

CHAPTER

THREE

Historical Context

The 'compound' – a term deriving from the Malay word kampong meaning village or hamlet- first developed as an enclosure for the segregating/controlling African labour during the 1870's-80's at the De Beers consolidated Diamond mine in Kimberly (Byerley 2012:35).

"The compounds were the most directly coercive form of workers' housing in existence, comparable in several respects to 'total institutions' of which prisons and asylums are prime examples" (Wasserfall 1989:6).



Figure 3.1. Miners of Premier Diamond Mine on shift (Cullinan archives, 2014)



A LAST TOAST TO THE OLD WORLD

Every system of power is presented with the same problem, the ordering of human multiplicities... (Foucault in Byerley 2012:34)

The Premier diamond mine living quarters for migratory black mine workers (known as the No.2 Shaft Compound) were built in 1904 on the southern side of the then growing open-cast pit. A large work force was needed in order to fuel mining of the diamonds discovered at Cullinan and as a result up to 15 000 men were employed and housed there for 6 month 'no leave contracts'.

The authors of a document entitled *Development plan proposal for No.2 shaft compound Interpretive Centre, Premier mine* explain the use of the word 'compound', when describing the ruins and surviving structures located near the No 2 Shaft Premier Mine in Cullinan. "These and other structures housing black mine workers were referred to as compounds and formed part of a widely practiced compound system, started on the Kimberley diamond mines by De Beers and later used by the gold mines and other industries in South Africa during its industrial and mineral history. Furthermore, the terminology 'compound', and the differing meanings attached to this word, have remained in mining and state parlance for close on a hundred years" (Site Solutions 2004).



Figure 3.2. Miner at work (Cullinan archives, 2014)



Figure 3.3. Playing soccer at No 2 shaft compound (Cullinan archives, 2014)



Figure 3.4. Subsurface drilling (Cullinan archives, 2014)



Figure 3.7. Sorting (Cullinan archives, 2014)



Figure 3.5. Miner at work (Cullinan archives, 2014)

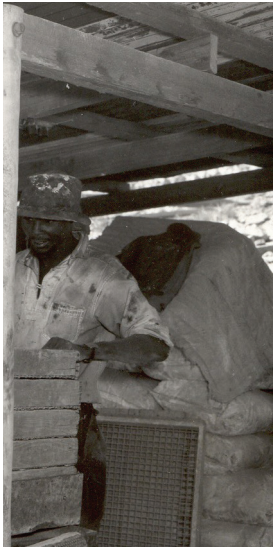


Figure 3.6. Mine structures (Cullinan archives, 2014)



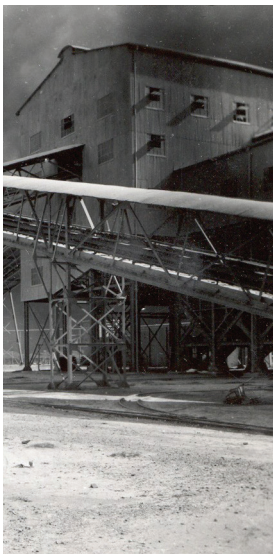
Amongst a plethora of information that exists about the Cullinan diamond and the crown jewels, the labour force, the lifeblood of the mine, barely receive a mention; this, despite the fact that the mine exerted an enormous socio-economic power over the vast majority of communities existing throughout South Africa. The majority of black children at the time grew up without knowing their fathers as a result of the existence of these compounds. With so many men having stayed in these compounds throughout the years of their existence, it is surprising to note how little information is available.

The fragmented information collected reveals that although the compounds are known to have existed in the broader public memory, there is no cohesive historical record which exists that tells the story, or even a part thereof, of the Premier mine compounds and the workers who once inhabited them. This reality was tested on local people associated with the mine, such as the employees and locals who were unable to identify where the burial sites for the black workers are located, or even how many compounds existed during the one hundred years that the mine has been in operation (Site Solutions 2004).



At least 6 compounds squares or barracks were identified as having existed and forming part of the No. 2 Shaft compound. On 11 July 1913, a return of compounds submitted by the Inspector of the Native Affairs Department described the Premier Mine as having four compounds situated on the mine property as follows:

- No 1 Compound: 15 000 miners
- No 2 Compound: 500 miners
- No 3 Compound: 2000 miners
- No 4 Compound: 600 miners



Recruitment of men occurred all over South Africa from what was formally known as Basutoland, British Bechunaland, British Central Africa, Natal, the Cape Colony, as well as Mozambique and Zimbabwe. A General Manager's review, dated 3 June 1910 records that production was disrupted between Shangaan and Basuto miners and so to avoid a repeat of this, the mine then split the shifts along ethnic grounds, mirroring the racial segregationist policies that were typical of colonial South Africa at the time (Site Solutions 2004).

Compound rooms were approximately 170m², with plans in 1961 showing that these rooms were later divided into two sleeping areas, which were separated by a changing room and each half had sleeping provision for 20 workers, although it estimated that these numbers may have been much more. The men's Communal facilities were outdoors, and included communal showers, washing troughs for utensils, cooking facilities, blanket washing baths and water points. In 1912 these facilities were photographed as being open air, and only during the renovations in 1957 were roofs constructed over the newer facilities (Site Solutions 2004).



Figure 3.8. Men undergoing compulsory medicals (Cullinan archives, 2014)



Figure 3.9. Compounds after the upgrades in the 50's (Cullinan archives, 2014)



Figure 3.10. Miners underground (Cullinan archives, 2014)



Figure 3.11. Miners preparing food in the upgraded cook areas (Cullinan archive)



Figure 3.12. Miners attending evening class (Cullinan archives, 2014)



Figure 3.13. Miners dancing at the compound (Cullinan archives, 2014)



Conditions of the compounds

Eating in the compound

Documentation reflects that it was policy of the Premier Mine for workers to purchase their own food from the compound stores. The miners were even paid in a unique currency only used within the mine and at the compound. Wages were paid to the miners in these 'tokens' as a way of exerting further control over them and as a guise for funneling the pitiful wages of the miners back into the mine. As a result, most of the miners' wages were spent at the 'coffee shops' and spaza shops at the mine with the result that little cash was sent home to their families. Coal and wood were supplied by the mine and food was prepared at the central cooking facilities, usually in turns by the miners, who would prepare a large meal for his room mates. Food sold included meat, white bread, cakes, sausages, sardines, maize meal, sweets and cigarettes. Fresh produce was lacking and as a result, the men often suffered from scurvy and other nutritional deficiencies, which meant that the nearby 'native' hospital was often full to capacity. After the compound was left abandoned, bottles of lime juice were found lying about, presumably given to the miners to stop them from developing scurvy (Site Solutions 2004).

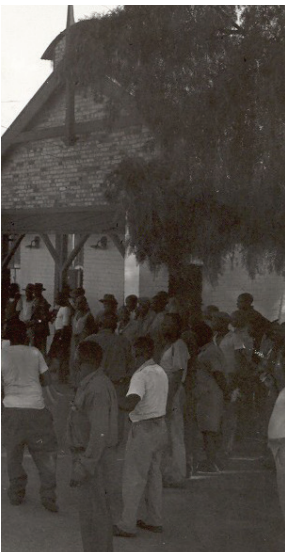


s. 2014)

Upgrades

During the 1950's, the compounds were upgraded as some of the disused structures had fallen into ruin. Many of the compound's rooms, currently standing in better condition, were actually built on the foundations of the original 1904 rooms. Larger spaces for recreation were made available to the men and the men practiced dance, played football and watched silent movies in the newly built amphitheatre. The outdoor ablution facilities were roofed and made more private.

Nevertheless, this upgrading should be seen against the historical period of the rise of apartheid and its related labour practices, which mirrored that built upon the prior labour policies of the colonial era. Conditions on the mine for black workers were very different to that of the white labour force and are reflective of these eras (Site Solutions 2004).



Significance of the compound in a post- apartheid South Africa

Due to the unfavorable light the compound casts upon the Premier mine, and the historical milieu in which the compound existed, little attempt has been made to record the experience of these workers. The few photographs that exist today are seen as a farce, displaying the good quality of the buildings and facilities while the miners who were photographed were usually only in the background. “Consequently, a memory loss exists in relation to the compound and the workforce resulting in a wider historical gap being made prevalent within the historical context of the mine” (Site Solutions 2004).

Places of cultural significance enrich people’s lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences (Icomos 1999:7).

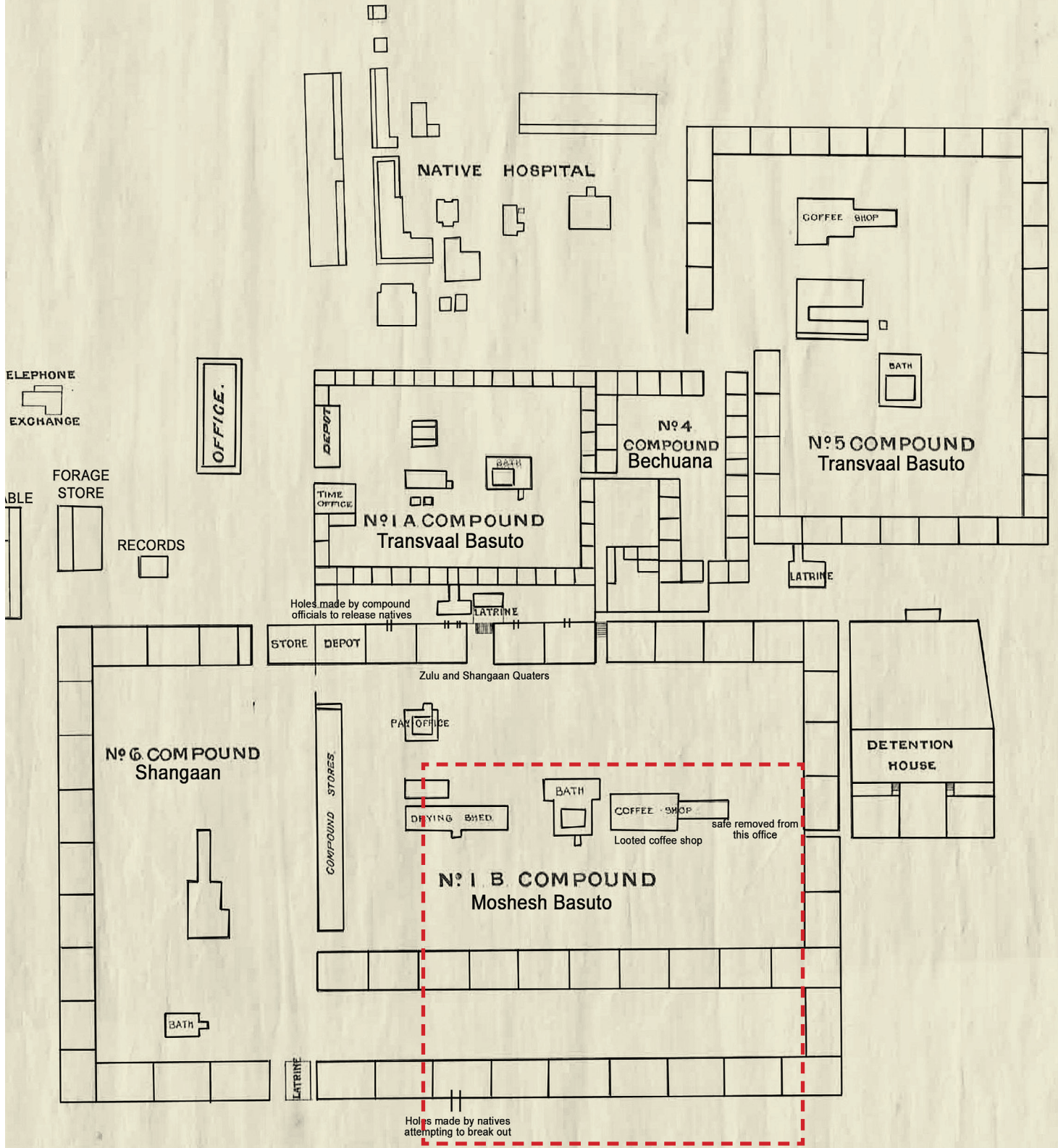
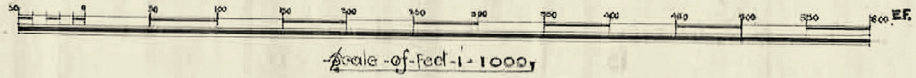
The history of the No 2 shaft compound holds significance for every South African in understanding how labour policies have changed and that still today, the struggle for equality, fairer wages and working conditions continues for many laborers and miners.

Figure 3.15. (Right) Early compound plan indicating specific study area (Cullinan archives, 2014)

Figure 3.14. (Below) Early days where digging was done manually, some of the miners still young boys (Cullinan archives, 2014)



BLOCK PLAN OF MAIN COMPOUNDS.



Immediate Site Context

1. Historical Bath
2. Existing washing and food preparation facilities
3. Existing foundation floor slabs, stepping down 1 meter between each slab
4. Abandoned warehouses to be used for storage and light industry
5. Current entrance
6. Existing compound room ruins
7. Re-appropriated offices
8. Existing compound floor slab
9. Retaining wall level difference of 3m



Figure 3.16. Aerial photo of compound site with 5m contours (GIS, 2014)



Significance of historical fabric to immediate site

As the compound is relatively large, only the significance of the immediate context to this dissertation's site will be analysed. The new architecture will engage in a process of adaptive reuse that is sensitive and responsive to its context. The Illustrated Burra Charter is used as a guide to decision-making when it comes to working with the historical fabric on site.

The Burra Charter advocates a cautious approach to change: "do as much as necessary to care for the place and to make it usable, but otherwise change it as little as possible so that its cultural significance is retained" (Icomos 1999:2).

Current Status

A heritage impact assessment on the No 2 shaft compound was undertaken by Sydney Millar who stresses the urgent need to preserve the remaining built environment, along with the historical information, in the possession of Premier Mine. He states further that much of the surviving built fabric, comprising of a collection of bricks, mortar and rusted steel, exists in a state of decay and that numerous features of the compound's buildings have been destroyed or removed over time. Any material artifacts found lying around the compound by the miners, such as a board game that was found, have since been removed and stored by the Premier Mine – the removal of these artifacts may be seen as a conscious removal of 'evidence' (Site Solutions, 2004).

As the compound is currently 'guarded' from the public, it is isolated from the rest of the mine and remains a lost site of heritage for the families of the men who once stayed there. Beyond those directly related in a historical sense, the compound has a wider significance for all South Africans, who benefited from the economic growth, which was generated, and yet remain oblivious to the living conditions of the miners.

At present, their experience remains untold in the various interpretive tools currently on the mine terrain and they, along with this built environment within which they lived and worked are forgotten. They have slipped from the recorded landscapes that constitute the understood, remembered and presented history of the mine as a whole" (Site Solutions, 2004).





Figure 3.17. Ruined Compound rooms (2014)

Compound rooms

Six unroofed rooms, where as many as 40 miners slept each night, border the southwestern corner of the site. The rooms are distinguishable by their high gabled walls and geometric paintings on walls adjacent to the now bricked up doors. These paintings were for the miners to ‘read’ and distinguish their rooms from one another, as most of the men were unable to read. It is also rumoured that men escaped from a hole in the wall from this side of the complex. The rooms have stood empty and inaccessible for as many years as the compound has been abandoned, and as a result, each room is a capsule of Nature 1. This ‘reclamation’, is evidenced by the presence of mature trees, long grass and weeds which flourish on their own and spill out of the broken windows while monkeys play inside the rooms and run along the walls. As such the rooms are in very poor condition, one of the gables has crumbled and the white paint has chipped away to reveal red brick; exposed concrete lintels tell that the rooms were built as simply and cheaply as possible.

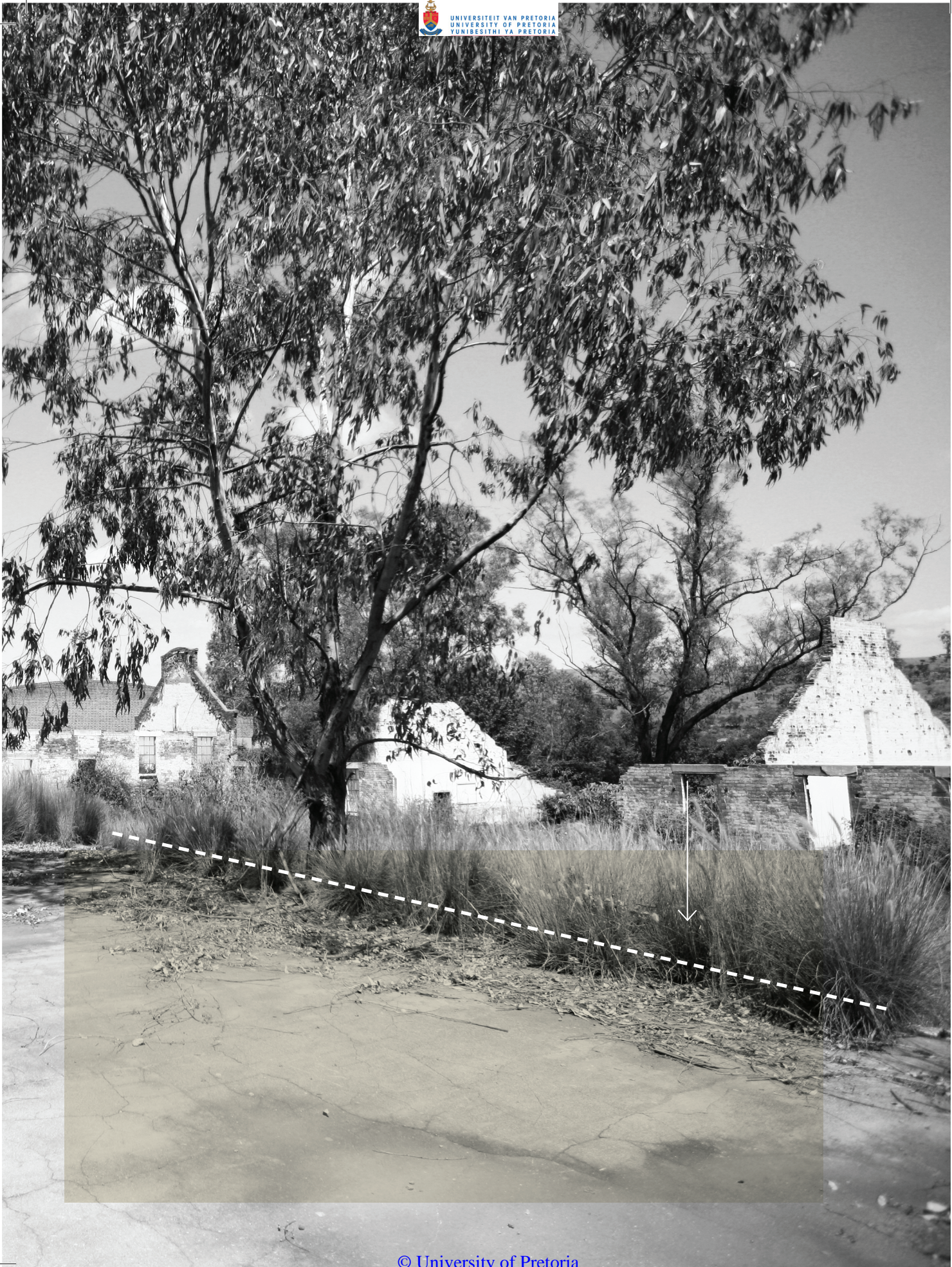
The rooms are in too poor a condition to be appropriated, however, their physical presence contributes to an experience of palimpsest, which is vital in telling the story of the compound and of how nature has ‘anaesthetized’ and romanticized this condition. As such, the rooms cannot be demolished due to their historical significance nor recreated, as all patina and connection with nature will be lost, therefore it is proposed that the rooms remain in their state of ruination.



Figure 3.18. Existing laundry wash basins and work tables standing in overgrown grass (2014)

Washing and food preparation structures

These structures, in various stages of disrepair, are vital in understanding the miner's daily ritual and the hardship of having to prepare meals away from family and in the open air. The rows and rows of concrete washbasins and shower stalls reveal the anonymity each miner must have felt. These structures are fascinating in just how function-driven and brutal they were as 'objects'; seeing them today in their present overgrown state is almost apocalyptic. Some of the structures such as the concrete prep benches, concrete hand wash basins, and *braai* facilities will be restored so that they can be used again for similar functions, while other structures can be adaptively reused to create seating for visitors.



Concrete surface bed

The remaining surface-beds are important footprints which serve as a reminder of how dense and visually enclosed the compound once was, though housing 15 000 men. These footprints enforce the strong grid imposed upon the compound and erasing them would mean that any such trace of these compounds would be lost forever. Nature consumes and forgets, as it has with the walled compound rooms, but it also has the ability to ignite memory, where grass grows collectively from the gap where the dividing room once stood. As defined by the Burra Charter (1999:2), “[c]ultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects”.

The proposed intervention adds a level of sensitivity to the surface bed and plans to acknowledge this significant fabric.

Level difference

There is a 3m level difference between the current, standing compound rooms and the remaining surface bed where compound rooms one stood but were since demolished. The significance of these level differences is that they denote the physical separation between the men; this has been nicknamed by the author ‘The Human Ha- Ha’. Even today, with no traces of vertical access between the levels, it is extremely difficult to access the lower compound rooms. As a result, the lower level, being the lowest point of the compound, collects and concentrates all rainfall and the vegetation in the ha-ha is thick and green. The lack of any influence of man on this environment for the past 40 odd years has meant that this pocket acts as a perfect example of Nature 1.

Figure 3.19. Existing floor slab after compound wall slab was removed and as well as level change below (2014)





Figure 3.21. Concrete bath, emptied (2014)

Bath and surrounding fabric

There was no hot water supply in the compound and bathing arrangements were roofless enclosures fitted with cold showers that were often used by workers for washing out food tins and linen (Site Solutions,2004).

In the context of the site chosen for this investigation, lies an existing bath which was used by the miners for the washing of blankets; it has also been rumoured that the bath was used in earlier days as a 'dip bath' for the miners. This is notably unsettling as there are obvious negative connotations associated with the act of bathing in the compound, stripped of privacy and in the cold. These feelings need to be portrayed to the visitor and perhaps as a notion of humanity overcoming adversity, water collected from site would flow through a channel and fill the bath once more - serving a better purpose of irrigating introduced agriculture.

Figure 3.20. Existing historic fabric (2014)

CHAPTER

Nature, Memory and Silence

FOUR

I like ruins because what remains is

not the total design,

but the clarity of thought,

the naked structure,

the spirit of the thing.

Tadao Ando

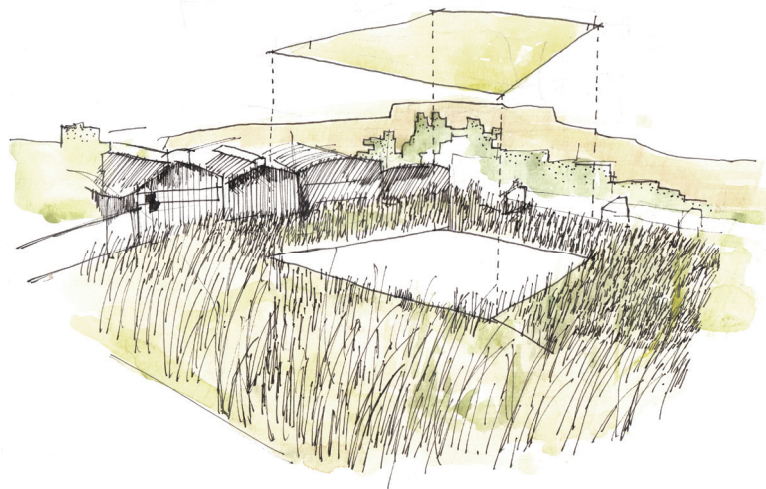


Figure 4.1. Silence removed (2014)

Silence

The things of nature are filled with silence. They are like great reserves of silence
(Picard 1948:103).

Silence is to be understood not merely as the absence of sound, it is not a negative, but a positive entity, complete in itself. As the philosopher Picard explains in his book, *The World of Silence* in the chapter 'The Nature of Silence', that "[s]ilence has greatness simply because it is. It is, and that is its greatness, its pure existence. There is no beginning to silence and no end: it seems to have its origins in the time when everything was still pure Being" (1948:1).

It must be noted that there is a difference between literal silence, and the silence that encourages awareness and introspection. The total absence of noise is not life supporting, sound means life and in quiet places our ears sharpen to listen to it. The silence that relates to the genius loci of a place will include water moving against rocks, wind rustling the trees and insects communicating with one another.

If silence has no beginning and no end, it exists as a constant and governs over the 'Natures'. It has a close relationship with time and memory. As spoken of by Palasmaa, architectural structures have the ability to 'create and protect silence.' The more the building contains a so-called silence, the greater the capability of the building to recall memory. "Time is interspersed with silence. Time is accompanied by silence, determined by silence. Its quietness comes from the silence that is enclosed within it. But the sound of measurable time, the rhythmic beat of time, is drowned by the silence" (Picard 1948:103).

Within a modern sensibility, life is fast and silent space is difficult to come by. Picard comments, "...[n]othing has changed the nature of man so much as the loss of silence... Man who has lost silence has not merely lost one human quality, but his whole structure has been changed thereby" (1948:221).

This dissertation will conduct research into the making of a building that kindles silence. How will this silence be used in turn to reflect and remember the past occurrences of the compound?

Silence and Nature

Silence has always had a strong relation to nature. It is the silence that has been forgotten in the process of carrying on with life, and which is remembered when one travels outside the city. It can sometimes feel almost deafening. Picard says about nature and silence that "[i]t is a blessed silence because it gives man an intuitive feeling of the great silence that was before the word and out of which everything arose" (1948:129).



If man were nothing but a part of nature, then he would never be solitary. He would always be connected with everything through silence-but in a relationship that would concern only the natural side of his nature. Man is not, however only a part of nature, but also spirit, and the spirit is solitary when man is connected with things with things only through silence, for the spirit needs to be connected with things through the word.

(Picard 1948:129)

The 'first nature' is the human being's closest connection to the original silence that existed at the beginning of time, "the silence of nature is the primary reality" (1948:130). The more the natures evolve through the workings of people (Nature 1 and 2) the more likely it is that silence be lost. However, as Picard says, this silence is also oppressive at the same time as being blessed "...because it puts man back into the state in which he was before the creation of man. It is like a threat that the word might be taken away from him again into that original silence" (1948:129). The original silence of the earth cannot exist unaltered, as there would be nothing to hear. Man needs to build his own environment to be able to tell his story. "Silence was there first before things. It is as though the forest grew up slowly after it" (1948:130).

We have said that the silence of nature is permanent; it is the air in which nature breathes. The motions of nature are the motions of silence. The alternation of the seasons is the rhythm of silence; the pattern of the changing seasons is covered by silence. The things of nature serve only to make the silence clearly visible. The things of nature are the images of silence, exhibiting not themselves so much as the silence, like signs pointing to the place where silence is.

(Picard 1948:130)

Figure 4.2. Lightduress, digital collage, - Inspired by Paul Celan's poem Lightduress, man versus nature (Jeffrey James, 2009).

This dissertation will investigate how silence can be translated spatially and manifest itself in built form, through the phenomenological experience of the user.

Healing Silence

As introduced, the landscape of Cullinan is scarred physically and in the memories and lives of the people who inhabit it. Although most of the miners who stayed at the compound have died, the legacy of abuse will have trickled down into their families and into the communities who live there today. There is occasion for reconciliation; the people of South Africa must never forget.

Figure 4.3. Under the bridge, digital collage - Nature is noticed when framed by something man made (Jeffrey James, 2010)

Healing is a process that can only take place within the individual, but the process can be triggered and supported by healing environments. Christopher Day writes that "Of all the healing forces in the God-given world around us, silence is perhaps the greatest" (Day 2004:203). Silence and places of introspection are needed for healing; often the busyness of a noisy place can avert the mind from what is truly important. To understand the heritage significance of the site, it needs a connection with the earth it stands on; a silence is required to make this realization



NATURE 1

THE AUTHORITY

This is the first nature and has existed at the mining compound since the beginning of time.

Nature 1- the great sovereign healer, places bandages over all and will with time, conceals all that happens on earth. The first nature consumes and digests, and from this, new life is conceived. Nature 1 is what first existed on earth before man settled and built a new nature for himself, Nature 2





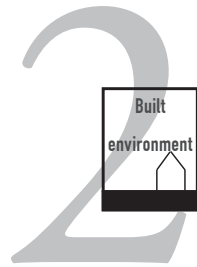
Nature 1- The Authority

Nature 1 exists as the unaltered and purest form of nature. It is mostly cyclical and predictive as each year passes and the seasons overlap with one another. But Nature 1 is the authority over all: it can bring with it merciless storms, scorching sunlight, pests and dirt - what man has sought to shelter himself against for centuries. Nature 1 is its own authority and is a closed system, it consumes and creates, day after day. “The fundamental sources of all our knowledge, however, still remain rooted in nature. That is to say that nature, as our first environment, was our primordial source of external knowledge and the subject of our speculation about ourselves in relation to all else” (Crowe 1997:4).

The conditions of Nature 1 existed on the site before man ever settled on and toiled the earth of the Highveld. Nature 1 is what gives the highveld its distinguishable characteristics and is what architecture needs to respond to. After the compound was abandoned, Nature 1 was left to flourish on its own accord and it would be detrimental to the sense of place to erase or attempt to control it. Our understanding of each nature is only relevant when all natures are understood with respect to one another.

Figure 4.4. Nature 1 surrounding and enveloping any existing built fabric (2014)

Nature 1 has the ability to heal and anaesthetize, it softens and greens. But, after a considerable amount of time, nature will erase the very memory of human interaction and since the site holds so much heritage value, it should be preserved for as long as possible.



NATURE 2

MEMORY AND THE RUIN

This is the nature man constructs for himself
from materials of Nature 1.



Nature 2- Memory and the Ruin

Having once departed Eden by creating a “second nature” all our own, it has been our task to nurture and perfect it ever since, even it seems, to the detriment of the natural world out of which it was formed (Crowe 1997:5).

Nature is both given and constructed. “We reveal our presence in the world by creating places-buildings, towns, villages farms and cities. They are set either directly or indirectly into the world of nature, and they serve us as a kind of artificial nature, or ‘second nature’ to use Cicero’s term for it (Crowe 1997:4).

Nature 2 is the umbrella term used for the buildings that exist on site, whether they be remnants thereof or whole, contained and water tight. These were built by the hands of men but with the materials of the earth. Nature 2, in this dissertation, will refer to the built fabric of the compound that has heritage significance. These structures are some of the only remaining tangible artefacts that are able to tell the narrative of the compound era of mine workers. Ruins are especially interesting as they evoke romantic notions, perhaps undesirable in the case of the compound, but still acting as a lieu de memoire. As Mark Treib says in his essay, Remembering Ruins, Ruins Remembering, “[t]he ruin may be the quintessential Romantic element, in neoclassical eras the ruin often represented the remains of a Golden Age” (2009:195).

The ruin has long had a symbiotic relationship with nature, whether the vegetation be planted (Nature 1) or voluntary (Nature 3).

The ruin is important in retarding the memory and retaining the sense of place of a site. “The ruin slows time and grasps the past as a part of the present, as it inserts the present within the past” (Treib 2009:195).

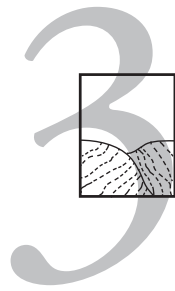
Pallasmaa says of ruins, “buildings and their remains suggest stories of human fate, both real and imaginary. Ruins stimulate us to think of lives that have already disappeared and to imagine the fate of the deceased occupants” (2009:20-21). Ruins and eroded settings have an especially evocative and emotional power; they force us to reminisce and imagine. They represent the true and bare essence of the building that once stood, and the ongoings of lives that occupied the spaces once before.

Figure 4.5. Nature 2 , built by man and in a current state of ruination on site (2014)

All buildings maintain our perception of temporal duration and depth, and they record and suggest cultural and human narratives. We cannot conceive or remember time as a mere physical dimension; we can only grasp time through its actualizations: the traces, places and events and events of temporal occurrences.

(Pallasmaa 2009: 19)

3

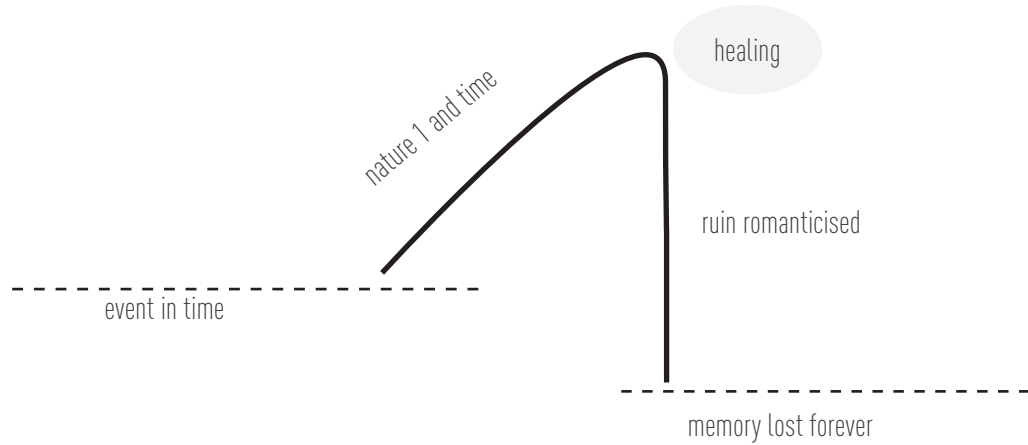


NATURE 3

HUMANITY OVERCOMING ADVERSITY

The nature where man has control over and is replicating Nature 1 in order to produce food or for the aesthetic enjoyment of a garden.





Nature 3- Humanity overcoming adversity

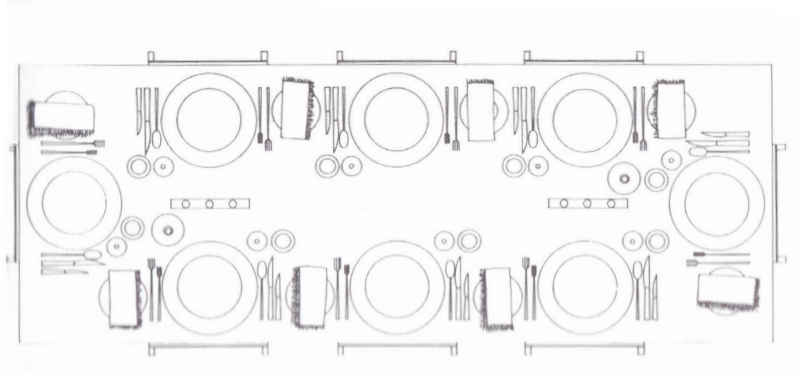
Every garden is a replica, a representation, an attempt to recapture something, but the form it finds for the act is that of a mental picture, so in spite of its special properties a garden is just another of the images of art.

(Harbison 2000:3)

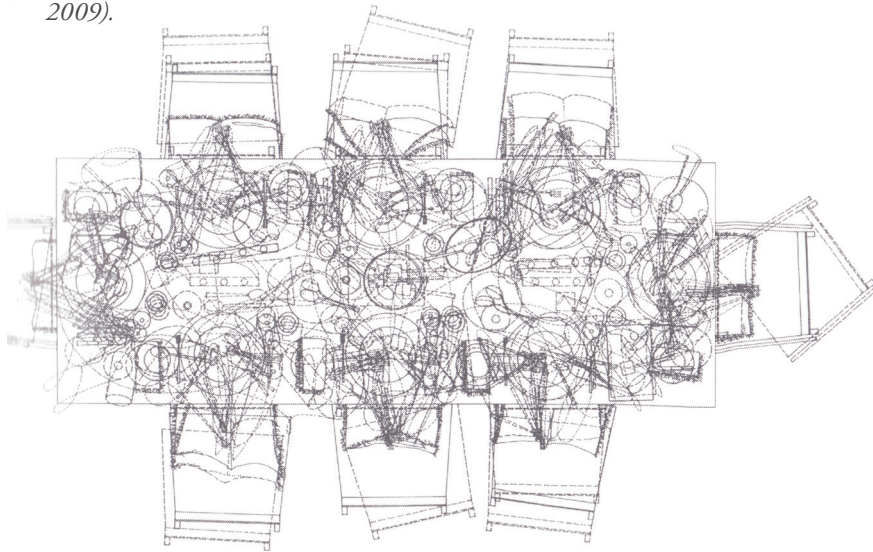
Nature 3 is a representation of the control that the human exerts over Nature - the garden and the agricultural plots used for human use. The controlled and productive garden is introduced to the site as a sensitive occupation of the relatively large open spaces between built forms, whether they be existing or new. Like a key placed in the lock of a door, one can only notice the phenomenon of the ruin in wilderness if it is placed directly adjacent to the orderly vegetable garden and sensitive species capsuled within the greenhouse spaces. An architectural intervention will reveal the possibilities of the landscape, and also the possibilities in unveiling memories through the juxtaposition of these elements.

Gardens are built on the idea of contrast: one thing superimposed on another thing, art on wilderness. If one allows the contrast to be strained to its utmost one can feel clanking machinery among the fields as a picturesque effect. The roles are slightly altered: now the man made threatens the vegetable, is fiercer and wilder, now the plants assume some of the virtues of civilization, seem decorous and self-contained (Harbison 2000:19).

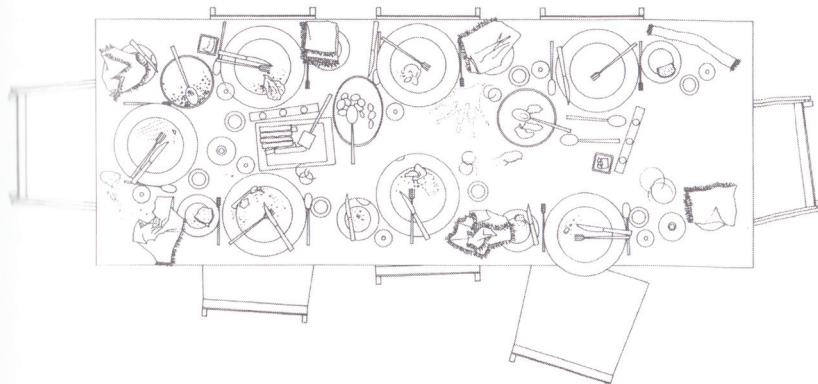
Figure 4.6. A proposed productive Nature 3 on site (2014)



“The Lay of the Table- An architectural ordering of place, status and function. A frozen moment of perfection. This is how architects see” (Sarah Wigglesworth: 2009).



“The Meal- Use begins to undermine the apparent stability of the architectural order. Traces of occupation in time. The recognition of life’s disorder” (Sarah Wigglesworth: 2009).



“The Trace- The dirty tablecloth, witness of disorder. A palimpsest. This is the reality of domestic life (Sarah Wigglesworth: 2009)

Figure 4.7. The architecture of a meal, setting, movement, and traces after. (Sarah Wigglesworth, 2009)

CHAPTER

FIVE

Programme

One way of arming people against the impending food crisis would be by teaching them how to grow and nurture their own vegetable gardens and fruit trees. In this scheme, the visitor is 'appealed' to through the demonstration of good practice and, in a sense, lured by the awakening of the senses and the imminent call of the appetite. It is hoped that the right triggers would result in the individual being heartened into rethinking about the type of produce that they buy and consider the growth of their own.

“The act of dining aspires to satisfy more than the feral cravings of the belly.”



Figure 5.1. A poster for Syngenta's good growth plan (Syngenta online, 2014)

too much sugar

Agriculture is among the greatest contributors to global warming, emitting more greenhouse gasses than all our cars, trucks, trains and aeroplanes combined. This is largely from methane released by cattle and from rice farms, nitrous oxide from fertilized fields, and carbon dioxide from the cutting of rain forests to clear space for growing crops or raising livestock. Farming is the thirstiest user of earth's precious water supplies and it accelerates the loss of biodiversity. And yet, despite these worrying factors, the earth will have 9 billion mouths to feed by 2050 (Foley 2014: 43).

The debate over how to address the global food crisis has polarized, pitting large scale and hugely productive farms against smaller scale, organic farms that provide support to local people and their crafts. The answer does not need to be an either-or proposition; research can be conducted into identifying species of crop that are hardier and need less water and fertilizer, while at the same time providing support and education for small-scale farmers. This kind of approach can help to tackle the problem from both sides (Foley 2014:43).

The produce cultivated will be used at the restaurant; for the dishes prepared and served around the existing food preparation structures of the compound. The aim of the complex would be to cross-programme the enjoyment of good, honest food and the environmentalists and researchers who care for biodiversity and heritage of plant species that provide food.

Production :Botany

Clients: Syngenta , Department of Agriculture

The cultivated plants that will be grown on site will form the basis of Nature 3: an indication of man overcoming adversity and a direct comparison to the very wild Nature 1, which grows on the lower side of the Ha-Ha. The area covered by Nature 1 extends between the greenhouses and out northwards, towards the hole. Plants are 'forgiving' of past conditions and sensitive to change; they provide a platform for the occurrence of a tabula rasa. Hardier versions of plant species are able to grow and adapt in the strangest of circumstances, growing out from the cracks in concrete and along walls. This, while other varieties require the greatest care and overseeing, protected in the controlled environment of the green house. The scheme plans to showcase both species side by side - thus demonstrating the destructive condition of Nature 1 with the controlled Nature 3 being protected and inserted into the old condition.

Syngenta is a world-leading agribusiness committed to sustainable agriculture. They consider “farming with future generations in mind. Through world-class science, global reach and commitment to our customers we help to increase crop productivity, protect the environment and improve health and quality of life.” Syngenta contributes to sustainable agriculture in many ways, for example, by raising productivity through innovative research and new technology (Syngenta, 2014).

Technical Development is critical to the success of Syngenta; they strive to provide innovative crop solutions and programs to ensure sustainable profitability and sustainable agriculture. The research laboratories, green houses and test patches of agriculture at the compound complex will be made use of by Syngenta, so as to establish themselves in Africa. Syngenta South Africa does “biological development of new products, label expansions, crop programs and crop solutions. They also support global development and research as a Southern Hemisphere country and strive to ensure sound registrations to minimise any form of risk to the users and the environment” (Syngenta online, 2014).



Figure 5.2. The pleasures of well-situated eating (Laura Letinsky, Untitled #38, Berlin, 2001. Courtesy of Edwynn Houk Gallery, New York.)



Consumption: Food

Table Settings: The Pleasures of Well-situated eating

“The encompassing pleasure of a good meal depends on its setting” (Horwitz & Singley: 2004).

The food movement

The local culinary movement is blossoming both in global terms and, within the last few years, locally too. Consumers are showing an increased interest in ‘food transparency’, defined as the full reality behind how food is produced (Foley, 2014). Consumers have allowed their palates to ‘open’ to a wider variety of foods and fruit and vegetables that taste of the land that they come from. Unfortunately, these movements are often thought of as elitist and more often than not cost more to produce and consume, although they are the ‘better choice’.

Every human being has the physiological need to eat and most enjoy the act of sharing a meal with others. “The truth is at the end of a well-savoured meal both body and soul enjoy an especial well-being (Horwitz & Singley, 2004).

The very human experience of dining incorporates the meal and its context. When a meal and its setting fit particularly well, when they resonate and thereby stir the senses and sentiments, the results can be especially memorable. (Horwitz & Singley, 2004)

Figure 5.3. The pleasures of well-situated eating (Laura Letinsky, Untitled #39, Berlin, 2001. Courtesy of Edwynn Houk Gallery, New York.)



Clients: Slow Food International

Slow Food International combines a renewed interest in ‘gastronomic pleasure’ and a ‘slow pace of life’ with an environmental and socially responsible approach that strives for biodiversity of produce, as well as fair trade.

Slow food is interested in the -

- Safeguarding of local and indigenous dishes;
- Giving preference to foods that are grown and produced sustainably;
- Regarding meal times as an opportunity to celebrate relationships and cultures;
- Believes that the enjoyment of a food is the right of all people.

(Slow Food Online 2014)

Slow food has started an initiative whereby people are invited to nominate indigenous and endemic plant species (specifically ones which can be grown as produce) to be added to an online directory. This directory was dubbed the ‘Ark of Taste’ and aims to protect the heritage of fresh produce in each country. It is proposed that a physical ‘Ark of Taste’ be designed for the herbarium and green house where selected species will be exhibited, either in the ‘flesh’ and growing in optimum conditions or dried and mounted as specimens.



Herbarium

Functions of herbaria

Herbaria have one or more of the following functions or roles:

- Conservatory of dried plant material
- Archival record of a region's flora
- Source of botanical information and diversity
- Recorder of plant names
- Supplier of a support service to the community: plant identification, information, education, collecting services for bio-prospecting or other specialised projects
- Training for botanists
- Research

(Victor et al 2004:2)

Spatial Requirements of Herbaria

Working areas, storage space, and offices

- Ideally, members of the herbarium staff should have their offices outside the main herbarium to allow for minimum disturbance.
- There should be enough work surfaces inside the herbarium for researchers and other workers to spread out specimens when working with them.
- A packaging area may be required for sending and receiving specimens, books, and so on. This area is best kept separate and suitably equipped with a large working surface, easy access to wrapping materials, and a scale.
- A mounting area should also be kept separate from the main collections to reduce insect contamination and to consolidate mounting activities and equipment.
- Storage space would depend on the quantity of supplies that are kept, but should be suitably shelved and maintained for optimum efficiency (Victor et al 2004:75).

Lighting

Studying herbarium specimens with microscopes and hand lenses requires good lighting. In sunny countries such as in South Africa, large windows may leave plant specimens exposed and vulnerable to direct sunlight. To avoid damage to plant specimens, the use of artificial or indirect light is preferable (Victor et al 2004:75).

Ventilation

In some climates, atmospheric control by air conditioners and humidifiers is essential in a herbarium. Such control does, however, create an artificial working atmosphere for staff and is expensive to install and maintain. The decision to control the atmosphere should therefore be made with great care, taking into account the fumigation method used and compatibility with the fire protection system. In addition, ventilation should comply with Health & Safety standards. (Victor et al 2004:75).

Figure 5.4. Flower species being mounted and prepared for a Herbarium collection (The Otchipotchi Blog, 2010)

Restuarant

	Pragmatic	Idealistic
Outdoor seating amongst existing washing and food preparation facilities	SANS 10400	Connection with Natures and Silence.
Internal Seating for 40 people	SANS 10400	Connection with Natures and Silence.
Cold Storage	Accessible to vegetables grown on site, outside deliveries	
Kitchen	Comply with health and safety regulations	
Public Ablutions	SANS 10400	

Herbarium

	Pragmatic	Idealistic
Reception	Accessible to disabled	
Public lending and viewing	Dry, temperature controlled, good natural light.	Connection with Natures –view outside but still discreet and private.
Pressing and drying space	Closed off from the rest of the herbarium, containing fumigation closets	Connection with Natures –view outside but still discreet and private.
Decontamination Space	Closed off from the rest of the herbarium, containing fumigation closets	Physically inaccessible to the rest of the herbarium, visually accessible
Actual specimen storage space	De-contaminated space, not accessible to public and separate from the rest of the herbarium, controlled lighting and ventilation. Good fire protection.	Visually accessible to the rest of the herbarium.
Botanists' offices	Access to the rest of the herbarium	
Ablutions	SANS 10400	

Research Laboratories

It is proposed that the laboratories be split so as to separate different research activities within laboratories.

	Pragmatic	Idealistic
Reception	Accessible to disabled	Visual access across all 3 laboratories
Ablutions	SANS 10400	
Reading and research spaces	Well-lit and comfortable space, view to the exterior.	
Main laboratory space	Work benches with access to test growing areas, seedling trays and greenhouses. Rinse basins. Well-ventilated and adequate lighting for detailed work.	
Seed storage/hazardous storage of chemicals	Well-ventilated, fire protection, access control	
Offices	For resident researchers	Well-lit and comfortable space, view to the exterior

Greenhouses

Greenhouses are built to allow for greater control over the growing environments of plants, key factors which may be controlled include temperature, levels of light and shade, irrigation, fertilizer application and atmospheric humidity (Nelson: 1998).

To the southwest of the site, ruined compound rooms stand; it is proposed that light-weight greenhouse structures be inserted into them. The greenhouses would be accessible to the public with a traversable walkway from above and form part of an entire route through the site. The greenhouses will hold exotic and tropical fruit species such as granadilla, papaya and various berries that would not otherwise fare well in the Highveld.

Each portion of greenhouse will be atmospherically controlled for the species grown within that space.

	Pragmatic	Idealistic
Exhibition Space	Good light conditions	Connection with Natures and Silence
Employees' tea station and ablutions/showers	Shower and change facilities, personal lockers	Service space
Tool Store	Security	Service space
Wormery	Warm and moist conditions	
Delivery holding area and security	Private parking and entrance for employees and researchers, collection of fresh produce and deliveries for restaurant	Clearly demarcated as a point of arrivals for suppliers making deliveries or academics wanting to partake in research.