SOLID GROUNDING / FRAMING MOVEMENT

Extending Community Opportunity in an Urban Park

Raw vs Refined

JOANNA BACON

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Extending Community Opportunity in an Urban Park.
Raw vs. Refined

Trafalgar Park, Woodstock, Cape Town

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Kevin Fellingham

This Dissertation is presented as a part fufilment o the degree of Master of Architecture (Professional) in the school of Architecture, Planning and Geomatics, University of Cape Town

3 November 2016

Joanna Bacon Solid Grounding: Framing Movement

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INTRODUCTION

Fundamentals of this dissertation- Where it began

Solid Grounding: Framing Movement

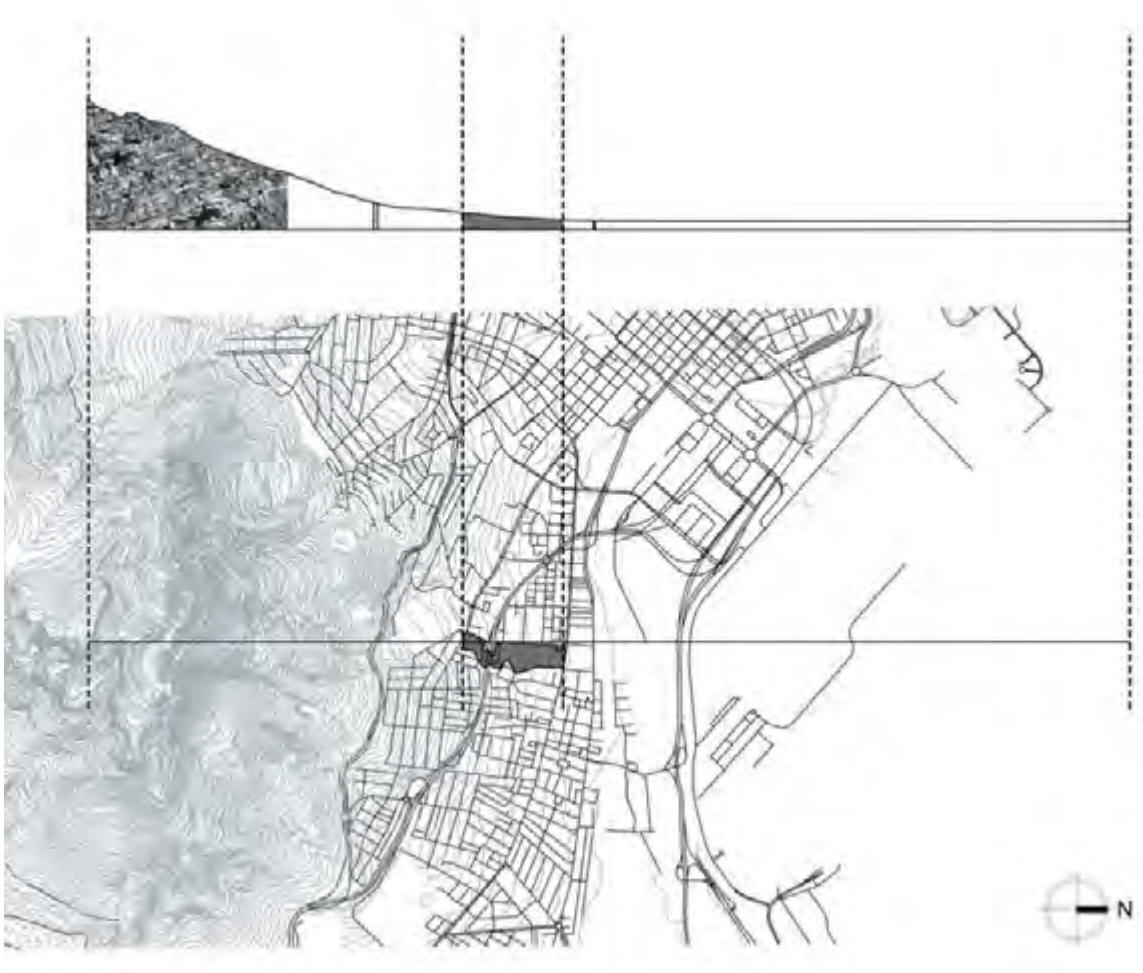


Figure 1

This dissertation follows a process of research and design. The project research is defined in the first section of the dissertation as a conceptual duality of raw vs refined. The study of a raw heavy materiality of architecture, in comparison to a delicate refined light weight architecture, where a link is developed presenting light, experience and embodiment of materials as the common denominators. The design is then developed and revealed throughout the next section.

Figure 1: Aerial line drawing and section cut through Cape town showing section studied and highlighting chosen site- Trafalgar Park, Woodstock.

The final outcome of this project is a Resource Centre (carved into and added onto the park) to facilitate after hours' life of school children in Woodstock,Cape Town, chosen to actively involve and integrate the community with the park.

The year began with a group investigation into a section cut through Cape Town. Starting at Devils Peak, moving down through District 6 and Woodstock, ending at the harbour figure 1.) This presented a rich base of knowledge for this particular strip of land. Although my individual study was into rock – the upper portion of the valley section (figure 1.) I chose Trafalgar park as my site. It was chosen for its rich historical value and positioning in the city, with beautiful views of the main geological landmarks in Cape Town, namely Table Mountain, Lions Head, Signal hill and the ocean. The focal point and what drew me to this site was the solidity of exposed rock seen in the remnants of the 18th century defence system in the form of a redoubt. With old trees hinting at the existence of this wall, marking either side of exactly where it used to lie. The surrounding land forms a beautiful parkscape with many changing levels presenting great opportunity for intervention.

Frequent visits to site allowed me to understand how the park and neighbourhood functioned, and how people used , or rather, underused the park in its existing state.

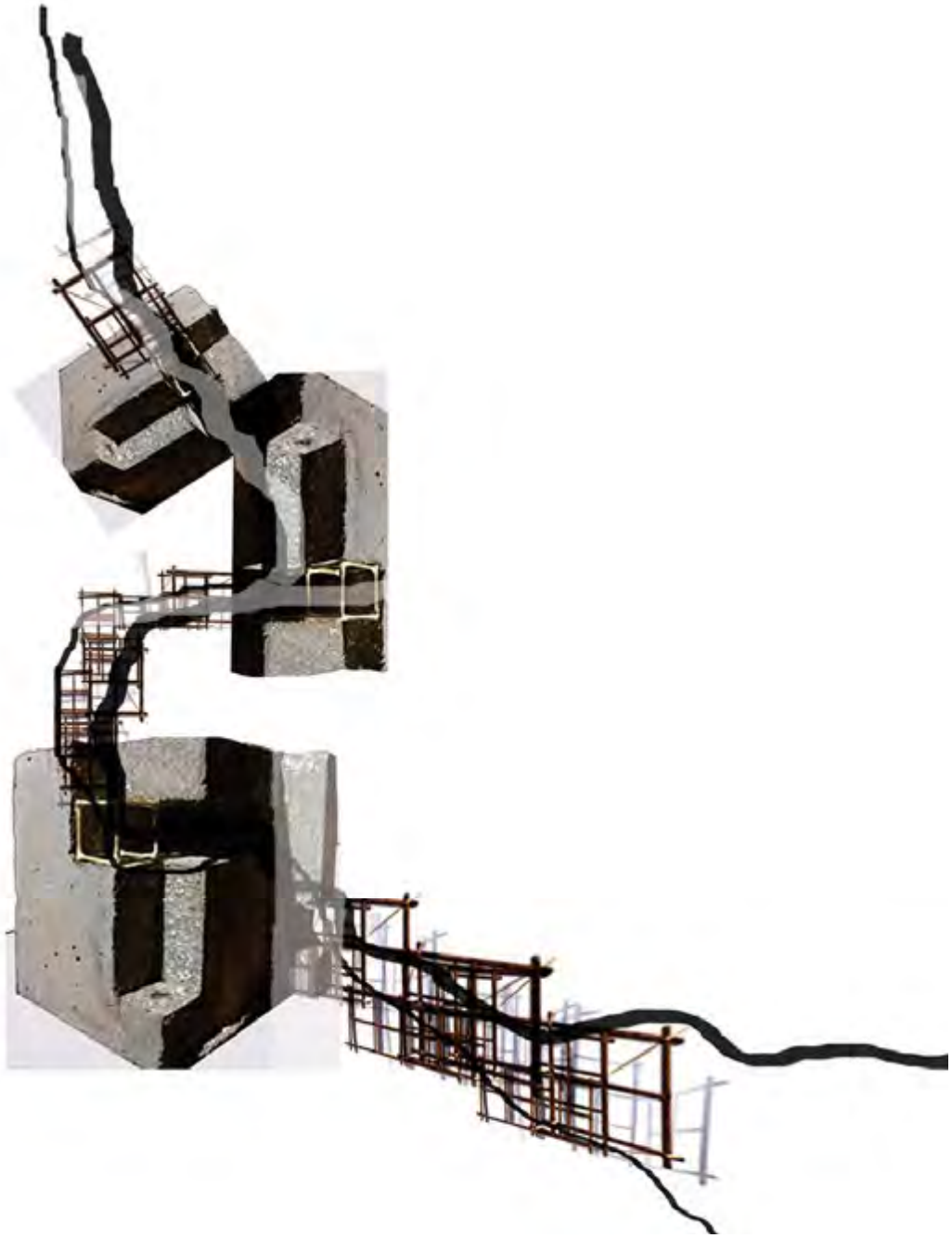


Figure 2

Visits to the archives presented old maps and information on the French Line of defence as well as historical images of the redoubt itself. Research into the geology of Cape Town and especially that of the Woodstock area lead to an understanding of the ground I would be building on.

"Architecture is the masterly correct and magnificent play of masses brought together in light" Le Corbusier.

The material a space is made of, is just as important as light in developing and revealing its character and how it is perceived. Light is immaterial, it needs a surface to be displayed on and interact with in order to be seen. The characteristics and properties of that specific material are almost more important than the form that they take on. These will determine how the light acts in a space. If the materials are reflective the light will bounce off it, if they are matt or rough the light will be absorbed and diffused through a space creating different phenomenological experiences. (Nava, 2014)

Researching architects such as Peter Zumthor, Carlo Scarpa and Juhani Pallasmaa gave insight into dealing with light and material in architecture and set a basis for experimentation and exploration in my own work. From this two theme papers were written as a grounding for the approach taken in this dissertation with the design scheme that followed.

My architectural project aims to rejuvenate Trafalgar park and create a new vibrant character, allowing it to become a well-used asset for the Woodstock community. The introduction of a new circulation route creating an interactive journey through the park encountering solid and fragmented part of an overall scheme. Relevant program housed in "heavy masses" connected by a light weight system framing specific views along the way. The substance of the scheme in relation to my research can be seen in its making. The use of raw and refined materials to create character.

Figure 2: Collage of my own images showing connection of raw and refined architecture reflective of the type of experience created in the park

PART 1

key objectives and workings of this project

“To create space in architecture is nothing more than to concentrate and refine light.” Tadao Ando

This dissertation explores the coming together of material and light in architecture expressed through raw materiality, vs an architecture expressed through refined and detailed tectonics. It is the combination of architecture as the built environment and as a part of nature

> Architecture is essentially an extension of nature into the man-made realm, providing the ground for perception and the horizon of experiencing and understanding the world. (Pallasmaa, 2005)

Architecture is designed to be experienced. The characteristics of the space, regardless of what emotions or senses they might evoke, rely heavily on materiality, and in turn materiality relies on light to be able to express itself. The surfaces of different materials have different qualities that all react to light differently, some absorbing, reflecting and some refracting light. The presence and absence of light works with the material to reveal its qualities. Artificial light is over used in the present day, where spaces are over illuminated with very uniform levels across a space. This leaves spaces plainly unexciting with no point of interest. I aim to use light to reveal materiality and create unusual experience and character within architectural space.

Figure 3: Alongside is an aerial view of Woodstock, Cape Town with Trafalgar Park at the center of the map

Figure 4

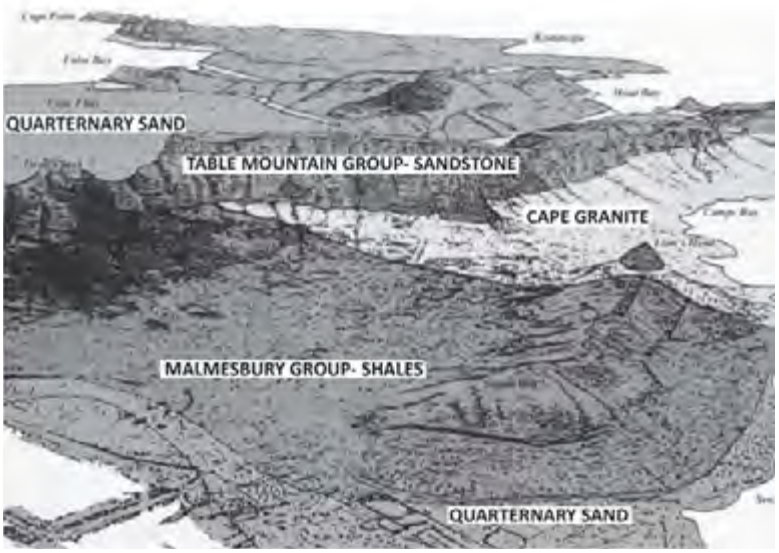


Figure 5

Architecture has a utilitarianism existence and a poetic existence. The tension between the two is what gives it great power. (Pallasmaa, 2014)

An understanding was developed of how materials are brought together and how character can be integrated into space by articulating how that space is made.

I started off this journey with an investigation into rock, the geology of Cape town and Table Mountain specifically. Learning that there are 3 main rock groups that cover Table Mountain and the city bowl. Table Mountain Sandstone, Granite and Malmesbury shale. These rock groups all have different properties and characteristics which allow them to act in different ways determining how they weather and survive in nature and also how they are used in the built environment.

The role of a miner was also explored The kind of space a miner gets to experience and be immersed by. Their view and understanding of rock is completely different to the average person. They get to see the inside of rock, the inside of a solid mass, a spatial volume. Lighting conditions in a mine shaft become important ,with the lack of it allowing the miners senses to be naturally heightened.

Space is material and materials are spatial. There is a technical (aesthetic) and experiential quality to and of materials. The design decision of joining different types of material in different way affects the end product and the power of the architecture. Technology enables detailed design where effective details embody concept in their assembly.(Compton, 2004)

Figure 4: Examples of different types of rock found on Table Mountain.

Figure 5: A geological diagram of Cape Town

Rock has natural beauty and carving qualities in nature and in the built environment. Different materials are used in architecture to create different effects and spatial experiences. What links us to these materials is the space in-between, the volume within the envelope of an architectural object, a material shell. In this space, surface and light interact with one another to create an atmosphere. It is given a sensory quality that can be physically perceived and recognized through emotions, allowing the space to become relatable to us. Research has shown that when combining the qualities of materials and design intent, attention must be given to the joining of building elements, as that is where the sensory event takes place and that is what brings a space to life

Heavy materials such as rock, stone and concrete create phenomenological effects to be taken advantage of in architecture. Their relationship with light present endless opportunities that can be manipulated according to the designer's intent. Their embodied characteristics portray them as solid and heavy. This, in combination with light, allowed me to study phenomena created and get a greater understanding for these materials providing the necessary information for me to use when designing.

"The Sun never knew how great it was until it hit the side of a Building" Louis Kahn

Figure 6: Shows the beautiful carving quality of rock in nature.

PART 2

experimentation and exploration

EXPERIMENTATIONS AND EXPLORATIONS

Having introduced key ideas of solidness and light, the following pages will demonstrate the exploration and experimentation with physically making and assembling space through a series of artefacts. They show different methods of connecting raw materials to achieve various effects and help to illustrate their joining abilities. They are an investigation into rock and concrete in order to explore the materials solidness, carving ability, beauty and character, as well as what affect light has on them. The results will be critiqued in order to get a feel of the phenomena and effects created by these materials and the way each shares a different expression and relates to the senses through sight, touch and texture.

As mentioned above research was done on architects such as Peter Zumthor, Carlo Scarpa and Juhani Pallasmaa and their work as a way to understand materials and light. A set of experimentations and explorations of these topics were then developed. Some of which drew inspiration from these specific architects and some which were of my own endeavour.

These architects design to create “multi-sensory architecture of high emotional impact” (Buchanan, 2012) They highlight the materiality of a building in a beautiful way, creating phenomenological experiences for people to inhabit and explore paying close attention to the character and qualities that different materials possess and therefore let these dictate what they are used for. (Buchanan, 2012).

Juhani Pallasmaa is an architect who reflects a keen understanding of embodied experience for those who encounter and inhabit his buildings. There is a relation between architecture, human perception and embodied experience which goes beyond visual impressions. It is a combination of perception and action, embodiment and aesthetics.(Juhani, 2014) He believes that architecture has a utilitarianism existence and a poetic existence that work together giving it great power.(Juhani, 2014) He describes his own work as minimalistic and supports reduction and simplicity.

His view on modern architecture is that it has become emotionally cold and distanced from life. He states that quality of physical space, our behaviour in this space and our mental state are all interrelated and when designing architecture the physical spaces- we are implicitly designing and specifying distinct experience and emotions that we want a space to have (Juhani, 2014)

In order to address and respond to creating not only a physical structure, but spaces that evoke feeling and create atmosphere we must pay very close attention to how and what this space is made of. Only by doing this will results be achieved that satisfy those means. The most demanding task an architect takes on is the imagination of atmosphere, as it is not an object, it is a perception. (Juhani, 2014) Learning to understand material in as much depth as these architects allows one to predict with more accuracy what the atmosphere will be.

In a study of light, openings and windows became a key part of my research. Allowing in varied amounts of light, in different ways giving a completely different feel to the space produced.

> Shadows give shape and life to the object in light. In great architectural spaces there is a constant deep breathing of shadow and light; shadow inhales and illumination exhales light. (Pallasmaa, 2005)

In the praise of shadows, Tanizaki points out that everything depends on shadows. Everything is inseparable from darkness. People adjust situations in order to emphasis the darkness and shadows of a room. (Tanizaki, 1977)

To state the obvious, without darkness there would be no light. Dark and light work together and allow the essence of materials forming the built environment to be revealed to us. Shadows allow us to perceive the direction, intensity and movement of light. Light and shadow greatly impact experience and people's perception of a space with a puncture or window being a common source of light entering a space.

A window is a mediator between 2 worlds, between enclosed and open, interiority and exteriority, private and public, shadow and light. (Pallasmaa, 2005) They let light into a space and also imply a view. There are many different ways in dealing with windows and how view and light are perceived by different people.

In modern times a window has turned into the absence of a wall. This has caused us to lose the sense of an intimate space , rather we all live public lives. Darkness creates a sense of solidarity and strengthens the power of the spoken word. (Pallasmaa, 2005) A dark space allows someone a pause moment, a mental withdrawal and privacy from the light. Achieving this in a public space can be challenging therefore window placement in the public realm must be carefully designed and thought through.

Light allows atmosphere and phenomenology of a room to come to life. “the perceptual spirit and metaphysical strength of architecture are driven by the quality of light and shadow shaped by solids and voids, by opacities, transparencies and translucencies. Natural light, with its ethereal variety of change, fundamentally orchestrates the intensities of architecture and cities” (Holl, Pallasmaa, and Perez-Gomez 63).

The materiality of different types of glass make a difference to the character windows create and the view that people see, likewise, the frame of a window does the same thing. A view obstructed by mullions in comparison to a clean framed view allow character and people’s perception of what they are seeing to differ. By framing a view the architect is making a decision to crop the image that people will see, this is often done to show a specific part of the image.

The distance between the viewer and the window is also important as the view seen can change from being that of a ‘small framed picture hanging on the wall’ to that of a full 180 degree panorama view when up close to it. Repton describes a window as having a significant purpose of allowing a specific view. Their positioning is in turn extremely important as we can choose what is visible and what is hidden. This can then change the character of what is being viewed. (Repton, 1816)

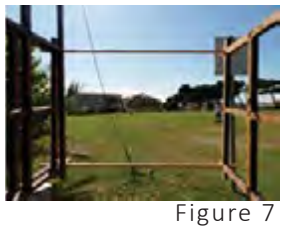


Figure 7

My view finder is an artefact influenced by the work of Carlo Scarpa. Presenting a refined modular structure in order to frame different views. It allowed me to frame views with different perspectives, to introduce a gridded frame or a simple rectangular shape completely changing the feel of the image being framed. The view finder also gave depth to each frame, presumably the foreground of the 'room'- internal space before the 'window' and the view. It was used in locating a site.

Figure 7: View finder constructed and used on site

Figure 8

Figure 9

Figure 8: Cave like conditions with punctures letting light in. Devetàshka cave, Bulgaria

Figure 9: The Thermal Vals by Peter Zumthor showing lighting detail in roof.

A window, be it in nature or the built environment directly determines the amount and intensity of light entering a space and that is what will ultimately change its character. With every condition being completely different, from light entering a cave like space through a punctured roof covering (Figure 8) to a slit opening in a contemporary roof structure(Figure 9)

Joanna Bacon Window shapes and sizes

Figure 10: investigation showing direct and indirect light entering a space through different size and shaped windows creating different atmospheres and experiences in each case

Figure 10

Materials and Light creating atmosphere

Zumthor believes "that materials can take on poetic qualities within the context of an architectural object" (verlag, 1997). Atmosphere is a very important and intriguing part of designing space to him. Being able to imagine what the atmosphere of a space is, is an integral part of his methodology. Many of his projects capture memories and rely heavily on experience and the senses. A very valuable lesson learn from Zumthor is that by designing closely and carefully with senses, form, shape and materials can be developed and determined (verlag, 1997).

Zumthor looks closely at these points when designing which I used as a guideline of my own.

1. Location- direct and indirect environmental characteristics that affect material placement and form.
2. Sensory nature of materials -texture, colour, smell, where it comes from and structural quality dictates how it is used,creating a feeling out of material.
3. Volumes, surfaces, sequence and transitions of space and materials- tested out in material box (figure 11)
4. The atmosphere and touching peoples' senses.

Character is creating through making and the way in which materials are put together. Zumthor followed a very precise method of detailing in this building, making the technical details look completely effortless and almost hidden. In my opinion the layered affect of the stone played the biggest role in constructing character within the baths.

The experience Zumthor creates walking though the baths as a whole is a combination of intense light and dark moments, along a suggestive circulation route to specific points where Zumthor intended for one to pause and soak in the atmosphere. The rocks are assembled in patterns that subtly circulate people to specific pausing points and then let them explore other spaces themselves

Zumthor has gained invaluable experience throughout his career with regards to what different materials work well together. His spaces are materially rich and are transformed by the adding of light, as without it they become very plain and ordinary. This meaning very careful consideration will be taken with designing what light enters a space and what character it creates.

Figure 11

Like in Zumthor's work this artefact demonstrates how direct light projected onto materials can change and enhance the experience of both. The space shows the interaction of two different materials meeting with direct light being cast onto them illuminating the surfaces. Each creates a different atmosphere and phenomenological experience, with the first image of figure 11 creating a warmer and more inviting space, in comparison to the second image of figure 11 which has a colder feel to it.

Scarpa believed that form was brought to life through materials, space, light and time. The “changing shape of light creates the shape of things” (J. Carmel, 2002) with factors such as mass, colour and texture replying on the light.

Figure 11: Material box showing influence light has on the character of space created.

In Scarpa’s eyes, details are possibilities for innovation and invention. They present architects with an opportunity to be creative. A detail is a part of a whole- it is an expression of structure and the use of the building. Scarpa has mastered the art of selecting appropriate details that work well together and this results in a certain beauty about his buildings (Frascari, 1996). The art of detailing is really the joining of materials, elements, components and building parts in functional and aesthetic ways (Frascari, 1996).

Scarpa very strongly promotes a hands on approach to architecture. He looks at the relationship between the craftsman and the draftsman identifying the process of perception and product, the combining of the construction and constructing. There is a difference between the craftsman drawing a detail and being able to understand and build it, the virtual detail found today compared to the real thing. The detail is no longer a part of the building or a joint, it has become a production drawing, and gets churned out by architects (Frascari, 1996).

Scarpa has an “Adoration of the joint.” The way in which he designs allows for expression through making. Each detail tells a story of its making, its placing and its dimensioning, singling out its functional role as a part of the whole building giving it significance (Frascari, 1996).

His drawings allow him to convey the phenomena of construction to the user of the building. Scarpa’s design was a response to the variables of “light and spatial interplay”(J. Carmel, 2002). He achieved balance between, “light and dark, void and solid, volume and mass”(J. Carmel, 2002). His work method allowed him to “transform through drawing an idea into living matter”(J. Carmel, 2002).

Figure 12

The relevance of this block experiment was to provide a further understanding of how the characteristics and properties of different materials allow them to act in different ways producing different end results expose how it was cast and assembled.

Figure 12: Cast concrete blocks, inspired by Carlo Scarpa

Whether it was the size of the block or the texture the material gave the block, each block differed in its own way. They allowed for the exploration of a materials solidity. In terms of the project at a larger scale this investigation clarifies what building material would be used throughout the project, concrete.

In making these concrete blocks, achieving precise detail at a big scale was extremely difficult. The end result became much more varied when using actual building materials compared to a craft material such as plaster of paris, numerous factors must be taken into consideration. This lead to the realization that it is very difficult to achieve neat and accurate lines in the making of concrete forms as Scarpa does. It also shows that for both architects to produce works of such precision they must have an extensive knowledge of how each material works in space, so much so that they can focus on designing around phenomena that they would like the materials to create. The only way to understand the phenomena of a material is to experience and experiment with it first-hand, these blocks show the visual richness of concrete, it takes on the form created but it is more than just a form, the characteristics of material has contributed to the phenomenological effect of the artefact. Choosing the right material when designing is a vital part of achieving a specific phenomenon.

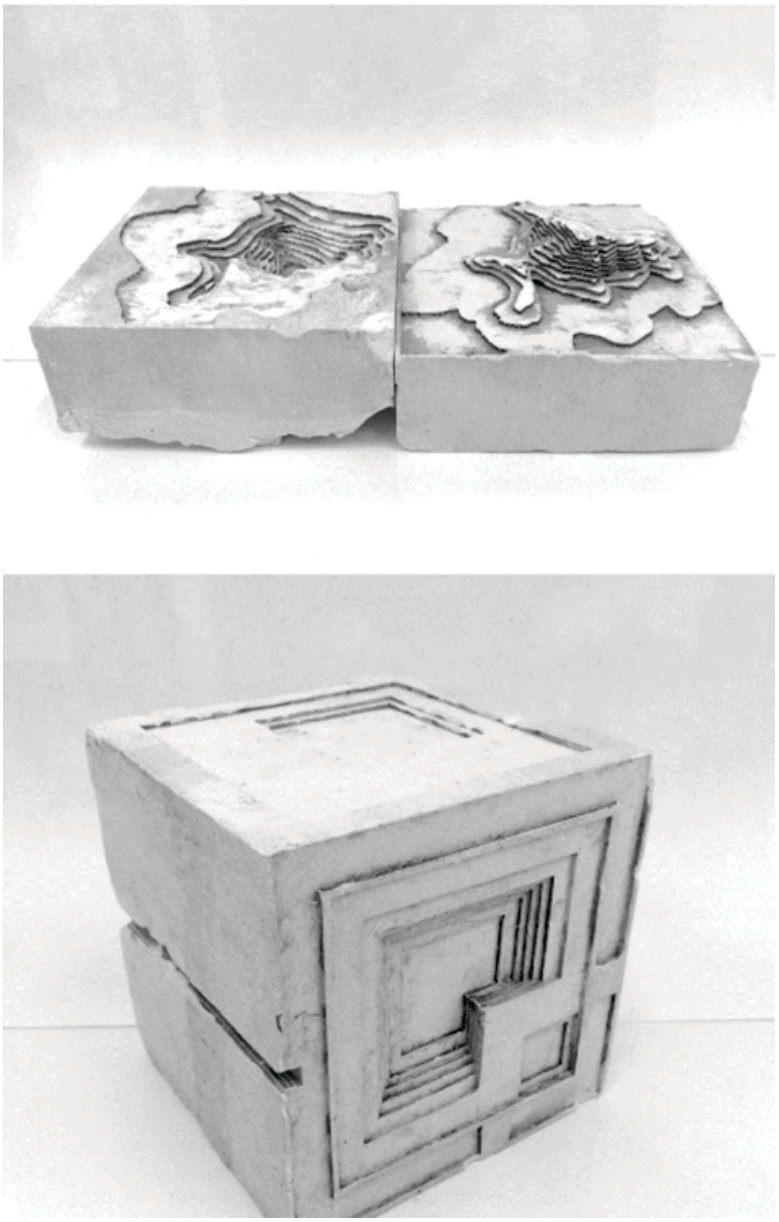


Figure 13

Knowledge was gained in making these plaster casts. It showed that it is much easier to achieve detail at a smaller scale (these are about a quarter of the size of the concrete blocks). This emphasises how precisely designed Scarpa's and Zumthor's details must be to achieve such intricacy in their buildings. Blocks 1 and 2 (Figure 13)were inspired by nature and block 3 (Figure 13) by the carving out geometric shapes of Carlo Scarpa. The value added to my design investigation by these blocks was that of contrast. The methods behind the construction of these blocks in comparison to the concrete blocks differed hugely as the materials acted very differently to each other. The visual affect achieved in these small blocks is very elegant and refined, however the form that they take on is what is meaningful about them. The material itself has served the purpose of taking on the shape of specific form work but does not contribute significantly to the experiential quality to them, the form does.

Figure 13: Plaster casts showing natural contours vs man made structure. Inspired by Carlo Scarpa.

After doing this experiment, material choice for my final building was easy to make . Concrete will make up a large portion of my building. With large scale, less detailed areas cast in situ and smaller more intricate details being precast in workable pieces and constructed on site at a later stage. The texture of this concrete will also be manipulated differently throughout the building. Smooth/ rough surface defined and exposed in the process of construction.

Figure 14: Textures of concete and plaster

PART 3

Exploring Woodstock- Trafalgar as a part of its surroundings

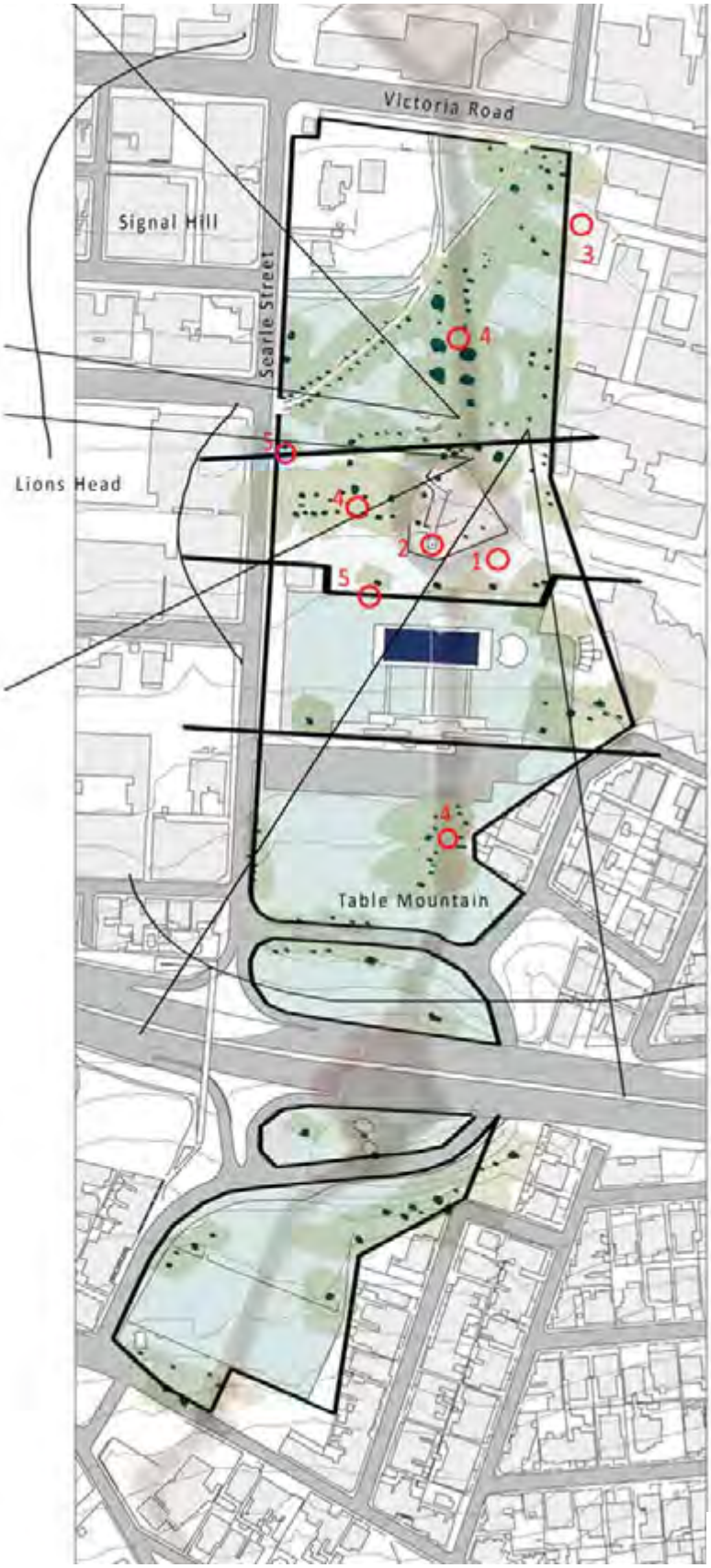

Victoria Road
Signal Hill
Searle Street
Lions Head
Table Mountain
3
4
5
4
2
1
5
4

Figure 15

Trafalgar park is a 3.2ha Municipal park in Woodstock. It spans from district 6, on the slopes of Table Mountain the way down to the bus terminal in Woodstock and is approximately 150m wide. It is edged by two important roads, Victoria Road and Searle Street. Both of which house heavy traffic especially in the mornings, pedestrian and vehicular.

Although the park occupies a very large piece of land, it is divided up into smaller segments with poor access and is very underutilized. Areas of the park are walled/fenced off with controlled access and operate independently of one another losing the sense of the park as a whole. To the south end lies ,open fields, a parking lot and a public swimming pool facility which is walled off, next to a fenced grass area, housing the Central Redoubt and 2 brick kilns.

Figure 15: Map showing Trafalgar Park with specific landmarks indicated.

1. Favorite part of the site- going to optimize

2.Brick kiln

3. Old Tramway Depot- StudioMas Building

4. Tree tunnels/ pathways indication old French Lines

5.Fence separating play area from historic area

5.Wall separating pool from historic area

Figure 16

The two existing access points lie off Victoria road (1) to the North of the park and Searle Street (2) to the West. The entire east edge has no access and is therefore very underutilised. The park exists as three separate entities in its present state.

When choosing a site, the conscious decision was made to build in the city. Rather than building on the Mountain (in the rock) I wanted to draw away from the mountain and choose a specific site in the city which had beautiful views back to the mountain.

Trafalgar park lies in the Malmesbury shale category of Cape Towns Geology and presented these views, not only of Table Mountain, but also of Lions Head and Signal hill to the west of the site and the sea and harbour to the North of the site. My aim now was to create a building resembling the characteristics of the raw solid rock, located in this park, framing the beautiful views that surround it.

Figure 16: Map showing Trafalgar Park with existing access and movement routes marked out with road names. It also shows the lack of access routes causing the dead east edge.

Figure 16

The park is surrounded by a diverse community. There are local commercial businesses such as shops , offices and small inidustiral spaces to the East and West of the site. The North edge fronts onto a local bus terminal and further down meets the train lines. To the South and higher up the site, after crossing the highway sit a residential area home to a mainly Muslim community.

Many schools are positioned in close proximity to the park. 11 schools in total are all within walking distance. These schools do not have their own swimming facilities and therefore use the Trafalgar Swimming Pool during summer months as a part of their physical education, with rotating schedules to allow each school access. As the pool area is open during the afternoon, the space acts as an after care for many of the school children having to commute from far away as adult supervision is provided. However this is not the purpose of the swimming pool and puts unfair responsibility on the swimming pool staff.

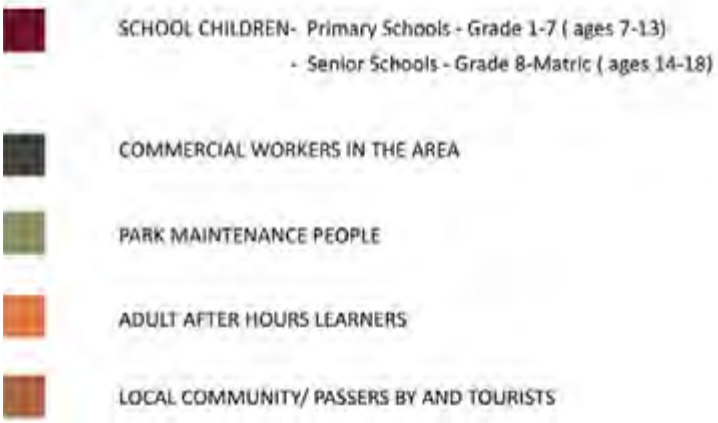


Figure 17: Highlighting the use of different buildings surrounding the part and in close proximity to the park.

Figure 18

Although underutilised the site has great historical significance to Cape Town and holds the potential to be a very popular destination for tourists and also the local community and school goers It is home to the Central Redoubt which was a part of the old French line of defence built to defend Cape Town from the British. The remanence and memory of this line is evident on site .

"This fortress was hastily built in 1781, when an attack by British forces on the Cape was expected." (South African Heritage Resource Agency, n.d.) Five years after being built the line was very run down and in a poor state. After the occupation of the British in 1795 the connections and earthworks were restored. They formed the defence line all the way up to Devils peak. However, the line eventually stopped being used and was set to be demolished. The walls connecting the redoubts disappeared along with the redoubts themselves with the exception of the Central Redoubt found in the park. As it was the last remaining evidence of the defence line it holds a lot of significance to Cape Town and was declared a National Monument in 1968. (City of Cape Town, 2014)

The French Redoubt has "earth banks and a stone entrance." An interesting Structure was built in it, a brick kiln built after 1830 and was "use for making bricks after the fort was demilitarised." (City of Cape Town, 2014)

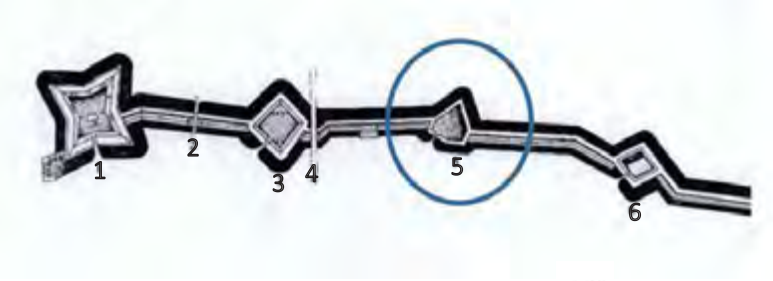


Figure 19

Figure 18: 1785 aerial view of old Line of Defence built to protect Cape Town

Figure 19: Zoomed in image of French Line of Defence with the Central Redoubt circled. Key Below.
Key
1) Fort Knokke
2) Road (Modern)
3) Holland's Redoubt
4) Road (Modern)
5) Central Redoubt
6) Burgher Redoubt

Photographs of site

Figure 20: Central Redoubt, Part of the French line of Defence

Figure 21 Brick Kiln

Figure 20

Figure 21

Figure 22

Figure 23

Figure 22,23: Old trees marking either side of where the original defence wall used to be positioned.

Figure 24

Figure 25

The swimming pool is ideally located in close proximity to the schools in Woodstock and is extremely well utilized during the summer months of the year. Its location allows for beautiful uninterrupted views of Table Mountain and attracts up to 1200 people daily during peak season. The pool itself is only designed to hold 120 people maximum and measures 48m long.

Figure 24,25: Trafalgar swimming pool with view of Table Mountain and kiddies shallow pool.

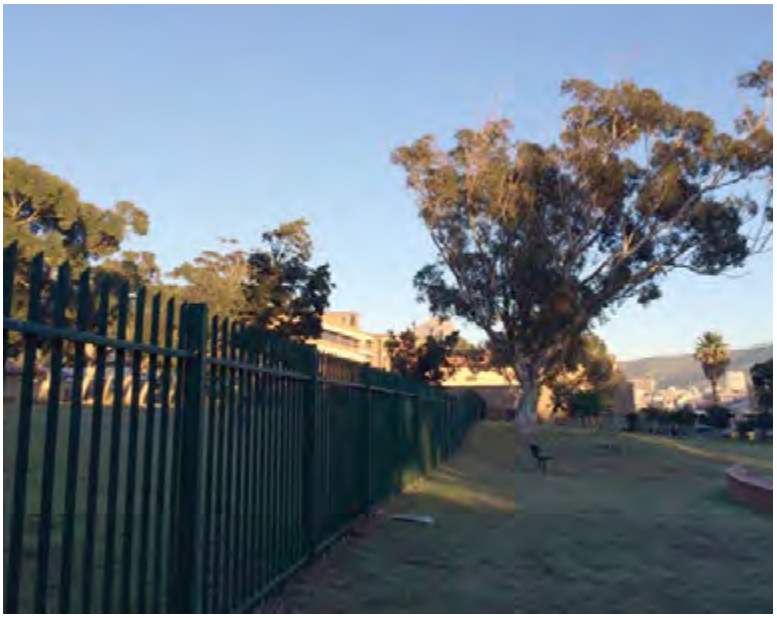


Figure 26

Figure 27

As mentioned previously the park is divided up into smaller segments. These photographs show the fence and wall separating the pool, historical area and park areas from one another. The wall sits on top of the most sloped area of the site, providing great potential to be carved into .

Figure 26: Fence separating park from redoubt

Figure 27: Wall separating grassy redoubt area from Swimming pool facilities.

Figure 28

Figure 29

As a part of my urban strategy I have chosen to integrate the Old Tramway depot Building - by StudioMas Architects and create synergies between it and my own buildings. It lies along the parks east edge and is the only building that addresses and communicates with the park by allowing its larger events to spill out of its courtyard into the park space adjacent to it. As seen in figure 29, the morning winter light filters through this building creating a beautiful atmosphere in the park.

Figure 28,29: Old Tramway Depot - StudioMas building opening up its courtyard onto the park

Column spacing and structure will be used as a reference to carry a constant rhythm throughout my scheme and though the whole park.

The rest of the east edge of the park presents a completely blank wall with the other buildings showing their “backs” to the park preventing any interaction or connection between the two. This has made that specific area very unappealing and unsafe, with no visual connections and no access route allowing people to enter and filter through.

Figure 28

Figure 30

Figure 30: East Edge of the park. A blank wall and the " back" side to the rest of the buildings. The drawing shows possibility for intervention in the park, activating this dead edge.

Shadow Study

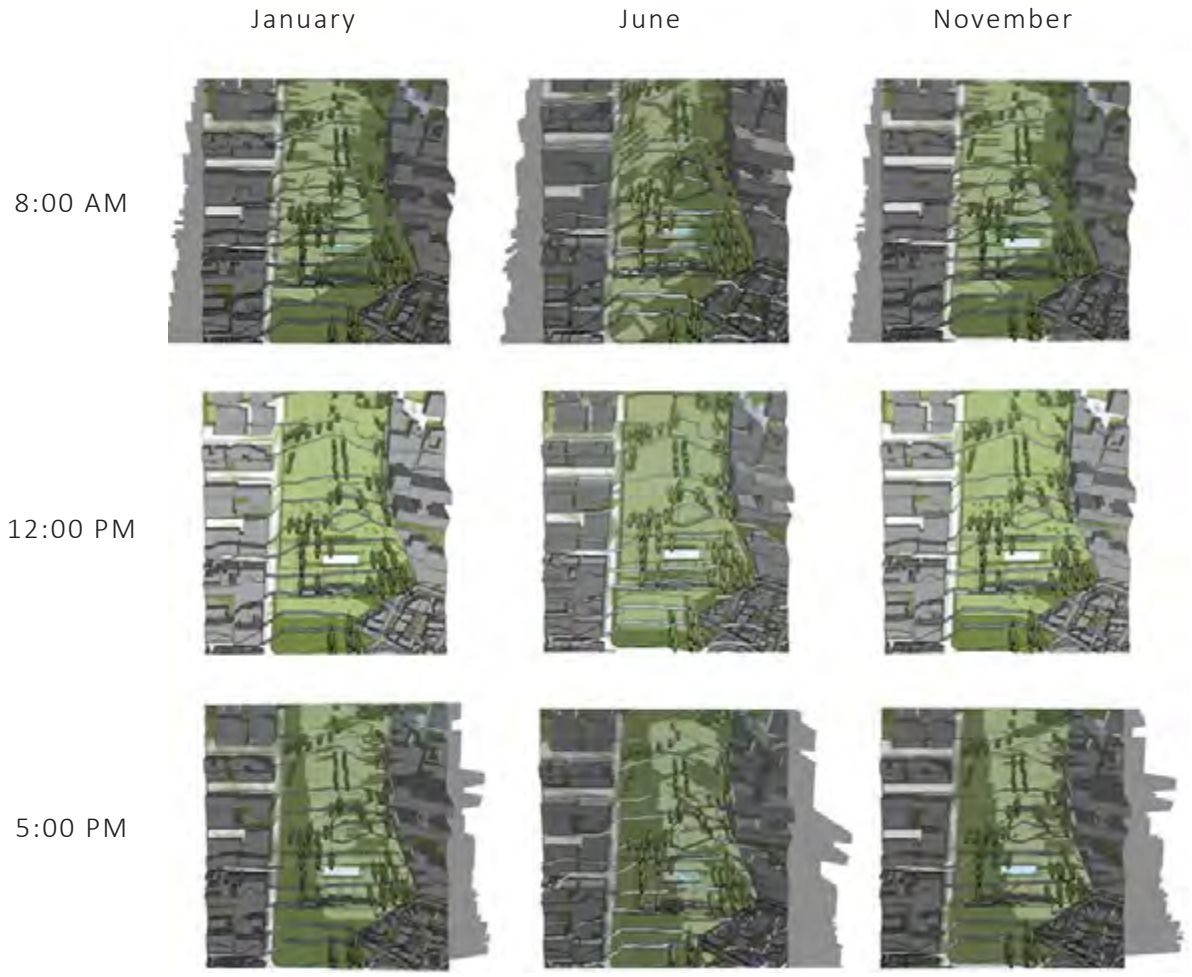


Figure 31

The shadow study of the site allowed me to analyses what portion of the site would be covered by shadow and at what time. This helped in informing location and orientation of my program.

Figure 31: Shadow study of site. Carried out at specific times of day and months of the year .

Trafalgar park vs The Company Gardens

Figure 32

Figure 33

In order to emphasis the size of Trafalgar Park within the city I have shown a comparison of it to the Company Gardens in the center of Cape Town. These Gardens are extremely successful at serving the city precinct, they are home to the National Gallery, Houses of Parliament and the Arts campus of the University of Cape Town. The gardens provide an escape from the busy city, with lots of green areas, planted spaces and a coffee shop for people to take advantage of. It is a popular lunch spot for the locals and well used by the commercial working class. The restaurant draws in many tourists with the park being well utilised throughout the day. Trafalgar Park occupies a very similar amount of land and holds the potential to be as great an asset to the Woodstock community as the Company Gardens are to the city.

Figure 32,33: Comparison in size between Trafalgar Park, Woodstock and The Company Gardens in central Cape Town. Both drawings are at the same scale..

PART 4

urban strategy and program- what my scheme will be

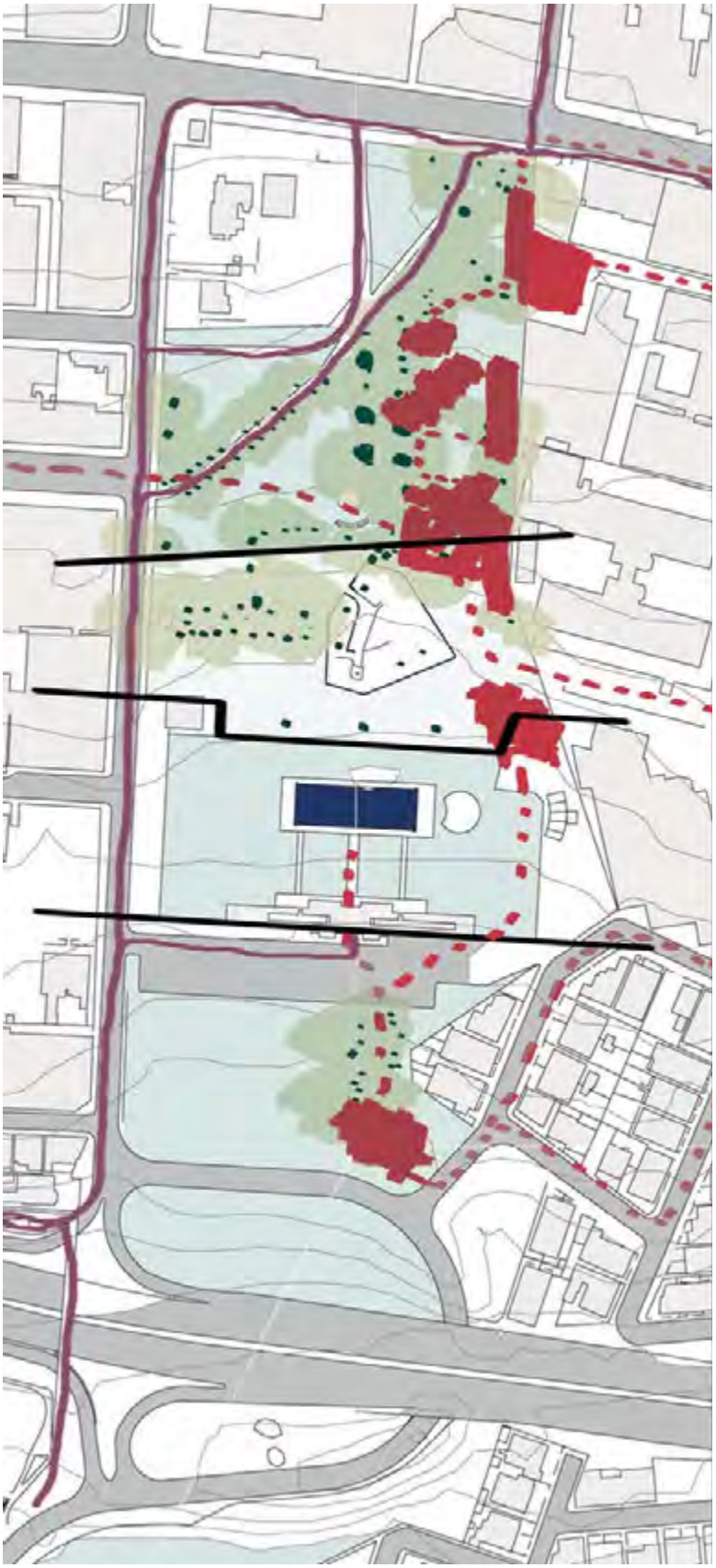


Figure 34

My aim would be to rejuvenate this beautiful park space by introducing new circulation routes opening up the east side of the park with programmatic activators to bring the space to life .

It is important to deal with the site respectfully, and reveal the importance of what is already there. Program will be placed in the park along this new circulation spine, specifically to activate and rejuvenate the spaces and take complete advantage of the richness the site is presenting. It will create a journey for people to wonder through and explore, presenting the raw and refined architecture explained above in Part 1. This access way will be cyclist and runner friendly with water points along the route to make this possible. Promoting the possibility of the park having an area which is safe enough for night activities, with a well designed area that can be utilised.

Architecture can connect us with the external world. It gives us specific perceptual frames and horizons of understanding. I will use architectural space to stimulate, guide, choreograph actions, interests and character within this new park..(Juhani, 2014)

Figure 34: Introduction of new circulation route to open up the East edge of the park. With program scattered down the site to activate existing spaces. Map showing zoomed in portion of site.

Communities and Schools in the area

The park is surrounded by and has the potential to be utilised by three main categories of people.

- Commercial workers in the area
- The local community in housing to the South West edge of the park
- Schools in the area

The Schools in close proximity to the park are:

Marion Institute Nursery School
Mountain Road Primary School

St Agnes Dominican Convent Primary School
Alpha Primary School
Holy Cross RC Primary School
Walmer Estate Primary School
Chapel Street Primary School

Walmer Secondary School

Zonnebloem Nest Senior School
Queen's Park High School

BHC School of Design(college)

After understanding the site in terms of use and how it fits in the community and the great potential it holds, I tried to answer the question:

How could architecture change this site? How could I construct a facility using the landscape that presents itself along with material and light to present a character within my building and also a new and revived character of the park? Can the building became what activated the space . The fall of the land lends itself to carving out of and terracing, carving an urban Cave

What is my site strategy? What must it follow?

- Circulation- remove boundaries to allow fluid circulation along east side of the park
- Open up new access from the east to allow a through way directly across to Searle Street.
- Use the geometry of site and its assets to set up a perimeter to work with, include active program along ' dead' east side of the site.
- Emphaise the existing assets in the park, redoubt , tree, lay of the land

Design keeping in mind
- material and lighting
- Raw vs refined joining and connection

-What will the new character of the park be?

PROGRAM

My program will accommodate these different groups of people allowing the park to be used to its maximum potential.

Park maintenance offices- which exist in the north west corner of the site will be moved to the entrance off Victoria road. Raised office space will be provided to allow surveillance of the park- eyes on the site to make people feel more safe and comfortable.

Restaurant/café/tuck- shop area to serve the children in the afternoons and to attract outsiders to this exciting space. With several outdoor seating areas to service the commercial workers during their lunch hour and free time, a well-designed park to be utilised by the local community

Resource center - For the many school children in the area the program will provide spaces that accommodate fun activities, in combination with learning in a safe, supervised, beautiful outdoor environment. A resource center to facilitate the after hours life of school children in the area and the local community and also allow them to further their education with spaces conducive to learning.

Auditorium and classrooms space- With an auditorium for more formal classes or talks,(for the children of after hours adult learning), Interior rooms such as classrooms, reading rooms, that allow the children space to do their homework and be within a quiet environment and multi-purpose spaces to facilitate extra mural activities, such as art and drama with exhibition space to display these works.

Amphitheater Well-designed outdoor space allows the children to make use of the park to its full potential with play equipment and an outdoor stage area and amphitheater allowing them to be expressive.

Multi Purpose sports Hall- Having a pool on site promotes an active side to the park. Because of this the program will include a multipurpose sports hall to be situated near to the pool to allow that vicinity of the park to be an active fitness hub for the school children to use. With the hall acting as a large indoor area where school events such as prize giving's etc can be held.

To ensure the safety of school children using the park After Care adult supervision will be provided Volunteer staff members will be present on week days, Monday- Thursday from 12.30 to 18.00 and Friday from 12.30- 16.00. Staff will be stationed inside and outside throughout the afternoon helping facilitate activities to keep the children occupied and stimulated. The restaurant will provide extra adult supervision .

Breaking down of the program

Figure 35

Throughout the design my program will allow me to express material and light that will enrich the buildings that is developed and express a strong connection to character of place allowing work to be done with the land and carving out spaces.

To the left I have categorised my program according to spaces that will be provided and broken each space down into fundamental categories that I will be using to design the individual space, with regards to light/ darkness positioning and connection to the park.

Figure 35: Program broken down into fundamental categories as part of initial design process

Figure 36

Figure 37

The initial program I wanted to introduce to the site was that of a library. This would sit along side the park and help activate it by providing spaces for all different community groups. The reason for this choice was the importance of light in a library and peoples reliance on their senses experience and move through it.

Although what is a library today? Is it a resource center? Does it contain actual books? Or is it completely media based? As you will see from my program listed above (Figure 35) I have chosen to create a resource center which programatically contains most spaces a modern day public library would include. It is a translation and my own version of a library. I have therefore included precedent studies on two libraries that take full advantage of natural lighting and material choice.

Phillips Exeter Academy Library- Louis Kahn
Kahn focuses on a very simple approach. Having natural light entering from the center as well as all four sides of the building which he uses to his advantage. He places seating at these points. Where people will sit and read and take advantage of the natural light illuminating the space. He has then put bookshelf space and circulation where artificial light is employed to light up the area.

Darwin College Study Center
This example also orientates the reading and working spaces in the library closest to the space that has strong natural light. This library deals with materials in a very delicate way, with the main bulk of the building almost fading away and leaving the wooden walkway in the north facade to act as the face of the building.

Figure 36: Internal lighting of Phillips Exeter Academy Library- Louis Kahn.

Figure 37: External use of material in Darwin College Study Centre

PART 5

Design methodology and strategies- design development

Creative collages

Figure 38

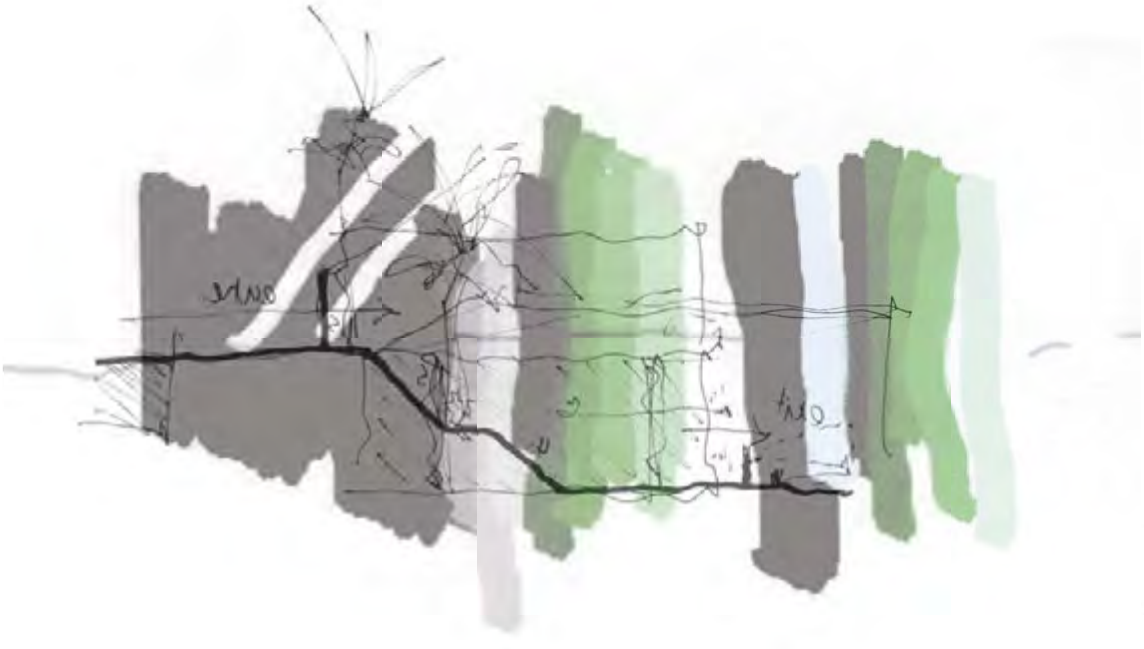


Figure 39

A special relationship exists between rock and light as a result of their natural occurrence (e.g. caves, cliffs and mountains). The power of the spaces which they create can be seen replicated in architecture. Caves present a series of transition spaces from the dark, damp and wet depths progressing slowly into the warmth of vegetation and light. These spaces present a series of boundaries/ thresholds with different characteristics and atmospheres, each putting forward a new architectural lesson or condition enclosed by rock. A cave presents a world of ideas; showing collaborations of material, space and light.

Key images that describe my design intent for a scheme are the ones that follow. Showing a combination of raw and refined architecture and an overlap of phenomenology and a created experience. I used this as my starting point for design and went through a process of drawing, modeling and drawing again to obtain useful information to continue designing with.

Figure 38: An assemblage of different images showing specific atmospheres (qualities) experiences, phenomena that I visualized taking place within a building along a section of site. Representing the transition spaces showing a progression of images from complete darkness slowly being punctured by light and finally ending outside the in the open air .

Figure 39: A drawing done to capture the Figure 38 (atmosphere collage) in a simple yet descriptive way. Allowing the feeling of the image to come through in a colour strip. Again with the darkness being punctured by light moving left to right from utter darkness to light.

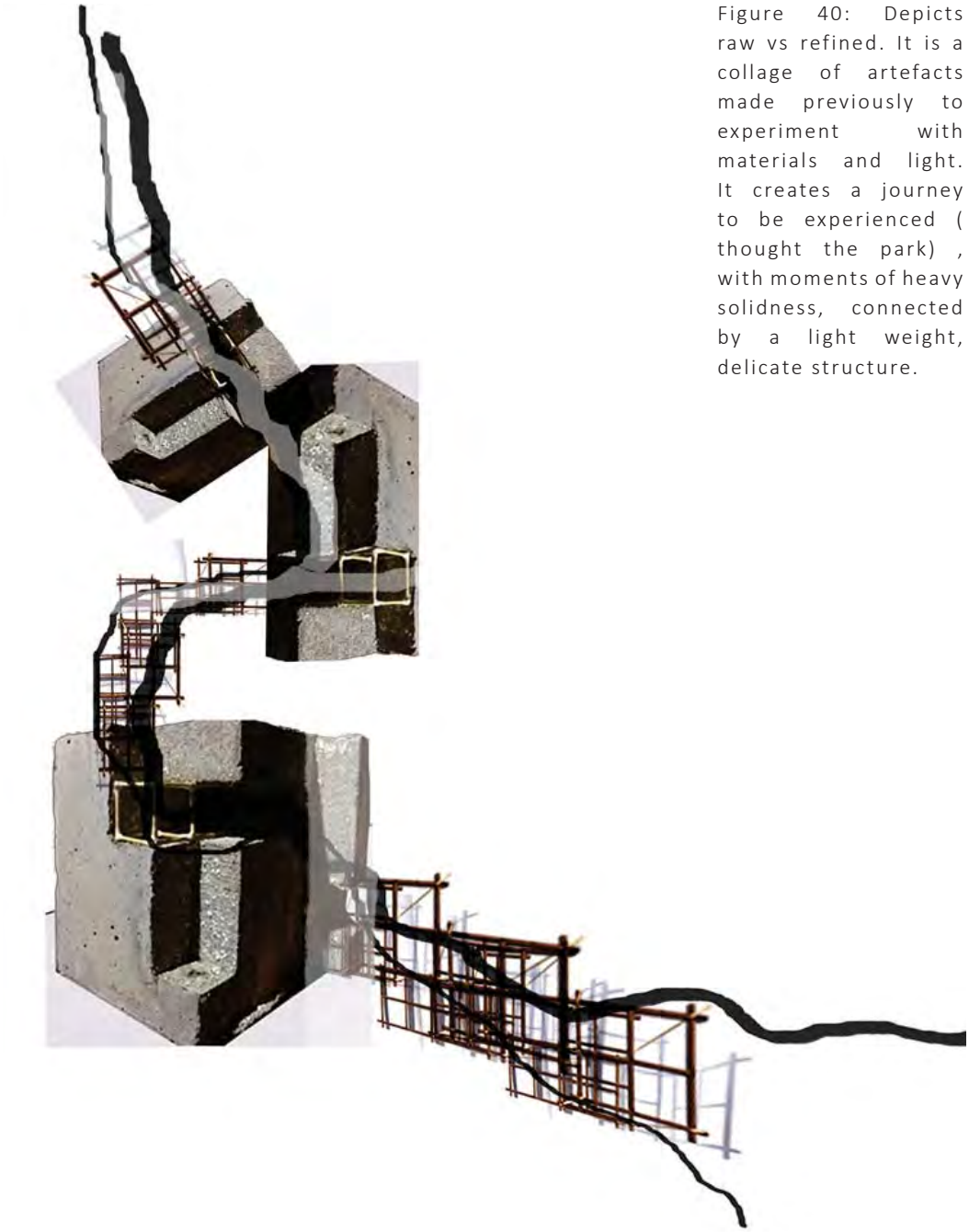


Figure 40: Depicts raw vs refined. It is a collage of artefacts made previously to experiment with materials and light. It creates a journey to be experienced (thought the park) , with moments of heavy solidness, connected by a light weight, delicate structure.

Figure 40

Figure 41

Figure 41: shows an overlay of two drawn artifacts. A phenemenological drawing and built form collage.

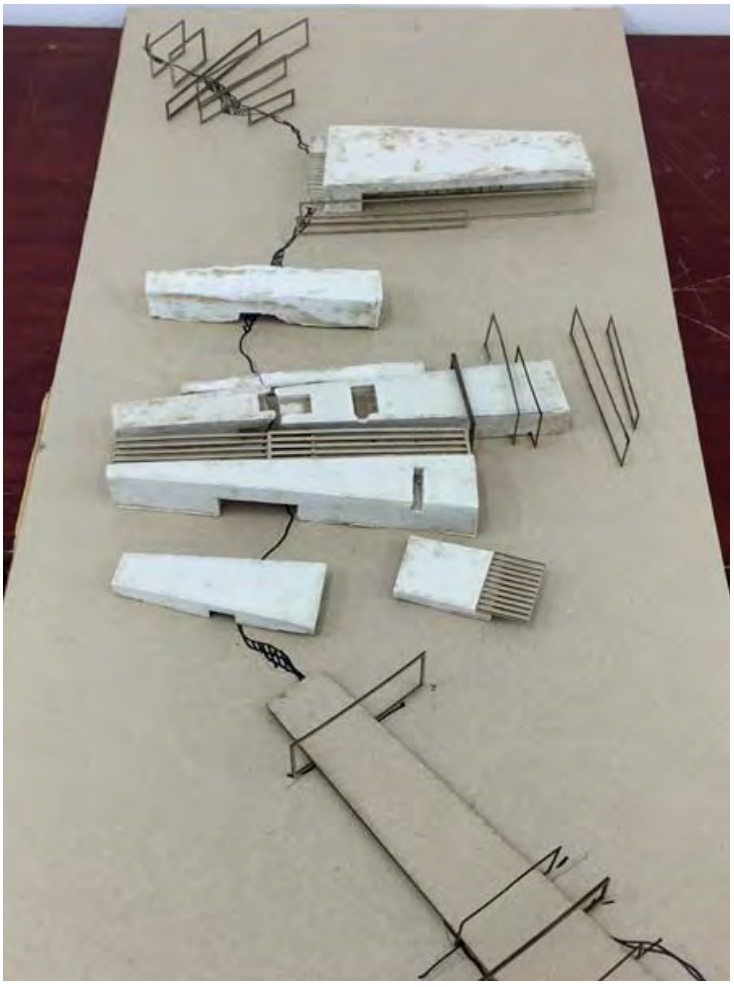


Figure 42

Figure 42: is a model representative of these two drawings overlayed.

Figure 43: Photographs of plaster cast and laser cut model- showing different angles of entry.(model in Figure 42)

The overlaying of raw vs refined and the phenomenological experience drawing lead to this model, creating a built journey though the park dealing with a solidness, and a framed structure.

Figure 43

I then used these diagrams to spark an idea in both plan and section in a design scheme. Strategically positioning them on site to encourage a journey through the park and to then go further to construct the character for these spaces through my material choice and light design.

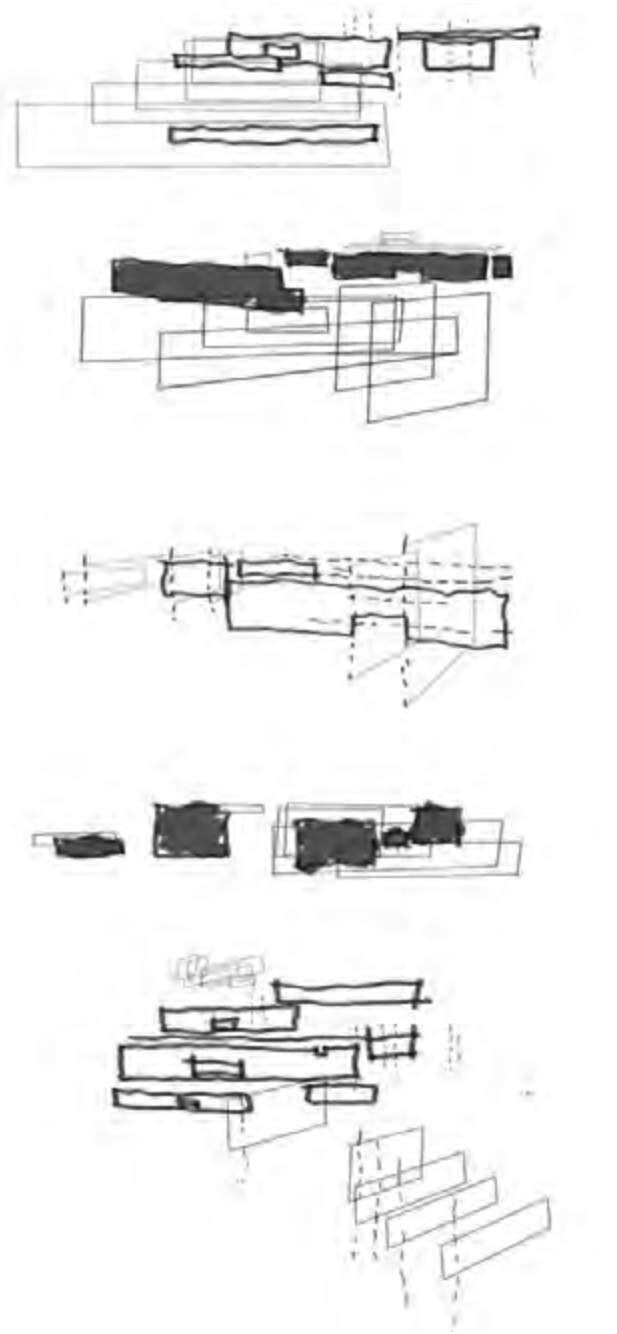
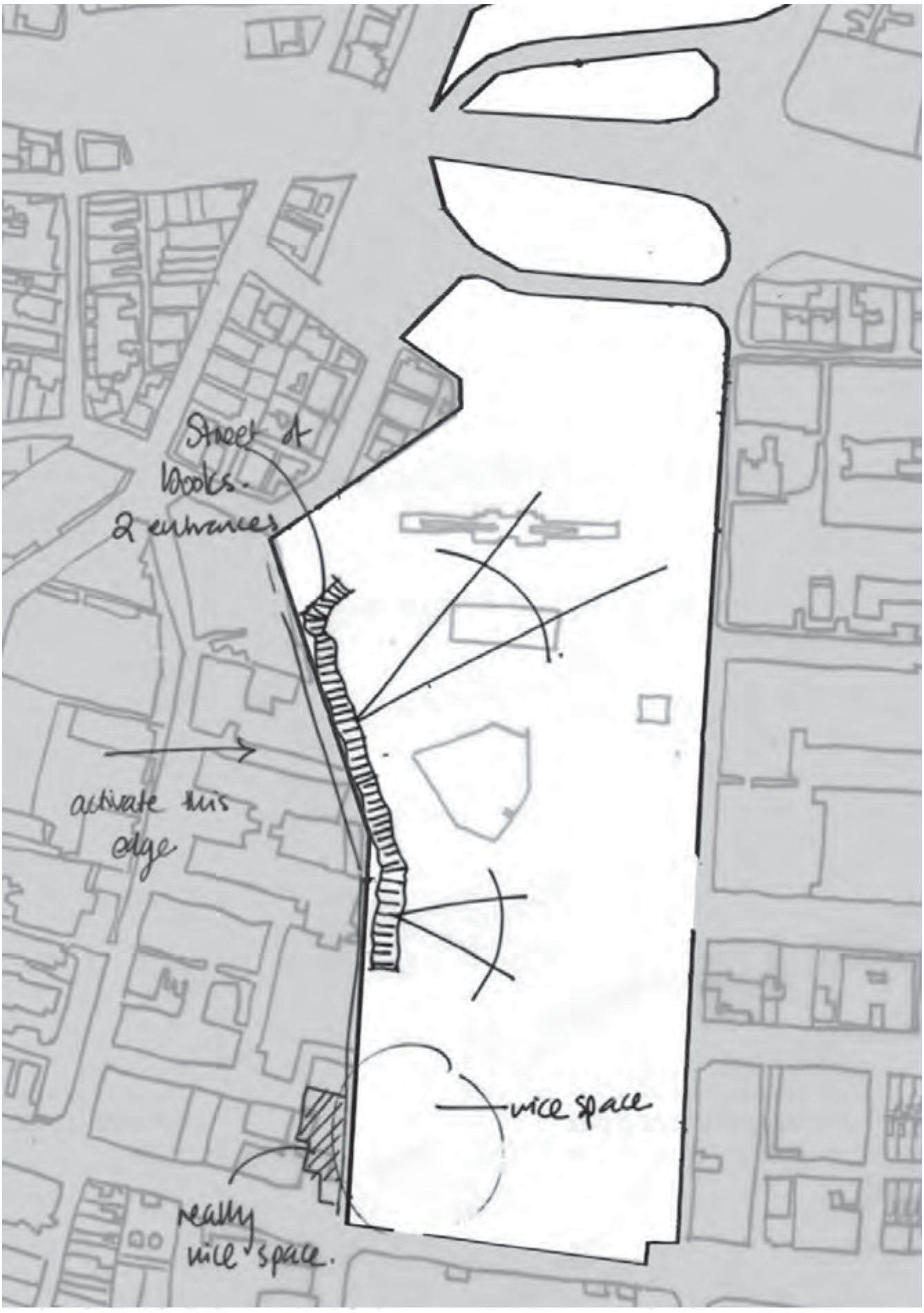


Figure 44: Drawings made from photographs(Figure 43) ,showing journey, layering, framing and solidity.

Figure 44


Street of books.
2 entrances
activate this edge
nice space
really nice space.

Strategy 1

My first design attempt was to create a linear library, One that ran along the dead East edge of the site to rejuvenate and reactive that space. My intention was to have a double story building winding down the side of the park that allowed for program to occupy different parts with some spaces being carved out and some a series of frames holding an outdoor space together. The park management team to occupy offices on the second story allowing eyes on the site at all times to increase safety.

This served as a very helpful investigation but after further research the decision was made to a connection, route/pathway/ journey that worked linearly, along the east edge instead of the building itself. Having the experience(the buildings), pull out into different nodes of the park creating pockets and working with existing fabric to activate these different spaces and feed of one another.

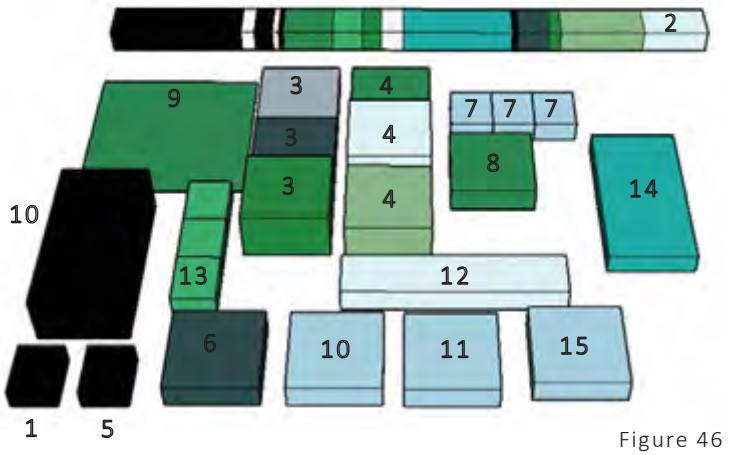


Figure 46

Figure 45: Linear library down the East side of the site.

Figure 46: Showing initial program to be included in linear library.

Schedule of accommodation:
1) Entrance
2) Bookshelf Space
3) Reading area
4)Outdoor reading area
5) book check out area
6) private study area
7)Quiet seminar rooms
8) Auditorium
9) Amphitheater
10)Multipurpose rooms
event space
....adult study area
11)Kids area
12) exhibition walls
13) Offices
14)Cafe Space
15) Bathrooms

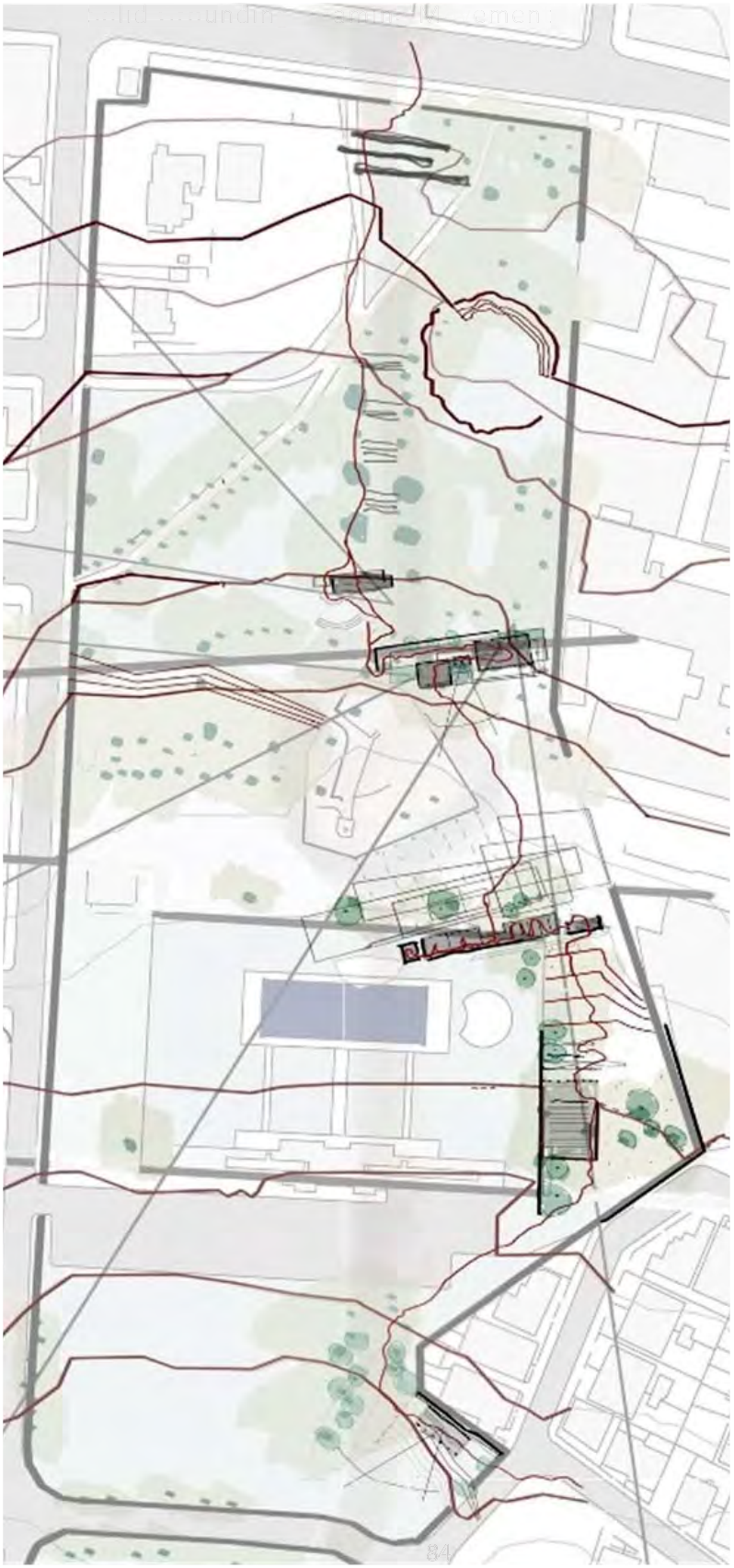


Figure 47

Strategy 2

Exploration of splitting up the program along the East side of the park to active and encourage the new circulation route. The direct circulation routes to the west of the park are for people who are passing through with different destinations in mind in contrast the new circulation designed to be explored and experienced as a journey.

By pulling apart the program it allows for pockets of space to be formed and held by the buildings, with program of both building and space working together to create this new character of the park. These spaces offer opportunities for indoor and outdoor activities.

By increasing the number of people using the East side of the park, safety will therefore increase.

The embankment / auditorium space uses the lay of the land and natural typography – including the courtyard of Old Tramway Depot to the east of the main ground space in front of the entertainment stage

This strategy is what was taken forward for further development.

Figure 47: showing activation of East edge with more consideration to lay of the land. Introduction of an amphitheater to optimise's existing land fall.

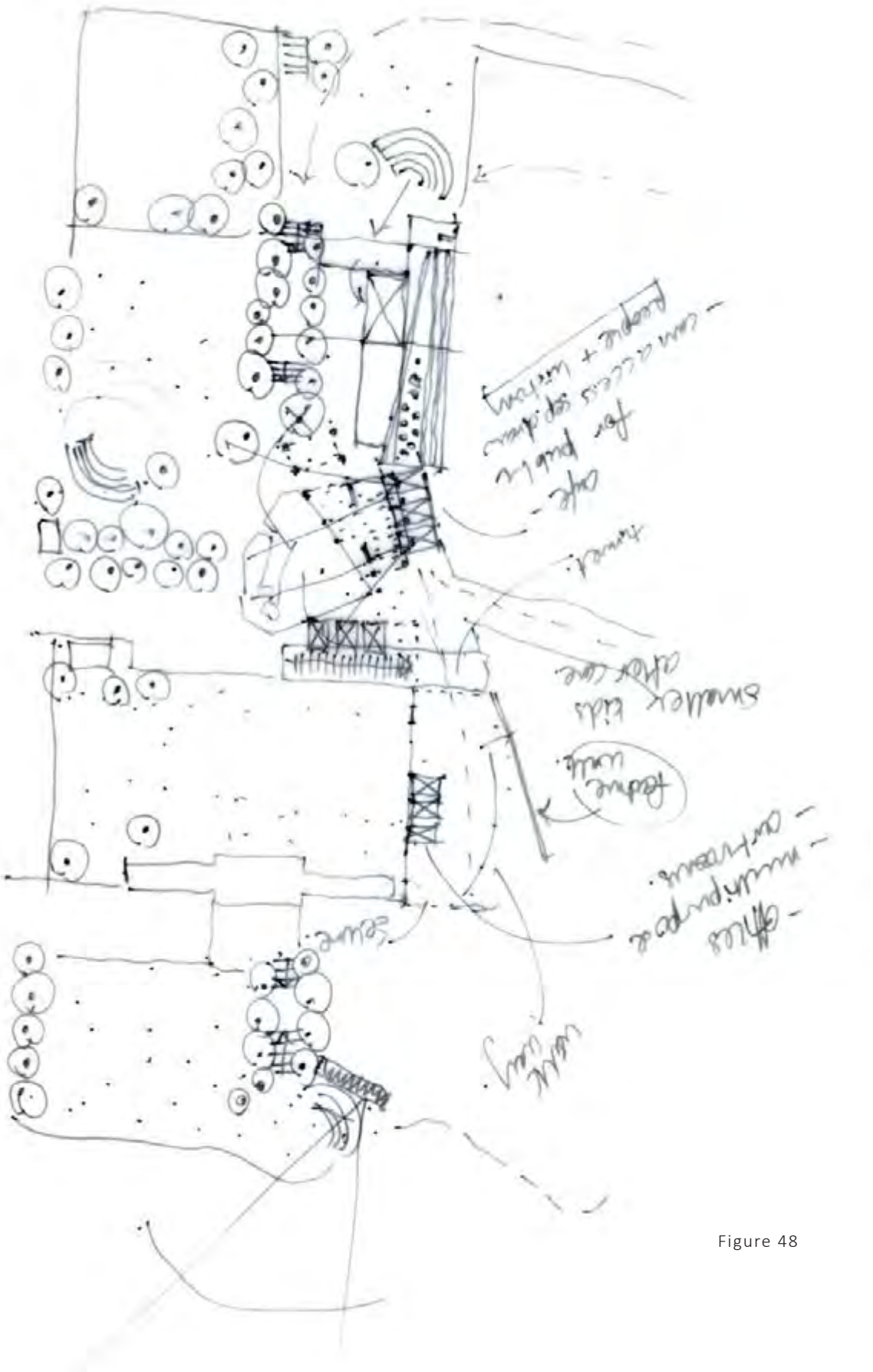


Figure 48

Figure 49

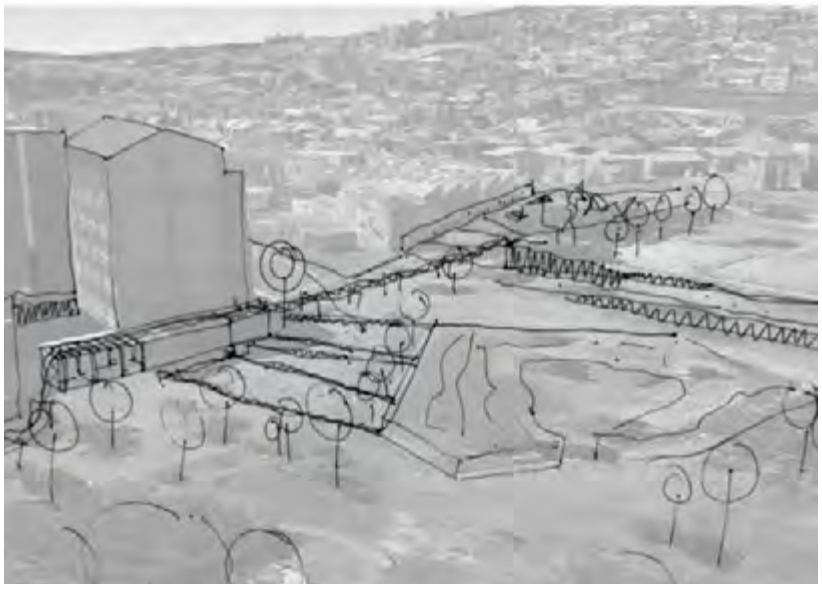


Figure 50

Figure 48: Sketch design of activation of the East edge. With program being split up and working with site assets.

Figure 49, 50: Aerial view of the site with overlaid drawing of how i imagine the site to look once a scheme is positioned on site..

Making the most of the parks levels

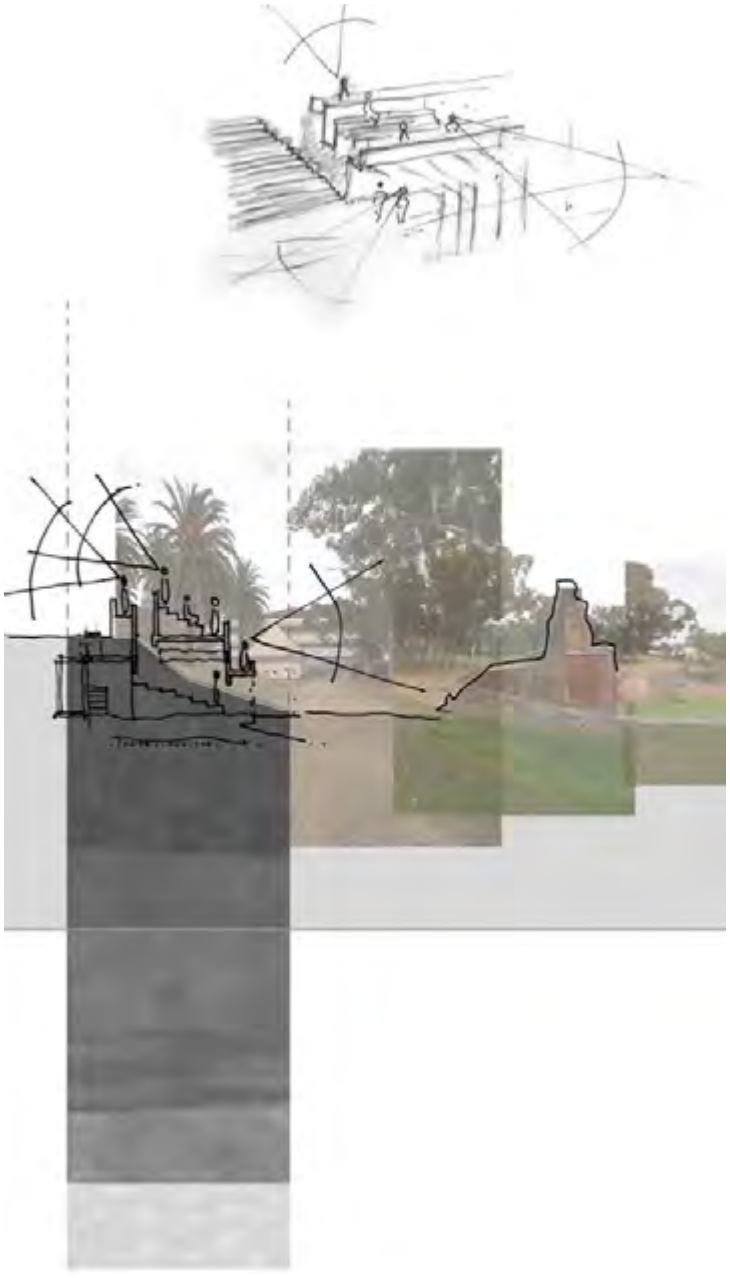


Figure 51: Collaged Section though initial auditorium design, taking advantage of the slope the site presents

Figure 51

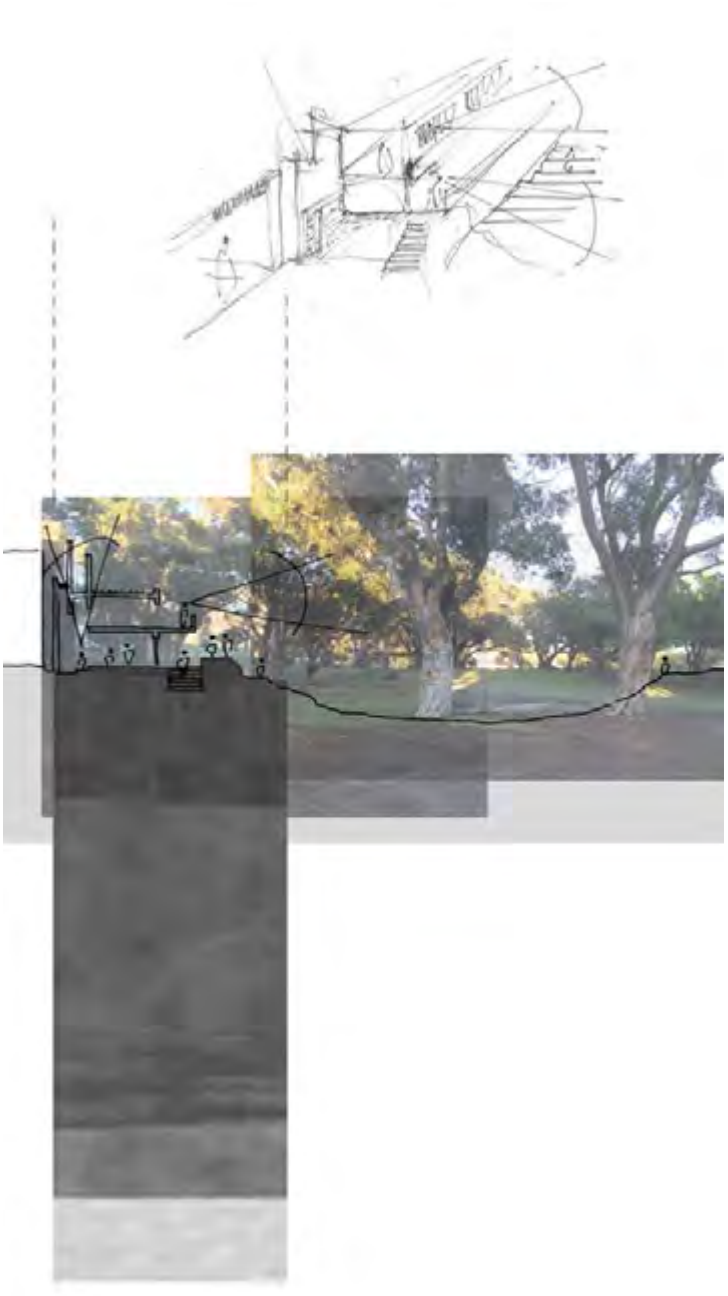
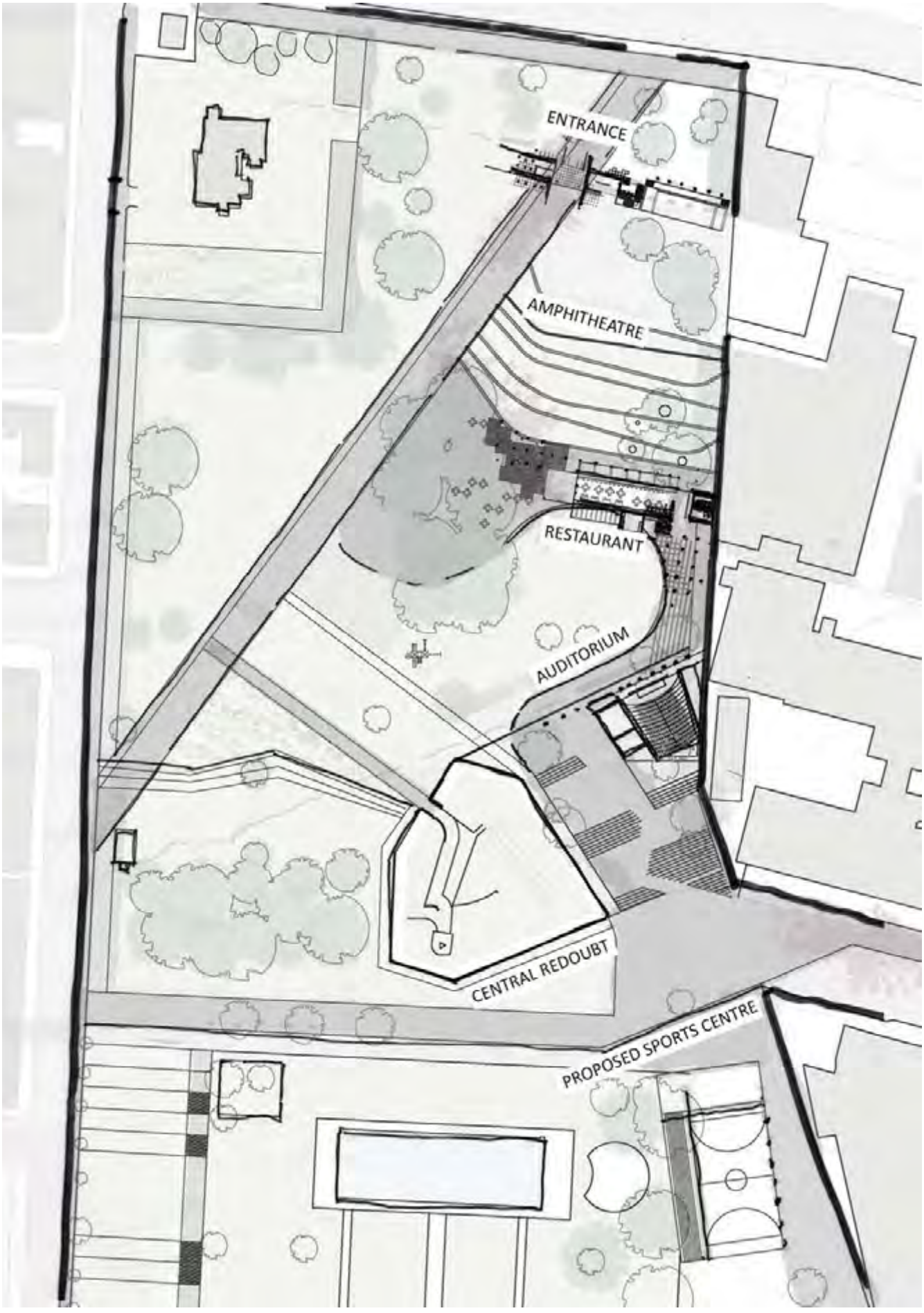


Figure 52: Collaged section through library space. Using site photographs to depict facade after section cut.

Figure 52

PART 6

Further Development


ENTRANCE
AMPHITHEATRE
RESTAURANT
AUDITORIUM
CENTRAL REDOUBT
PROPOSED SPORTS CENTRE

The program is structured along the East side of the site with the introduction of a new access route directly to the east and to the south east.

Moving from North to South the site program is structured as follows, In the pages to follow the logic behind each intervention forming a new journey is explained.

Entrance offices for park maintenance staff- surveillance
Amphitheater
Restaurant/ Multipurpose spaces
Auditorium
Central Redoubt remains focal point of circulation
Proposed sports center facilities next to pool (further development)

Figure 53: Site plan clearing marking the final placement of where each part of the program sits along the journey

Smallest paving

Larger paving

Gravel

Darkest concrete paving

Middle toned concrete paving

Lightest concrete paving

Paving to grass connection

Grass

Flower beds

Flowers on pergola

Figure 28

Figure 54: Surface textures covering the park and new suggestive movement route

Entrance to the park

Figure 55

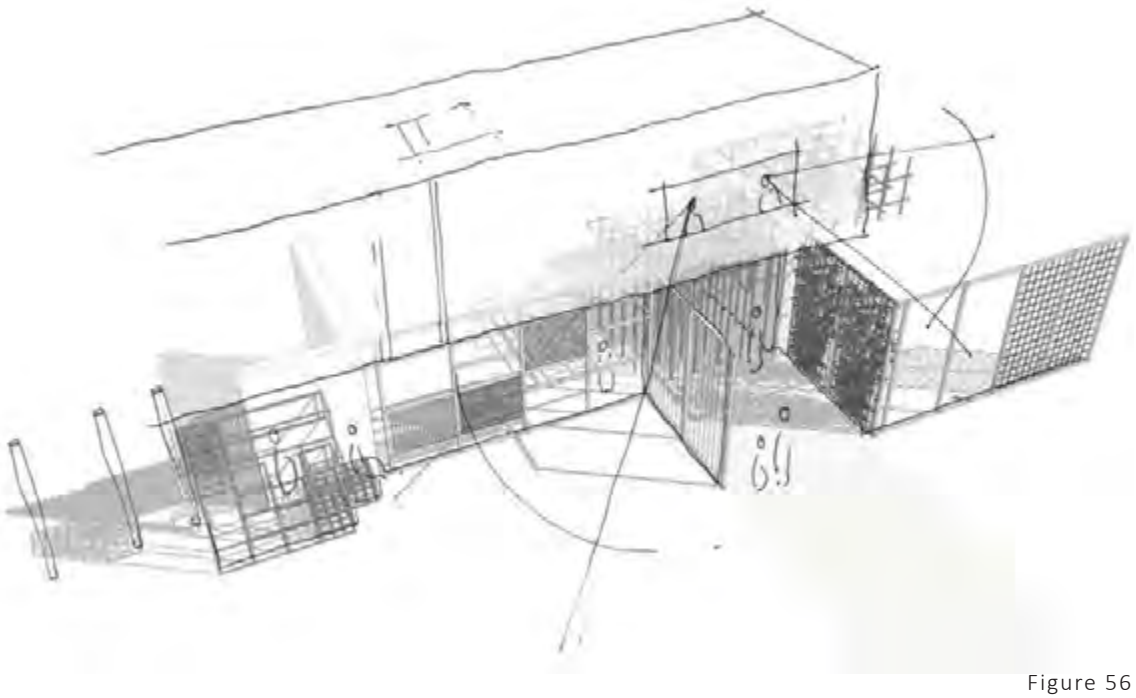


Figure 56

The entrance offices house the maintenance staff of the park. (12 people) A raised office space positioned strategically to allow for surveillance of people entering and exiting the park. Connected to simple outdoor stage facility used in collaboration with the amphitheater.

This will be a combination of a heavy and light weight structure. Heavy concrete walls grounding it, with light weight steel frame work and vines forming a more delicate language. Figure 56 and 57 show the beginnings of the form it will take on and how light adds character and adds to the experience of it. They are examples of form and light coming together, representing the more refined delicate architectural language within the scheme,

Figure 55: Original design of elevated office space inhabited by people entering the park A good example of what the facade of the entrance to the park will look like,

Figure 56: Shadow study on design development of entrance structure

Figure 57.: Steel structure taking on the form of artifact inspired by Carlo Scapra creating beautiful and interesting shadows.

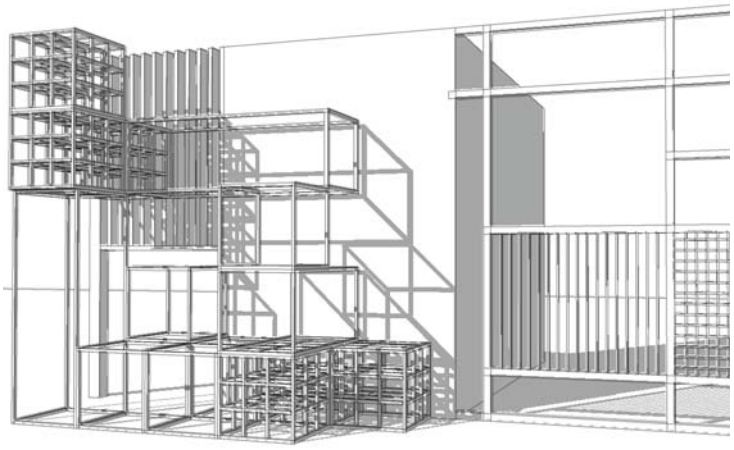


Figure 57

Park in use as performance space

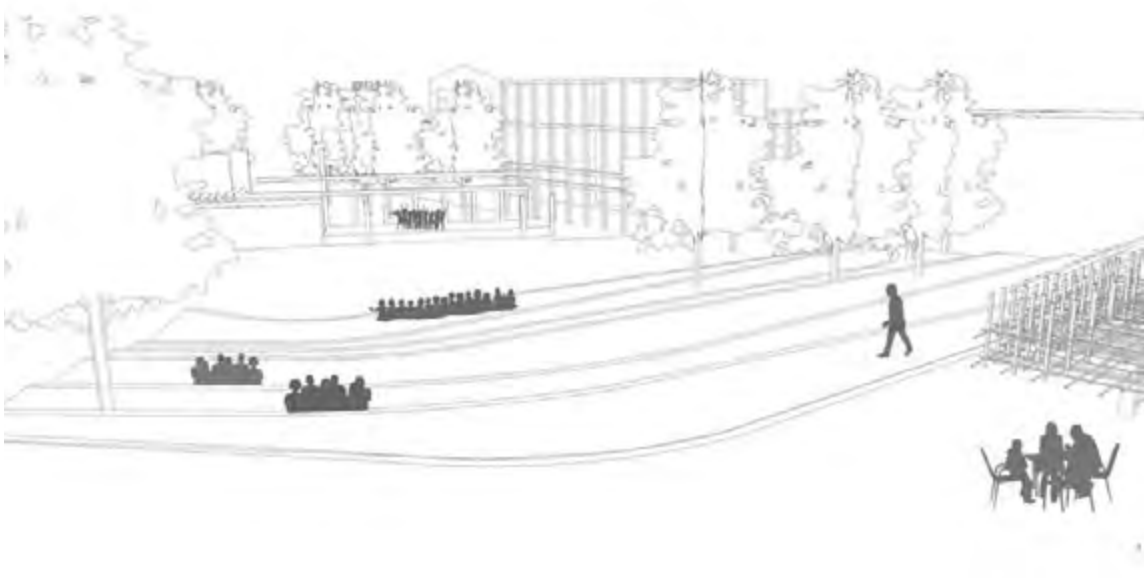


Figure 58

In the north east section of the site ,having manipulated the ground plane and surface, terraced grassed seating is laid out moving with the natural lay of the land working closely with the contours. This transforms the existing embankment into an amphitheater for the outdoor stage area.

The informal stage space attached to the entrance offices uses the column size and spacing of the Old Tramway depot to the right of it (Figure 58) to tie into the existing with its courtyard space opening up and spilling out into the park entertainment space.

The restaurant sits at the top of the terracing with a clear view of the stage. The architectural language of the restaurant and stage space/ offices feed off each other creating a dialogue and connecting the spaces.

Figure 63 shows the North facade of the restaurant/ multipurpose spaces Working with inspirational precedent with unique characters and developing an architectural language that includes all of these characters and still reads as a whole. The Upstairs area of the restaurant is dedicated to multipurpose spaces, of different sizes to accommodate smaller learning groups of children. This building has energy and will bring life to the park.

The Redoubt remains as a center piece to the park with circulation routes moving around it in most directions

Figure 58: showing W space in use with stage/ office space to be developed

Different phenomenological conditions

Figure 59

Figure 60

Figure 61

Figure 62

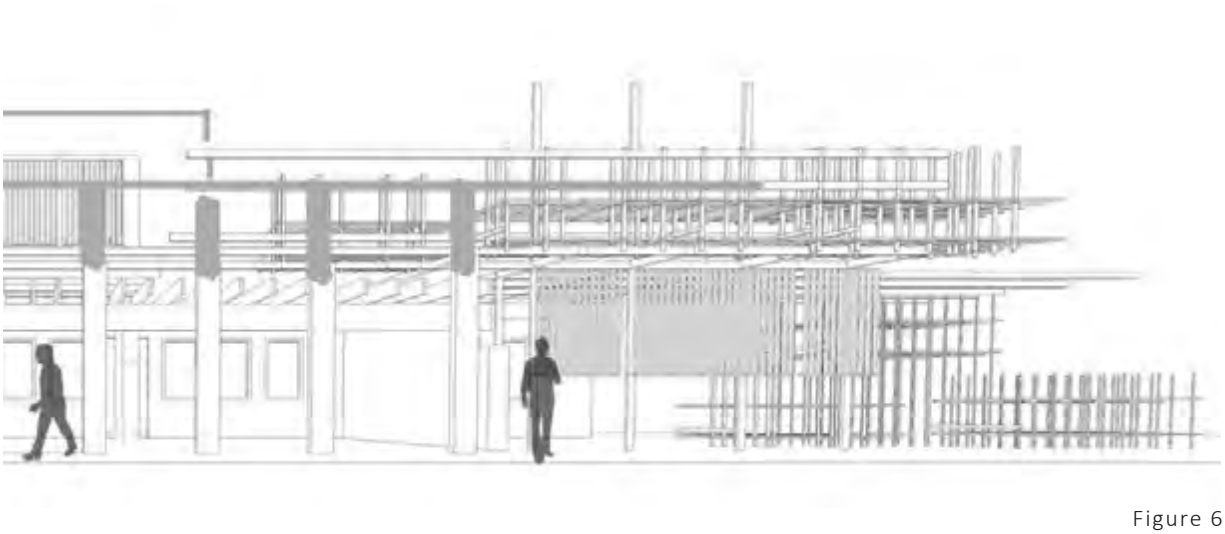


Figure 63

Figure 64

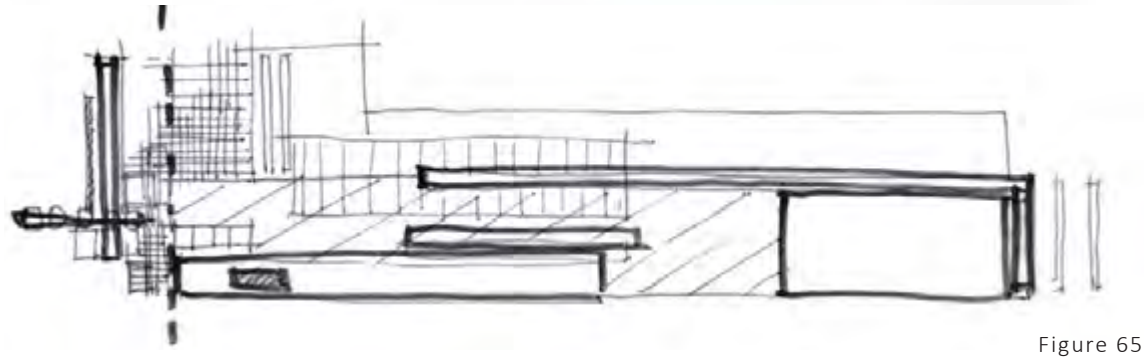


Figure 65

Figure 66

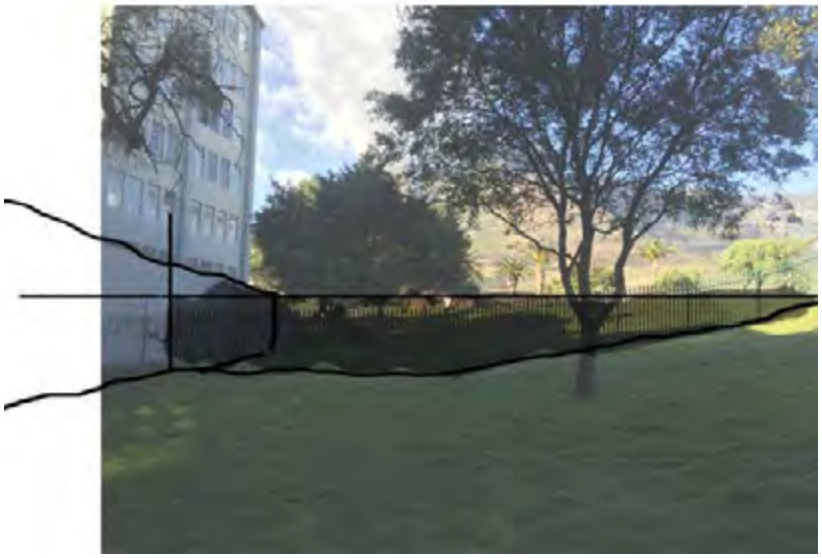


Figure 67

The Auditorium is positioned on site to make use of the existing slopes. With a 2.5m drop to the far east of the site. The auditorium fills this open area and the land is cut and filled where necessary.

Figure 64,65: Facade development of the auditorium with a more solid character and approach to this building. Concrete will form a large part of it

Figure 66: Collaged drawing of auditorum facade with Table Mountain view behind it.

Figure 67 Slope to the east edge of site.

Facade studies

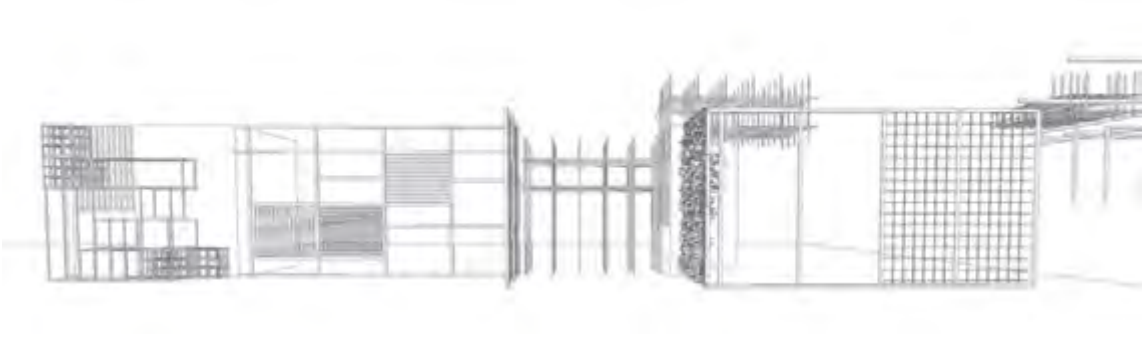


Figure 68

Figure 69

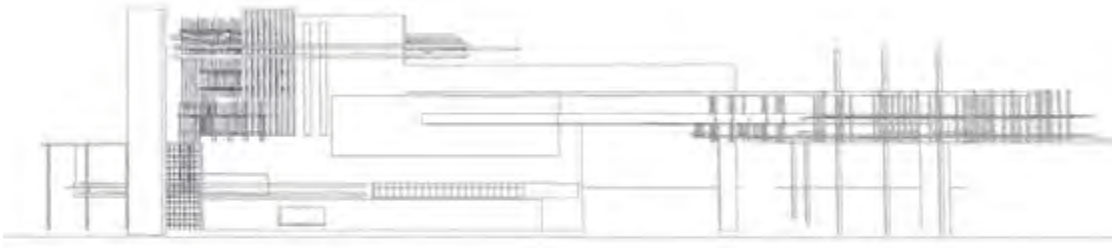


Figure 70

These drawings show the architectural language that is spread throughout the park. Each building has its own character and feel but reads as a part of an overall coherent scheme.

Using concrete and steel as the two main materials creating solid simple spaces as well as intricate defined spaces.

Figure 68,69,70: showing facade studies of whole scheme, Entrance, restaurant and auditorium.

Figure 28

Figure 71

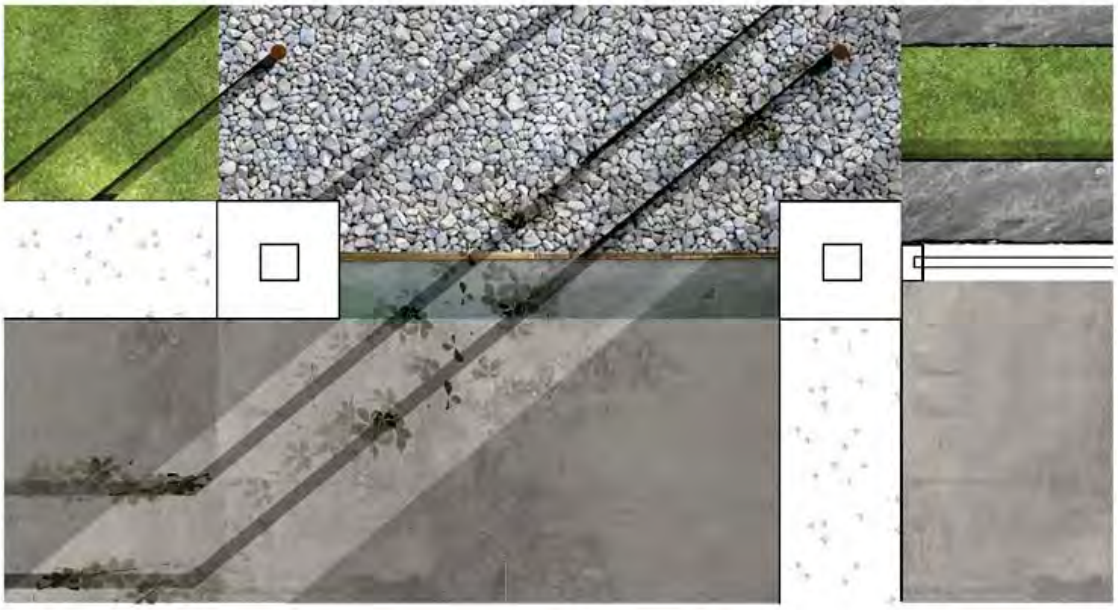


Figure 72

A representation of light working in combination with materials and nature. A technical detail that will occur within my scheme , shadow and surface interacting to create a beautiful internal character.

Raw and refined, heavy weight concrete walls acting as planes for the refined shadows to be viewed. Steel frame work and foliage on the external accompanying small stone gravel, grass and heavy stone slab stairs.

Figure 71,72: A combination of concrete, steel, light and shadows working together to create character.

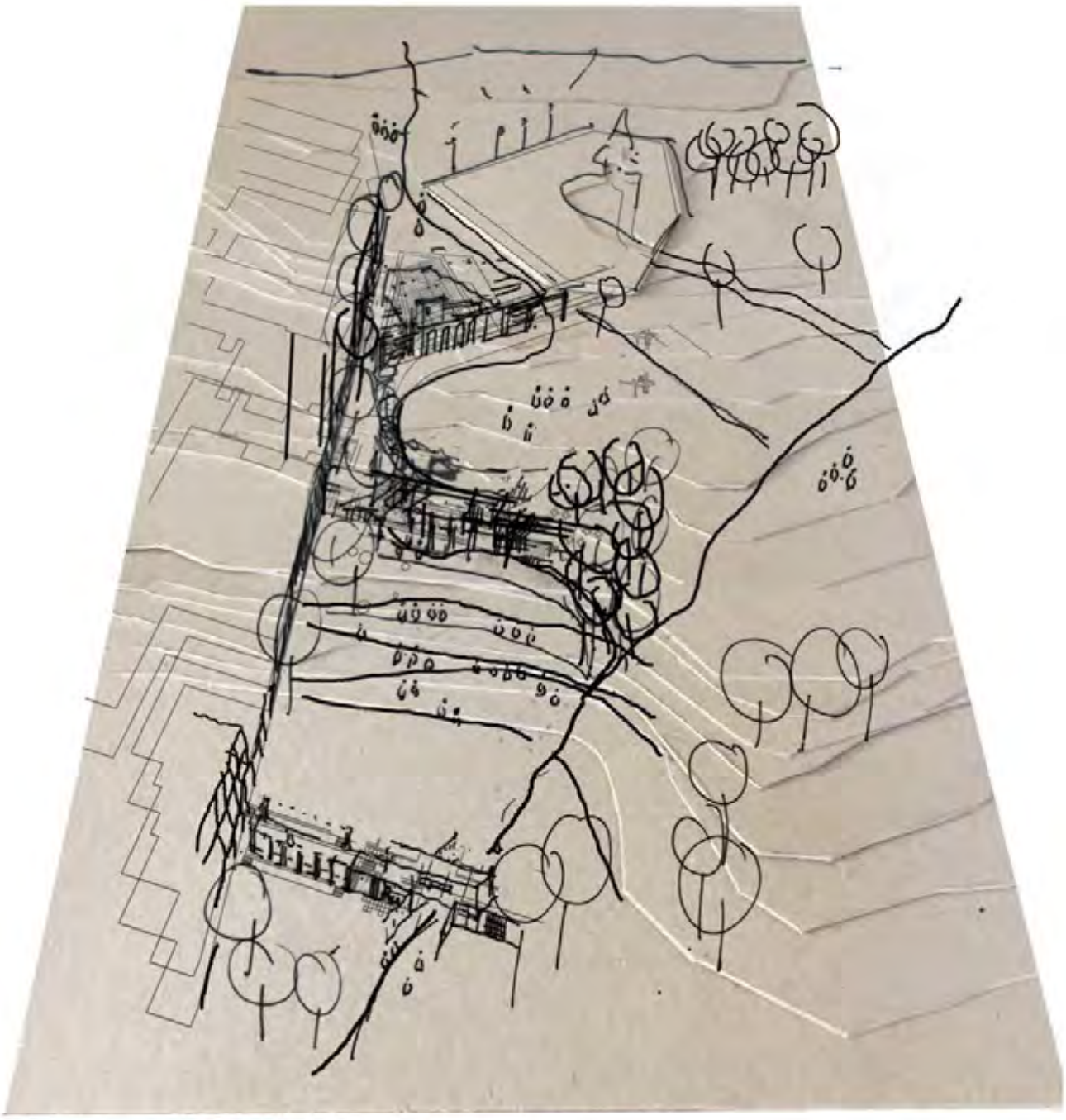


Figure 73

Through manipulation and use of different material and light I believe I have arrived at having constructed a new vibrant character that gives life to the park.

Using movement as a tool to allow people to encounter and interact with a solid ground, surface and textures merging into and forming a rich architectural language of raw and refined.

The architectural scheme has developed along the way and through understanding the parkscape as a series of levels and nodes waiting to be activated.the project has emerged

Ultimately the project is about using architecture to reactivating spaces that already exist and using the rich opportunity they provide to create a new character for Trafalgar park turning it into an asset for the Woodstock Community.

Figure 73: A combination of built and drawn work. A built contour model overlaid with a drawing of the scheme working as a whole creating a new exciting character for Trafalgar park.

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