Between Nature and Culture

A Stone Masonry School and Walking Path at the Strand Street Quarry

by Jean-Sebastian Rolando
The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.
This dissertation is presented as part fulfillment of the degree of Master of Architecture (Professional) in the School of Architecture, Planning and Geomatics, University of Cape Town.
Declaration

1. I know that Plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.

2. I have used the Harvard convention for citation and referencing. Each significant contribution to, and quotation in, this essay/report/project from the work or works, of other people has been attributed, cited and referenced.

3. This essay/report/project is my own work.

4. I have not allowed, and will not allow anyone to copy my work with the intention of passing it off as his or her own work.

Name: Jean-Sebastian Rolando

Signature:

Student number: RLNJE002
I would like to express my deepest thanks to the lecturers that have taught me throughout my university career. Particularly I would like to communicate my appreciation to my adviser, Matteo Fraschini, and to Kevin Fellingham and Melinda Silverman.

I would also like to profoundly thank my parents and Nicole Seymour for their tireless support.
Sisyphus and the Value of Labour

In Greek Mythology, the chronicle of Sisyphus has held enduring value for its ability to tell of wrongdoing and subsequent, justified punishment. The story fascinates me, not because of its moral agenda, but rather because I believe it encapsulates the spirit of the human condition.

Sisyphus, the King of Corinth and a champion of humanity, decides to abolish death, a cruel and terrible invention inflicted on Man by the gods. He manages to outwit and imprison Death so that no man would have to face the ravages of old age and in doing so he provides the world with the gift of immortality. The gods, however, would not tolerate such defiance and immediately freed Death.

Death exacted its revenge by punishing our Hero to an eternity of hard labour. He was bound to the endless task of pushing a rock up a mountain side only to have it roll back down to its point of origin. The futility of the undertaking and his pointless exertion was meant to drive Sisyphus into a deep and inescapable despair. However, Albert Camus, Nobel laureate for literature, argues in his essay “The Myth of Sisyphus” (1940) that, “The struggle itself toward the heights is enough to fill a man’s heart. One must imagine Sisyphus happy.”

If that thing that is achieved is undone, does it have less value? Is it made illegitimate? The labour, being honest and displaying those heroic characteristics of strength, commitment and determination, has its own value. And to say that futility is the undoing of success is to discount all human endeavour, for all things exist only for a moment and become undone in time. In this ephemerality, we find beauty. We must accept the inevitable force of change and of nature, and take our labours and our life to be that which has presence and is of worth.
Abstract

The dissertation design seeks to make present and enhance the inherent qualities of the Stand Street Quarry in order to re-introduce its heritage narratives into the public realm. The proposed intervention aspires to, if anything, *subtlety*. It seeks to make the value of the histories of the site evident to the user in such a way that they are compelled to find meaning individually, to interact with the site and the landscape in a meaningful and personal manner. Minimalistic design solutions were sought out in order to produce a product scheme that embeds another layer of human intervention in the palimpsestual narrative of the Signal Hill territory.

SUBTĪLITĀS (latin; noun f., 3rd):

fineness of texture, logic, detail; slenderness, exactness, acuteness; sharpness : precision²
## Contents

3  
Preface

5  
Introduction

7  
Chapter 1: The Land and the Hand:  
The landscape condition of Cape Town  
The Sublime  
Craft and the landscape  
Maieutics  
A place of interest  
The digital and the material  
Making a stone path on Signal Hill  
A Remnant Strewn Hillside

29  
Chapter 2: The Narrative:  
Historical reference  
Memory and ambiguity  
Death and the land

51  
Chapter 3: Stone:  
Geology of the site  
Constructing the Void: the de Hoop Quarry  
The line in the land  
Scaling time  
A Stone Model

71  
Chapter 4: Manifestation:  
The urban perspective  
The heritage perspective  
The initial program  
Inherence  
Water steel concrete  
Memory typology, memory topography  
Incompleteness

97  
Conclusion

98  
Bibliography

102  
Reference list

104  
Figure reference list
Fig. 1.
Preface

During the course of my Master of Architecture Dissertation project, my interests have quickly grown into unadulterated fascinations with regards to practical, theoretical and technological ideas and pedagogies surrounding artisanal traditions, perceptions of the landscape and materiality.

A short time ago, I made a wooden table from an oak tree that was felled on a farm close to my home. Quickly reaching the limits of my technical ability, I hired an experienced carpenter to aid me for a few days in the making of the piece. I have never before had such a dense and rich education about making. I now live with the table and I will keep it, it will remind me of my time engaged with a skilled craftsman.
How can an architectural intervention contribute to society's understanding of the landscape?

Fig. 2. 1910-1920 Signal Hill in the process of being quarried. A.Lillie - Cape Archive Collection
Introduction

Above the city, below the mountain, in the in-between space, you can find the Strand Street Quarry, the chosen site for my Masters Dissertation Project. The process of my research, with regards to the significance of the site, developed in a non-linear fashion. By consequence, this paper presents itself as a series of episodic research endeavours, culminating and manifesting in the final design product.

I propose that the isolation and identification of a series of dormant local narratives, presented successively, can combine in an intrinsic manner to inform one’s perception of and subsequent reaction to, place, landscape and material. In tracking and presenting my sequenced discoveries of the symbolic, physical, historical, cultural and geological layers of the Signal Hill territory, I hope to convey the experience of my research. It is my intention that the reader might gain an insight, not only into the particular character of the area, but also into my personal attitudes towards the task of interpreting the site and the surrounding landscape.

Successive layers of research are compiled with their interrelation being left to individual interpretation. The body of the work, however, takes on a character that is greater than the sum of its parts. Just as sedimento shale becomes metamorphic slate through the pressures exerted by the earth, so the palimpsest of my efforts over the course of the year become unified through the pressure of the design task. Each layer remains visible, identifiable and integral but becomes incorporated into a greater and binding whole.

In four parts, this report will discuss ideas involving the landscape and craft traditions, the narratives of the site, stone and, finally, the manifestation of the research, the design project. It will start at the beginning of the process and comment on my initial investigations and the discovery of the site and will conclude with diagrams of the envisioned built intervention.
Chapter 1

The Land and the Hand
Fig. 3. Map of Cape Town showing land-harvest sites along the urban edge.
Chapter 1: The Land and the Hand

Landscape Condition of Cape Town

Cape Town is a city made in the in-between space. The residents go about their daily lives on the land left to them after the sea has ended and the mountain is not yet too steep. In-front of the city, the ocean makes a hard edge, reclamation being able to challenge this boundary but not eliminate it. Above the city, loom famous and impressive natural landforms.

This condition has become imbued in the archetypal social identity of the people of the Cape. There is a focus on the sea and on the mountain and it is a beautiful way of life. It is ironic, however, that the city acts to betray its own character. The harbour, the mother purpose of the community, severs contact with the ocean. The mountain becomes unreachable, access strangulated by a great depth of suburbia.

It is also important to remember that this plane of inhabitation, the surface of the landscape, remains a mere superficiality. Nick Shepherd reminds us that, "Cape Town exists as a palimpsest, a layering of successive horizons and events. To dig down from the surface is to encounter wall footings, occupation floors, the debris of past societies, the remains of the dead themselves." He speaks of the city as not only, "the single horizon of the strolling flaneur, but rather in terms of depth, dimensionality and succession."
Chapter 1: The Land and the Hand

Fig. 4. De Hoop granite quarry, Paarl.
The Sublime

When attempting to understand the landscape, Kant’s writings become useful, if only to aid our recognition of the obscurity of the task. He separates the subjective and objective characteristics of aesthetics with regards to the experiential difficulties encountered when attempting to appreciate nature.

Wicks refers to the Sublime, explaining that, “it involves magnitudes in nature that surpass our abilities to capture them with any finite measure.” This describes the Sublime as the perplexing phenomenon of human consideration towards the boundless landscape.

When we view the expanse of nature we are consumed by the unfathomable monumentality of the perceived scene. This can be classified as a Sublime experience and involves that which cannot be understood with reference to human proportion.

Nature plays out at a scale which can be considered unfair, our tools of perception being finite and the perceived being, for all purposes, endless. The act of viewing the land, therefore, goes beyond our reason and enters into the realm of aesthetic appreciation. Helen Mallinson describes the aesthetics of the Sublime in that it, “began in an attempt to capture an overwhelming experience of immensity, an experience that could not be grasped by the immediate senses or even by calculation.” Reasonable logic gives over to more abstract emotion and so our memories of landscape tend towards subjective inaccuracy and sentiment.
Chapter 1: The Land and the Hand

Fig. 5. The hands of Henry Moore.
Craft and the Landscape

The relationship between craft traditions and our perception of the landscape becomes interesting when we think about the innate Sublime nature of our world.

And so the question must be posed, how do we understand the landscape in which we live if it is intrinsically incomprehensible? An avenue of further understanding can be obtained through accruing embodied knowledge about the landscape’s physicality.

The craftsman, he who augments the raw material of the world directly, is a good example of a custodian of just such accrued physical knowledge. Particularly through his trade as implemented in the built environment, he manipulates material, be it wood, clay or stone to a desired end. He learns its strengths, its weaknesses and its limits. He utilizes more than the five Aristotelian senses in this act, additionally engaging with the job through the inner ear (the sense of balance and movement) and through the muscles and skeleton (the sense of weight)⁷. Through this genuine interaction with the material he learns the true nature of the object.

This development of true material understanding is, however, restricted to that which can be directly interacted with. The landscape, for example, in its infinity, lends itself to mystery rather than existential transparency. We can only attempt to know the part in hopes of gaining an understanding of the whole.

The example of the artisanal saw-miller can be used. He must know how to transform a whole tree into the plank of finished timber. He must know how to quarter-saw in order to bring out the grain, how to take advantage of a crotch in the wood and how to peel veneer in a manner that will be beautiful. In knowing these things he gains a connection to the forested landscape on which his livelihood is based. On viewing a mountain side, covered in a timber plantation, his specialized appreciation of wood leads him to associate the green mass of the forest with his craft. He sees the landscape and imagines the ideal finished plank where others might only look and enjoy the view.
Chapter 1: The Land and the Hand

Fig. 6  Conceptual models - an object that builds its likeness
Maieutics

Early on in my research I came across the concept of ‘maieutics’. It seemed to epitomise the manner in which I knew I would like to go about the design process.

Maieutics; “Maieutic 1. Adjective - Of or relating to the Socratic method of eliciting knowledge by a series of questions and answers. Word Origin - from the Greek ‘Maieutikos’ relating to midwifery (used figuratively by Socrates), from ‘maia’ or midwife. The metaphor of delivery of knowledge through labour and extracted with the hands.”

There is certain knowledge that can be extracted through the hands that cannot be gained through passive endeavours.

Fig. 7. To learn through the hands.
Chapter 1: The Land and the Hand

Fig. 8. The Stand Street Quarry
A Place of Interest

Being interested in society’s relationship with the landscape, I started to research the history of Capetonian land harvest. The growth of the town, in the particular topographic and geographic conditions of the city bowl, became important. Subsequently, the urban periphery, the divide between nature and culture, drew focus in my investigations.

Society’s attitude towards nature is most clearly legible at the urban edge of human settlements. In the case of Cape Town, the city’s periphery is littered with sites of landscape harvest and augmentation. The many stone quarries and brickfields that can still be found tell of the short-sighted colonial attitude towards resource acquisition. These places, once having been well outside of the town limits, have either been engulfed by the urban sprawl or now awkwardly straddle the divide between the occupied and native landscapes.

I explored these residual, melancholy places, some epic in scale, some barely distinguishable, and ultimately I decided to pursue a site that I had passed many times but had never paid much attention to. The Old Strand Street Quarry, upon first visit, impressed me with its powerful presence. The intense, raw beauty of the stone quarry face and the massive scale of the void had a lasting phenomenological impression.
Chapter 1: The Land and the Hand

Fig. 9.
Chapter 1: The Land and the Hand

Fig. 10.
Chapter 1: The Land and the Hand

Fig. 11.
The Digital and the Material

Finding that it was almost impossible to remember the form of the sublime quarry face once having left site, I set out to digitise and 3D model the contours of the area. The resulting digital model became the basis for almost all further explorations. It became an essential base tool, allowing countless design investigations to be carried out over the course of the year.

Nevertheless, I became dissatisfied with the digital model. It lacked the tactile quality that had made such a great impression during my site visits to the quarry. I needed to realise the site, at scale, in a material that was appropriate.

Hence, in attempting to meaningfully interact with the physicality of the land, I began work on a stone landscape model. The materiality of the finished product pleasingly represented the embodied character of the Quarry. However, the task became a deeper learning experience than I had anticipated.

The heritage of the site encouraged a view of stone, not only as a static material, but rather as a thing continually augmented by man, a thing of material flow. The Quarry remains undoubtedly linked to the hylomorphic traditions of the manipulation of stone and, consequently, the creation of the model became a metaphoric re-enactment of the quarrying endeavour.

Juhani Pallasmaa aptly describes the result of the hylomorphic process in his statement, “The craftsman has the advantage that at every stage of the work, his material is in his hands to feel and command.” And while I am by no means a craftsman, the connection to the land, to the material and to the intangible heritage of stone work became an essential part of my understanding of the site.
Making a Stone Path on Signal Hill

The mountainside above the Stand Street Quarry is a topography of sparse Stoney Pines in rare, indigenous Renosterfeld. This small fragment of a once common floral system consists of low scrubby grassland, golden dry in the summer, lush green during the winter months and brilliant with spring blooms.

The slopes are criss-crossed with informal hiking and commuting paths. These ‘desire lines’ exist as, “the spaces between the planned and the providential, the engineered and the lived.”11 They mark the will of the individual and subvert the authority of the official, “No Entry” signs placed at the base of the mountain.

The network of pedestrian connection routes, maps, in an organic fashion, the easiest way in which to traverse the undulating topography. No matter where you wish to go, a path will take you there. It will be logical and it will be made less demanding by those who have blazed the trail before you.

I walked these paths to understand the land. In places where the gradient grew too steep the ground became marked by the effort needed to climb the trail. The track became uneven and eroded through earth loosened by the erratic spoor of struggling commuters.

In a particularly steep section of path, I gathered rocks from the immediate surrounds and worked with hammer and chisel to shape the stones into regular forms. I spent the day arranging the stones on the walkway, making the steep slope into a stair path.

The stones split along their sedimental grain when struck. They were grey blue with veins of bright orange, iron oxide. The land was a red clay earth with bedrock of the same blue stone about 200mm below the surface. The grassland that had appeared uniform was composed of an infinite number of unique plants and flowers.

The stair, when completed, was used by hikers who greeted me and looked at my muddied hands with interest. I hope that that section of mountain will not be eroded and further due to the rocks I have laid.
Chapter 1: The Land and the Hand

Fig. 13.
Chapter 1: The Land and the Hand

A Remnant Strewn Hillside

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 their deceased occupants. Ruins and eroded settings have an especially evocative and emotional power; they force us to reminisce and imagine. Incompleteness and fragmentation possess a special evocative power.12

The mountainside above the Strand Street Quarry is marked by evidence of human intervention, all unused, most in a state of disrepair. I came across Kramats, shrines, graves, block houses, naval fortifications, anonymous foundations of ruined structures and the great abandoned void of the Quarry. These fragments have aged beyond their use and have become ruins. They litter the landscape, each telling of a unique story in the history of Signal Hill. They will slowly decay and will eventually disappear, consumed by the weather and the land and the physical ties to our heritage will be lost.

Rebecca Solnit writes about the urban and social importance of ruins in our cities. “Ruins stand as reminders. Memory is always incomplete, always imperfect, always falling into ruin; but the ruins themselves, like other traces, are treasures: our links to what came before, our guide to situating ourselves in a landscape of time. To erase the ruins is to erase the visible public triggers of memory; a city without ruins and traces of age is like a mind without memories. Such erasure is the foundation of the amnesiac landscape,”13

It is important to preserve these monuments and to reincorporate their histories into the public sphere of knowledge. The landscape of remnants on Signal Hill can be seen as a wealth of historical value that could, with little intervention, be made available for individual interpretation.
References

1 Camus, 2005: 78
2 “Subtilitas”, latinlexicon.org
3 Murray, Shepard, & Hall, 2007: 126
4 Wicks, 2014; 203
5 Wicks, 2014; 203
6 Adler, Brittain & Fontana, 2012: 112
7 Kundig, 2011: 9
8 “Maiuetics” dictionary.reference.com
9 Ingold, 2013: 24
10 Pallasmaa, 2009 “The thinking hand”: 56
11 Murray, Shepard, & Hall, 2007: 189
12 Pallasmaa, 2009 “Space, place memory...”: 21
13 Dillon, 2011: 151
Chapter 1: The Land and the Hand
Chapter 2

The Narrative
Chapter 2: The Narrative

Fig. 14. Aerial Photo, 1926
Historical Reference

In order to develop my understanding of the Strand Street Quarry, I sought to uncover reasons for it’s being, the events that had shaped it and the stories of the people that had lived and worked in the area.

The history of the Quarry begins in the seventeenth century. The Dutch East India Company required an extensive labour force shortly after their arrival at the Cape in 1657\textsuperscript{14}. The problem was solved through the immediate import of slaves sourced from the extensive international trade network that the VOC had established. These slaves originated from a collection of eastern locations including Indonesia, India, Java, Malaysia and Sri Lanka. They arrived with no physical possession but brought with them their religious beliefs. And so, Islam was introduced at the Cape.

The Quarries at Strand Street were established in order to facilitate the construction of one of the most well known Cape buildings, the Castle of Good Hope\textsuperscript{15}. The large rocks needed for the defensive bastion walls could not be sourced from the Robin Island stone deposits and the gradual slope down the length of Strand Street would allow the rocks to be transported easily by ox wagon. The quarry was initiated in 1666\textsuperscript{16} and is thought to be the first significant colonial quarry in South Africa.

The Quarries operations proved extremely efficient and grew over time. However, O’Donoghue and Buttgens remind us that “the quarries were not only a source of building material but were also a place of forced labour and hardship”\textsuperscript{17} And while the quarries developed a negative social connotation amongst the Islamic community due to associations with forced labour and the extremely dangerous work environment, the space also developed a special significance as a sanctified holy place, providing a rare opportunity for secluded religious gatherings for the slave community.

The VOC, not permitting the practice of Islam, forbid the construction of a mosque and outlawed any public expression of faith that did not comply with the beliefs of the Dutch Reform Church.\textsuperscript{18} Slaves at the time were commonly Muslims and sought out the hidden spaces in the Quarry to carry out their daily prayers.
Fig. 15. The Castle, the Methodist Church, the Buitengracht Wall, the Strand Street Firehouse
The stones excavated from the quarries on Strand Street were the primary source of building stone for construction until around 1870\textsuperscript{19} when more exotic stone began to be imported into Cape Town harbour as ballast in trading ships. But prior to that date, the list of monuments that had been constructed from the Blue Stone hewn from the slopes of Signal hill included the Cape Town Castle, the paving of Green Market Square and the old Methodist Church, the Buitengracht wall, the Strand Street Fire House and countless other town houses, hotels and homes around the city.\textsuperscript{20}
Chapter 2: The Narrative

The Strand Street Quarry was abandoned in 1906\textsuperscript{21} and the stone quarry-bed made regular with a thin layer of earthen fill. The adjacent quarries, (eventually to be named the Wash House Quarry and the Prayer Quarry) were similarly decommissioned a short time later. The voids, however, were soon filled. In the case of the Payer Quarry, with informal mud brick housing and in the case of the Wash House Quarry, with a group of simple stone buildings that functioned as a municipal wash house and laundry, employing the women of the surrounding community.

The Three quarry spaces became an integral community space in the life of the urban fabric that now surrounded it. All industry having been removed, the open land became a place of social gatherings, sport and recreation. However, “This cohesive built environment was changed when High Level Road (Strand Street extension) was constructed in the early 1930’s causing a divide in this community, Bo-Kaap to the south and De Waterkant toward the north.”\textsuperscript{22}

The group areas act which, in the 1950’s, forcibly removed all non-whites from the De Waterkant area, furthered the disconnect in what had once been a tightly knit Islamic community. The divisions were arbitrary and binding and the Bo-Kaap/De Waterkant area, once a unified village, became not only divided but also disassociated. The two neighbourhoods no longer shared relations, cultural ties, religious beliefs or common social practices.

The Strand Street Quarry, once a common ground for the Bo-Kaap and De Waterkant areas became neglected as both neighbourhoods became segregated and, by effect, introverted. It became a quiet, derelict space that attracted vagrants and vandals. The Wash House was demolished due to the City’s fears that it might become a haunt for criminals. Eventually the Quarry area was fenced in to disallow public use or access.
Fig. 17.
Chapter 2: The Narrative

WOMAN'S DEATH ‘WAS AVOIDABLE’

Policing should be improved, says Bo-Kaap Association

Close Kraal, say Bo-Kaap residents

Fig. 18.

Fig. 19.
In the 1980s an informal settlement began to develop and grow in the abandoned Wash House Quarry. Today it consists of 25 illegal shack dwellings, housing roughly 150 residents of which many are immigrants. This residual and forgotten space in the city has revived its role as a sanctuary for those who remain marginalized.

The community has no electricity, an inefficient water supply and extremely lacking sanitary facilities. In recent times, however, the shack settlement has become a haven for crime and the illegal drug trade. The shacks are positioned near the city centre while also offering easy escape from police through the network of paths that lead onto the mountain.

The Strand Street Quarry is today an unused and dangerous place.
Fig. 21. Map of Cape Town c.1885, City Engineers Department (Strand Street Quarry visible)
Fig. 22. 1974, Cape Archives Collection
Chapter 2: The Narrative

Fig. 23. Signal Hill Signal Station before demolition, Cape Archives Collection
Chapter 2: The Narrative

Fig. 24. Noon Day Gun, Lion Battery, Cape Archives Collection
Chapter 2: The Narrative

Fig. 25. 1974, Cape Archives Collection
Fig. 26. Public celebrations on the slopes of Signal Hill for King George’s Birthday, Cape Archives Collection
Memory and Ambiguity

Memories are true memories..... Whether the memories accurately represent past events or not, however, is irrelevant; the process of construction of the meaning of those events is the focus of memory work.24

Interview with Salie Jardin (64 year old Bo-Kaap resident) September 9 2015

- What can you tell me about your memory of the Quarries?

There were washing lines everywhere. There are still the concrete foundations for the washing lines. It's all still there. On top and on the side, they were there.

- And what do you remember of the buildings that used to be in the quarry?

They were solid buildings. They were brick and stone. They used the stone from the big quarry for it. You want to know about the history? They dynamited the stones here a long time ago to build the castle. That's how it all started. That's the history of this place. You know when I was young it was very different. This area didn't have running water and that's why they built the wash house in the first place. The whole area was different. There was no crime like there is now and on all the corners of every street were Indian shops. There were all different races living together like one nation and then Apartheid separated them. I had family in De Waterkant and they had to move. But today we thought things were going to change and they haven't. Zuma is spending it all on his big house. The only thing that has happened here is that they were doing renovations to The Castle and they came here to get more rocks so it would be the same and match. You see this stone? You just take a hammer and it splits like that. That's why they built The Wash House from it in the first place.
- Have the quarries changed since you were a child?

They didn’t put the ‘hokkies’ up for a long time. It was just empty and then they started putting them up and it grew. Before that, there was The Wash House. They took it away and they built a new one down there, but that is only to shower not to wash (laundry). You know back in that time we didn’t have anything, we didn’t even have toilets. But it was fine, we didn’t know it could be different. I was maybe 12 or 13 when I used to play here and a lot of the women washed clothes for the white people here. But for us it was just fun to run around and such.

- You said it was fun to play in the Quarries?

Yes, all of my friends are now in their 60’s but we were all here every day. First we played in The Wash House and all in the washing lines and in the storage rooms where we slept. Later we played soccer and they said I was the best goal keeper in the Bo-Kaap. The field there in the quarry, no one plays on it now though. The council doesn’t make it right. There are no lines and rocks in the grass. Also the quarry is dangerous. We climbed all over it, I can’t do that now, but it was where we played. You see that big rock? Three people pulled that down. It was sitting on the cliff and it was loose. They pulled it down with ropes and they were killed. They need to sort it all out and make it the way it was. All these ‘hokkies’ are going also, they are moving and we can use this place again for something. The Mosque said they were going to build a hotel but I don’t know about that.
Death and the Land

For the purposes of my investigation, death itself will not draw focus, rather the manner in which society approaches human memorial becomes of interest.

Death and the land are bound concepts. All that is living eventually has an end and returns irrevocably to the landscape. The manner of this return to the earth becomes defined by social and religious customs, but it is almost always a pious practice. Consequently, the places where our loved ones or ancestors are consigned to grave take on a transcendental character, transformed by the associated memories of those who have passed.

When we are deposited to became a part of the body of the land the landscape itself remains relatively unchanged. It is rather our social constructs, our cult of death, that builds the sacred nature of a burial ground. Sacredity being immaterial, we are then compelled to physically mark the environment to proclaim significance.

The Muslim traditions with regards to death consist of a specific series of rituals culminating in the burial of the deceased. The deceased must be washed, they must be shrouded, prayers must be performed over them and they must be buried, laying on their right side and facing in the direction of Makkah. These processes must be undertaken within 24 hours of the death. Islamic graves are usually simple holes dug into the earth. Once the burial is completed, a simple marker or stone can be placed to mark the location. The event is both a celebration of the life lived and a mournful occasion for remembrance.

The Tana Baru is an ancient Islamic burial ground situated directly above the Stand Street Quarry. In the 1790's, a Prince of the Trinate Islands, Imaum Abdullah Kadi Abdus Salaam, proceeded to petition the Dutch Government for a site to build a Mosque, for a burial ground and for the legalisation of the Islamic Faith. He was denied, but nevertheless, “he led the Muslims to the quarries for prayers even though this was against the law.” Eventually, however, the space where the hidden prayers had been taking place became exposed by the growing progress of the Quarry and the gatherings became impossible.
In 1805, Dutch Governor Janssens granted the Muslim community the right to build a Mosque and the right to maintain a Muslim burial site. The land above the quarries became subdivided and an Erf was given to a local Imam for the purposes of creating an Muslim cemetery. Imaum Addullah Salaam, commonly known as Tuan Guru or ‘Respected Teacher’, passed away soon after and was buried at Tana Baru. His grave became a Kramat and today he is known as the Father of Islam at the Cape.

The Tana Baru burial ground was operational until 1886 when it was closed due to overcrowding. The site remains an important part of the cultural heritage of the Bo-Kaap, housing holy Kramats and grave sites.

Many of those that were interned at Tana Baru lived the lives of slaves, forced into laborious work in the dangerous conditions of the quarries below. The majority of their graves were marked with simple blue stones of which they had excavated themselves.
Chapter 2: The Narrative

References

14 City of Cape Town. By: Bridget O’Donoghue & Peter Büttgens. [City of Cape Town], 2010: 56
15 City of Cape Town. By: Bridget O’Donoghue & Peter Büttgens. [City of Cape Town], 2010: 34
16 City of Cape Town. By: Bridget O’Donoghue & Peter Büttgens. [City of Cape Town], 2010: 54
17 City of Cape Town. By: Bridget O’Donoghue & Peter Büttgens. [City of Cape Town], 2010: 54
18 City of Cape Town. By: Bridget O’Donoghue & Peter Büttgens. [City of Cape Town], 2010: 56
19 City of Cape Town. By: Bridget O’Donoghue & Peter Büttgens. [City of Cape Town], 2010: 54
20 Cole, 2002: 8
21 Cole, 2002: 8
22 City of Cape Town. By: Bridget O’Donoghue & Peter Büttgens. [City of Cape Town], 2010: 54
23 Booyse, 2010: 2
24 Crawford, 1992: 51
26 Soeker, 2014: 64
27 City of Cape Town. By: Bridget O’Donoghue & Peter Büttgens. [City of Cape Town], 2010: 57
28 Davids, 1985: 2
Chapter 2: The Narrative
Fig. 29. Geographic landscape of Cape Town
Geology of the Site

A stone’s chemical makeup and its history of geological processing dictate its material qualities and its classification by man. The three major stone types can be identified as igneous, sedimentary and metamorphic. These refer to the manner in which the stone underwent its latest state of change.

Cape Town’s geology is made up of a combination of these three rock types, namely, the Cape Granite Suite (Igneous granite), the Malmesbury Group (Metamorphic Slate and Blue Stone Quartzitic Slate) and Table Mountain Sandstone in the Graafwater Formation and Peninsular Formation (Sedimentary Quartzitic Sandstone).

At the Strand Street Quarry finely grained slate and blue stone is primarily evident. The strata of the rock is clearly distinguishable due to the Metamorphic character of the rock formation. It is shown to be pushed up, bedded almost vertically through the geologic process of orogeny. The South American, African and Antarctic continental plates continuously collide with one another and have pushed the once level stratal layers of the rock up and along a NW to SE axis.
Making the Void: the De Hoop Quarry

In an effort to understand the quarrying and stone masonry process in more detail I travelled to the De Hoop Granite Quarry in Paarl, run by the Clift family of J.A. Clift Granite Contractors and Monumentalists.

I was warmly greeted by William Clift upon arrival and seated in his office while he explained the history of the Company and the process of building in stone, from the quarry to the finished product. I was struck by the series of beautiful Capetonian buildings that William, his father, his grandfather and his great grandfather had built over the last century. The list included the Cape Town Parliament building, Jameson Hall at UCT, Rhodes Memorial, the Mutual Heights Building, the Cape Town City Hall and the list goes on. He lamented over the national loss of traditional craft knowledge and explained that the Clift workshops have become the only facility in the country actively training traditional stone masons and sculptors. There is no governing body for the artisanal masonry trade and for that reason stone artisans are usually imported from Europe when needed instead of trained locally.

I was presented with a monograph of the company’s work, it celebrated a century of involvement in the granite industry. I was then taken to meet Jimmy Clift who showed me around the stone-working workshops and storage yards. Later I visited the quarry itself, situated on a hill above the workshop.

Being the only working dimension stone quarry in the Western Cape, the ‘pit’ is perpetually active. But despite its constant productivity, the reasonably modest void that has been carved from the hillside has taken over 109 years to create. Jimmy explained that dimension stone removal, the method of freeing large cubes of rock individually, is far more efficient and far more of a controlled process than dynamite blasting. The rock is only removed to satisfy specific orders, and therefore, the quarrymen know the exact size and shape of the stone to cleave from the face. In this way, there is very little wastage and the void in the mountain grows slowly.

All information pertaining to the Clift family and the De Hoop Quarry was gathered through site visits to their premises in Paarl.
Chapter 3: Stone

Fig. 31. Photographs of the De Hoop Quarry, Paarl
Chapter 3: Stone

The dimension stone quarrying method uses pneumatic diamond tipped drills to drill down into the rock to form a 50mm diameter hole that is as deep as the block you wish to retrieve. A line of these holes is then drilled and plug and feather wedges are inserted into the hole openings. The wedges are hammered by hand, slowly to ensure even pressure, until the stone is forced apart and a crack develops along the line of 'pредрilling'. The rock, being immensely strong in compression but weak in tension, eventually breaks free and can be retrieved with a crane. Trolleys or trucks transport the raw blocks to the workshop where they are processed by a large diamond band saw to remove any rough edges or waste material. The large blocks, now roughly rectangular prisms, range from a half to six cubic metres in size. They are then passed through a series of circular gantry saws, grinders, polishers, and worked by hand with hammer and chisel (depending on the project).

Fig. 32.
Chapter 3: Stone

Fig. 33. Plug and feather wedge: (Actual size)
Chapter 3: Stone

The quarry face itself is mesmerising. It is an alien topography of over-scaled stone blocks, some carved from the bed but still attached, some sitting free, waiting to be transported. A lot of the time you cannot tell the difference between what is still a part of the mountain and what has become its own entity.

The scale of it all becomes bewildering, only a few hints, a ladder or a bucket, give away that an object is double or triple the size you first assumed. Misjudging the scale of something proves to be somewhat of a thrill, akin to a magic trick that managed to fool you.

The texture of the place is powerfully consistent. The machining leaves a fine rhythm of drillings on the stone, blurred from a distance and only noticeable when you get up close. This is complimented by the pattern of the blocks, which create the overarching cadence at which you experience the space.

You can also clearly see the age of things in the quarry. Stone that has been freshly exposed is a pale grey with the gypsum catching the light, while the older parts of the face are marked with dark lichens where the water has run and stains of rust streaming from inset handrails and steel ladders.

Fig. 34 Edward Burtinsky: Carrara, 1993
Chapter 3: Stone

Before my departure, we were joined in the pit by William who recounted his father’s uncanny ability to read the quarry through his vast accumulated knowledge as stone mason;

My Father could just place his hand on the stone and know the freeway. The first time he looked at a face (cliff face) he knew the size of the stone we could get, just from how the faults ran. He even knew, on any of the farms (in Paarl), where the stone would be closest to the surface. I can’t do that yet and I’ve been here for decades.

William Clift Senior’s embodied knowledge developed from a lifetime spent involved in stonework fostered not only a fundamental and intuitive understanding of granite but also of the landscape in which he lived.
Chapter 3: Stone

1: Stones are removed from the quarry and transported via trucks to the workshop.

2: Stones are processed with a specialised mechanical diamond saw.
Chapter 3: Stone

3: Stones are roughly shaped with a hydraulic gantry desk saw

4: Finally, fine finishing work is performed by hand by the stone mason

Fig. 35. Stone work flow diagram
Chapter 3: Stone

Fig. 36. The ‘freeway’ visible on site
Chapter 3: Stone

The Line in the Land

One of the fundamental objectives of dimension stone quarrying is the discovery and interpretation of the ‘Freeway’. This is the plane in which the stone can be most easily split. The Freeway produces the cleanest and most accurate cleaves and is, therefore, the preoccupation of the quarry mason. The Midway identifies the plane in which the stone will split second most easily and the Toughway is, as the name suggests, the tough way to split the stone. These planes usually align at perpendiculars on an x,y and z axis model. In granites, the aligned crystalline structure of the rock mass dictates the freeway. In sedimentary rock types and metamorphic stones, the Freeway is always associated with the plane in which the sedimental layers were originally deposited (the strata).

In practice, the Freeway is not always apparent and only the most experienced quarrymen can read the rock accurately. The cuboidal subtractive process becomes completely governed by the predetermined and inherent nature of the stone. Furthermore, this character of stone can be seen to have relevance reaching beyond the quarrying industry. Architectural interventions and engineering projects could benefit from subscribing to the natural manner in which stone allows itself to be augmented.

Fig. 37.
Scaling Time

The topic of Time, as it is important to architects, must be viewed as a polymorphistic entity. Despite its relentless sameness, it becomes spectacularly different depending on the context from which it is considered.

Stan Allen comments on comparative time-scales with reference to living things, architecture and the landscape. He states:

Landscapes change and evolve, and they too, are shaped by force and resistance working over time. But the rate of change in a landscape or an ecological system is far slower than that of an individual living body. Architecture is situated between the biological and the geological - slower than living things but faster than the underlying geology.31

The time-span of a human life becomes the primary frame of reference for any individual and it is the inescapable lens through which we view the world.

The life-span of architecture and of the city is something completely different. It can transcend any living time frame to become impressively long lasting. It can be rebuilt, maintained and be useful across generations. The Quarry can be seen in this manner, existing at the time-scale of the life-span of the city.

By contrast, the time-scale of the landscape, or Deeptime, is characterised as, “the scale of geologic time that scientists deal with, which is so vast that it defies narrative.”32 Deeptime remains independent of the relative superficiality of human or architectural time frames. Existing at a profoundly different level of action, the landscape and its Geological processes remain unchanged, in any significance, when compared to our own fleeting existence.

A confluence of these three time-scales can be experienced at the Strand Street Quarry. On visiting the site, one might empathise with the many human lives lost in the brutal conditions of the once colonial quarry. Alternatively, one might acknowledge the relationship that the Quarry and the city have maintained over the past three centuries. Lastly, the individual may simply marvel at the epic geology of the place.
Chapter 3: Stone

References

29 Cole, 2002: 4
30 Malan, 2012: 13
31 Allen & McQuade, 2011: 20
32 Gee, 2000: 1
Chapter 3: Stone
Chapter 4

Manifestation
Chapter 4: Manifestation

Fig. 39.
The Urban Perspective

From an urban perspective, the Stand Street Quarry can be seen as a massively unused resource of open public space in proximity to the city centre. Furthermore, it has become a node of natural pedestrian convergence with many of the City’s inhabitants walking past the site on their daily commute from Seapoint.

If opened to the public, direct pedestrian links could be made with the Bo-Kaap and De Waterkant as well as the CBD. For those visitors arriving via vehicular transport, Stand Street extension need only be widened by half a meter to accommodate three hundred plus parallel parking spots on both sides of the street.

Moreover, the site has the unique attribute of being the lowest point where the surrounding Table Mountain National Park can be accessed by the public. This presents the exciting prospect that the Quarry could act as a gateway and access point to the natural landscape of the mountain. It could allow the pedestrian the use of the park-like resource of the mountainside without having to rely on the car in order to enjoy a hike, a walk or picnic.
Chapter 4: Manifestation
The Heritage Perspective

The South African Heritage Resource Agency, or SAHRA, have graded the heritage significance of the Strand Street Quarry as III A, or of medium local heritage significance (a low grade of heritage significance awarded by SAHRA to sites, buildings or objects). The statement of heritage consequence as espoused by Doug Cole and published on the SAHRA website reads, “Strand Street Quarry is the oldest known quarry in South Africa and was opened for construction of the Cape Town Castle. It was subsequently worked intermittently for foundation stone, fill and building stone in Cape Town. There are plans by the City of Cape Town and Table Mountain National Park to develop a tourist gateway at the Quarry.”33 This statement, however, makes superficial the true and crucial cultural value that is imbued in the Quarry and its many histories.

The Heritage Impact Assessment of the Bo-Kaap Quarries, published in 2010 by the City of Cape Town, paints a slightly different picture of the value of the Quarries in terms of their social, cultural, aesthetic, scientific and historic importance. The ‘HIA’ report acknowledges that the Quarry’s stone is evident in much of Cape Town’s historic built fabric, that it is associated with the birth of Islam at the Cape, that it has been a historic recreational ground for surrounding communities for centuries and that it has a direct link with the life and work of generations of artisanal stone masons from the Bo-Kaap and De Waterkant. It also has ties to the practice of slavery at the Cape and was a place of forced, hard labour and death. It has a geological value in terms of exposing the underlying geology of the landscape and exhibits examples of the famed Malmesbury Group Contact Zone. Finally, it is a prominent aesthetic landscape feature that has been present since the initiation of Cape Town as a VOC station in the seventeenth century.34

The HIA report deems the Quarry face to be the tangible heritage object and the history of stone work as the site’s intangible heritage. I would argue, however, when considering the sublime quality of the face, that the exact form of the quarry face should be of lesser importance to the role of the space within the life of the city. The use of the space should be that which is of heritage value. To re-introduce activity and programme to the abandoned site, would be to make safe the quarry and expose the many histories that currently lay dormant. The void itself becomes the heritage object.
Chapter 4: Manifestation

By cable car from city to Signal Hill?

A facelift, tram or cableway could soon link the city centre to the noon-day gun and Signal Hill if Sanpark has its way.

Such a “mechanical people mover” is on the cards in a management plan it has drafted to boost tourism.

Table Mountain National Park (TMNP), managed by Sanpark, has released its draft management plan for the next ten years. The public is invited to comment on it.

Something old

A large portion of the plan is dedicated to finding solutions to numbers, which in turn will fund conservation, heritage and community building.

This entails upgrading a range of existing tourist spots.

First on the list for an upgrade is Boulders Beach, which sees 400,000 annual visitors.

Visitors are growing by about 5% a year. The visitor facility will be redesigned to enhance visitor experience and vehicular flow, the plan states. Other upgrades include the boardwalks, parking area and interpretive information.

A proposed upgrade of Cape Point may see infrastructure improvements to the road, water pipeline and sewerage systems, as well as the visitor centre.

The Rhodes memorial site may also see infrastructure upgrades. An investigation is underway to explore sites for the old pool, which is said to serve as a “waterway” to the Cape Schelte estuary and the sea.

The Table Mountain area is also in line for upgrades, according to the plan. It proposes developing the area into a “vibrant multi-purpose gateway to the park where the environmental, cultural and social significance of the area is celebrated through the rejuvenation of the Table Mountain and surrounds.”

An upgrade of the Signal Hill and Tafelberg road interchange is needed, according to the plan, which sees 1.2 million visitors a year. This would tie into new developments in the Strand Street quarry.

Something new

To improve access to Table Mountain, Sanpark is currently investigating improving parking facilities and the creation of a new interchange which will link the Strand Street quarry to the Lions; Battery and Signal Hill. This could lead to a range of visitor facilities at the noon-day gun and Signal Hill.

The management plan also proposes to maintain or develop key visitors in the City Bowl for a variety of “low-volume multi-use events”.

Silvermine is also set for development, with the establishment of a picnic area on the southern side of Silvermine Dam as well as re-use of the Great Silvermine Homestead as a visitor site linked to Fresh Cape and the Sandyford Education Centre.

The Silvermine Square-to-Sand project will be implemented to rehabilitate the river systems and promote recreational links between the urban environment and the park.

The plan also looks at waterways, with a focus on making the diversity of the surface environment with that of the ocean through the establishment of a “marine gateway to the Southern Ocean”.

“The purpose of this gateway would be to promote the wonders of the ocean through a variety of marine-based research and marine enforcement,” the plan says.

A site for this gateway is still being identified.

The plan serves as a reference to the management and development of the Park in its current and envisaged future form. The plan includes information on the biological, biophysical aspects, desert and marine ecosystems as well as strategic and operational needs.

The plan is available on the Sanpark website. Public comment can be submitted until Saturday 9 May.
The Initial Program

The chosen program emerged gradually and became clarified over the course of the research endeavour. Parallel modes of work became symbiotic. The uncovering of hidden narratives and, simultaneously, the assimilation of relevant spatial, aesthetic and existential theories guided a refinement of usage, activity and appropriate program. The site drove the choice of intervention, with every activity being found rather than imposed.

The program initially located itself within the City's vision for the site, the scope of which included plans to develop the Quarry into a gateway onto the mountain. A funicular had been proposed by the Table Mountain National Park to ferry pedestrians from the Quarry to the viewpoint at the summit of Signal Hill. I found this proposal intriguing as it would re-introduce the quarry as an open, urban public space. It would also break the urban boundary and connect people with the native landscape.

In search of an architectural response to the site, I turned to the embedded logic of the augmented landscape in order to identify an appropriate architectonic design strategy. With the primary historic mode of space making in the area being the act of excavation, I began exploring the concept of quarrying the Quarry, of carving rock, of removal and reconstitution of the stone mass. Appropriately, the program grew to include a stone masonry school that would act to re-presence the forgotten histories of the site.
The scheme that was developed for my mid-year review was, nevertheless, disappointing. It straddled the divide between built and natural environments, acting as a mediator. It used the layered composition of slate stone as the paradigm on which the stone building was created and, in this way, set up interesting relationships between the users and the underlying land.

An evolving building that harvested stone and continually built itself was imagined and combined with the funicular link to the mountain above. This strategy, however, proved insensitive and was fundamentally flawed.

The building was too large and did not convincingly influence the Quarry space itself, rather it grew up the roadside, distancing itself from the site. The funicular, too, was criticized for its crass, counter intuitive mechanisms. What was the point of connecting the public to the land if they would sit in a funicular car and be delivered to their destination?
Further concerns surfaced when considering the stone-craft school. The concept for the building centred on a metabolic architecture; a building that would carve out a site for itself in the sloping landscape in order to provide the students with stone material to work. In this way, for the building to survive, it would need to continually grow - a short-sighted solution that developed an inappropriate relationship with the finite resources available on the site. What would the building become when the stone had run out? Would the intervention revert to a derelict and dangerous space?
Chapter 4: Manifestation

Fig. 44. Walking path to the Acropolis, Dimitris Pikionis
Inherence

While reconsidering the program and positioning of the project, I became aware of the work of Greek architect Dimitris Pikionis. His work in constructing the walking path to the Acropolis in Athens exemplified a pedagogical interpretation of the landscape through a process of embodied experience. Through the act of walking the path, of navigating the contour, the individual learns of the environment through which he travels. Pikionis states, “As we walk upon this earth, our hearts experience anew that rapturous joy we felt as children when we first discovered our ability to move through space - the alternating disruption and restoration of balance which is walking.”

Space, being dynamic rather than static in nature, lends itself to interpretation through movement. The temporal act of walking wholly engages the senses with space and its material qualities. Accordingly, Pikionis used human movement over a topography as a tool through which to convey the narratives of a particular place. He constructed a stone walking path that ascends the hill on which the Acropolis is built. Inset into the path are stone artefacts found in the process of excavation. These artefacts, these pieces of history solidified in stone, carvings, mill stones, tablets, are arranged in the paving in such a manner that the youngest objects find their place at the start of the pathway while the oldest artefacts become inset successively further along the walk. Consequently, the walker is taken on a journey through space, but also through an experience of layered time frames. The pathway becomes a museum where the landscape itself becomes the exhibited object.
In reaction, I made the decision to abandon the funicular in the design. It would be replaced with a stone walking path that would wind its way through the landscape and eventually bring walkers to the summit of Signal Hill. This pathway would prescribe to the already existing network of informal trails; a route would be chosen and the ‘desire-line’ would be paved in stone. This subtle approach ensured no unnecessary damage would be inflicted onto the natural environment.
In order to build the pathway, stone would need to be excavated for material. The Quarry would resume its historic role as a place of industrial action and become, once more, a source of building stone. A problem presented itself, ironically, in the fact that the stone cliff-face was now a heritage protected object and could not be quarried. In search of a solution, I returned to the site and began to draw from the inherent qualities of the area.

The site has been in use as an informal soccer pitch for decades. Unfortunately, however, it functions poorly as the quarry floor slopes towards the South and remains ungraded. It would prove impractical to level the area either through excavation or through importation of fill material owning to factors including the size and geology of the site. The solution presented itself in a proposal for subtractive stone quarrying of the quarry floor in order to level the site for the soccer field while simultaneously providing stone for the construction of the walking path.

The stone masonry school became re-sited and positioned itself at the critical point where the quarry face met the road edge. Pragmatically, this area was the only point here the wall of the quarry allowed access to the mountain-scape above.

The three proposed interventions; the new void, the stone school and the walking path were supplemented with public amenities including public toilets and a Tea Room for visitors.

The design project became linked back to my initial investigations involving relationships between craft and the landscape. It is my hope that the introduction of the stone masonry school and walking path on the site may encourage a meaningful interpretation of the sublime landscape, both through a physical interaction with stone and through an understanding derived from movement over a topography.
Chapter 4: Manifestation

Fig. 47. Water, Steel, Concrete
Chapter 4: Manifestation

Water Steel Concrete

Certain materials are almost always associated with the trade of stone-masonry. Stone reacts and combines with these partnered materials in a dialogue that is both poetic and mechanical.

Water allows steel to cut stone without overheating and it washes away debris from a blade or grinding disk.

Steel enables stone to be carved. Being harder than stone, it can become the tool required to break, lift or cut.

Finally, concrete, being a metaphoric 'cast stone', takes up the inconsistencies of the landscape. It becomes foundations for cranes, stairs in the quarry or forms surfaces on which to work.
New Ground

The project becomes a microcosm, mirroring the play between void and built form in the relationship between Cape Town and the Quarry.

The cut or the fill can be seen to be the essential moves from which architecture is initiated. To begin to build on a topography we must either remove earth to create a flattened site or we must construct a plinth, building up the land to make it suitable. The design project is made through these strategies; the negative is hollowed in order to facilitate the construction of the positive, and in doing so, both are made suitable for occupation.

A new ground is built, a humane surface made to be inhabited.

Fig. 48. RIGHT: The Sacro Monte (sacred mountain) devotional path in Varese sits on the slopes of Monte Velate. It consists of a winding cobbled path that leads through a series chapel pavillons as it progresses towards the church sited on the summit of the mountain.
Chapter 4: Manifestation

Memory Typology, Memory Topography

Symbols as gestures to past use run the risk of becoming little more than static memorials; if meaning is prescribed there is always the danger that the visitor will say ‘yes, I get it’ and have no impetus to connect further with the site.

From the beginning of the project, I had the intention to re-interpret the traditional memory typology as seen in orthodox museum programs. I wanted to re-involve the site in the everyday life of the city and, in doing so, subtly reintroduce the heritage of the place into the realm of public consciousness. I believe that there should be opportunities, beyond the formal environments of State museums and galleries, to be educated on matters of heritage and history. History is omni-present, should we not also learn from the artefacts and historic environments with which we are surrounded?

The design project aims to enliven not only the quarry space itself, but also to enliven the memory of the place. The walking path becomes a symbolic journey of ascension and enlightenment with layered narratives designed to unfold as you climb towards your destination.
Chapter 4: Manifestation

Fig. 49.
Incompleteness

The landscape is ever changing. Similarly, our cities are living, growing urban organisms. The ruins that lie on the slopes of Signal Hill tell of the temporal character of our occupation of the land. When considering this, it became evident that the design project would need to adapt to future use and accommodate programmatic potentialities. It would need to become polyvalent.

The quarry would become a quarry again, for a time, and it would produce stone and in exchange create a level ground. It would then become what it aspires to be, a sports field and place of recreation for the surrounding community.

The craft school would function to educate stone masons in order to bolster the dying South African artisanal industry. It would prepare the raw stone in order to build the walking path that would grow up the mountainside. Eventually though, the stone masonry school would change. The source of stone exhausted, the stone path built, its function would have run its course and it would be reconceived as a community building and sports club for the sports field below.

The Stone Masonry School would become another chapter in the diverse history of the Bo-Kaap. Its legacy would, nonetheless, live on in the stones laid to make the walking path, in the field made usable through the act of excavation and in a multi-use community building and sports clubhouse.
Chapter 4: Manifestation

Fig. 53.
Chapter 4: Manifestation

References

33 Cole, 2103
34 City of Cape Town. By: Bridget O’Donoghue & Peter Büttgens. [City of Cape Town], 2010: 104-110.
35 Antonakakis, 1989: 68
36 Jorgensen & Keenan, 2012: 183
Conclusion

From the outset, the aim of my research has been to identify an architectural approach that could facilitate a mediation between nature and culture. I have found that the greater your knowledge of the topography in which you live, the greater your appreciation of the physical, cultural and historical significance of your environment. Particularly as architects, we are ethically compelled to ensure that we remain self-critical and conscious of our attitudes towards the landscape.
Bibliography


Ruskin, J. 1889. The seven lamps of architecture: the lamp of memory. London: Hazell, Watson, and Viney, LD.


Reference List


Figure Reference List

Note: All figures by Author unless otherwise stated.

Fig. 2 - Cape Archives Collection AG9850.

Fig. 5 - Pallasmaa, J. 2009. The Thinking Hand: Existential and Embodied Wisdom in Architecture. United Kingdom: John Wiley & Sons Ltd; pg 19.

Fig. 14 - Aerial photograph montage, 1926, National Geo-spatial Information Centre, Mowbray.

Fig. 18 - Legg, K. Quarry Plunge: Woman’s Death was Avoidable. Cape Argus. February 8, 2013.

Fig. 19 - Booysen, H. Close Kraal, say Bo-Kaap residents. Peoples Post. August 3, 2010.

Fig. 21 - Map of Cape Town c1885 (Land Survey Branch, City Engineers Department). Available in “Buildings of Central Cape Town 1978, Cape Provincial Institute of Architects”

Fig. 22 - Cape Archives Collection CA1157

Fig. 23 - Cape Archives Collection AG13566

Fig. 24 - Cape Archives Collection E3572

Fig. 25 - Cape Archives Collection CA1156

Fig. 26 - Cape Archives Collection R1012

Fig. 27 - Cape Archives Collection E9354

Fig. 34 - Edward Burtynsky, Carrara, 1993.

Fig. 38 - Available at http://www.wordsinspace.net/wordpress/2012/03/24/deep-time-of-media-infrastructure/. accessed 18 November 2015.
Fig. 41 - By cable car from city to Signal Hill?. Peoples Post. April 28, 2015

Fig. 44 - Available at http://n-architektur.tumblr.com/post/34097358898/rcruzniemiec-dimitris-pikionis-landscaping-of. accessed 18 November 2015.

Fig. 45 - Available at https://www.youtube.com/watch?v=EZkP9YJGfow. accessed 18 November 2015

Fig. 48 - Available at http://www.sacrimonti.net/User/index.php?PAGE=Sito_en/sacro_monte_varese. accessed 18 November 2015