 2015: online).
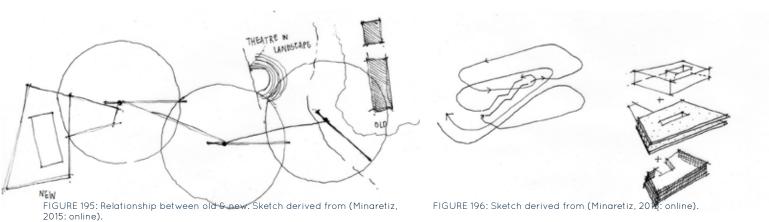
FIGURE 197: Key display, an example of ordinary objects (elseplace, 2008: online).
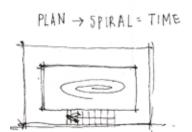
FIGURE 198: Cigarette buds, narrating something about the life of the users (elseplace, 2008: online).
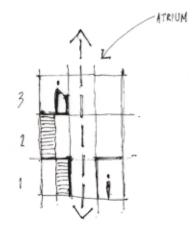
FIGURE 199: Photo exhibition (elseplace, 2008: online).

"Pamuk describes the relation between the novel and the museum as "The museum is not an illustration of the novel and the novel is not an explanation of the museum. They are two representations of one single story perhaps" (elseplace, 2008: online).

The story of Thaba 'Nchu should be told , through the architecture, by the ordinary people residing in the settlement. The Museum of Innocence by Orhan Pamuk, a novelist and recipient of the 2006 Nobel Prize in Literature, is a novel that has been brought to life in the form of a museum. Each chapter of the novel is portrayed as an exhibition in the museum, including everyday objects that revive the memory of a specific time and place relating to the chapter. The narrative of the past is brought to life by the ordinary objects chosen as an illustration such as keys, photo's or watches. What contributes to the success of this museum is that the ordinary stories of people are used. The structure itself reminds of the memories it contains. Using the principles of The Museum of Innocence in this dissertation will challenge the norms of museums and archives as a building typology. I propose using works of architecture to aid the ordinary residents of Thaba 'Nchu in telling their stories

Stairs form atrium in center- circulation takes visitor on a chronological journey through the story told by the museum.

Section through the house-museum. Atrium forms a breathing space for visitor to pause in time- to contemplate the narrative of the Museum.

FIGURE 200: Photo exhibition (elseplace, 2008: online).

FIGURE 201: Exhibition (elseplace, 2008: online).

FIGURE 202: Museum of Innocence in old house (elseplace, 2008: online).

MEMORIES

THE VOICE OF THE SITE

The House of Memory for the forgotten narratives of Tha-
ba 'Nchu will be the place where the old informs the new, as
in the Acropolis Museum. The architectural intervention will be the
mnemonic device that remembers the story of Thaba 'Nchu through
local narratives. Each person who tells his or her story becomes part of
this 'memory machine', gradually reviving identity through remembering
the story of place.

The site is located between the three hills, to the north of central Thaba 'Nchu
on a large plot of land allocated as church grounds, largely representing the his-
tory of the settlement in built form. A hill becomes the natural boundary of the
site. To the Barolong, hills are significant elements in the landscape as villages
were built at the foot of the hill so that the chief, dwelling on top of the hill, could
watch over and protect his people. The ruins of the first Black school in the Free
State, built by the Barolong and the missionaries using clay bricks, is located
on the site, as well as the ruins of the Ereskuld NG church, reminiscent of
the Cape Dutch-style, and a Victorian style chief house. These ruins, all of
which are by-products of Apartheid, represents past stories that may
be confronted and included in the proposed project. The Traditional
Council, the tactic offices of the police and a temporary shed
housing SASSA offices, appeal to the present needs of the
community of Thaba 'Nchu.

CATALYST

To move —'resurrected' → (lever) needs to be turned
for Mnemonic stystem

WHERE TIME AND SPACE MERGE

The House of Memory will delicately add another layer to this complex site through architectural language that embodies the stories of the cultures within the place, the history, the modern life and the natural environment will present the threshold between the past and present, a story in itself. The ruins on the site are remainders and reminders of past stories. They become physical clues that will contribute to the design in terms of material, size, scale, form and construction. Furthermore, these considerations will augment the story narrated by the House of Memory. The architecture will attempt not to override the historical structures. Rather, it should attempt to augment them for the successful integration of the old and the new to 'create the new from the damaged old'. Furthermore, the House of Memory is aimed at augment the traditional idea of museums in society.

The proposed project strives to be a place where the old is reconstructed and remembered, and where the meaningful new can be inspired. The epochs portrayed architecturally on the site are juxtaposed, the museum becomes the connection in time, weaving together what was with the new, reviving the forgotten stories.

The morphology of the new will be derived from the old structures within the context to attempt the making of meaningful architecture in a specific milieu. The Victorian-style chief house uses brick for construction and porches serve as the threshold between the outside and inside, offering shade against the harsh sun. The precinct will attempt to mirror this principle through the constant interplay between private, semi-public, and public spaces reflected in relationships between closed and open spaces that also address the climate conditions. The Barolong constructed their dwellings, using ironstone from the area and built their dwellings in clusters. This will be reflected in the proposed project which is informed by the built context, and which augments the existing site. The existing structures are not ordered according to a grid, but poetically interacts with the varied landscape. They are all single-storey structures, long and rectangular in form, which will be reflected in the design of the precinct. Bearing in mind the tectonics of the project, structural decisions will be based on the concept of the new emanating from the old through the use of thick ironstone walls as the core of the structures, deconstructing into a steel framework with either corten steel cladding that represents the new, or recycled galvanised iron reminiscent of the construction of the house in the context.

TRADITIONAL   VS.   AUGMENTED

REPRESENTATION	EXPRESSION
MONUMENTS	HOMES
HISTORIES	STORIES
NATIONS	PERSONS
GROUPS	INDIVIDUALS
INTERNALIZED	ACCESSIBLE
PRIVATE	INTEGRATED
INTROVERTED	PUBLIC
EXCLUSIVE	INTERACTIVE

FIGURE 203: Voice of a Place revived through stories as mnemonic devices

In order to revive the voice of Thaba 'Nchu, using a funeral procession as a metaphor in the design may contribute to the remembrance of certain occurrences in the place, which will set the memory machine in motion in order to come to terms with the past and voice the story of Thaba 'Nchu. The existing structures on the site reveal a definite axis, the voice of the old, reinforced by the ruined structures on the site. The 'funeral procession' should use the ruins on the site to represent that which is old and which will be remembered and voiced through the new emerging from the old. The place where the new and the old come together represents the voice of Thaba 'Nchu. This may be achieved by designing a new axis that intersects the old axis. The point at which they meet should represent the remembrance and contemplation of the stories of those who live there. A probable location for the proposed project is between the ruined structures and the buildings that are presently being utilised in order to connect the forgotten stories with the present needs in Thaba 'Nchu.

In order to orientate and direct an individual on the site, the ruins of the old chief house may be used as the point of entry into the precinct. The house may of-
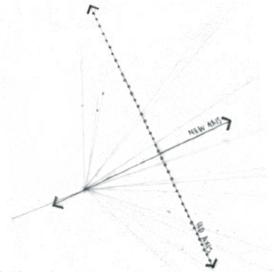
FIGURE 204: Old & new axis identified on site.

fer the visitor a sense of familiarity, bearing in mind Bachelard's notion of a house typology as a manifestation of the soul, a container of memory and experience. With regard to the funeral procession, the house may serve as the gathering space for the funeral, leading to the rest of the precinct.

A labyrinth of ramps will address the steep slope, and may enhance the experiential quality the visitor has,

HOUSE AS THE POINT OF ORIENTATION AND DIRECTION ON SITE
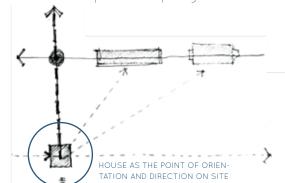
FIGURE 205: House as possible point of orientation and direction. Old & new axis meet at 'revived' voice of Thaba 'Nchu
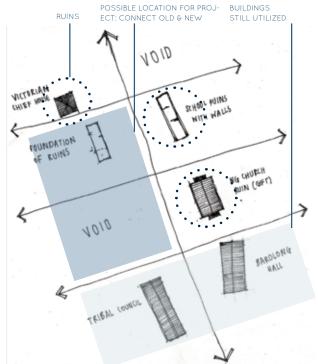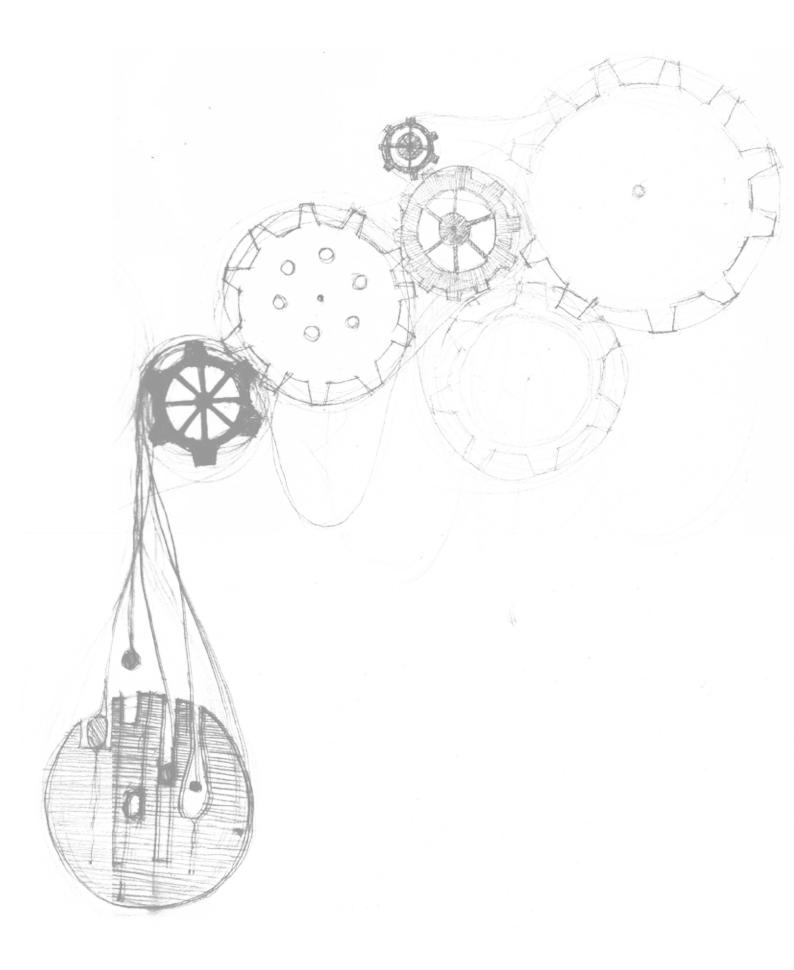
FIGURE 206: Structures & axes on site

attempting to disconnect the visitor from the present and drawing attention to the voice projected by the architectural spaces. The House of Memory will attempt to connect all the traces of narratives, becoming a container of stories like the ruins in the context, yet project these stories into the place so that a relationship be established between the old and the new may be established.

The metaphor of the funeral procession may extend into the museum itself. 'Tombs' as exhibition spaces may narrate the stories that devastated Thaba 'Nchu. Sinking the spaces into the ground may illustrate the 'burial' of these stories of which the place needs to be reminded in order to come to terms with it. Visualising the stories with ordinary objects from that time period, as in the Museum of Innocence, may augment the 'chapter' being portrayed in the space.
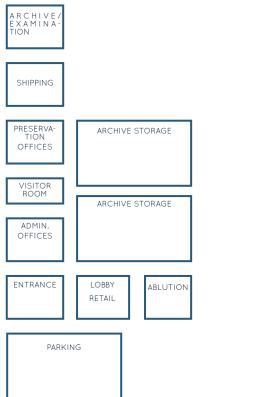
In order for the voice to be remembered after the devastation, oral history from ordinary people residing in Thaba 'Nchu should be voiced. Anthropology offices will contribute to the revival of forgotten stories, and preserve the present social narratives in Thaba 'Nchu. Providing spaces where oral history can be recorded within the precinct, as well as within the sparsely-urbanised setting of Thaba 'Nchu, may contribute to the memory machine, resurrecting the buried and forgotten voice. The mnemonic procession attempts to use that which is ruined and buried to help find meaning and purpose in continued living in Thaba 'Nchu. The House of Memory strives to become the connection between the past voice and present stories, between people and the place they inhabit.

PUT TRACES OF NARRATIVES BACK TOGETHER

FIGURE 206:
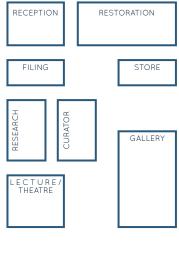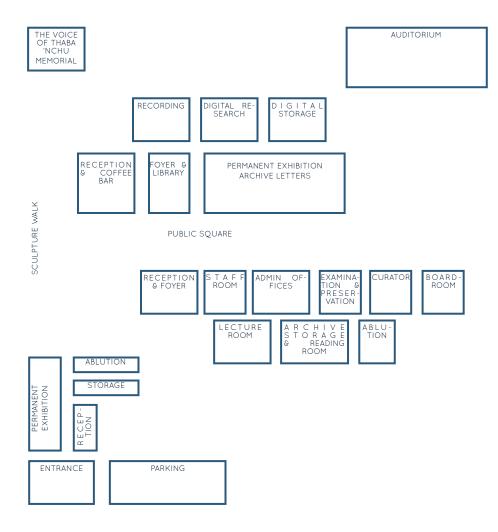
ARCHIVE TYPOLOGY
BULK OF SPACE FOR STORAGE

ARCHIVE/ EXAMINA- TION

SHIPPING

PRESERVA- TION OFFICES

ARCHIVE STORAGE

VISITOR ROOM

ADMIN. OFFICES

ARCHIVE STORAGE

ENTRANCE

LOBBY RETAIL

ABLUTION

PARKING

MUSEUM TYPOLOGY
SPACE FOR VISITOR MORE IMPORTANT

RECEPTION

RESTORATION

FILING

STORE

RESEARCH

CURATOR

GALLERY

LECTURE/ THEATRE
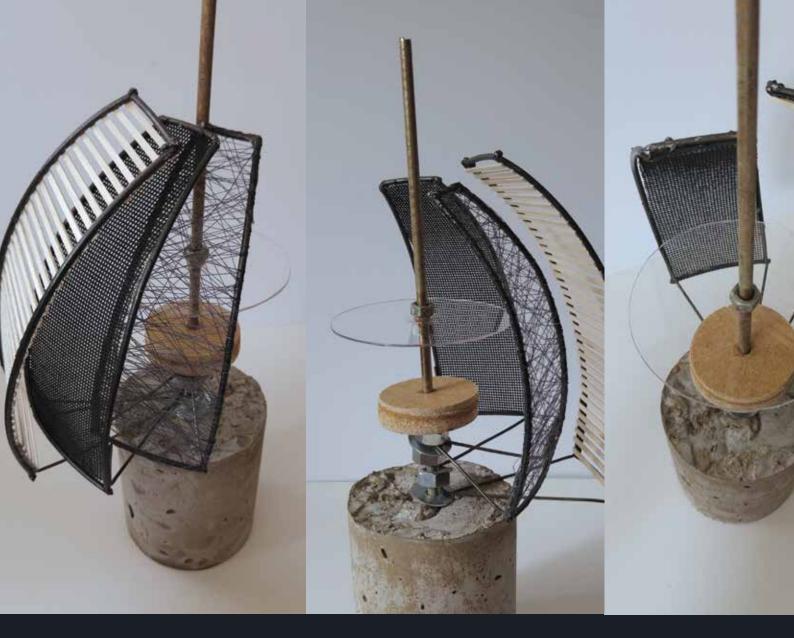
ORAL HISTORY MUSEUM & ARCHIVE

THE VOICE OF THABA 'NCHU MEMORIAL

AUDITORIUM

RECORDING

DIGITAL RE- SEARCH

DIGITAL STORAGE

RECEPTION & COFFEE BAR

FOYER & LIBRARY

PERMANENT EXHIBITION ARCHIVE LETTERS

SCULPTURE WALK

PUBLIC SQUARE

RECEPTION & FOYER

STAFF ROOM

ADMIN OF- FICES

EXAMINA- TION & PRESER- VATION

CURATOR

BOARD- ROOM

LECTURE ROOM

ARCHIVE STORAGE & READING ROOM

ABLU- TION

ABLUTION

STORAGE

PERMANENT EXHIBITION

RECEP- TION

ENTRANCE

PARKING

The accommodation list below lists the various functions that are incorporated into the final design proposal. The programme was mostly determined from the functions deemed most important identified in the precedent study analyses in terms of typology, also from the client's requirements.

HOUSE:

Reception & Reception office	17m^2
Exhibition	76m^2
Site Storage	15m^2
Ablution	14m^2

ARCHIVE:

Reception	5m^2
Foyer	10m^2
Staff Room	14m^2
Office Space	14m^2
Preservation & Filing Room	14m^2
Curator & Curator's Assistant Office	22m^2
Boardroom	22m^2
Circulation	40m^2
Lecture Room	43m^2
Ablution	15m^2
Archive Office	24m^2
Reading Room	74m^2
Archive Storage	75m^2
Reading Garden	60m^2

MUSEUM:

Reception, Coffee Bar & Library	56m^2
Basotho War Tomb	27m^2
Colonial War Tomb	35m^2
Apartheid Tomb	39m^2
Circulation- Hall of stories	35m^2
Circulation- Tell your story	62m^2
Oral History Recording	18m^2
Digital Archive	18m^2
Digital Storage	18m^2
Circulation & Waiting Areas	55m^2

SCHOOL RUINS:

Barolong Chamber	30m^2
Missionary Chamber	30m^2
Voortrekker Chamber	30m^2

ERESKULD CHURCH:

Auditorium	118m^2

CHAPEL OF VOICES:

Memorial	140m^2

SCULPTURE WALK

TOTAL AREA: 1365m^2

2.8   TECTONICS
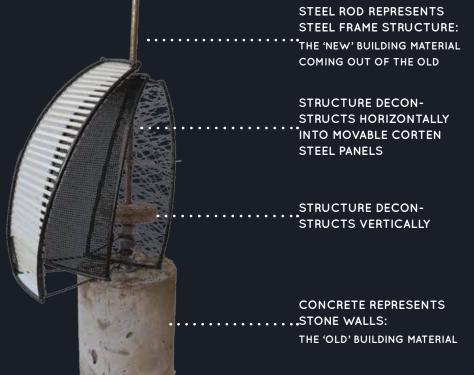
2.8.1 STRUCTURAL CONCEPT EXPLORATION

The structural touchstone was explored in terms of the design concepts. The structures in the immediate context consist of load-bearing masonry, a stereotomic characteristic, and recycled iron sheeting as a tectonic consideration. Almost half of the built context is comprised of old structures, many of which are run down, while the rest are modern structures. The proposed building aims to stitch together the old and the new by using the old as the foundation for the new. The old material is represented in iron stone walls, and the new material as steel framing, cladded with corten steel.

Emerging from the stereotomic structural core, lighter elements 'radiate' from this heavy, buried 'old' see fig. 207-211. In addition, the stone walls emerging from the ground represent the buried and forgotten, which is revived. Light entering the tectonic structure augments the 'revival' in the proposed project.

FIGURE 207-211: Construction Touchstone by author 2016

STEEL ROD REPRESENTS STEEL FRAME STRUCTURE:
THE 'NEW' BUILDING MATERIAL COMING OUT OF THE OLD

STRUCTURE DECONSTRUCTS HORIZONTALLY INTO MOVABLE CORTEN STEEL PANELS

STRUCTURE DECONSTRUCTS VERTICALLY

CONCRETE REPRESENTS STONE WALLS:
THE 'OLD' BUILDING MATERIAL

STRUCTURE DECONSTRUCTS IN TERMS OF LAYOUT & MATERIAL DENSITY VERTICALLY & HORIZONTALLY

2.8.2 BUILDING REQUIREMENTS

A museum is an institution which collects, documents, preserves, exhibits, and interprets material evidence and associated information for the benefit of the public (Museums Association (UK), 1984), while an archive is a collection of historical documents or records providing information about a place, institution, or group of people. The archive-museum will protect, conserve and sustain the history as narratives of the site. Whereas archives are usually introverted and forgotten in society, the archive and museum for the forgotten narrative is part of the community and is a narrative of the history of the area, public and accessible to the Bloemfontein community.

Use of space

* Sufficient space allocated to work areas, collection storage and exhibitions.
*Retail facilities visually separate from exhibitions.
*Well ventilated exhibition spaces, sufficient natural light with no obstructions

ADMIN
→ 3 staff + 2 receptionists
→ Wheelchair access
→ women need x2 sanitary facilities as men

BARRIER FREE ENVIRONMENT → STAIR LIFTS
* May be used in public/ semi public
* hydraulic
* no permanent enclosure
= Require min. pit depth
* Semi-public.

TOILETS → Enclosed
→ own lighting + ventilation
*STAFF TOILETS : 6-25
(F)2 WC's, 1 urinal + 1 WC (M)

*PUBLIC (30) 1000 m² - 2000 m²

	M	F
WC	1	2
Urin	1	
Basin	1	2
Disabled	1 unisex	
Baby-, changing	1 unisex	

WC → 900mm with 800 mm door
* Toilet roll holder
* Bin

*Disabled → door open outward

EXTERNAL SPACES → Body dimensions
→ Walk ways NB materials
→ furniture
→ Drainage
→ Retaining walls
→ Ramps

MUSEUM → small collection
→ 1 curator (oversee)
→ Area's determined by client
→ info + staff + commitment to research + conserv. provide guide to areas.
→ Storage accessible for research + conservation.
→ storage for collection expansion
→ not every function need separate space
→ educational operations
→ Museum layout → possible expansion
→ consider nature of narratives
  └ labyrinth route
→ control access
→ NB Furniture arrangements
→ open storage floor
→ Show staff + Public routes
* TEMPERATURE → control humidity, temperature in:
  * Exhibitions ⎤ air conditioning
  * storage   ⎥ material use
  * photo displays ⎦
+controlled entrance
* Clear aisles (grids?) 1,5m
* fire exit
* grid system for storage
→ Air pollution → air quality, may need filtration
* LIGHTING → indirect light NB (no UV radiation)
  → max. light dosage
mixed collections : 20-22 °C (paintings, paper, furniture)
* Sound + noise through structure controlled
  └ material finishes
*SERVICES : water + waste pipes not close to exhibitions
Risk management enhanced if separate heating / air conditioning system/ independent control system provided in collection areas.

Collection facilities

* Storage areas should be internal rooms, separate storage areas for different types of materials.
* Building to be well ventilated and air is filtered for dust.
* Minimises temperature and relative humidity fluctuations.
* Security as an important aspect.

Visitor flow and comfort

* A single point of entry and exit for visitors.
* Minimises the number of doors used, for both security and climate control purposes.
* Provide seating at strategic points throughout the museum.
* Clean toilets, conveniently located.
* Access for disabled persons, and safety considerations are vital to the planning.

Administration facilities

* Allocate space for administrative facilities.
* Plan for curatorial space where staff can work without interruptions.
* An allocated research space where the public can use the museum's reference library, resources, and appropriate collection information.

PROFESSIONAL & SPECIAL LIBRARY
→ specialist collection of books + Prof. Journals
→ rare material
→ community use
→ limited access

* meeting place for community
* Security (reception)
* natural light + ventilation
* connected to civic life

PARKING → 1 per /staff
1 space per 30m² of public display] museum
1 per 10m² [theatre]

AUDITORIUM → 5m min. for drama, Small stage
→ sound insulation + sound locks on doors
→ services acoustically sealed
→ HVAC system : s.l /s , 75% outside air and 25%
reticulated

LIGHTING → below, house lighting (EXIT + ESCAPE), Back stage
front of house lighting

FIRE PROTECTION
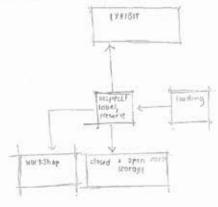
FIGURE 212: Ablution regulations

Occupancy Classification	Class of Occupancy	Total Population Allowed	Population	Sanitary Facilities Required
A1	Entertainment and Public Assembly (Pubs etc)	Number of fixed seats or 1 person per m² if there are no fixed seats.	Staff Public	Table 6 1 WC + 1 WHB (M) 1 WC + 1 WHB (F)
A2	Theatrical and Indoor Sport (Cinema etc)	Number of fixed seats or 1 person per m² if there are no fixed seats.	Staff Public Participants in sport	Table 6 Table 7 (peak) Table 7 (off peak) Table 8
A3	Places of Instruction (Educational Institutions)	1 person per 5m²	Staff Students	Table 6 Table 7
A4	Places of Worship (Church)	Number of fixed seats or 1 person per m² if there are no fixed seats.	Staff Public	Table 6 1 WC + 1 WHB (M) 1 WC + 1 WHB (F)
A5	Outdoor Sport	Number of fixed seats or 1 person per m² if there are no fixed seats.	Public Participants in sport	Table 7 (peak) Table 7 (off peak) Table 8
B1 - B3	Commercial Service (all risks)	1 person per 15m²	Staff Public	Table 6 1 WC + 1 WHB
C1	Exhibition Hall	1 person per 10 m²	Staff Public	Table 6 1 WC + 1 WHB (M) 1 WC + 1 WHB (F)
C2	Museums	1 person per 20 m²	Staff Public	Table 6 1 WC + 1 WHB (M) 1 WC + 1 WHB (F)
D1 - D4	Industrial (All Risks) (Factories etc)	1 person per 15 m²	Staff Public	Table 6 No separate provision
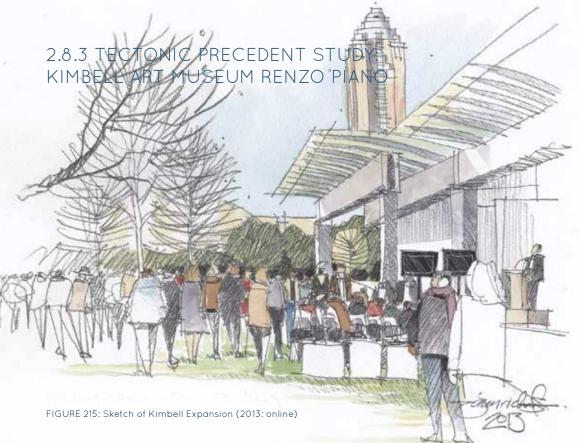
FIGURE 213:

Table 8 — Classifications for fitted floor coverings

1	2	3	4	5	6	7	8
	Classification						
Class of occupancy	Basement of building of any height	Building up to three storeys		Building exceeding three storeys		Building of any height	
	Any floor area except that contained in column 7 or column 8					Feeder routes	Emergency routes
	USP or SP	USP	SP	USP	SP		
A1	2	3	NR	3	NR	2	1
A2	2	3	NR	3	NR	2	1
A3	2	3	NR	3	NR	2	1
A4	2	3	NR	3	NR	2	1
B1	2	3	NR	3	NR	3	1
B2	2	4	NR	3	NR	3	1
B3	3	4	NR	4	NR	3	1
C1	3	3	NR	3	NR	2	1
C2	3	3	NR	3	NR	2	1
D1	NC	NC	NC	NC	NC	NC	NC

FIGURE 214: Parking standards NBR

Dimensions for Parking Area Layouts					
Parking Angle (ø)	Width (m)	Depth (m)	Aisle Width (m)		
			Ideal	Acceptable	Abs. Min.
90°	2.5	5.0	7.5	7.0	6.5*
60°	2.9	5.3	5.4 Two Way 4.4 One Way	=	=
45°	3.5	4.9	5.2 Two Way 4.2 One Way	=	=
30°	5.0	4.2	3.5	=	=

FIGURE 215: Sketch of Kimbell Expansion (2013: online)

The Kimbell Art Museum Expansion is used as a precedent in terms of structure, material, detail, space utility, response to existing structures and context. The expansion of the Museum in Fort Worth Texas is designed by Renzo Piano, which serves to increase much needed exhibition space of the Kimbell Art Museum, originally designed by Louis Kahn in 1972. The client, the Kimbell Art Foundation, required a structure that would respect the older building, provide sufficient space for the growing collection and make provision for education programmes, while the Kahn building would preserve the museum's permanent collection. Piano describes his extension to Kahn's as 'Close enough for a conversation, not too close and not too far away' (Schoek, 2016: online).

FIGURE 216: Renzo Piano

ENVIRONMENT & MICRO CLIMATE
Orientation

The building has an East-West orientation in order to form a relationship with the main Kahn part of the Museum (Fig. 10), as well as a dialogue with the Will Rogers Memorial Center and Amon Carter Museum. The Kahn and Piano Museums are nestled between century-old trees that set up a poetic contrast between civilisation and nature (Texas Architect, 2014: online). The narrow north and south facades are protected from the noise of the congested streets by green spaces planted with trees, as well as from the harsh Texas sun by the large overhang of the roof.

Roof

The roof is a complex system, layered with louvers, glass and screens, (Fig. 222-225). The louvers control the number of rays that enter the building, thus acting as a temperature regulator. The roof becomes an external sunscreen. This is relevant as filtered natural light enters the gallery, without damaging the art work, while the roof produces thermal comfort as well. The system may be too complex to consider in Thaba 'Nchu, but certain principles used by Piano may be re-interpreted into the proposed project.

Figure 217: Location in North America (2016: online)

Figure 218: Average monthly Rainfall in Texas (2016: online)
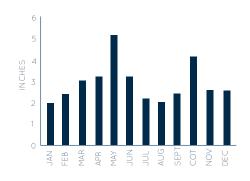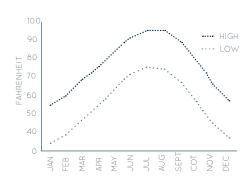
Figure 219: Average Temperature in Texas (2016: online)

Micro-climate

The Kimbell Art Museum Expansion is located at 333 Camp Bowie Blvd, Fort Worth Texas, USA. The area has a humid, subtropical climate which suggests that precipitation is evenly distributed throughout the year (2016: online). Summers are hot and humid with an average temperature of 35°C Fig. 218, while winters are cold and damp with an average temperature of 12.8°C and an average snowfall of 0.07m per year, (Fig. 219) (2016: online). The Temperatures are similar to that of Thaba 'Nchu with hot winters and cold summers.

Context

The museum is located on a large city block of 16 187 m² (Fig. 220), downtown in the cultural district of Fort Worth and bordered by a residential area and a university. The plot is defined by the four streets that surround it. The Kimbell Art Museum consists of the Piano Pavilion and the Kahn building that sits across each other. The Piano Pavilion is partly successful as it addresses many issues in the urban area such as traffic, limited parking space, rapid storm run-off, higher temperatures and a lack of green space (Nelson, 2010: online). The location is similar to the site for the proposed project in terms of centrality. The site is mostly also surrounded by a residential area with a school and some businesses in the vicinity

Figure 221: Site Plan (sketch derived from Google earth)

Figure 222: Adjustable roof panels (2016: online)

Figure 223: Glass roof (2016: online)

Figure 224: Roof with votovoltaic cells (2016: online)

Figure 225: Glass roof articulation (2016: online)

Figure 220: Locality Map- Culture district in Texas (Google images)

USER BEHAVIOUR, SOCIO & ECONOMIC PROFILE & BUILDING REQUIREMENTS

Building Requirements
In the case of the Kimbell Extension, the Musuem aims to conserve and exhibit art works. The design of a museum should include the following factors:

Use of space
-Sufficient space allocated to work areas, collection storage and exhibitions.
-Retail facilities visually separate from exhibitions.
-Exhibition spaces well ventilated, sufficient natural light with no obstructions
Collection facilities
-Storage areas should be internal rooms
-Building to be well ventilated and air is filtered for dust.
-Minimize temperature and Relative Humidity fluctuations.
-Security as an important aspect.

Administration facilities
-Space for administrative facilities.
-Plan for curatorial space where staff can work without interruptions.
-An allocated research space where the public can use the museum's reference library, resources, and appropriate collection information.

Visitor flow and comfort
-A single point of entry and exit for visitors.
-Minimize the number of doors used for security and climate control.
-Provide seating at strategic points throughout the museum.

Socio Economic Profile
As an entrance fee is required to enter the museum, only a certain group of people who can afford to do so is welcome to visit it. Only people with a Kimbell membership receive free and unlimited admission to all exhibitions. A museum is part of the culture of a place and should be freely accessible to all members of society because it is their constitutionally defended right to education.

SITE PLANNING AND LANDSCAPING

Piano sustained what Kahn envisioned for the Kimbell Museum, to have a direct relationship with nature, thus maintaining as much green space as possible in an area deprived of greenery.

The Piano Pavilion emphasises transparency and openness (RPBW, 2016: online). The structure becomes part of the landscape through glazed walls, prominent in the western section of the building. The eastern section is buried underground with a green roof. The turf roof ramps up from the street level and becomes a park-like space that allows the site to maintain recreation space for informal gatherings and museum functions (Nelson, 2010: online). 14 000 m^2 of the green recreation area is planted with 320 new trees , forming a tree-like lawn, which includes trees between the old and the new addition to re-establish the previous planting (Fig. 226 & 229). Apart from these new trees, the Kimbell Museums are nestled between century-old trees that adds to the character of the Museums.

Lessons learnt:

Developing the nature:
-Are vital to urban spaces as they aid in preserving green space.
-Provide the spaces for people to gather,
-help air filtration
-reduce the heat island effect
-foster community identity

Figure 226: Garden connects the old Museum with the new (2016: online)

Figure 227: Paths, lawns & pond- communication between new and old (Nelson, 2010: online)

Figure 228: Museum extends into Landscape-nature and built inform each other (Nelson, 2010: online)

Figure 229: Nature seperating the old (1) from the new (2) (Nelson, 2010: online)

UTILITY & SPACE ENHANCEMENT

Meeting of classical inspiration and technical innovation

The main purpose of the Kimbell Art Museum is for visitors to appreciate historical art pieces with a backdrop in the form of nature and other historical centres. The building is quite strong in itself with good elements to it. Clear lines of the architecture allow visitors to concentrate only on the artwork. The design is a colonnaded pavilion with overhanging eaves that recognises Kahn's museum building through associated height, using concrete as a primary material with the emphasis on light. Piano placed the structure 60m away from Kahn's Museum to 'respect' and conserve the older architectural masterpiece. The museum, mostly single-storeyed, allows the interior spaces to be illuminated naturally through the roof and walls similar to Kahn's building (Fig. 234).

Plan

Two glass passageways connect two adjacent wings. The section to the east, the front wing, appears weightless as a result of the glass roof that floats above the timber beams and concrete posts. Square concrete columns wrap around three sides of the building and emphasise the entrance of the pavilion. The plan is linear, without disturbances to ensure open circulation for visitors to view the artworks (Fig. 231).

East wing program

*Ground level: pavilion lobby with pavilion café, 2 top-lit galleries, pavilion shop, loading dock and security.
*Lower level: art storage, preparatory areas, mechanical systems, services

West wing program

*Ground level: non-top-lit gallery, suitable for the display of light-sensitive works, auditorium balcony, education workshops, membership department
*Lower level: pavilion auditorium with 298 seats and auditorium foyer, library, education

Area

The total area of Piano's Pavilion is 9 400 m, with a height of 6,7m.

Breathing floor

To spatially enhance the galleries, Piano designs what he calls a breathing floor, a floor that functions as a vent. The spaces are void of air ducts and cables have been installed in the roof, which would otherwise have been visible within Piano's glass roof.

The white oak floorboards have been laid with small gaps in-between to allow low-velocity air to flow through the floor. The openings in the floor echo the beams above, creating a subtle pattern, while its colour provides warmth, complementing the cool concrete walls (McMillan, 2014: online).

Gallery walls

The gallery walls are movable, adding to the dynamism of the space. They have been designed in such a way as to maintain the tranquility of the gallery spaces and the feeling of weightlessness. The 277mm walls have been secured to the floor, allowing light to filter through the bottom part, also appearing to float as the roof (Texas Architect, 2014: online).

Light

Piano designed a roof structure that allows daylight to filter through the gallery ceilings. The spaces are subtly lit, providing luminance perfect for comfortably viewing works of art.

Furnishings

Furnishings are used and positioned in such a way as to contribute to the overall experience of the museum, illustrated through neutral-toned contemporary furniture of tan and white, accentuated by red (Fig 232).
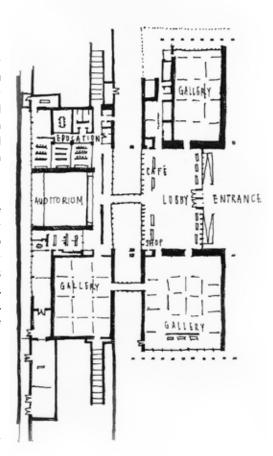

Figure 230: Ground Floor Plan of Piano's extension (sketch derived from architects drawings)

Figure 231: Lower Floor Plan of Piano's extension (sketch derived from architects drawings)

Lessons learnt:

*Linear plan ensures undisturbed circulation
*Single storey allows natural illumination in every space
*Mechanically controlling natural light
*Enhance existing/ historic with out altering it
*Served and servant spaces
*Movable partitions for exhibition needs
*Materials used contribute to function of the building

These factors may be considered in the proposed project to attempt to design optimum spaces in relation to the function and aim of the building.

Figure 232: Resting spaces view on green lawns (2016: online)

Figure 233: Clean, linear lines (2016: online)

Figure 234: Floating roof- allows natural light to pass thorugh (Texas Architect: online)

Figure 235: Building materials enhance function (Texas Architect: online)

Figure 236: Building focuses on content displayed (Texas Architect: online)

Figure 237: Stairs become aesthetic details in design as a whole (Texas Architect: online)
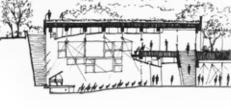
Figure 238: Section through Auditorium, sketch derived from architects drawings (Texas Architect: online)

HORIZONTAL & VERTICAL CIRCULATION

Piano designed the Art Museum so that it is mostly experienced on a single floor This allows visitors to move through the exhibitions without disturbances.

Vertical circulation

Visitors enter the museum via an underground parking lot and go up to the portico of Piano's building by means of an elevator or stairs. Piano purposely directs visitors to use the entrance Kahn intended them to use (Texas Architect, 2014: online). By doing this he accentuates the old and brings about awareness of the historic gallery, an important design mechanism that can be utilized in the proposed project.

Stairs (Fig. 237) and elevators contrast with the mostly linear, horizontal circulation. In fact, it almost becomes disruptions in the circulation (Bernstein, 2013: online). Piano uses canted walls next to the main staircases to add real dynamism to the simple act of moving between levels (Fig. 238).

Horizontal circulation

From the portico of Piano's extension, visitors follow a passageway across the lawn to the lobby of Kahn's building. The design of circulation between the new and the old structure is designed to delay gratification, to heighten the sensory awareness of the visitors and prepare them for the art inside (Bernstein, 2013: online). The circulation becomes a choreographed procession in which the visitors are encouraged to become mindful of the shifting light, the gravel that crunches under their feet at the entrance, and the water splashing in the fountain.

Circulation spaces parallel the galleries in the museum, reinforcing the galleries' mostly linear orientations. The exhibition circulation has no prescribed route, and the rooms are not organised in any strict linear order. However, users feel a natural inclination to move in a certain linear direction. The rhythmical sequence of variously proportioned galleries stimulates the visitors' appreciation of the works

on display. The served and service spaces have their own independent circulation routes to ensure that no attention is taken off the art that is on display.

Lessons Learnt

*Circulation enhances function of Museum
*Materials used in architectural elements enhance circulation
*Circulation on exterior as important as circulation on interior
*Circulation as sensory tool in design
*Minimize vertical circulation to minimize disturbances in museum 'route'

These factors may be considered in the circulation of proposed project to enhance experiential quality of building.

Vertical Circulation:

■ Stairs
■ Elevators
■ Ramps

Horizontal Circulation:

•••• Staff
•••• Visitors

Figure 239: Circulation (sketch derived from architects drawings)
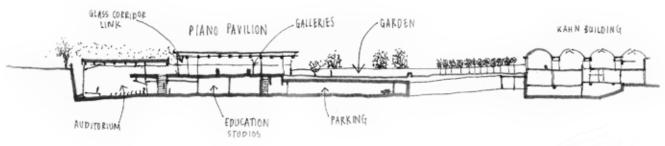
Figure 240: Section through new and old museums (sketch derived from architects drawings)

FORM & FUNCTION

'The tension between the man-made world of the museum versus the immense vastness of the Texas plain; the solidity of the building is the source of the design's brilliance. Piano sinks the pavilion deep into the slope, resulting in a long, low-slung structure' (Texas Architect, 2014: online).

Piano's extension is similar to Kahn's Museum in terms of size and height. The symmetrical, rectangular structure has a width of 25 m and a length of 91 m, echoing the older structure. Piano's Pavilion has four square concrete columns on the eastern side and four on the western side of the exterior of the building, with more closely-spaced rows of these columns placed on the northern and southern facades that support the beam overhang.

The positioning of the structure on the site draws attention to the western facade of the Kahn building where the main entrance is located. The Pavilion faces east and is placed 60 m from the old structure.

The long, rectangular form of the building (Fig. 244) suggests linear movement which supports the function of the building as circulation within a museum is one of the vital aspects to consider when designing a museum. The path taken by the user is directly linked to the experiential quality of the museum. The form allows for visual connections to the landscaped surroundings, as well as the existing cultural structures. The form is simplistic, yet detailed, to ensure that emphasis is placed on the artworks contained in the museum as well as on the gardens.

Lessons learnt:

*Form is derived from context and landscape
*Form illustrates function- in the case of the museum- long and narrow form speaks of the linear paths of the museum.
*Form relates to the older structures, yet is interpreted in a contemporary way

These design elements may be considered in the form of proposed project to be aware of the existing and how it forms a dialogue with the old and the landscape.
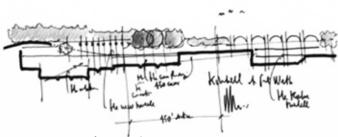
Figure 241: Existing inform new design (2016: online)
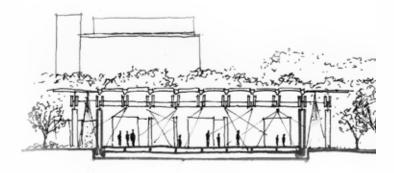
Figure 242: Form does not overshadow the art pieces in the museum (sketch derived from architects drawings)

Figure 244: Form of new is derived from the form of the old (2016: online)

Figure 243: New structure cuts into landscape so that old structure is enhanced (2016: online)
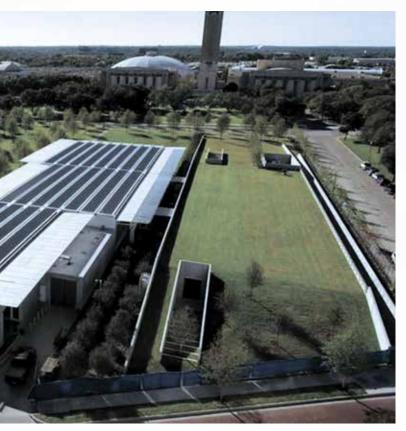
DESIGN DETAILING: ACCESSIBILITY

Wheelchair access

The museum and the museum park are wheelchair accessible. Handicapped users can access the Pavilion by means of the underground parking area, as well as from a drop-off zone from Camp Bowie Boulevard. The lifts in the museum have door breadths of 85 cm and widths of 140 cm to accommodate wheelchairs.

Toilets for the physically disabled are wheelchair accessible with a door breadth of 95 cm and a seat height of 47 cm; hinged handles and handle grips have been installed and a wheelchair-adapted washbasin is available. The mirror has been mounted at a suitably lower height. The museum also has wheelchairs available for physically-disabled visitors.

All rooms in the museum have been designed to meet the needs of visitors with mobility impairments. As the museum does not have steps or obstacles, all visitors with disabilities have access to the works of art in the museum and its exhibitions (Figure 246). The type of flooring used in the exhibitions provides a smooth, barrier-free surface.

Deaf persons

For the deaf and hard-of-hearing, special guided tours are available, conducted in English sign language, usually once per exhibition.

People with disabilities are entitled to a reduced admission fee. Admission for carers accompanying disabled visitors is free.

Lessons learnt:

*All design decisions should be made while bearing in mind those with disabilities or challenges with regard to accessibility.

Figure 245: Paths are wheelchair accessible (Texas Architect: online).

Figure 246: Floor are barrier free (Texas Architect: online).

Figure 248: Doors are magnetized to keep open when moving through (Texas Architect: online).

STRUCTURAL SYSTEM DETAILS

Classical styling with modern technology

Renzo Piano wanted to honour, but not copy, Kahn's structure. The new addition echoes Kahn's three-section layout, form, and shape, as well as materiality (glass, concrete and wood) in a contemporary way.

Floor

The floor is 38 mm thick, with 6-mm layers of riftsawn white oak (Fig. 265). Rather than a conventional tongue and groove, the planks for the so-called 'breathing' sections were milled with CNC-cut tabs placed 300 mm apart. The boards are pre-finished with UV-cured aluminium oxide finish, avoiding the need to sand and finish a floor with gaps between the boards. The gaps appear only in the galleries. In the lobby, where food and beverages could fall through during special events, two large grates for ventilation were designed. The wooden grates are flush with the floor so that they remain hidden (McMillan, 2014: online).

The floor has a large service space beneath the floor finish to accommodate the many services that would traditionally be hidden in the roof structure to preserve the aesthetic of the roof. The floor has a white oak finish with a pattern that mirrors the beams above. To avoid ruining the aesthetics of the floor in the museum with air registers, the floorboards were laid with gaps in-between to create a 'breathing' floor (McMillan, 2014: online).

The floor also contains connection points for the movable exhibition walls. Steel U-channel attachment plates have been bolted to the concrete. Since floorboards are CNC-cut, specially-fabricated brass bolts are accessible every 1,5 m throughout the gallery space. About 1 000 brackets are situated beneath the gallery floors, which enable endless layout options for exhibitions and expanding collections (McMillan, 2014: online). Hidden below the wear layer of the floor are strong magnets, which have been drilled into the floorboards and which serve as door locks. When engaged, the magnets in the floor attract magnets concealed in the bottom of the doors to secure the galleries (McMillan, 2014: online).

Walls

A colonnade of square concrete columns wraps around the sides of the building, supporting solid wooden beams and the overhanging eaves of a glass roof (Architizer, 2016: online). The walls are creamy white concrete throughout the structure, infused with titanium with tie holes at 9-m intervals that produce an interrupted, neutral backdrop, ideal for the display of art. Slender steel columns support the gallery roofs (Bernstein, 2013: online). The exhibition walls are movable partitions which are locked, using two or three anchors that are hidden beneath the floorboards, thus allowing light to spill beneath them (McMillan, 2014: online).

Glazing

Glass used in the pavilion gives a tectonic balance to the stereotomic timber beams and adds transparency to the structure. Double-glazed, gas-filled walls allow natural light to fill the northern and southern galleries, and to flow from the glass roof. From the entrance of Piano's addition, five layers of glass allow a view through the lobby area, the garden between the sections, into the museum's rear section and into the 'light-well' that spans the length of the western building section. Custom-sized steel members are the main structural element for the glazing system.

Roof

The almost-entirely-transparent roof is a significant element within the design, as in Kahn's Museum. The glass roof appears to float above the substantial, paired beams and creates a controlled day-lit environment (RPBW, 2016: online).

Beams

29 pairs of laminated, Douglas-fir timber beams (Fig. 263) are spanned throughout the interior, extending to the exterior. These beams, which have a length of 30m, provide support for the roof system and visually add weight to the large continuous interiors.

Isokorb®connections, an American product, are used in the roof system of the eastern part of the building, and connect the floating roof with the heavy beams. The laminated wooden beams include steel headers and are connected in pairs with Isokorb®, providing a column-free space for the full width of the 31m bays. The wooden beam pairs are connected by Isokorb® type S, steel connections, at the beams steel headers (Fig. 429) (Schoek, 2016: online).

The roof is constructed from a layer of high-efficiency fritted/frosted glass coupled with silk-like scrims that support a mechanically-operated louvre system with built-in photovoltaic/solar cells (McMillan, 2014: online). The ceiling is activated by the natural light that flows through the glass roof, down through 'silk-like' scrims. Natural light provided by the glass roof is enhanced by energy-efficient lighting with LED technology. The louvres are capable of rotating 180 degrees to protect the skylight and the PV arrays from Texas' frequent hailstorms (Nelson, 2010: online).

The top layer consists of aluminium mechanical louvres that shade direct sunlight and capture energy with photovoltaic cells, and has an area of approximately 1 000 m^2 which produces approximately 1,4 MWh of green electricity (GIG, 2016: online). The main function of the louvres is to control the amount of light entering the space. The louvre system can be fully closed or opened to any position between 0 and 45 degrees. The system can rotate and fold over to protect the glass roof structure in the case of heavy weather, such as hail. The PV cells within the louvres generate enough energy to meet about 70 per cent of the building's lighting energy needs. The louvres also keep sun off the glass; each component of the system is individually controlled by a control system (Donhoff, 2014: online).

The middle layer comprises a high-efficiency fritted glass roof that further diffuses light, and has an acid etch on the inside surface for a more matte finish (Donhoff, 2014: online).
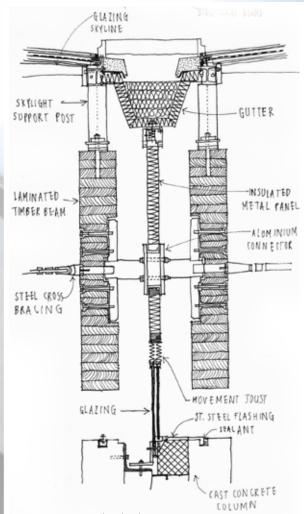
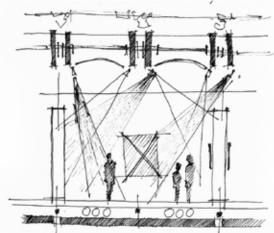Figure 249: Laminated timber beam structure (sketch derived from architects drawings)

Figure 252: Gutters inbetween paired beams (sketch derived from architects drawings)

Figure 253: Roof system (sketch derived from architects drawings)

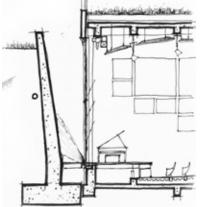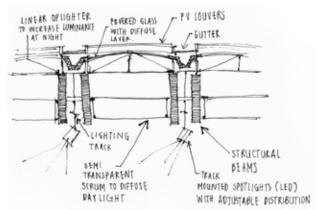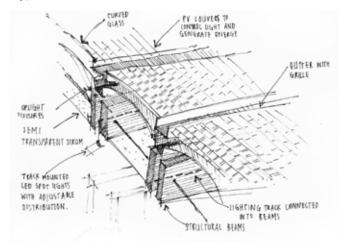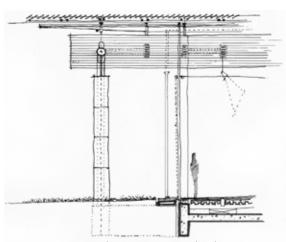Figure 250: Floating exhibition walls with services under floor finish (Texas Architect: online).

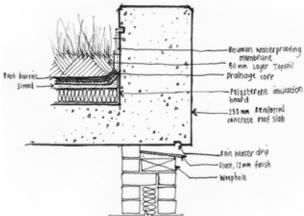Figure 254: Concrete column supports paired timber (sketch derived from architects drawings) beams.

Figure 251: Concrete retaining wall (sketch derived from architects drawings)

Figure 255: Green roof structure in South Africa

The bottom layer is made up of the interior, stretched between wooden beams, and which has a silk-like scrim fabric that filters light to evenly distribute daylight throughout the gallery. Custom 10,5 W 3 000 K LED fixtures with an adjustable shield are tucked away out of sight above the wooden beams to uplight the glass ceiling and increase the luminance at night (Donhoff, 2014: online).
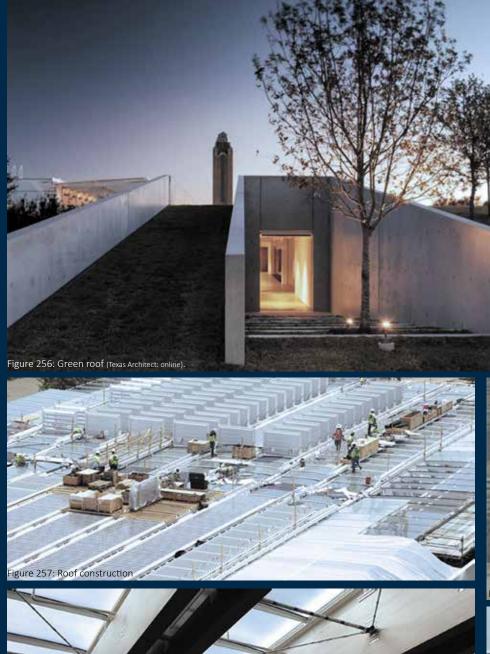
Green roof

The west wing has a green roof structure that slopes down to a lawn that is accessible to the public. The roof protects the gallery that houses light-sensitive artworks, and an auditorium. Isokorb® type CM is used for concrete connections in the parapet wall that is connected to a 230-mm thick concrete roof, which is covered by grass. Isokorb® provides a thermal break from the concrete roof connection to the parapet (Schoek, 2016: online).

The high quality construction components prove to be too expensive and complex for Thaba "nchu, yet valuable lessons can be learnt from the construction and details may be simplified to fit into the level of skill and material available in Thaba 'Nchu.

Lessons learnt:

*Simple architectural elements- floor, wall and roof- are reinterpreted into dynamic elements that contribute to the function of the building.
* Older, classical ideas are reinterpreted into technical innovative ideas.
* Roof mechanically controls daylight filtration into spaces
* Services in floor void and organized between beams
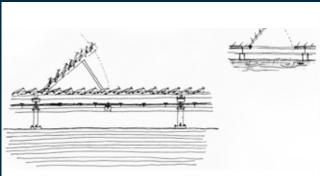*Success of structure is dependent

Figure 256: Green roof (Texas Architect: online).

Figure 257: Roof construction

Figure 258: Transparency of roof (Donhoff, 2014: online)

Figure 259: sketch of meovable roof panels (sketch derived from architects drawings)
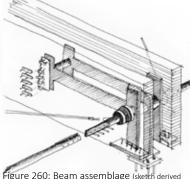
Figure 260: Beam assemblage (sketch derived from architects drawings)

Figure 261: possible South African interpretation

Figure 262: possible South African interpretation

Figure 263: Constructing the roof (Donhoff, 2014: online)

Figure 264: Photovoltaic cell moveable panels (Donhoff, 2014: online)

Figure 269: concrete to beam connection

Figure 267: roof transparency vs solidity of column

Figure 270: Inserting glass roof panels (Donhoff, 2014: online)

265: Floorboard system (McMillan, 2014: online)

266: Floor construction (McMillan, 2014: online)

Figure 268: Floating roof on timber beams (Donhoff, 2014: online)

Figure 271: Green roof entrance (Texas Architect: online).

TECTONIC ASSEMBLIES/ COMPONENTS

	PRIMARY			SECONDARY			TERTIARY		
	FRAMES	PLANES	JOINTS	FRAMES	PLANES	JOINTS	FRAMES	PLANES	JOINTS
ROOF	LAMINATED WOOD BEAMS			STEEL BEAMS	COVERED GLASS PANELS		CANTILEVER ROOF & LOUVER STEEL FRAMING	ROOF LOUVERS	BOLTS, WELDS, CLIPS, PLATES, GROUT
FLOOR	CIP CONCRETE FRAME			EXPNDED METAL GRADE PERIMETER				OAK FLOOR PANELS	
WALL/ENVELOPE	CIP CONCRETE COLUMNS	CIP CONCRETE WALLS	CUSTOM STEEL BRACKETS	ALUMINIUM CURTAIN WALL	CLEAR CURTAINWALL GLASS	SEALANTS AND GASKETS			BOLTS, WELDS, CLIPS, PLATES, GROUT
FOUNDATION	GRADE BEAMS	CONCRETE SLAB							

BUILDING SERVICES

Sustainibility

Compared to Kahn's building, Piano's pavilion only uses half of the energy per square foot (Dezeen, 2013: online), making the design extremely energy efficient through:

*Photovoltaic cells located on the roof
*Glazing that reduce heat loss and gain
*Geothermal wells that store energy and produce heating and cooling
*An air displacement supply system to reduce energy needed for air conditioning
*Low energy LED lighting
*Process fresh air through a central unit to recover energy and moisture
*High efficiency bathroom fixtures
*Breathable floor provides low velocity air that is well-distributed (Fig. 272)

As only a third of the interior is situated above the ground, the museum will see greatly reduced demands for heating and cooling (Schoek, 2016: online). These spaces, including two galleries and a lobby, benefit from the overhanging glass roof that supports a photovoltaic panel system, shades direct sun, and generates enough energy to offset up to 50% of the carbon produced by the structure on an annual basis. A geothermal well aids in air conditioning the building by using the natural heating and cooling provided by the earth's crust. Lighting, air-conditioning systems and fixtures also contribute to the energy efficiency of the building.

HVAC

A large service void of 600 mm is located underneath the finished floor layer and on top of the concrete floor slab to accommodate the pressurised plenum – a pressurised chamber containing air at a pressure that is higher than the surroundings, to equalise pressure for more even distribution – where the air duct is placed (McMillan, 2014:

online). Chilled air is sent through narrow gaps between the floorboards to avoid the need for grillwork which is visually distracting. Hence, the floor becomes a giant vent (Bernstein, 2013: online).

The mechanical louvre system which is normally open, closes completely during the time that the museum is closed and opens minutes before the museum opens again. This cuts down on heat gain from the sun during the long summer mornings, reducing demand on the HVAC system (Nelson, 2010: online).

Light

The Kimbell Art Museum is a contemporary interpretation of how to marry light and architecture (Donhoff, 2014: online). Piano used a combination of natural and electric lighting so that it is adaptable and tuneable. Spaces can be lit using daylight, or they can be changed primarily by means of electric light. Lighting is crucial in gallery spaces and museums, especially in the harsh Texas climate. Piano addresses this aspect through his roof structure that regulates light by means of movable aluminium louvres, as well as channelling light and providing surprising sightlines by slanting certain walls, including the concrete light well wall and the walls on either side of the two main stairways (Bernstein, 2013: online).

Light plays a significant role in the auditorium as well. Natural light fills the space through a light well that is situated behind the stage and its rear glass curtain wall. At the bottom part of the curtain wall, a line of shielded wall-washers keeps the source hidden from the view of the audience and performers (Donhoff, 2014: online). The wall is slanted to bring in the greatest amount of natural light. Theatrical lighting is suspended from the ceiling.

Service track

Tracks positioned between the beams (Fig. 252) contain the LED spotlights as well as other build-

ing systems that include sprinkler systems (in case of fire) and security cameras. This design principle keeps the ceiling plane as clean as possible (Donhoff, 2014: online).

PARKING DETAILS & STANDARDS

The parking area is located underground and can house 135 cars. The structure has an area of 4 914 m^2 (Fig. 276-275).

South Africa
The size of a standard parking space is 2.5 m wide x 5m long with an aisle of 7.5m in-between rows of parking for vehicle access.
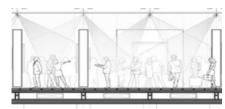

Figure 272: Services located in floor

Figure 273: Basement parking (2016: online)

Figure 274: Basement parking (2016: online)

Figure 275: Basement parking (2016: online)

CONSERVATION

As the Piano Pavilion is an extension of Kahn's Kimbell Art Museum, Piano's design is respectful of Kahn's work as he draws inspiration from its architectural organisation, attention to materials and textures, and masterful use of natural light which infuses the interiors with a sublime quality (Donhoff, 2014: online). Piano used Kahn's classical principles, reinterpreting them with modern technology in a contemporary way.

Subtly echoing Kahn's building in height, orientation, scale and layout, Piano's Pavilion has a more open, transparent character. Piano reinterprets the way light enters Kahn's building through vaults by designing a floating roof that lights up the exhibition spaces (RPBW, 2016: online). Both structures are single-storeyed, with a section hidden below the ground. The new lighter, open structure is similar in part to the old one, yet has its own character, setting up a dialogue between old and new.

Piano kept the concept that Kahn had for the landscaping of the site by leaving as much of the green erf open as possible, illustrated through the use of green roofs. Piano sited the pavilion in such a way as to correct the tendency of visitors to enter Kahn's building through the secondary eastern entrance. The pavilion stands on the underground garage so that when visitor's park, they rise up in an elevator and see Kahn's facade. The extension guides the visitors to enter Kahn's structure through the main, western entrance (Dezeen, 2013: online).

KAHNS BUILDING

Figure 276: Light from the roof (2016: online)

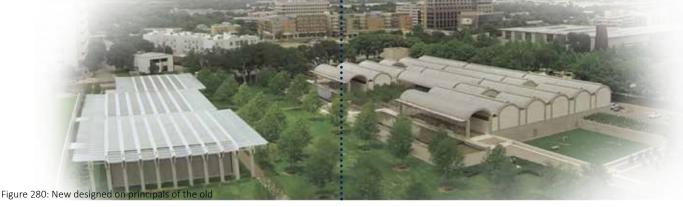Figure 277: Stairs enhance spatiality (2016: online)

PIANO'S BUILDING

Figure 278: Light from the roof (Texas Architect: online).

Figure 279: Stairs enhance spatiality (Texas Architect: online).

Figure 280: New designed on principals of the old

CONCLUSION

Through the knowledge acquired from the case study of The Kimbell Art Museum extension, the design of an exhibition/ museum space, will result in an appropriate design response in terms of:

*Using the old to reinterpret it in a contemporary way
*Classical material with innovative technology
*Simplicity being found in the level of detailing

*Controlling natural light to enhance museum space
*Services in 600mm void under floor
*Movable exhibition walls
*New informs the old through transparency
*Poetics between stereotomic and tectonic
*Rethinking roof use:
    o   Energy
    o   Sustainability
    o   Light diffusion

Through the process of investigation in chapters 1 and 2. The historical investigation, together with the interviews that were conducted, revealed certain ways of thinking about Thaba 'Nchu as a place and its voice, it further suggested ways in which a form of understanding can be generated, by the realisation that architecture may be utilised as a means of communication, a voice.

Voicing traces of different narratives through the exploration of Thaba 'Nchu as a place, will attempt to bring about a greater connection between the past, present and future, ultimately contributing to the relationship between people and place, reviving a forgotten identity. The process of revival is set in motion by means of architectural intervention serving as a memory machine, realized through the touchstone and augmented by the conceptual ideas. The conceptual ideas left traces that began to point to ways of approaching the proposed project on the specific site. The typological investigation included precedent studies that aided in developing a suitable accommodation list, as well as identifying how the various requirements of the building could work together to form an integrated design. A common thread ran through the precedent studies, i.e. the importance of integrating narratives exhibited within spaces with the architectural language of the building itself. Symbolism, repetition and texture become important experiential design factors to consider, as well the relation to the context in terms of buildings, the socio-economic profile of the users and the topology. The site analysis began to highlight different ways of approaching a design that sensitively communicates with this specific site, especially in terms of the kind of scales and proportions that would be suitable in the context. The analysis grounded certain controlling decisions in the design, which led to incorporating the ruins on the site with the proposed project, to form a relationship with the old and the new 'voices', where the old is interpreted as the foundation for the new on which to be constructed, also fragmenting the historical traces into the urban landscape where traces of the new narratives happen.

A literature review arose from the investigations that had been conducted which contributed towards revealing unique approaches to the design of the House of Memory for Thaba 'Nchu. This includes the use of narratives of ordinary people to tell the story of the place. The interpretation of literary sources disclosed the importance of the voice of a place, construed from traces of stories collected over time that have been forgotten and which may be revived and remembered through architecture. A significant approach to the design, realised through the review is the importance of obtaining a relationship between the past and the present through the remembrance of forgotten stories. The forgotten stories are told by the community, which enables the House of Memory to become inclusive and attract the general public to become more aware of the place in which they live, bringing about a greater connection between place and people.

The design seeks to generate public interest, while at the same time protecting and conserving the historical material which has been retrieved and archived by anthropologists. The House of Memory should incorporate both of these facets to realise the client's needs, as well as those of the community in an innovative manner. The investigation of the Museum of Innocence, Lebbeus Woods scar metaphor, and the Acropolis in Greece, led to notion of reviving memory through traces of different stories in a ruined place to attempt to reinstate an identity that has been forgotten as a result of the devastation of a place, through architecture.

The approach to the tectonic and structural investigation arose from the conceptual considerations pertaining to the new coming from, or being grounded in the old, as well as the methods used in context which address the climatic considerations to an extent. It is intended that these considerations and lessons learnt are further developed through the design development, as expressed in the following chapter, which focuses on demonstrating the synthesis of the design.
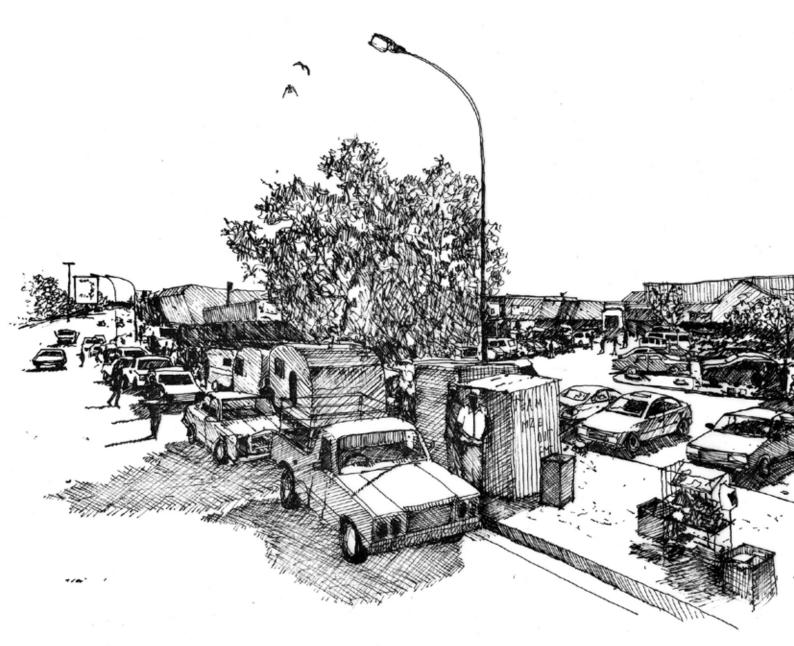
FIGURE 281: Perspective of Brand Street.
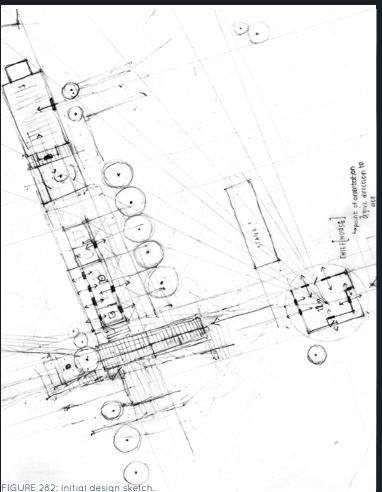
CHAPTER

3.1 DESIGN SYNTHESIS

From the investigations and research conducted through chapter 2, including the aims and challenges identified in chapter 1, the design process commenced. The traces of left by these investigations concerning the history of Thaba 'Nchu, the site analysis and precedent studies determined certain guidelines and boundaries for my approach to the design of the proposed project. The research administered under morphology revealed a unique ways to execute the design of the proposed building typology in a specific place. The structural decisions were made parallel to the design development.

The design process was initiated predominantly by conceptual sketches. Model building proved to better my understanding of the nature of the site and the proposed building's relationship to the site in terms of placement, scale, proportion and detail. The models developed from using that which worked in one, to merge it with that which was successful in another. The ideas portrayed in initial conceptual models led to the depiction of the design models.

The design development proved to be more challenging than what I expected, especially in regards to decisions concerning the placement of proposed structures. Ultimately, the models and continuous sketching led to the decisions made in regards to the morphology of the project, in order to identify 'traces of different stories' to form an architectural voice for Thaba 'Nchu. Chapter 3 is a combination of technical and design decisions, which was mostly realized through hand drawings and models, only once the design was finalized did an architectural program aid in visualizing the tectonic and design resolution.
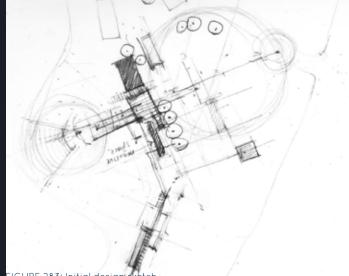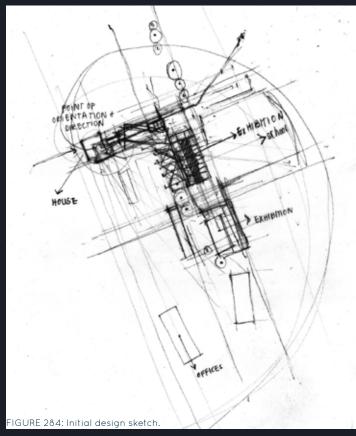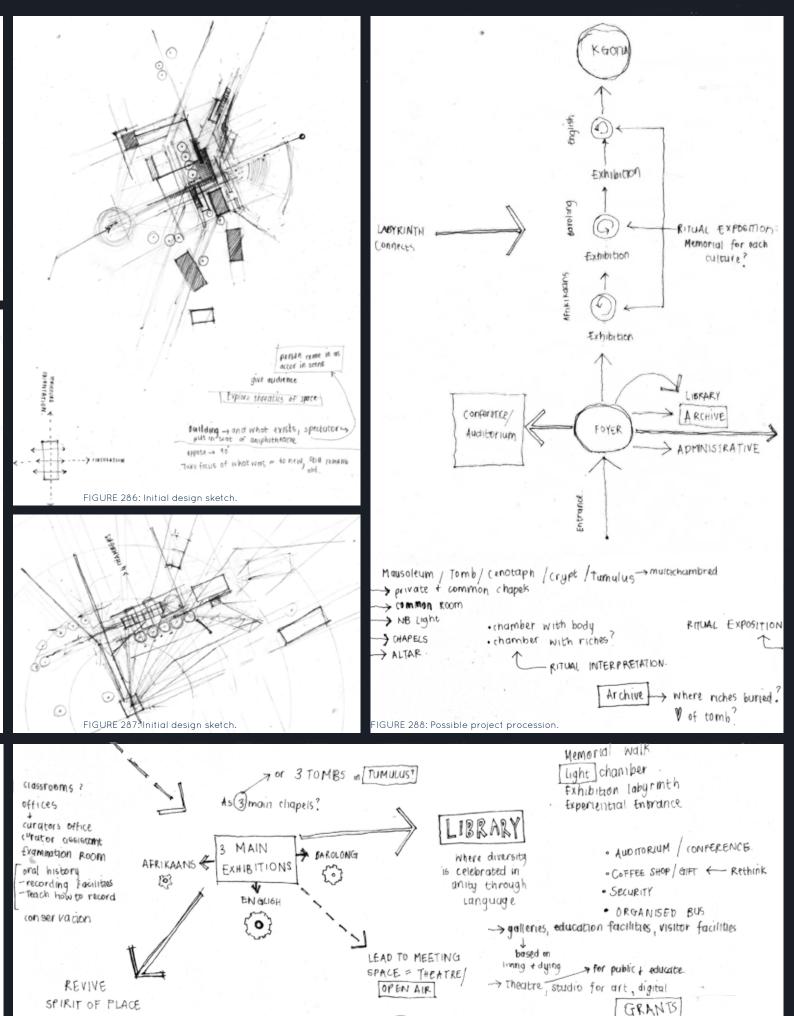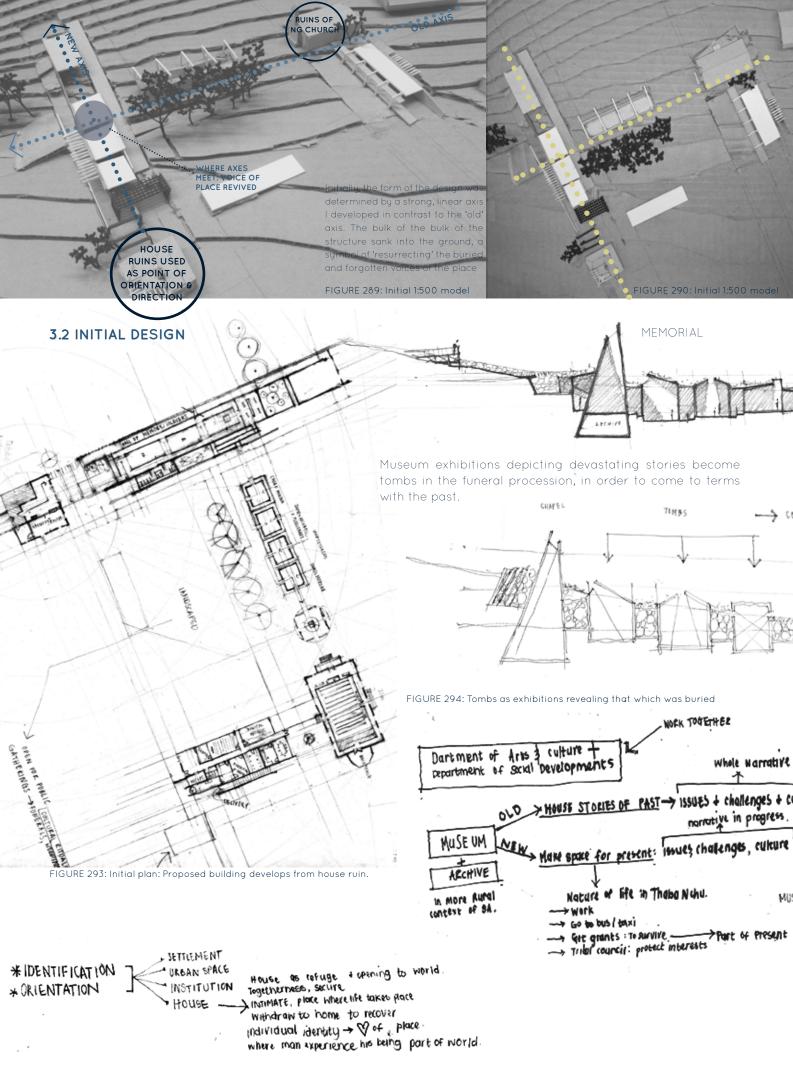

FIGURE 283: Initial design sketch.

FIGURE 284: Initial design sketch.

FIGURE 282: Initial design sketch.

FIGURE 285: Site reflects settlement.

FIGURE 286: Initial design sketch.

person come in as actor in scene

give audience

Explore theatrics of space

Building → and what exists, spectator →
put in seat of amphitheatre

oppose → 90°

Take focus of what was ≈ to new, still remains old.

PROCESSION
ORIENTATION

CIRCULATION

FIGURE 287: Initial design sketch.

4 CHAMBERS

LABYRINTH Connects

English
Exhibition

Barolong
Exhibition

Afrikaans
Exhibition

KGOTLA

RITUAL EXPOSITION
Memorial for each culture?

Conference/Auditorium

FOYER

LIBRARY
ARCHIVE
ADMINISTRATIVE

Entrance

Mausoleum / Tomb / Cenotaph / Crypt / Tumulus → multichambered
→ private + common chapels
→ common Room
→ NB Light
→ CHAPELS
→ ALTAR

• chamber with body
• chamber with riches?

RITUAL EXPOSITION

RITUAL INTERPRETATION.

Archive → where riches buried?
♥ of tomb?

FIGURE 288: Possible project procession.

classrooms?
offices
+
curators office
curator assistant
Examination Room

oral history
-recording facilities
-Teach how to record

conservation

or 3 TOMBS in TUMULUS?

As 3 main chapels?

AFRIKAANS

3 MAIN EXHIBITIONS

BAROLONG

ENGLISH

LEAD TO MEETING SPACE = THEATRE/
OPEN AIR

KGOTLA

REVIVE SPIRIT OF PLACE

IN TOMB

LIBRARY
Where diversity is celebrated in unity through language

Memorial walk
Light chamber
Exhibition labyrinth
Experiential Entrance

• AUDITORIUM / CONFERENCE.
• COFFEE SHOP / GIFT ← Rethink
• SECURITY
• ORGANISED BUS
→ galleries, education facilities, visitor facilities
   based on living & dying → for public + educate
→ Theatre, studio for art, digital

GRANTS
→ ID's
→ Birth certif.

NEW AXIS

RUINS OF
NG CHURCH

OLD AXIS

WHERE AXES
MEET: VOICE OF
PLACE REVIVED

HOUSE
RUINS USED
AS POINT OF
ORIENTATION &
DIRECTION

Initially, the form of the design was determined by a strong, linear axis I developed in contrast to the 'old' axis. The bulk of the bulk of the structure sank into the ground, a symbol of 'resurrecting' the buried and forgotten voices of the place

FIGURE 289: Initial 1:500 model

FIGURE 290: Initial 1:500 model

3.2 INITIAL DESIGN

MEMORIAL

Museum exhibitions depicting devastating stories become tombs in the funeral procession, in order to come to terms with the past.

FIGURE 294: Tombs as exhibitions revealing that which was buried

FIGURE 293: Initial plan: Proposed building develops from house ruin.

The model that followed the initial design was an attempt to form a better relationship with the existing on the site in terms of siting. Incorporating functions on the site, name-ly SASSA, into the proposed project was considered

The axes meet at a memorial for Thaba 'Nchu that commemorates those who were forcefully removed. The memori-al serves as the chapel, a place where past stories can be contemplated and commemorates those who passed during Mzilikazi wars, and those force-fully removed during Apartheid.

FIGURE 291: Second 1:500 model

FIGURE 292: Second 1:500 model

Ruin house: orien-tate user

FIGURE 295: New designed on principals of the old

FIGURE 296: Plan developed from initial design, proposed project accommodates SASSA offices as a way of integrating the proposed project with the present needs on the site.

3.3 DEVIATING FROM THE INITIAL DESIGN

At this point in the design process, I was quite un-
sure as to how my design communicates with the
context on the site. I was spending too much time
on 1:500 scaled models and losing focus on the
initial intentions of the project, 'playing' around
with all the various design possibilities I could
come up with

FIGURE 297: Section through house, point of orientation and tombs that
lead to the memorial- the point where the old and new come together to
form a new voice for Thaba 'Nchu.

FIGURE 298-300: Developed design attempts to integrate better with the context.

3.4 RE-INTERPRETING INITIAL DESIGN IDEAS
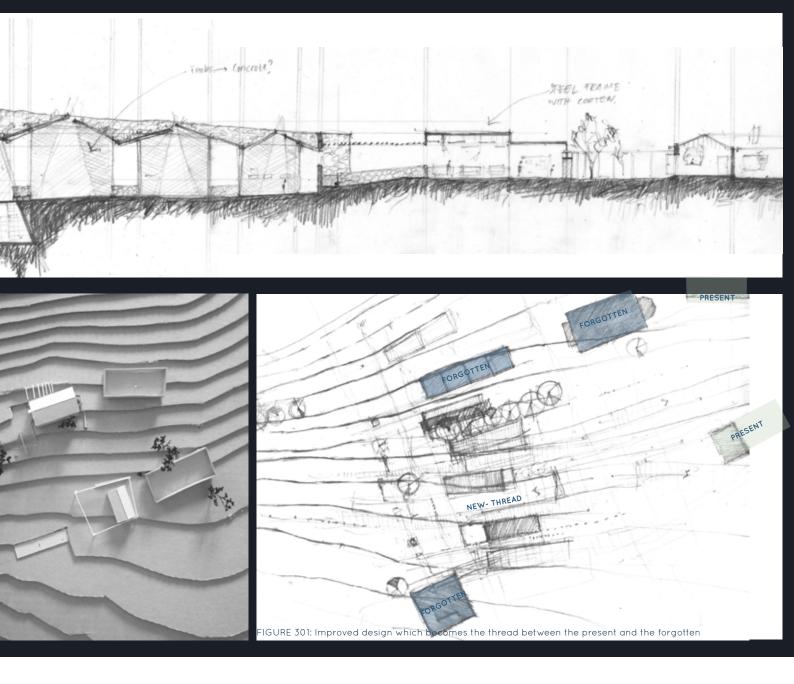
Finally, I reinterpreted my ideas concerning the re-
lationship I would like the proposed design to have
with the existing, by using the ruined structures as
traces of stories and considering the functioning
buildings on the site, to narrate and construct the
House of Memory. The House of memory may be
viewed as a 'Kgotla', a significant space for the cul-
ture of those living in Thaba 'Nchu. The Kgotla may
be viewed as a gathering space, where stories are
told by ordinary people, a place of contemplation
and rest, where the old is considered, voices are
heard, and ideas for the future are discussed.
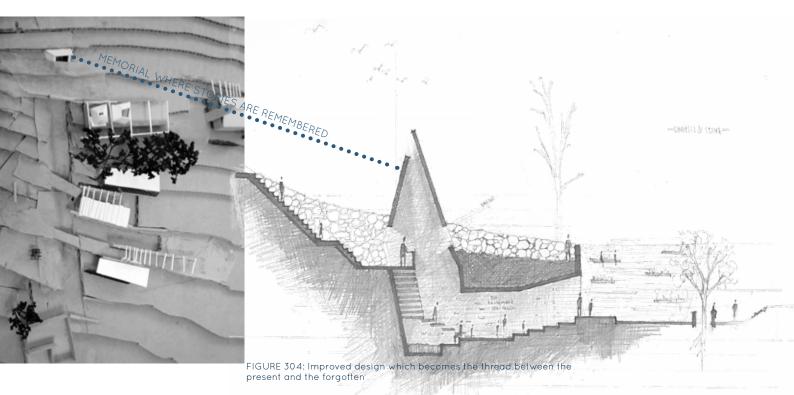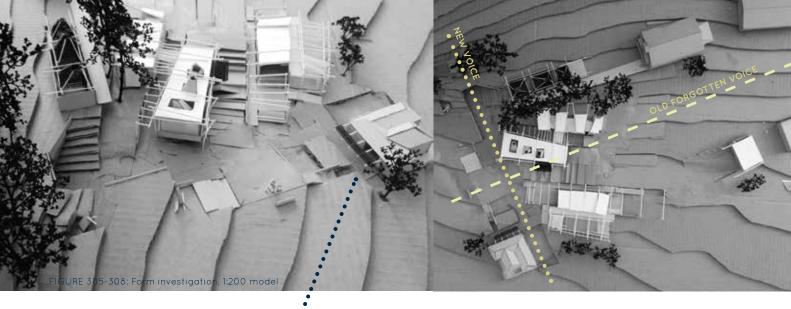
KGOTLA → PLACE OF GATHERING

FIGURE 302,303: Improved design which becomes the thread between the
present and the forgotten

Timbs → Concrete?

STEEL FRAME
WITH CORTEN.

PRESENT

FORGOTTEN

FORGOTTEN

PRESENT

NEW-THREAD

FORGOTTEN

FIGURE 301: Improved design which becomes the thread between the present and the forgotten

MEMORIAL WHERE STORIES ARE REMEMBERED

FIGURE 304: Improved design which becomes the thread between the present and the forgotten

FIGURE 305-308: Form investigation, 1:200 model

NEW VOICE

OLD FORGOTTEN VOICE

HOUSE: ORIENTATES USER, PLACE OF GATHER FOR 'FU-NERAL'

CHAMBERS IN OLD SCHOOL RUINS NAR-RATE HISTORY OF THE PLACE

RECORD NEW & FORGOTTEN STORIES

ADMINISTRATION, AR-CHIVE AND LECTURE ROOM- COLLECT AND REMEMBER TRACES OF STORIES

EXHIBITIONS AS 'TOMBS' TO COME TO TERMS WITH APART-HEID, BASOTHO WAR AND COLONISATION DEVASTATION

AUDITORIUM WHERE NEW STORIES CAN BE VOICED

RE-PURPOSE GA-RAGE INTO PUBLIC ABLUTIONS & PROVIDE FRAMING FOR FUNCTIONS

N

FIGURE 309: Plan showing allocation of functions

Once the siting of the structures were determined, I began to organize the various functions and develop the spatial considerations. The location of the proposed structures better communicate with the existing by using the contours on the site, where areas are more level, to determine their placement. This placing could cause considerable challenges in regards to orientation, as facades may be too exposed to the West sun glares. Considering the spatial requirements for the functions of the project, natural light is not desired in spaces that contain historic material that need to be protected from high temperatures and harsh sun glares. In this regard, functions may be closed off from direct sun light. Light 'scoops' may redirect north light to enter spaces that predominantly face west.
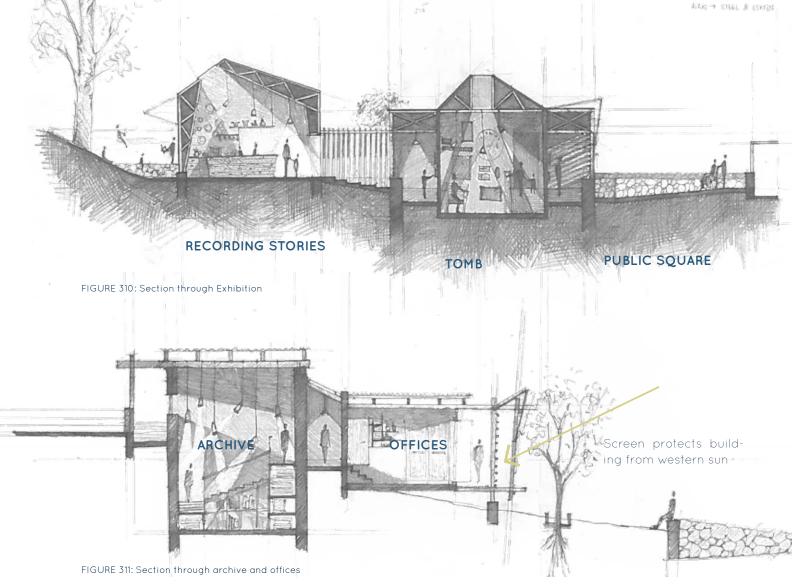
POINT OF ORIENTA-TION & DIRECTION
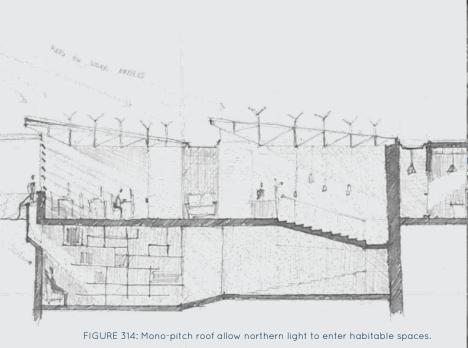
The first 1:200 model was an exploration into suggesting a new architectural voice for the place while making memorable spaces. The house is the starting point for the 'memory machine' that attempts to restore the voice of Thaba 'Nchu, remembering and augmenting it. A labyrinth of ramps from the house address the steep slope and attempts to take the user out of his present situation, in order to draw focus to the stories narrated through the precinct. The ramps lead to museum chapter of the precinct, where the exhibitions that become tombs for remembering and coming to terms with the devastation sink into the ground. Emerging out of the tombs, is an exhibition that contains the oral history of inhabitants of the settlement. Furthermore, chambers in the ruins of the school remembers Thaba 'Nchu before the devastation. The old and new is brought together in the old NG church, which serves as theatre for the community where thoughts and feelings of the old and new life are voiced. The mnemonic procession uses that which is ruined and buried to help find meaning and purpose in continued living in Thaba 'Nchu.

RECORDING STORIES

TOMB

PUBLIC SQUARE

FIGURE 310: Section through Exhibition

ARCHIVE

OFFICES

Screen protects building from western sun

FIGURE 311: Section through archive and offices

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The
model that de-
velop from the previous
design attempted to form an
architectural language that is
more coherent. The proposed struc-
tures 'happen' in-between the ruined
structures and the buildings function-
ing presently; in an attempt to bring
together the forgotten and the new.
In this regard, the proposed
project emerge from the old
resurrecting the bur-
ied voice.

BREATHING SPACES:
COME TO TERMS WITH RE-
MEMBERING FORGOTTEN

Spaces are
also allocated for
the community to
illustrate their story
through words or
drawings.

FIGURE 312: Revised plan, Buildings connected with ramps to accommodate steep slope.

Figure 313: Revised model

FIGURE 314: Mono-pitch roof allow northern light to enter habitable spaces.

ARCHIVE STORAGE & OFFICES

The archive space is divided into a more public space that the public can use and a private area, sunken into the ground to protect the history, and 'dig up' the forgotten stories.

Post graduate students studying Anthropology, from the University of the Free State, will occasionally be taught at the precinct how to collect oral history, and help the Museum gather oral history from Thaba 'Nchu and the surrounding villages. The stories collected will be stored digitally and exhibited in the House of memory.

FIGURE 317-321: Improved model, form and shape is informed by existing buildings and topography of site.
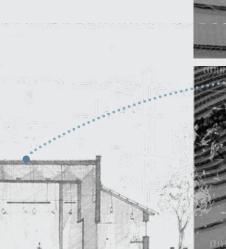
FIGURE 315: New auditorium draws attention to old church through form, scale and location.

AUDITORIUM IN CHURCH RUINS

FIGURE 316: Section model through auditorium

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SCULPTURE WALK

CHAPEL OF VOICES

FIGURE 322:
GROUND FLOOR PLAN

The sculpture walk reinforces the 'new' axis with life size sculptures of people who live or have lived in Thaba 'Nchu. The sculptures are created by local residents that are part of the Cultural Centre art group.
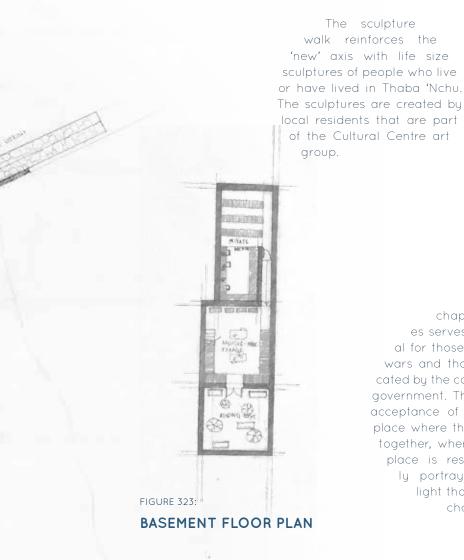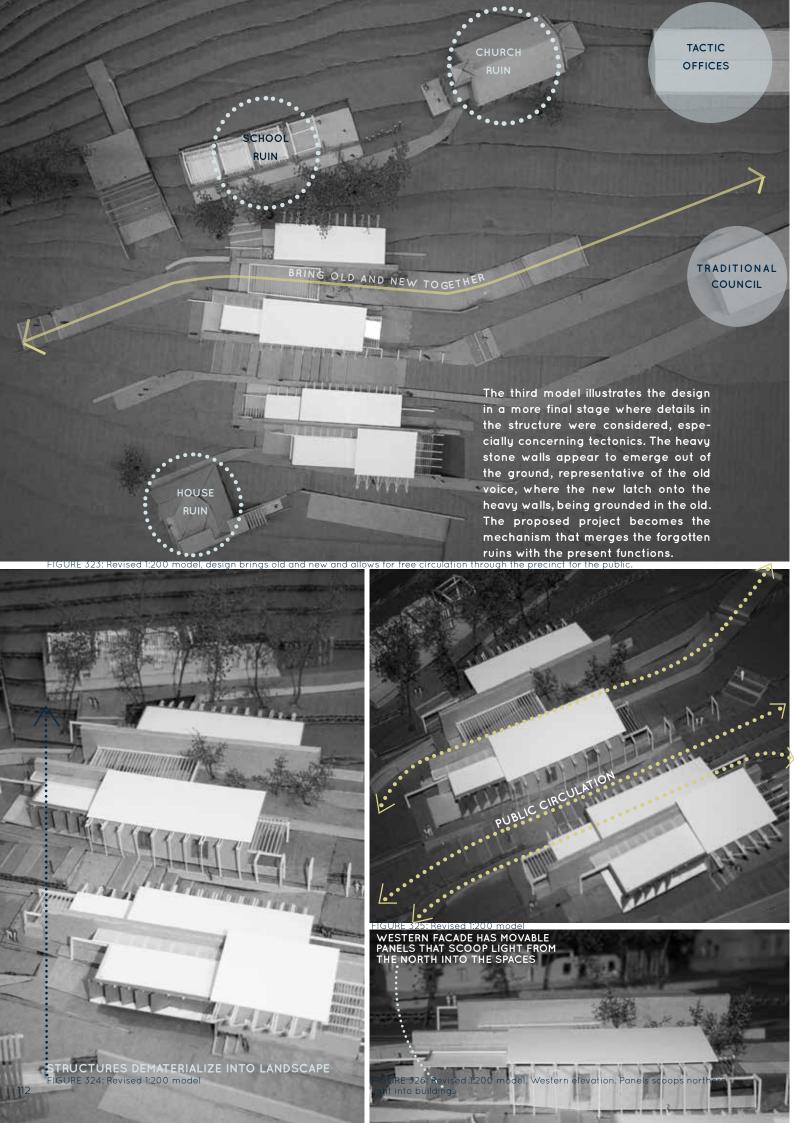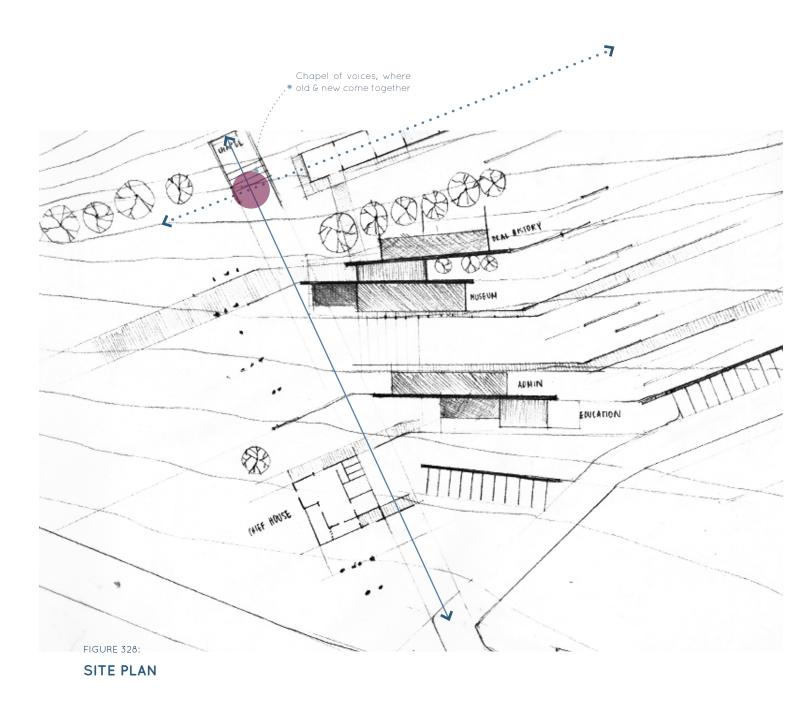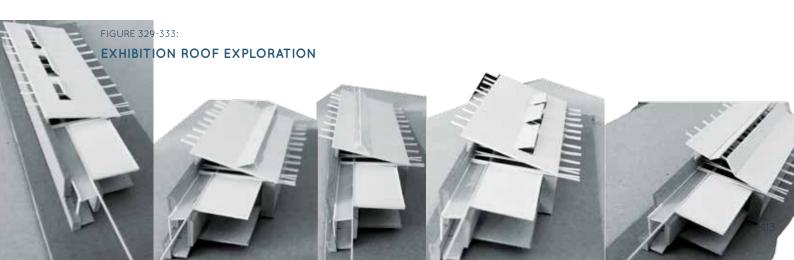
The precinct has no forced route. The ramps and various pathways offer visitors and pedestrians various walkways to use. A sculptural walk depicts historic figures from Thaba 'Nchu, which connects the memorial with the rest of the precinct.
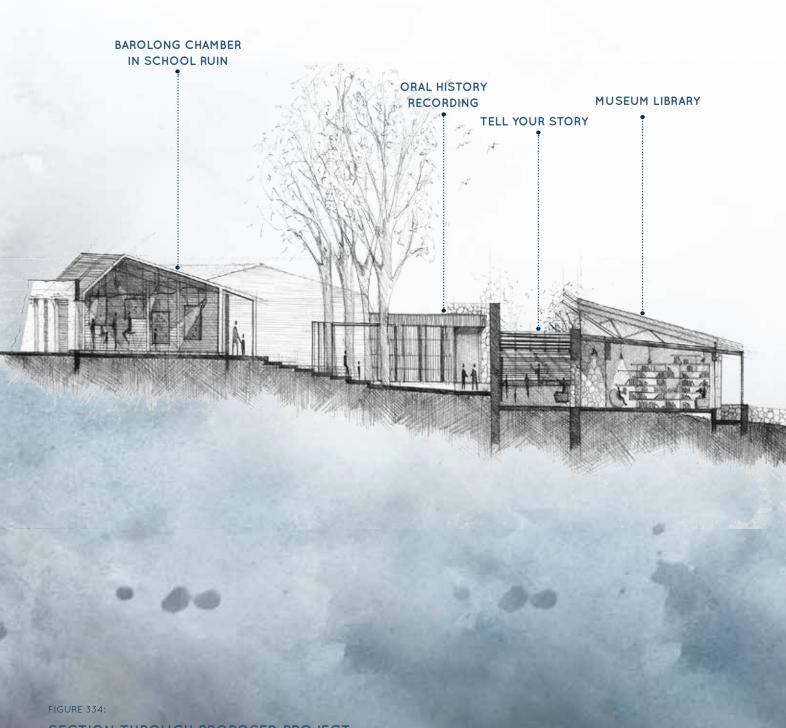
The chapel of voices serves as a memorial for those who died during wars and those who were relocated by the colonial and apartheid government. The chapel is the final acceptance of the devastation and place where the old and new come together, where the 'voice' of the place is restored, symbolically portrayed through the light that falls into the chapel.

FIGURE 323:

BASEMENT FLOOR PLAN

FIGURE 323: Revised 1:200 model

TACTIC OFFICES

CHURCH RUIN

SCHOOL RUIN

BRING OLD AND NEW TOGETHER

TRADITIONAL COUNCIL

HOUSE RUIN

The third model illustrates the design in a more final stage where details in the structure were considered, especially concerning tectonics. The heavy stone walls appear to emerge out of the ground, representative of the old voice, where the new latch onto the heavy walls, being grounded in the old. The proposed project becomes the mechanism that merges the forgotten ruins with the present functions.

FIGURE 323: Revised 1:200 model, design brings old and new and allows for free circulation through the precinct for the public.

PUBLIC CIRCULATION

FIGURE 325: Revised 1:200 model

STRUCTURES DEMATERIALIZE INTO LANDSCAPE

FIGURE 324: Revised 1:200 model

WESTERN FACADE HAS MOVABLE PANELS THAT SCOOP LIGHT FROM THE NORTH INTO THE SPACES

FIGURE 326: Revised 1:200 model. Western elevation. Panels scoops northern light into building.

Chapel of voices, where
old & new come together

FIGURE 328:

SITE PLAN

FIGURE 329-333:

EXHIBITION ROOF EXPLORATION

BAROLONG CHAMBER
IN SCHOOL RUIN

ORAL HISTORY
RECORDING

TELL YOUR STORY

MUSEUM LIBRARY

FIGURE 334:

SECTION THROUGH PROPOSED PROJECT

ADMINISTRATIVE
FUNCTION

ARCHIVE & LECTURE
ROOM

HOUSE RUINS WITH RE-
CEPTION & EXHIBITION
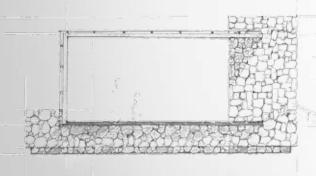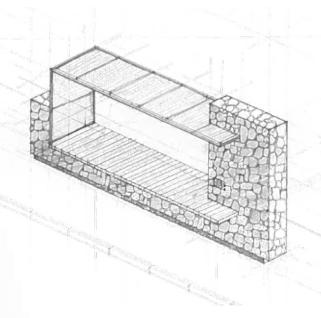
VOICING STORY TRACES IN THE URBAN FABRIC

FIGURE 335: Site plan illustrating location of Story Stops in Thaba 'Nchu

116
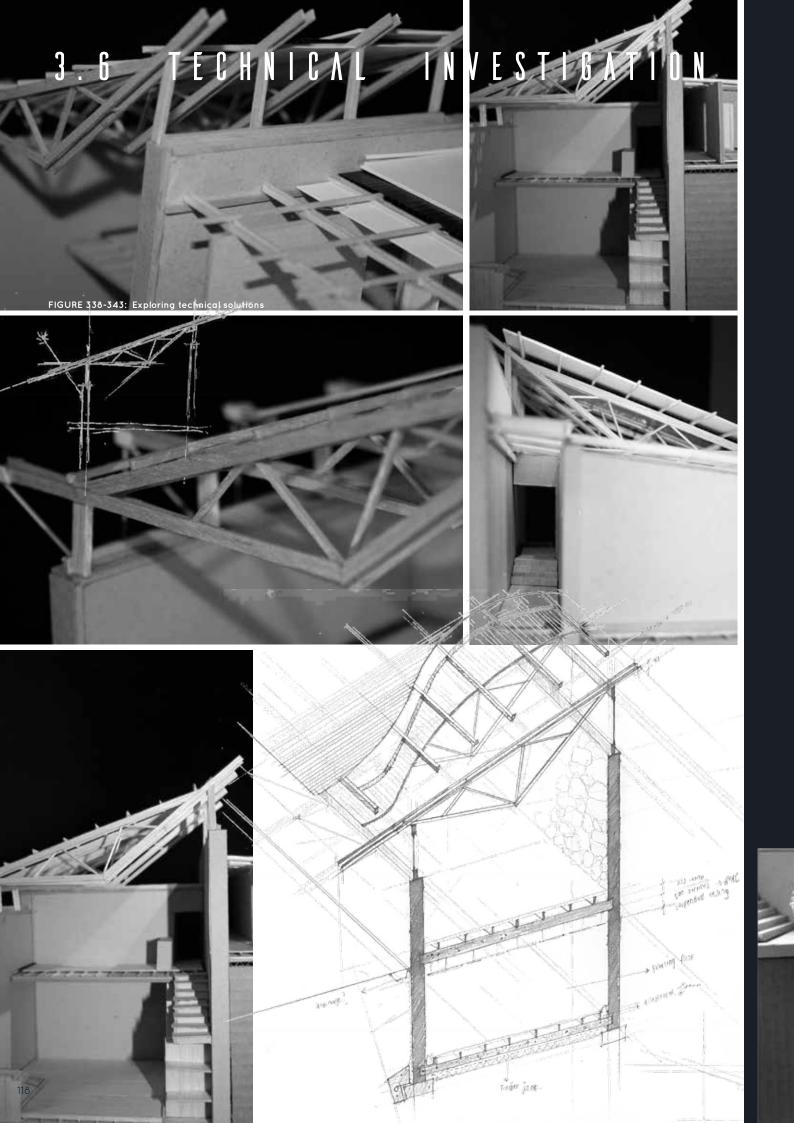
In order to revive
the story of Thaba 'Nchu, the
House of Memory should extend into
the urban fabric of Thaba 'Nchu by com-
bining the social needs of the community,
with that of the past. The transportation net-
work creates spaces for the community to gather,
while performing a vital service for the settlements
infrastructure. The House of Memory will collect
oral history from the taxi or bus stops where gath-
ering in the city happens. Volunteers will record
the stories resulting data can be listened to.
This will deconstruct the museum so that it is
immersed within the settlement, as well
as provide researchers and sociolo-
gists with information.

STORY STOP

FIGURE 336,337: Story stop design

FIGURE 338-343: Exploring technical solutions
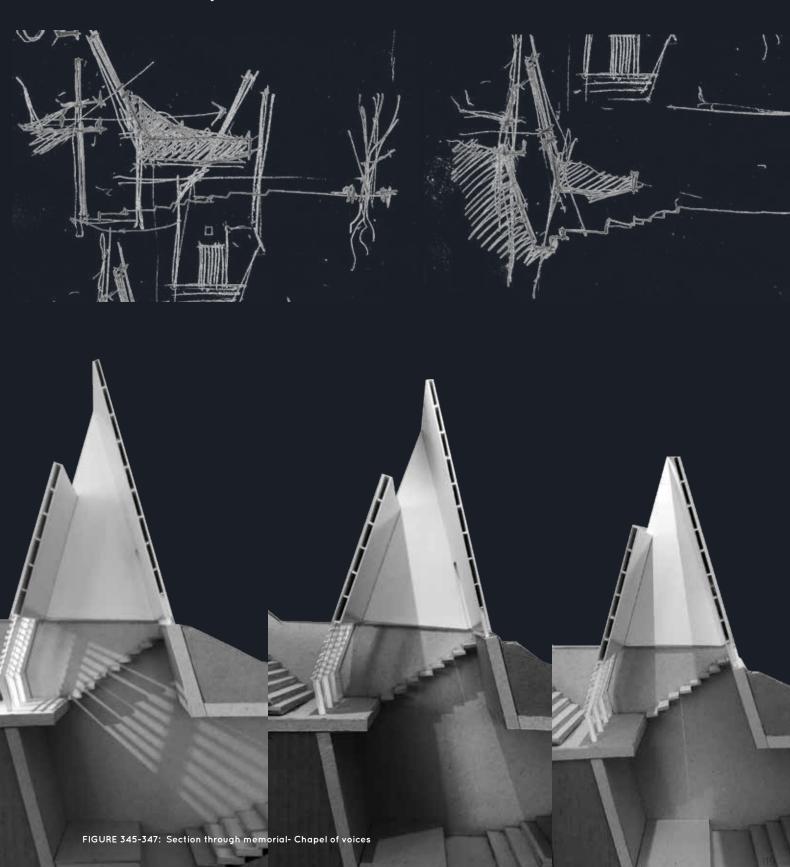
3.7 LIGHT STUDY: MEMORIAL

FIGURE 344: Section through memorial

FIGURE 345-347: Section through memorial- Chapel of voices

3.8 SPATIAL REQUIREMENT INVESTIGATION

This investigation was conducted to develop the essential function of the proposed project within the three dimension. Three spaces were selected namely, the archive; curator's office; and the library, reception and coffee bar. A plan, section and perspective was developed from these spaces in order to grasp a better understanding of the spaces with furniture, services and specific equipment

FIGURE 348:
ARCHIVE PLAN

FIGURE 349:
ARCHIVE PERSPECTIVE

FIGURE 350:
ARCHIVE SECTION

FIGURE 351:
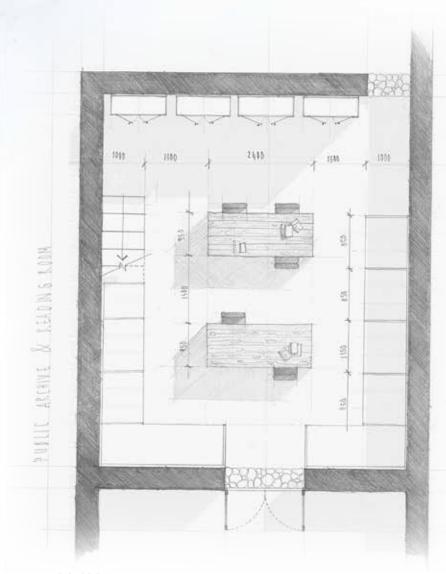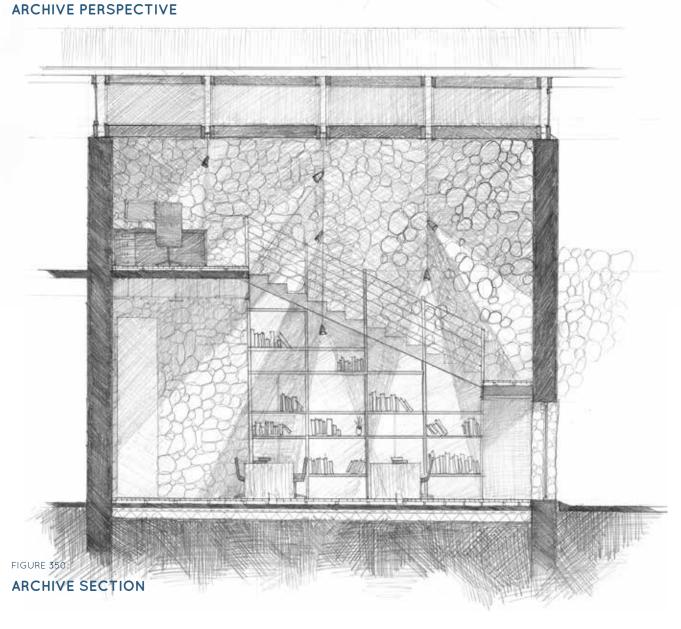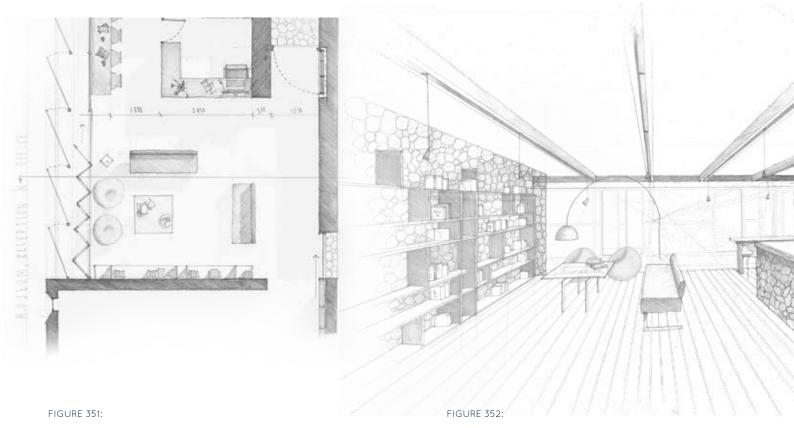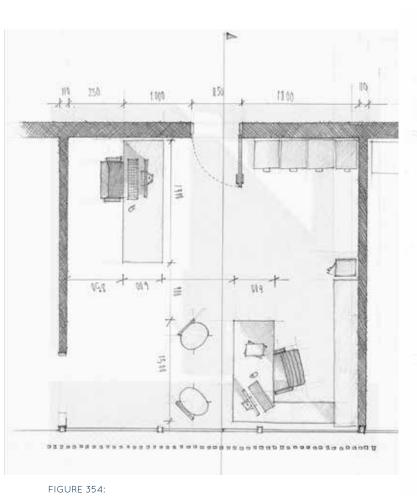
RECEPTION, LIBRARY & COFFEE BAR PLAN

FIGURE 352:
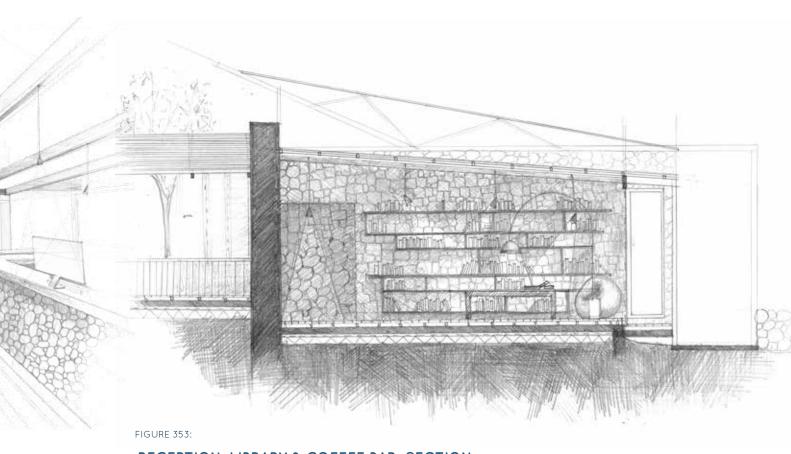
RECEPTION & LIBRARY PERSPECTIVE

FIGURE 354:
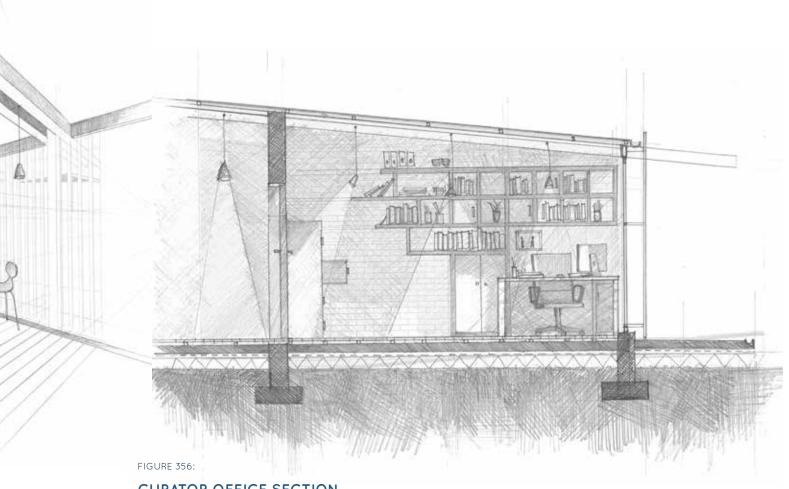
CURATOR OFFICE PLAN

FIGURE 355:

CURATOR OFFICE PERSPECTIVE

FIGURE 353:

RECEPTION, LIBRARY & COFFEE BAR SECTION

FIGURE 356:

CURATOR OFFICE SECTION
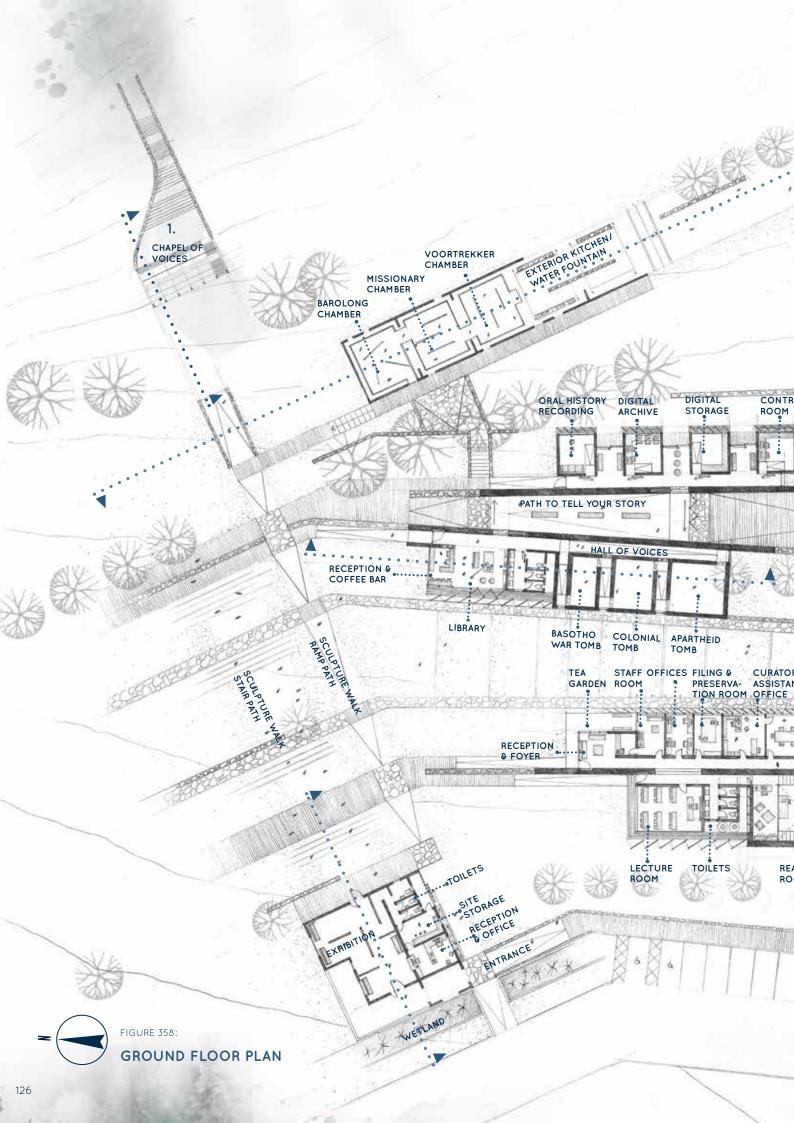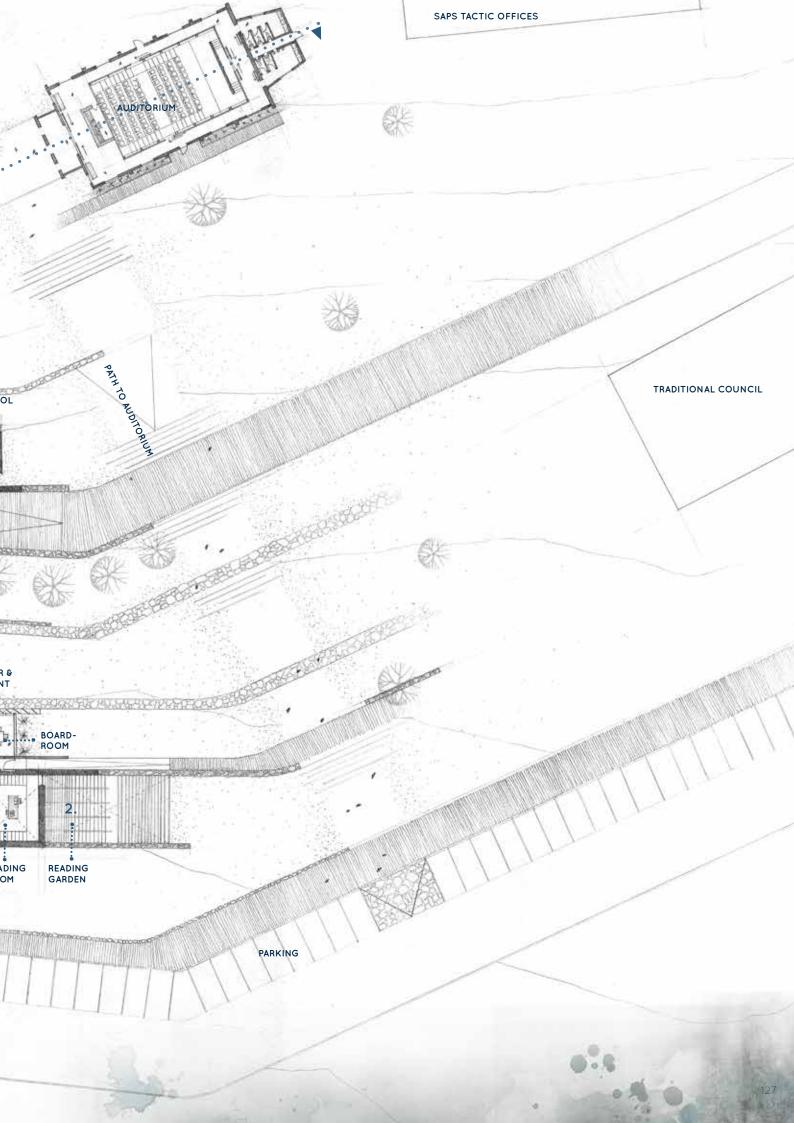
FIGURE 357: Precinct perspective

1.
CHAPEL OF
VOICES

BAROLONG
CHAMBER

MISSIONARY
CHAMBER

VOORTREKKER
CHAMBER

EXTERIOR KITCHEN/
WATER FOUNTAIN

ORAL HISTORY
RECORDING

DIGITAL
ARCHIVE

DIGITAL
STORAGE

CONTRO
ROOM

PATH TO TELL YOUR STORY

HALL OF VOICES

RECEPTION &
COFFEE BAR

LIBRARY

BASOTHO
WAR TOMB

COLONIAL
TOMB

APARTHEID
TOMB

SCULPTURE WALK
RAMP PATH

SCULPTURE WALK
STAIR PATH

TEA
GARDEN

STAFF
ROOM

OFFICES

FILING &
PRESERVA-
TION ROOM

CURATOR
ASSISTAN
OFFICE

RECEPTION
& FOYER

LECTURE
ROOM

TOILETS

REA
ROO

TOILETS

SITE
STORAGE

RECEPTION
& OFFICE

EXHIBITION

ENTRANCE

WETLAND

FIGURE 358:

GROUND FLOOR PLAN

AUDITORIUM

PATH TO AUDITORIUM

TRADITIONAL COUNCIL

OL

R &
NT

BOARD-
ROOM

2.

ADING
OM

READING
GARDEN

PARKING

ARCHIVE
STORAGE

ARCHIVE
READING
ROOM

READING
GARDEN
WITH
GREEN
WALL

2.

FIGURE 360:

BASEMENT FLOOR PLAN

1. •·······• PODIUM

CHAPEL OF •·······•
VOICES

MEMORIAL •·······•
ENTRANCE

FIGURE 359:

MEMORIAL FLOOR PLAN

FIGURE 361:

SECTION THROUGH PRECINCT

FIGURE 362:

SECTION THROUGH RECEPTION & SCULPTURE WALK

FIGURE 364:

SECTION THROUGH ARCHIVE & LECTURE ROOM

FIGURE 365:
SECTION THROUGH OFFICES & ARCHIVE

FIGURE 366:

SECTION THROUGH CHAPEL/MEMORIAL

PERSPECTIVE OF MUSEUM & ADMINISTRATION

Exhibitions sink into site, revealing the buried voices

FIGURE 368:

EXHIBITION SECTION

FIGURE 369:

PERSPECTIVE OF WALKWAY

FIGURE 370:

SECTION THROUGH EXHIBITION SPACES

FIGURE 371:

SECTION THROUGH ORAL HISTORY RECORDING SPACE

FIGURE 372:

SECTION THROUGH ORAL HISTORY RECORDING SPACE

FIGURE 373:

SECTION THROUGH AUDITORIUM AND CHAMBERS

FIGURE 374:

SECTION & DETAIL OF AUDITORIUM

FIGURE 375:

SECTION THROUGH CHURCH AUDITORIUM

FIGURE 376:

SECTION THROUGH CHAPEL OF VOICES

FIGURE 377:

PERSPECTIVE OF STORY STOP IN BRAND STREET

FIGURE 378:

SECTION THROUGH PRECINCT
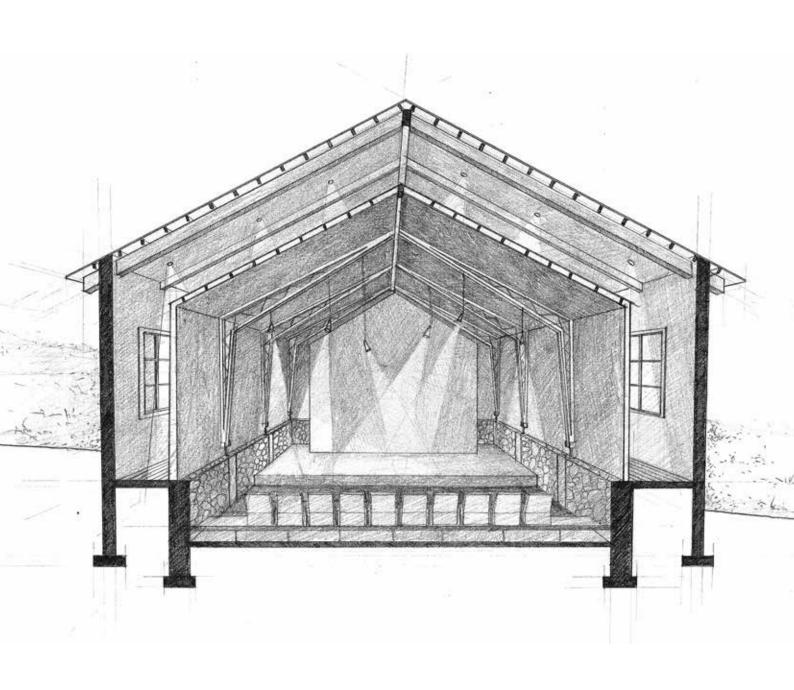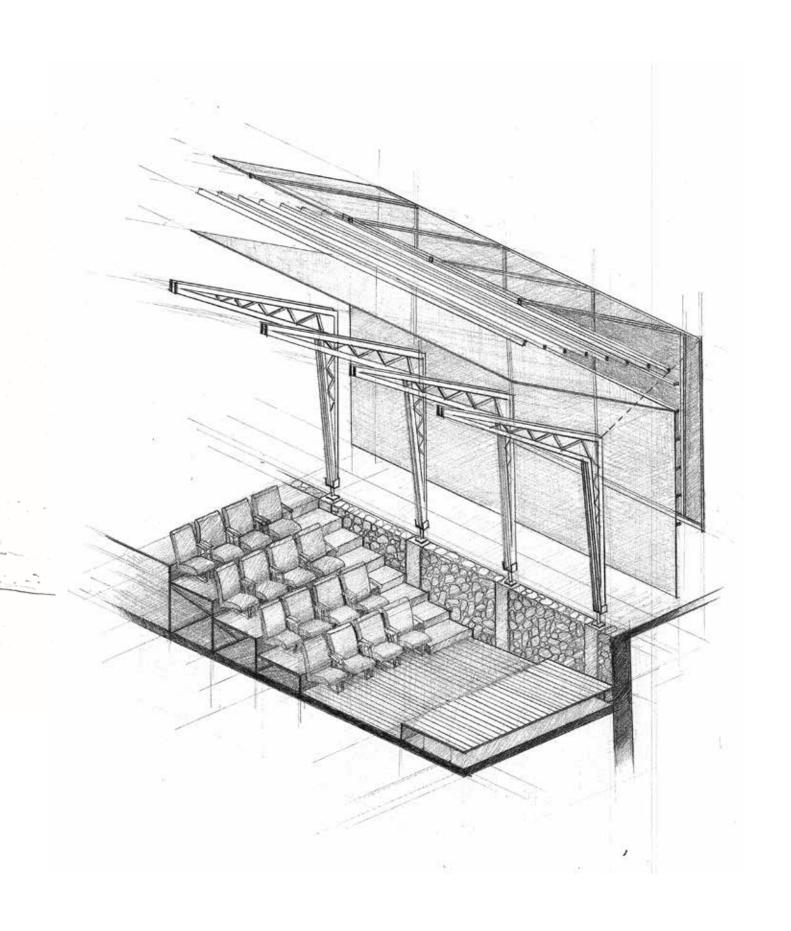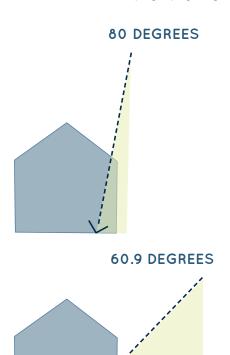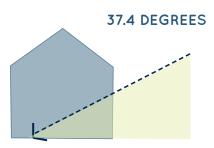
3.10 TECHNICAL INVESTIGATION

The technical investigation is a significant part of the design process as it explores the influences the site has on the project, the structural approach with regard to tectonic and stereotomic expression, sustainability, as well as the conservation elements that pertain to the building, and the building components that contribute to the overall functionality of the structure. These conditions are imperative to design resolution. Conceptually, the project attempts to use that which is old, buried and forgotten as a foundation on which the new can develop, and this should be reflected architecturally through the design's structural considerations.

THE SITE
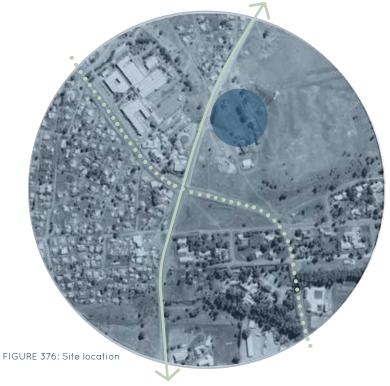
It is imperative that the proposed site be analysed in order to resolve a structural approach to the design, so as to respect the context in built form, as well as the objective of the proposed project. A considerable part of the structural resolution will probably be determined by the quantitative phenomenology, which may also influence the project's technical aspects with regard to social characteristics. The micro-site analysis offers an investigation into the site's topography, vegetation, geological information and climate.

80 DEGREES

60.9 DEGREES

37.4 DEGREES

The site itself is historical in terms of the ruined structures found on the site. It illustrates architectural languages that reflect colonialism and the influence of apartheid. The site has quite a steep slope that gradually levels out into a vast, open space used by pedestrians. The site is located to the north of the CBD and possesses commercial, institutional, residential and industrial characteristics.

The structures within the context are mostly simple single-storey stereotomic structures. The houses within this area are predominantly constructed of brick (some are plastered and painted) with a pitched corrugated iron roof or make use of recycled corrugated iron cladding fixed to a light steel frame structure. The houses that are more historical are built in a Cape Dutch or Victorian style, or are built out of ironstone, or sandstone quarried around Thaba 'Nchu. The commercial structures are also constructed of brick and corrugated iron. The institutions on site have buttresses that become strong vertical elements on the facade, with corrugated iron roofs. The various architectural elements identified in the context were considered in the proposed design. There is a definite contrast between old and new structures in terms of maintenance and material use.

FIGURE 375: Sun angles   FIGURE 376: Site location

ENVIRONMENT & MICRO CLIMATE

Considerations regarding climate greatly influence the technical aspects of a design, especially concerning energy efficiency and comfort. Thaba 'Nchu is located in an area described broadly as the 'cold interior' in Climate Zone 1, according to SANS 10400. This classification influences the design of the building with regard to material choice and structural system.

The area mostly experiences low humidity, summer rainfall and has four distinct seasons in which summer and winter temperatures exceed human comfort (Vollmer, 2011:105). The angle of the sun on the summer and spring solstice is 60,9 degrees, whereas in winter, the angle is 37,4 degrees. Bearing in mind the extreme variation in temperature between summer and winter, the project is sited so that it receives maximum solar access and the use of thick iron stone walls presents a high thermal mass that increases thermal comfort. Adjustable shading on facades is also used to address the extreme temperatures.

Thaba 'Nchu may be described as semi-arid, which suggests that the rate at which water evaporates from the surface of the ground is marginally higher than the rate of precipitation. Therefore, the proposed project makes use of rainwater harvesting.

DESIGN RESPONSES SUITED TO CLIMATE ZONE 1

Use of passive solar heating.

Utilizing high thermal mass.

Effective insulation of the thermal mass, including slab edges.

Maximize the north facing falls and glazing, especially in living areas.

Minimize use of glazing on the east, west and south.

Utilize adjustable shading.

Use double glazing and insulating frames: glass must be well insulated for cold winters.

Minimize the external wall areas on the east and west: orientate the building north.

Use cross-ventilation and night-time cooling in summer.

Seal building properly against droughts and provide airlocks at entrances.

Reflective insulation can be used to keep out heat in summer.

Bulk insulation can be used to maintain interior thermal comfort during winter.

Walls, ceilings and floors should be bulk-insulated.
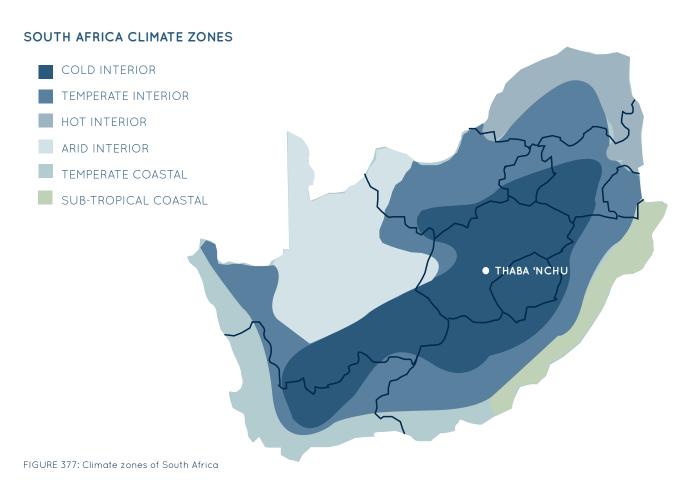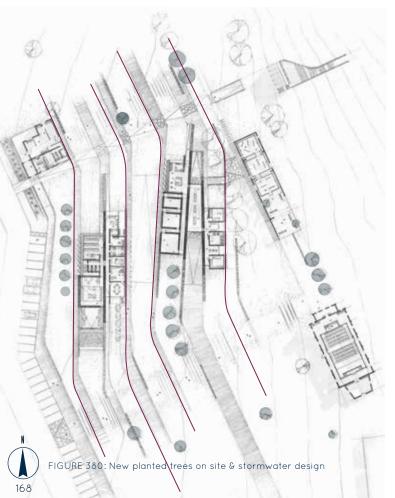
(Schmidt, 2013: 104-105).

SOUTH AFRICA CLIMATE ZONES

- COLD INTERIOR
- TEMPERATE INTERIOR
- HOT INTERIOR
- ARID INTERIOR
- TEMPERATE COASTAL
- SUB-TROPICAL COASTAL

● THABA 'NCHU

FIGURE 377: Climate zones of South Africa

FIGURE 378: Wetland on site

FIGURE 379: Non-indigenous trees on site

FIGURE 380: New planted trees on site & stormwater design

TOPOGRAPHY

The site for the design is located in central South Africa, with an altitude of more or less 1 532 m above sea level. The topography of Thaba 'Nchu is relatively flat with a few hills in the landscape and typical Highveld grasslands for vegetation. With regard to the site itself, a steep hill becomes a natural boundary to the project, which may cause drainage problems for the proposed structure (Fig. 378). The hill is located on the north-eastern side of the site, sloping down to the south-western side. The slope has an overall height difference of 20 m. No municipal storm-water run-off drains service the site. In this regard, the design channels the storm-water away from itself to the gardens at the lower end of the site (Fig. 380).

Vegetation

The site has a few shrubs and various grass species. Large non-indigenous Eucalyptus camaldulensis trees, approximately 15 m high, are planted in a row leading to the ruins of the NG Church (Fig. 379). The precinct uses trees that are indigenous to the Free State, including Acacia Karoo and Leucosidea sericea, to augment the exterior spatial quality and offer shade (Fig. 380).

FORM & FUNCTION

The project respects the context by forming a visual connection with the context through size, scale and materiality, i.e. the use of ironstone which is seen in the older house structures, brick and recycled corrugated iron and material from ruins in the context. Also, the proposed project's location is informed by the topography of the site, as are the structure's in the context.

The form of the building was derived from connecting the ruined structures on site with the functioning structures, bearing in mind that the existing structures are long and rectangular in form. In addition, the form of the proposed structure encourages movement throughout the precinct as the site is a threshold between the inner city and the residential areas.

USER BEHAVIOUR, SOCIO & ECONOMIC PROFILE

The primary function of the proposed project is to combine a museum and an archive. Combining these functions enables the design to store historical documents, while providing the public with access to the exhibition spaces.

Local labourers are used to construct the project in an attempt to involve the community. By this involvement, a sense ownership may be developed among the users of the House of Memory.

The design is open to all members of society, from the low-income group that predominantly inhabits the site to those who earn higher incomes. The design encourages all to record their narratives and to be enriched with historical knowledge of the area that had previously been wounded by colonial and apartheid rule.

Accommodation List:

Reception
Exhibitions
Library
Coffee bar
Administrative offices
Archive: public & private
Lecture room
Computer room
Recording Facilities
Audio-visual Storage
Memorial / Chapel
Auditorium
Sculpture Walk

N

FIGURE 381: Dark blue area show building form. Light blue area show proposed building form in existing structures.

FIGURE 382: Local inhabitants of Thaba 'Nchu in the CBD

Recycled corru-
gated iron panels
as light scoops
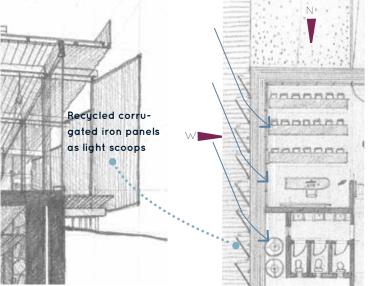
FIGURE 383: Recycled corrugated iron panels

FIGURE 384: Local stone used to construct the Barolong boo-Seleka kgotla

FIGURE 385: Local iron stone used to construct the birth place of James Moroka

FIGURE 386: Local stone used to construct houses

UTILITY & SPACE ENHANCEMENT

The archive museum becomes part of the landscape. The main aim of the House of Memory is for visitors to appreciate the stories of Thaba 'Nchu and to become part of the rich historical context. The varying landscape augments the precinct by connecting the new with the old. The structure's simple, rectangular form compliments the shape of the site without dominating it.

The western elevation of the structure is varied so that it is protected from the harsh sun. Recycled corrugated iron panels on the west open to the north to maximise the amount of northern light that enters the building, contributing to thermal comfort (Fig. 383). The stone walls are good sound insulators, and protect the interior spaces from the exterior sounds to enhance the experience of the design.

The stereotomic stone walls are contrasted with tectonic structures that grow out of them. The materials, namely corten steel and iron stone (Fig. 385), are used to enhance the experiential quality and the story narrated by the structure. The tectonic roof appears to float on the heavy walls. The walls define three main structures added to the site, and situated in such a way as to respect the context. The structures are connected by a labyrinth of ramps which connect the old with the new, forming a new narrative on the site.

Exhibition spaces and the archive are mostly closed to minimise that amount of natural light and harsh glares caused by the sun which may damage the material. Vast windows connect the interior with the landscape, initiating a dialogue between the interior exhibitions and the surrounding, historical landscape.

The archive-museum is mostly single storeyed, respecting the size and shape of the surrounding built context. The ground floor plan is divided into public and private functions. The public plan comprises of a reception area and lobby, ablutions, storage, an auditorium, a space for interviewers to record oral history, an exhibition space that is divided into three tombs that narrate the Basotho wars, as well as the colonial and apartheid effect on Thaba 'Nchu, and a memorial chapel.

The private section ground floor plan consists of a reception area, offices, a boardroom, a kitchenette, a lecture room, and a private and more public archive. The archive is located on the lower floor as it aids in regulating temperature to provide optimum conditions for the stored history.

HORIZONTAL & VERTICAL CIRCULATION

Circulation is used to disconnect the user from his or her present in order to focus on and embrace that which is visualised through the architecture and exhibitions.

Horizontal

The horizontal circulation separates public from private users of the building, namely staff, researchers and students. Private users of the precinct mostly use linear circulation routes, i.e. in the administrative section.

Vertical

The exhibition space in the museum becomes a route in itself, a labyrinth. A ramp from the reception area in the chief house ruins leads the user down into the first tomb and then on to the second and third, sinking into the ground to bury the past. A sculptural path ramps upward to the memorial chapel, which sinks into the ground by means of steps. The area around the structures is landscaped using ramps and stairs to address the steep slope, and create a sensory experience. All of the ramps, whether they form part of the interior of the structure, or part of the landscape, have a ratio of 1:12, complying with SANS 10400 Part D 3 that states 'Any ramp or driveway shall be so designed that it is safe when used and is fit for the purpose for which it is intended'. The flight of stairs in the archive space adheres to SANS 10400 Part M: 2011 and also becomes an element used for spatial enhancement in the public section of the archive.

SITE PLANNING & LANDSCAPING
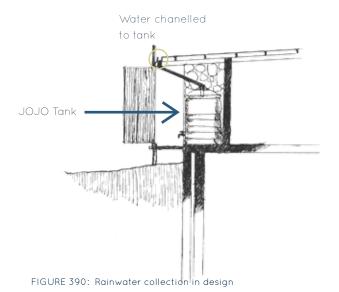
Site development
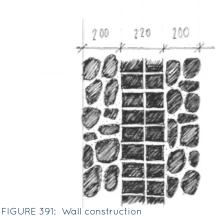
The landscape is integrated into the design. The House of Memory uses the ruins on the site to augment the function of the proposed project by adding functions to the ruins. The three new structures are informed by the organising principles of the old structures and stretch into the landscape itself, forming a memory park which commemorates the historical site. A sculptural walk connects the old axis on the site with the new, narrating the stories of people from Thaba 'Nchu, and commemorating the forgotten through the landscape (Fig. 389).

The landscaping extends from the footprint of the structures in a more organised manner, finally disintegrating into the natural landscape. Indigenous trees reflect this principal through linear rows that dissolve into disorganised nature. The stereotomic stone walls dissolve into the landscape, forming boundaries and seating for users of the precinct.

Bus and taxi shelters augment the daily routine of the present inhabitants of the place. These spaces will take the form of collection and listening points for oral history in the urban landscape, further extending the House of Memory into the landscape.

FIGURE 387: Vertical circulation

FIGURE 388: Horizontal circulation

FIGURE 389: Sculpture walk

Water chanelled
to tank

JOJO Tank

FIGURE 390: Rainwater collection in design

FIGURE 391: Wall construction

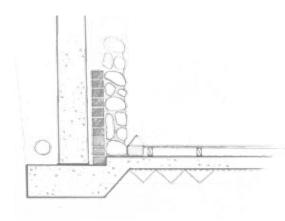FIGURE 392: Basement wall construction

FIGURE 393: Basement wall & foundation construction

Finally, the structures will once more be consumed by nature so that only the stone walls will be reminders of the story narrated by the structure.

Storm water control

The 20m slope forms a natural slope for the storm water run-off. The roofs channel the rain water to JOJO tanks for water harvesting, while the excess water on the site are channeled away from the structures into the landscaped memory park.

The water from the JOJO tanks (Fig. 390) are pumped to the sloped, green wall of the reading garden, where water is distributed through the hollow concrete blocks filled with soil and plants, becoming a water feature the readers may look out on.

STRUCTURAL SYSTEM

Stereotomic structure

The bulk of the building comprises of solid stone masonry with iron stone, also known as dolerite (indigenous to the Free State), quarried in Thaba 'Nchu. The core of the wall is a loadbearing, double layer brick wall to ensure structural integrity that has not been proved by the stone (Fig. 391). The linear form of the structure is emphasised through 620mm thick iron stone walls, representing the old.

Tectonic structure

Steel framing emerges from the heavy stone walls, representing the 'new'. The tectonic structure adheres to a 3 000mx3 000m grid and supports a tectonic roof structure, with timber trusses and an iron roof sheeting. The framing supports corten steel cladding, recycled iron sheeting used as cladding and glass panels.

Sub-structure foundations:

A continuous strip foundation is used to carry the loads transferred from the super structure. The cast in-situ concrete foundations are used for the loadbearing walls. Exterior loadbearing walls will have a foundation with dimensions of 900mmx500mm deep. The steel columns have foundations with dimensions 200mx600mm deep. The basement of the archive has a raft foundation

Super structure:

A thick concrete box is used to protect the archive material embedded in the ground. A brick wall is used as a second skin to ensure that no water penetrates through to the material, which is finished with 200mm iron stone (Fig. 392).

This stone is a type of sedimentary rock that has a stratified structure, significant in its use as a building material. The material provides high thermal mass which has

high heat retaining capacity and is slow to heat up or cool down. The stone walls have a high rate of heat transfer and will provide a cool interior for the structures in summer. They have low sound-absorption and a good sound insulator which contributes to the experiential quality of the proposed project in order to optimise the user's experience. The long life span of stone ensures a desirable, long-term appearance that requires little maintenance (Vollmer, 2011:204). In time, the colour of the stone may change, only to add to the dynamism of the design and context.

Steel framing is supported by the stone walls. It consists of columns, beams and lattice trusses. The steel structure is assembled and welded on site. The framing is mostly filled with glass. A second skin of Corten steel panels that may be adjusted to control the amount of sun entering, a passive design principal (Fig. 394). The cladding is insulated and soundproofed, repeated in the steel framed auditorium placed inside the ruins of the church.

Floor:

Cast-in-situ flooring, approximately 75 mm thick, and 220 mm thick in the double storey archive space is used. Tongue in grove timber flooring is used as a floor finish with insulation. A samp is used beneath the archive's floor to ensure water drainage. A dehumidifier is built into the wall to control the dampness of the air in the archive (Fig. 395).

Glass:
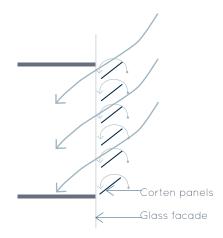
The glazed glass used is 6mm thick laminated safety glass that complies with SABS 1263 part 1. The glass has aluminium framing and is installed between the stone walls and steel framing.

Roof:

Mono pitched metal sheet roofs are used throughout the design. Klip-lok 700 0,5-mm thick sheeting is attached to the timber purlins which are attached to the timber roof trusses. The timber ceilings are fixed in-between the trusses to expose them. The roof pitches vary to illustrate different functions within the structure.

BUILDING SERVICES

Building services are the systems installed in buildings to make them comfortable, functional, efficient and safe. This is supported in both the SANS 10400-XA:2011 and SANS 204:2008 documents which cover energy use in buildings. SANS 10400-XA supports National Building Regulations.
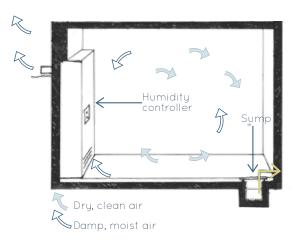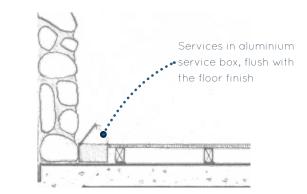

FIGURE 394: Panels channel North light into spaces

FIGURE 395: Humidity control in archive space & sump

FIGURE 396: Services in the floor
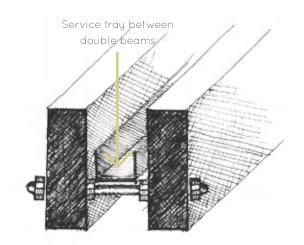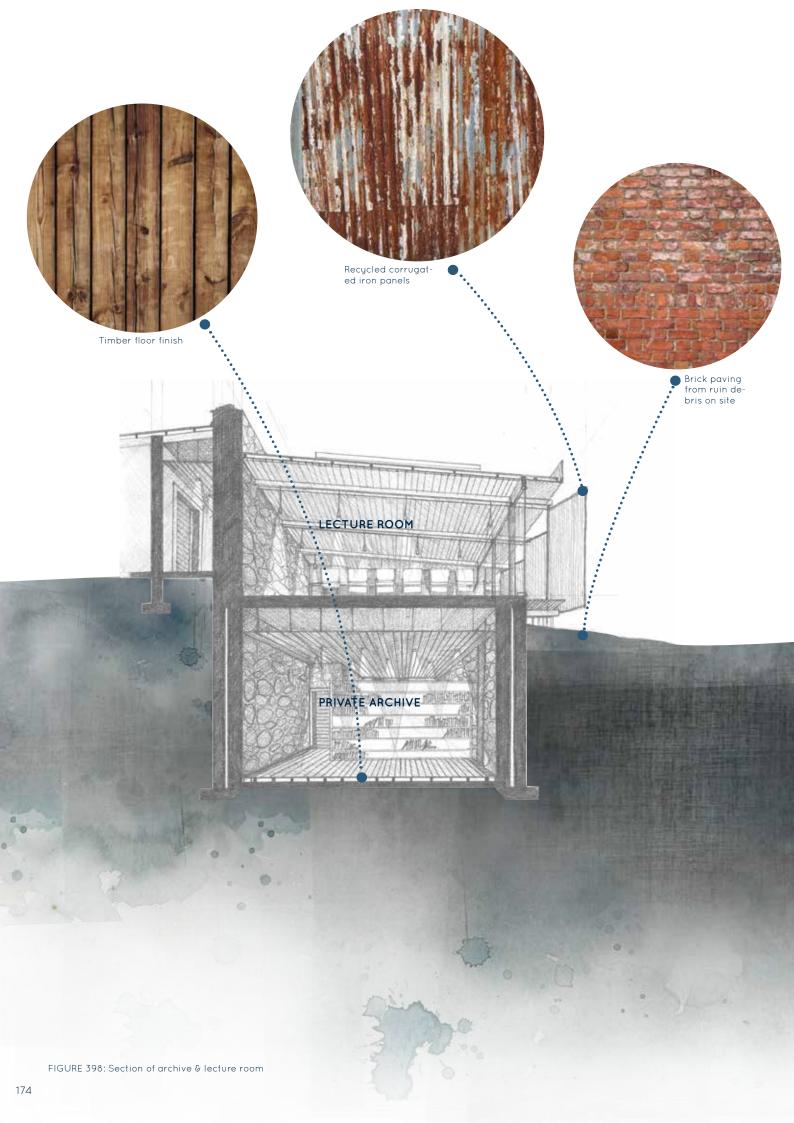
FIGURE 397: Services inbetween beams
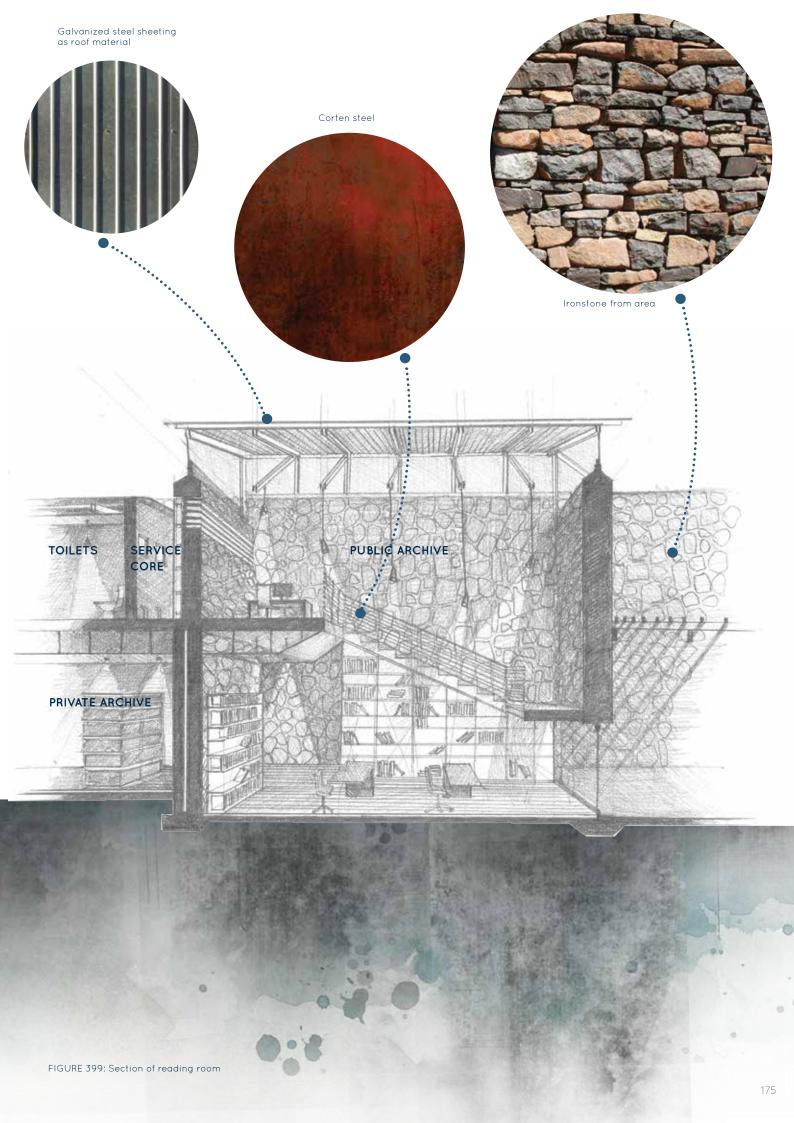
Timber floor finish

Recycled corrugated iron panels

Brick paving from ruin debris on site

LECTURE ROOM

PRIVATE ARCHIVE

FIGURE 398: Section of archive & lecture room

Galvanized steel sheeting as roof material

Corten steel

Ironstone from area

TOILETS

SERVICE CORE

PUBLIC ARCHIVE

PRIVATE ARCHIVE

FIGURE 399: Section of reading room

FIGURE 400: Emergency routes & Gathering points
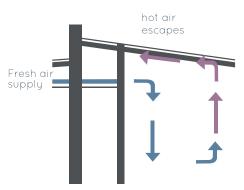
Fire protection

As the structure houses irreplaceable historical documents, protection against fire is vital to conserve that which is contained within the building. Adherence to SANS 10400: Part T: Fire Protection in South Africa for B2 classified structures is evident throughout the building:

A fire alarm system is used that includes smoke detectors, thermal detectors, flame detectors and fire-gas detectors that set off a fire alarm. This is installed in the stone walls to ensure easy access and that fire is detected before the documents are harmed. A fire hose is located within the service wedge leading to the exhibition. The reception area and lobby, lecture room, storage and administrative spaces have portable extinguishers. An emergency route leads through the main entrances (also serving as escape doors) of each structure to the terraced space between the museum and administrative structures. The terraced space becomes a gathering point from which to exit the site (Fig. 400). The materials used, such as the stone walls and polycarbonate roof, offer fire protection, and the insulated cladded walls offer at least two hours of protection.

HVAC

The building is passively designed to optimise heating and cooling which will be described in the sustainability report. Mechanical ventilation, which includes air-conditioning, appears throughout the design to provide optimum temperature and humidity control to protect the historical documents. The outlet pipes for the air conditioning will be placed on the roof, thus hidden from view on the ground level. The energy gained by the solar heaters is used to operate the air conditioning. The auditorium id mechanically ventilated through the floor.

FIGURE 401: Fire equipment in stone walls

Water supply

Water is supplied by the municipality and a solar water heating system is used in the structure, which complies with SANS 10400-XA:2011 (Vollmer, 2011: 128)

Sewage disposal

Collected waste and soil water from the project is directly connected to the sewage system at a connection point provided by the Mangaung Municipality. The sewage is moved by gravity to the sewage treatment plant where it is treated.

Security

Security is essential in a structure that houses historical documents. Each of the access points has a reception area with a controlled entrance.

hot air escapes

Fresh air supply

FIGURE 402: Ventilation through office space

DESIGN DETAILING:
BARRIER FREE ENVIRONMENT

Accessibility

The museum has free access to ensure that people from different income groups have access to their history. The House of Memory complies with SANS 10400 part S and T so that all spaces in the design meet the needs of visitors with impairments. The precinct is committed to providing all disabled visitors with access to all of the spaces within the structures.

Wheelchair access:

The structures and surrounding landscaped park are completely wheelchair accessible. The precinct consists of a labyrinth of ramps that address the steep slope. The ramps comply with SANS, 2011: Part S as the slopes of all the ramps do not exceed 1:12 m. The material used for the exterior ramps include the fallen ruin materials on the site which offer enough friction and movability for wheelchairs. The interior spaces are free from steps or obstacles, and have timber flooring that does not restrict movement. Toilets for the physically disabled are wheelchair accessible with a door breadth of 95 cm and a seat height of 47 cm; hinged handles and handle grips have been installed and a wheelchair-adapted washbasin is available (Fig. 403). The mirror is mounted at a suitably lower height. The museum offers wheelchair availability for physically disabled visitors.

The Blind:

Narratives in exhibitions are also exhibited in braille.

Visitors:

Written narratives of the exhibition are available in all of the 11 official languages in South Africa.

SUSTAINIBILITY

To adhere to social, economic, and ecological sustainability, designing buildings in a sustainable manner is used. The sustainability of a design may include the conservation aspects of the project, as well as environmental, social and economic considerations.

Conservation

As the site is located in a historical part of Thaba 'Nchu with historically significant ruins, significant decisions have been made to conserve the historical buildings and enlighten the community about them through the design of the precinct. The design of the structure is subtly integrated into the site and communicates with the historical context in the form of a memory park, a sculptural walk and a memorial, as well as using the ruins as functions in
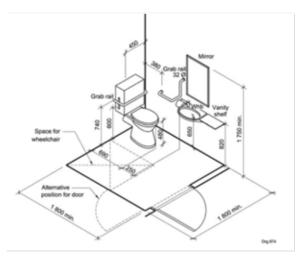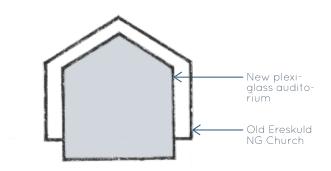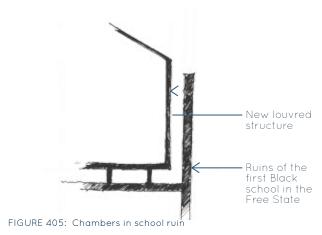

FIGURE 403: Disabled toilet layout (Sahf, 2015: online)

FIGURE 404: Articulation between the old church and the new auditorium

New plexi-glass auditorium

Old Ereskuld NG Church

FIGURE 405: Chambers in school ruin

New louvred structure

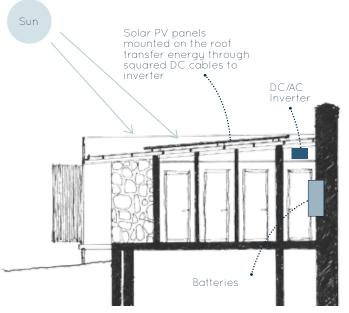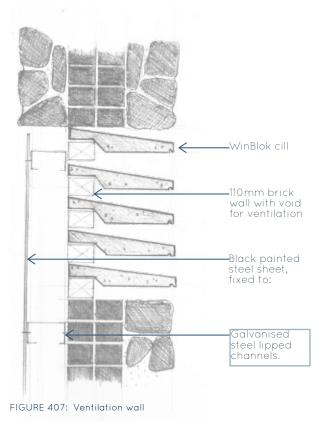Ruins of the first Black school in the Free State

FIGURE 406: Solar panels converts energy from the sun to electricity, which is transferred to gel type batteries where it is stored. Direct current is inverted to alternating current

FIGURE 407: Ventilation wall

the design. Conservation is achieved through augmenting the existing contextual conditions of the environment. The facades of the proposed structure resemble the identity of the surrounding structures through material, rhythm and repetition. Where the design uses the ruined structures, form and materiality becomes very important. The existing house, used as the reception in the proposed project, is left as is. Only ceilings, floors and non-load-bearing walls are added. The exhibition spaces added into the school ruins are lifted from the floor and articulated from the walls to emphasize the old. The form of this space is reminiscent of the old structure and informs the form hidden within the church. The auditorium in the church is constructed of timber trusses that support plexiglass. This material is 30% translucent so that there is a constant awareness of the old church. The proposed project suggests a new architectural language to become a threshold between the old and modern structures in the context.

Energy & environmental sustainability

The project uses passive design solutions to reduce the use of artificial heating and cooling to achieve comfortable temperatures for interior spaces. Passive solar heating is attained through creating an insulated building envelope. Materials with a good thermal mass are used, namely stone, brick and concrete. Large, open windows are confined to the southern part of the building. Fenestration on the northern side is shaded by louvred structures. The small amount of fenestration on the western façade is covered by corten panels that open to the north, redirecting the desired light into the spaces. Trees are planted in front of the western façade to offer shade against the harsh sun (Fig. 410).

The habitable spaces, which include the coffee bar, library, oral history recording room, offices and lecture rooms receive light from the north as well as from the east. All rooms in the building are naturally cross-ventilated with the aid of mechanical ventilation in the auditorium, archive and exhibition spaces.

Habitable spaces, such as the offices and learning rooms receive northern light. The office spaces have adjustable shading devices on the eastern façade.
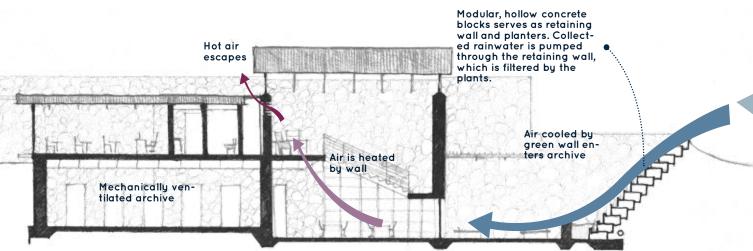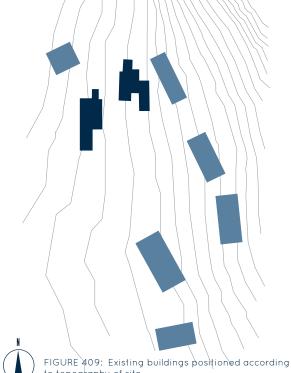

FIGURE 408: Passive ventilation in archive space

The archive and administrative building uses the green wall to cool the air which enters the basement space. This cooled air rises as it is heated through the wall in the service core. The wall is cladded with steel purlins that supports black painted steel panels, which heats the air. The air escapes through vents. The vents are constructed of WinBlok cills.

Lighting

Natural lighting is used in spaces that do not contain light-sensitive historical documents. These include the foyer areas, circulation spaces and offices. Diffused natural lighting is used in the memorial, exhibition and archive spaces. Artificial lighting is used throughout the design to enhance the experiential quality of the precinct. The electrical wiring of the lights are located in the service tray between the double beams void.

Features that contribute towards the diffusing natural light are high ceilings with tall windows and interior light surfaces to reflect incoming light.

FIGURE 409: Existing buildings positioned according to topography of site

Orientation

The orientation of the structures resembles that of the context, which is elongated on the north-eastern and south-western sides. The linear forms are fragmented to maximise desirable light to enter from the north into spaces such as the offices, lecture room and foyer spaces. The long, narrow design of the building increases the effectiveness of its passive design (Fig. 409).

Materials

Materials commonly used by local unskilled builders will be used in order to employ local labourers in the construction of the project.
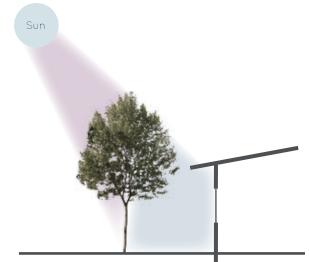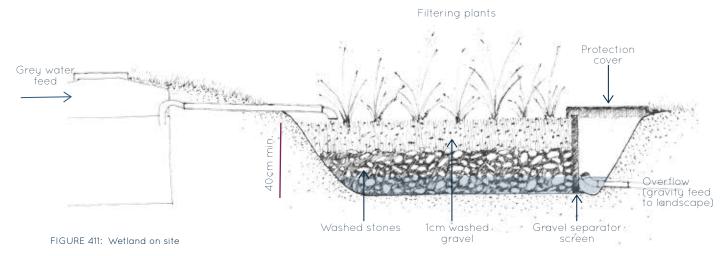

FIGURE 410: Trees used as shading devices

FIGURE 411: Wetland on site

Filtering plants

Protection cover

Grey water feed

40cm min.

Washed stones

1cm washed gravel

Gravel separator screen

Overflow (gravity feed to landscape)

FIGURE 412: Parking

Green space & landscaping

Vegetation in front of the windows will serve as filtering devices to reduce the glare from the sun and allow cool air into the structures. The wetland on the site (Fig. 378) is designed in order to use the water for irrigating the precinct. Some of the storm-water is channeled to the wetland, and grey water from the ablutions and kitchenette is pumped to the wetland where vegetation is used to filter the water. The filtered water is used to irrigate (Fig. 411).

PARKING DETAILS & STANDARDS

Parking on the site is not a major problem due to the large, open space available on the site. The 30 parking bays are integrated into the design of the landscape to ensure that it does not affect the experiential quality of the design (Fig. 412). Provision for bus and taxi drop-offs is made as most visitors do not own vehicles. The parking spaces adhere to SANS 10400-D: Public Safety. The layout of the visitors' parking consists of 90-degree bays with two-way movement aisles that minimise vehicle-to-vehicle and vehicle-to-pedestrian conflicts. Parking for the disabled which has a 1,5 m minimum width access aisle between vehicles to allow for easy wheelchair access between parked vehicles is provided. The parking is softened by trees that shade the area.
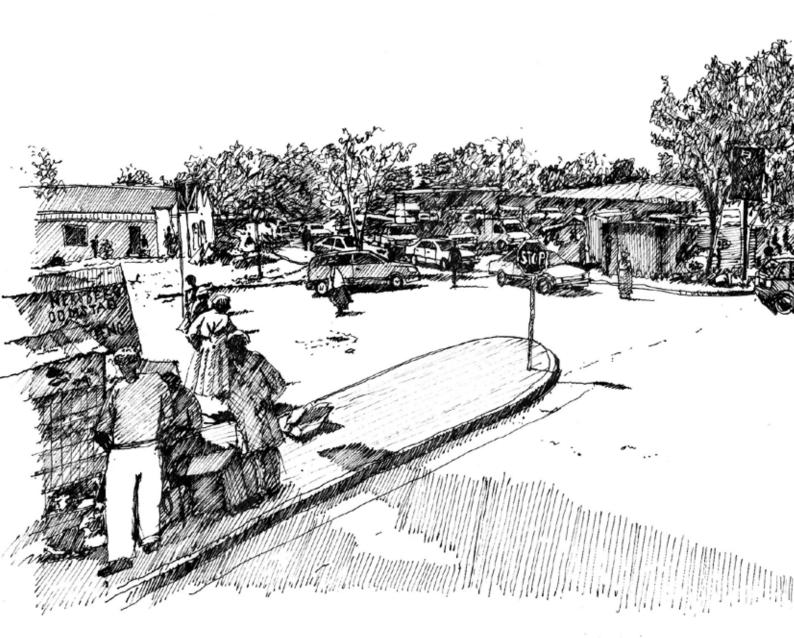
FIGURE 413: Perspective of Thaba 'Nchu CBD.

C H A P T E R

4

4.1 REFLECTION & EVALUATION

4.1 EVALUATION & REFLECTION

December 2015

I am drawn to the strangely atmospheric Thaba 'Nchu. I feel the weight of history that adds to this atmosphere, and I love it. The archives and the library seem to contain a treasure of secrets, silent secrets which deserve to be loudly celebrated, silent in voice, but unavoidably... loud. The interviews immersed me into the minds of people who contained beautiful reservoirs of knowledge, things that appear lost, seemingly seeping out from the pages of a book. I want to give a metaphorical microphone to this heritage, this history, but how will I do it through architecture?

February 2016

It is hard to give a voice to the voiceless. The touchstone is making a sound, but is it in tune with the melodies that flow from this rich history? My frustration builds as the conceptual exercises are dragged out.

March 2016

Site analysis has channeled the voices into a clearer, almost audible voice. It made a song of a series of noises, adding with it the sounds needed to lay out the symphonic skeleton of this forgotten narrative. This proves to be the cognitive foundation for a museum and archive for the forgotten narratives of Thaba 'Nchu. How can I sing history without using the old words? The existing structures and their voices are the crux of this melody. How can I sensitively yet powerfully play an old song with modern instruments of architectural music? The frustrating process of building many topographical models to see where the music should be constructed seems futile, am I wasting my time?

May 2016

The cacophony finally gives way to melodious harmony. With each separate section, a voice emerged, all the clearer. The theories I analysed makes me realise that this song needs the architecture and design created simultaneously. The rhythm and the notes can only have a proper voice when they hold hands. The rhythm makes tells me what the notes should be, and the notes tell me what the rhythm should be. The spatial quality to make sense of these voices finally grasped, I can see that my original melody was too concrete. I only listened to the background music that the place hummed silently, yet I ignored the singing of the people.

June 2016

Individual voices make the song as it is. This is not a narrative of a place, but the narrative of a people. The architecture must voice the people. Each voice, each story, each narrative of every person must be heard. Must be sung.

August 2016

Final notes are being written. The composition is coming together. The Magnum Opus is beginning to look like the voice that needs to be loudly celebrated. The value of the song presses me on more than anything. Passionately, designs flow from my fingers as if playing on a piano of scribbles and ink.

A perfect song has never been written. There is always more that can be done. It seems that there is more that could be done. But the work gives a voice to that which was voiceless and forgotten. Each structure, each brick, is a voice. And each voice is a victory against the void. Silent voices can be resurrected

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