Experiencing the Middle *an investigation into the experiential qualities of site, space and materials*

DESIGN PROJECT DOCUMENT

Submitted in partial fulfillment of the degree Master of Architecture (Professional)

University of Cape Town

2009

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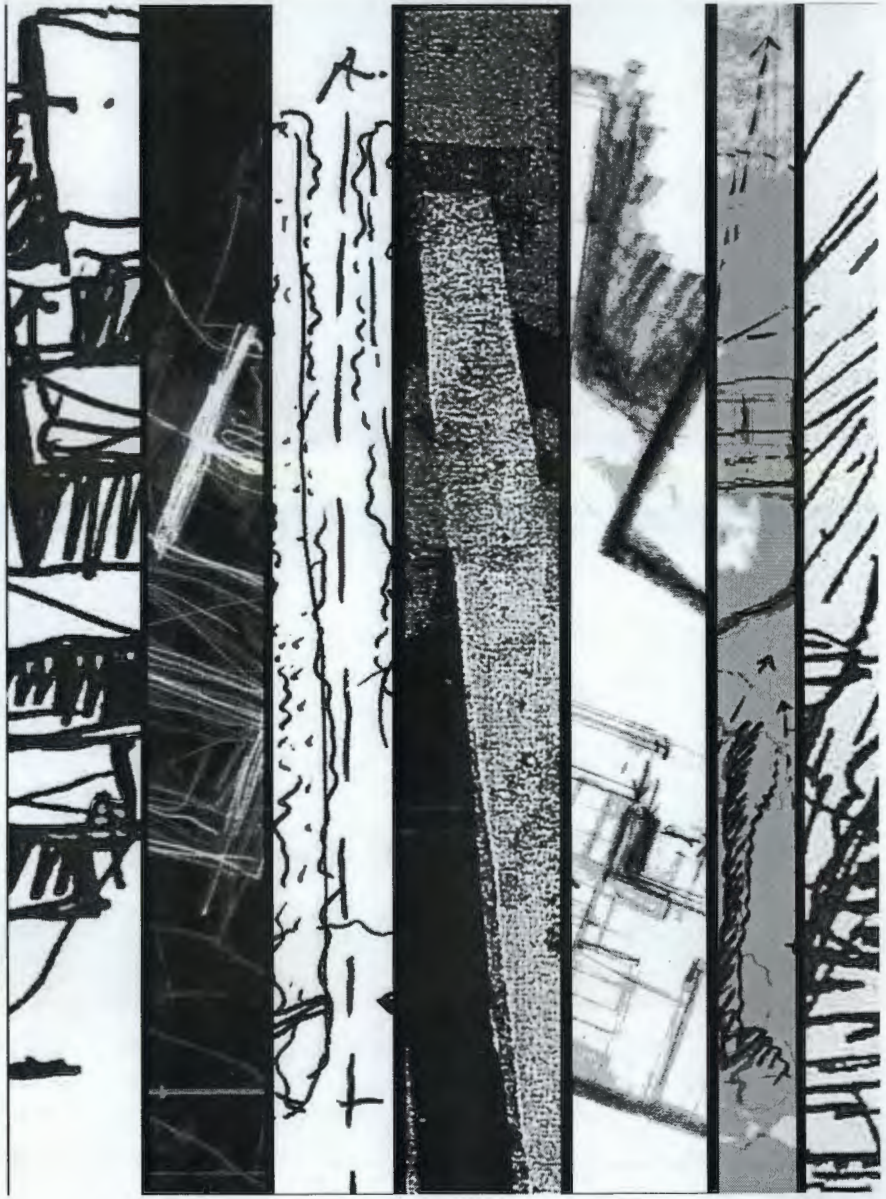

M.ARCH DESIGN PROJECT DOCUMENT
UNIVERSITY OF CAPE TOWN
OCTOBER 2009
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INTRODUCTION TO THE DESIGN PROJECT

INTRODUCTION

My architectural thesis investigation stems from an interest in the materiality of architecture and the "life-giving" [1] characteristics that materials can have in capturing the character or essence of a place. As this interest has developed, I have simultaneously developed an appreciation for the phenomenological and sensorial opportunities and possibilities that lie within the nature of a site and how these opportunities can be utilized to enhance the experience of the site through architecture. Each site contains quantitative phenomena, but also contains more ethereal phenomena such as 'feelings' and emotions, which often leave a longer-lasting impression and spiritual connection to a place, rather than a mere formal recognition.

For example, being within a cool, dense and dark forest; with tall and towering trees above; with old, crunching leaves below or out in the soft open field, with the warm sun beaming down and one or two clouds slowly drifting overhead, on the same piece of mountain side, will have vastly different sensorial characteristics and moments, whilst still being connected to a greater site, which carries its own qualitative elements. These feelings and emotional connections to the site are dynamic and temporal, as they will also fluctuate according to day/ night or weather/ season.

I find the process of approaching design through this conceptual filter extremely exciting, as one is constantly thinking about and engaging with the body of the user. It is important to find, through processes of 'experiential mapping', specific characteristics and moments, which inform the programming of a site. Questions are constantly asked as to what the body will See; Smell; Hear; Taste; Touch or Feel and Think; as the user moves through the site and space. Architecture is therefore given back to the body, contrasting the formal fascination and abstraction which occurred during the Modernist movement.

How does one then capture these less tangible phenomena architecturally and engage the senses of the user? Spatially these opportunities can be materialized through the amalgamation of, and complementing and contrasting expressions of site specific phenomena such as:

- textures;
- light / shadows;
- cool/ warmth;
- sound';
- materials;
- enclosures / voids – static / dynamic ;
- flow of contours;

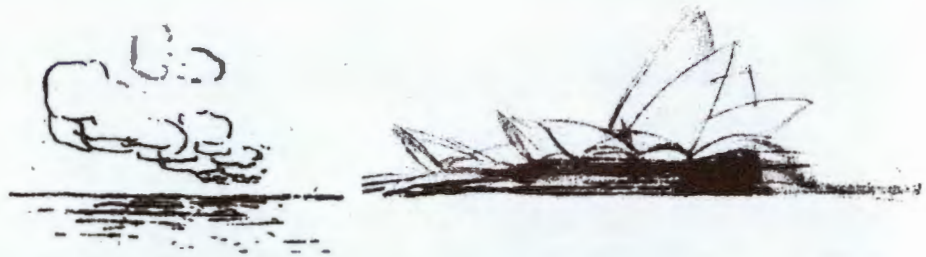


Fig.1 & 2
Concept sketch development for Sydney Opera House
Jorn Utzon

[1] The term 'life-giving' is used here in terms of engaging and enlivening the sensory experience of the user.

The site is the spatial experience which the body occupies between sky and earth; between roof and floor; and between the architectural elements which are *of* the earth and those which sit *on* the earth. The nature of the ground which is walked upon; the nature of the sky above; the nature of the boundaries which enclose; these are the phenomena which act on the body in space, and it is this *space* that is referred to in this project as the *middle*. The body occupies this middle and it is here where my thesis interest lies. The term "middle" has been adapted from K. Michael Hays in the book "*Delayed Space: the work of Homa Fardjadi and Mohsen Mostafavi*" where he speaks about the "middle as a site for action" (Mostafavi: 1994: Pg 9). I re-interpret the 'middle' as a 'site for phenomenological action,' or the act of experiencing site, space and materials.

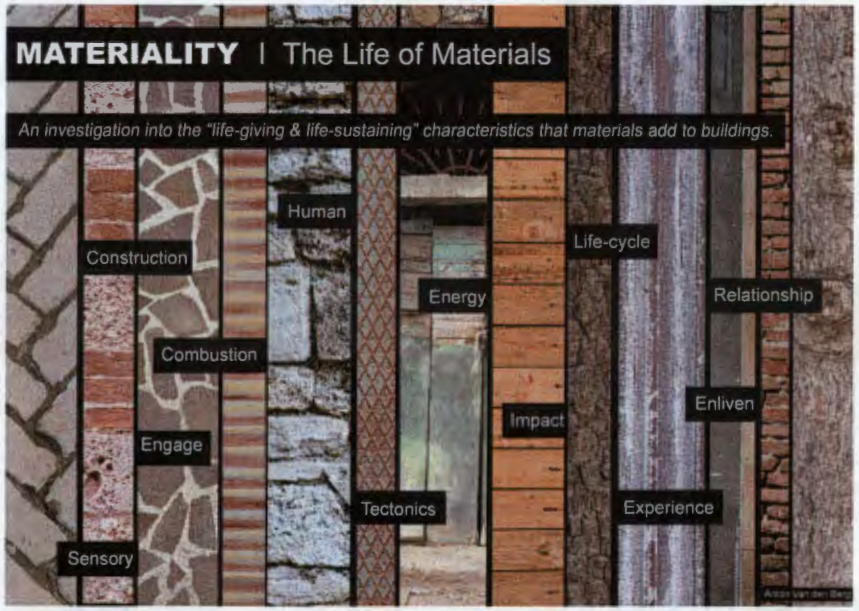


Fig. 3
First thesis topic proposal representing an interest in Materiality and the Life of Materials

As the Theory and Technology documents dealt with the theoretical and technical aspects regarding my thesis investigation, this Design document deals with the Design Project and aims to introduce the thinking behind my design process. During the course of the document I will go into more depth regarding choice of site and program, but I feel that it is necessary to briefly introduce you to my thesis project.

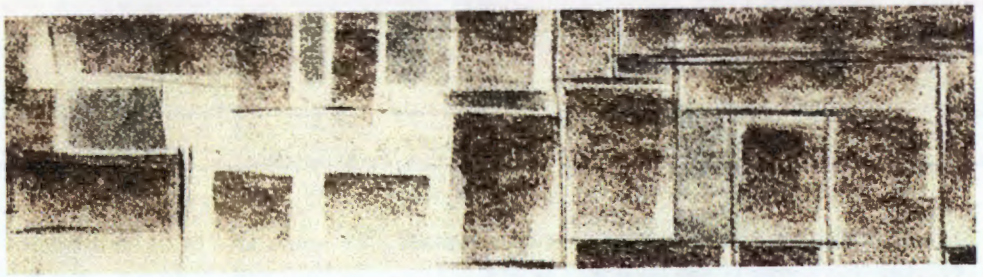
I have chosen the Old Groote Schuur Estate Zoo as my site for investigation, which sits on the slopes of Devil's Peak and to the South of UCT. Programming the site aims to recognize the potential for the site to act as a public 'gateway' into the greater mountain estate and incorporate movement routes across the site. Other appropriate functions have also been incorporated into the site-programming in order to re-establish opportunities for a multi-functional and diverse connection with the landscape and greater mountain estate in order to utilize this unique piece of 'natural'[2] landscape and appeal to and benefit Cape Town and all its inhabitants and visitors.

The program consists of:

- A Visitor's Information Center;
- Environmental Educational Camp;
- facilities for the "Theatre for Africa";
- a Restaurant.

[2] The site is not a natural landscape as the estate was constructed under Sir Cecil John Rhodes.

Fig. 4
Old Zoo Site
Google Earth



DEVELOPMENT OF IDEAS THROUGH RESEARCH

DEVELOPMENT OF IDEAS

Theory & Technology Research

Through the Theory and Technology papers, built and written investigations into phenomenology and experiential qualities of architectural space have been explored. Although I do not intend to repeat much of what was written in those documents, I believe that there are certain important points and opinions regarding the making of architecture through this conceptual lens that deserve to be represented in this Design document, in order to locate my project within the greater discipline of architecture.

Texts by Norberg-Schulz, Steven Holl, Peter Zumthor and Juhani Pallasmaa have been explored in order to investigate the phenomenology of space and the essence of 'place', whilst further texts by Kenneth Frampton and Gottfried Semper provide tectonically orientated arguments towards the actual making of space.

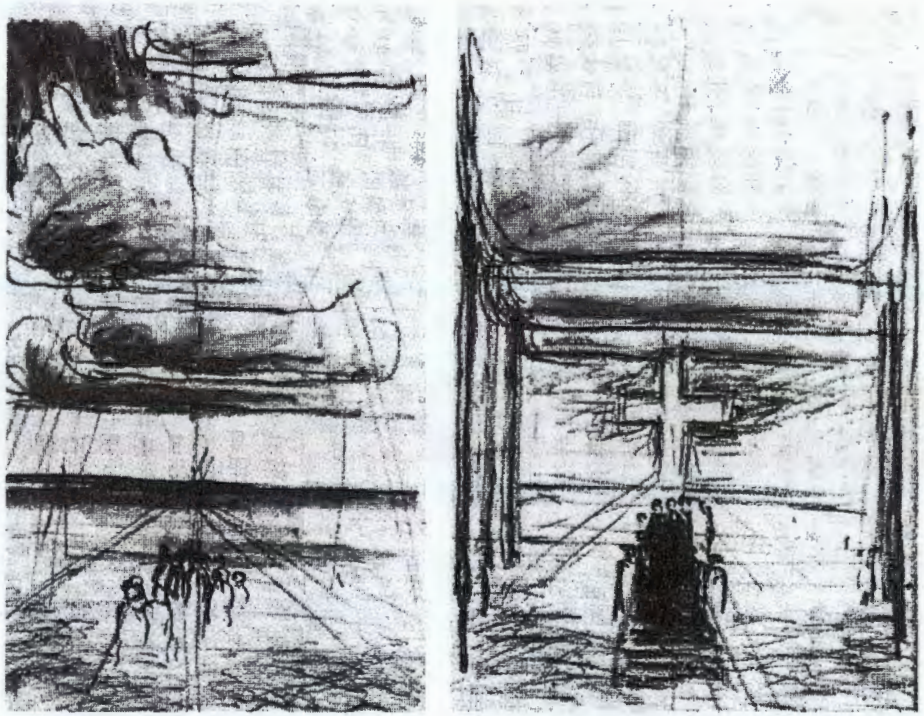
An important departure point for the theory and technology arguments was to recognize that the abstraction and formal approach of Modernist architecture lead to sanitised buildings being produced, seeking a timeless quality which attempted to be devoid of any signs of aging. This resistance to natural weathering disregards the natural setting of the site, and produces architecture which objects to developing over time with the site around it. Unlike music, sculpture or other experiential arts, architecture is physically bound to a place. It is important to absorb the qualities and experiences of existing site specific phenomena and conditions into the architecture.

The natural wear and tear of materials creates significant experiential qualities for the user, providing evidence of climatic and human interaction. This process of weathering allows people to locate themselves within the dynamic timeline of architecture and site. Norburg-Schulz refers to phenomenology as a "return to things" (Norberg-Schulz: 1980), which architect Steven Holl can be seen to elaborate on by explaining that an architecture based on the physical experience of materials and their sensory properties encourages the user to experience the space by *walking through it*; by *touching it* and by *listening* to it (Holl: 1994). It is an architectural statement which clearly defines the experience of the user as priority.

This experience of the user can be manipulated by the enclosure around the body. Thickness of walls; lightness of roofs; texture of cladding; etc, all have profound effects on the spatial connection, which talks to the body's experiential feelings of a place. Gottfried Semper was very interested in the notion of the stereotomic and tectonic elements of architecture and what is most relevant for this Design Project is Semper's separation of structure and enclosure. Semper believed that it was the cladding or enclosing 'membrane' which was important for the materiality of space, as it was through this element or material that the space was experienced.

One example of an architect who attempts to capture the essence and experience of site specific phenomena in order to inform form is Jorn Utzon. Utzon works through experiential charcoal sketches, which then inform the design process. For example, for the Sydney Opera House, Utzon used the phenomena of clouds hovering above the sea of Sydney Harbour to launch the process towards his expressive roofs for the Opera House. He uses a similar approach for the conceptual stages of the Bagsvaerd Church. These sketches clearly place the body at the center and represent the nature of the middle through the expressive qualities of the ground below, the sky above and the enclosure around.

What Utzon has achieved, arguably successfully, is to capture the essence, character or atmosphere of a place or intention in order to inform a spatial material/ concrete design, which adds another layer to both the character and spatial experience of a place. Specific buildings by Zumthor, Kahn and Siza have also been used as precedent in order to learn from their ways and means of making architecture, which focuses on an experience of phenomena relative to site and material.



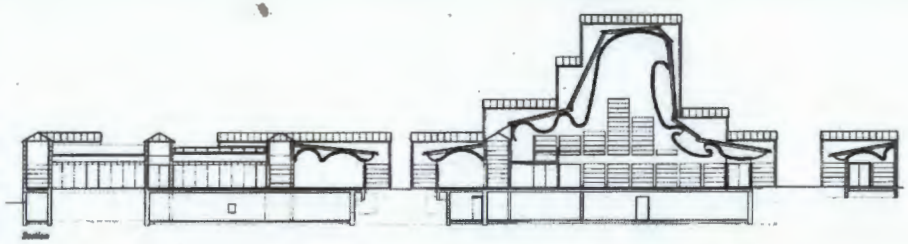


Fig.5-6
Bagsvaerd Church section & conceptual sketches showing development of site phenomena into form

A SUMMARY OF THREE CRITICAL PRECEDENTS

Levy Memorial Playground, New York, 1961-1966
Louis Kahn

"[T]he building as a contour, not one contour but an interplay of contours."
Louis Kahn

The un-realized Levy Memorial Playground is a spatial manipulation of a site, which lies somewhere between the sculptural and the architectural. Kahn was adamant that a "[...] playground building in a park must give itself to the park and its natural characteristics." This statement suggests that the building and the park are one and the same and that a structure which is recognizable as a building would interrupt the 'park' aspect, which was undesirable.

The building contains no recognizable windows on its façade, in order to protect the integrity of the building as a park and not a recognizable building, in the familiar sense. Instead Kahn uses light courts to bring light down into the deep spaces below. This notion of removing familiar human-scale building elements is a bold statement, which allows the building to retreat and let the functions of the park become the main focus, allowing for free and uninhibited play in and around a building-as-a-park and a park-as-a-building.

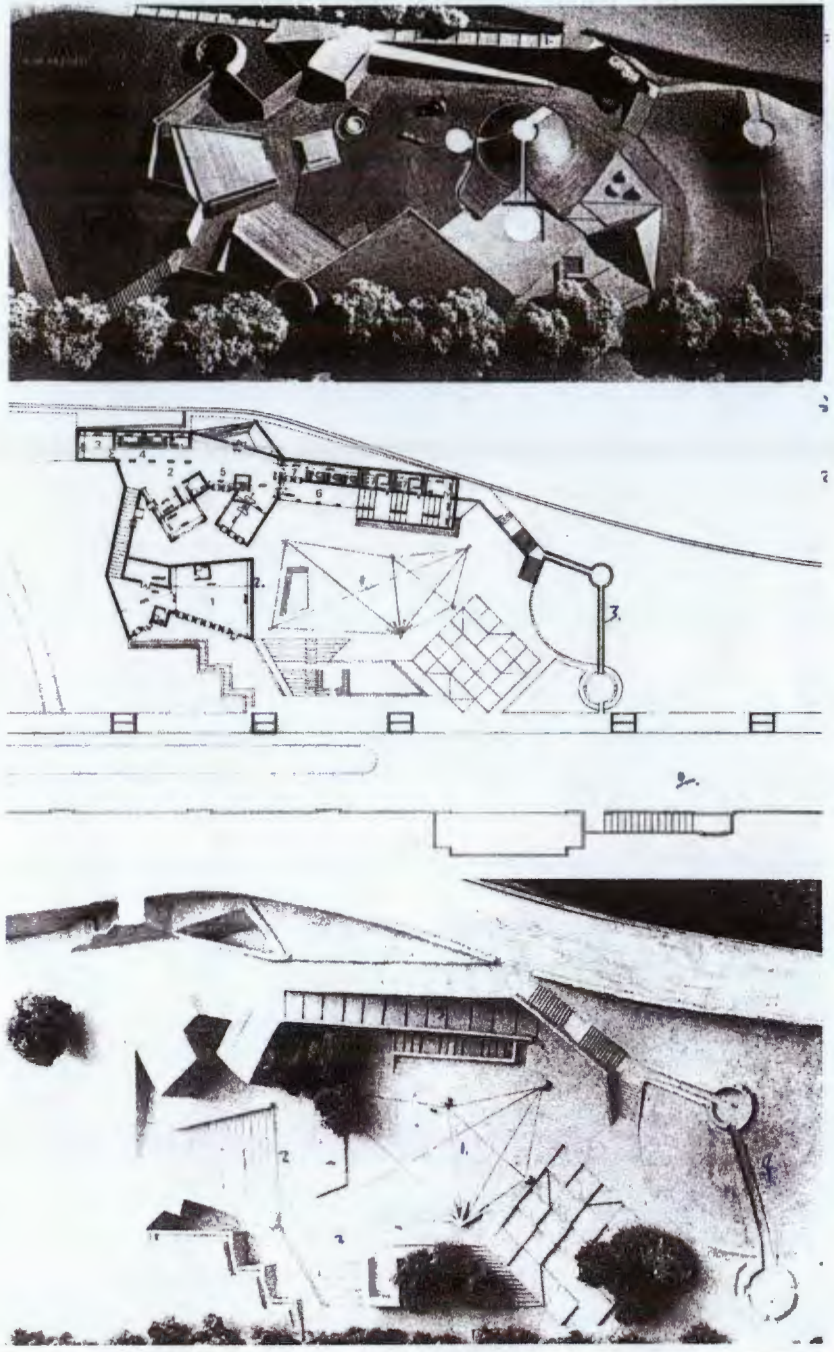


Fig.7-10
Design development for Levy memorial Playground

Ocean Swimming Pool, Leca da Palmeira, Portugal, 1961-1966
Alvaro Siza

The site for the two pools sits on a rocky outcrop at the ocean water's edge of an urban setting. Siza sinks his building below the level of the road, so as not to impede the view and also acknowledging the importance of the sea and sky as they meet at the horizon. A re-enforced concrete wall runs the length of the site, providing a physical and movement buffer zone between an urban and natural zone. The wall shifts back and forth, becoming inhabitable and provides space for the necessary pool facilities.

The colouration of this wall provides a third tone to the natural palette of sand and rock and compliments the varying blue tones provided by sky, sea and the different depths of swimming pools. The rough Atlantic sea is contrasted and visually enhanced by the calm waters of the pools, in much the same way that the planar nature of the ramps and stairs enhances the organic ruggedness of the rocky outcrops. As the building lies low it is unobtrusive in the landscape and, although coincidentally built during the same time that Kahn was designing the Levy Memorial Park, Siza uses a similar concept to Kahn by removing human-scale and recognizable openings in the building in order to produce a building which is part of its natural rocky landscape.

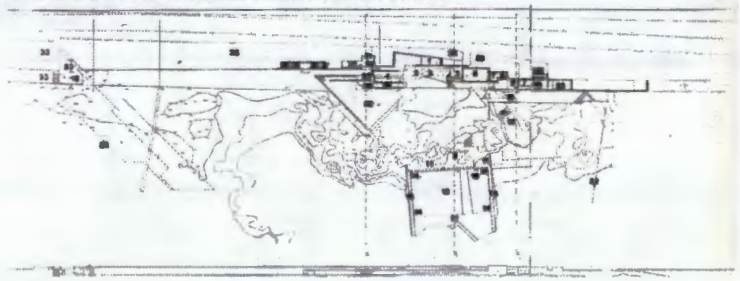


Fig.11-14
Ocean Swimming Pool, Leca da Palmeira
Alvaro Siza

Thermal Baths, Vals, Switzerland, 1990-1996
Peter Zumthor

"All design work starts from the premise of this physical, objective sensuousness of architecture, of its materials."
(Zumthor: 1999: pg. 34)

Zumthor is intrigued by the make-up of the physical 'things' that people can touch, see, hear and smell. He believes that it is these 'things' that make architecture inhabitable and provide lasting experiences and memories for the user, providing ordinary materials with a poetic quality through construction and materializing into an extraordinary experience (Zumthor: 1999: pg 11). This is the underlying philosophy which guides the design process at the Thermal Baths.

According to Zumthor, only through investigations into the phenomena of mountain, rock and water, did spatial layouts and experiences begin to emerge. Zumthor's conceptual ideas are based on making space through construction in order to bring out "specific meanings of certain materials [...] meanings which can only be perceived in just this way, in this one building" (Zumthor: 1999: pg 11). From conceptual diagrams through to the finished built product, we can see clearly his intentions to make a dark space of stone inhabitable through the introduction of spaces of light and water, which are formed in various voids 'cut' into the darkness, creating a mystical world of stone and water inside a mountain.

Although Zumthor's building still contains architectural elements, such as windows, the expression of these elements is still kept to a minimum. Windows are housed in large openings and frames sit flush in the stone wall. Doorways and passageways become voids in thick walls, as opposed to the standard opening with frame and door.

Amongst other things, there is a running theme in these three architects' approaches to these buildings in that they attempt to remove most recognizable architectural elements from the building, in order for the architecture to spatially and aesthetically better become associated as a piece of the landscape. Each architect takes cognizance of the nature and essence of each site and in doing so, each building is adequately prepared and designed to enhance it.

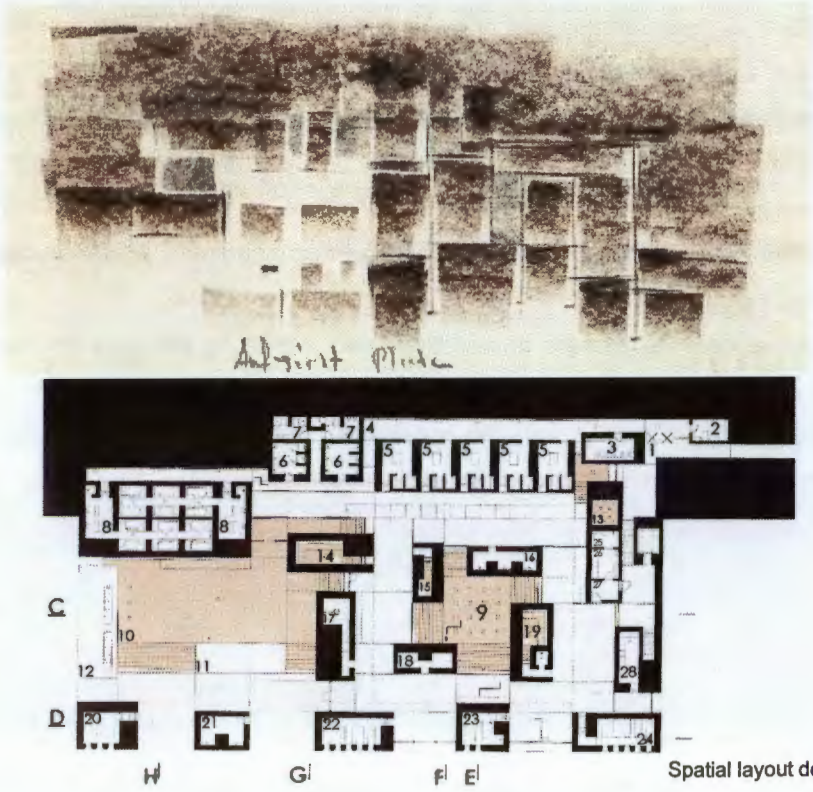
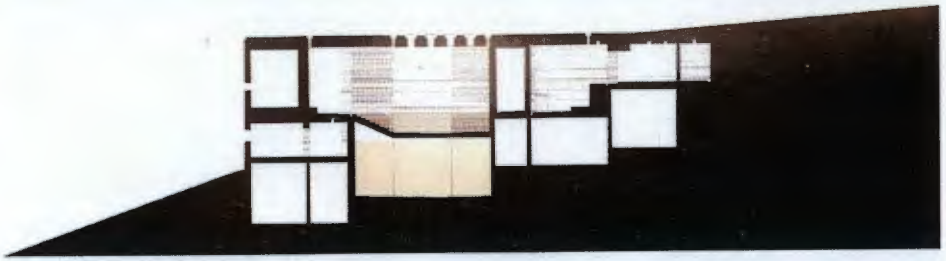
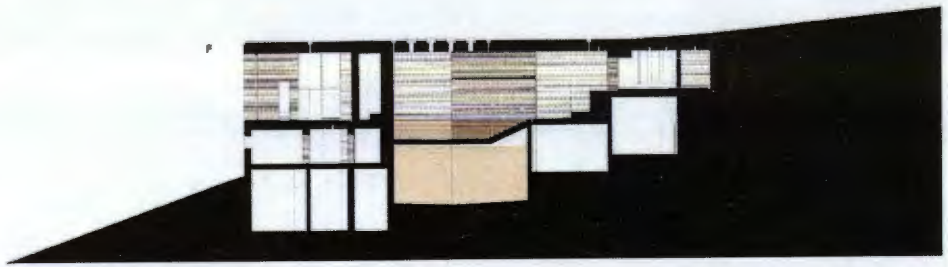


Fig.15-16
Spatial layout development





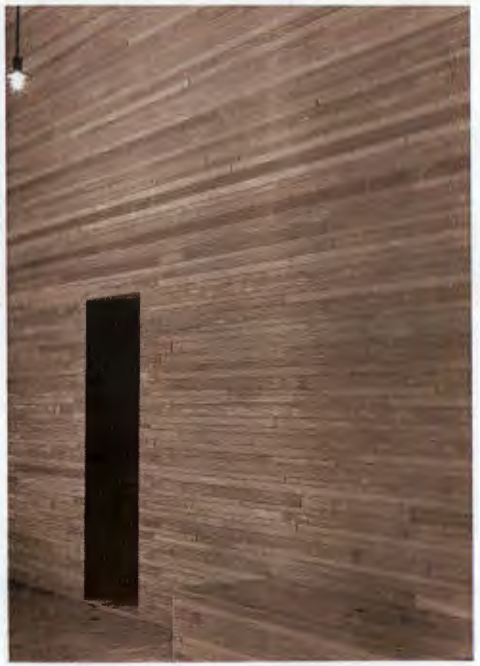


Fig.17-22
Thermal Baths at Vals
Peter Zumthor

CONTEXT OF PROJECT

CONTEXT OF PROJECT

Site I Programming

My choice of site comes from personal experiences of a place that has in a small way become part of my student life. Almost everyday for the past 6 years of studying at U.C.T, I've walked past or through this strange, mysterious, semi-ruined piece of landscape which captured my imagination as to what it once was and what it could become. The Old Zoo site, which lies on the eastern slopes of the greater Groote Schuur Estate, with Devil's Peak looming above, is amongst other things, a semi-rural site of refuge, peace and intrigue. As you step off the path heading towards UCT, within meters you are relieved of the hustle and noise of urban life below and you're suddenly enveloped into a semi-rural landscape, although aware that a stone's throw away the M3 highway speeds past. The unkempt appearance adds to the rural nature of the site with evidence of what was once before emerging through overgrown grass, bushes, shrubs and trees. Devil's Peak pierces through the canopies of trees, rising towards the sky and keeping a watchful eye on all that occurs below.

If Rhodes Memorial is the lookout point in the Groote Schuur Estate which provides spectacular panoramic views and visual connections from False Bay in the South, to the Atlantic coastline in the North; then the Zoo site's most spectacular view is up the eastern slopes towards the ominous mountain peak above in all its splendour.

Most of the view cones on the estate were constructed in order to direct attention either up towards the mountain or out over the Cape Flats and Helderberg mountain range in the distance.

It is a site with a, possibly controversial, colonial history and, although it is not my intention for this project to analyse the history of the site in too much detail, I do recognize the importance of the site in the greater history of Cape Town and feel that an investigation into its origins is a worthwhile process in order to begin to understand the underlying imperial attitude towards constructing space and landscape during the late 1800's and early 1900's. In summary, I aim to focus on the experience and essence of the site as it is today whilst still taking cognizance of what has happened before - What makes it so special to me now and how could this spatial experience be enhanced?

Fig.18
Cartoon depicting Sir Cecil John Rhodes and his intention to connect Cape Town and Cairo with a telegraph line
www.wikipedia.org

The old Zoo site is small part of a greater constructed piece of landscape on the eastern slopes of Table Mountain known as Groote Schuur Estate. During the late 1600's and the 1700's, the Dutch East India Company found the soil on these slopes to be extremely fertile and with a constant water supply from various ravines and river, most notably the Liesbeeck River, the land was divided amongst certain members of the Company, it's servants and the Free Burghers (fig. 19). The landscape of this time was mainly fynbos and looked completely different to the tree-lined slopes we see today. During the 1700's the slopes were extensively planted with stone pines, which now form the towering canopies which can be found continuing all the way around the Cape peninsula slopes.

The Zoo was generated as part of the colonial history of the Cape as it was part of Sir Cecil John Rhodes' Groote Schuur Estate on the slopes of Table Mountain during the late 1800's and early 1900's. Rhodes arrived in the South Africa in 1853, and was obviously astounded by the beauty of the Cape mountain region.

"Here he said to himself, are several miles of mountain-side...In the ordinary course of things the speculative builder will cover it with dwellings...and it will be lost to nature and the people for all time. So going quickly to work...he quietly buys up several pieces of mountain-side – surely one of the loveliest bits of this earth's surface."(The Cape Argus, 31 October, 1898)[3]

[3] Extracted from "Groote Schuur Estate: Conservation and Devlopment Framework, Phase 2B: Detailed Planning and Management Proposals, September 2002 by Chittenden Nicks De Villiers urban design, environmental planning and landscape architecture.

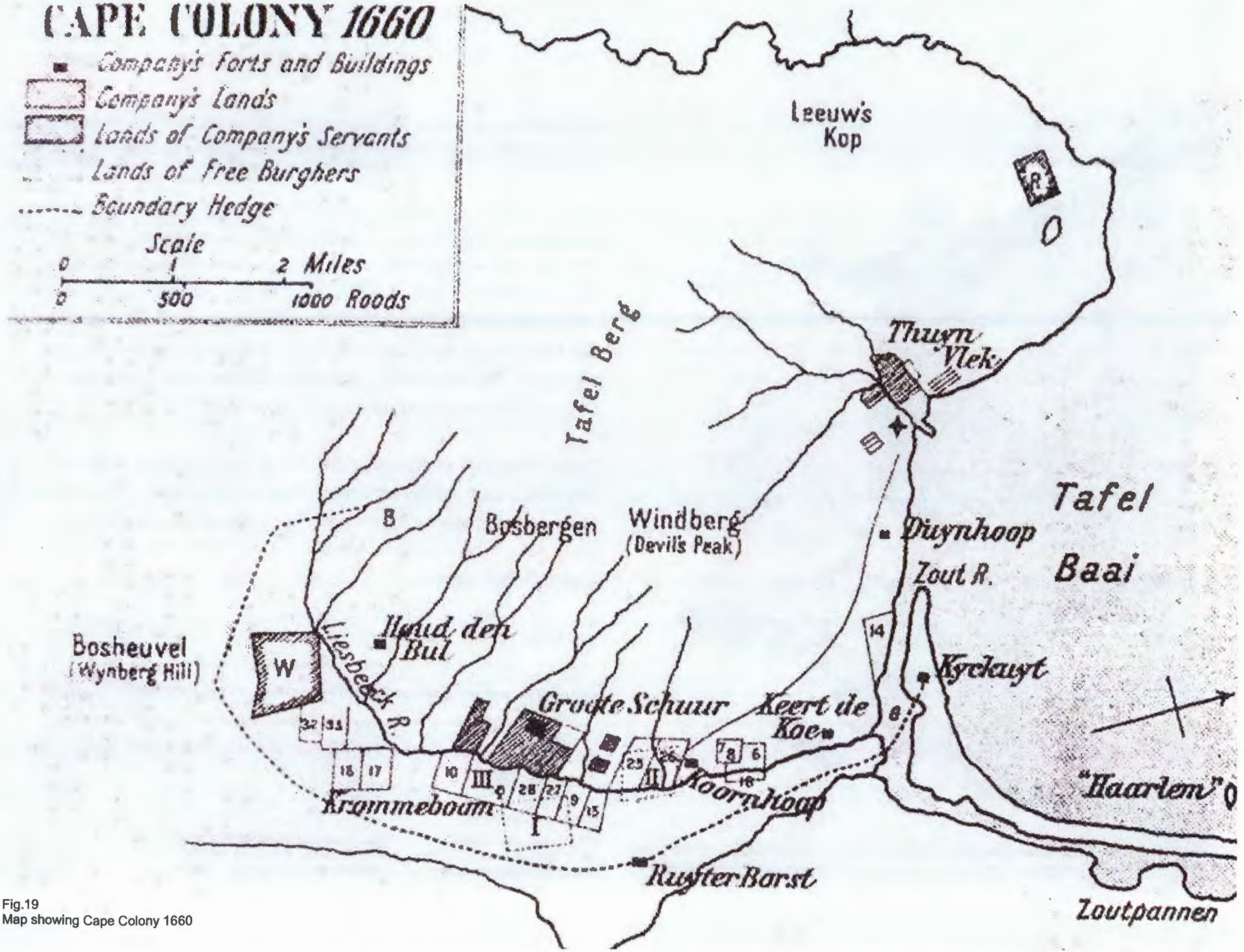


Fig.19
Map showing Cape Colony 1660

Fig.20
Map of eastern slopes of Table Mountain
c.1904
SA Archives: Simons : 1996

In 1897 Rhodes began constructing the zoo with the initial lion enclosures on the upper slopes of the estate. Rhodes sent his architect, Sir Herbert Baker, to Europe to study the ancient and classical Greek and Roman ways of making. Baker returned to the Cape with classical undertones engraved into his initial design of a "Paestum temple" of columns, through which the lions would saunter and sway.

This design did not reach fruition however, as instead it followed the trend of Carl Hagenback (1844-1913), who was a German animal dealer and zoo owner, who had developed a new approach to zoo design. Hagenback used moats rather than cages, in order to allow the animals to be "free" to the open sky, decreasing the feeling of imprisonment.[4]

Although there is an educational aspect and argument to the display of animals in a zoo, Rhodes was trying to display a wild piece of nature to the public. However, these animals were placed in a colonial constructed piece of landscape, which had forced and moved the ground away from its natural flow of contours in order to respect the superficial and imperial line of axis between the Groote Schuur residence and Devil's Peak. The grounds were kept neat and clean, becoming more like a tame English garden than a wild mountain side. However, now that the site is no longer functions for this purpose, through human neglect the 'natural' landscape seems to be slowly engulfing the structures and paths that remain behind.

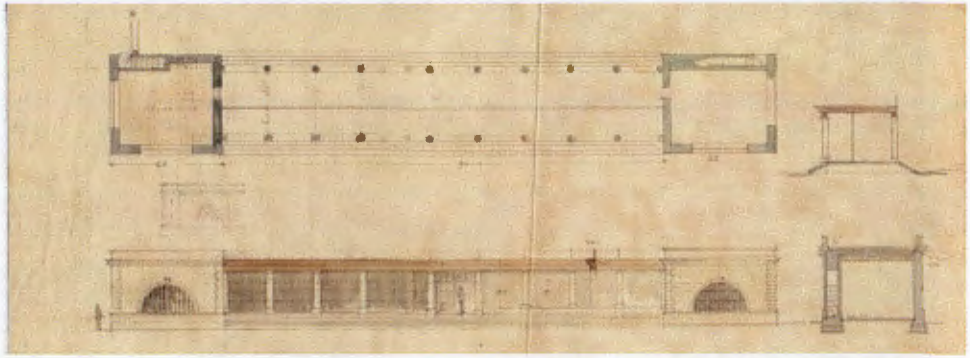


Fig.21
Initial plans and elevation of Lion enclosure
Sir Herbert Baker
UCT Archives

[4] Green, L. "Disciplining the Landscape: Table Mountain and the Production of Nature in the Twentieth Century." (University of Cape Town: Centre for African Studies, Pamphlet, October 2005.

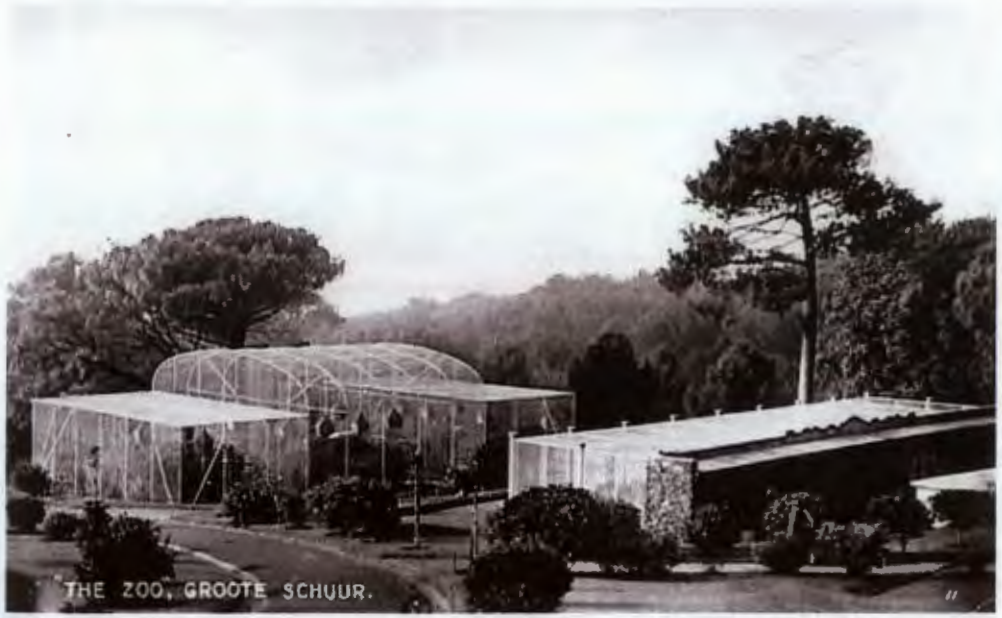
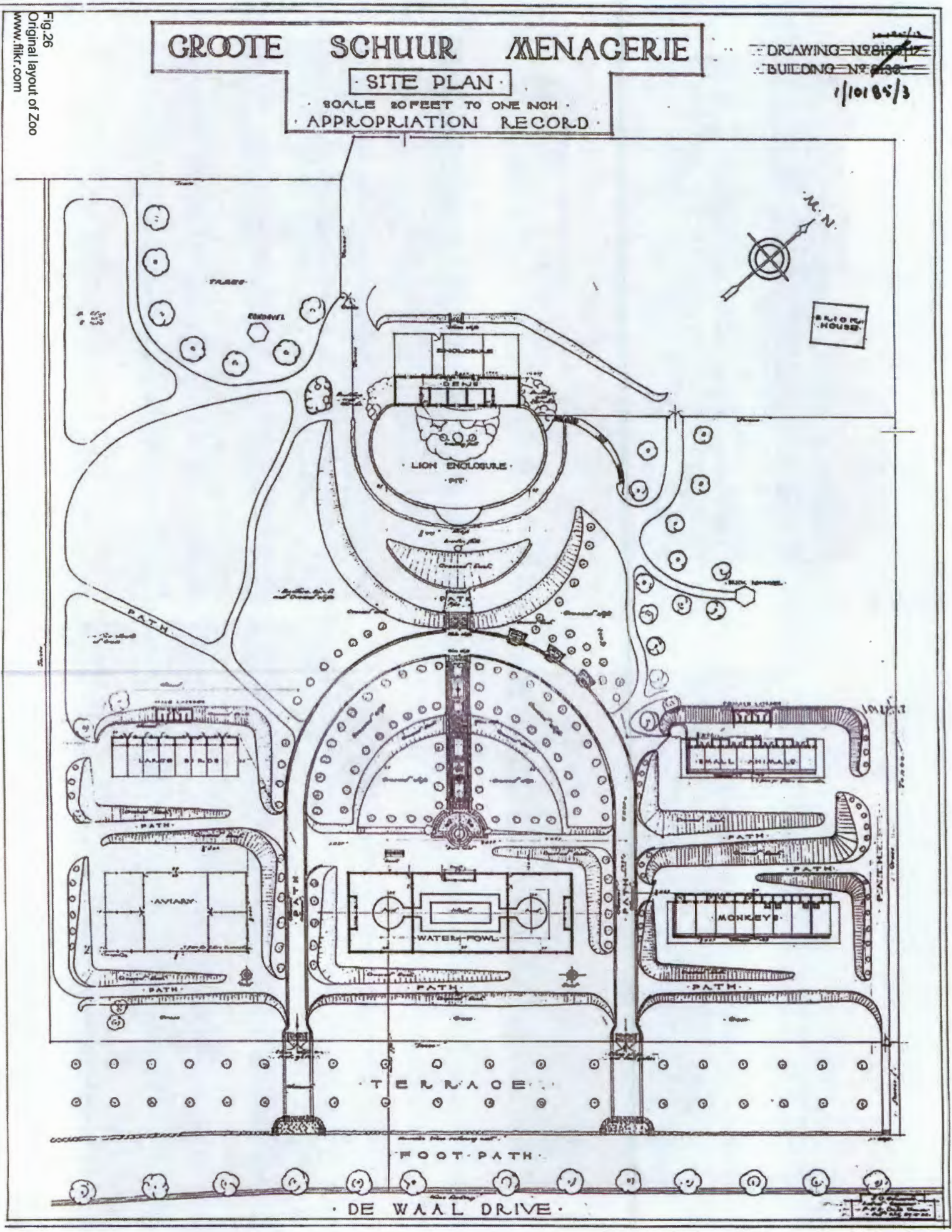


Fig.22-25
Various postcards and pictures depicting the Old Zoo in it's hey day
www.Flikr.com

Fig.26
Original layout of Zoo
www.flikr.com



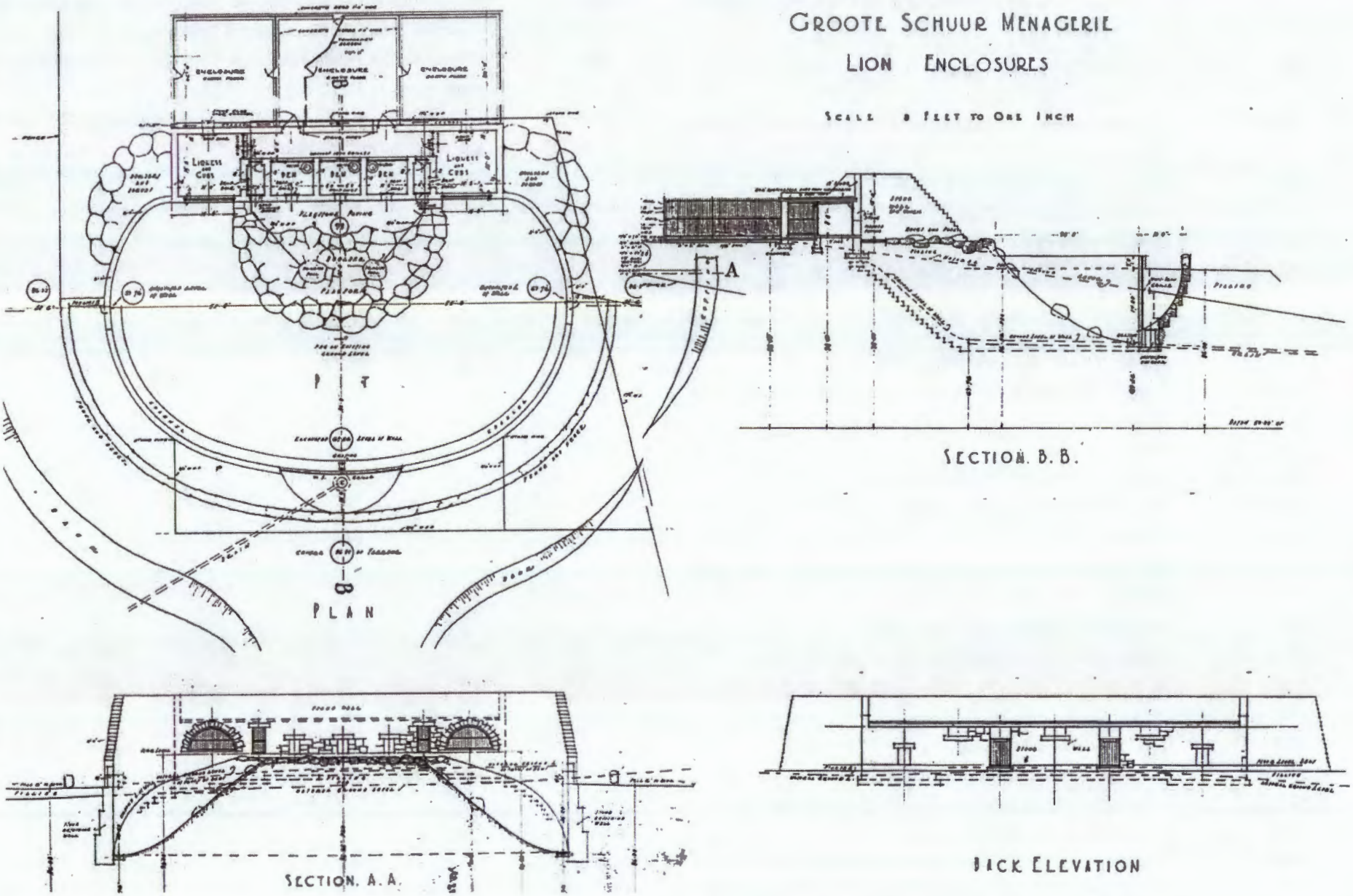
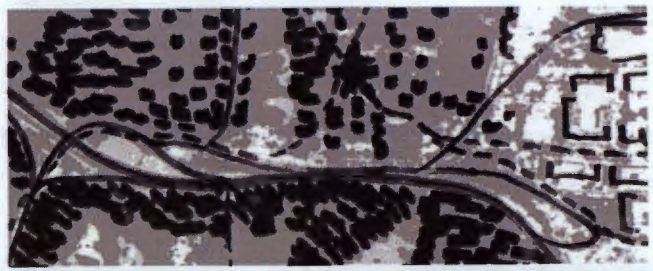


Fig.27
Original layout of Zoo and sections
www.flikr.com

Chronology of the Estate

1667	Dutch East India Company built *De Groote Schuur* ("Big Barn") as a granary
1700's	*Stone pines* were planted extensively on the Table Mountain slopes
1813	Plan prepared for the Eastern slopes by Thibault
1853-1902	Lifespan of Cecil John Rhodes
1853	Cecil John Rhodes arrives in South Africa
1870's-1900	Second generation of Stone pines were planted
1891-1899	Rhodes purchased properties on Eastern slopes of Table Mountain
1893	Rhodes purchased Groote Schuur Residence
1897	Cage-like structure to house lions constructed on upper slopes of estate
1902	Death of Rhodes
1902-1910	Estate administered by Rhodes' Trustees
1910	Passing of Rhode's Will (Groote Schuur Devolution Act) 9/1910
1910	SA Government put Department of Public Works in charge of Estate
1911	Construction of University of Cape Town
1912	Rhodes Memorial and associated cottage constructed
1920's	De Waal Drive (from city center) was connected to Rhodes Drive
1930	Old Lion house demolished
1930s	Construction of Groote Schuur Hospital
1931	Construction of new lion enclosure and Groote Schuur Zoo
1975	Groote Schuur Zoo closed
1985	Amendment to Groote Schuur Devolution Act (55/85). Groote Schuur Zoo site (13ha) transformed into a "park for the people"
1989	Environmental Conservation Act 73/89 incorporated Estate into Cape Peninsula Protected Natural Environment
1999	Groote Schuur Estate incorporated into Cape Peninsula National Park
2009	UCT M.Arch student Anton Van den Berg chooses Old Zoo as site for thesis investigation.



SITE ANALYSIS; PRGRAMMING

Zoo Site I *City Context*

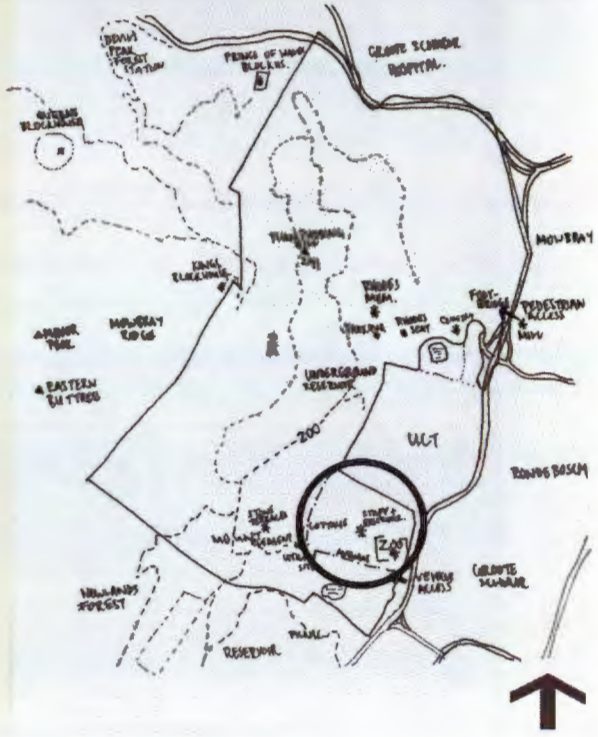
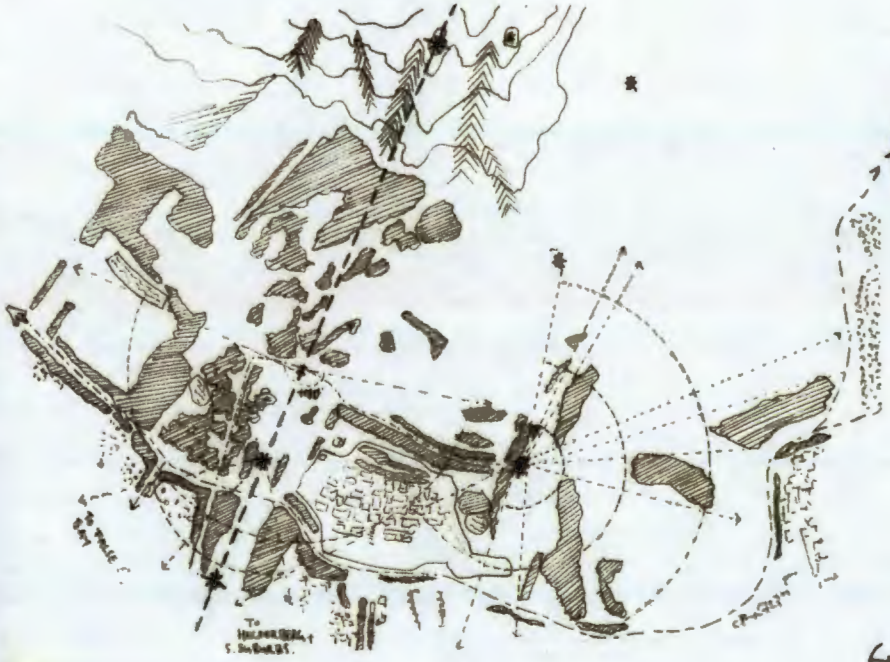


Fig.27
Site Context



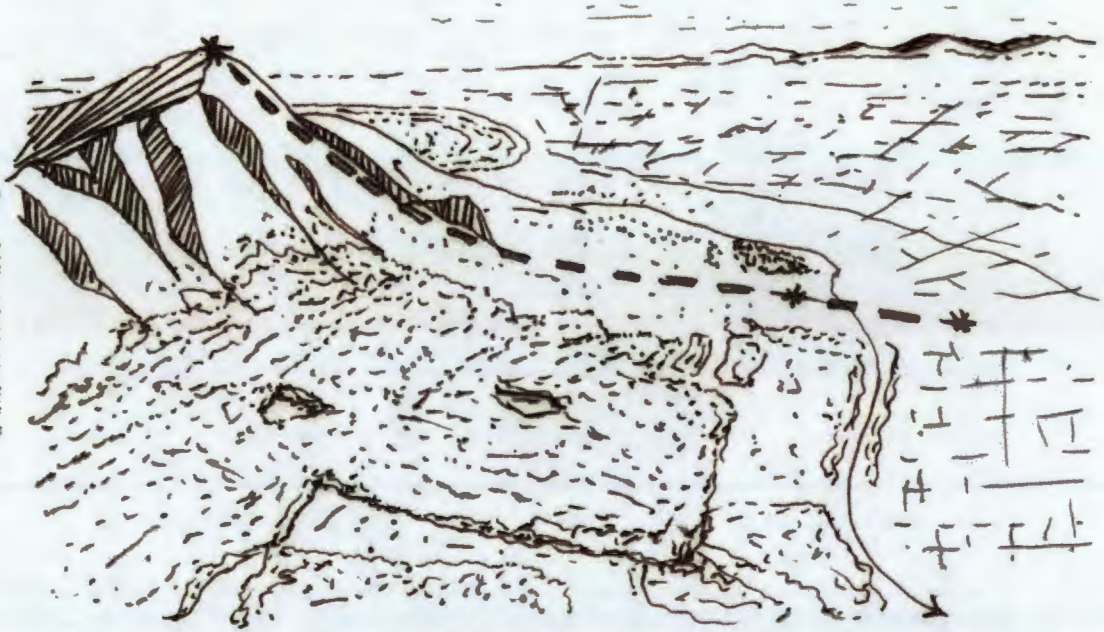
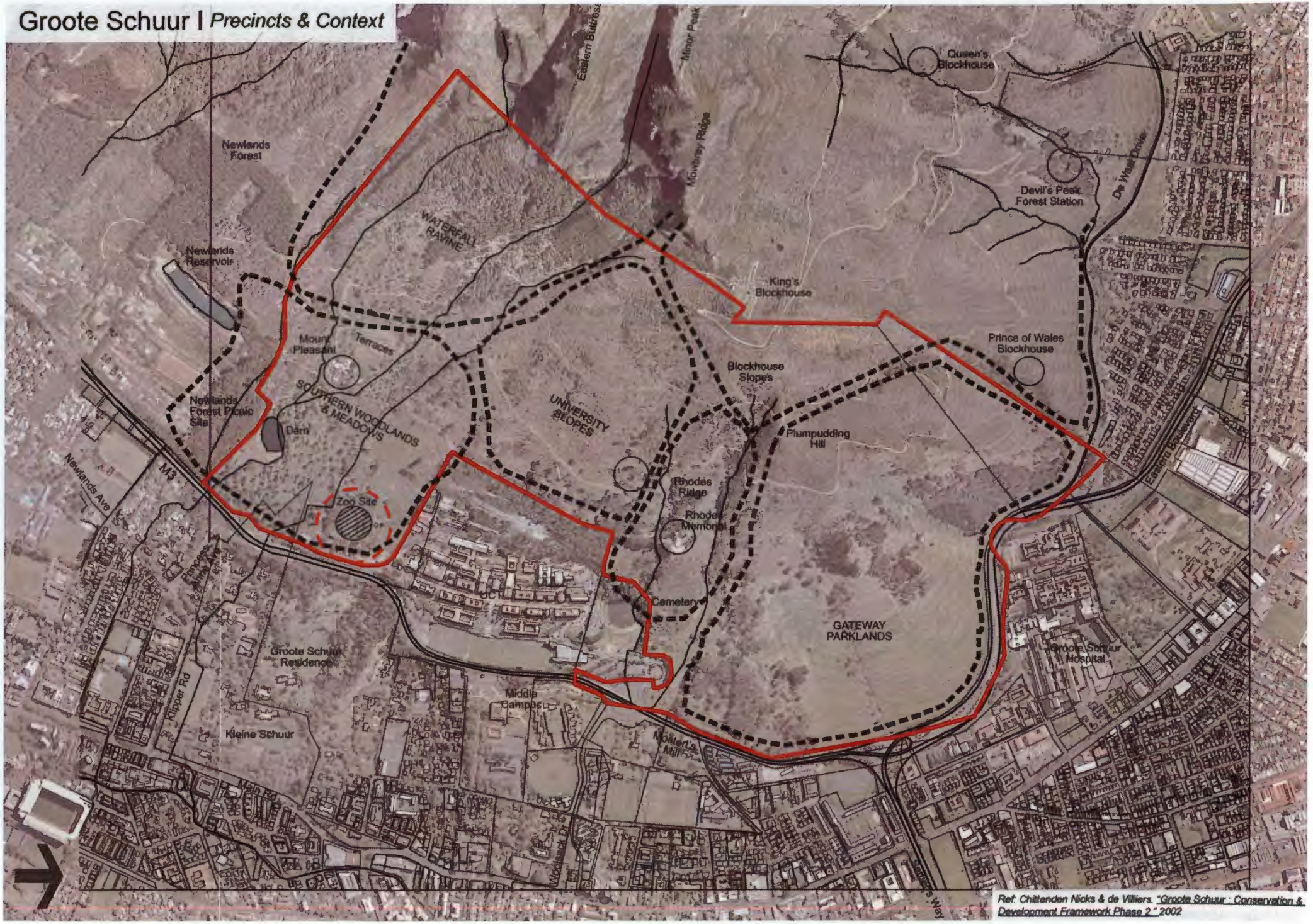


Fig.27
Site Context sketches

Groote Schuur | *Precincts & Context*



Ref: Chittenden Nicks & de Villiers. "Groote Schuur : Conservation & Development Framework Phase 2" 2002

Fig.28
Precincts and Context

Fig.29
Routes around and through site connecting surrounds

Fig. 30
Site Analysis & sketch

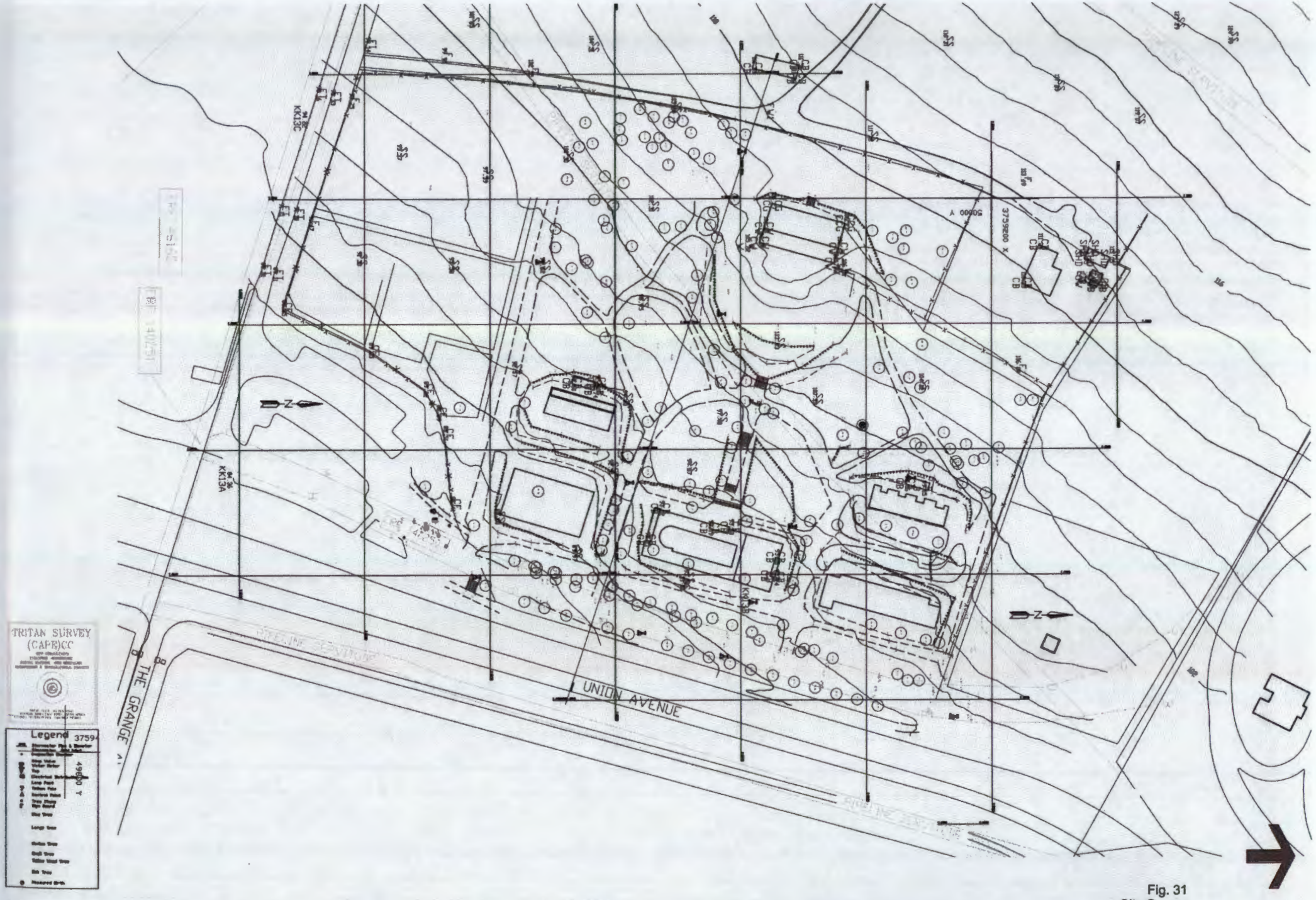


Fig. 31
Site Survey
Tritan Survey Cape CC

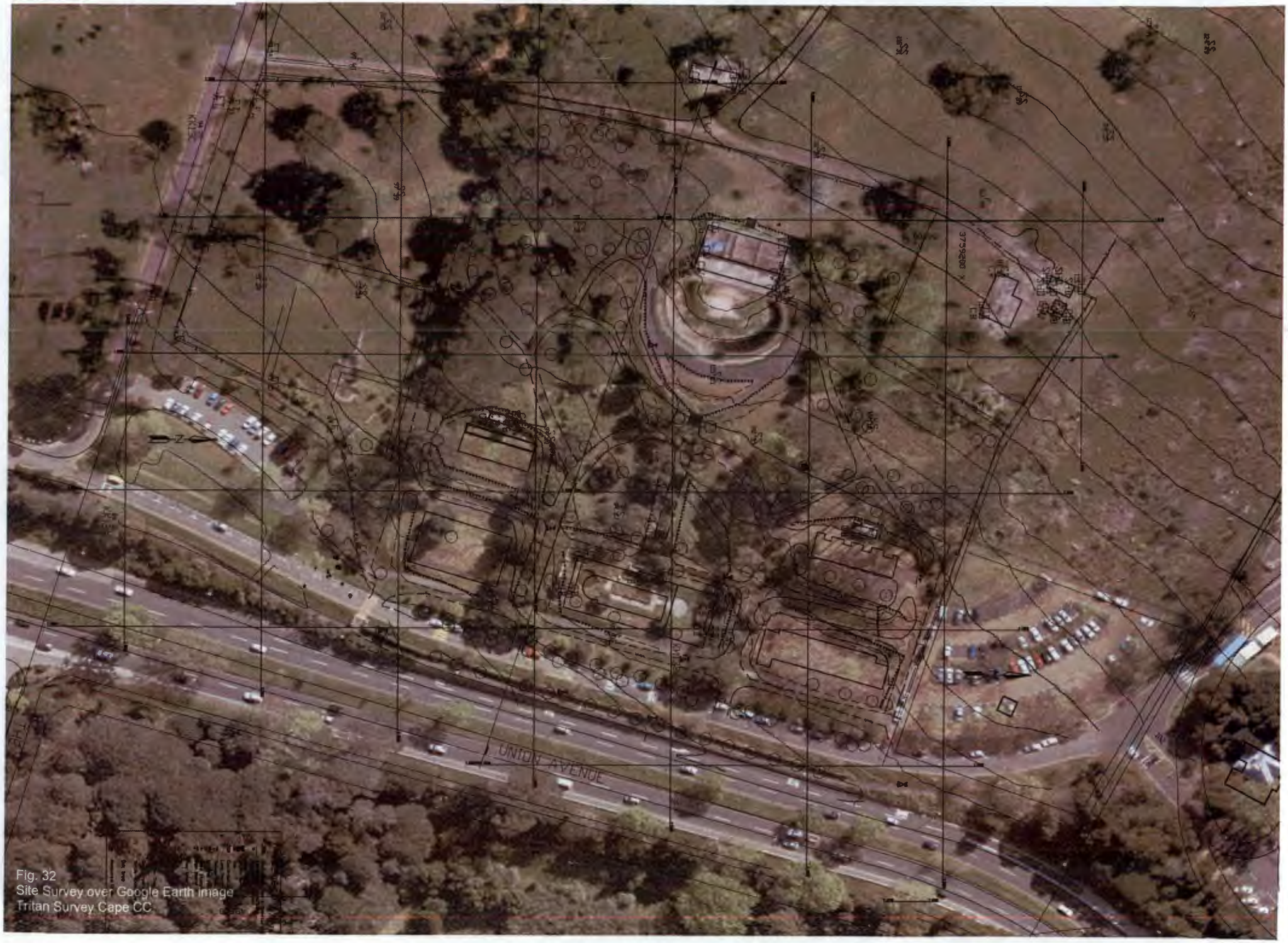


Fig. 32
Site Survey over Google Earth image
Tritan Survey Cape CC

Fig. 33
The Brooding Spirit of the Mountain, charcoal sketch
Sir D.Y. Cameron

What is the nature of the site and how will this inform form and making?

The site is one of intrigue, refuge, and peace. There is a slight air of mystery surrounding the site with the ruins; spaces of secrecy and varying degrees of enclosure forming as you move through it. Enclosure comes in the form of two main spatial elements – trees and the stones which make up the retaining walls. These two natural elements are entirely different in nature and produce contrasting spatial experiences.:

The tree is a dynamic, living structure, which rises vertically to the sky, then fans out to provide cover and shade to what lies beneath. The canopy above is experienced as a hierarchy of different layers of fragmented enclosure...branches rise up and out eventually sprouting leaves at their ends. The bark is constantly, albeit slowly, being replenished beneath as ring upon ring grows outwards from within. The tree contains a temporal quality which changes over seasons and time. The quality of flickering light, which is allowed to pierce through the canopy, is constantly changing through the day; through the seasons; through growth and with the movement of the tree in the wind. The height and density of canopy differs; the thickness and colour of each tree trunk along with the texture of the bark also differs.

The low-lying stone retaining walls contrast the nature of the trees above, which rise to the sky and are free to sway in the breeze. The stones are part of the earth. They've been dug into the slope in order to withstand the earth's pressure beyond. They are withholding and absorbing the energy of the earth behind, whilst the trees deflect and react to the energy of wind and sun above. The stones produce a static, solid enclosure, which

provides a greater sense of protection and robustness with quite primal and rural connotations being 'of' the earth. Unlike the tree, the stone does not grow or develop overtime, only weathering over a long period. It is a stationary object which provides a more secure sense of shelter and spatially it provides the means to dig away and be 'within' or beneath the natural lie of the site.

The past functions were fragmented around the site, creating different 'pockets' of activities, which were spatially defined by varying degrees of tree- and stone-retaining enclosures. This has resulted in different zones, open to the sky or partially enclosed by tree canopy and retaining structure.

The physical bodily experience of these zones is constantly changing with contrasting effects of:

- LIGHT I DARK
- WIND I CALM
- URBAN NOISE I NATURAL PEACE
- WARM I COOL
- SOLID I VOID
- BEING ABOVE I BEING BELOW
- SUN I SHADE
- OPEN I ENCLOSED
- FLAT I SLOPE
- STATIC I DYNAMIC
- MOVEMENT I PAUSE

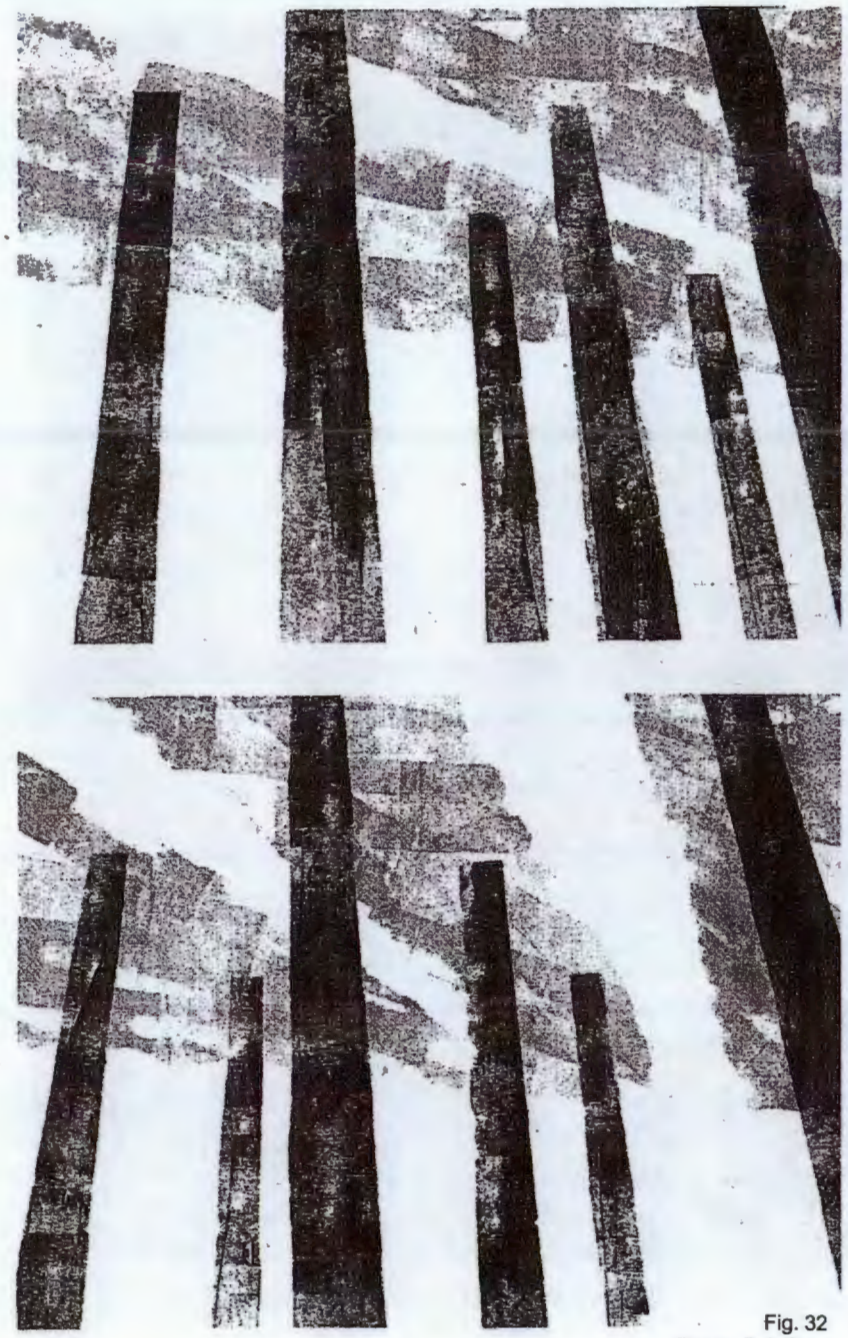


Fig. 32
Poplar Paintings
Bosch

82 Bosch, series of paintings, poplars

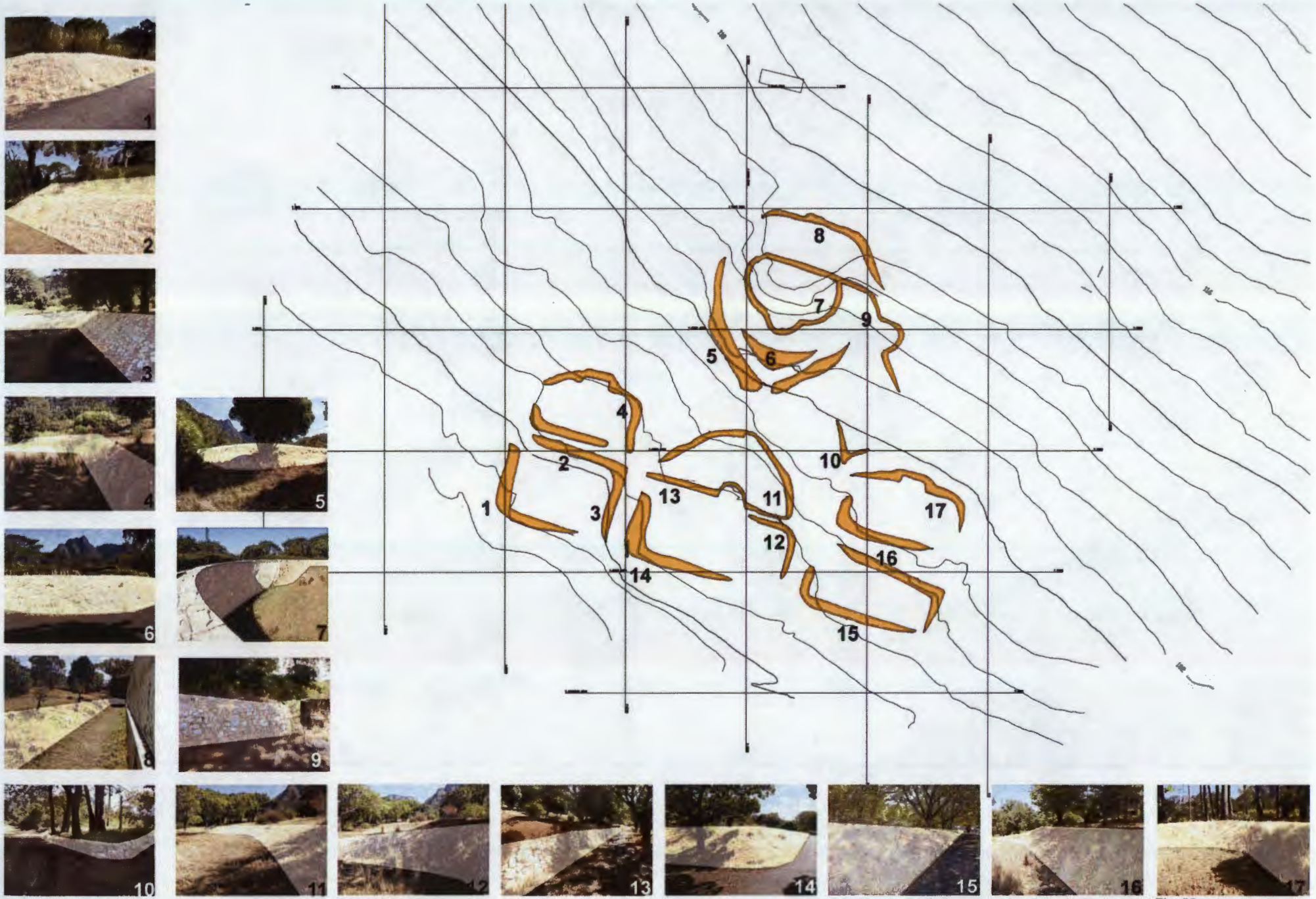


Fig. 33
Mapping: Stone-wall retaining structures on the site

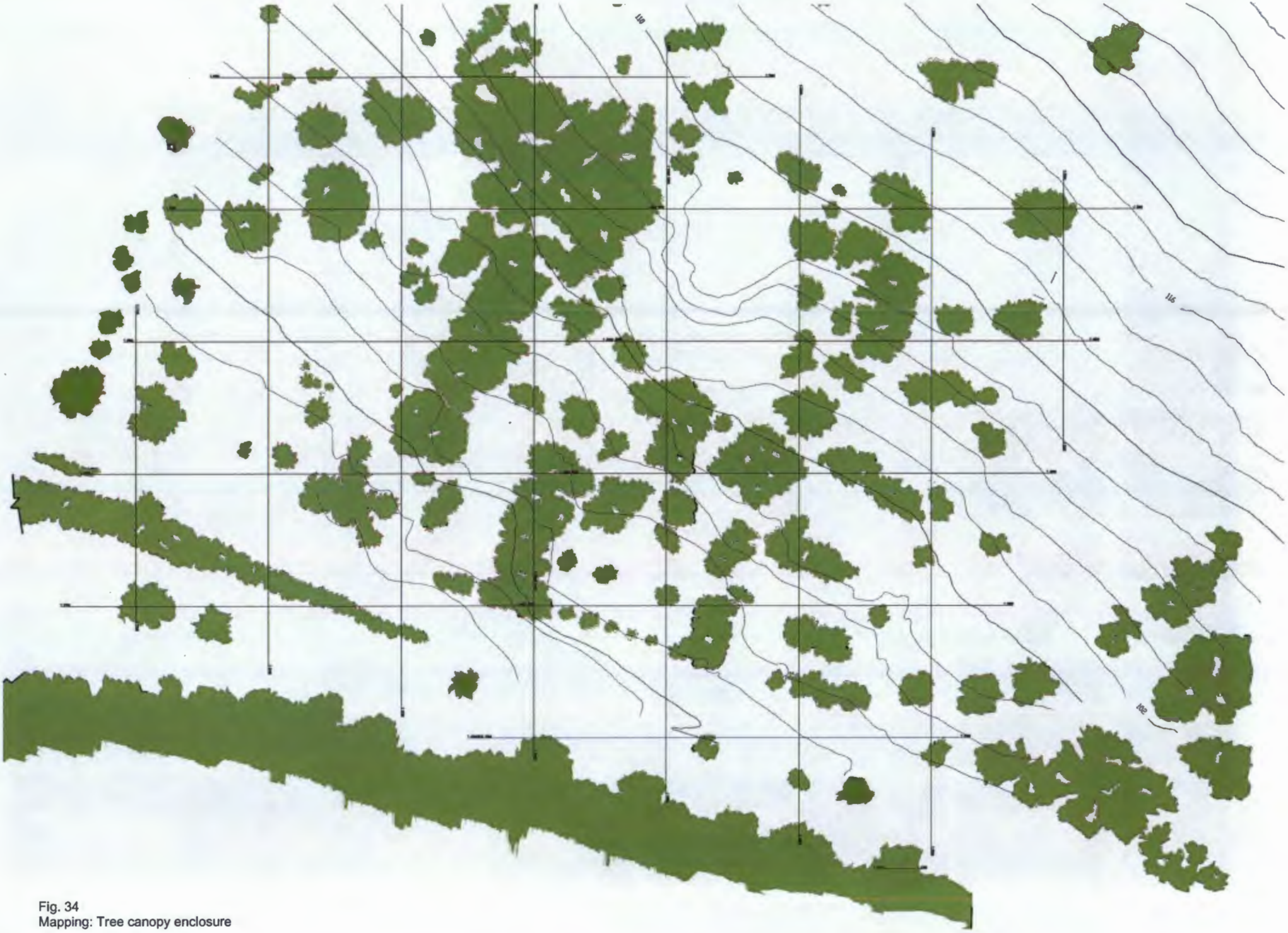


Fig. 34
Mapping: Tree canopy enclosure

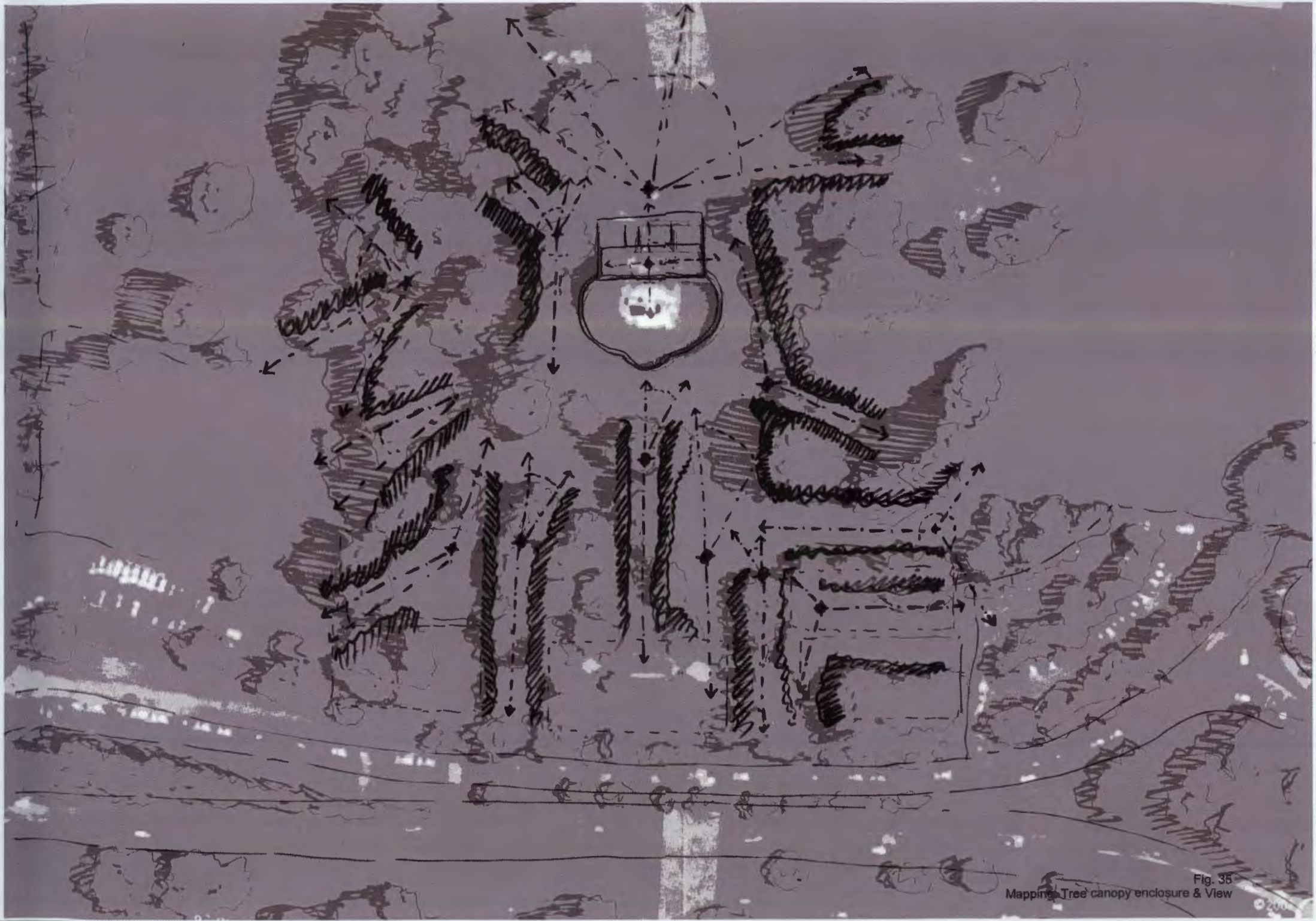
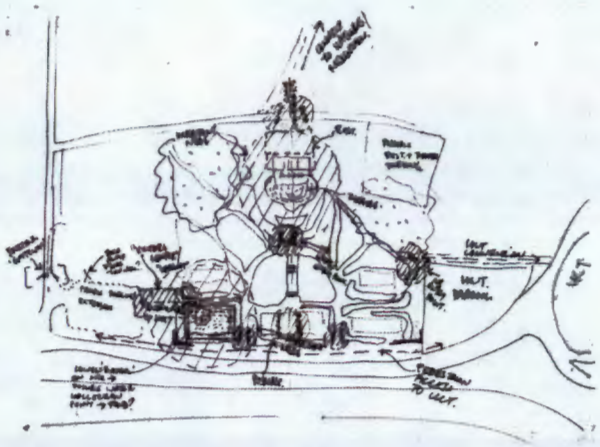
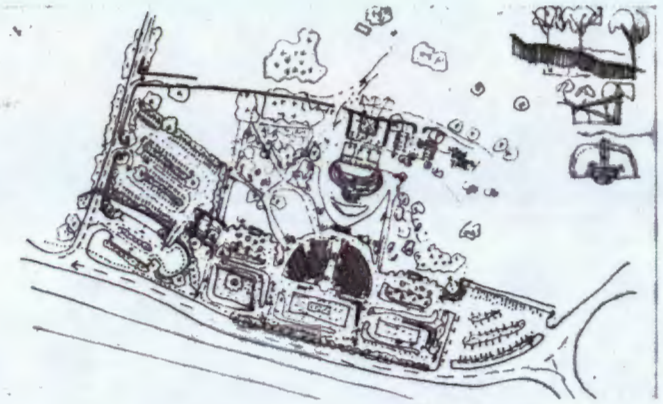
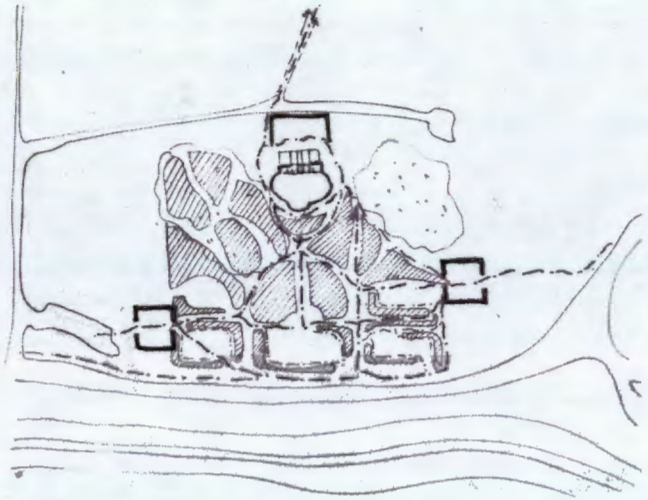
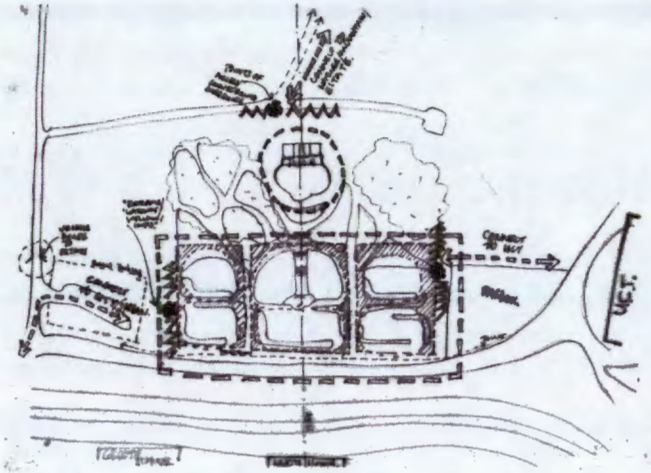


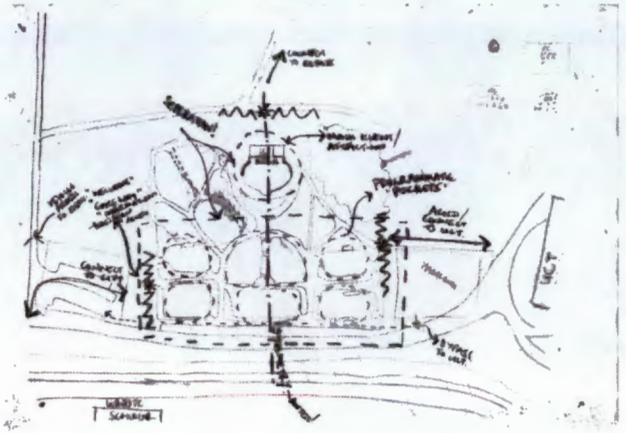
Fig. 35
Mapping Tree canopy enclosure & View

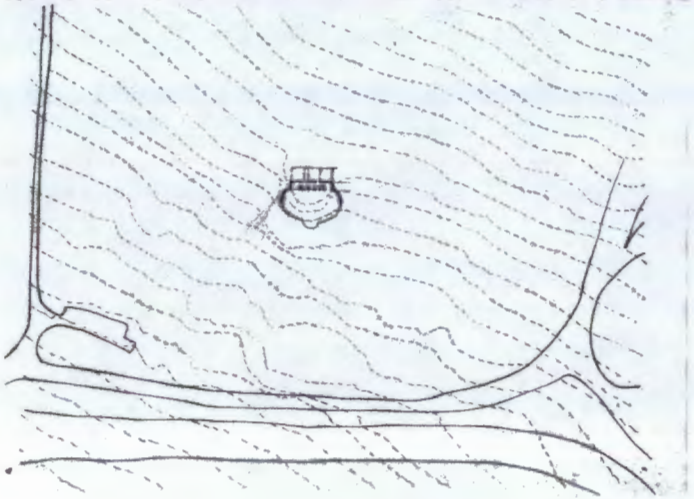












An early series of exploratory sketches attempt to analyse the site and find opportunities for programmatic and spatial interventions. However, by keeping to the existing symmetrical movement grid, the design process was being severely hampered as I kept focusing on the empirical layout of the site's previous functions and spatial elements, as opposed to developing an experiential approach to the site based on the current qualities of the site.

In order to free myself from this geometry the existing movement paths were removed, as the site no longer functions in this way, allowing a new interpretation to develop on the experiential nature of the site as it is and what it can become.

Fig. 36-41
Early sketches

Fig. 36
Mapping: Routes through and surrounds

The nature of the site acts on the body, providing it with a physical relationship and dynamic memory of place, which is not just of form and aesthetics. This is a spatial and experiential interpretation of the site and my intention is to enhance these effects through my buildings and interventions.

A third element of the site, which is absolutely necessary to respond to, is the natural lie of the contours. As has been mentioned earlier, the contours were manipulated in order to set up a, seemingly arbitrary, symmetrical geometry on the site, which did not take into account the natural fall or lie of the land. I aim to create a less imposed experience of the site by complimenting my interventions and structures in accordance with the contours, thus keeping the natural flow through the site as unforced as possible. However, where the buildings need to move up the slop, they do so perpendicular to the contours, thus digging into the slope and providing a new experience of the natural fall of the land as you move up, along or down the slope.

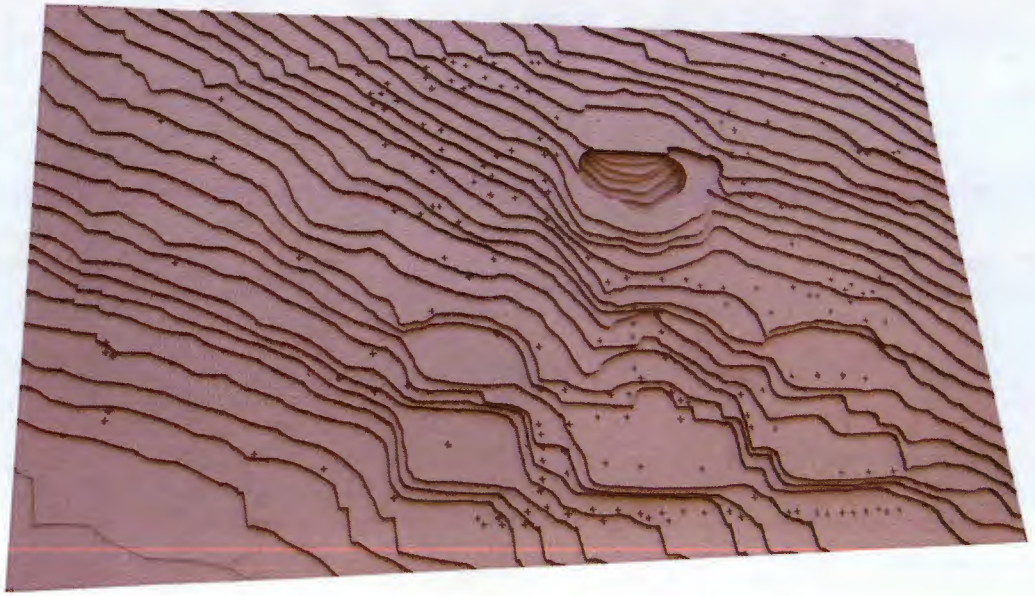


Fig. 37-39
Laser-cut contour model of site

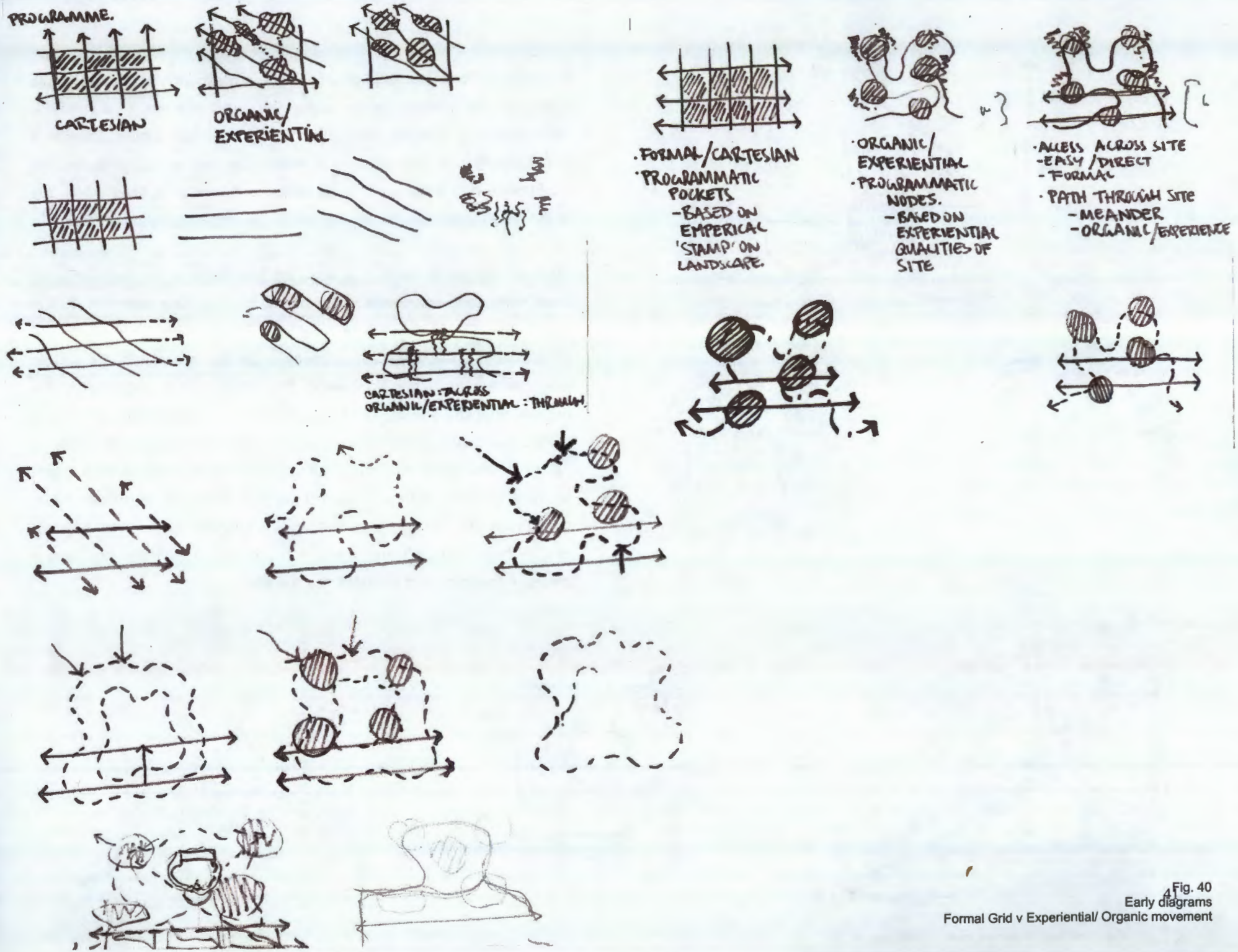
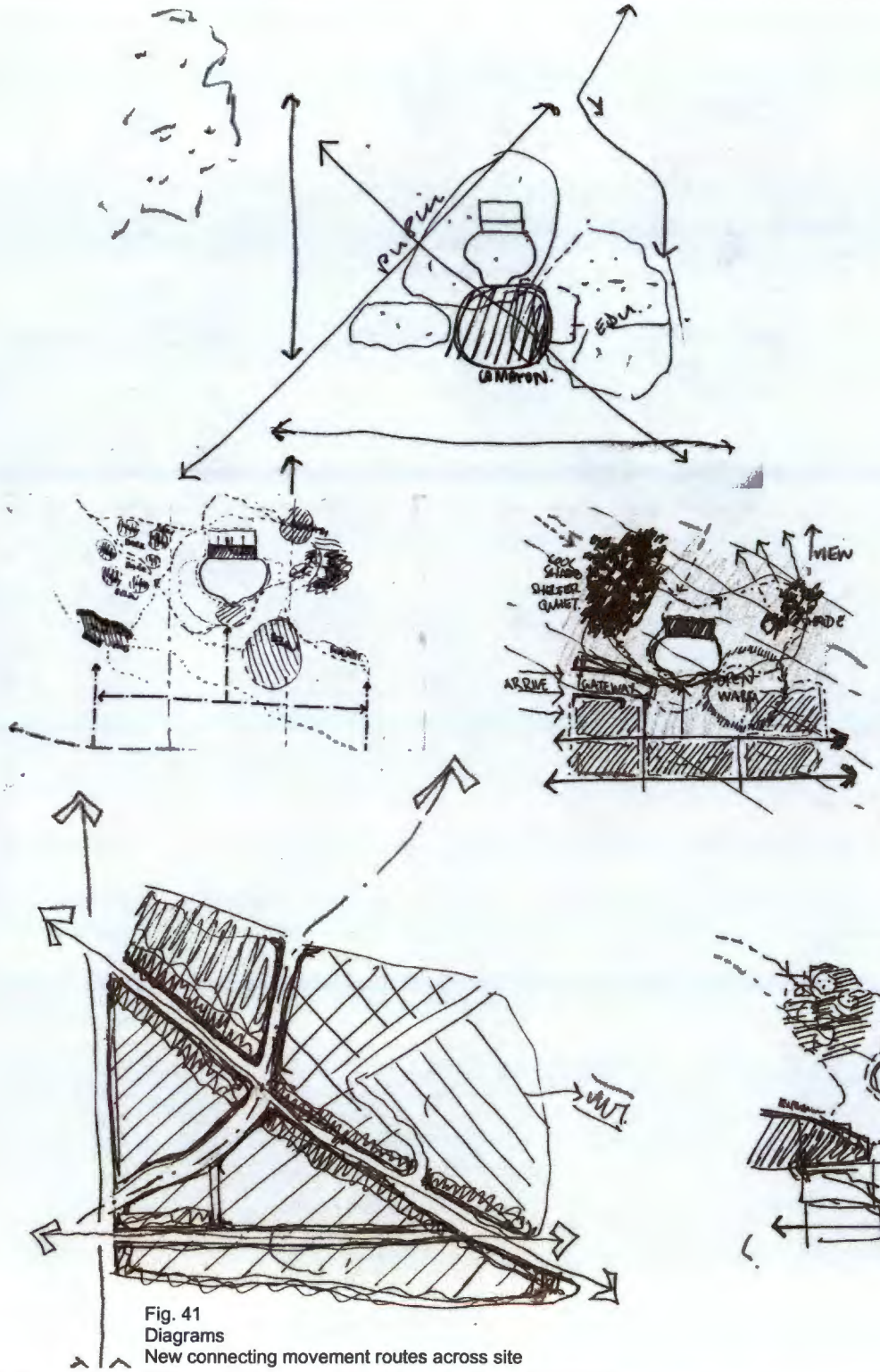


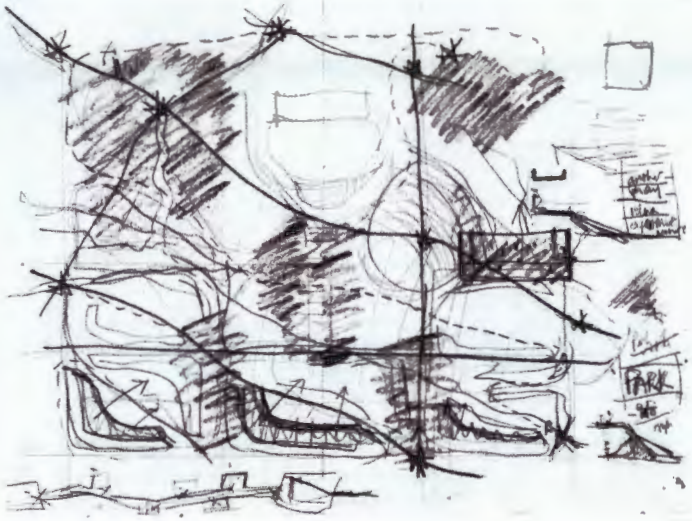
Fig. 40
Early diagrams
Formal Grid v Experiential/ Organic movement

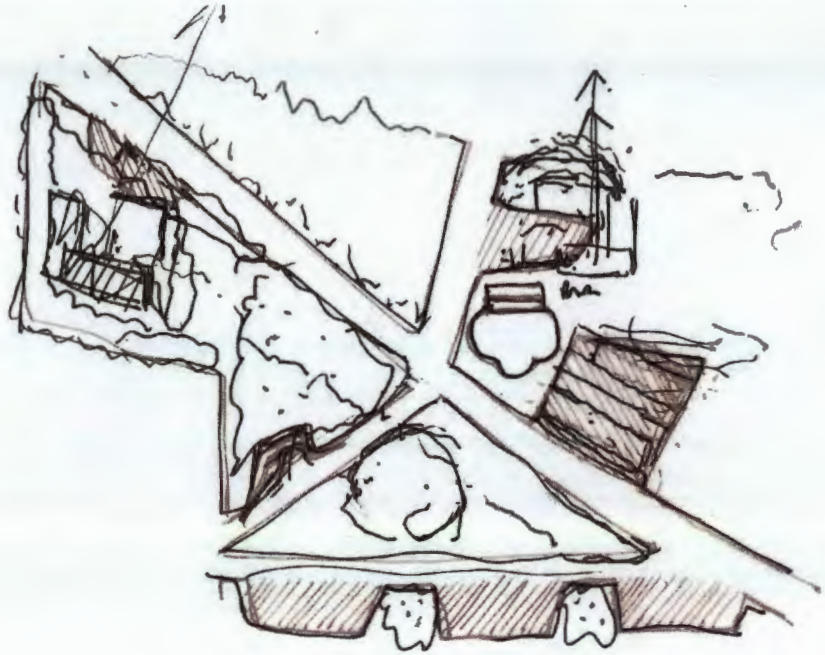


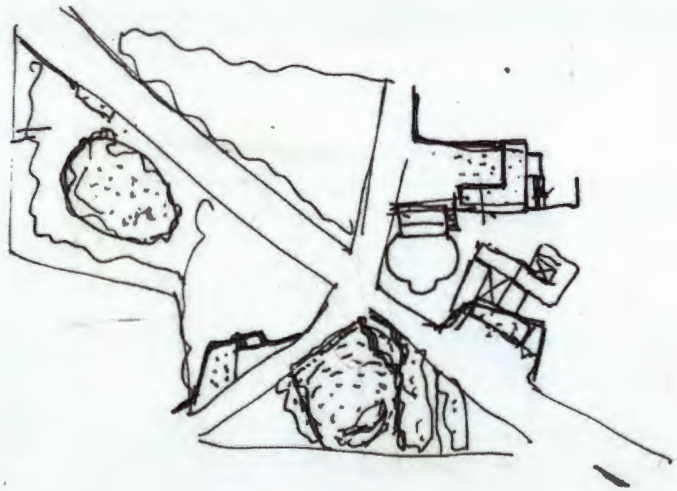
My intention for this design project is to learn experientially from the site and use this knowledge to inform the programmatic zones, spatial formations and physical experience of my buildings, aiming towards a phenomenological interpretation of what a building on this intriguing site could be. A new layer needs to be added to the historical layer, which sits in the distant past with functions which are no longer accepted or required.

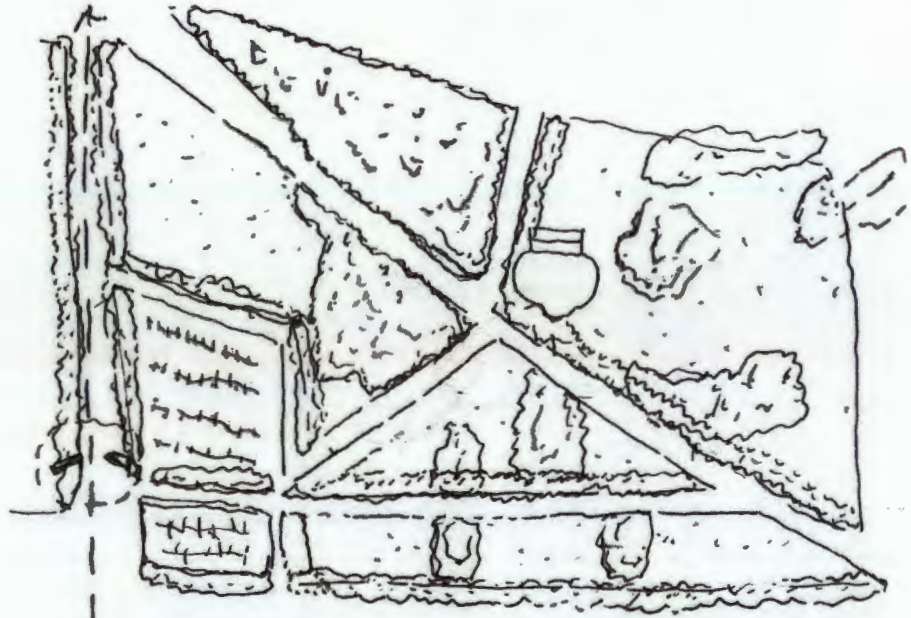
Through the site analysis it is apparent that there is the opportunity for three connecting movement routes across the site. One connects UCT in the North-east with the trail to Newlands Forest in the South-west. The other connects the urban surroundings in the South-east with the greater mountain estate in the North-west. The third route is informed by the original geometry and layout of the site, and runs north-south, providing a more direct connection between UCT and suburbia to the south. Students use this route constantly through the day; however the route at the moment sits adjacent to the south-exit road of the UCT, and does not actually move through the site, leaving the pedestrian with very little idea of what lies right next to them. Thus, I intend to move this route up a platform, providing a greater experience and awareness of the site.

Fig. 41
Diagrams
New connecting movement routes across site









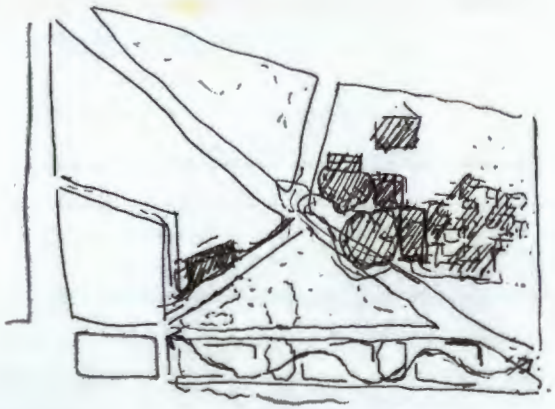
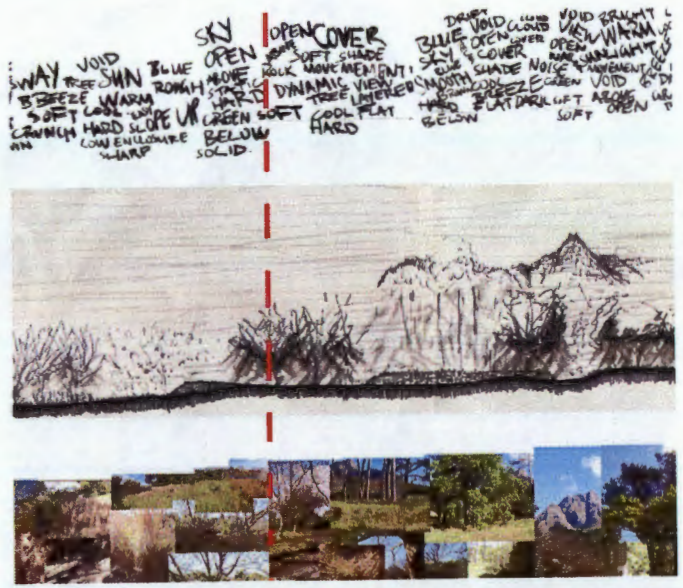


Fig. 42
Diagrams
New connecting movement routes



EXPERIENTIAL MAPPING OF SITE

Fig. 43
A walked route to be mapped experientially, through TEXT I SKETCH I PHOTO COLLAGE, in order to be able to represent the nature of the site.

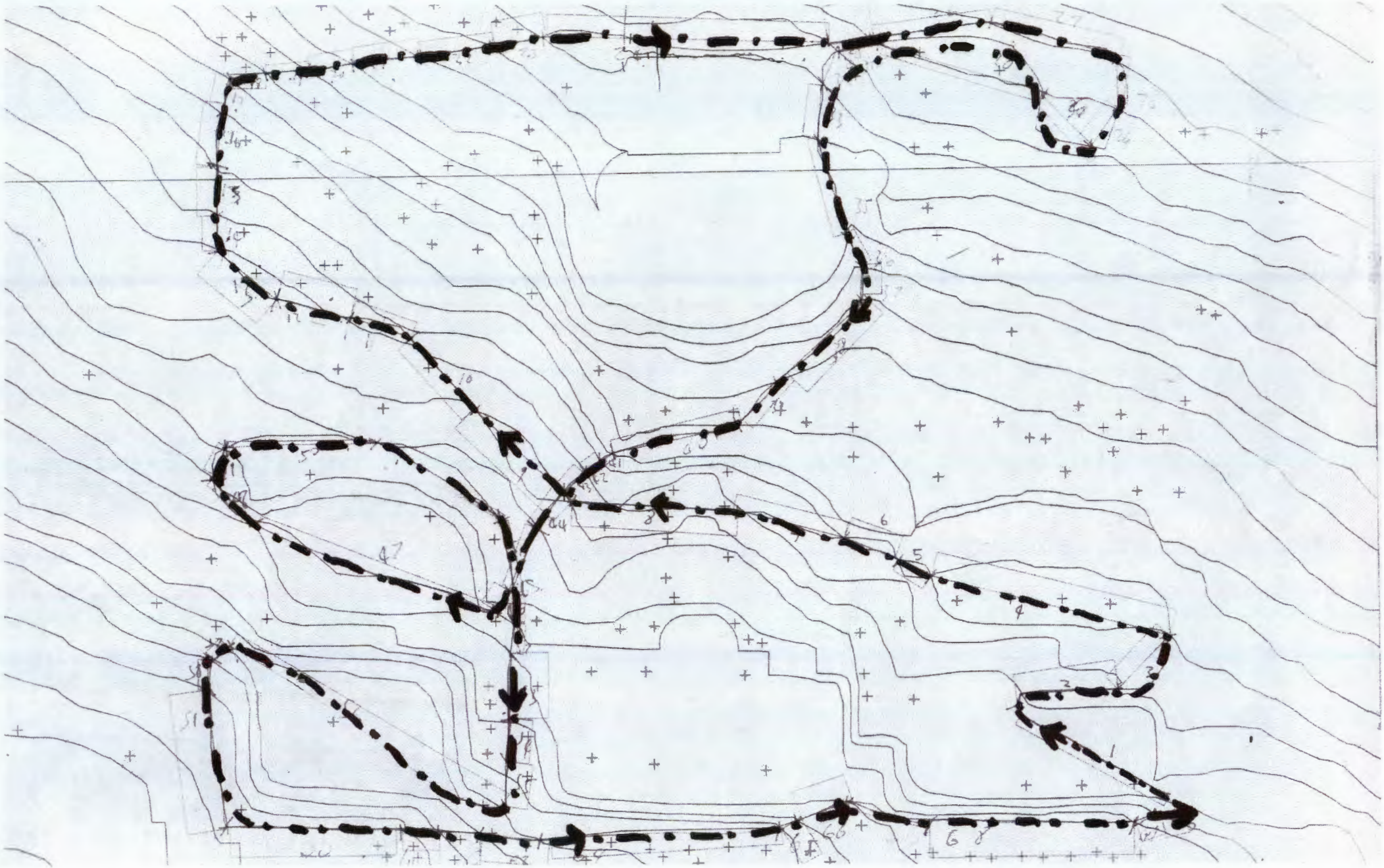


Fig. 44
TEXT

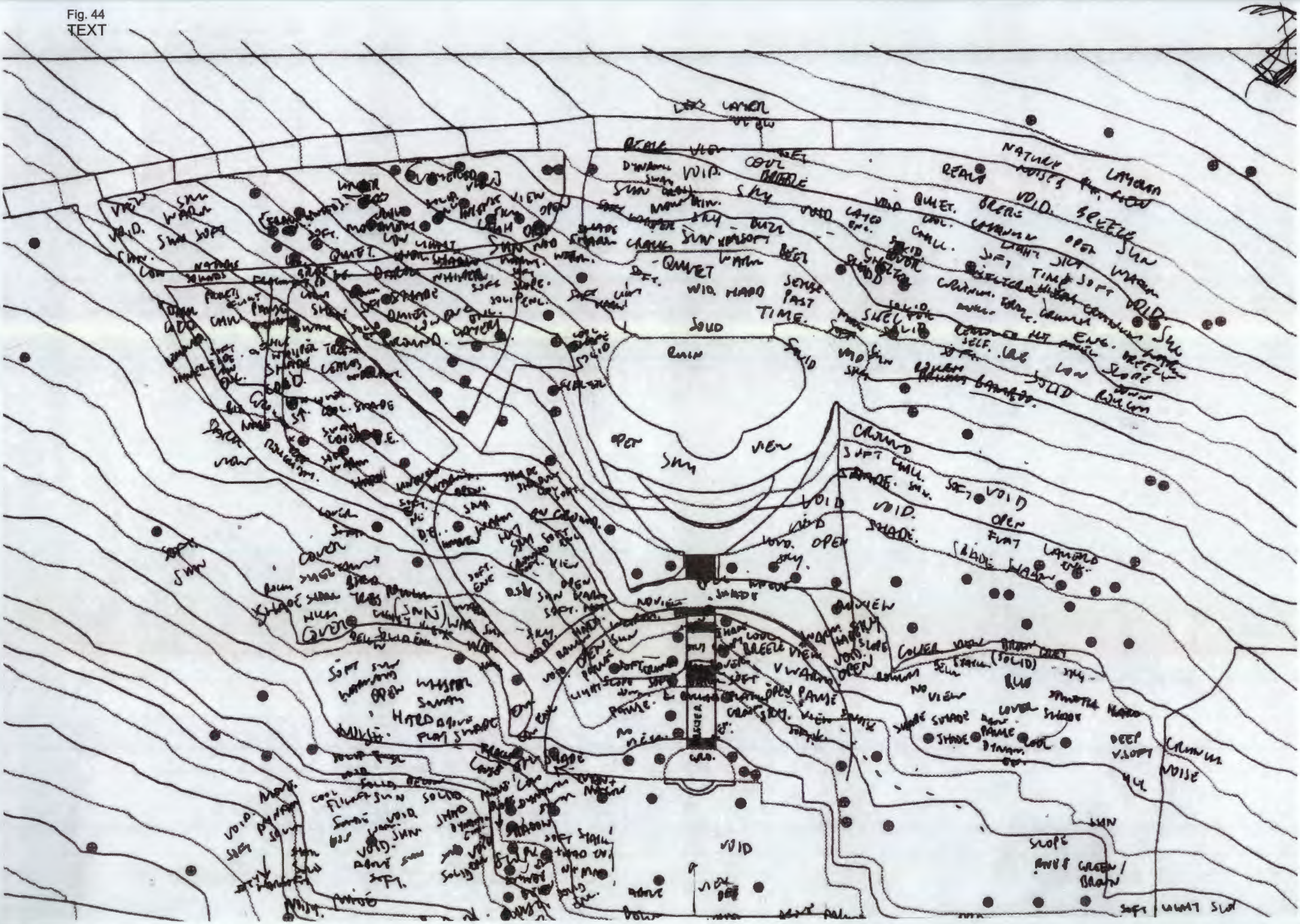
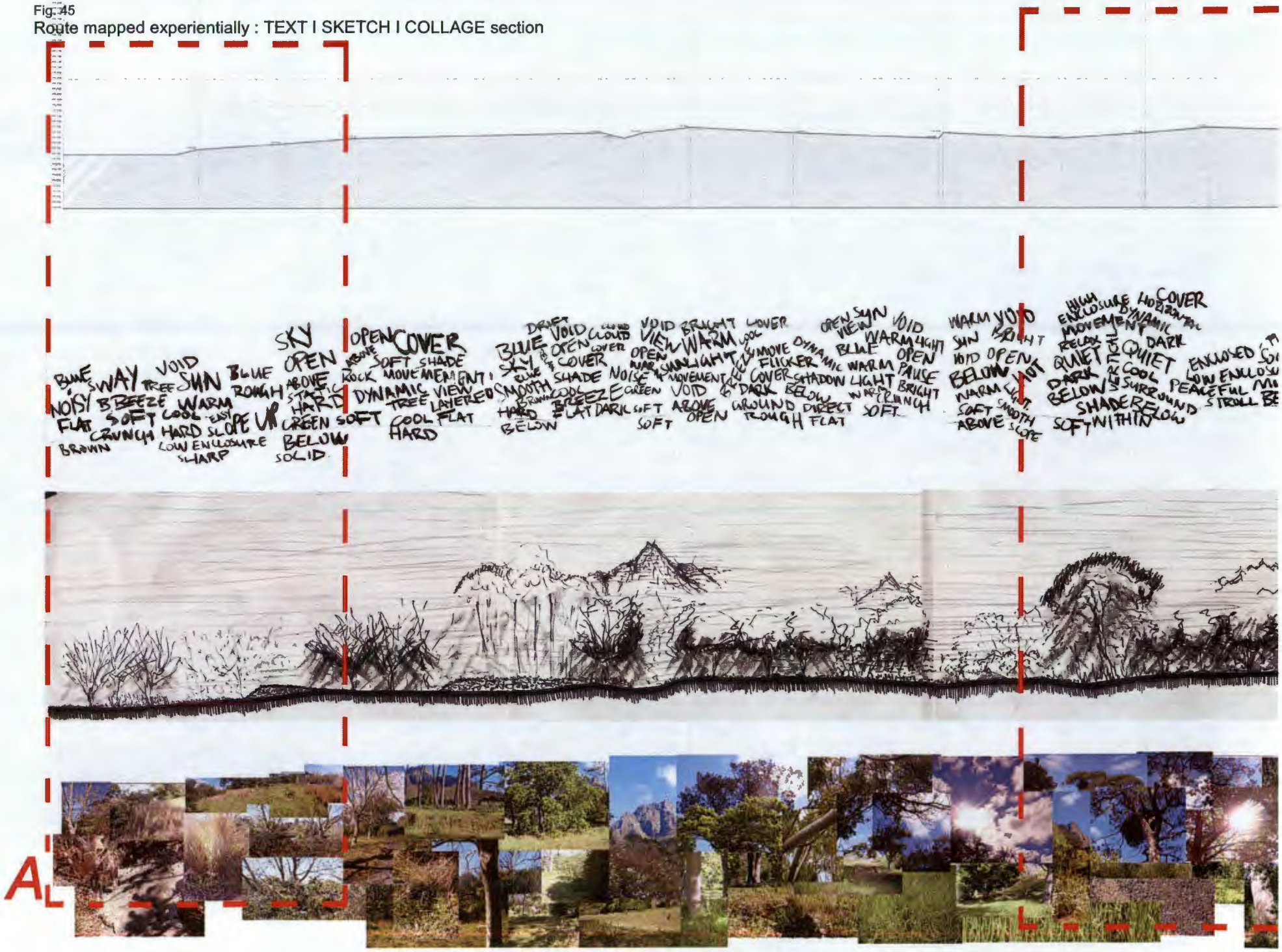
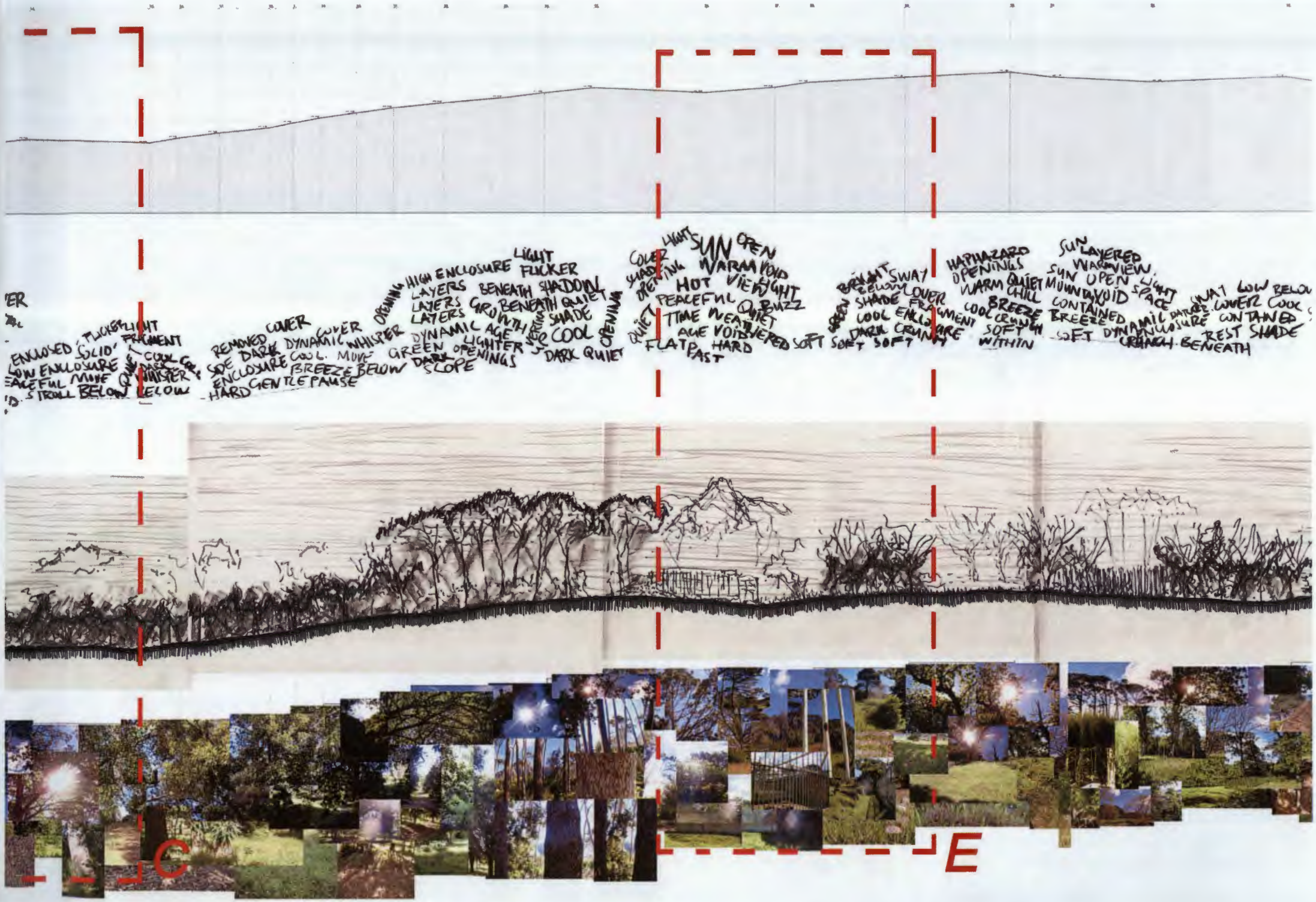


Fig. 45
Route mapped experientially : TEXT I SKETCH I COLLAGE section

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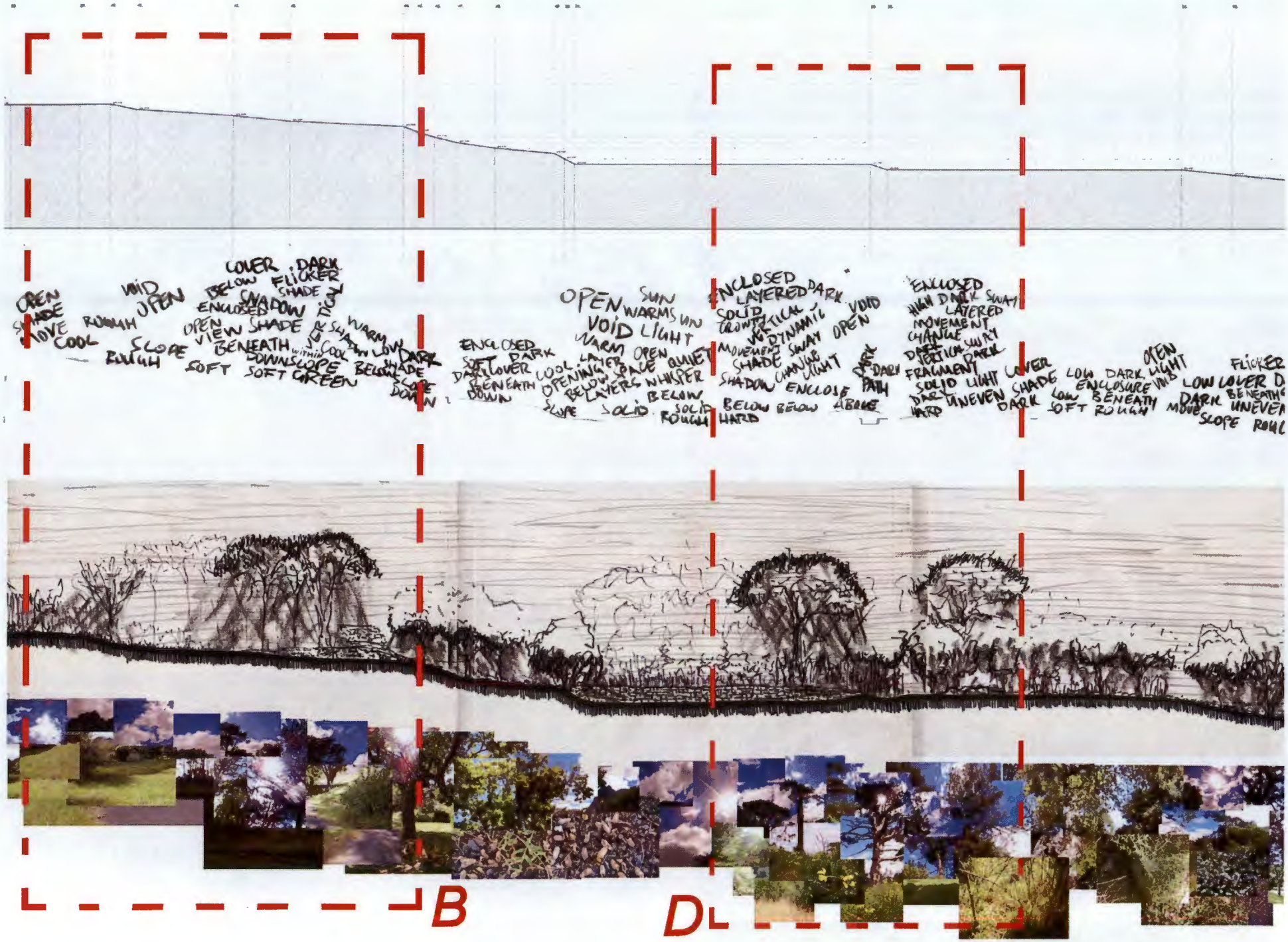
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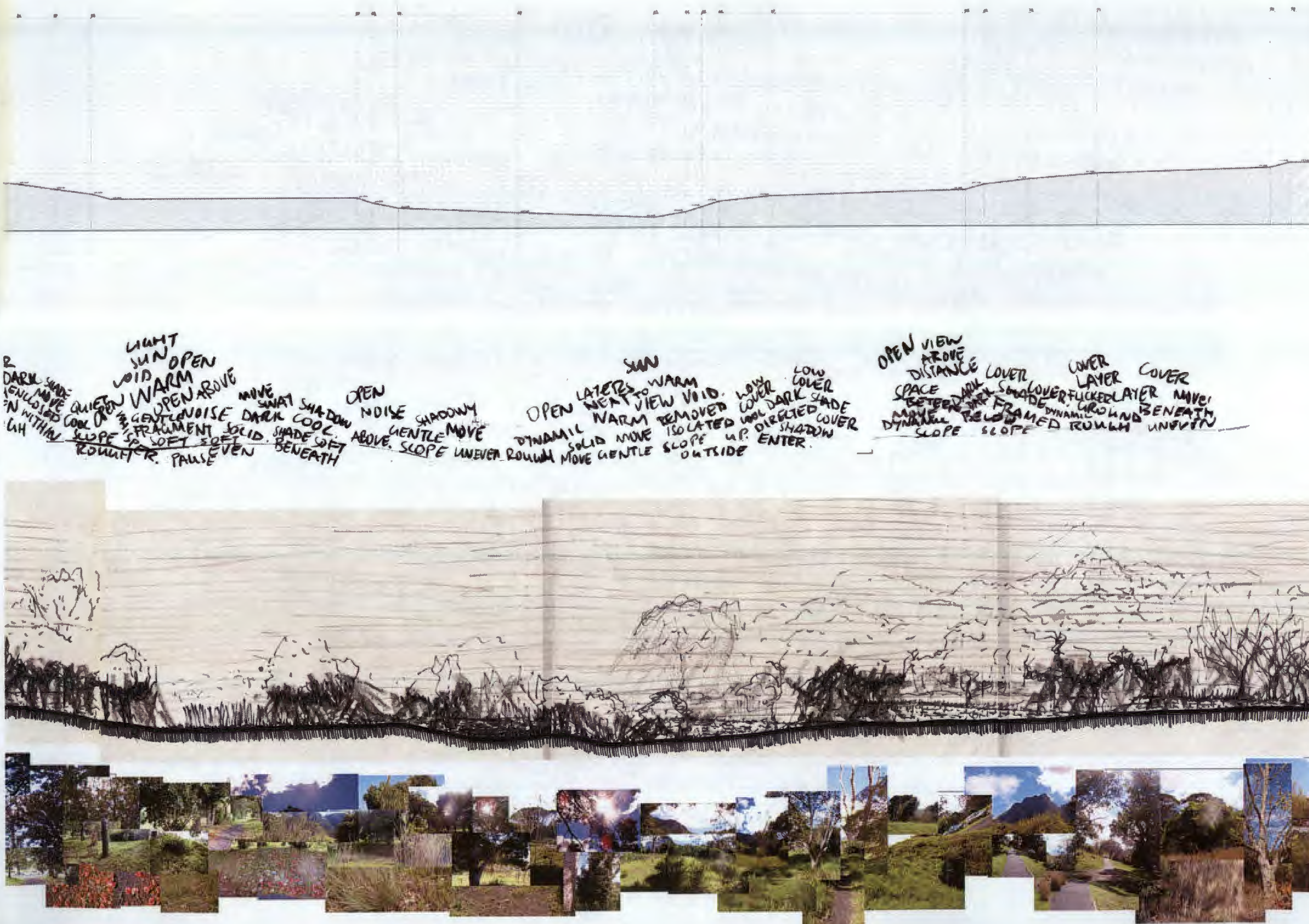

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WARM REMOVED
ISOLATED
DYNAMIC
SOLID MOVE
MOVE GENTLE SLOPE
OUTSIDE
LOW COVER
DARK SHADE
DIRECTED COVER
SHADOW
ENTER.
OPEN VIEW
ABOVE
DISTANCE LOVER
SPACE
SLOPE SLOPE
FRAMED ROUGH
COVER
LAYER COVER
BENEATH


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MOVE MOVE ARRIVE
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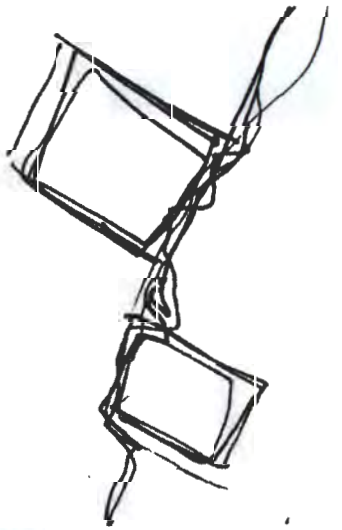


DESIGN DEVELOPMENT

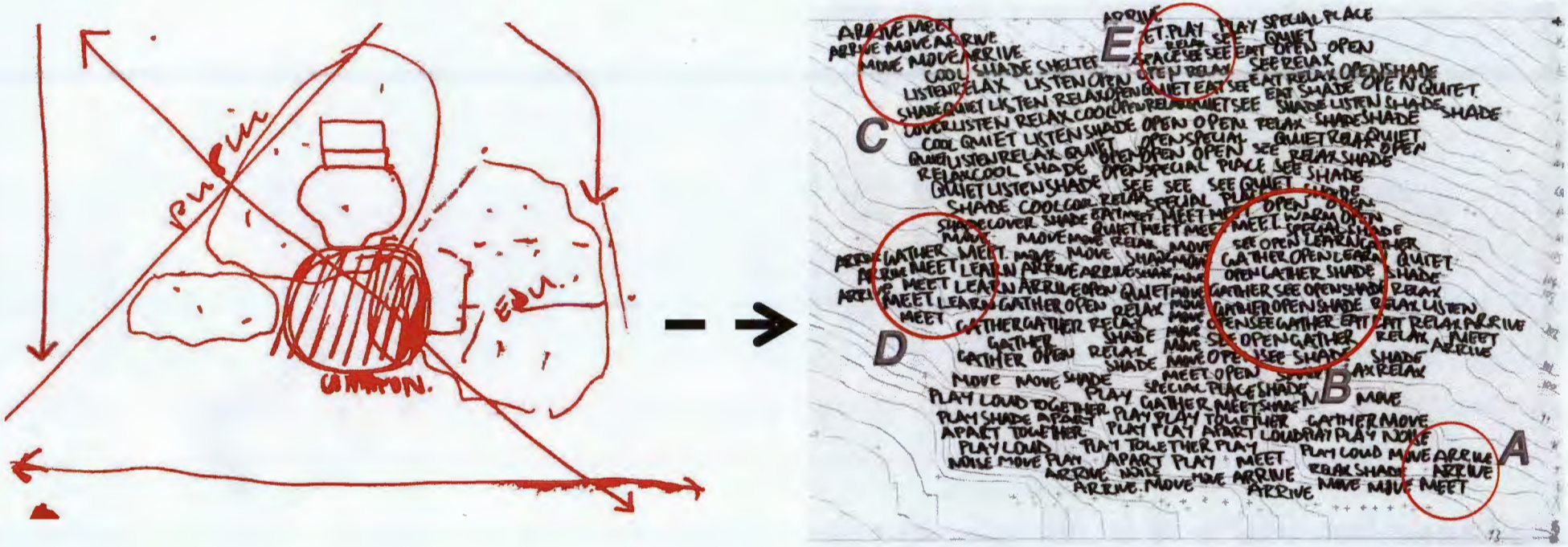
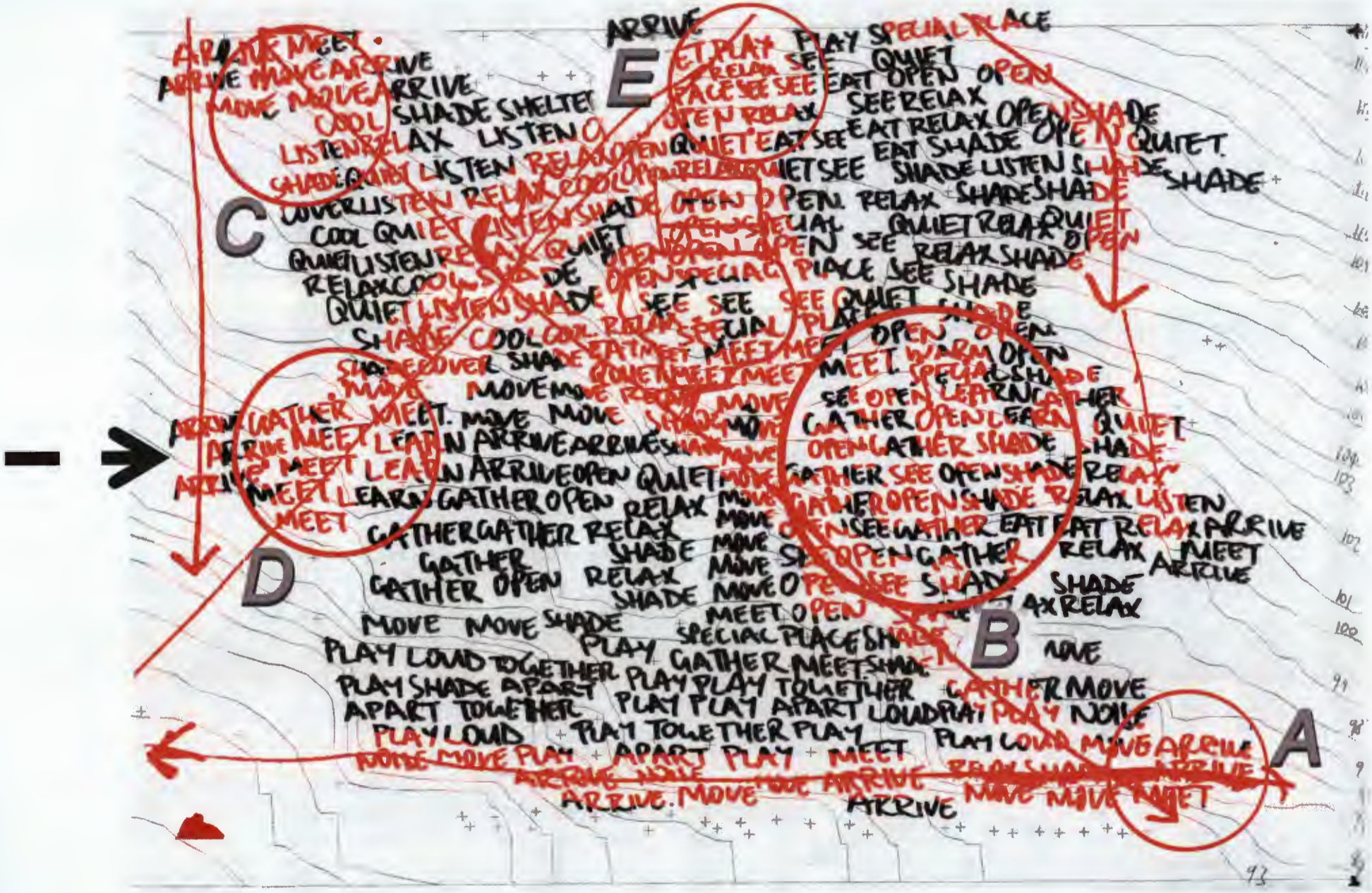


Fig. 46
Amalgamation of new routes through and experiential mapping at strategic points for new interventions.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93

Programming the site:

The Visitor's Arrival & Information Center lies on the (roughly) South-east/ North-west axis, whilst the "Theatre for Africa" facilities and Restaurant lies on the (roughly) North-east / South-west axis. The Environmental Education Camp lies further up the slope adjacent to "Theatre for Africa", and developing on from the spatial layout, so that they both can benefit from each other's and facilities.

A theme which runs throughout each building, at this stage, is that of fragmenting the form in order to better shift and align with the contours. A 'closed up', monolithic building, in my opinion, would not fit into this site as the past-program of the site was fragmented, causing zones of functions with differing experiences, held by an overall connection to the site as a whole. The sense of enclosure constantly changes as you move through. The response has been to split the buildings up into recognizable functions and pieces, with courtyards and voids constantly connecting the user to the outdoors of the sky above and beauty of the natural landscape surroundings.

The *stereotomic* and *tectonic* elements, which are *of* the earth and *on* the earth respectively, are differentiated and instantly recognizable:

- where the building seeks a more private function and needs to recede into the landscape, the walls are thickened at points where the user would come into contact and be aware of this thickness, i.e. thresholds. This is only done at necessary points in order to exaggerate the effect of being within the earth and within a solid enclosure. In learning from the precedent studies, openings are not recognizable as your standard architectural elements, but rather slits; voids and 'caves.'

- Where the buildings' functions are more public, open and less private, lighter elements are used and expressed as such.

- In terms of the materiality of the buildings at this stage in the design process, stained concrete, picking up tones form the natural Table Mountain sandstone, with cortone-steel 'doors' will be used as the heavy *stereotomic / of the earth* elements; whilst glass, timber and steel will be used to represent the *tectonic / on the earth* elements.

- The stained concrete will better compliment the surrounding stone enclosures than plain off-shutter concrete, and will pick up the tonal connections of the stone.

- The cortone-steel used for the 'doors' across these thresholds, will be heavy and need a bit of physical effort to move. The effort required is obviously relative to children who will be using the Environmental Education Camp. The steel will also weather and stain, leaving behind traces of past seasons.

Structurally, I do not want to be too literal with tectonic expression, but rather to focus on the qualities of light; layering and weathering of structure; etc; in order to impact on the experience of space. Although there are plenty of fine examples of structures resembling trees with 'branches' splaying out to hold up the roof, my focus is less formally representational and rather more experiential.

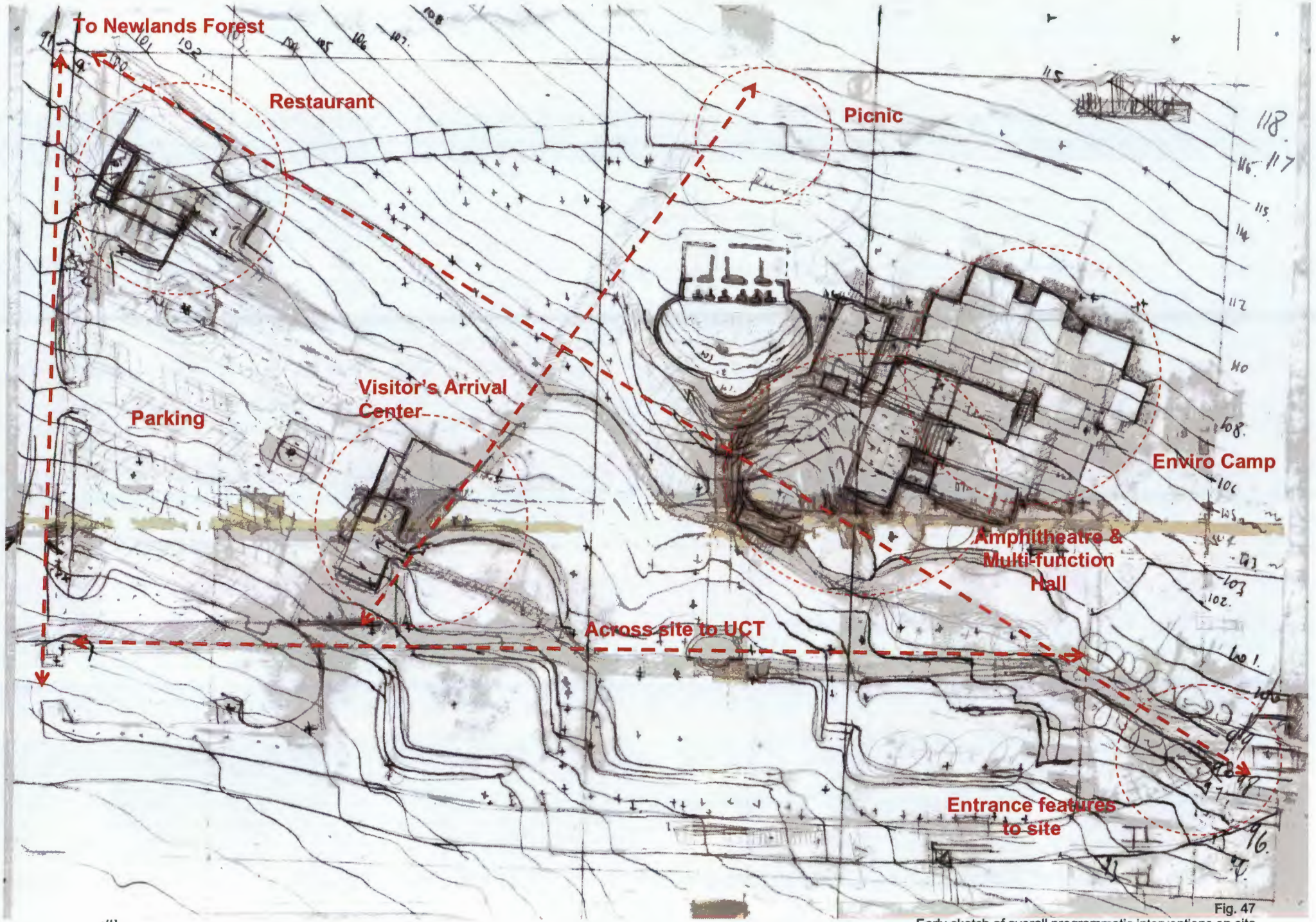


Fig. 47
Early sketch of overall programmatic interventions on site

What is the nature of the Visitor's Arrival & Information Center?

I'm not going to go into too much detail at this stage regarding the design of all of the buildings or interventions, but I'll briefly describe design principles towards each intervention, going into detail, as far as I've taken the design process thus far.

As the site as a whole acts as a gateway to the larger mountain estate, it is important for the Visitor's Arrival & Information Center, in particular, to aid the journey from urban; to semi-rural; to rural. It should facilitate the process of leaving urbanity and entering nature.

Informing the visitor through information panels, etc, is one aspect that is to be addressed, but there is also the experiential and spatial journey which needs to awaken their senses for the 'natural' landscape ahead.

By positioning this building along the South-east – North-West primary movement axis, the spatial experience immediately talks about a journey up, into the site and into the mountain beyond.

On arrival the visitor is confronted with a rough, stained concrete wall, influencing a sense of intrigue as to what lies beyond. The thick wall, which protrudes perpendicularly out of the landscape and is semi-covered by the natural ground fall, divides the site from the parking-lot thus providing a physical barrier between the visitor and the urban world. The wall thickens at the entrance incorporating an opening, guiding the visitor into the building. This is a dark space, forcing the user's vision to adjust to the lack of light, thus removing the visual connection that the visitor has with the urban setting, before emerging into the first enclosed information area.

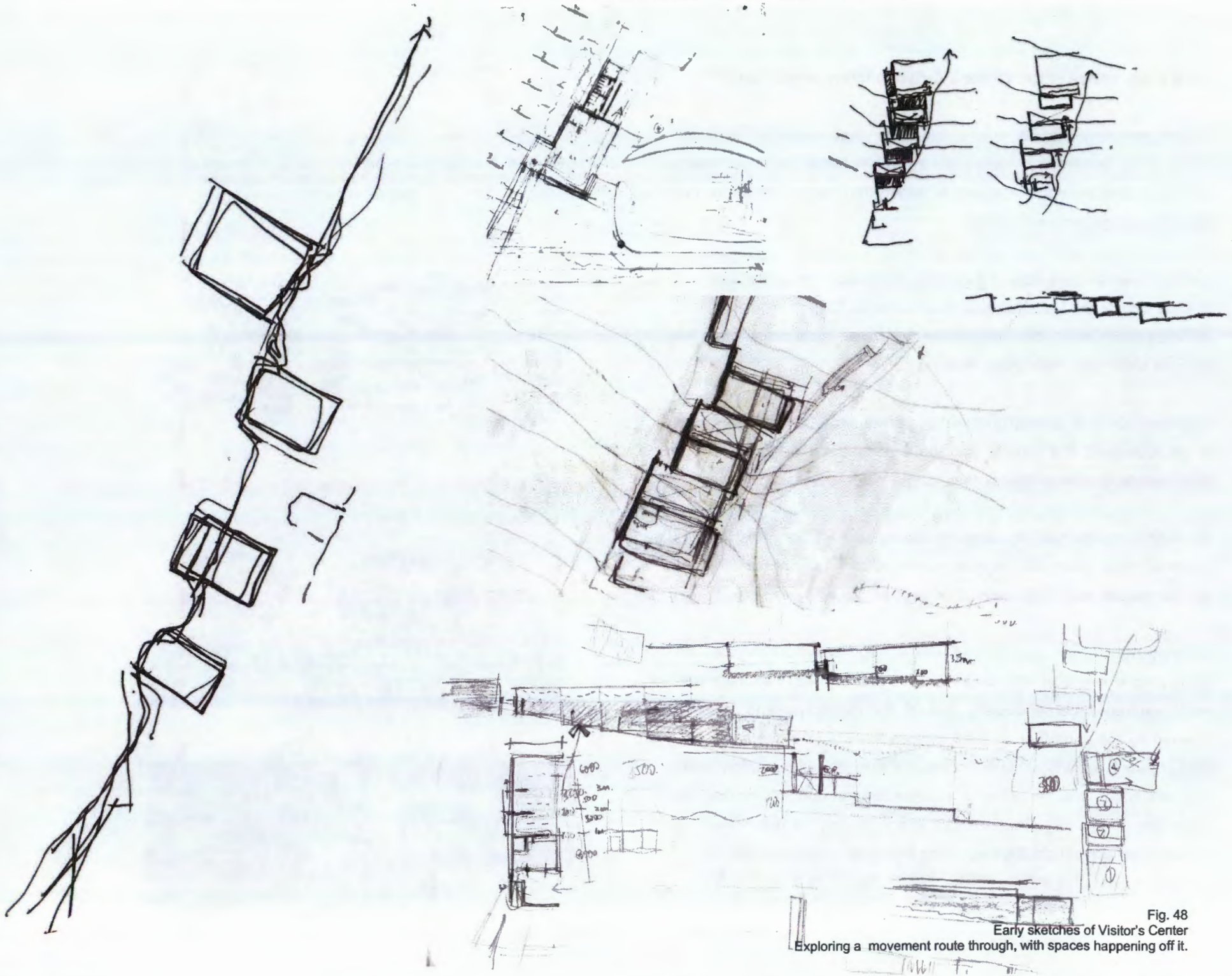


Fig. 48
Early sketches of Visitor's Center
Exploring a movement route through, with spaces happening off it.

This first information area is a light space, with a visible structural layering of ceiling and roof enclosure, which is supported by a few cylindrical steel columns. Between the columns stand vertical timber members with a translucent glass infill. The vertical timber members differ in colour, section and spacing apart, allowing different amounts of light into the space at different times of the day. The translucent glass allows diffused light in but maintains the visitor's attention on the information panels provided. However, the translucent glass stops short of rising all the way to the ceiling and is replaced by transparent glass. This allows glimpses of the overhead stone-pine canopy, which the building sits adjacent to.

Moving through this light space, the user would then move into a dark, thick-walled room, with a ramped ground-plane to move the visitor up the slope, back and forth along the line of the contour. A slither of light provides come relief from the darkness as it enters from above, where the concrete roof is pulled away from the wall. On exiting the first ramp and turning on the first landing before heading up the second ramp, the visitor is afforded a glimpse out of the darkness towards the surrounding site. As the building is dug into the ground, this space should literally feel as if you are moving *along* the contour, but more importantly up *through* the earth, before emerging out into the bright open courtyard, which reconnects you with the trees and sky above and the surrounding site. There are two more such information spaces which the visitor would continue through, before emerging into the final open courtyard and up into the site.

Fig. 49
Plan of Visitor's Center
Exploration of dark and light spaces; thick walls; open protected courtyards, occurring on a movement route into site.

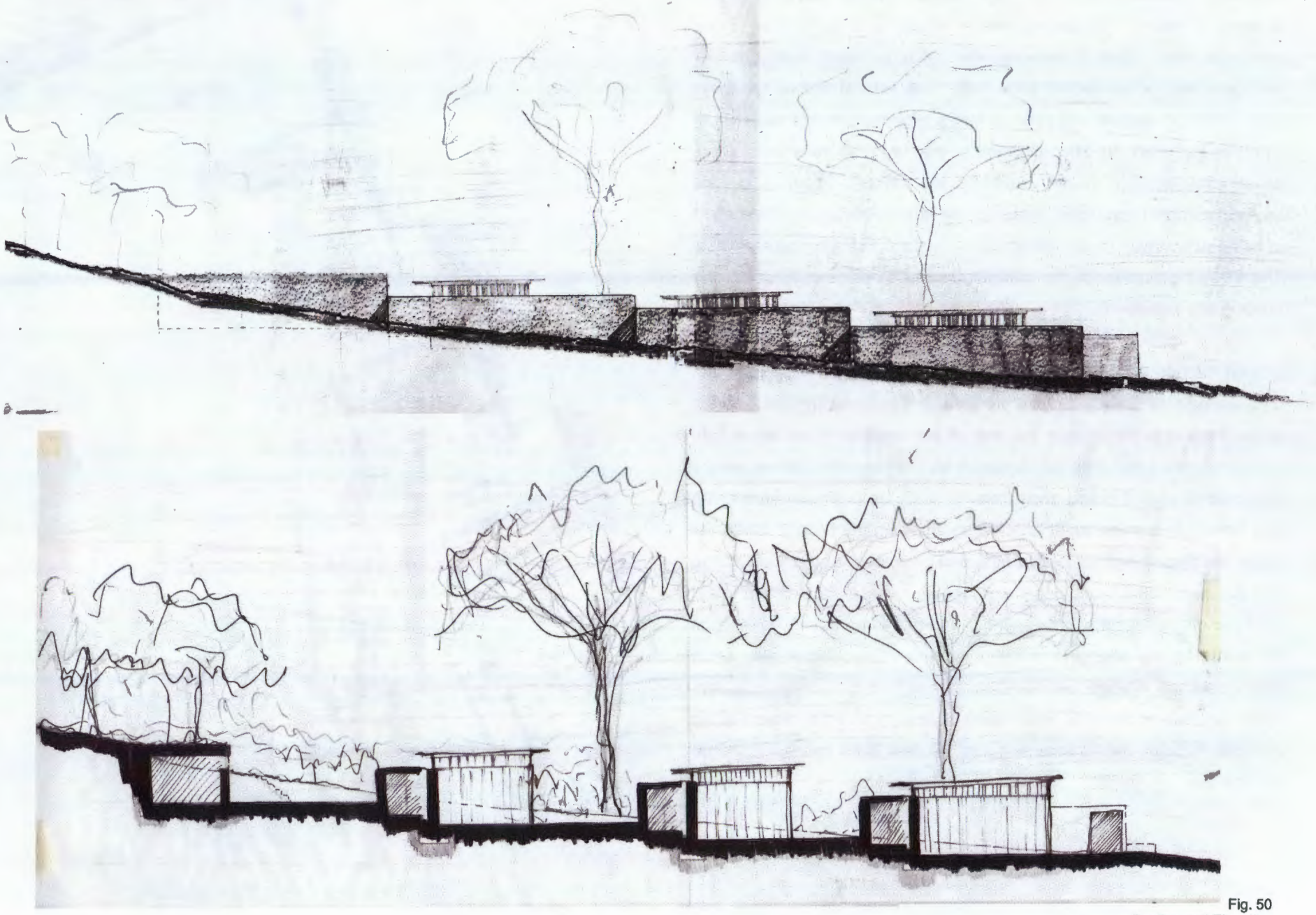


Fig. 50
Section and Elevation
Exploration of dark and light spaces; thick walls; open protected courtyards, occurring on a movement route into site.

Fig. 51
Early working model
Site and Early Visitor's Center

Fig. 52
Early working model
Visitor's Center: working with a route along contour, as opposed to up slope into site

What is the nature of the Theatre for Africa?

The "Theatre for Africa" is a theatrical venture run by Nicholas Ellenbogen, which aims to educate people, specifically the underprivileged community, on the history and diversity of Africa; South Africa; the Cape; and the beauty of Table Mountain, through the medium of performance. They have informally operated out of the old Lion Enclosure and have been looking at ways for the site to better accommodate these activities. The Theatre for Africa was also involved in educating the guides for the newly developed Hoerikwaggo (the indigenous *Khoekhoen* word meaning *'Mountain in the Sea')* Trail, which takes visitor's along a 3-5 day hike up into Table Mountain with various camps and overnight stops along the way. This design projects new development and programming of the old zoo site could very well be included into the Hoerikwaggo trail as a place for visitors to experience the theatrical productions of the Theatre for Africa and possibly as one of the overnight stops along the route.

Although I have initially toyed with the idea of continuing with the idea of the theatre operating out of the old Lion Enclosure, I have chosen to rather create a space adjacent to the enclosure which will house these functions.

The old Lion Enclosure is one of the mysterious marvels of the site, and although it does not operate as such anymore, I feel that it should be acknowledged as such and will be opened up to the public, who will be able to access the enclosure as it is. An informal picnic spot will sit on the mountain side, behind the old cages, and the enclosure can operate

as an accessible piece of the history of the site, to be experienced and enjoyed at will. As the project develops over the next 6 weeks, this position may change, but at this stage, that is the intention for this beautiful piece of rural and somewhat primal architecture on the site.

A new amphitheatre is planned, which will be dug in and moulded into the ground, becoming more of a subtle piece of landscape than the formal, classical idea of amphitheatre. It will be open to the sky above, however it will be able to be tented to still accommodate the functions whilst providing shelter from the elements. Apart from the theatre, this space could hold outdoor lectures/ conferences/ presentations/ weddings, etc.

A multi-functional space, will sit adjacent to the amphitheatre, facing south in order to capture light which is conducive to exhibitions which could take place. The physical make-up of this building will be very similar to the Visitor's Center in order to develop and maintain a sense of a unifying architectural language which is informed by the site.

A subterranean auditorium will sit to the west of the amphitheatre, which provides a contrasting internalized space for possible lectures / performances. Behind all these functions will be the Environmental Education Camp.

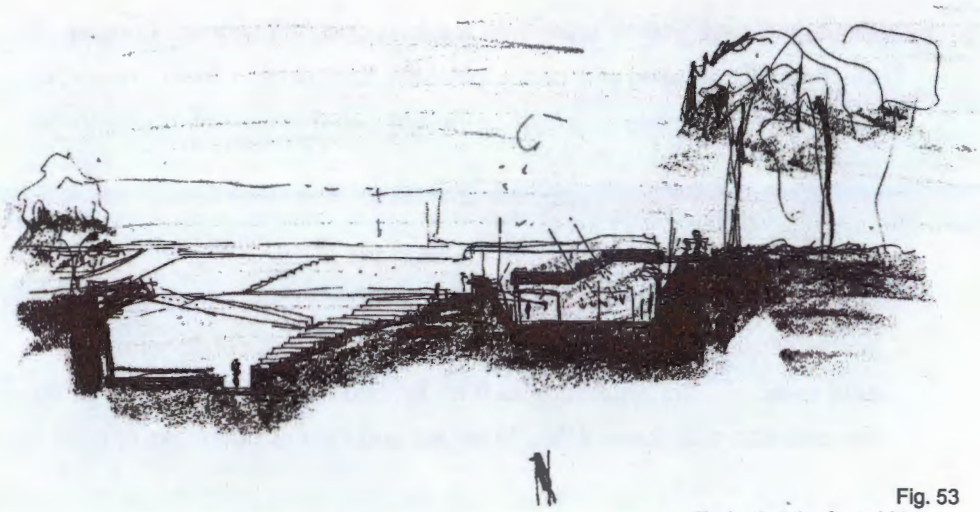


Fig. 53
Early sketch of amphitheatre

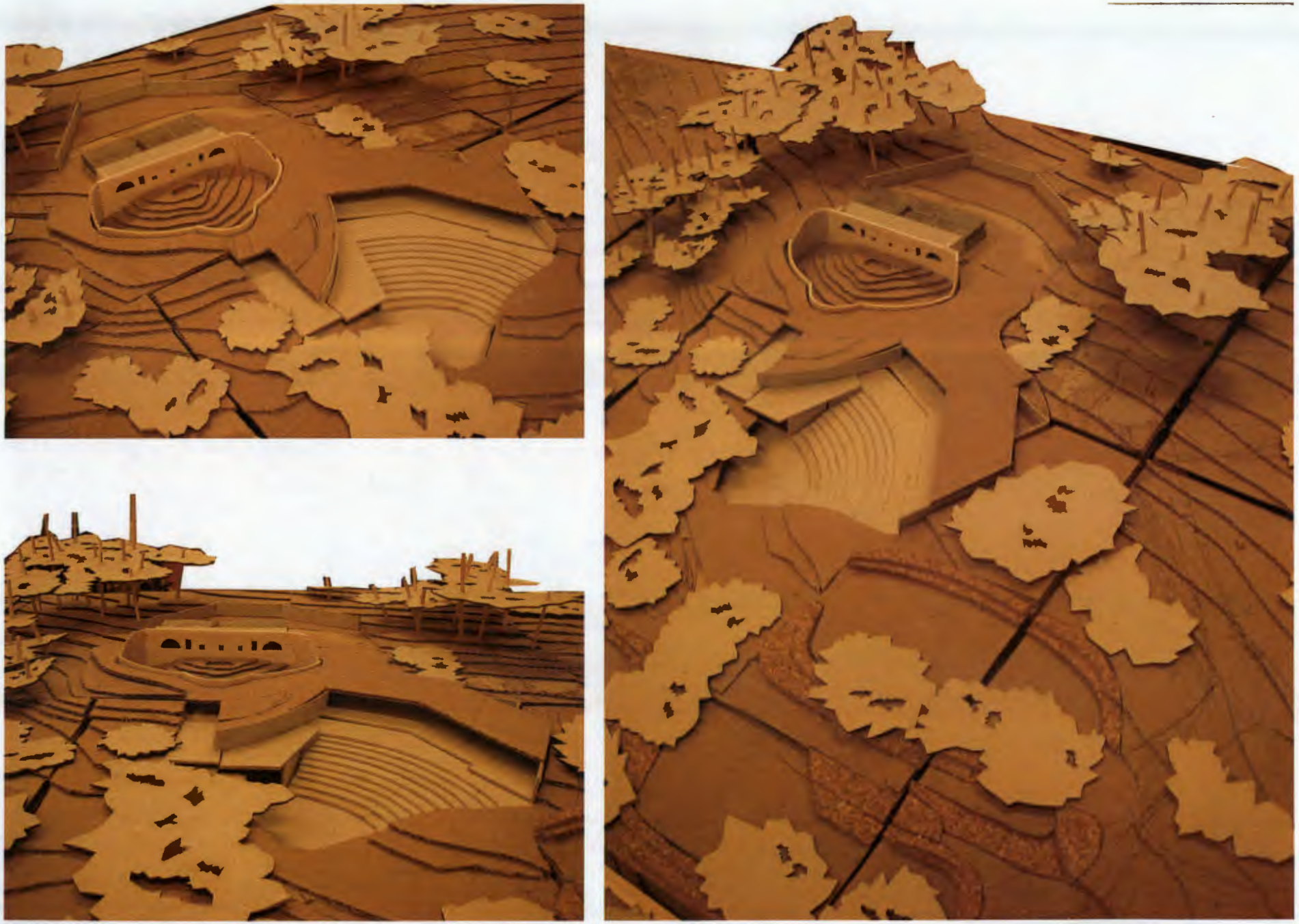


Fig. 54
Early model of Amphitheatre

Fig. 55
Early model of Amphitheatre with exhibition space

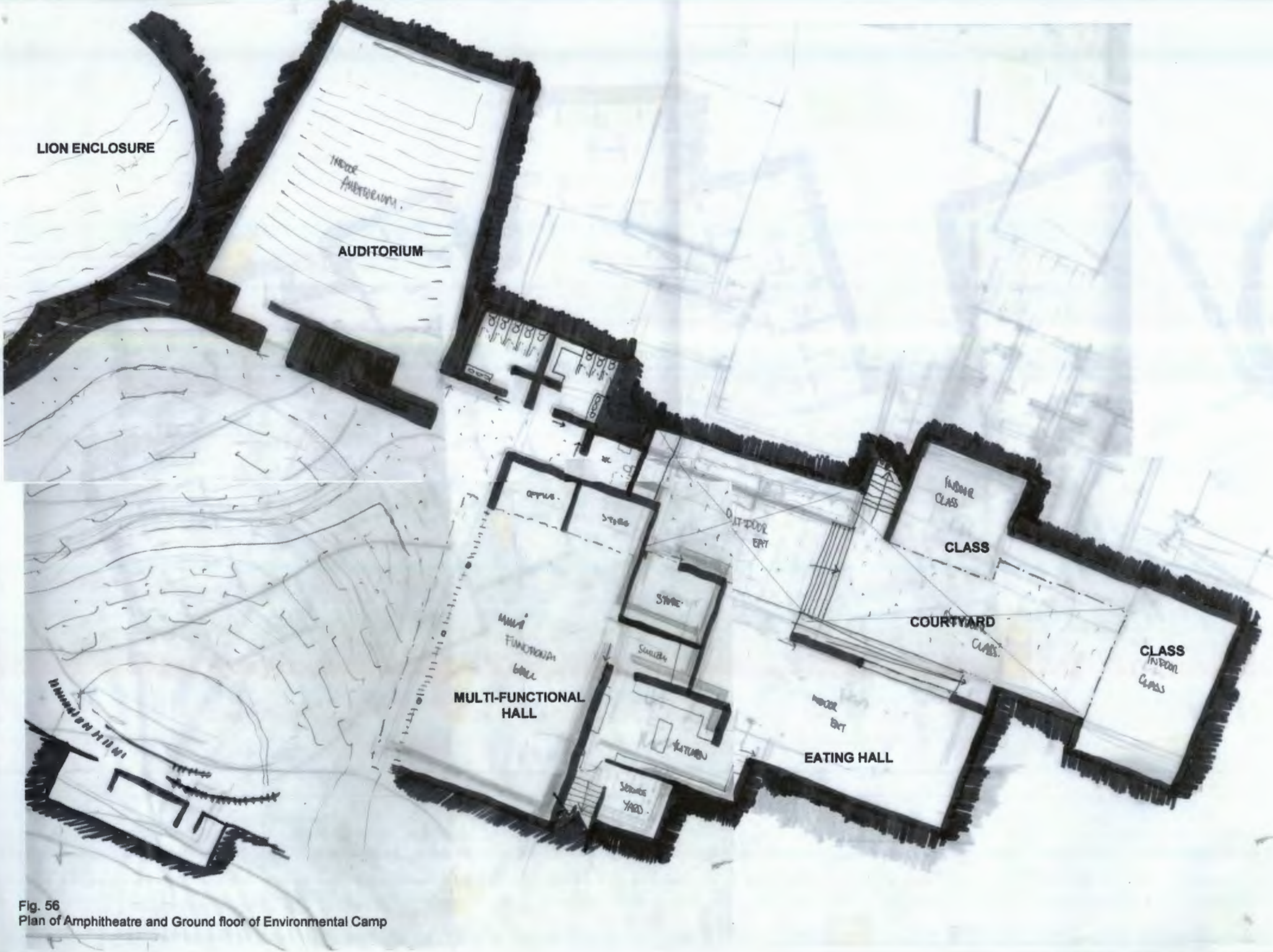


Fig. 56
Plan of Amphitheatre and Ground floor of Environmental Camp

Fig. 57
Plan of upper level Environmental Camp

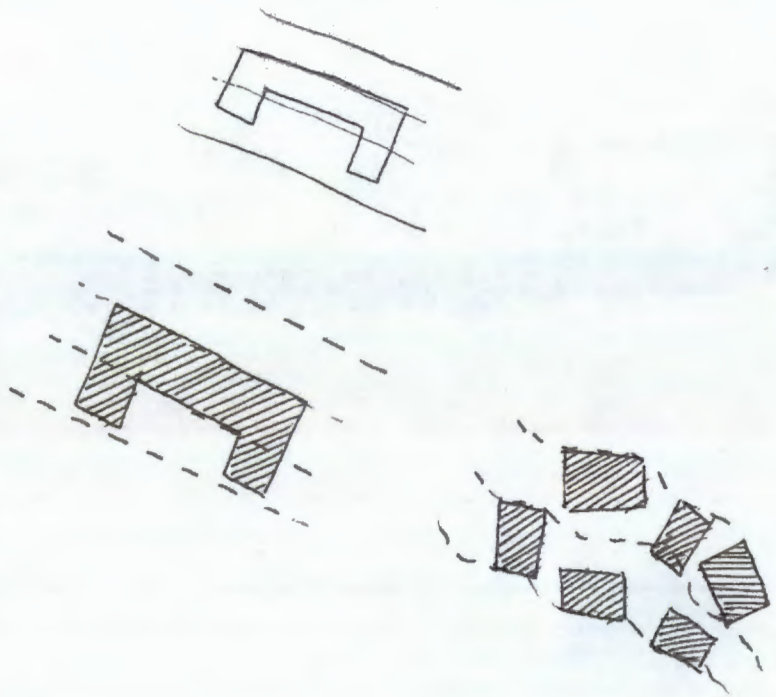
What is the nature of the Environmental Education Camp?

The idea for this camp is concurrent with the idea for the entire site and that is to enhance the spatial and experiential characteristics of this unique piece of mountain side. Once again, by fragmenting the spatial layout of the program and opening courtyards and voids to the sky, the intention is to keep providing opportunities of connections to the natural surroundings.

The camp also requires a degree of security and 'secrecy', thus it has been dug down into the earth, providing the visitor's with a mysterious subterranean world, in which to learn more about the beauty of their surrounds. Heavy, thick walls are once again contrasted by light structures in the appropriate places. The camp can accommodate 120 people in dorms of 20 each, plus smaller rooms for teachers, and guides.

These dorms are placed furthest up the site, in order to maintain the hierarchy of public-semi-public-semi-private-private. The layout of the dorms shifts and adjusts to the contours, providing interesting courtyards, one for the female dorms and one for the make dorms. An ablution block sits at the centre of the space.

Below the dorms lies two 'classrooms' which have been dug into the hill, and a large covered eating hall. These buildings surround further outdoor learning areas and outdoor eating areas. The intention is for this camp to operate as a camp for on site learning, but also to operate as a base camp for the children to leave and head off into the greater mountain estate, possibly overnight, to further experience the nature of the mountain...a mountain, which I would imagine, that a lot of under-privileged children have only experienced from the distant Cape Flats.



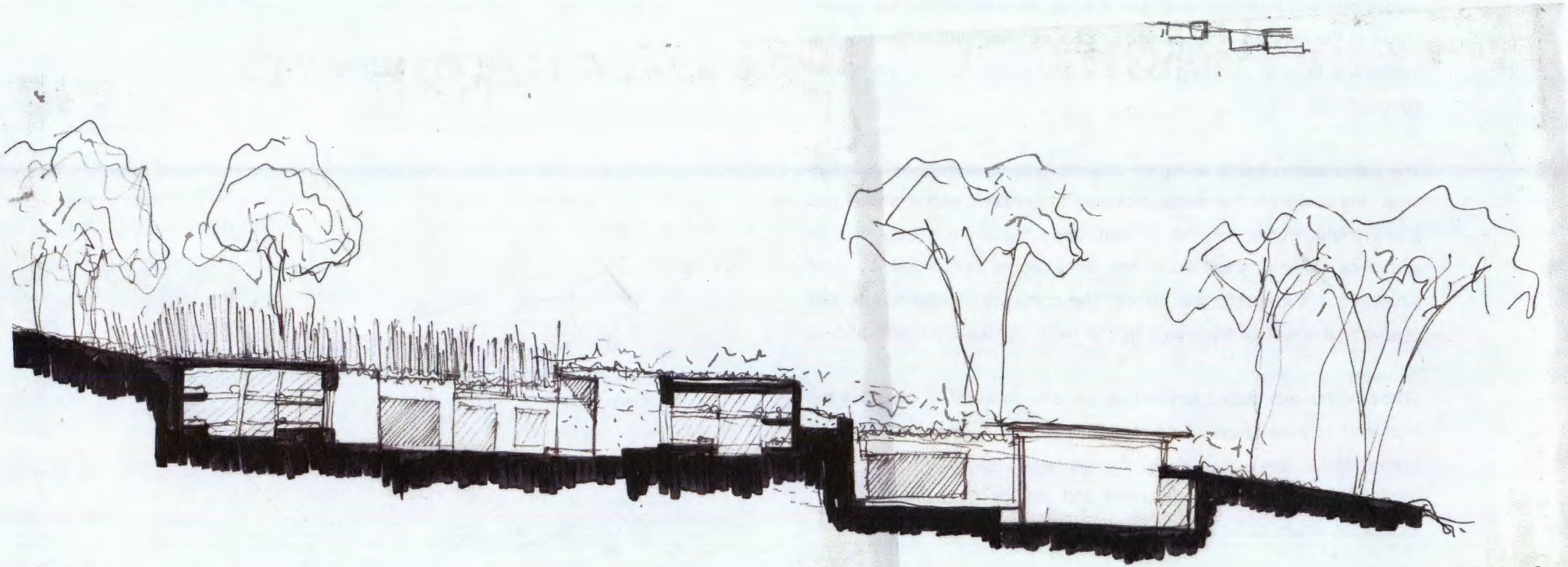


Fig. 58
Section through Camp

What is the nature of the Restaurant?

The restaurant sits in the south-west corner of the site, welcoming visitors/ hikers from the Newlands Forest trail to the south, whilst also providing a visual connection to passersby's travelling up or down the East-West road to Rhodes Memorial. The site has the most spectacular view of Devil's Peak, to which the building opens itself up in appreciation.

Once again, the building adjusts between the solid and the void, opening itself up to the sky through voids in enclosure and courtyards in specific places; and closing itself up with heavy and thick walls in other places. It sits along the natural flow of the contours and south-west / north-east movement route, thus the form of the building acts accordingly, shifting as the contour shifts.

The idea for the food and food preparation of the restaurant ranges form indoor kitchen; to outdoor braaing/ spit-braai/ poitjie, etc. In much the same way that the *Strandloper* restaurant in Langebaan embraces the concept of communal cooking, this restaurant will accommodate a range between communal to individual dining. This will allow the restaurant to cater for a more diverse range of clientele, in keeping with the notion of a *"park for the people."*

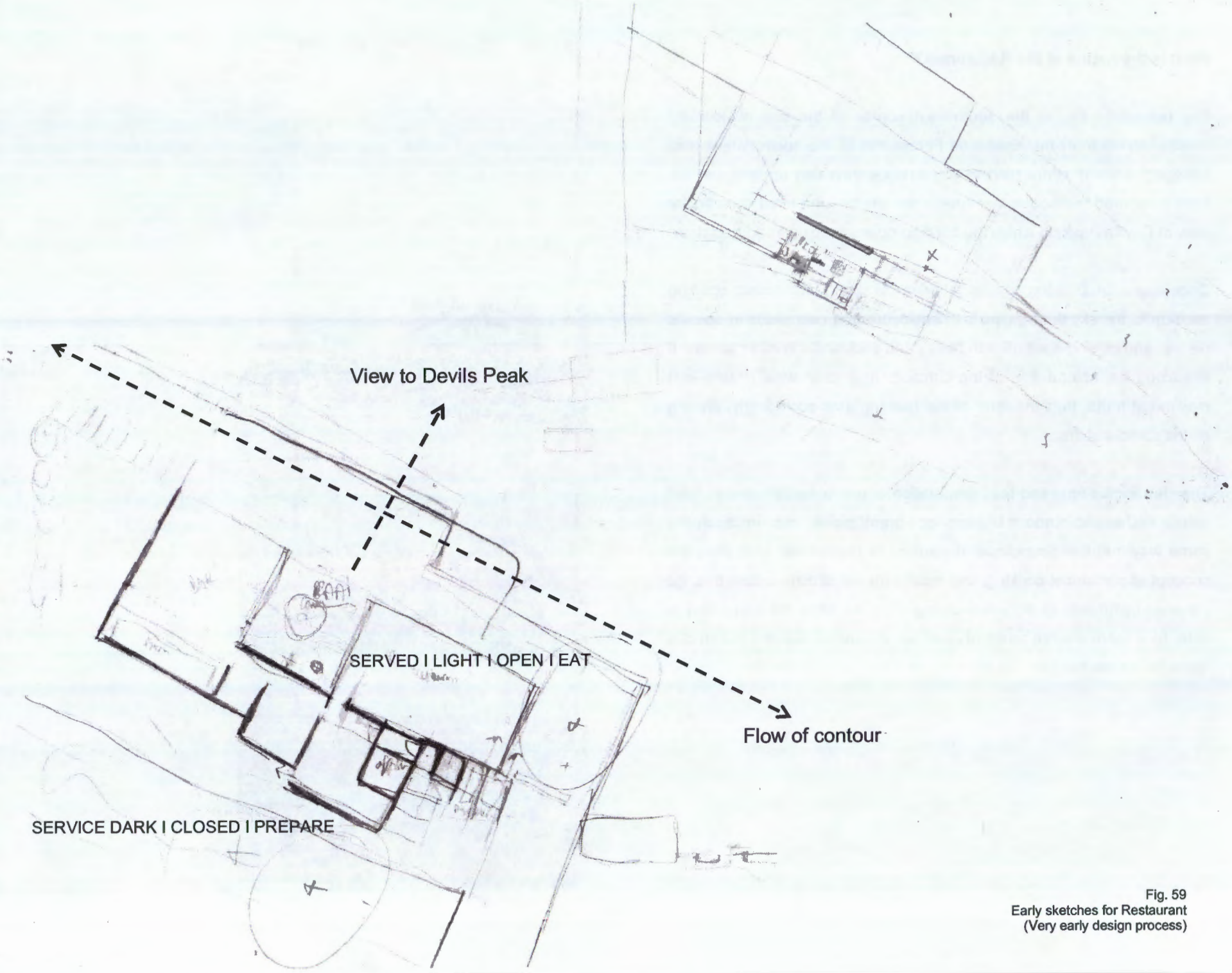


Fig. 59
Early sketches for Restaurant
(Very early design process)

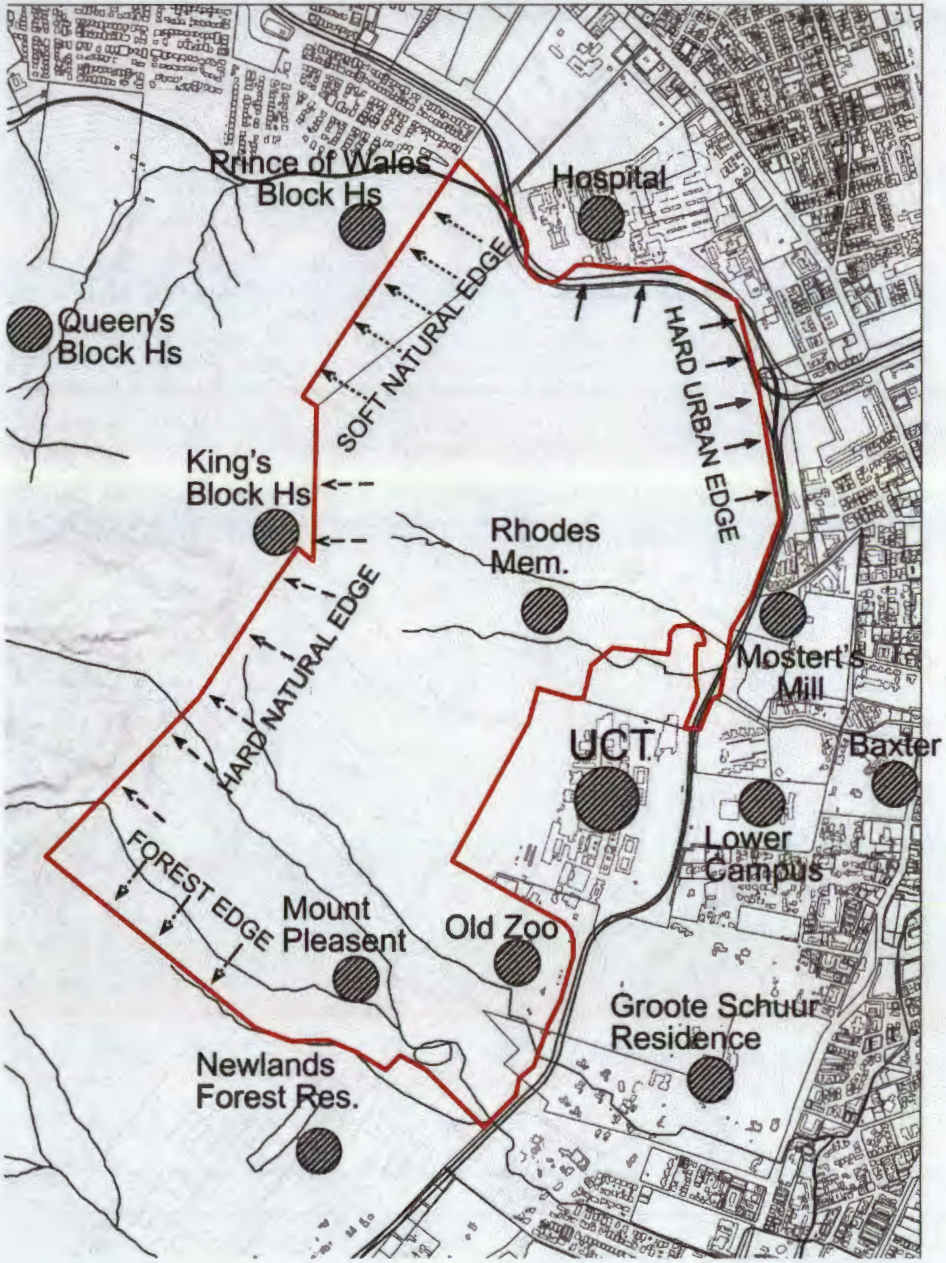
Conclusion

Although the design process is still very much in the development stage at this point, this document aimed to make my design intentions for each intervention clear.

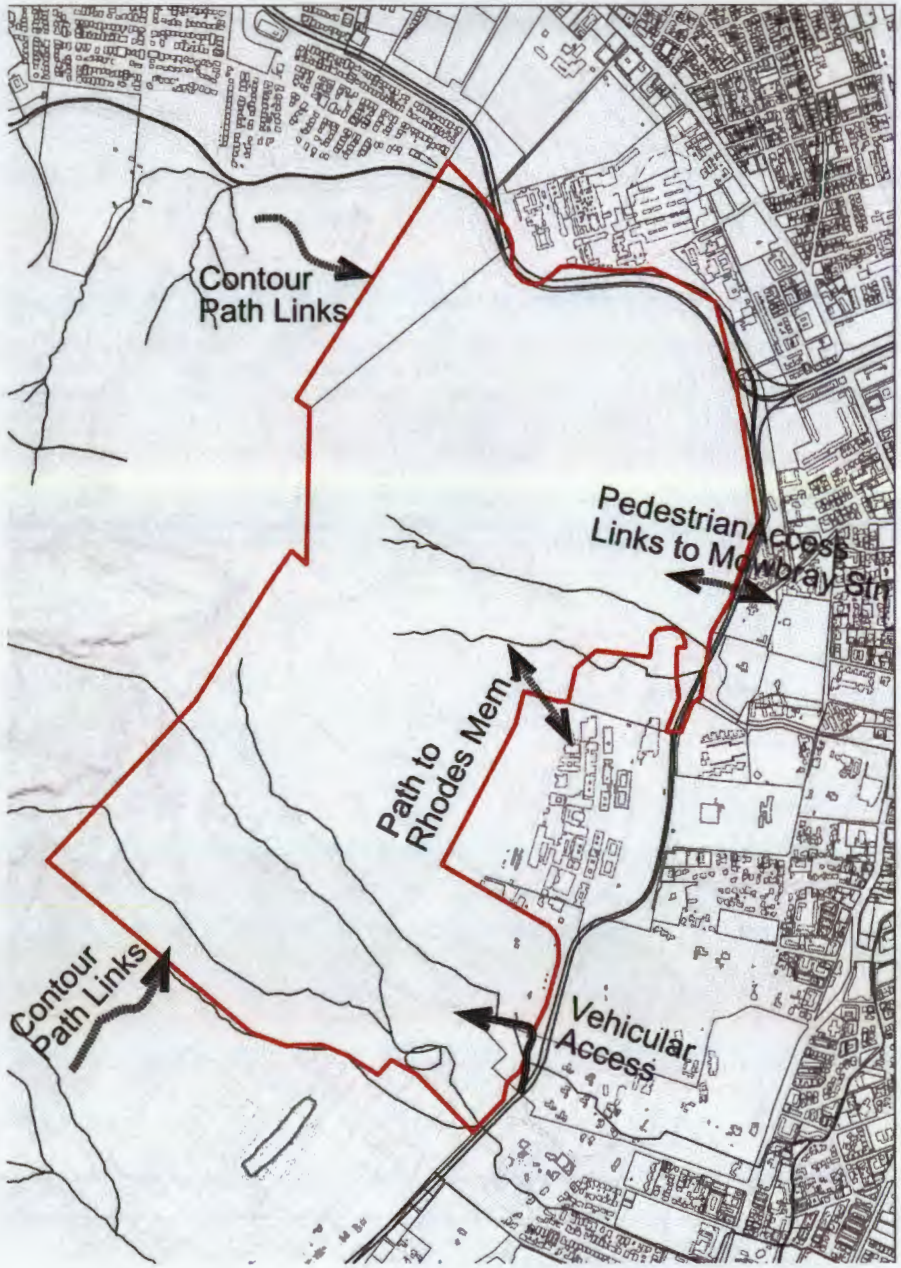
The spatial layout of the new interventions for the site lies along the identified movement/ connection routes, which connect the important surroundings of the site. Each intervention is located at strategic points on these routes and I aim to introduce buildings which are appropriately designed for each micro-site, taking into account the functional requirements and the nature of the site.

As has been said, this site is uniquely situated on the eastern slopes of Table Mountain and sits beneath the ominous Devil's Peak. It is a site of intriguing spatial elements of tree canopy above and earth and stone below. Through the spatial layout of thickened walls, which are of the earth, and lighter elements and spaces rising above the earth, my intention for this thesis design project is to learn experientially from the site and use this knowledge to inform the programmatic zones, spatial formations and physical experience of my buildings, aiming towards a phenomenological interpretation of what a building on this intriguing site could be. A new layer needs to be added to the historical layer, which sits in the distant past with functions which are no longer accepted or required.

Groote Schuur I *Surrounding Developments*

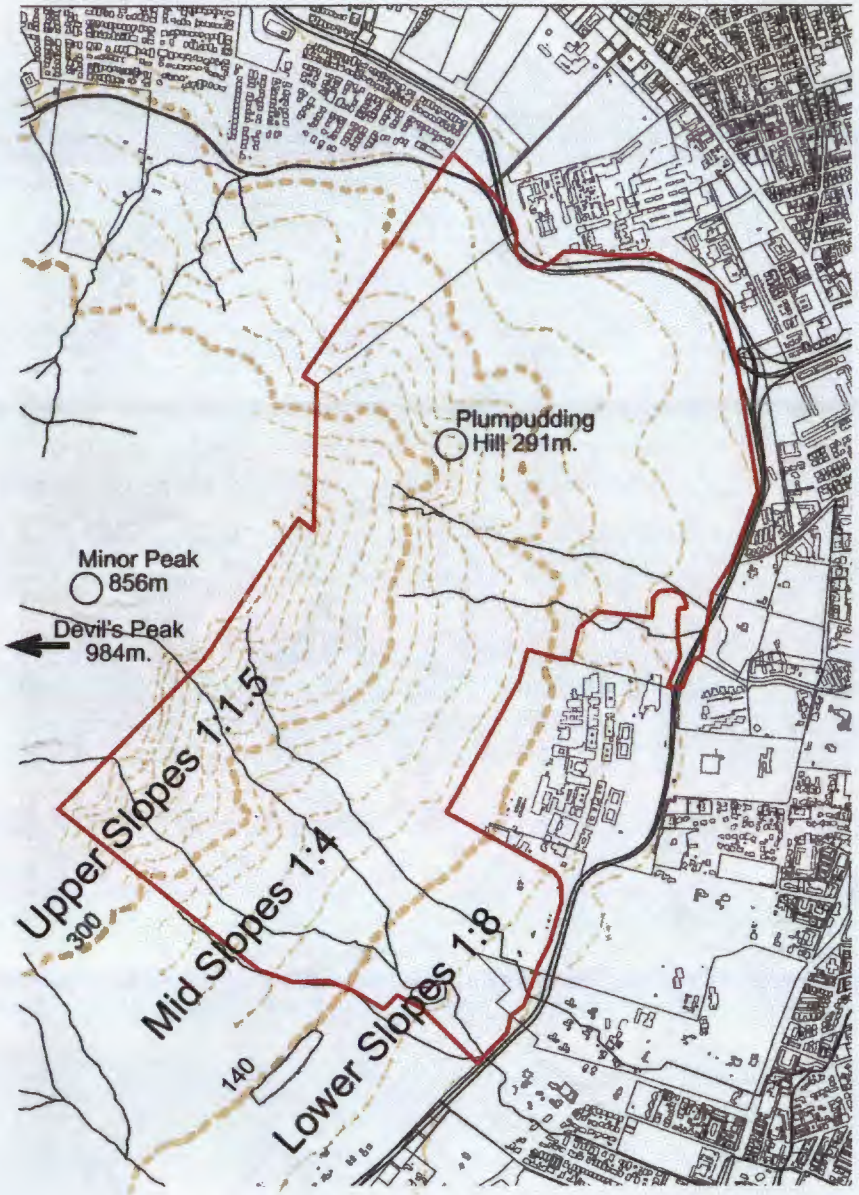


Access to Estate



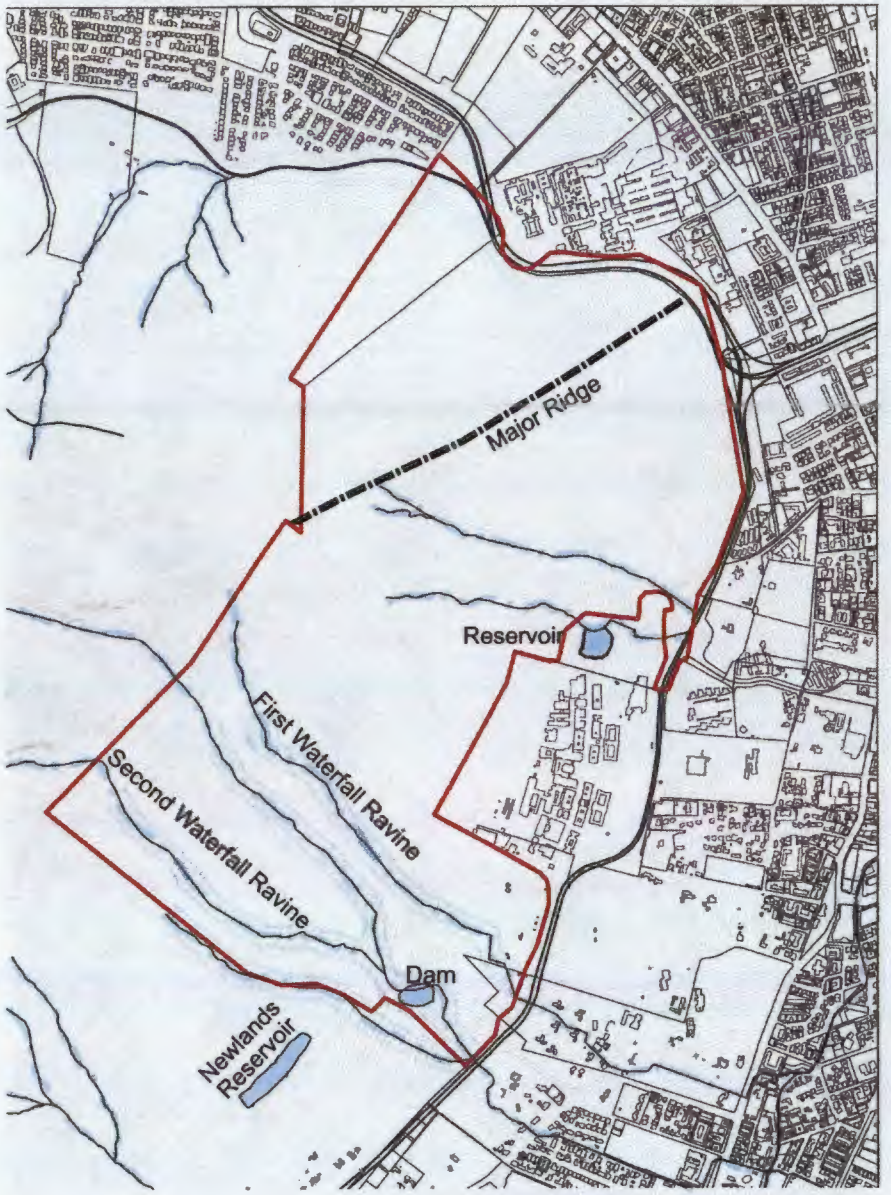
Ref: Chittenden Nicks & de Villiers. "Groote Schuur : Conservation & Development Framework Phase 2." 2002

Groote Schuur I *Topography*



B

Drainage



Ref: Chittenden Nicks & de Villiers. "Groote Schuur : Conservation & Development Framework Phase 2." 2002

4.0 LEGAL FRAMEWORK

4.1 LEGISLATIVE CONTEXT

A 'review of the legal framework applicable to the development of an Integrated Environmental Management System for the Cape Peninsula National Park and Cape Peninsula Protected Natural Environment was prepared by Cliffe Dekker Fuller Moore Inc. (February 2000).

The report reviewed the range of legislation that pertains to the Park, including: international law, conventions and treaties; the National Parks Act; the Constitution of the Republic of South Africa; National, Provincial and Local legislation and other ordinances and by-laws.

A number of pieces of legislation are very briefly summarized, below, (from Cliffe, Dekker Fuller Moore Inc., February 2000), and especially their implications for SANParks and the current study:

4.1.1 National Parks Act (57 of 1976) as amended by the National Parks Act Amendment Act (106 of 1999)

The Cape Peninsula National Park was declared by notice of the Minister of DEAT in GC18916 GN739 of 29 May 1998. In terms of section 12(1) of the Act, SANParks is charged to 'control, manage and maintain the Parks'.

4.1.2 National Environmental Management Act (107 of 1998)

The National Environmental Management Act 107 of 1998 (NEMA) states that its purpose is, 'To provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; and to provide for matters connected therewith.'

The principles articulated in section 2 include:

- Environmental management must place people and their needs at the forefront of its concern and serve their physical, psychological, developmental, cultural and social interests equitably.
- Development must be 'socially, environmentally and economically sustainable'.

For activities 'that may significantly affect' the environment, it will be necessary for SANParks to comply with the minimum procedural requirements for investigation and assessment set out in the Act. These procedures will be binding on SANParks regardless of whether or not the activity is one to which the environmental impact assessment regulations (EIA Regs) promulgated in terms of the Environment Conservation Act apply.

4.1.3 Environment Conservation Act (73 of 1989)

The act has been largely repealed by NEMA. Until such time as regulations are published in terms of NEMA, the Regulations of 5 September 1997 and May 2002, remains applicable.

As these regulations are part of national legislation, they are binding on SANParks. However, in terms of s28A a government institution may in writing apply to the Minister or a competent authority, with the furnishing of reasons, for exemption from the application of any provision of any regulation or directive that has been promulgated in terms of the Act.

4.1.4 National Heritage Resources Act (25 of 1999)

The National Heritage Resources Act (NHRA) has repealed the National Monuments Act (Act 28 of 1969) as well as a section of the ECA.

Table Mountain was declared a national monument in 1958 under the Natural and Historical Monuments, Relics and Antiques Act 4 of 1934.

The NHRA is expressly binding on the State and local authorities and, it would appear by implication, on organs of state including SANParks. It provides for the replacement of the NMC by a heritage resource authority and for a provincial equivalent which may exercise certain powers over areas of the Park. The Act identifies objects and places of historical and cultural significance for present and future generations as part of the 'national estate'. These include landscapes and the protection of rare or endangered aspects of South Africa's natural heritage.

SANParks is obliged to maintain the resource under its control according to standards and procedures that will be set out in regulations prepared by the National Heritage Resources Authority (SAHRA), to submit to it an annual report on the maintenance and development of those resources and to otherwise comply with prescribed procedures, particularly those regarding to planning. Section 9(3) of the Act states that no action that adversely affects such a resource can be taken unless the authority concerned is satisfied that there is no feasible and prudent alternative to the taking of that action and that all measures that can reasonably be taken to minimise the adverse effect will be taken; and "at the initiation of the planning process of the project, or at least 90 days before taking any action that could adversely affect such heritage resource, whichever is the greater, inform SAHRA of the proposed action and give them a reasonable opportunity to consider and comment on it.

The Act also provides for a Heritage Resource Authority to enter into an agreement with a conservation body to provide for the conservation, improvement or presentation of a heritage resource. Such an agreement with SANParks may be contemplated in order to achieve a level of unified management of the area.

4.2 "CONDITIONS RELATING TO STATE LAND"

The Groote Schuur Estate is state land that has been allocated to SANParks by the Minister of Public Works, subject to a number of conditions. These include:

- The property remains State owned and will not be legally transferred to SANParks.
- SANParks is given "right of use" of the properties and they are not available "for exchange on the open market".
- The property is to be used for conservation purposes only and is to be included in the CPNP.
- Any change of use, construction of any buildings, letting out of land or buildings or operational rights, must be submitted for "approval" to the Minister of Public Works.
- SANParks is to pay any rates and taxes.
- The continued rights of DPW to water from the reservoirs on the Estate.
- SANParks to take over the administration of the agreement regarding the Rhodes Memorial Tea Garden.

4.3 RHODES WILL DEVOLUTION ACT (9 OF 1910)

This Act, intended to be used exclusively for the control and development of the Groote Schuur Estate and Rhodes Memorial, is of cardinal importance to the future of the Estate and elevates this portion of land into a unique category, over and above the provisions of the National Parks Act. (Refer to Section 3.3 and Annexure A of the Phase 1 Report)

- In terms of the Act, the Groote Schuur Estate was transferred to the Union Government in accordance with the Will of Cecil John Rhodes, although all servitudes, rights and privileges remained intact.
- The Department of Public Works has administered the Act in the past but SANParks as an organ of the State in terms of the constitution, is now vested with the authority to manage and maintain the Memorial and the Upper Estates on the State's behalf.
- The Act gives the State President the right to live in the house (Groote Schuur) and open part of the grounds for a public park. Clause 1A specifically states that the State President may,
- "(a) grant permission that the residence known as De Groote Schuur also be used for the purposes of establishing and maintaining a museum.
- (b) place a portion of Erf 44211, ... in extent approximately 13 hectares, at the disposal of any person to be utilised as a park, open to all members of the public, subject to ... conditions."
- The second schedule states that Rhodes Memorial is to be properly and efficiently maintained by the owners of the Estate (the State) and enshrines the right at all times of public access to the Memorial, and to the "park on the Groote Schuur Estate", subject to "regulations as the Union Government may from time to time make and publish."
- In terms of the Will, the granting of any real rights cannot encumber the land, and therefore SANParks cannot "lease" or "alienate" any of the land constituting the Groote Schuur Estate. This is dealt with below (4.3.1).
- Clause 3 of the Will establishes the funding source via the transfer of £25 000 to the Union Government in 1910.

4.3.1 Legal Opinion Regarding Rhodes' Will and Concession Opportunities on the Estate

Given the restrictions in the Rhodes Will, the Phase 1 Report made specific recommendations (see 9.3.5 in Phase 1) in regard to the need for a legal opinion (or "contemporary interpretation") to ensure that possible future concessions do not fall outside the provisions in the Will.

Accordingly, a series of legal opinions have been obtained by SANParks. For the purposes of this report a 'concession contract', drafted with the particular circumstances and intent of the Rhodes Will in mind, will not fall outside the provisions of the Will nor the 1910 Devolution Act.

Sonnenberg Hoffman Galombik has previously prepared an opinion in regard to the lease at the Rhodes Memorial Tea Garden. Clause 2.12 of the opinion refers to a "management agreement" (as opposed to a lease) and further to the public use and income stream issues. This opinion also concludes that a "management agreement" will not derogate from the stipulations of the Will.

The issue of "rights of access at all times to the public" (subject to regulations) as enshrined in the Will is an important issue for management. Clearly the issue of access can be separated into either vehicular or pedestrian. A case could be made out, if necessary, to exclude certain types of access at certain times, but this would have to be subject to a relevant "regulation" (or published management policy).

4.3.2 Existing "Agreement" at Rhodes Memorial

The previous custodians of the Estate, the Department of Public Works (DPW), entered into a "Memorandum of Agreement" with the Rotary Club of Cape Town in 1991 (copy contained in Annexure E of the Phase 1 Report), subject to a number of conditions, including a two month termination clause. The Rotary Club thereafter entered into a "Memorandum of Agreement" in 1992 with the Rhodes Memorial Tea Garden CC, subject to similar conditions as originally imposed by DPW.

SANParks, as current custodians on behalf of the State, are in the process of renewing the lease agreement with Rhodes Memorial Tea Garden CC. The new lease specifically records the intent of SANParks to implement a conservation-development framework, which includes the recommendation to redevelop the Rhodes Memorial Precinct by way of a joint venture agreement or concession contract preceded by a public tender process. SANParks is accordingly entitled to terminate the lease agreement subject to written notice.

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