

CULTIVATING A LANDSCAPE OF LEARNING

a rural educational and community node in the Breërivier Valley

submitted in partial fulfilment of
the requirements for the degree

of MASTER OF ARCHITECTURE (PROFESSIONAL)

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figure 1: the vineyards



DECLARATION

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ACKNOWLEDGEMENTS

I would like to thank the farm worker community of the Breerivier valley, in particular those whom I had contact with - this thesis is for them.

I would like to thank my lecturers, Alta Steenkamp, Jo Noero, Francis Carter and Nic Coetzer for their guidance and input this year. I would also like to express my gratitude to everyone else who had input in terms of information, knowledge and help.

And finally, I am indebted to my parents for my "third culture kid" lifestyle and opportunities of having a rural upbringing, which shaped and inspired this thesis.

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PROLOGUE _ the roots of the thesis

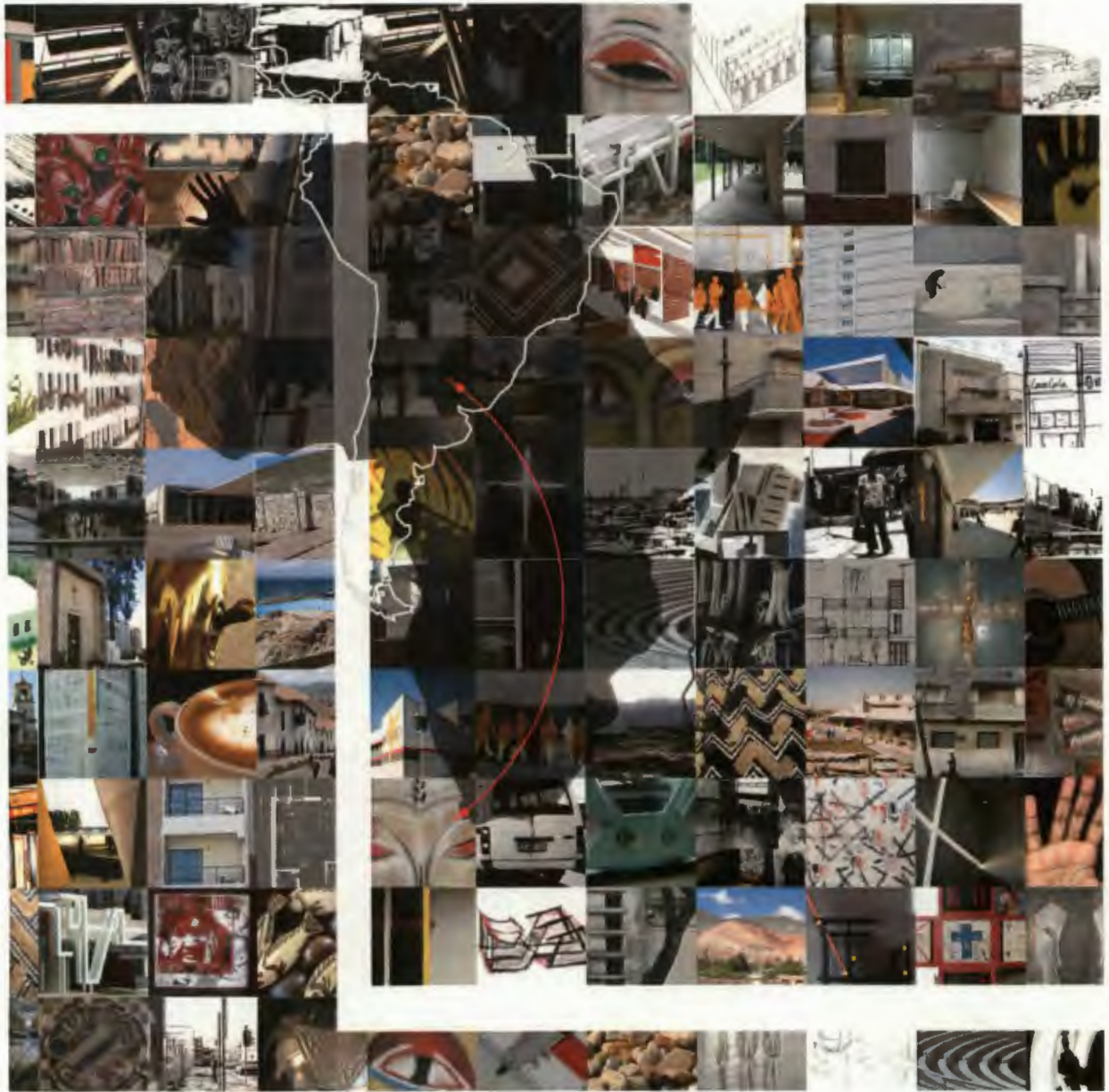


Figure 2: This graphic was compiled and designed for my portfolio in 2008. It represents my 'confused' state of the coexistence of my Uruguayan and South African lifestyles.



a.

A Third Culture Kid (TCK) is a child who grows up outside of their passport country (or their parents' culture) for most or part of their childhood, having "... spent a significant period of time in one or more culture(s) other than his or her own, thus integrating elements of those cultures and their own birth culture, into a third culture. (Wikipedia, 2009a)

Having been uprooted from South Africa at the age of 12, to be placed on Uruguayan soil, and to make it 'home' for half of my life, makes me as a third cultural kid. I have my own "third culture" - a culture that has constantly been fed by the co-existence and equal dominance and interdependency of both countries. I experienced the three phases of cultural shock (maybe insert footnote here?), and now I am going through reverse cultural shock - that of being relocated to South Africa. For 11 years I have been in a constant flux of not "belonging" and of being unable to fully identify with one culture, yet contradictorily, being able to.

And this sense of "not belonging" has fuelled a constant desire and search for elements that make me feel as if I 'belong' - the need to be able to identify with a place and establish a sense of place in it. Perhaps it is this constant urge to be able to find something to relate to, and to allow me to feel as if I belong, that has illustrated the importance of genius loci. A sense of place, and the ability of being able to identify/relate to one's built environment is a key factor in creating a sense of belonging for man and society at large.

While I consider myself South African, my TCK upbringing has led me to identify better with South American architecture (to such a degree that on the most part, I am often disappointed with our South African buildings). It has formed the major part of the subconscious language that informs the way I interpret the built environment and its sense of place. The [reinterpreted] Modernist tenets (that were absorbed by Latin America to become an architecture of the people) form part of the mental mapping process of defining genius loci and finding a sense of identity within the spaces of everyday life. Whatever it is, when exposed to other 'modernist environments' (or environments with hints of Modern characteristics) from around the world, I subconsciously establishes an 'identify' with this unknown/new place. It feels like I can relate to it.

This "third culture kid" (and to not even mention "cross cultural kid") interpretation and relation to the built environment and spatial manifestations, together with my six years of architectural study, have left my wondering how I can create a I can truly create a modern African architecture? Will I be able to make architecture that talks to the nation, when my influences and reference fields have been 'tainted' and positively infected with another place?

How can I, involved in the African context and linked to it through birth and education, but with a very strong South American influence, begin to explore a 'sense of place' and re-create the meaning of 'home', the idea of dwelling? How do I negotiate the state of in-between, of not belonging, so as to be able to make appropriate architecture? How can one begin to make architecture that identifies with local, within our contexts, but which also has an element of the global in it, to make it accessible to the global community as well?

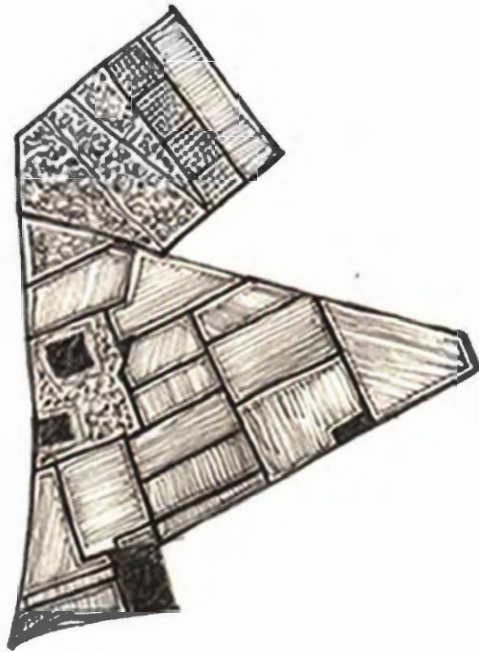


Figure 3: A graphic illustrating the plan of my parents farm, Rouzelle, in the Breerivier. Looking back on the image, one can see how the seeds of this thesis were planted a few years ago.

b.

Being relocated permanently to South Africa, my family have settled on a farm in the Breerivier, nestled between mountain and vines. The concepts, components and elements that have for so long constituted home and 'sense of belonging' have had to re-establish themselves in the Breerivier Valley. It is an personal and subconscious act of trying to figure out a 'sense of place' and hence the possibility of being able to "dwell." That pseudo Uruguayan-South African cultural realm that I (and my family) made for ourselves is being challenged and adjusted in the South African context.

This fairly recent acquisition of a wine farm by my parents in the Breede Valley has become a pivotal part of my life. Hence, I have been exposed to the lifestyles and conditions of the farm workers on our farm and the valley in general. Little attention is paid to the spatiality of farm workers living conditions (not just their housing, but the surroundings and their accessibility to facilities). On each farm, a housing community is formed yet there are little spatial interventions to encourage and nurture these communities, let alone form a connection with the outside world, and other communities. It is not only the spatial conditions, but the lack of access to basic facilities (educational, recreational, social) and an absence of a drive to change the lives of the farm working community that is of interest to me. It is hence here that I would like to direct my thesis - to find a programmatic intervention focused on the collective spaces of the farm working community.

00

INTRODUCTION

This thesis confronts the spatiality of farm worker communities in the Breerivier, in an attempt to find a programmatic intervention that will create collective community space. It thus turns to its context, the landscape and the farming that embraces the site as a generator of form and language. In essential, the thesis is hoping to find a new critical "vernacular" that responds to the ruralscape.

In order to get to this point, the thesis had different entry points. Part of this thesis is a pursuit to understand my personal relationship with architecture and sense of place (and hence the way it effects the way I design); another part is a quest to understand how the modern (and modernism) seeped into the Cape Vernacular [winelands] architecture. The final part is an interrogation into a programmatic intervention in the Breerivier Valley (to produce a collective community space for the farm workers)through the analysis of the context. This document aims to bring together the different components of the thesis process (a theory, technology and design investigation).

While the theoretical research sits as its own entity, and does not directly feed into the subsequent design thesis, it formed a vital part in finding a personal peace in order to be able to design, and helps to contextualise myself. Thus this document opens with a debate on MODERN VERNACULAR and CRITICAL REGIONALISM. . It was upon stumbling across the concept of "modern vernacular" (and con-

sequently its "rival", critical regionalism) that I began to understand the way I related to the built environment (and the role that modernism had to play in coding my spatial/aesthetical language). It suggests that the Modern Movement had a popular acceptance in South America- it achieved a modern vernacular status. However, in South Africa it seemed that Modernism did not disseminate to such an extent that it became popular and rather remained floating around the concept of regionalism and critical regionalism. Consequently, I researched the reasons for these two 'approaches'. Furthermore, the relevance and importance of this research was exposure to the modern movement in South Africa, and a search into the different contextualisations - in a critical regionalist vein - of modernism. Thus, it interesting to see what and how the 'regionalist' elements were that influenced architecture in the Cape.

At this point I would like to state that while the theoretical investigation has a strong Modernist slant, it is not my intent to transfer a modernist (or modern vernacular) design into my thesis. In a fantastical world, it would have been wonderful to resolve a modernistic Cape vernacular, however modernism is a era that belongs in the past and does not have a direct design link to the present. It is not possible to attempt this in the given context. But what I cannot deny is that one can learn from it, and that it has influenced my architecture, and ultimately, that architecture needs to respond not only to context, but also to the people that inhabit the spaces, which is important in this thesis as it looks for a new vernacular that extends beyond vernacular and becomes 'global' as well.

The document then takes on a 'vernacular' and contextual slant. It records a visual journey through the Breerivier valley in order to understand both the old Cape Vernacular architecture, and the "new" Cape vernacular;

it grapples with the materiality and tectonics of a rural stone-infested landscape. Through this journey, one tries to interrogate how the modern has infiltrated into the rural landscape and what this means for the spatial qualities and harmony of the Cape winelands. It thus also begins to set up a picture of the context of the thesis.

The next section is journey through the design process; the road taken and the turns made before finally coming to the design intervention. This was not a linear journey, and turned back on itself in order to find a programmatic response. Firstly, the section sets up an understanding of the farm worker's community and living conditions, as well as a visual stimulation of the valley. This leads to a suggestion of an initial programmatic development, which in turn reveals that a different type of programming is needed. This, in turn, leads into a new section of the document, which re-visits the site, and a site analysis. It is thus through this site analysis that the roots for programming a Cape vernacular are found: a programmatic intervention that suggests the development of an educational node for the farm worker community. And it is through this educational node, that a collective community space can be expressed and developed .

Hence, a new Cape vernacular can be cultivated through this programmatic intervention. The final part of the document looks at the design intervention in terms of this: it locates the site and looks at farming to suggest a design approach and intervention. It thus concludes with a concept design, which attempts to bring together a harmony between landscape and the built intervention; between a productive agricultural space and collective educational space; an integrated rural intervention - its finding way of reconciling the vernacular and the global, the built and the natural.

LOOKING FOR A PROGRAMMING CAPE VERNACULAR

IS IT POSSIBLE THAT THE LOCAL BUILDING STYLES OF THE WESTERN CAPE AND THE IDEA OF (POST)MODERN ARCHITECTURE CAN MERGE TO PROGRAMME A RURAL CAPE VERNACULAR?

THEORY

SOUTH AMERICA SEEMED TO ASSIMILATE MODERNISM INTO ITS CULTURE IN SUCH A WAY THAT IT BECAME VERNACULAR IN A SENSE, APPEARS AS IF IT BECAME THE ARCHITECTURE OF THE EVERYDAY (particularly in Brazil)

MODERNISM WAS 'ACCEPTED' BY THE MASSES

IT SEEMS TO ME THAT ELEMENTS/TENETS OF MODERNISM HAVE SUBCONSCIOUSLY BECOME PART OF MY VOCABULARY THAT PARTICIPATES IN THE MENTAL MAPPING PROCESS OF DEFINING A GENIUS LOCI OR BEING ABLE TO RELATE TO A SPACE SOMEWHERE UNROOTED FROM SOUTH AMERICA, AND PLACED IN OTHER ENVIRONMENTS WITH MODERNIST TENDENCIES, ONE IS ABLE TO IDENTIFY WITH THEM



MODERNISM

MODERNISM IN LATIN AMERICA

UNDERSTANDING THE CAUSES FOR MODERNISM BEING INCORPORATED INTO THE EVERYDAY LIFE OF LATIN AMERICAN CULTURE/SOCIETY

CRITICAL REGIONALISM
MODERN VERNACULAR

MODERNISM IN SOUTH AFRICA

UNDERSTANDING THE POSITION OF MODERNISM IN SOUTH AFRICA (AND CAPE TOWN), WHAT WERE THE CONDITIONS THAT DID ALLOW FOR MODERNISM TO BECOME VERNACULAR IN SOUTH AFRICA? ALSO, TRYING TO UNDERSTAND A RELATIONSHIP BETWEEN MODERNISM AND CAPE DUTCH ARCHITECTURE

IS THIS JUST ALL IN MY HEAD? OR IS THERE PERHAPS A 'GODD' ASPECT TO MODERNISM? ITS AN IDEA THAT IN THIS GLOBALISING AND EVERY SHRINKING, MORE NOMADIC WORLD, MODERN ARCHITECTURE, OR ITS TENETS, HAVE A ROLE TO PLAY IN FORMING A FOUNDATION WHICH CAN BE REGIONALISED TO SUIT LOCAL CONTEXT, CULTURE AND ENVIRONMENT, SO THAT ARCHITECTURE CAN BE BOTH LOCAL AND GLOBAL AND THREAD TOGETHER AND RE-INTRODUCE THE NEED AND IDEA OF GENIUS LOCI FOR THIS EVER MORE NOMADIC GLOBAL COMMUNITY?

THESE THOUGHTS ARE A CONSEQUENCE OF MY EXPERIENCES IN SOUTH AMERICA, WHAT HAPPENED IN SOUTH AFRICA? WHY DID MODERNISM NOT HAVE AS MUCH OF AN EMPHASIS HERE? AND IS IT POSSIBLE FOR THIS INVESTIGATION TO SEE IF THERE IS YET FOR MODERNISM TO BECOME 'VERNACULAR' IN THE CAPE, TO BRING WITH IT A NEW MODERN CAPE DUTCH?

CAPE DUTCH ARCHITECTURE

REVEL FOX
PIUS PAHL
GAWIE FAGAN
RDELF UIITEYNBOGACHT

LOCAL MATERIALS vs MASS PRODUCTION

TECHNOLOGY

Figure 4: This diagram was done to help situate myself in my thesis topic, to be able to bring together the different ideas I was researching, and interested in.

SITING | PROGRAMMING

PROGRAMMING CAPE VERNACULAR

WINE+FRUIT FARMS: THE BOLAND UPPER BREEDS VALLEY FARMING

THEIR LIVES HAVE BEEN DIRECTLY AND INDIRECTLY INFLUENCED BY THE 'STATE OF MODERNITY'. MODERNISATION AND GLOBALIZATION THIS HAPPENS BOTH THROUGH THE RELATIONSHIP BETWEEN CONSUMER AND PRODUCER (HENCE DEVELOPED WORLD AND THE DEVELOPING WORLD) IN TERMS OF PRODUCTION AND THROUGH THE GENERAL CHANGE OF LIFESTYLE OF THE CONTEMPORARY WORLD

THE LIVES OF FARM WORKERS COMMUNITIES

LEGACY OF SLAVERY
PRESENCE OF PATERNALISM
DOPSYSTEM
HISTORY OF THE AREA

YET THE FARM WORKERS ARE STILL MARGINALISED FROM ALL THIS, AND ISOLATED AND TIED TO THE FARMING COMMUNITY. THEIR SPATIAL EXPERIENCES ARE NOT OF A MODERN FORM, BUT STILL RELIANT ON TRADITIONAL FARMER WORKER RELATIONSHIPS

LIVING|SPATIAL CONDITIONS

HISTORY OF THE AREA

- TIED HOUSING
- ISOLATION
- LACK OF RECREATIONAL SPACES
- TRANSPORT DIFFICULTIES
- CHURCH MOVEMENT
- EDUCATIONAL AND DEVELOPMENTAL FACILITIES
- ACCESS TO CLINICS, SHOPS, ETC

IMPORTANCE OF COMMUNITY SPACES

COULD THIS IDEA OF A NEW PROGRAMMED CAPE VERNACULAR, COMBINED WITH URBAN DESIGN PRINCIPLES (OR ELEMENTS LEARNT FROM IT) FOR A RURAL SETTING CREATE A POSITIVE SPATIAL ENVIRONMENT FOR THE FARMWORKERS AND THEIR FAMILIES. WHERE THE GAP BETWEEN LOCAL AND GLOBALIZATION CAN BE 'BLURRED'. IN ESSENCE IT IS ABOUT BRINGING MODERNISATION NOT JUST TO THE FARMING PRACTICE, BUT TO THE LIVING ENVIRONMENT AS WELL. WHERE MODERNISM ENHANCES THE IDEA OF 'GENIUS LOCI' AND SENSE OF PLACE INSTEAD OF SLOWLY EAT AWAY AT IT

01

UNDERSTANDING ONE OF
MODERNISMS EVOLUTIONS

MODERN VERNACULAR | CRITICAL REGIONALISM
high architecture vs popular taste

Modernism has been condemned to failure - it never achieved the popular acceptance it had hoped for. Yet it was a movement that was disseminated throughout the world, and has formed part of every country's architectural language. In many parts of South America, it achieved a popular status; in South Africa it did not. This is an investigation into the reasons for its popular acceptance in Latin America, and lack thereof in South Africa.

This concept is supported by the theoretical understanding of MODERN VERNACULAR and critical regionalism (as coexisting with Modernism), and thus gave me an understanding that modernism could, in some sense, have had played a role in helping creating an ambiguous architecture, of double coding which could become a global architecture yet at the same time be rooted in the local.

What follows is an theoretical architectural thought piece which looks at how modernism, if and when subjected to a contextual and cultural transformation, either developed into an architecture that is elitist (CRITICAL REGIONALISM) or into an architecture that is absorbed by society (MODERN VERNACULAR). It is assumed for the purpose this piece of writing, that the reader has an understanding of the principles of Modernism and hence this has not been documented.

Modernism is criticised for its abstractness and its demand for universalism. It was focused on, and for, the masses, yet it never achieved the popular acceptance which it had hoped for. The Modern Movements were a spatial symptom of modernity - it "...was the outward manifestation of the changing parameters of Western civilization..." (Umbach and Huppauf 2005, 4). Modernity is characterized by the sense of homelessness which was reinforced by Modernism's disregard for a sense of a place and *genius loci* and the local/regional context, and in its place the use of steel, concrete and glass. Initially, the Modern Movement had a set of social ideals and concepts, but with its dissemination across the globe, many of these initial ideals were watered down or lost and in many regards, it became just another style. One of its ideals was creating a new built form, for a desolate and 'immoral' Europe whom the pioneers of Modernism thought needed an architecture to guide them after the atrocities of the First World War. Modernism, and modernity had tried to emancipate man from its cultural, contextual and spatial references - it had tried to repress all elements that constitute society's meaning in the world, and their connection with place and identity. (Umbach and Huppauf 2005) However, instead of making architecture for the people, it produced a type of architecture only comprehensible and appreciated by an elite group of people. The majority of society who were meant to benefit from this 'new' architecture could not relate to it. Popular taste did not absorb modernism and thus contributed to the failure of modernism (figure 4).

Conversely, this loss of 'dwelling' by society within the sterile, inhumane environment of Modernism formed and inspired 'reactionary' movements. These movements developed in parallel with the "International Style", and in a sense, there is an interdependency

between them and Modernism . Both **CRITICAL REGIONALISM** and **MODERN VERNACULAR** are based on this interdependency; however, they challenge /investigate the idea of genius loci and public acceptance in terms of the relationship between the modern/universal and the vernacular/local from different theoretical positions.

UNDERSTANDING THE DIFFERENCE APPROACHES OF THE THEORIES

The concept of *critical regionalism*, developed by Liane Lefaivre, Alexander Tzonis and later by Kenneth Frampton, is the acknowledgement of the local context and cultural influences in conjunction with universal trends, standardization, and elements of Modernism/modernity. It is a response which tries to marry the globalising world with local communities. The appeal - and hence popularity - of critical regionalism is its double coding and hybridity. It brings together and attempts to merge the conditions of contemporary life: a society in search of a universal acceptance yet still rooted, and influenced by their locality and its identity. This architectural approach is trying to respond to the modern condition: in a globalised world where boundaries, brands, beliefs, communication, etc are blurred and mixed, where a global culture is emerging, there is still a very strong link and need for the local, the tradition, the idea of national/local/personal identity. It is looking for an architecture that people can relate to.

Nevertheless, there is the opinion that *critical regionalism* has been "...misused to promote a few handpicked architects as personifying critical regionalism and elevating them to the status of cultural representatives." (Lara 2009) Thus, the *critical regionalism* of an area becomes synonymous with a particular architect's reading of that area, instead of more broadly represented interpretation of a region. It is a theoretical approach which involves a select section of society and so in its attempt of creating a genius loci and making space which the everyday life occupies, it also pushes it away.

Critical regionalism can thus be regarded as the academia/theorist's response to modernism; but there is an intuitive and empirical response to modernism - a modern vernacular approach. In contrast, the modern vernacular theorises that "...elements of high architecture are appropriated by laypeople and rearticulated into the vernacular." (Lara 2009, 42) In other words, Modernism has been absorbed into everyday life; it has been adopted by the vernacular. It is an architecture that has merged modernist influences with those of context, culture and environment in such a way that the adapted modernistic tenets become everyday phenomena. It suggests that the ordinary citizen has developed an understanding/relationship with the modern to such an extent that they naturally have become concepts of his spatial environment. Moreover, it suggests that in the citizen's mapping of his everyday life, the modern has become an accepted and recognizable element that forms part of the language that contributes to his understanding/creation of a genius loci.

Embedding vernacular in the modern

The very notion of combining the ideas/words *vernacular* and *modern* seems contradictory. These words are in opposition and associated with rival theories: "*The vernacular denotes particularism and, by extension, a specific attitude of sensitivity to place, whereas modernity denotes both a historical period and a general mental disposition.*" (Umbach and Huppauf 2005, 8). The word 'modern' - like its ideals - is universal and understood across most languages and cultures - it is global. On the contrary, the meaning and interpretation of the word vernacular varies across the world. It thus has the tendency of taking on ambiguous meanings and interpretations. (Umbach and Huppauf 2005) The word 'vernacular' has its roots in the Latin word *vernaculus*, which is defined as 'native', 'domestic' and 'indigenous'. It describes things that belong or are associated with the domestic sphere of life - something that is confined or characteristic to a certain region or place (Umbach

and Huppauf 2005) (Dictionary.com 2010).

Hence, in relation to architecture, the vernacular relates to the construction methods of an area, the influence of local materials and geographical and cultural situations: it "...represents a form of housing which, in its time and place, is not only cheap, sound and secure but is generally acknowledged to be a material manifestation of local society and culture." Frescura 1987 in (Malan 2004) It is the architecture of - and by - the people; a "...architecture without architects (Rudofsky 1965)" (Malan 2004). It has relations to its context and so a genius loci is inherit in the spatiality of society.

Consequently, the 'architecture of the people' is more than just the use of local building materials and methods. It becomes a narrative that has embedded in it the culture and lifestyle of a place; the physical and psychological aspects of a region and its people. The vernacular is the memory of place; it creates a sense of place that allows for an existential experience. Perhaps it is more appropriate in today's condition to understand vernacular as 'belonging to a place' so that it is not only defined by the use local materials and construction methods, but rather in reference to environment, climate and culture. Therefore, in a epoch where building materials are 'standardised' and available not only locally and nationally but globally too; where natural/local resources are not as readily available as in previous generation); and where building regulations now have a big influence, the vernacular aspect of building and architecture is being challenged. This is when and where the vernacular needs to evolve and to be usable in the modern world, where it becomes about context and culture, the region as whole - the two begin to merge.

It is here where the interdependency of these two opposites begins to make sense. According to Umbach and Huppauf, throughout the modern movement, there was a sense of vernacular underlying - and running alongside - the materialization of modernity and modernism. For them, there is a correlation between modernism and the vernacular which has often

been overlooked - and which suggests that the modern is in fact a narrative of complexity. This complexity is the "... the negotiation between, and the interdependence of, the regional and the global, concrete locality and border-devouring abstraction..." (Umbach and Huppauf 2005, 2) It could be argued that globalization and universality have a dependency on the vernacular, if they want evolve, and vice-a-versa.

Consequently, from this viewpoint, the spaces that modernism created never completely destroyed the concept of genius loci but contributed to shaping/determining it as well. Thus, a sense of place began to evolve amongst these modernistic tenets. The modern tenets (and the ideas of globalization/internationalism) were being incorporated into the language and signs that society used in the spatial mapping of their environments. This adjustment of the genius loci seemed to happen in places where modernism was regionalised and mutated to specific contexts. With this Modernism, under a vernacular influence, had been incorporated and society could begin to relate to. In some instances, modernism was being mutated, adapted and regurgitated as a style with vernacular tendencies. Here, within the vernacular style of an area the modern tenets become a common characteristic.

The emergence of a *modern vernacular* begins to suggest that modernism is double-coded and ambiguous: an 'and/both' relation and not 'either/or'. Accepting this relationship between modernism and vernacular suggests that "...modernism was more pluralist, dialogical, open-ended, and tolerant than its critics suggest." (Umbach and Huppauf 2005, 16)



FIGURE 1: situating myself in South America - the domesticated modern architecture
 a-e. concrete vs openings - functionalism&formalism - modern yet still responding to the traditional streetscape.

Figure 5a: My Uruguay - some buildings that have shaped who I am - image taken from theory paper, illustrating my architectural stand point

This reading of Modernism's relation with the vernacular and context supports the idea that Modernism had (has) the potential of being absorbed into a local cultural and hence being 'vernacularised'. It suggests that if, and when, Modernism interacts with a region's context and cultural - it can find a successful co-existence of the global and the local. It also gives an alternative to critical regionalism and its associated qualities - perhaps a type of critical regionalism that is involved and interactive with its context, instead of being highly academic.

In both South America and South Africa, the Modern Movement was adapted and interpreted in terms of context - it was regionalised. The difference between the two though, would be that in South America the conditions were such that the its regionalisation lead to a modern vernacular; in South Africa the regionalisation and adaption of the modern took a more critical regionalist slant which only seeped into some sections of its society. And where it didn't do this, Modernism remained 'pure' and "died".

What it begins to hint at, at least from my point of view and my intellectual standing at this time, is an understanding for my relation to the Modern. As previously mentioned, through my South American connection, I have developed a relation with Modernism, which has influenced the conglomeration of elements that helps me relate and define spaces in the built environment. Because it became a 'common' language in South America, and because of Modernism's international dissemination, it perhaps makes more places/spaces/built environments accessible to my intuitive understanding of genius loci, etc and so it gives me the possibility of creating an relation to a wider range of towns/countries/villages, or a simple building; an almost global genius loci.

So, perhaps it is this adapted modernist architecture that forms an underlying backbone for the way I design architecture. It is not an 'in-your-face' modernist approach, but it has definitely made its mark.

Hence, having understood the concept of modern vernacular, and subsequently the role of modernism as informants of my personal genius loci and relation to the built environment, I had to further my research to understand why a unique quality and identity of modernism arose in Latin America. And what were the conditions that allowed for the vernacularisation of the modern? And why, despite similar treatments and adaptations of modernism in South Africa - where it was also regionalised - did the architecture remain a theorist's architecture and not merge into popular taste? The following images (figures 5a to 5e) try to summarise my relationship with South America, and the modern vernacular. I think it is important to include them as they act as a way of exposing the type of architecture that has subconsciously formed a major part of who I am, and my attitude towards the built environment (as well as explaining the idea of modern vernacular).



a.



b.



d.



e.

FIGURE 2: situating myself in South America - concrete and whiteness.
 a. the apartment block; b. a modern corner house - flat roof&ribbon windows; c-e. modern mausoleums

Figure 5b: My Uruguay - some buildings that have shaped who I am - image taken from theory paper, illustrating my architectural stand point

UNDERSTANDING ONE OF
MODERNISM'S EVOLUTIONS

1 THE BATHING
APARTMENT STATE

MODERN VERNACULAR VS
CRITICAL REGIONALISM



FIGURE 3: situating myself in South America - the dominance of the apartment.
a. the modern with the old; b. brise-soleil in the form of shutters; c. the element of the balcony; d. the modular grid

Figure 5c: My Uruguay - some buildings that have shaped who I am - image taken from theory paper, illustrating my architectural stand point

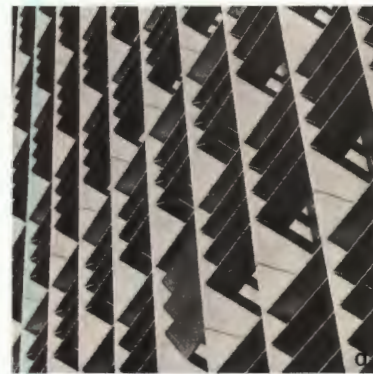


FIGURE 7: the brise-soleil: different forms of sunshading devices as a modern tenet.
 a. blocks of apartments in Rio de Janeiro - here is a variety of sunshading devices: awnings and shutters; b+c..Day Nursery, Gavea, Rio de Janeiro by Niemeyer - adjustable vertical asbestos blinds. Not only does it protect from the shade, but it also creates an varied facade dependent on the position of the blinds; d. The Ministry of Education and Public Health, by Niemeyer. e+f. Brazilian Pavilion, New York World's Fair (1939) - another application of a brise-soleil version to project a glass facade.

Figure 5d - Modernism in South America, and myself.



FIGURE 9: an illustration of modern technical tenets appropriated by the favelas. a-b. favelas in Belo Horizonte: a rudimentary interpretation of the concrete post and beam system forms the basis of the structural system in the working class neighbourhoods. The easily accessible concrete and the willingness to have a 'vernacular' technique of formwork has lead to this technique as disseminated across society, to all building types..

As one looks around the built environment and its spatial agglomeration of styles, ideals and cultural manifestations, the South African Modernism seems to have been swallowed up by the urban fabric - slowly fading away. The remains of Modernism in South Africa have either been adapted beyond recognition, or demolished, or have just become another neglected, insignificant feature in the constantly evolving urban space. In many cases, they seem to be tombstones, a reminder of what has passed. Modernism never made as big an impact on SA as it did in Latin America.

Nevertheless, there is no doubt that Modernism was prominent and present in the South African context. In the Cape, and particular Cape Town it took a more industrial slant, while in Johannesburg and the Transvaal, it had a much stronger presence in the domestic/residential sphere of society and architecture (van Graan, *The Emergence of Modern Architecture in Cape Town 2007*). The fascination for me though is that it has only been through researching the topic that I have become acutely aware of its presence (this perhaps is also directly related to being situate/educated in the Cape, where modernism was not as dominant), whereas in South America one was somehow more aware of its presence, in both its high style and popular applications.

Through my research, I found reasons as to why the South African modernism did not become a modern vernacular. South Africa was looking for an 'elitist' Afrikaner nationality, which also needed a national architecture. Thus, it adopted Modernism to a certain degree, but South Africa was under the rule of the National Party, and the regime of Apartheid. Not only could it be speculated that modernism was thus associated with 'Afrikanerdom', but also with oppression, segregation and isolation. And it was through the spatial manifestations of these, that modernism was not able to disseminate down the social strata and be reinterpreted. The control of the government on 'native' housing and zoning, prohibited the natural dissemination of ideas. While it might not have become a modern vernacular in South Africa, there were regionalist interpretations of modernism, such

as the Third Vernacular in the Transvaal and regionalist interpretations in the Cape by architects such as Pius Pahl, Revel Fox and Gawie Fagan, among others. Yet these remained critical regionalist, almost academic interpretations.

*

HENCE, IN CONCLUSION:

I have realised that I cannot strive to create a modern vernacular (it is something that needs to evolve naturally), but this theoretical investigation has helped me to place myself within the architectural realm.

It has also emphasised the importance of creating a programmatic and linguistic approach to architecture that does not deny the trends of globalisation, the qualities of the modern/contemporary building elements and the access to massproduced/standardized components; and which turns to the context and locality for design influence. What this research has shown is that it is perhaps possible to create an architecture that identifies with its local context as well as the global context and produce a genius loci that becomes accessible to a broader audience. Ultimately, the element that I would like to take forward into my design, albeit theoretically and directly linked to the design investigation, is the importance and the need to contextualise the programmatic intervention - that when all research (theoretical, practical, technical, global or local) is transformed into a programmatic response, it must always have as one of its key elements, a response to the physical, cultural and social context. It is through this, that one can use the theory and the global, yet make it a local response that engages with a genius loci so that everyone can relate to it.

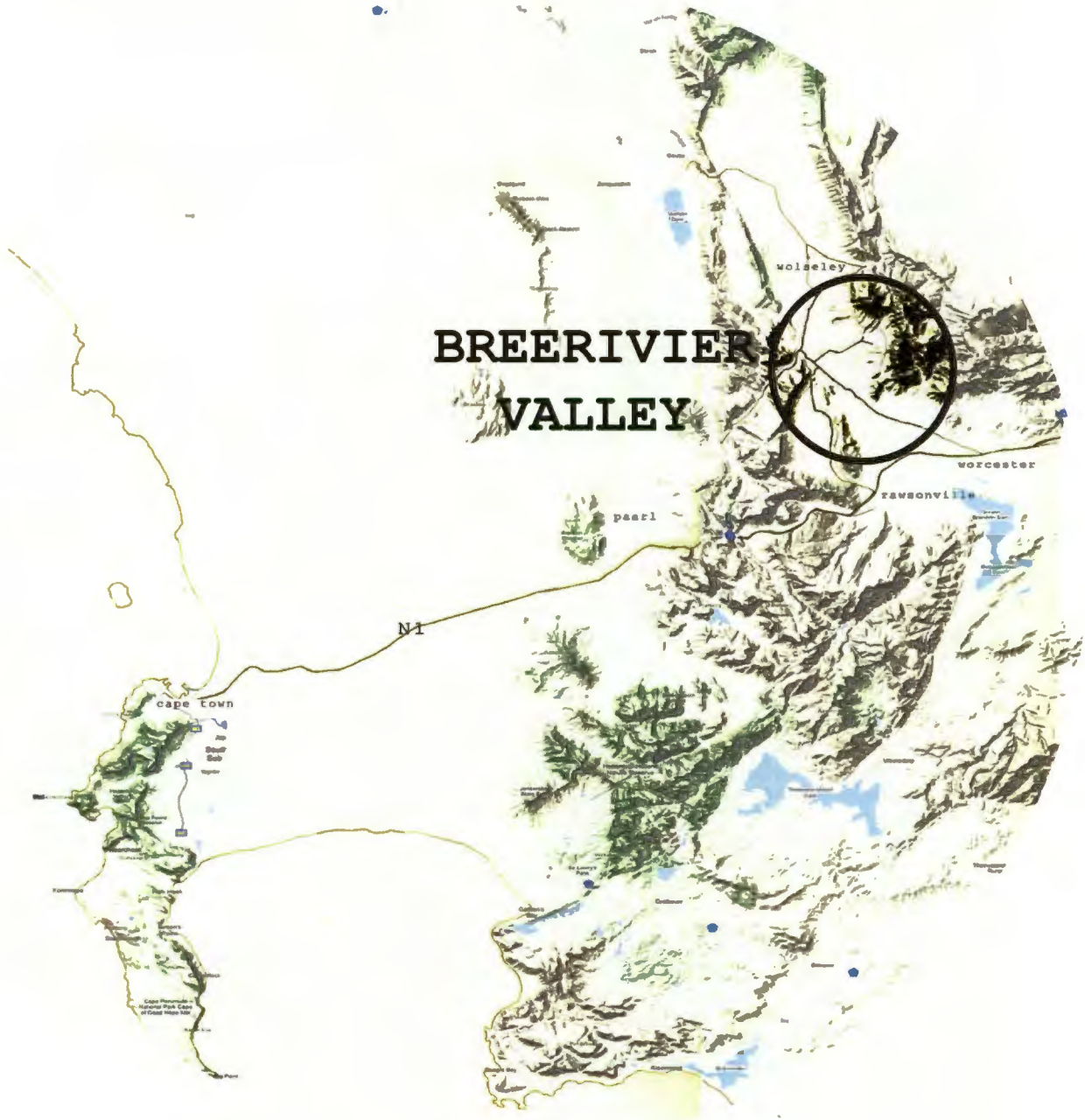


Figure 6: locating the Breerivier valley

Having discovered the modern vernacular architecture of South America, and understood it, I now wanted to explore the the built environment of South Africa through the concept of modern vernacular (and perhaps critical regionalism). I was eager to find out, how and if, the modern and the vernacular architecture of the Cape has found a means of co-existence.

This search is focused in the Breerivier Valley and surrounds - the Cape/Boland winelands. In a sense, it is not only a technological and phenomenological exploration of the area, but it also forms part, and backdrop, of a site exploration for the design intervention. It sets up a cultural, historical, visual and contextual image/background from which (and onto which) a programmatic and design response will evolve. Furthermore, it is because of the focus of the design component of the thesis (that of looking for a programmatic intervention that responds to the siting and conditions of the farm working communities) that the Cape dutch architecture needs to be understood, in order to understand the context and its evolution with and through contemporary times.

Vernacular architecture takes into consider climate/contextual and economical conditions; it built in relation to these. Modern architecture and technological advances, in its first 'pure state', demanded a rupture between building and context.

Now, as consequence of modernism, globalisation, mass production and the 'lack' of local building materials/resources, the tectonics of a building have become devoid of site specific details and a sensitivity to site and environment.

This is a visual journey through the wine and fruit lands of the Breede River Valley and its surroundings. It is a documentation of the use of local materials and the re-interpretation of these in relation the globalised world of mass production/prefabrication and vernacular tradition.

02

UNDERSTANDING CAPE
[DUTCH] ARCHITECTURE

a.

At the start of this thesis research, I always looked on at the characteristic whiteness of Cape [dutch] architecture with some reservation. While I have grown up, and been exposed to this whiteness for as long as I can remember, there was always a part of me which questioned the use of white as the outside treatment of the buildings. Set amongst the vineyards and the dramatic presence of the mountains as a backdrop, the white homesteads (figure 7, 10, 11) tend to stand out against the greens, reds and blues of land and mountain. And it made me wonder how people could think that Cape Dutch architecture was in harmony with its landscape.

However, now I understand, and now I have deeper respect and appreciation of this characteristic whiteness. And the reasons are twofold. Firstly, there is a trend amongst farmers to adopt the current colour palette that is so popular at the moment. What were once whitewashed labourers' cottages dotting the landscape, are now a variety of earthy colours - ranging from yellows to browns, greys and greens in a variety of trendy shades - blending in with the environment. Now the little buildings become almost indistinguishable from the landscape and there is no contrast that is so typical of these structures - both in terms of a comfortable contrast with the natural environment that stretches around these buildings, as well as the contrast of light and shadow on the buildings themselves (figure 8, 9, 10).

It feels as if the landscape becomes bland and indistinguishable; the harmony that is created through contrast and tension of man and nature seems to have been tampered with.

FIGURE 7: A renovated Cape cottage on Rouzelle Farm - the whiteness of the cottage, even after a storm, still portrays the vernacular characteristic of the limewash. The magic of the uneven white, and the subtle glare has been lost in the newly painted labourers' cottages. Furthermore, in spite of the cottage's 'insignificance' and vernacular style, it echoes the idea of proportion and symmetry - a harmony between the parts.



7.

What Cape [Dutch] architecture has achieved is a richness in the simplest of forms and spaces. For Barry Biermann, there lies a direct relationship between the architecture of the Cape, and the vineyards in which this architecture found itself. Just as the imported vine stocks adjusted to the new soils and climatic circumstances of the Cape, so did the architecture: "The architecture and the vine have adapted completely to the soil they spring from. This fundamental harmony gives rise to rich and varied consequences." (Biermann 1971:90).

But amidst all these words, the underlying element in this is the strong relationship of climate and environment with the building. It exemplifies the concept of vernacular - where the Cape Dutch architecture, amongst other influences and reasons, evolved in response to the geographical specifics and through this created a sense of place and the beginnings of a collective, area-specific memory that still influences the landscape today. As Biermann suggests, it is in this unique part of the world, where the different geographical and climatic elements come together so the Wine Country can flourish.

This unique winelands architecture is perhaps most beautiful in its harmony within the patterned landscape of vines and fruit - and stone. Its dwarfed stature in relation to the immense surroundings, and yet at the same its dominant presence creates this harmony. However, this harmony is also present as one approaches the buildings; as one interacts within its spaces. It is not just the whole that makes it harmonious, but all its individual elements too. What follows is a summary of what Cape [dutch] architecture is, and a look into some of the elements that contribute to its harmony.

FIGURE 8: A newly painted cottage. While the roughness of the wall is still evident in the way the light reflects off of it, it no longer has the crisp and subtle glare of whiteness - the powerfulness of the white wall within the vineyard is lost.



8.



FIGURE 9: A trendy colour palette. The shadow of the rough plaster and chimney are still achieved, but the sculptural contrast qualities are watered down. This is evident when contrasted against the white building next to this one: man's place in nature does not seem as powerful.

9.



FIGURE 10+11: A white cottage with its komyntjie. The symmetry and proportion of the cape vernacular is illustrated here. Furthermore, this illustrates how the cottages sits in the vineyard - set amongst the vines, only the top halves of the cottages stick out, and they appear like white floating elements in a sea of greens, reds and browns.

10.



11.



12.

FIGURE 12: Where are the cottages? With a coat of paint inspired by the trendy colour palette of today, these dwellings seem to have lost their power, and their harmony with nature. The dull earthiness of the colour palette makes the houses blend into the landscape (which to some people, would seem a more appropriate response to nature) but within the parameters of the Cape vernacular tradition the sensitivity of building and nature is questioned.



13.

FIGURE 13: The Cape Cottage becomes a 'row' cottage, but the same elements of chimney, proportion and colour palette are employed as a design informant.

B.

"Is so-called Cape Dutch Architecture 'polite' or 'rude', high style or vernacular?" (Malan 2004: 24)

For some, Cape Dutch architecture is undoubtedly vernacular. It is an architecture that arose without architects - they were handcrafted structures built by the local people (white, brown and black people) with local resources and skill, in response to the environment. On the other hand, it is argued that it is 'high style' due to its 'respectable' antecedents; in other words its development from 'high' European culture which is responsible for the Cape Dutch's unique application of proportion and symmetry in the buildings. (Malan 2004: 24) This makes Cape Dutch architecture "...the joint product of formal established architectural 'styles' and the informal vernacular of anonymous builders." (Malan 2004: 25) The presence of a 'high style' in vernacular architecture, is part of the Cape Dutch architecture's uniqueness.

Furthermore, this debate extends into the difference between: Cape Dutch and Cape vernacular. The Cape Dutch, which is associated with 'whiteness', 'Europeans', in other words with the [landed] gentry and farmers - the more elite branch of the Cape society and population. The vernacular, in contrast, referred to the marginalised section of the Cape Colony; the rural areas and places such as missions and fishing villages (Malan 2004: 25).

Nevertheless, the Cape architecture developed in harmony with its landscape, something with which both all streams of Cape [dutch] architecture can lay claim too:

"There is a subtle interaction between building and environment: the eye seeks concordance between the long dark horizon and the white extent of the homestead...Cape Dutch architecture is rich in these visual concordances: as if the style itself, like the vine, adapted to the ground in which it is rooted. For the eye this is equivalent to wine on the palate: full bodied, balanced, and of pronounced character." (Biermann 1971: 118)

This relationship with context, climate, resources, and the people who built and inhabited the spaces, manifested culturally and socially, and due to it being the architecture of all social classes, it still remains an integral part of the people of the winelands. It is this architecture, which in the 'isolation' of the farms, is still dominant, in both its original sources and its newer interpretations, and it is this that forms part of man's ability to 'dwell' and to identify a 'sense of place'

(The following information is a compilation of knowledge gained from all the sources, which have been referenced at the end of the document.)

C.

Many of the elements that characterise the Cape [dutch] architecture are either a result of material limitations, or often developed out of functional need. These characteristics are clearly visible in the existing Cape Dutch architecture. Moreover, many of these elements have been passed down over generations, and are still found in architectural manifestations. In some instances, they have varied little, in others they have been adapted or reinterpreted to more 'modern conditions'. Sometimes these elements have been used in 'theme park' type developments; in others they are genuinely reproduced through the vernacular traditional, in many cases having been mutated and merged with modern tenets and prefabricated elements.

But what were the conditions that created some of these elements which form an integral part of the man's sense of place (and their sensitivity to it) in the farmlands? What follows is a brief look at some of the elements most associated with the Cape architecture. This section will assist in the visual analysis of built structures in the winelands - the analysis of how, and if, the modern and the vernacular have merged, in relation to their physical and cultural context

| the white wall |

Perhaps one of the most dominant features of Cape [dutch] vernacular architecture is its WHITENESS.

The most common building materials were RUBBLE, CLAY, STONE and UNBURNT BRICKS, held together with CLAY MORTAR (figure 16). The use of unburnt bricks and clay mortar, and the climatic conditions of heavy winter rains and storms demanded a form of protection. Hence, the walls were plastered with a WHITE LIME-WASH. Often, the bottom section of the wall was painted "...in a rough-and-ready imitation of marble, to conceal mud splashes." (Bosdari 1953: 20). This concept is still alive today - it is a common sight in the winelands districts to see the farm workers' cottages where the base of the outer walls are painted a dark colour.

The application of the LIME-WASH was rough and so the wall surfaces always had a rough finish. It is this, and use of inferior materials in difficult climatic environment that was to infuse a beauty in the Cape Vernacular.

Thus it was the unevenness of the WHITE LIME-WASHED WALLS that dispersed the strong Cape sunlight into a subdued yet gleaming whiteness amongst nature; and created the subtle shadows on the walls. This is what made the whiteness easy and pleasing on the eye. The wall is more than just a physical element separating inside and outside; threshold and inbetween element, it is a landmark and orientating element.

FIGURE 14: Main homestead on La Plaisante farm, Breede River Valley.

A piece of plaster has been removed to reveal the masonry work. Here one can see the slow disintegration, and unevenness of the unburnt clay bricks. The plastered end gable exemplifies the nature of the whitewashed walls so typical of Cape Vernacular.





15.



16.



17.

The following is an excerpt from an interview with a retired local farmer about the history of the Valley:

"Die oorspronklike huis op de plaas het net sulke dik klei mure gehad. Onder is gewoonlik van de gladde klippe wat uit de berg kom as fon-

dasie gebruik. Hulle het populierboom balle in de muur gesit (gaggas vreet dit nie) as hey hoog genoeg was en dan get hulle riet gevat en stuf teenmekaar gepak vir der solder en dan het hulle klei so vier duim dik bo-op gesit. Dan sit hulle die dakkappe op en dek dit met riet..." (Man 2010).

FIGURE 15: The stone and clay mortar walls of an old Cape cottage. Due to the use of stone, the walls are consequently about 600mm wide. These walls were then plastered.

FIGURE 16+17: Unburnt brick and clay mortar masonry work, revealed in La Plaisante homestead. The wooden poles sticking out would have helped with bracing and construction, and would most likely have been poplar tree, as suggested from the interview. All this masonry work sat on a stone base.

FIGURE 18: A collection of outbuildings on Rouzelle Farm, Breede River Valley. The play of sunlight on the buildings, and the shadows created by not only the rough plaster but the nearby trees as well makes a complex composition of a white colour palette. What could have been blinding white glare in the summer sun is instead subdued and textured.

FIGURE 19: A close up photograph demonstrating the uneven effect of the plaster and whitewash - the unevenness is only evident at close inspection and hence, from a distance, the walls with the play of light, appear smooth.



18.



19.

| the gable |

The Cape GABLE is the most prominent element of Cape Dutch Architecture, and maybe the element most associated with Cape Dutch Architecture.

The GABLE is a further example of the influence of climatic and functional conditions on vernacular building. It is also a representation of the region and the builder - it bears testament to the element that arose from the use of lime wash. This ornamentation would not have occurred if there had not been a need to protect the buildings.

THE END GABLE

The GALE FORCE winds and stormy weathers of the Cape insisted the need for END GABLES as these protected the thatch on the roofs from blowing off. (Bosdari 1953) It is a plain wall, with a simple gable with no ornamentation (like the main gable): a beauty of simplicity. It often had a door and a staircase for access into the loft.

THE MAIN GABLE

While the Cape manor house had its gable, it is not the focus of study here. It is however interesting to glance over it. The MAIN GABLE, although derived from Holland, evolved to accommodate new functions in the Cape. Functionally, it acted as a safety mechanism in the event of the thatch roof catching alight. The GABLE would catch the burning thatch and thus keep the escape route clear. And in rainy weather, it freed the front door "...from the drip of the eaves..." (Bosdari 1953: 24). Moreover, the gable was a symbol of 'wealth' - its central position and proportional dominance was a sign of power and belonging. Finally, the gable is - with its variety of mouldings, testimony to how the European architectural styles were manifested in South Africa, and how they were adapted into regional variants.





FIGURE 20+21: Front facade of the main homestead on Kanetvlei Farm, Hex River. The entrance door is placed symmetrically in the centre of the gable, and thus, being protected by the gable, the inhabitants could run out in the case of a fire (the burning thatch would fall against the back of the gable).

FIGURE 22: An outbuilding on Kanetvlei - the outbuilding and main house were often very similar, as is evident in this photo. The roof is no longer thatch, due to the fire hazards in the region.



22.

FIGURE 23: An outbuilding on La Plaisante farm. The simplicity and uneven whiteness of the end gable creates a moment of pause in the busy landscape. The mock chimney at the top of the gable is a typical characteristic, as is the door which allowed access into the loft. The parapets of the end gable extend above the line of roof to form a buffer against the wind. Another typical feature is the coping at the apex of the thatch, which was also a protective measure.



23.

| the stoep |

The STOEP was developed for practical reasons. The buildings were often built on uneven ground, or on a sloped site. The STOEP thus levelled the ground for building. Moreover, by raising the building off the ground, it protected the white-washed walls from mud and water (figure 24).

The STOEP played a very important SOCIAL role in the culture of the society. The ends of the stoep, on either side of the main facade, were built up to form benches. Like the voorkamer, it was a gathering point for family and friends. It was the threshold that mediated between public and private, man and nature (figure 25).

The raised STOEP was accompanied by some STAIRS. Steps were usually made with KLOMPJE BRICKS (7"x 3"x 1 ½" bricks, originally imported from Holland which became a golden yellow as they aged) on their edge, as well as forming the paving border. The rest of the STOEP was either paved with SLATE (either cut into squares, or left as natural irregular paving) or covered with PAVING TILES (16"-17" squares or 11" square) - which were also used inside. (Pearse 1968)

The STOEP evolved and was adapted over time under economical, social, family and cultural influences (as did many of the original Cape houses). The stoep, when not just a raised platform, had pergolas and vines for added protection, which later under other building influences, developed into a covered veranda. It is because of the use of shutters, small window panes (the openings got bigger with time) and the depth of the wall that a covered stoep was not originally needed.



24.



25.

FIGURE 24+25:
The stoep at La Plaisante. Figure 13 focuses on the slate/mountain stone paving common on stoeps. The steps were a necessity, to bridge the gap between the stoep and uneven ground. The raised wall at the end of the stoep (fig 14) holds the end bench. This fig. also highlights the uneven white-washed walls, and the stone base that most buildings had.

| symmetry-proportion |

The original Cape buildings had NARROW floor PLANS. The ROOF SPAN was the constraint of the narrowness, and the roof span was dictated by the WALL STABILITY and the ROOFS weight. The average SPAN was 6-7mm, which was usually the length of one room. If it were bigger than this, the walls would be pushed outwards under the weight of the roof.

The PLAN was functionally derived: it developed as more rooms were needed. The plan is rooted in north-Western Europe - the LONGHOUSE tradition. From this simple long rectangular plan, additional rooms could be added as needed, and consequently, the Cape Manor house plan developed into the typical shapes that are now common (I - U - H shapes) (figure 26).

The geometrical shapes of the plan, with a symmetry inherent in them, and with the organization of the plan, formed the basis to which the facade's symmetry could respond. This symmetry and proportion present in the plan and facade was echoed in the handling of the roof pitches and gables. It would seem that the uniqueness of the proportion and symmetry in this vernacular architecture is partially a result of the constraints of the building materials.

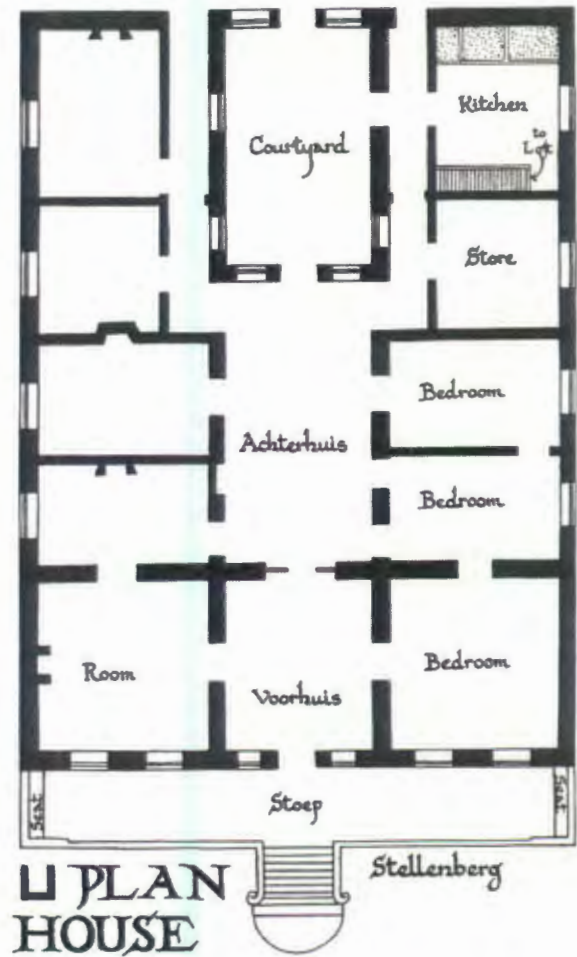
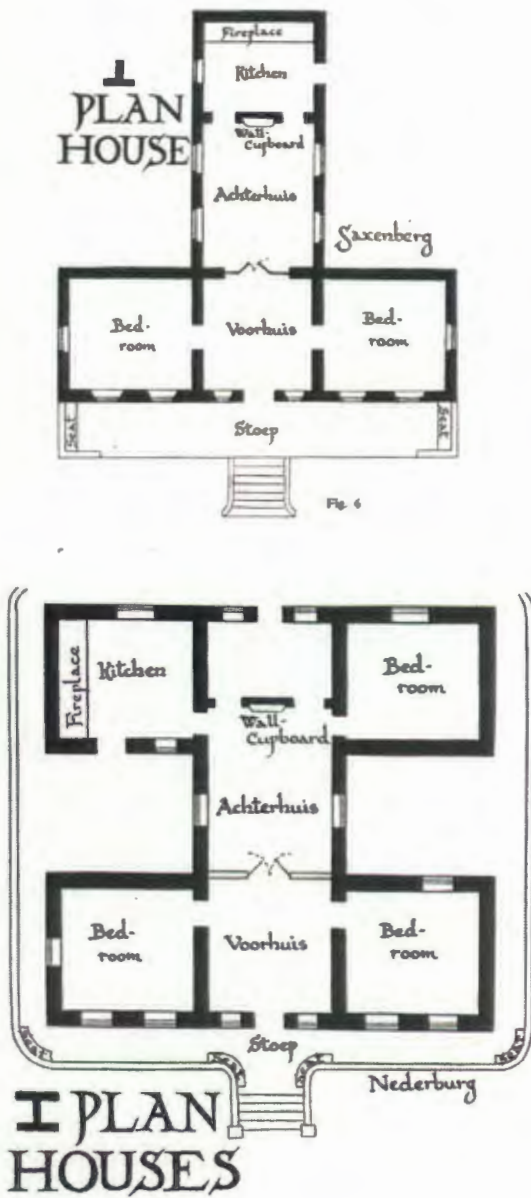


FIGURE 26: Drawings illustrating the different house plans.

| the 'komyntjie' + cottage |

It was not only the Europeans who arrived in the Cape who built with a regard to available resources. It is perhaps more telling to look at the Cape cottages (figure 27-33), as documented by James Walton (Walton 1995). It is here, more so than the Cape homestead, that one can begin to trace the origins, or the similarities between the Cape Cottages and the contemporary farm worker's dwellings in the Cape. While construction methods may have changed greatly, the form, function and visual aspects are still reminiscent of a former vernacular.

Unfortunately none of the cottages documented by Walton fall into the geographical regions of this research paper. However it is still applicable to glance over some of these cottages as it helps to contextualise the building style of the Breederivier, because despite variances of building technologies and materials, there is a generalness and homogeneous vernacular language (with the komyntjie as the main feature) :

"The cottages of fishing communities and on mission stations are basically the same, being rectangular thatched dwellings, but each settlement has its own particular style. And yet, within that basic style there is also considerable variation, depending on the means of the builder, the time when the cottage was built, the availability of building materials and the individual requirements and likes of the owner." (Walton 1995:57)

FIGURE 27: Construction details of Cottage at Oudekraal fontein.



27.

FIGURE 28: Cottage at Oudekraal fontein. This image shows the construction detail - timber vertical wall posts and horizontal laths supported reeds which acted as 'infill', and this was then plastered with lime. The boen-onder door is another characteristic element found all the Cape vernacular - it was functional as it could let light and air in with the top half open, but animals and children could be controlled by the closed bottom half.



28.

FIGURE 29: Cottages and their komyn-tjies. Despite being in different regions, all these cottages typify the 'komyn-tjie' element, and its resultant sculptural feature. This is an element that is still evident in the farming communities in the Breede River Valley for example.



29.

THE KOMYNTJIE

Just as the GABLE is a prominent feature of Cape Dutch architecture and the homestead, the projecting KOMYNTJIE is the distinctive feature of the CAPE COTTAGE (figure 29-33). A KOMYNTJIE is a "little kitchen", and was the cooking area as it accommodated a wood burning stove (it is thought that originally it may have been an open fire). The positioning of the KOMYNTJIE varied, but it was always attached to an outside wall. (Walton 1995)

The external application of the komyntjie is in response to the fire hazard of the thatched roofs, as well as the functional issue: there was often a window/hole to allow light into the space, and it gave access to the chimney to hang meat for smoking.

In the section that follows, one will see how the komyntjie is still a very prominent feature of the farm workers' housing.



30.



32.



31.



33.

03

UNDERSTANDING CAPE VERNACULAR MATERIALITY

building materials, like all other spheres of the modern life have become a commodity that transcends borders, cultures, seas, land and skills. Local materials have taken a back seat in many places. It is a consequence of modernity and globalization; which also supports mass production and prefabrication, a universal language of architecture with its supposed disregard for context. The result of this, in spite of Modernism's failure, is a sterile, monotonous and 'inhumane' environment. The consequence of Modernism in the urban realm is only too well documented and experienced.

But what happened when prefabrication and modernism seeped into the rural areas of architecture?

As mentioned earlier, according to Umbach and Happauf, throughout the modern movement, there was a sense of vernacular underlying - and running alongside - the materialisation of modernity and modernism. This suggests that the modern is in fact a narrative of complexity in which the global (modernism) was dependant on the local (the vernacular and context). Taking this concept as a valid and applicable idea, then the Cape winelands - with its Cape Vernacular architecture - could be the melting pot of the modern and the vernacular, the local and the global.

The Cape Winelands - and with the focus being the Breërivier Valley for this thesis - has a richness in its context, its culture and even in the spatial manifestation of the rural lifestyle. This landscape is rooted in Cape [dutch] vernacular elements, many which are generations old - or elements that have been passed down over the generations and adapted to the changing times. Moreover, coexisting with this is the rapid technological evolution of farming methods, building techniques, and the elements of the modern and globalised life. Hence it is here that a new vernacular is being made (albeit it not so "vernacular").

Therefore, the search to understand the implications of the dissemination of prefabrication and "modernism" into the rural landscape, and its meeting with the Cape vernacular forms a vital part in trying to understand how the cape vernacular can be programmed in today's terms, so as to start to suggest a architecture appropriate to the context. It is a search that is looking for an intervention that lies somewhere in between the notion of "critical regionalism" and a "modern vernacular". It uses man's need for an existential existence to suggest that a genius loci is important, and this should be achieved through materiality and context, among others. In the rural region of the winelands, man is still able to 'dwell' to a certain degree. In order to continue this tradition in new architectural interventions, one needs to look at how the man-made related to nature in existing buildings; and how a modern rural vernacular could maintain this genius loci in spite of the use of universal building elements.

It is an investigation into the relationship between man, technology and his natural environment and the resulting characteristics.

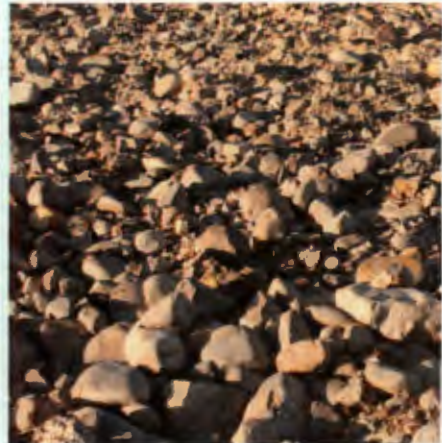
Hence, what follows is a visual journey depicting the built environment in the Breede River Valley, always keeping in mind that this could inform how one can 'programme a new [modern] cape vernacular'. This section looks at one of the elements that constitutes the definition of "vernacular", and that is the use of local material as informing spatiality and materiality of the built fabric. Thus, it looks at how stone, the most widely available material in the region, is an interrogation into the possibilities and presence of stone. Then this section looks at the "modern" shed (one of the most 'popular' buildings on farms and most interesting in terms of potential tectonics) in terms of the modern materiality and spatiality of steel, concrete and "mass produced" elements. It begins to question how, and if, the Cape vernacular, the local materials and the prefabricated/mass produced can work in harmony and be mutated into a 'rural' architecture.

The most widely available material in this area is stone. Stone is everywhere, mostly hidden beneath the sandy soils of the vineyards. It makes up the very essence of the landscape. It forms the ground into which the vines dig their roots into, and the manmade structures embed their structures onto. It is the dramatic juxtaposition of contrasts and colours that make up the majestic mountainous backdrops (figure 34). And it is the element that man uses to define his space in nature.

The use of stone as a space-defining element in this farming area reaches back many centuries, and today one finds not only reminiscent of it, but a continued use of the material. The stormy Cape winters (of much angled rain and wind) and the use of clay mortar and stone gave rise to the need to protect the walls. The resultant protection was in the form of lime plaster (which had to be touched up every year) and thus the characteristic white walls of the rural Cape arose. Dry-packed stone walls did not seem to be characteristic of the Cape vernacular. Hence, back then, a natural [visual] stone appearance/effect did not fall into the vernacular vocabulary and this legacy still stands, despite the contemporary use of cement based mortars (which nowadays do not need 'protecting'). Nowadays, the 'wall finish' is often a white finish (either white-washed or painted) - even in culverts - or just natural stone blending into the brown-grey concrete mortar.

The quality of the stone walls varies from wall to wall, builder to builder and from farm to farm. This variety in treatment demonstrates how in vernacular building, the final product of the built element is highly depend on the builder (and the materials).

FIGURE 34: The Breede River Valley and its natural landscape. The 360 degree surrounding of mountains: the softness of the valley slopes up to become rocky outcrops of dramatic shadows and colours. But beneath the 'softness' of the valley is a local reserve of stone - all shapes, sizes and colours.



Sometimes the spacing of the stones in the wall is tightly packed, sometimes loosely packed with ample mortar; in some cases the stones stick out far from the wall edge, sometimes they are well embedded. The finishing effect of these walls can be of two kinds: either the stone is left natural, or it is has a white finish (either whitewashed or painted). The detail of the wall coping also varies - it is either left with a stone finish, or it has a cement coping (figure 35).

With the evolution of building materials and construction methods, the use of the stone in the built environment has lost a lot of its 'colonial' popularity as a major masonry/structural element; yet it still has a presence as built elements within nature. While stone-walled buildings are more difficult to come across, there are 'remains' of an older generation of stone works; and the its biggest presence is in the smaller place-defining elements such as bridges and low walls.

What follows is a mainly visual depiction of the use of stone in the built environment, some old structures, some recent. It ranges from old treatments to current usage of stone and mass production/prefabrication. It is also a search for elements of a possible critical regionalism or a modern vernacular - the possibilities of a vernacular that has evolved to blend the local, the tradition and the universal.

FIGURE 29: The application of stone in the built environment: the different treatments of stone, mortar and whitewash in the valley.



| culverts |

Culverts and roads are some of the core 'structural' elements on the farm lands; they are almost intrinsically part of nature. Without them, the managing of water, and hence farming, would be hindered.

Although not strictly speaking a true marrying of the global manufacturing industry and local materials, these culverts are in a crude way, a 'critical regional' or modern vernacular approach.

In these bridges one finds the tension between, and union of, the mass produced concrete pipes and locally found stones (image 31). Here, in the context of vineyards, mountain and rocks, one finds a harmony in the simplest elements - the mass produced becomes personalised and contextual in the presence of stone and whitewash.

The greyness of the cement mortar and concrete pipes balances the range of browns, yellows and reds of the stones - and the culvert becomes integrated into the grassy landscape (figure 36).

Or the culvert takes on the characteristic whitewashed effect (figure 38) and it becomes a statement within the environment. But it creates a harmony which bridges that space between the man-made structure and nature.

It is often in these moments or elements of tension, where two opposing elements can sit side by side, that beauty and interesting tectonics and expressions of materials emerge. It is the difference of the elements, and this tension that serves to emphasise the difference and simultaneously make them work in harmony.

FIGURE 36: The merging of concrete pipes, local stone and cement mortar. The slight concave of the wall takes away the emphasis from the concrete pipe, and instead your attention is drawn to the stones which protude significantly, and which are tightly packed. Stone dominates over concrete, and the concrete coping balances out the concrete of the pipe. This culvert sits in the trench, becoming unified with its surroundings, the stone blending with the immediate grasses, contrasting with the blue mountain and thus creating harmony amongst the tension.



36.

FIGURE 37: A double piped culvert. Each culvert is different - this one has a dominance of reddish stone and creates a bigger contrast with the concrete pipes which produces a more interesting visual. This is further enhanced by the green context. Perhaps the beauty of these culverts is that, like the Cape vernacular, they have a symmetry about them, and a proportion of stone to concrete and pipe; from solidity to openness.



37.

FIGURE 38: A painted culvert, with a low wall. This culvert also defines space - its wall protudes above the level of road. These culverts just seem to grow out of the ground - a seamless transition; the stone becomes one with the soil and the grass. In spite of the white, which makes the culvert and its wall stand out, it does not obstruct, nor is it visually displeasing.



38.

"The whole of this inner area of the farm, called the werf, is enclosed in a long, low wall, whitewashed like the buildings inside it..." (Bosdari 1953: 31)

This low whitewashed wall - the 'RINGMUUR' - is more than just a wall that protects the werf. It is a space defining element that, in the vast surroundings of vineyards and mountain, creates a haven of human scale. More than a defensive element/wall, it is a psychological wall which separates man and nature - but which simultaneous brings them into harmony through the tension created. Thus, it encompasses a sense of place in which man can situate himself in nature.

The wall is the threshold between vine and nature, and man's defined spatial environment. It is an 'inbetween' that negotiates the two realms which connects man to his ability of 'dwelling', and the essence of genius loci; and to the land which he toils.

It is not only road construction that uses stone in their walling. Although not as common, or at least visible, is the use of stone in the construction of traditional 'ringmuur' and in the walls of buildings. While the 'ringmuur' is not as common as it was a century ago, there are still existing examples. Similar to the 'ringmuur' are the walls that enclose and define the family graveyards (figure 43). These would traditionally have been made of stone and the walls underwent the same treatment as the buildings: they were plastered with lime.

However, every once in a while one stumbles across a unique use of the local material (figure 39+40). In this wall, there is a poetic application of small stones in the wall, tightly packed, layer upon layer. In contrast, a more common application of stone walls uses much bigger stones (figure 42). A more recent low wall has been not been plastered and left to its natural colours (Figure 44). Both these walls have made use of local material, and both site in harmony with their context.

FIGURE 39+40: The small stone, tightly packed cemetery ring-mur. The stones have been packed in neat rows which can only indicate that it was manually built, layer by layer (and not in a makeshift shuttering contraption). Even here there is a subtle hint of the merging of the local/contextual and the 'modern'. The local element is the stone, and the 'modern' is mass produced - it is the gate, and the pre-cast concrete balls that are placed on the walls.



39.



40.

FIGURE 41: The boundary wall of a factory. The global meets the local with the stone base and columns, on and between which sits prefabricated metal railings. The stone acts as a base onto which the steel can sit, thus elevating it from direct contact with water on the ground. Furthermore, due to the unevenness of the stone base, and the need to protect the railings from sitting in water that could accumulate on the stone, the railings are lifted off the stone.



41.



42.

FIGURE 42: A stone wall used to create paddocks/fields on a farm. The stone is neatly packed in rows (with a preference for flatter shaped stones for easier construction), displaying a variety of colours. These colours resonate within the context and so the walls tend to blend in with its surroundings. To contrast the localness of the stone, the mass produced, off-the-shelf metal farm gates hanging on a gumposts become the opening and the 'light' elements amidst the solidness of the stone.



43.

FIGURE 43: A white plastered graveyard wall. It echoes the concept of the ringmuur; it encloses and creates a human scale. It also responds to the closeness and height of the vineyards, and the triangular copings of the posts echo the silhouettes of the mountains in the background. It sits defined, yet part of the landscape.

FIGURE 44: The smoothed stone wall enclosure in Slanghoek valley. Just another element in the landscape, it is mainly a grey concrete element, with spots of stone colours in it; it is smooth - there is no projecting stone and the concrete has been used to create a minimal, non-ornamental finish. Had it been made with clay mortar, it would have needed a lime plaster, and so a white wall would have emerged, perhaps creating a bigger tension and harmony between nature and the wall.



44.

The vernacular Cape cottages is one of the parts of Cape Dutch Architecture that seems to have been neglected, yet it formed a very important component to the spatial and social environments of the rural communities. Unfortunately many do not exist anymore, or if they do, they have been altered beyond recognition.

A COTTAGE: OLD AND NEW

Here, however, is an example of an existing cottage, in which one finds a narrative of its history in its walls (figure 45, 46) - as Barrie Biermann commented about a visit to a Tulbagh farm after the 1969 earthquakes, "...we had tea in his ruined dining room. The plaster had already been stripped from the cracked walls and the bare masonry was a palimpsest of architectural history..." (Biermann 1971: 36)

In this cottage one can see the use of a local material as the dominant building material: stone. The cottage in its current state is a combination of the original stone and clay mortar walls and newer brick and mortar walls (one of the side walls and the higher sections of the walls). The new sections of the walls were most likely built after the Tulbagh earthquake. The cottage originally had a monopitch roof, or 'brakdak', which can be traced in the change of wall texture and thickness (stone to brick).

However, what is of more relevance here is the rough plastered effect, with the whitewash, of the locally acquired stone. The use of stone and clay mortar as the building material also resulted in the external walls being about 600mm thick. This in turn has thermal effects on the building - it keeps it cool in summer. The thick walls also mean deeper recessed windows which creates a 'built-in' overhang as well as manipulating the quality of light that enters.

The use of local materials, combined with prefabricated elements, and in conjunction of the limewash has led to a layering of time and meaning, which creates a richness in the built environment and inherently can form a genius loci for people of the valley.

FIGURE 45: The abandoned cottage, before renovations. The whitewash had been washed off and the natural character of the stone, layered with years of weather battering, mould and dust talks about 'aging' and that 'nostalgic' essence. It brings with it a sense of place and a tactile and visual essence (which modern architecture is said to have lost).



45.

FIGURE 46: The cottage after renovation. A fresh layer of whitewash glitters and shines in the bright sunlight, and one might think that the charm of the natural stone has been sacrificed. But with time, and with rain, the whitewash wears down, flakes off and those effects that talk about a sense of place, of time and permanence begin to show through. With whitewash, the aging process is continuous and renewed on a regular basis, there is a constant layering of elements.



46.

Although the gabion cage - and gabion wall - are a global element - and not necessarily specific to a region, it is often used in this region to retain mountain slopes. The abundance of stone in the area further justifies its relevance and importance. In this valley/region (figure 47), the gabion cage is still mostly seen in its application as a retaining element (especially on roadsides, holding back the mountain slopes). However, in the architectural realm, it has begun to be used as a structural/visual aesthetic for many buildings. A vernacular reinterpretation of the gabion cage/wall into the built environment has not happened in the farming community.

These walls, and the gabion cages, are an elemental example of how mass production and prefabrication have been interpreted to suit local needs, to fit in with the environment. It allows for the interaction between site and built form. There is trend for these to be interpreted into architectural applications presents a possibility of a critical regionalism and a possibility of a sensitivity of landscape. But what about a vernacular interpretation?

The 'mass-produced'/universal cage/element is regionalised with its infill. The gabion wall and its stone creates a diverse visual aesthetic, depending on the stone and the way in which it is packed in the cages. Stones found locally are often used in these cages and so this universal element is immersed into the local, enhanced fact that vegetation can grow onto, around and through these 'rock walls'.

FIGURE 47: A retaining gabion wall along the N1 in the Hex River Valley. This image perfectly captures the union of man and nature: masses of rock (natural) merges into the drypacked stone wall (man laid) onto which the gabion cages are packed (universal). And eventually vegetation will make its presence too. This is a subtle insertion into the landscape - calculated yet appealing to the natural.



44.

On a farm just off the R43, is a small section of "pseudo-wall", or "pseudo-fence" (figure 48-50). This reinterpretation of the gabion wall concept, into a much smaller, more 'temporary' structure is a solution found by the farmer. They needed a fence with was a little more than a 'fence' and the result was a pleasing 'gabion-fence'. I can only think that this could have been inspired by the numerous gabion retaining walls in the district.

This 'wall' is simply a series of fence-poles with wire mesh fastened on both sides, and an infill of river stones. It is a simple solution using local materials, and is much like the cape vernacular, it corresponds and relates to its context. This is the union of industrial mesh, with local river stone which echos the contrasting of whiteness and shadow/darkness of the Cape vernacular tradition. It is a fusion of elements leading to a possible modern cape vernacular.

FIGURE 48-50: A 'makeshift' wall: a simple solution. It has direct connection to the ground - no protective measures, and old bark meets the stone at the base. The gum-posts protude above the rest of wall, whether intentional or not, it creates a sense of hierarchy and definition.



48.



48.



50.

★

FARM SHEDS are perhaps as important as the homestead itself. Dating back to pioneer days, the outbuildings in the farm 'werf' were very similar to the main homestead/houses. Due to the building materials, and skills of the times, the out buildings were treated much like the houses: a narrowness determined by the roof span, and a simplicity of proportion and symmetry. (Bosdari 1953) A common architectural language was present in all the building elements, from the main gable to the simple gate post to the end gable.

This language and character seems to have stayed alive, manifesting itself (albeit in a less poetic form), and [re]adapted into a more 'contemporary' farm shed (of the region). This 'new shed' becomes, in a way, a modern vernacular. It takes the mass produced, standardised steel frame and 'reinterprets' it to suit the farming lifestyle. The next few examples investigate the relationship between the modern and the Cape vernacular, and demonstrate the various reactions to this.

★

To me, this farm building structure (figure 51) illustrates could possibly be modern cape vernacular, or the in between of a critical regionalism and modern vernacular- it is the marrying of a prefabricated steel structure and the local stone walling technique. It is as if the steel frame wraps and contains the stone wall; and at the same time, the stone wall supports the steel frame. It is a subtle insertion into the landscape. On the one end, there is the echo of gable - a white wall borders the edge, extended past the roofline. The stone wall sits on the land, gradually becoming one with nature as grasses begin to grow up its walls.

FIGURE 51: The 'modern' farm building in its context. Within the larger context, this building is a dot in the landscape, almost unnoticed because of its sensitivity to the landscape: the use of stone dominates over the steel frame, its low mono-pitched roof echoing the angles of the jagged mountains. Yet at a more intimate scale, its spatial interaction with the landscape is unquestionable - it sits firmly in the ground, with grass mediating the connection of stone to ground.



51.

Most of the 'recent' (from about the 1900s onwards) outbuildings and farm sheds are still designed/built in terms of the characteristics mentioned above. However, modern tenets and the undeniable presence of prefabricated elements have found a way into the shed language. It is seldom that one would find a completely modernist shed. But instead, from the many sheds dotted all over the valley, there is an evident manifestation of modern tenets (or a concept there of) have have been regionalised with the Cape vernacular, and the context to form a contemporary vernacular shed.

The convenience and efficiency of the steel framed structures for industrial buildings seeped into the farming communities, where they have begun to replace the traditional loadbearing walled buildings. However, it is seldom that one will come across a 'pure' steel structure with only corrugated sheeting as its cladding.

The masonry tradition is too deeply entrenched and what emerges is a juxtaposition of the two. In one example the gable bookends a steel frame structure (figure 51a+51b) while another example, and a rather common one of this condition is the masonry/corrugated wall where the steel structure and its cladding meets a brick plastered wall 'base' (figure 52+52a).

The treatment of openings in the 'modern' shed echos modern tenets. The ribbon window (figure 54+54a), be it in a pure form, or an interpretation of it offers itself as a functional way of allowing in light while keeping wall/floor surfaces free activities within in the shed. A corner opening also makes an appearance (figure 53).

FIGURE 51a: A pseudo steel shed. The steel framed shed ends in whitewashed masonry end gables - it is as if the prefabricated elements are contained by the vernacular. The logical and common fact that a steel frame structure has modular grid is of minor detail here - the grid spacing is inconsistent.



51a.

FIGURE 51b: A union of a steel and gables. The steel H beams meet a rough concrete slab - there is no special base, and the concrete floor slab just fades into the ground, there is no inbetween space.



51b.



52.

FIGURE 52: A pseudo masonry based shed. In order to overcome the issues of the steel and corrugated sheeting's connection with the ground, many farmers will build a wall to about 1m or so, and then onto this the steel frame structure is fixed. This approach begins to hint at the merging of local building traditions and prefabrication. It also brings a more humane and contextual response to mass production while keeping the traditional transition of ground to building, and a human scale is maintained.



52a.

FIGURE 52a: The meeting of corrugated sheeting and wall. A detail of the connection between the masonry base of the wall the light weight structure of steel columns and sheeting attached to this.

FIGURE 53: The shed with the corner opening. A very unusual interpretation of the positioning of the shed door. Whether intentional or not, it echoes the modern tenet of corner windows. It also creates interesting tectonics of white-washed wall and gray corrugation. The corner becomes 'special' and negotiates the context of the tree and slope.



53.



54.

FIGURE 54: A shed on the way to Waveley Hills. The ribbon window runs along most of the facade, sitting almost flush with the eaves, and formed by putting standard steel windows next to each other. This simplicity is in harmony with the whitewash of the walls and weathered condition of its surroundings.



54a.

FIGURE 54a:
A new shed sits next to an older shed, surrounded by vineyards. The ribbon window of the new shed runs the entire length, sitting on a whitewashed wall.

FIGURE 55. The beauty of age. With the neglect comes a sense of time and permanence which exhales a feeling of genius loci. The traditional use of whitewash inspires this, as does the very understated connection to the ground.



55.

FIGURE 56. The modern tenets of the shed: rough grid module of columns, and the re-interpreted ribbon window (in the form of an exposed truss).



56.

FIGURE 56. The vernacular side of the shed. The roughness of the whitewash, scatters a characterising mould, in conjunction with the small window openings recalling the Cape vernacular.



57.

| corners |
ribbon - steel

SHEDS: A FARM TYPOLOGY

| UNDERSTANDING CAPE
VERNACULAR MATERIALITY

03

Some of the buildings are neglected, and this results in some of the effects that most people would kill to get, but here they happen naturally - the essence of weather and time produce an aging of the materials. In spite of this, lessons can be learnt by examining how the different materials have been put together, and what has been used.

A neglected shed on the R43 near Wolseley demonstrates such qualities. This shed seems to sit solidly on the ground, but also touches it lightly. There is no step or change in level between the building and the ground - it is one continuous plane and the negotiation between man and nature is transparent (figure 55).

This shed, though run down and neglected has gathered layers of tactile appeal. The material palette, the whitewash and the suggestion of a reference to Cape vernacular has created a sense of place about the building, which also portrays some 'modern' inspired characteristics. The functional programme of the shed has led to its spatial manifestation and form: a 'transparent' facade (depending on whether the doors are open or not) which negotiates the inside and outside - the representation of modern tenets (figure 56) and a back facade, a solid wall with small Cape vernacular window openings (figure 57). There is even a hint of a ribbon window effect, created through the truss system above the sliding doors.

Moreover, these corrugated sliding doors, with their positioning behind, and between columns, become customised to the building. The corrugated sliding door is in its own right a hint at mass production - it is a very typical and prototypical element, yet the way in which it sits on or within the building, and quality of the door, and the treatment of it gives it a vernacular slant (figures 58, 59, 60).



58.



59.



60.

FIGURES 58, 59, 60.
The shed door - the
use of prefabricated
and mass
produced materials
in a vernacular and
farmlike style.

| carbon - steel
ribbon - steel

SHEDS: A FARM TYPOLOGY

UNDERSTANDING CAPE
VERNACULAR MATERIALITY

03

This paper has been looking at the juxtaposition of old and new technologies and materials, of the reinterpretation and evolution of buildings in the winelands, a potential for a modern Cape vernacular. In this example, the search becomes an 'adaptive reuse' project. A factory (situated on the road between Michell's Pass and Tulbagh) is an exploration of stone and steel, and the concept of adapting an existing building. The adapting, additions and alterations to a building as the passage of time demands, was well practiced in Cape Dutch architecture, and so it would seem appropriate to apply such an approach in current times. In this factory, an original Cape Dutch building has been wrapped with a steel frame. It is a connection between stone and steel.

It is sometimes difficult to distinguish the hierarchy: is the steel frame and sheeting dependant on the stone wall or not? The stone wall of the existing building acts as a base, a solidness onto which the steel can attach itself. They become dependant on each other.

FIGURE 61: The adaptive reuse factory space. This building is a juxtaposition of many materials and sections of buildings. Yet in this seemingly crude combination there is a language of old and new, and steel and stone. In this image the silhouette of the old end gable is clearly defined, with a newer stone wall extending above it, which follows the line of a steel frame roof.



61

This visual journey between the vineyards and peach orchards of the Breede Valley River and its surroundings has revealed a richness of Cape vernacular, both old and modern. The meander through history, in books and in real life, together with the concept of the modern vernacular explored in the theory section, has led to a re-interpretation of the rural condition. And it has exposed the potential that lies within the Cape vernacular and the modern when they come together in the rural settings of the vineyards.

From this visual exploration, there is inspiration that it could be possible to begin to fuse the [contemporary] modern with the vernacular lifestyles and spatial manifestations so that the Cape vernacular architecture can evolve into a new Cape vernacular through a programmatic point. Moreover, it suggests an exploration of the notion of new vernacular architecture in rural farming communities in an attempt to merge the global with the Cape vernacular and local. It is a response to the globalised world which is unconsciously encroaching into the lives of the farm workers so that they, who so isolated from it all, can in some form be connected to the bigger picture.

Ultimately, what this interrogation of the architecture and materiality has revealed is the potential that lies in the choice of materials, and their relationship to each other, and the context. Moreover, through its simplicity and honesty - with its roots in history and the physical context - and an inherent tension and balance, it will guide a way to making an architectural tectonic creates harmony and a concordance in which man can dwell.

04

siting and programming

The very limited exposure and interaction that I have had with the children on our farm has been incredible. With only having re-opened the creche on Rouzelle Farm in June, it is unbelievable to see how quickly the children have grown mentally and socially. Furthermore, they are, along with the school children, so eager to learn and to be nurtured educationally (something which they can not get at home). This experience, combined with the other research that I have done, is suggesting that the programming of my site should be educationally focused.



The landscape: a aerial view of the Breerivier (GIS mapping 2010)

THERE ARE ABOUT 45 FARMS
THAT FALL UNDER THE
BREERIVIER WARD

This topographical map shows the layout of the Breerivier valley, as it sits between two mountain ranges, with the Breerivier running along the R43. This diagram is illustrating how the human settlements (farm werfs and housing in particular) are situated near the major roads (the R43 and Waaihoek road) and along the railway. The Breerivier Valley is considered to be the area from the kink in the blue line (towards bottom of the page) all the way up and past the T-junctions, then from the River up towards the mountains.

As you descend into the Breerivier valley, you are engulfed by a 360 degree space defined by mountains, vineyards and fruit orchards. The mountains are an ever present element in the daily life of the valley - they contain the farming activities and protect the inhabitants. Not only do they create a spatiality in the valley, but they are also a constant representation of the passing of the day. There is a constant play and relationship between the [sun]light and the mountains. At times the mountains become silhouettes, looking like cardboard cutouts stuck onto the sky; at other times they become a dramatic scene of varying depths, shadows, light, and colours. The colour palette changes from a range of blues and blacks of the silhouettes, to the reds, pinks, browns and yellows of the rocky mountain faces and the play of light.

This varied and interesting nature inspired context of shadow, light and colour is reflected on the built environment, albeit it subconsciously. The Cape vernacular architecture has inherently absorbed these characteristics, to become structures that are rich in shadow and texture and white texture (which is never quite white) - and it is perhaps this that creates a harmony and integrated landscape. The landscape itself has set up a language of contrasts, shadows and silhouettes, and I believe that this is something that should inform the making of the architecture - the buildings should be about the presence they make, and the way they interact with the context and space: about shadows, depths of spaces and the presence of light.



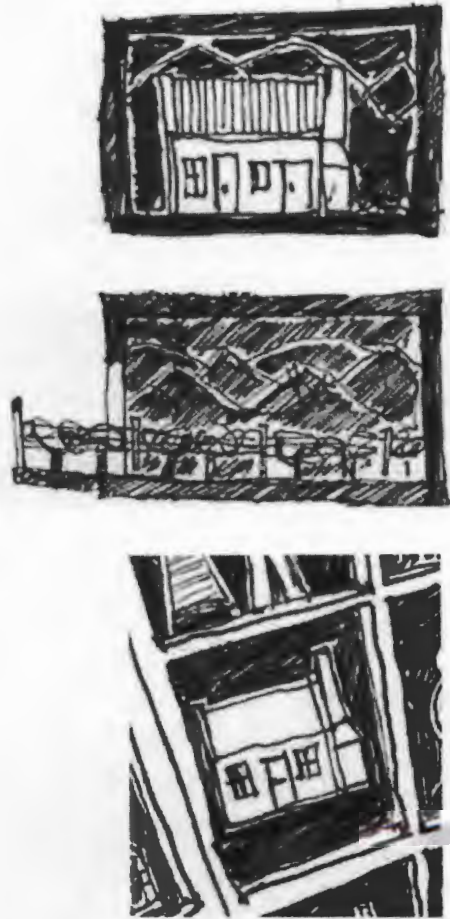
THE NATURAL SPACE |
DEFINING ELEMENTS



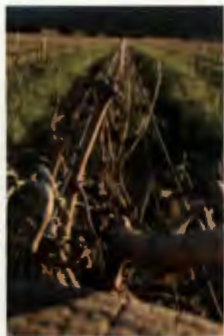
A VISUAL JOURNEY THROUGH
THE LANDSCAPE



DESIGN
INTERVENTION



This research, and presence of the valley in my life has inspired a visual exploration through graphical sketches



THE NATURAL SPACE
DEFINING ELEMENTS

A VISUAL JOURNEY THROUGH
THE LANDSCAPE

DESIGN
INTERVENTION

A VISUAL JOURNEY THROUGH
THE LANDSCAPE

SITTING:
THE BREERIVIER VALLEY

04



The protea - nature's symmetry



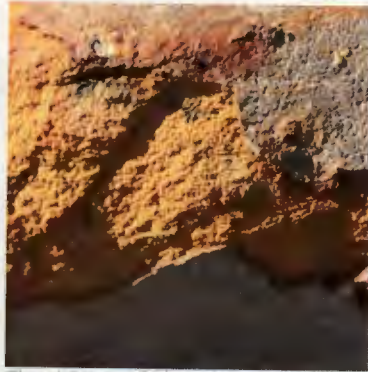
The tension of light, white and shadow.



The natural landscape: fynbos



Mass production - concrete culverts



The richness of the stone.



Peach harvesting.



Corrugated sheeting - shed doors



A ground cover - peach pips.



A rough texture - an old wall.



Vin clematis - colouring the landscape.



Man's tension - shadow and light.



Peach blossoms in the setting sun.



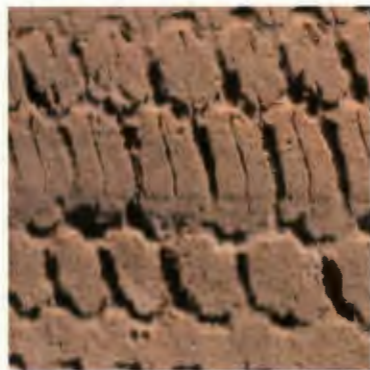
Harvest time - peach trees.



Waterblussmetjes - nature's food.



Textured surfaces - corrugated iron.



Footprints in the ground - a tractor.



Fruit crates - timber and steel merge.



Extra support - tying the peach trees.

A VISUAL JOURNEY THROUGH
THE LANDSCAPE

DESIGN
INTERVENTION

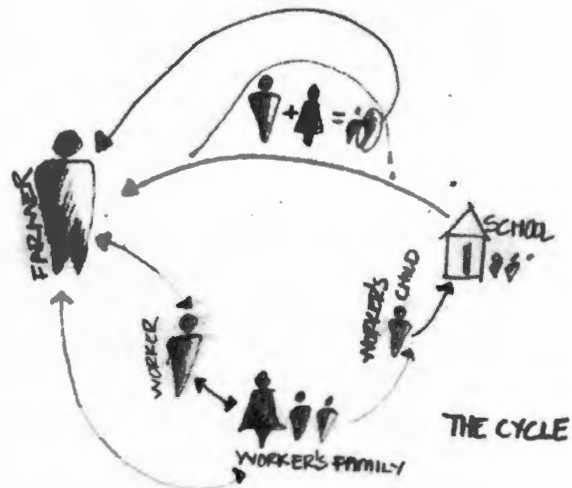
05

understanding the
farm worker community

It is not the farmer (landowner) whom I am interested in, but rather it is the farm workers and the community in which they live in. The focus of this thesis is to find a programmatic intervention that will benefit their lives and their social standing. The thesis is inspired by the farm worker's situation and conditions in the valley. With an overview of the man made elements in the landscape, in the previous chapters, I then focused my research on the people who inhabit this landscape. In order to understand the people and current conditions that I have been exposed to on the farms, I first had to discover their roots. To do this, I had some interaction with the farm workers, and I interviewed, a retired farmer who grew up the valley. Due to the lack of written information available on this area, I looked at papers written and research done on wine farms in neighbouring areas. These highlighted and correlated to the situation of the Breërivier. These papers dealt with the concept of slavery and the resultant paternalistic relationships between landowners and workers; and with the conditions on farms. All the information has been diagramatised and summarised on the following two pages.

The breërivier farming community was a very closed and tight-knit community, protected and isolated by the mountain ranges that surround it. These communities were historically made up of the landowner and their families, and their slaves and their families. In order to get a sense of the dynamic of this community, I first had to understand the legacy of slavery, and its relationship to the current conditions. It is only recently that new blood is filtering into the valley, and a higher degree of migration is taking place, albeit still low.

" Ek kan vir jou vertel hoe die situasie was daardie tye. Baie van die plaaswerkers was gesinne wat op die plaas gebly het. Hulle het daar gewerk, en dan het hul kinders en hul kleinkinders op die plaas gewerk." (Le Roux, 2010)



a.

DEPENDENCY:

The divide between farmer and farm worker has always existed, and always will. There is a continuous dependency between them. It is rooted in the days of slavery on the farming establishments. The abolishment of slavery may have freed the slaves, but the sense of dependency of the farm worker on the farmer remained. This cycle/relationship between farmer and farm worker "... evolved into a paternalistic relationship where the labourer was tied to a particular farm through housing, debt, economic impoverishment and political marginalisation" (Falletisch, L. 2008)

"Alles op die plaas was gedeel. As daar geslag word het hulle gekry, as daar mielies was. Al wat hulle eintlike vir hulself toegesien is as daar druiwe is het hulle vir hulself wyn gemaak. En hulle doen dit nog." (Le Roux, 2010)



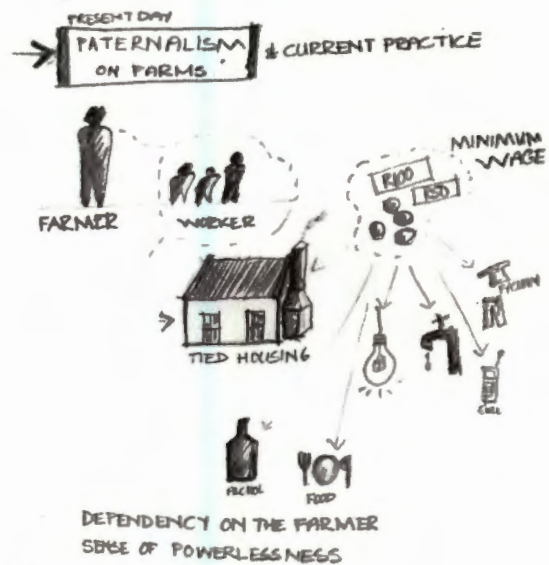
b.

PAST SLAVERY:

Even after slavery was abolished, a similar condition existed on the farms where the farm was their farm as well, so to speak: in return for working on the farm, not only did they get money, but housing, clothes, wine and food. In many senses, the farm workers were better off in those days. It was a sustainable lifestyle. (Falletisch, L. 2008)

"Huisse van volk was met stene gebou. Het ook strooidakke gehad, maar later sinkdakke. Dit was groter huises as deesdaar. Hulle het niks betaal nie. Later het hulle elektrisiteit gekry." (Le Roux, 2010)

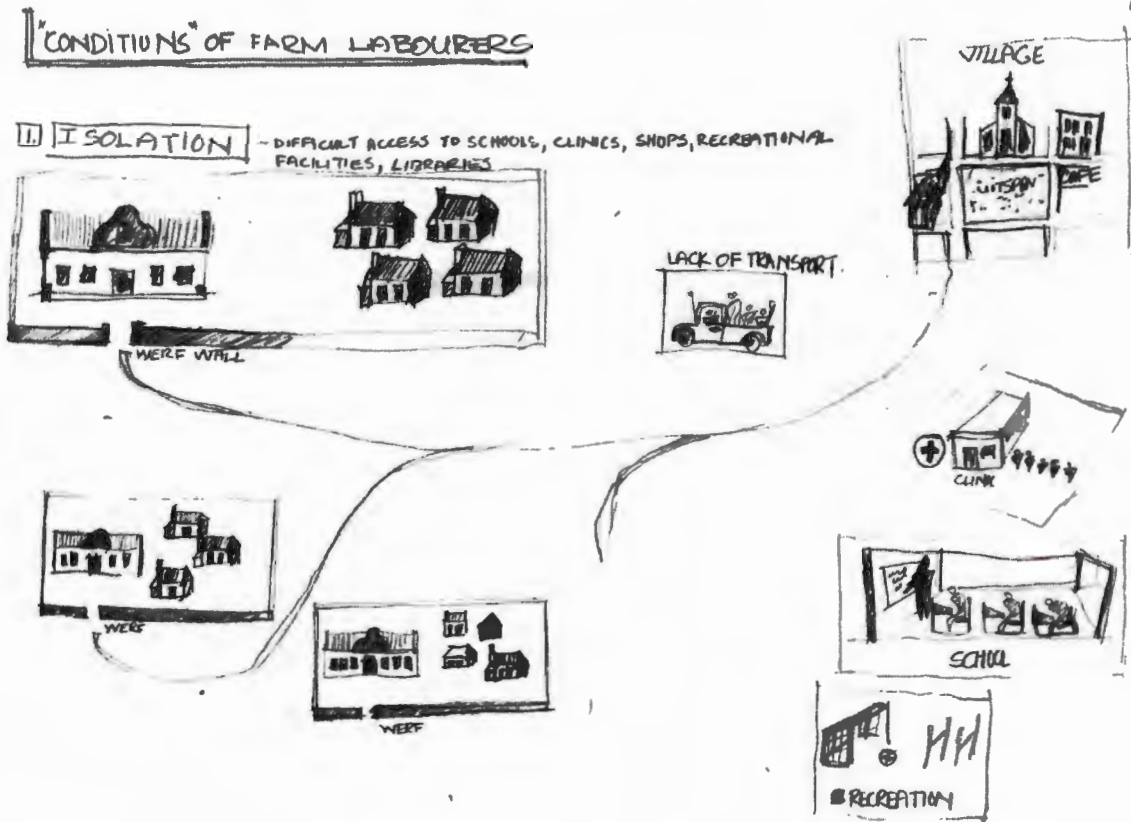
"Hulle het gewerk en hulle is ver-goed daarvoor. As mens teen vandag se tariewe kyk wat hulle betaal is. Die geld wat hulle daardie tyd gekry het is amper meer werd as wat hulle vandag kry." (Le Roux, 2010)



c.

PRESENT PATERNALISM:

The present condition is still similar to the past - the farm worker is attached to a farm/farmer who in return provides him with housing and pays wages. However, the modern farms are not as self sufficient (apart from grapes and fruit), and the farm worker can no longer live off the farms. The farm worker is still dependant on the farmer but the relationship has changed. The implementation of minimum wages as in a sense 'impoverished' the farm labourer who now takes responsibility of his own well being.



d.

ISOLATION:

The magnitude of isolation may have decreased (smaller - and more farms; better transport; globalisation, etc), but there is still a high sense of isolation experienced by the farm workers. The workers are housed on the farms, but it is difficult for them to get to schools, shops, clinic, etc. And when they are at these places, the sites do not encourage a sense of well-being. .

" Dan het hulle gewoonlik saterdag wolsely toe gegaan, want hier het n treintjie geloop van Worcester af Wolseley toe en dan draai hy om daar en dan gaan hy weer Worcester toe....Hulle het nie eintlik kos gekoop nie, want die het hulle gekry dit alles op die plaas. Hulle het wyn gekop...." (Le Roux, 2010)

POOR LIVING CONDITIONS



- NO PROTECTION AGAINST CLIMATE
- SMALL HOUSES

- OFTEN - NO STOEP / SOCIAL AREAS
- NO OVERHANGS (FOR RAIN / SUN)
 - NO MEANS OF HEATING THE HOUSES
 - NO HOT WATER
 - NO INSIDE ABLUATION
 - NO LITTLE MAINTENANCE AROUND THE COTTAGES

e.

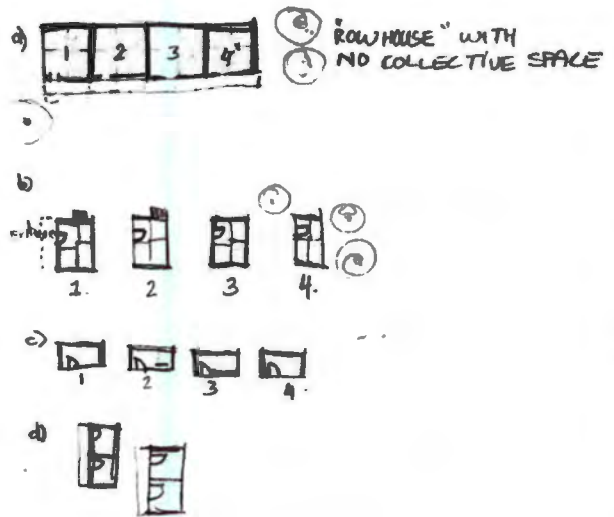
HOUSING CONDITIONS:

A characteristic of the farmer/worker relationship is the element of housing. Farm workers have always been supplied with housing on the farms (however, recent laws and trends are forcing changes of this, and many farmers are moving the workers off their farms). While there has been improvements made to these houses, the conditions of the houses remain minimal. Furthermore, the farmers are moving towards using contract labour due to these new laws.

"COMMUNITY SPACE"

EACH FARM HAS ITS OWN 'BARRACKS' (BUT THERE IS LITTLE THOUGHT OF IMPLEMENTING A SPATIAL PLAN THAT ENCOURAGES A COMMUNITY).

IE:



"Huisse van volk met stene gebou. Het ook strooidakke gehad, maar later sinkdakke. Dit was groter huises as deesdae. Hulle het niks betaal nie. Later het hulle elektrisiteit gekry." (Le Roux, 2010)



Ons het nie swartes hier gehad nie - dit was almal kleurlinge - hulle het 'n bruinerige kleur gehad en dan was daar ook van die Boesmans - ek gaan nie sê Khoi of San nie, ek gaan se Boesmans. Hulle was ligter van kleur en kleiner gebou as de Kleurlinge."
(Le Roux, 2010)

"Daar is nog van die oorspronklike families, maar dit het baie verander en toe het die swart mense begin inkom..." (Le Roux, 2010)



Thea Fourie



Adam Lodewyk



Aggel



Lien Fourie



Willem Fourie



Cassing, Esmone and Geraldine.



Niklaas Meintjies



Shuwaine, Sadwin.

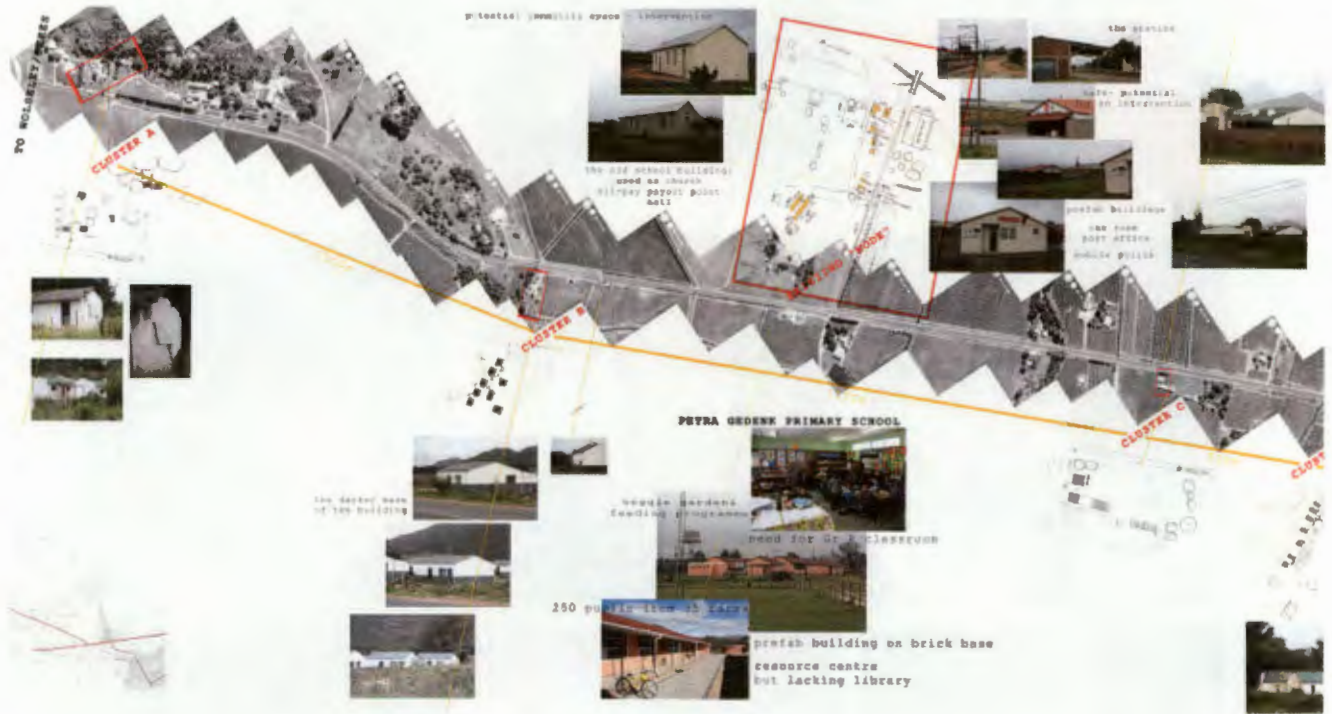


"As hulle soggens inval kry hulle so 'n bekertjie - 5 omtrent op n bottel en dan 11h00 weer 'n dop en middag as hulle uitval wee 'n dop en dan 4 uur weer en dan vanaand. Toe het ons dit later gelos en net saans' n bottel wyn gegee - een bottel op een dag - dit was nie baie nie." (

Le Roux, 2010)

"Dan het hulle soos vandag ook nog hul eie sort taal geprat. Ons het saam met dit groot geword en dit het ons nie gehinder nie."

(Le Roux, 2010)

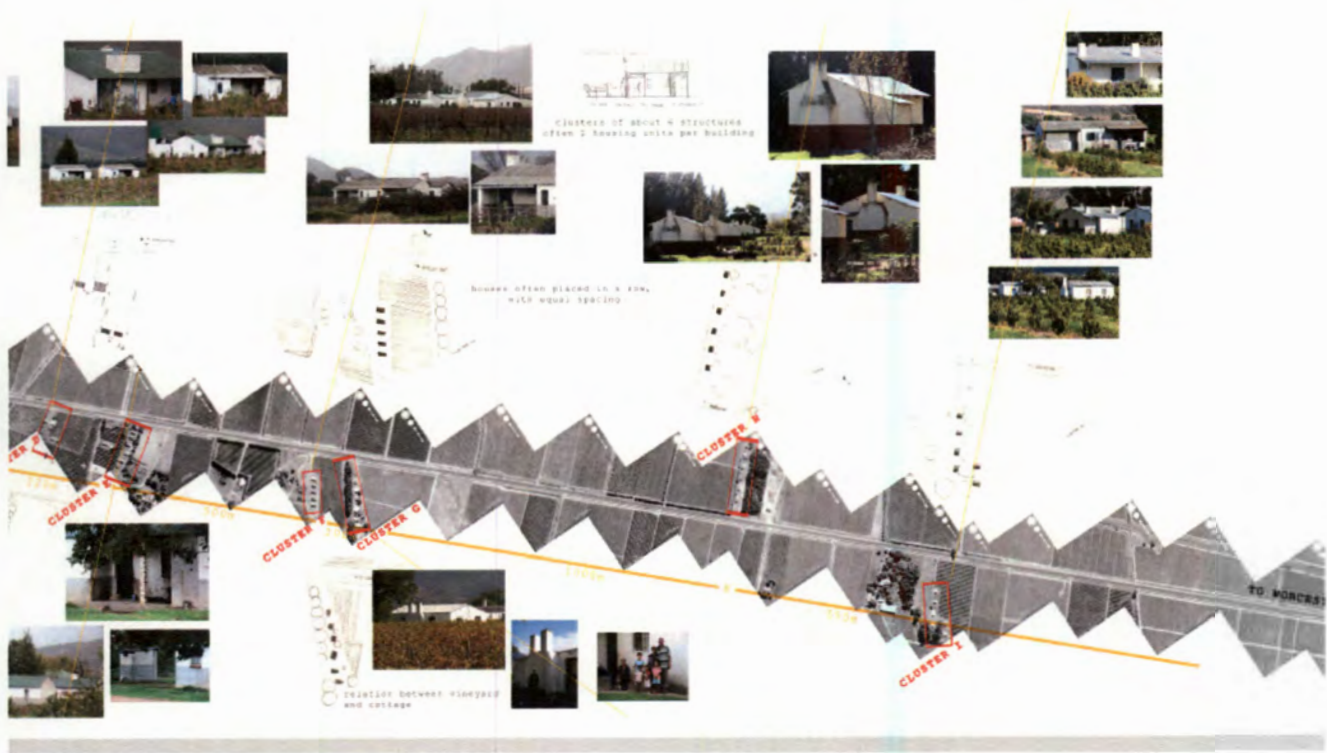


f.

HOUSING ANALYSIS:

About three years ago, I was tasked with measuring up the buildings on my parents farm - and one of these were the farm workers' houses. It was here, and because of this exposure, that I became aware of the plight of the farm workers - and thus from here that the interest for the thesis topic grew. The conditions of the housing and community facilities of the farm workers exists along with that of the whole valley, in varying degrees of 'quality'. This analysis looks at the housing that sits along the R43. Most of the farms border the R43 and in most cases, the

farm workers housing is situated near the road. Furthermore, there is a general pattern and language in each cluster - a spatial intervention that lacks any sense of creating a community spirit. If one looks at the layout of the houses, they are often in a row, and do not form community/shared and user-friendly spaces, which is ironic since the farm workers are very community based. The spaces between the houses is in fact the places were they socialise - but this is not catered for. This analysis thus exposes the layout of these clusters, as well as distances between each cluster



g.

COMMUNITY SPACES:

Not only are they spatially devoid of positive collective spaces, but there is not a defined gathering place for the farm workers either. The Breërivier village, which is the node that attracts all these settlements, does not offer community facilities, and neither do the farmers. I believe that either the houses are placed close enough to be able create shared community spaces between a few clusters; or the Breërivier node could develop into a community base.

h.

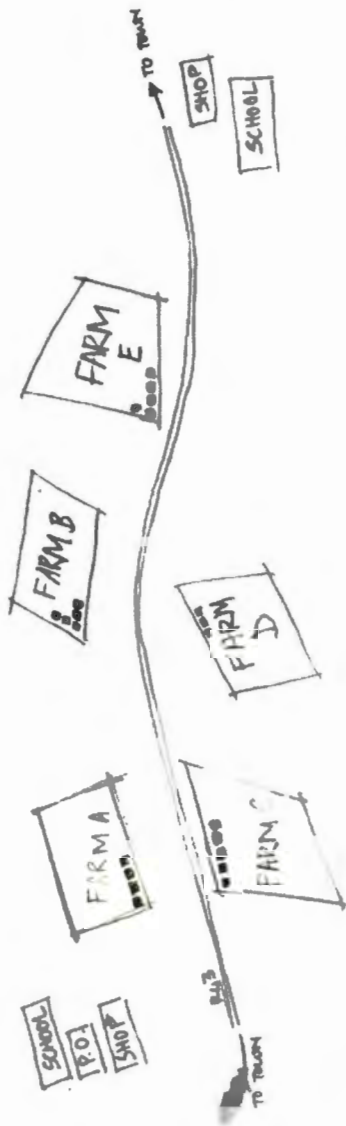
BUILDING ORIENTATION:

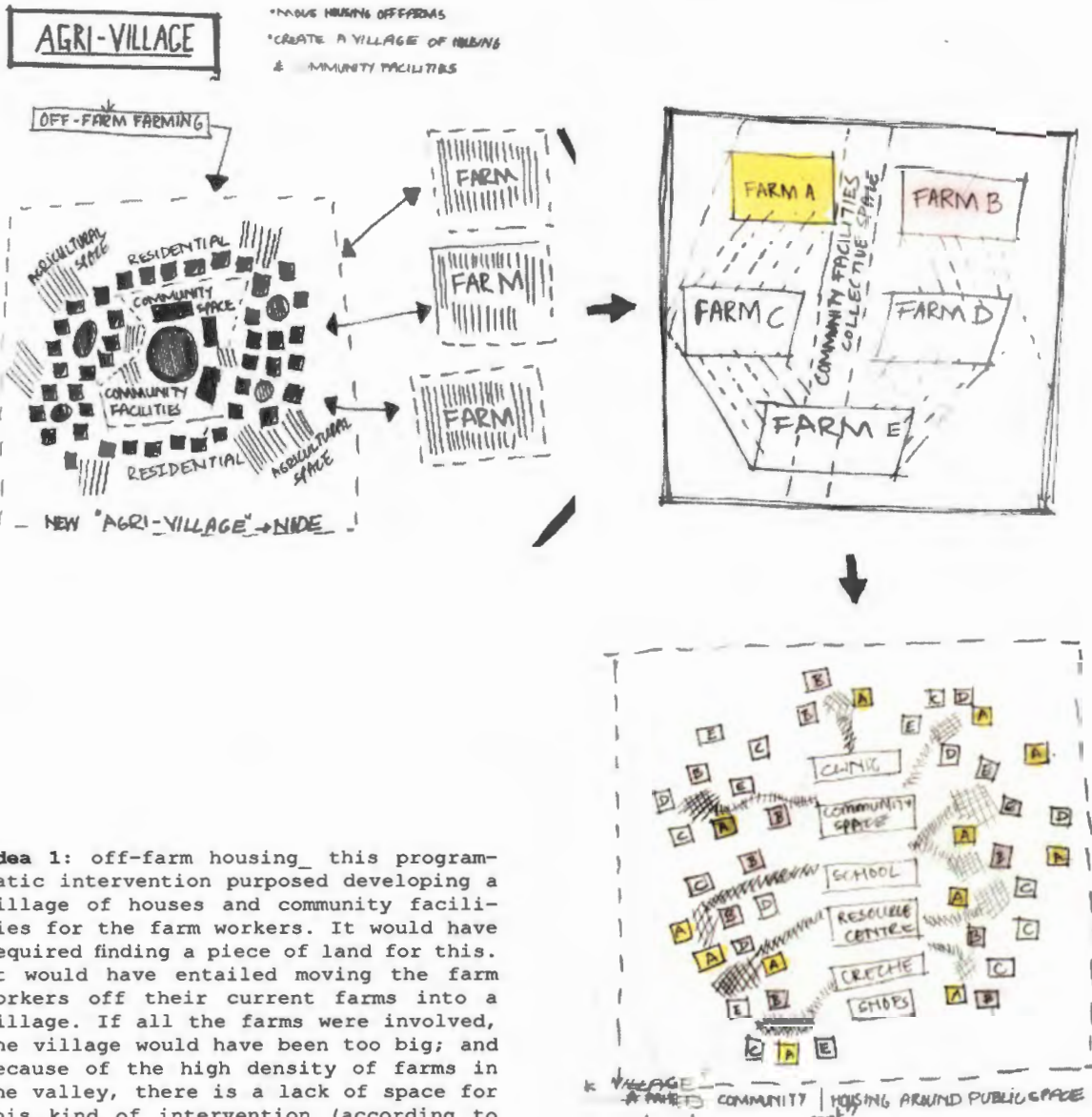
Another interesting point that arose was the positioning of the houses. Many of these houses would have originally been Cape vernacular cottages (but now greatly altered). Their orientation is such that the end gable walls are perpendicular to the wind which allows for the doors and windows to be open in strong winds which prevail in this area.

The visual and physical journey through the valley, amidst vines and houses, farmers and farm workers; the passage through history, books and journals; and a personal connection and desire to find a new 'order' in and amongst the patch-worked fields calls for an [architectural] programmatic intervention. This new 'order' is trying to find a way to assist in altering the form and amount of dependency between farmer and farm worker, and breaking the cycle of isolation experienced by the farm worker community.

This 'order', this architectural response is twofold - it has to investigate and respond to the housing and collective community space. The strongest and reoccurring thought/aspect that kept seeping onto the drawing board while understanding the Breërivier Valley as a site was the need for new and/or improved housing conditions. Hence, naturally my first architectural/programmatic approach focused on housing - and the need to improve/reinvent the farm worker's house. It was a consideration of implementing an almost "urban" approach into the rural setting as an overall design intervention strategy, and then zooming into an architectural strategy. Even though my thesis steered away from these ideas/approach to find a new programmatic intervention, looking over the following drawings, in hindsight the same ideas keep re-emerging but just in altered and improved forms.

The existing farm structures and their connections with each other and the R43



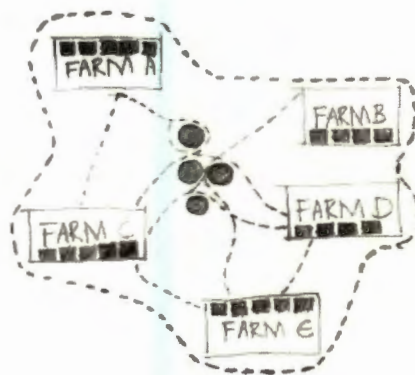
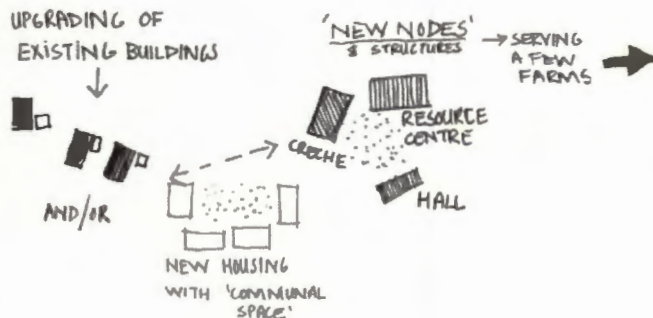


idea 1: off-farm housing_ this programmatic intervention purposed developing a village of houses and community facilities for the farm workers. It would have required finding a piece of land for this. It would have entailed moving the farm workers off their current farms into a village. If all the farms were involved, the village would have been too big; and because of the high density of farms in the valley, there is a lack of space for this kind of intervention (according to the Winelands municipality).

NETWORKED FARM COMMUNITY

- WORKERS HOUSED ON INDIVIDUAL FARMS
- DEVELOP A SYSTEM OF CONNECTING THE 'COMMUNITIES'
- HOUSING CONNECTED TO A CENTRAL COMMUNITY/COLLECTIVE AREA WITH FACILITIES

ON FARM HOUSING + COMMUNITY FACILITIES

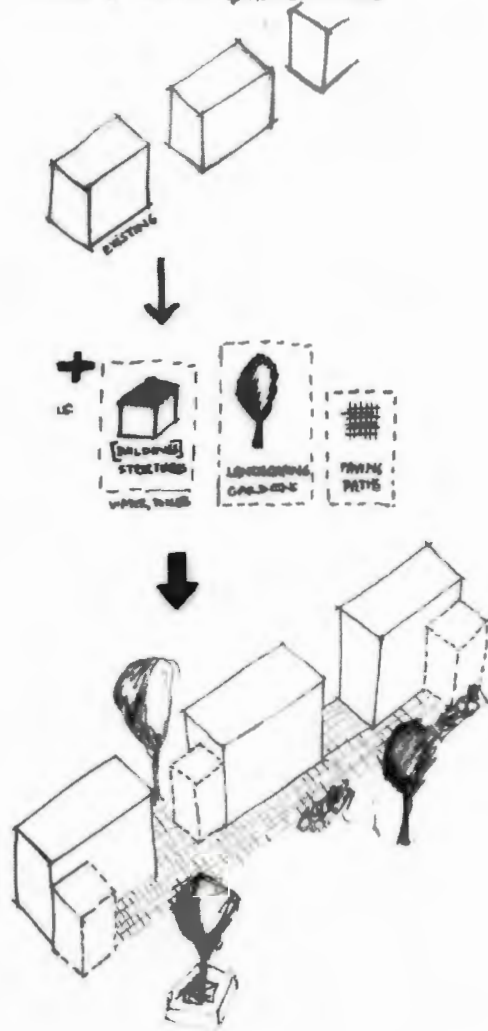


idea 2: a networked community This concept suggested that the housing remains on the farms, and is connected to each other and a community space via a network of walkways/paths. The concept looks at upgrading the existing housing (in conjunction with building new houses if needed) and having a programmatic intervention that would encourage a collective community space to be used by many farms.

idea 3: This design strategy would investigate and focus on the built intervention. This option would use existing housing/structures for upgrading, to create dignified living space and a sense of place. It would involve landscaping, adding rooms to the existing houses, and developing a "courtyard"/outdoor space strategy.

"OLD" EXISTING DWELLINGS
ALTERATIONS - ADAPTION

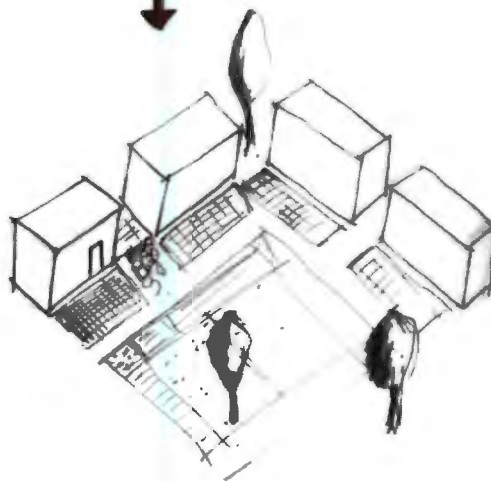
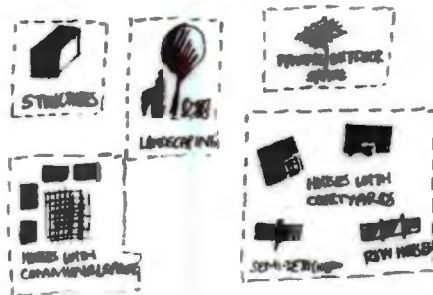
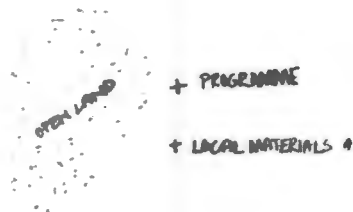
- INVESTIGATION INTO EXISTING CONDITIONS
- ALTERATIONS TO EXISTING LAYOUTS / BALANCE
- USING THE OLD → INDIVIDUAL FRAMES



NEW 'STRUCTURES'

A RE-INTERPRETATION

- A NEW DESIGN & SPATIAL INTERVENTION
- SPATIAL LIMIT OF VILLAGE
- PLANNING OF HOUSING
- LOOKING AT THE OLD TO IMPROVE THE NEW



idea 4: This design strategy would investigate and focus on [new] built interventions. It would set a up some design principles/strategies and then implement them through programmatic design interventions (either housing or community facilities).

INTERLUDE

— focusing the site and programme

THE ELEMENTS THAT INFORMED THE REST OF THE THESIS:

a. from interaction with the creche on a farm and the children:

THE NEED/THIRST FOR EDUCATIONAL NURTURING.

b. from gleaning over the census statistical information, it is revealed that:

THERE IS A HIGH NUMBER OF CHILDREN IN THE VALLEY, AND HIGH ILLITERACY RATE.

c. From the research leading up to this point: there is not only a need for improved housing conditions, but for

COLLECTIVE COMMUNITY/PUBLIC SPACE
(previous chapters)

My meandering through the vineyards and farming community, was experienced through the eyes of someone searching for a "solution" for the current [social, economical, educational, etc] situation. I was gleaning for an intervention through which one could begin to address the living conditions and dependency relationships of farm workers - and I believed that the programmatic intervention was through housing.

However, through the process of understanding the site and this potential programmatic intervention, I realised that I was focusing my energies on the 'wrong' topic. While I still believe that the housing issue needs to be addressed (and the current new houses that are being built leave much to the architectural imagination), it is not going to solve the problem of trying to connect the farm working community with bigger opportunities and placing them within the globalised world.

Essentially, what I have come to realise is that if I want to reach out to a broader community, I need a programmatic intervention that encompasses a wider scope. By looking at the housing, it is only focusing on a selected few farms ultimately (without even mentioning the politically sensitive topic of the housing amongst the farmers). But if I move my focus away from the housing component and rather zoom in on the collective community space, I can serve all 15 farms that fall within the Breërivier precinct.

WHAT is this COLLECTIVE COMMUNITY SPACE?

This in turn has lead me to "re-siting" and "re-programming"

focusing the site and programme
INTERLUDE

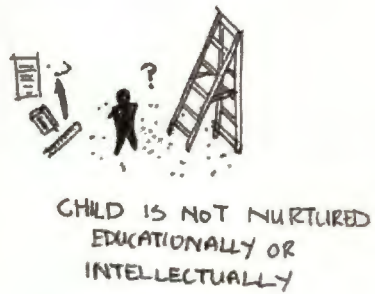
06

[re]siting

[re]programming

a. FINDING A PROGRAMME: INTERACTING WITH THE CHILDREN:

100% OF THE 1700 | EDUCATION BY DAY



the current situation of the farm children



the potential situation if the children were nurtured educationally

artwork by the Rouzelle farm children - proudly south african



The very limited exposure and interaction that I have had with the children on our farm has been incredible. With only having re-opened the creche on Rouzelle Farm in June, it is unbelievable to see how quickly the children have grown mentally and socially. Furthermore, they are, along with the school children, so eager to learn and to be nurtured educationally (something which they can not get at home). This experience, combined with the other research that I have done, is suggesting that the programming of my site should be educationally focused.



artwork by the Rouzelle farm children - embracing the world cup



Riccia



Nolan



Nathan



Learning about food.



The washing area becomes a play area.



An ice cream treat.



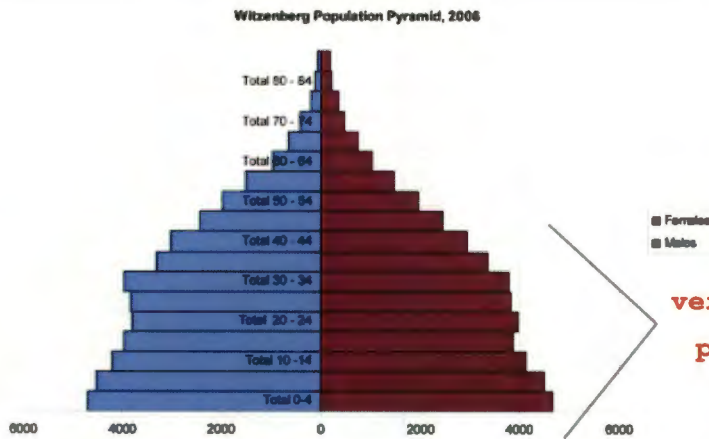
An ice cream treat after helping me measure up my site for my thesis.



Colouring in time.



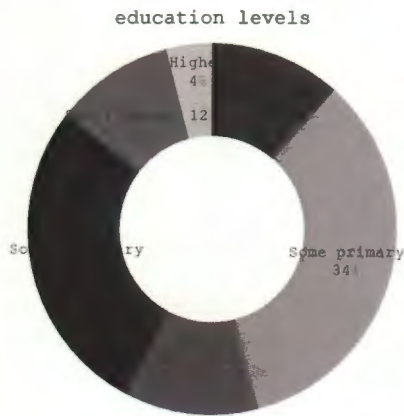
Summer fun - playing in the backyard.



more than half are under 30 years old (which is estimated to be about 55,5% of the population by 2010)

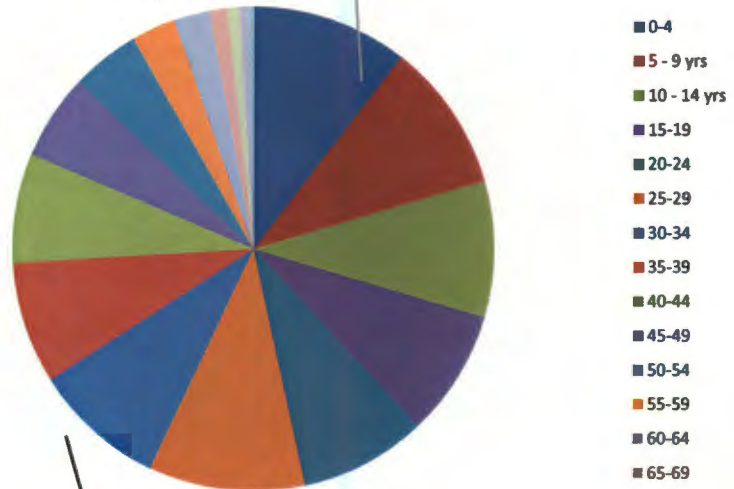
very youthful population

high dependency on working people



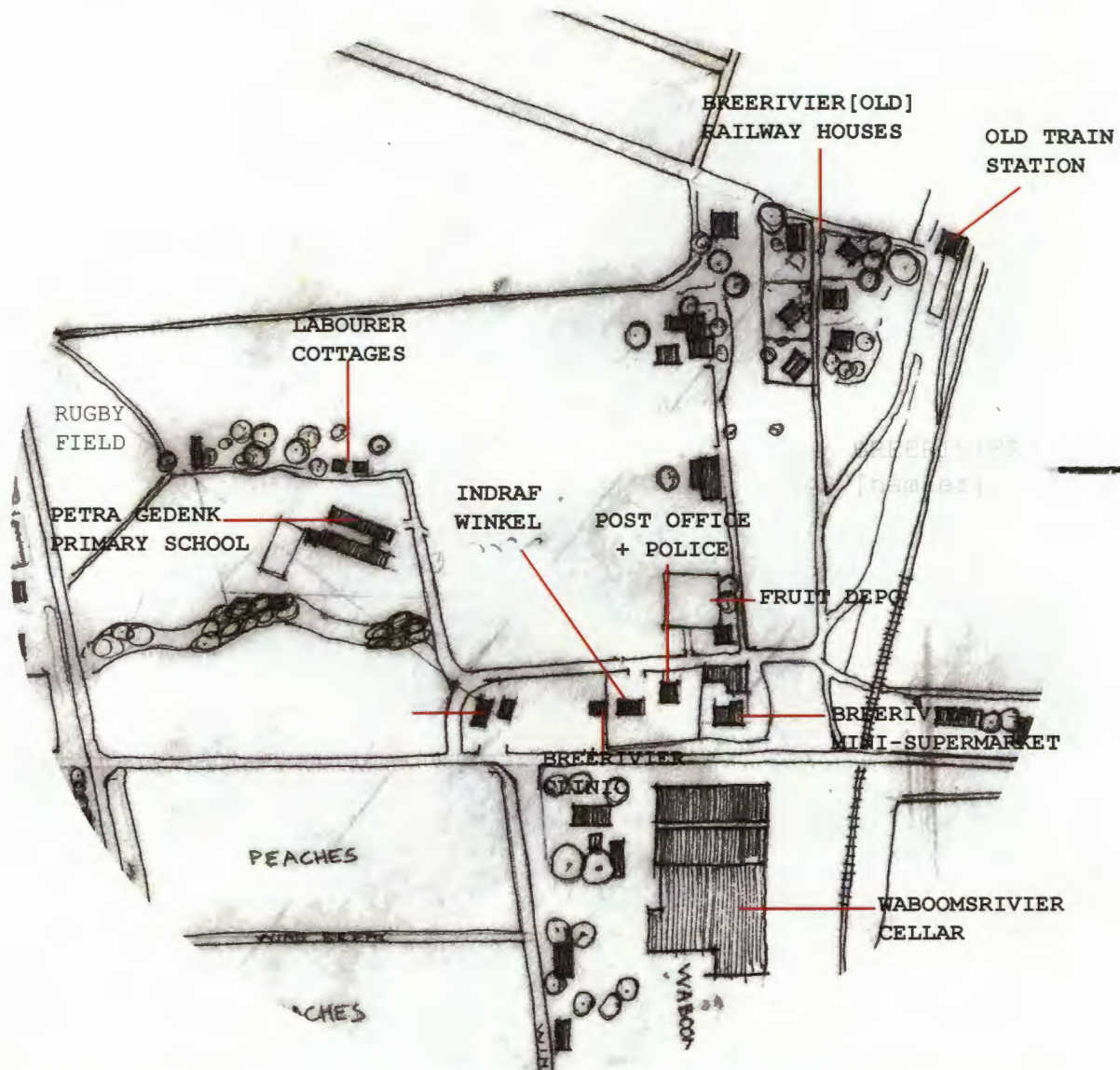
high illiteracy rates, or basic education only

age distribution

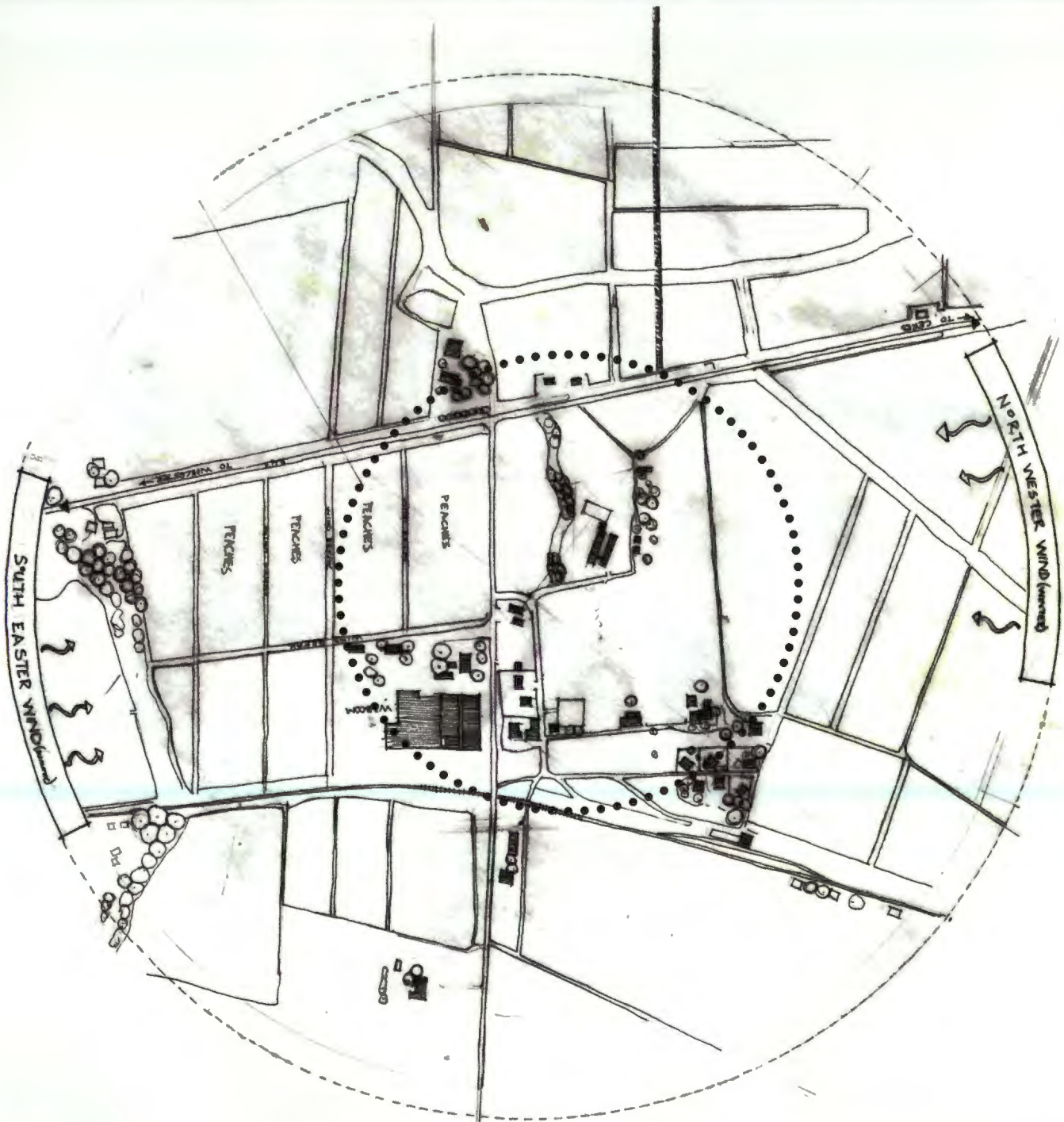


This study has revealed that there is large part of the population that is young, and it is this age that one can intervene and make a difference. Furthermore, with both parents usually working on the farm, there is little adult supervision during the day. And the low literacy levels suggests that the parents are not able to provide or understand the need for education.

With this, it points at the need for an educational intervention if one wants to change the valley.

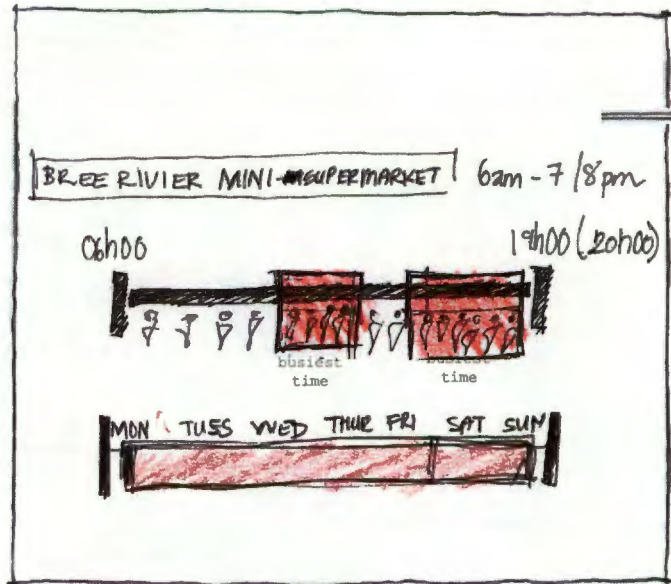


With a programmatic intervention that can act as a collective community space as well as be an educational node, it made sense to find a site which already draws in a wide range of people. The Breerivier precinct, which lies within the valley, next to the R43 will provide the context in which a 'micro' siting can occur, and hence a programmatic intervention.



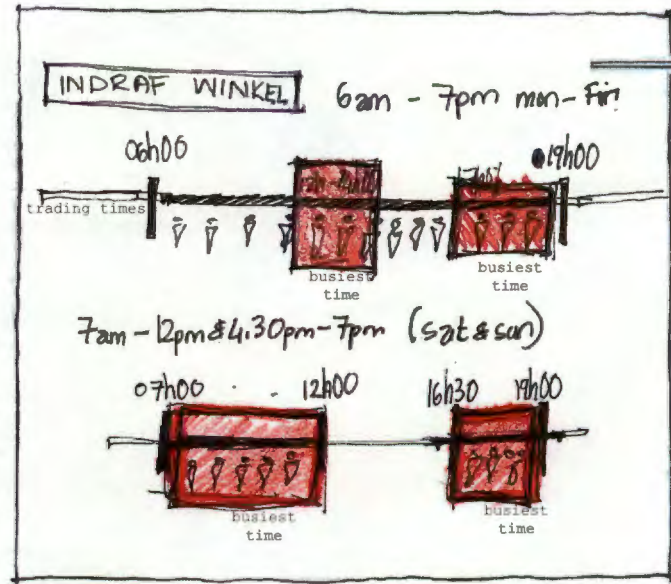
BREERIVIER MINI-SUPERMARKET

- the Breerivier Mini-Supermarket is owned by a Portuguese family and serves the valley.
- while it has a wide range of products, it does not stock fresh milk and vegetables (for this, the community has to go to Worcester or Wolseley
- it is not a self service shop, all the products are displayed on shelves behind a counter.
- since doing this site analysis, a bottle store has opened in the same building, on the other end.



INDRAWF WINKEL

- the INDRAWF WINKEL is a much smaller shop than the Breerivier Mini-Supermarket; and with a much smaller selection of products
- its trading hours are not as extensive as the Mini-Supermarket
- it is housed in a prefab building, with a very small entrance/threshold which is rather hidden
- the main attraction about this shop is that it has a few arcade games which attracts people



With a defined site, its context and nature is interrogated. This interrogation looks at the activity on the site, the role of the site and from this both the macro and micro sites began to shape the nature of the programme.



OLD CHURCH HALL

INDRAF WINKEL

POST OFFICE
+ POLICE

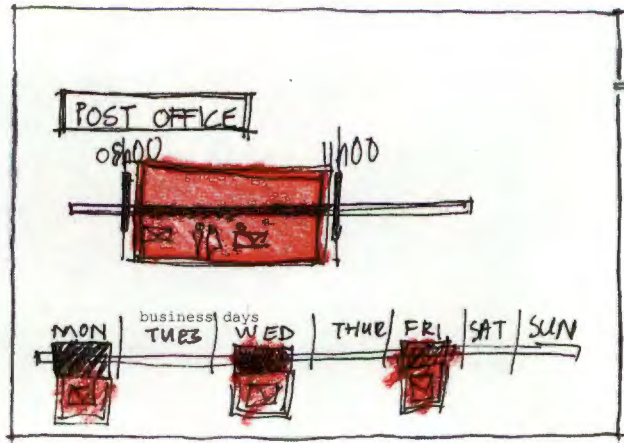
PETRA GEDENK SCHOOL

BREERIVIER CLINIC

BREERIVIER MINI-SUPERMARKET

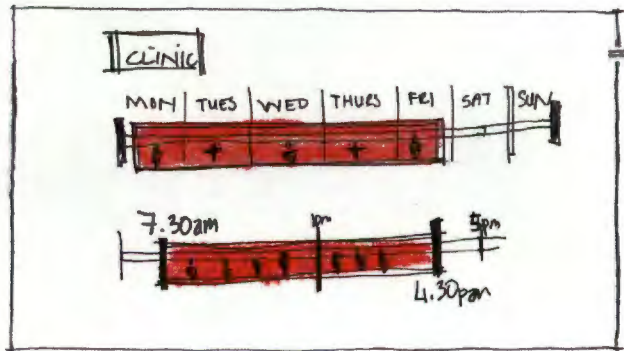
POST OFFICE AND POLICE

- currently, the POLICE and POST OFFICE rent their premises from TELKOM; however, due to high rent, they are looking for new premise
- the building is a prefab building



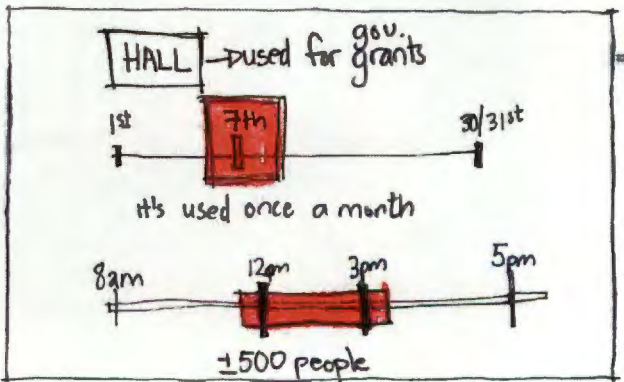
BREERIVIER CLINIC

- A visit to the clinic revealed the following:
- the waiting area/reception is too small; and there is not enough filing/administration space
 - the counselling room is not adequate - it is not friendly, not private enough and too big
 - the building itself is an old cottage which as been altered, however it does not emit a very healthy environment: the building is VERY cold in winter; it does not get a lot of direct sunlight; its damp
 - the nurses who I spoke to were very enthusiastic about the idea of a better clinic environment



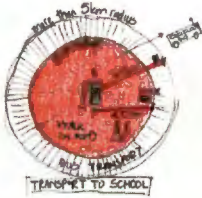
OLD CHURCH/SCHOOL HALL

- this old hall is property of Waboom Cellars
- it is used for a government payouts (ALLPAY, pension, etc) once a month, usually around the 7th
- 500 people come to the hall to receive payouts



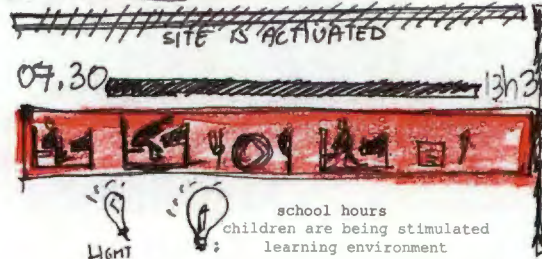


260 PUPILS
FROM 35 FARMS

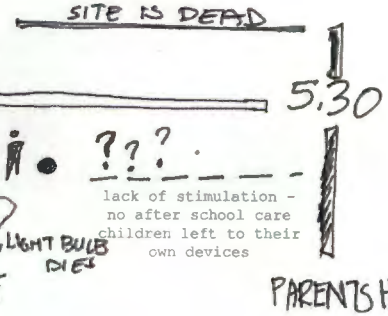


pupils have to walk to school if they live closer than 5km; otherwise there is a bus service

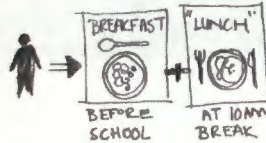
PRIMARY SCHOOL GRADE R - 6 | ONE CLASS PER GRADE



a typical day



NGO_ kos vir skole



OUTLINE:

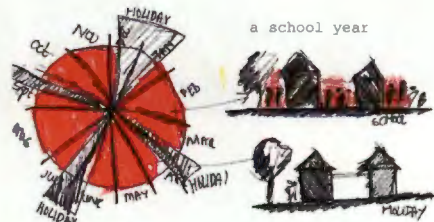
- started in 1999, it feeds 35 000 school kids and relies solely on donor funding
- active at Petra Gedenk, which is a MACRO school; all the children are fed with their feeding program
- they are active in 2 other schools in the area as well

GOALS:

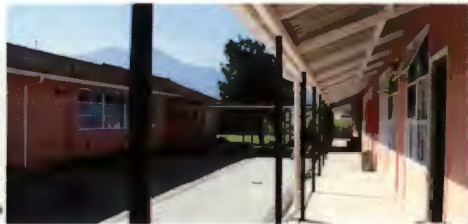
- their wish is to engage with kids to teach them skills and leadership development
- their ideal is to have a productive piece of land to grow food on, involving families

PETRA GEDENK PRIMERE SKOOL

- according to the Cape Winelands Municipality, the Petra Gedenk Primary School is one of the better schools in the area
- the building is in a prefab structure, designed in a typical school typology
- the Gr R classroom is in a timber Wendy house, with no insulation or correct ceiling heights - there is great need to replace it.
- the school does not have a library (just a neglected shelf of books); there is a need for a library
- there is a computer lab; it would be nice if it could serve a bigger audience



the school is not used over the holidays



A wing of the school



The entrance to the school



GR R classroom



a learning activity on the floor



colouring in time at the desks



C. FINDING A PROGRAMME:
THE BREERIVIER PRECINCT AS NODE

SITING and
PROGRAMMING

All the above research and analysis began to inform a programmatic intervention. The strongest element that stood out was the need for a facility that is educationally based and focuses its attention on the youth. The idea would be that this would then serve as a space that, although being an educational node, can also be a collective community space, with other facilities as well. Hence, the brief for this project becomes a collection of community facilities, with an educational base:

1. Interaction with **NGO Kos-vir-Skole**, revealed their ideal of wanting to produce their own food for the children they feed. This focused the programmatic intervention to be of an agricultural nature, where a major component of the site and design would be informed by the need of **productive agricultural space**.

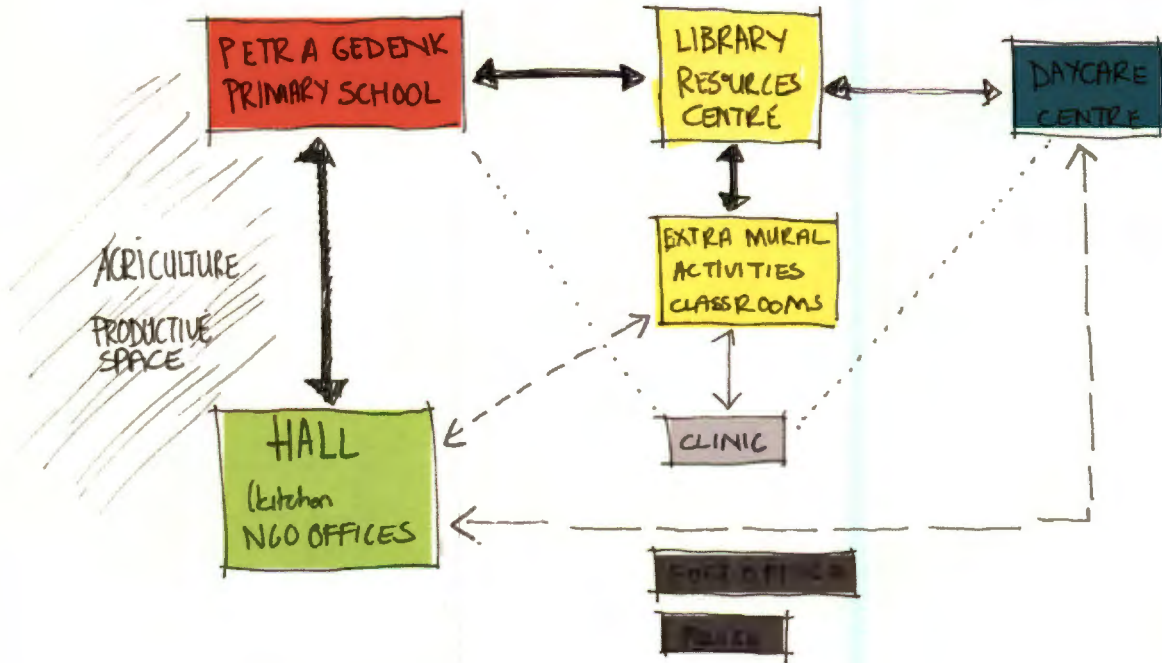
2. The existing **school** is prefab, and inspired by the Educational Department's desire to replace all prefab buildings, this posed a good opportunity to integrate the school into the brief. The need for a Gr R classroom also helped. Furthermore, the lack of facilities in the school suggested the need for a library (resource centre) which could be combined with a computer centre and extramural activities. These spaces in turn, would also serve the community as well as the older children of the valley.

3. The need to want to nurture and educate the children from a young age, together with the fact that many of the farms no longer have creches (they argue that the introduction of Gr R means there are not enough kids to justify a creche on each farm) has revealed the need for a central **day care centre** for the younger children (0-5 years old).

4. The unhealthy spatial conditions of the clinic, its lack of planning and hygienic, friendly and positive space, and a need for more space, has highlighted the need for a new **clinic**.

5. The fact that the Police and the Post Office are moving out their existing premises due to rent costs, has suggested incorporating them into the brief. These, along with the clinic, will act as a connector between my thesis site and the existing buildings, as well as bringing more activity to the site.

6. There is no space for the community to have church services, or functions, no big indoor space for the school to use, so a **hall** is needed. This will incorporate an NGO kitchen to service the school, as well as the hall.



programme _ brief

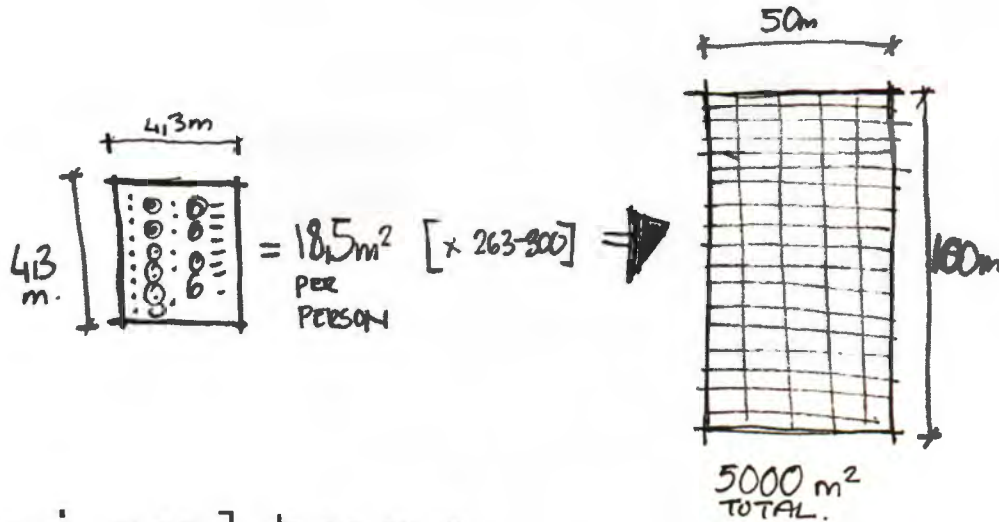
FIGURING OUT THE AMOUNT OF SPACE PER PERSON:

10 sqm = ideal size for a beginner

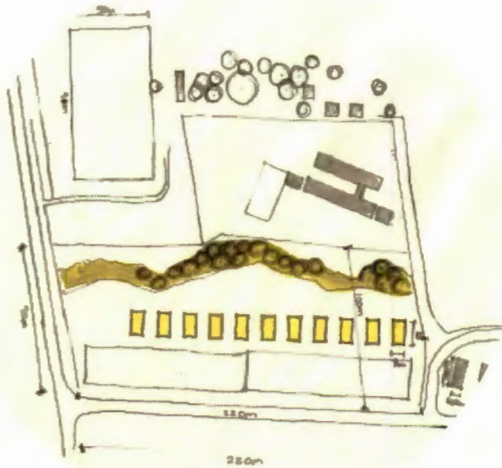
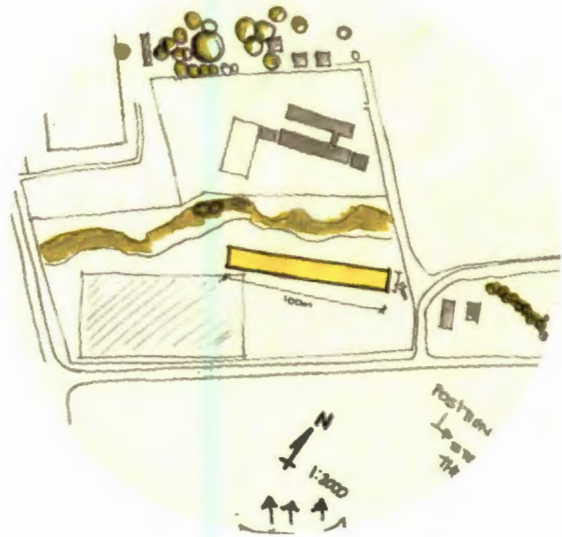
27,9 - 46,45sqm = should feed a family of four during summer

18,5sqm per person = should supply vegetables all year round

therefore, to feed about 260 - 300 children for this thesis (school, plus day care centre), you need **4865 sqm** of productive landscape



agriculture



These diagrams are an initial and conceptual exploration of the relationship of size between site, building and agriculture. Subsequently, with the design development, the building footprint has increased (but there is still enough land for the agriculture). These diagrams look at how and if the relationship changes according to the shape of the building footprint.

	BEANS (French)	AUBERGINE	BETROOT	BROCCOLI
SOWING SEASONS				
YIELD (per 3m x row)	± 1.8kg	± 5kg	± 4kg	1.8kg - 2.7kg
ROWS TO PLANT (per person)	6m to 15m (row)	0.4m to 1.8m	3m	3m - 6m
NUMBER OF PLANTS per m ²		4 plants	60 plants	9
PLANTING SPACE SPACING				

	MEALIES	ONIONS	POTATO	PUMPKIN/BUTTERNUT
SOWING SEASONS				
YIELD (per 3m x row)		3, 1 to 4.5kg	4.5kg - 9kg	4.5kg to 9kg
ROWS TO PLANT (per person)		4.5m to 7.5m	22m - 30.5m (?)	3m
NUMBER OF PLANTS per m ²		40 plants	3 plants	1 plant
PLANTING SPACE SPACING				

Because agriculture is a big component of the design intervention, one of the sections of research was about finding out how much vegetables are produced, as well as planting dimensions as it will inform the layout of the agriculture, albeit it conceptually.

CABBAGE

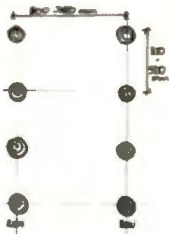
mar-apr and aug-dec



4.5 - 18kg

3m to 4.5m

6 plants



CARROTS

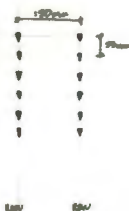
feb-apr and aug-nov



3.1 - 4.5kg

3m to 6m

2100 plants



CUCUMBER

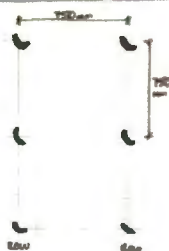
mar-may and sept-oct



3.65 - 4.5kg

4.5m to 6m

2 plants



LEEKs



4.15kg - 9kg

0.9m to 1.8m

20 plants



LETTUCE



2.3kg to 4.5kg

3m to 4.5m

10 plants



RADISH



6m (for 4pp)

200 plants



SPINACH



1.8kg to 2.7kg

9m to 12m

30 plants



TOMATO



6.8kg to 20kg

3m to 4.5m

3 plants



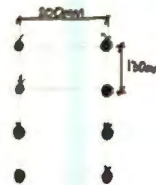
TURNIPS



3.6kg to 5.4kg

3m

35 plants



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design intervention

UNDERSTANDING THE PATTERNED LANDSCAPE

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The farm lands as seen from above. If one were to fly over land, from above you would be engulfed by the blueness of the sky. And below you would get lost in a palette of greens, browns, yellows and reds. The higher you soar, the more landscape turns into an abstract picture of colours and shapes. Yet you are still able to distinguish man's intervention on earth - inserts of building blocks and agricultural growth. It is a recognizable pattern, an identifying element. As you make a descent towards the ground, the image loses its abstractness and gradually the assortment of colour blocks and pieces land become defined. They no longer look like a shape that has been drawn and coloured in; instead, one realises that the shapes are defined by rows of planting. And then one is one the ground, walking in these vineyards and orchards and one realises that each row is made up of many plants and vines.



The Breŕivier valley

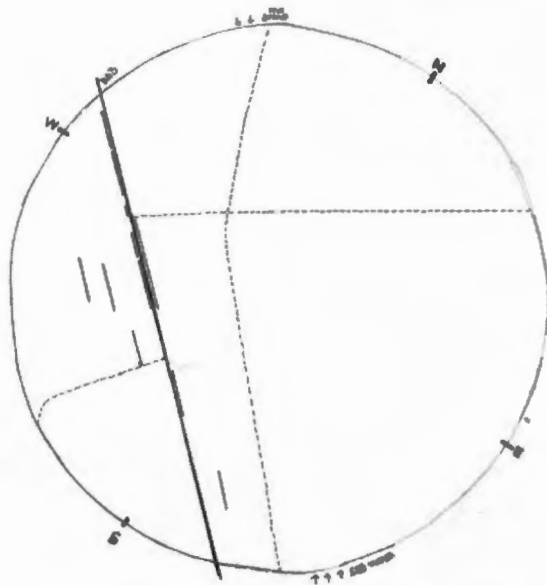
And so, as one meanders through the farmlands, this patterned landscape becomes a spatial experience, where space is not defined solely by built structure, but more by the spatiality of poles, vines, trees, windbreaks, streams, roads. The roads (and the wind) play a major role in defining the landscape from up above; but from the ground, it is the blocks of vines and orchards which define the spatiality.

It is a ambiguous relationship in a sense. So what is it that defines the shapes, and directions of the blocks of patterned agriculture? The landscape can be graphically expressed by lines - it is made up of many lines and points that vary with meaning, importance and density as one zooms in and out of the landscape.

At first glance, this 2D pattern language seems that someone took a ruler and pencil and drew shapes onto the land, all fitting alongside each other. However, at a closer investigation, it is not completely random organization. There are elements that order this landscape, and dictate the pattern.

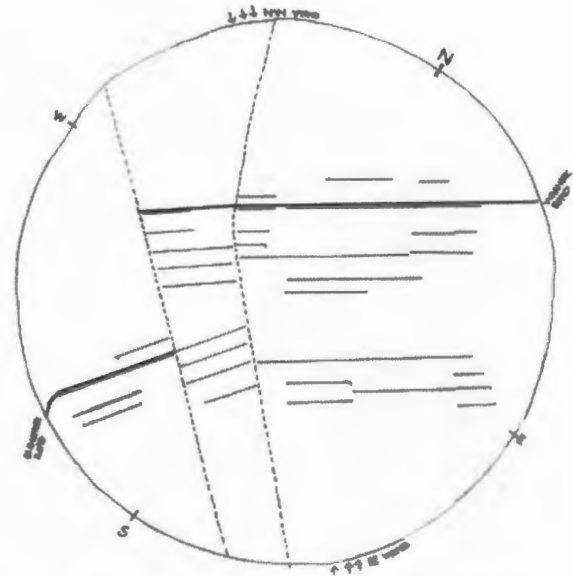
Defining the patterned landscape - an interpretation of the vines, roads and orchards





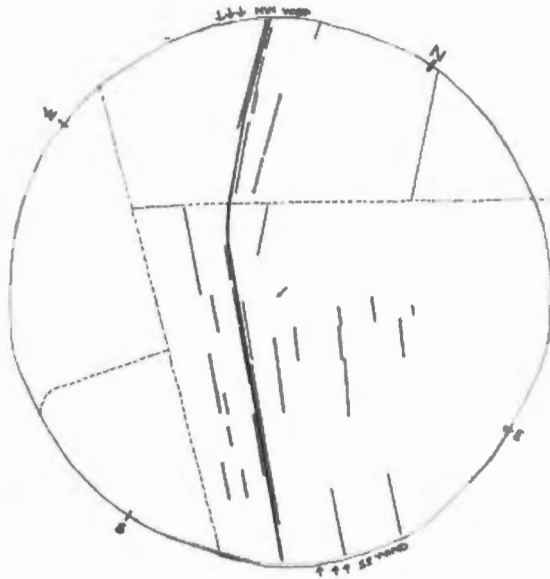
the R43 road as an ordering element

This series of diagrams has taken the previous lined drawing and deconstructed it in order to find out what the elements are that define the pattern of the winelands. In this diagram the R43 is highlighted as an ordering element. It defines the shape of the vineyards/orchards that run parallel to it, and few more further way. However, it is not a major defining element. This is perhaps because there is not that much land that borders the R43 in this section.



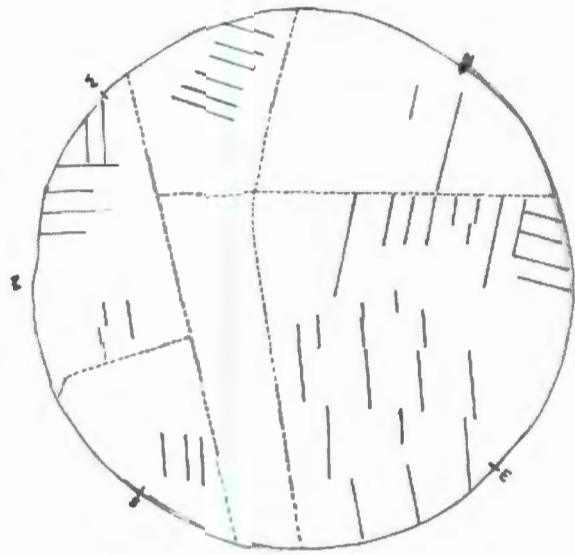
the Waaihoek and Slanghoek road as ordering elements

Here the railway lines is considered as a defining element, and seems to be a more important edge defining element. It influences more of the land than the R43, most likely because it borders more land. It makes sense that the blocks of agriculture alongside the railway line (and tar roads in general) run parallel to the line, and hence, due to the nature of planting the vines and fruit trees in rows, they might in turn follow this geometry, which then informs other minor farm roads (between blocks).



the railway line as an ordering element

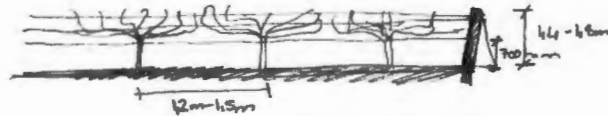
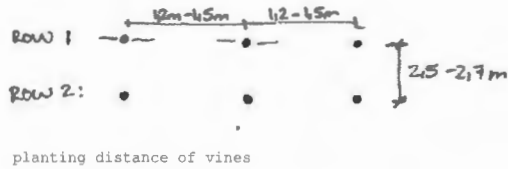
In this diagram, the Slanghoek road and the Waaihoek Road act as ordering elements. These roads in particular seem to dominate the structure of the farming pattern the most. Their influence spreads over a big area, which when isolated, form strong parallel geometry. A deeper investigation reveals that the reason that the Waaihoek and Slanghoek roads are such a strong presence in defining the landscape is because they run perpendicular to the strong South Easter and North Wester winds. Hence, they form a good geometry for planting windbreaks (for the pear and peach orchards) and for the orientation of vines so that they can form their own windbreaks. The layout of the rows of vines/tree seem to also pick up on these geometries (or vary within a few degrees of being perpendicular to the wind). It is not the roads that define the individual layout of the rows, but the wind!



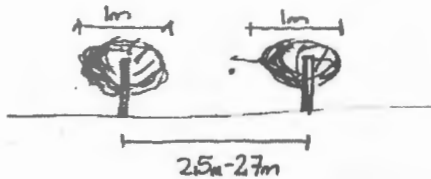
other ordering elements

Finally, there are many geometries and shapes that cannot be accounted, that define the patterned landscape. There may be many reasons for their positioning, such as natural causes (rivers and waterways). But whatever it is, there is a secondary pattern which emerges from these unknown influences. One road (or block of vines) is established, and from this further roads or made in relation, and parallel to this.

These diagrams look at the influence of wind and other factors as ordering elements in the layout of vines and orchards.



elevation of an individual row of vines



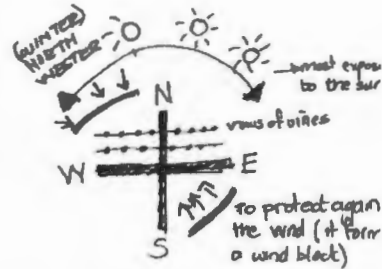
elevation of the end of rows of vines

PLANTING DISTANCES OF VINES AND ROWS:

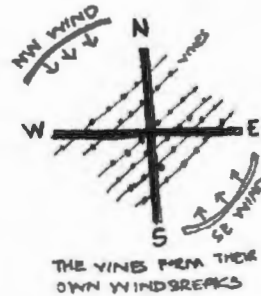
The distance between rows is usually determined by the width of a tractor. A tractor needs to be able to go up and down the roads (and it needs a big enough turning circle at the end of the rows) for spraying and harvesting (as more farms turn towards mechanical picking, the distances and heights are being determined by harvesters as well as tractors)

ORIENTATION OF ROWS:

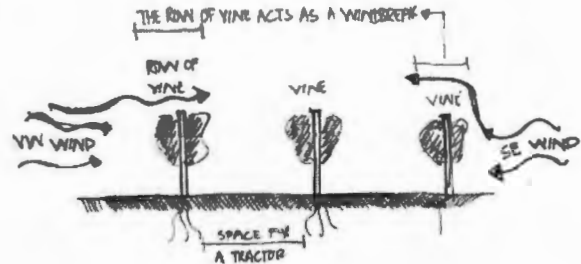
While the roads and slope of the valley have a big influence on the way the agriculture patterns the landscape, the WIND plays a major factor in the laying out and development of the vines and fruit trees. They need to be protected from the North Easter in winter and the strong South Easter in summer. Protection from the wind is considered more important than direct exposure to the sun, because in general the trees and vines are exposed to direct sunlight in spite of the direction that they face.



orientation of the vines (north as defining element)

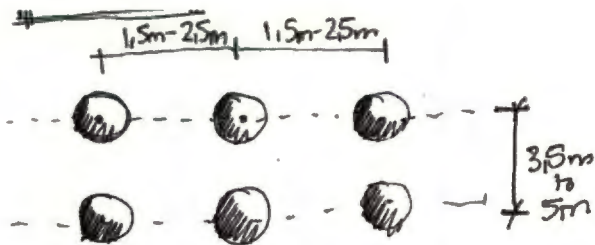


orientation of the vines (wind as determining element)

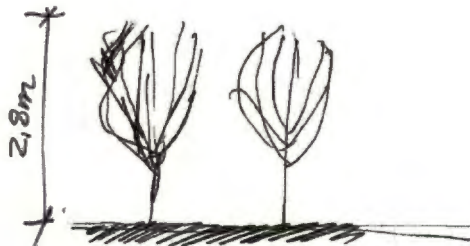


theory of the vine and its windbreak element

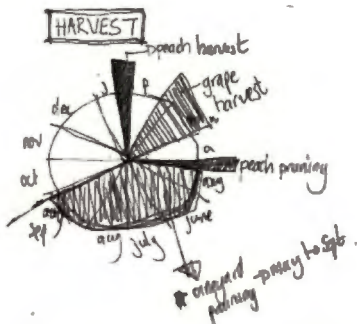
THE VINES _ ideally, it is said that the vines are planted in a east to west orientation, for exposure to direct sun. However, they are mainly planted against the North Wester and South Easter, as a row of vines forms its own windbreak (and protects the rows of vines around it). It is because of this that they do not need rows of windbreak trees between blocks of vineyards.



planting distances of peach trees



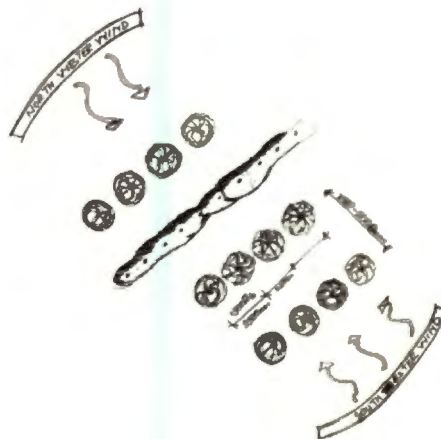
the average height of peach trees



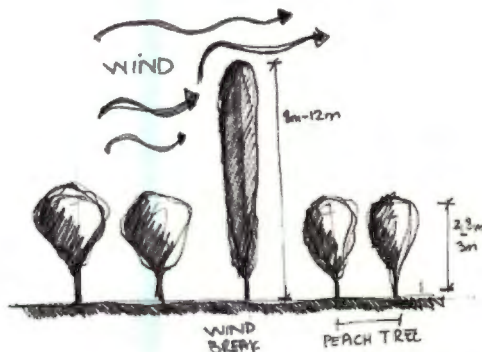
a diagram of the seasons of the vines and peaches

PLANTING DIMENSIONS:

The distance between rows is much greater for fruit trees than grapes. This is to accommodate for the bushiness of the trees, particular in summer when they are full of fruit, in conjunction with the need for a tractor to be able to pass through the rows in harvest time. The distance between each tree in its row is also determined by its crown. It is also interesting to note that the amount of pruning of the trees, and amount of blossoms that are pruned off the trees plays a direct influence on the size (and quantity) of fruits it'll produce.



peach trees and windbreaks - the wind break protects either side, dependant on the wind



the theory of the windbreak between peach orchards

ORIENTATION OF FRUIT TREES:

These are also generally planted in a manner that they block the wind. However, fruit trees by themselves are not effective enough and so one finds rows of windbreak trees between the blocks. These form barriers which direct the wind over them and the fruit trees they are protecting. And for this reason, the need to be orientated in a perpendicular fashion to the wind. This another ordering element in the landscape.

UNDERSTANDING THE PATTERNED
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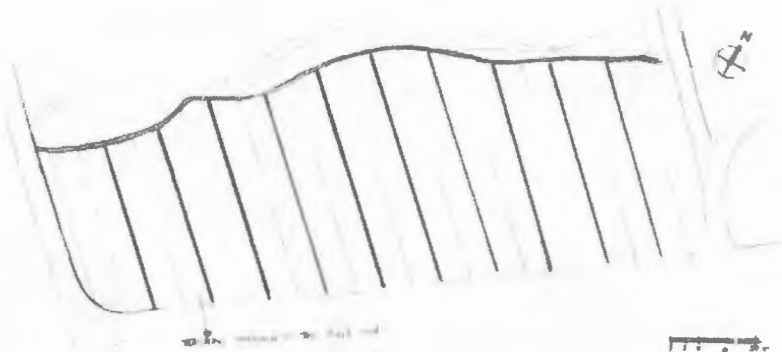
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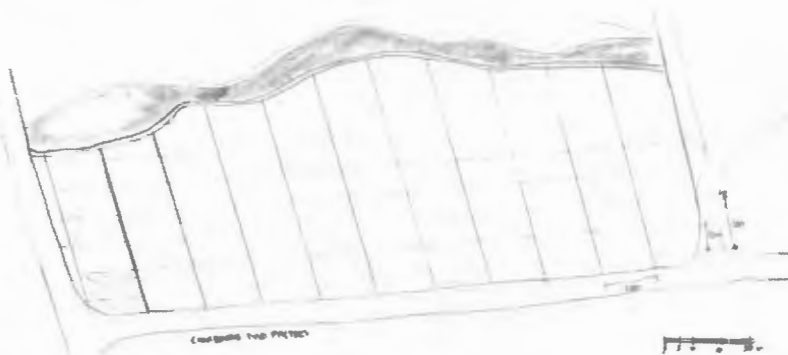
ordering element 1:
WAAIHOEK ROAD _ in this sketch, grid lines have been laid onto the site following the direction of the Waiihoek road. The site is thus divided into sections that run parallel to the Waiihoek, and "perpendicular" to the R42. Furthermore, it forms an effective grid for windbreaks as well as responding to the localised slope (which slopes towards the stream) on the site - allowing one to manipulate the site with terraces.



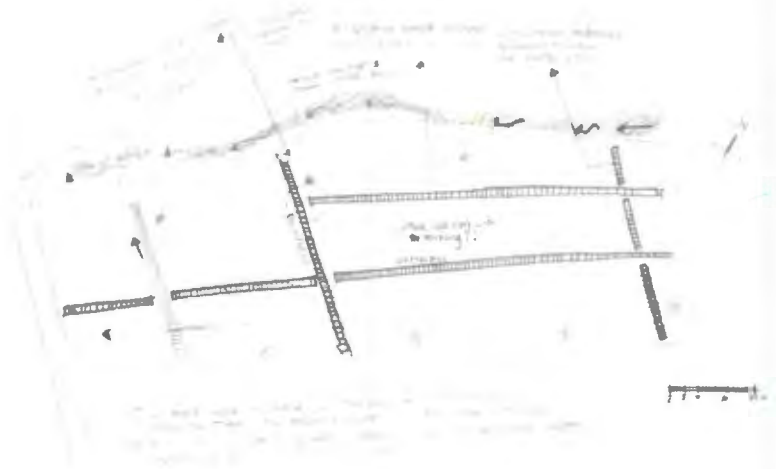
ordering element 2: THE R43
ROAD _ grid lines have been superimposed onto the site, running parallel to the R43 road. This can begin to define the other edges of the site, and mimics the language of the surrounding agricultural blocks. Moreover, it is also suggestive of the general slope of the valley, running from the mountain down to Breërivier river (and the R43)



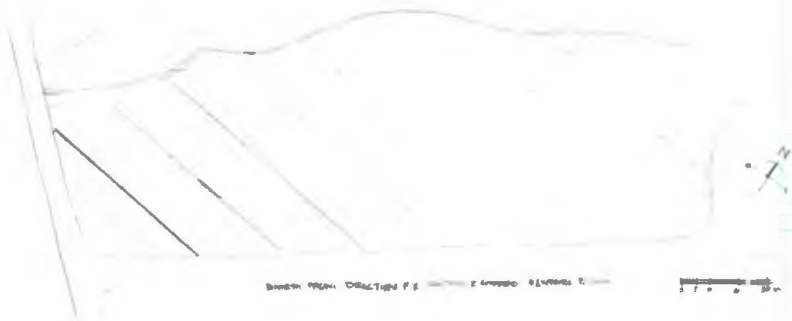
ordering element 3: COM-
POSITE GRID _ by using the R43 and the Waiihoek road to set up a grid on the site, the site begins to be defined in similar terms as the surrounding agricultural pattern; it is rooted and thus informed by environmental factors. This grid will form the backbone of the site.



Having looked at the elements that act as the ordering devices for the agricultural pattern of the valley, I have used those principles to order my site. These sketches illustrate how I have considered the different ordering elements, and how they effect the site. It is like making another block of agriculture, except this time it will be cultivating spatial experiences and buildings.



ordering element 4: DRAINAGE _ this diagram looks at how one would deal with drainage on the site. As the site slopes towards the R43, as well as towards the local stream, it would make sense to drain the water towards the stream.

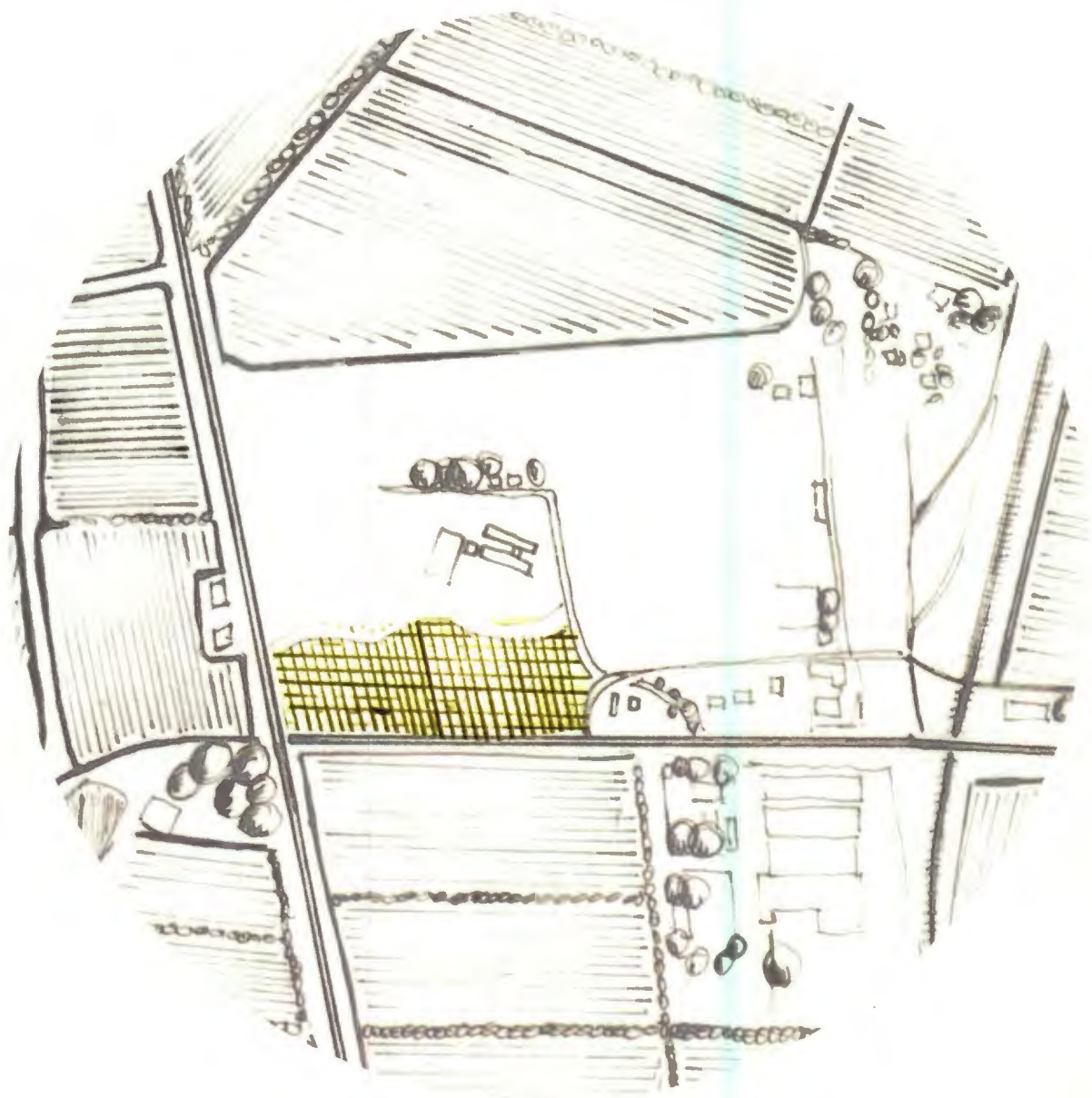


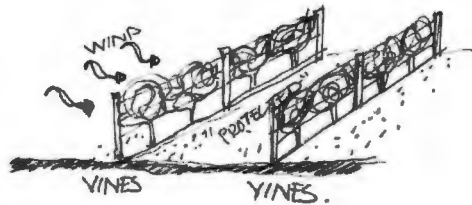
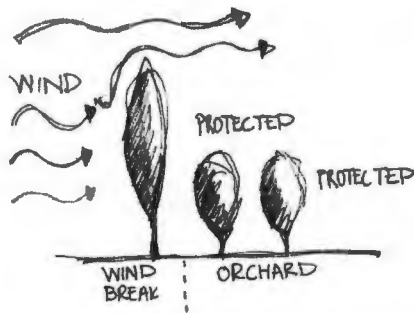
ordering element 5: AGRICULTURAL _ a general piece of knowledge about growing vegetables and plants (herbs) should face north and have most exposure to sun. However, this logic is not used in the valley as wind is a more important factor to factor. This element should not play a big role in ordering the site.



ordering element 6: COMBINING THE ORDERING ELEMENTS _ finally, all the ordering elements have been juxtaposed and order is given to the site. This is the conceptual basis to be applied to the design intervention

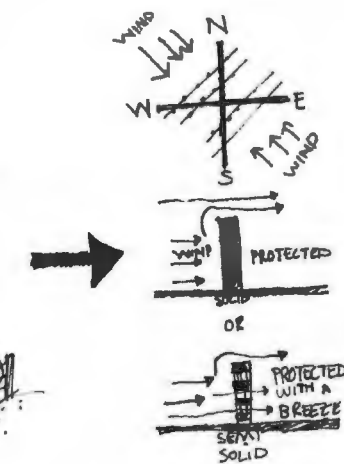
Filling the gap: from the investigations into the ordering elements of the agricultural landscape, and thus applying it to my site, one can conceptually begin to understand that is a juxtaposing of these elements. It thus picks up on the same language as its neighbouring spaces, yet it seems intensified. It begins to suggest a spatial intervention.





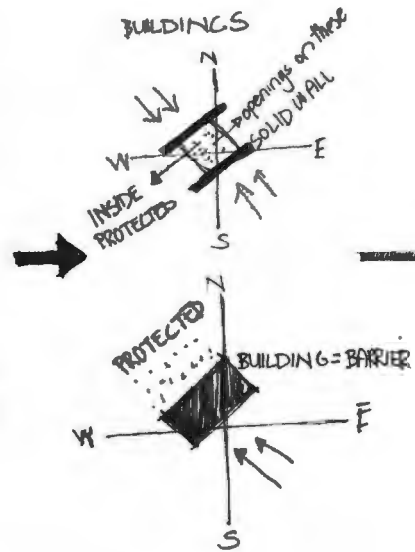
1.

The orientation of the vines and peaches/windbreaks are influenced by the South Easter and North Wester winds - in an attempt to create protected spaces. For this reason, they are often orientated in a [almost] perpendicular fashion to the direction of the prominent winds.



2.

The the strategy used for the landscape is diagrammatized: the impact, direction and amount of wind can be altered by putting a barrier (which can vary in height, solidness, width, etc) and hence pleasant and usable 'wind-protected' spaces can be created.

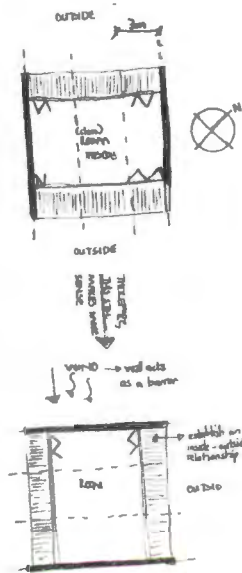


3.

The positioning of the buildings, and the positioning of [big/main] opening should thus learn from the agriculture. The buildings should be orientated so as to create protected spaces from the wind; and the walls that are perpendicular to the wind directions should protect the spaces inside, and become strong solid masses. This type of strategy suggests the use of courtyards, and courtyard type buildings.

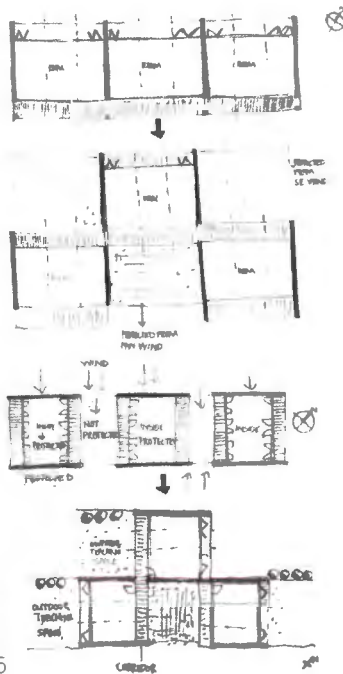
One of the hangovers from modernism is the disregard of context when designing the built form. It is an attitude that has seeped its way into many architectural endeavours. The vernacular, and older architecture of the winelands valleys were in many ways a direct response to context and climate. However, these simple yet intelligent 'architectural' approaches have - and are - being forgotten and ignored in more "contemporary" built interventions. Because this thesis project is aimed at countering this phenomena, and finding a contemporary vernacular approach to building - it wants to be modern, but needs to be rooted in the context and the local - one needs to learn lessons from the context, and in this case its the agriculture.

One of the main principles/strategies that can be taken from the agricultural landscape is its attitude towards the wind.



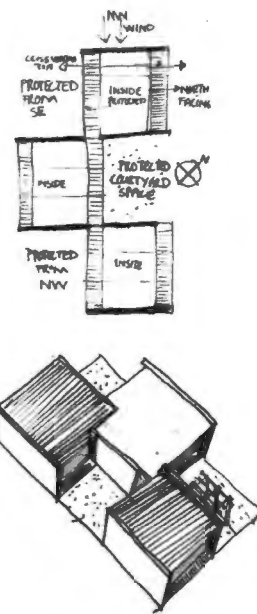
4.

If the main openings in the building are orientated in the direction of the winds, it could be problematic as the wind could blow through the buildings, creating unpleasant environments. However if the buildings were rotated so that there were solid walls facing the winds, pleasant cross ventilated spaces can be created because the openings such as windows and doors can remain open in times of wind.



5

With the idea of wanting to have strong/solid structures to protect spaces from the wind, it is not only about individual walls, but about creating courtyard spaces as well. This begins to suggest that different spaces within the same building should be "pushed and pulled" to create such protected spaces. In the first case, the spaces are protected from certain winds, the solid walls do not protect the inside spaces. Hence, it follows that once again, having the solid walls perpendicular to the wind and "pushing and pulling" the spaces as much more appropriate response. Furthermore, by doing this, the buildings being to respond to the grid and terracing on the site and they thus create a dependency and language between landscape and building.

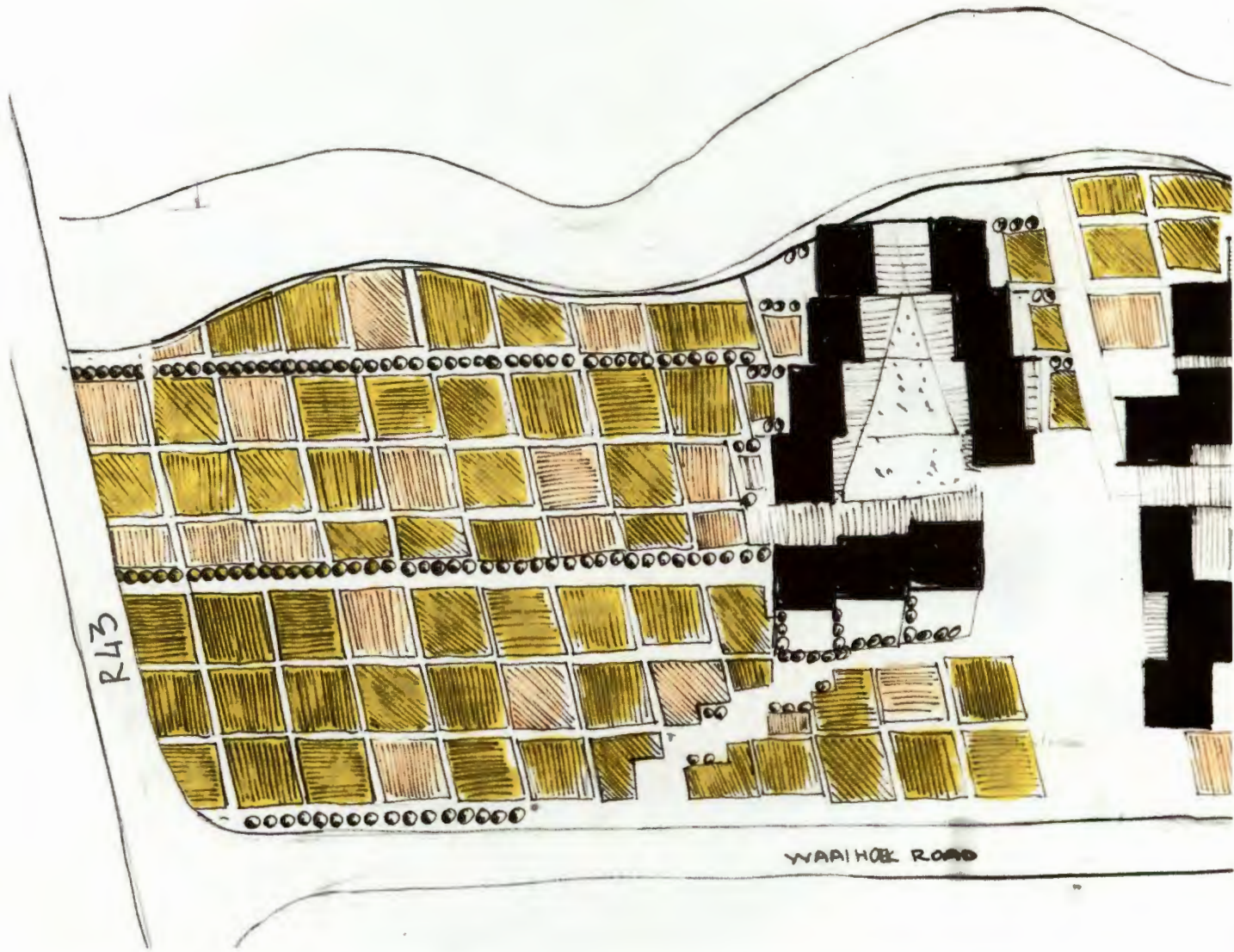


5.

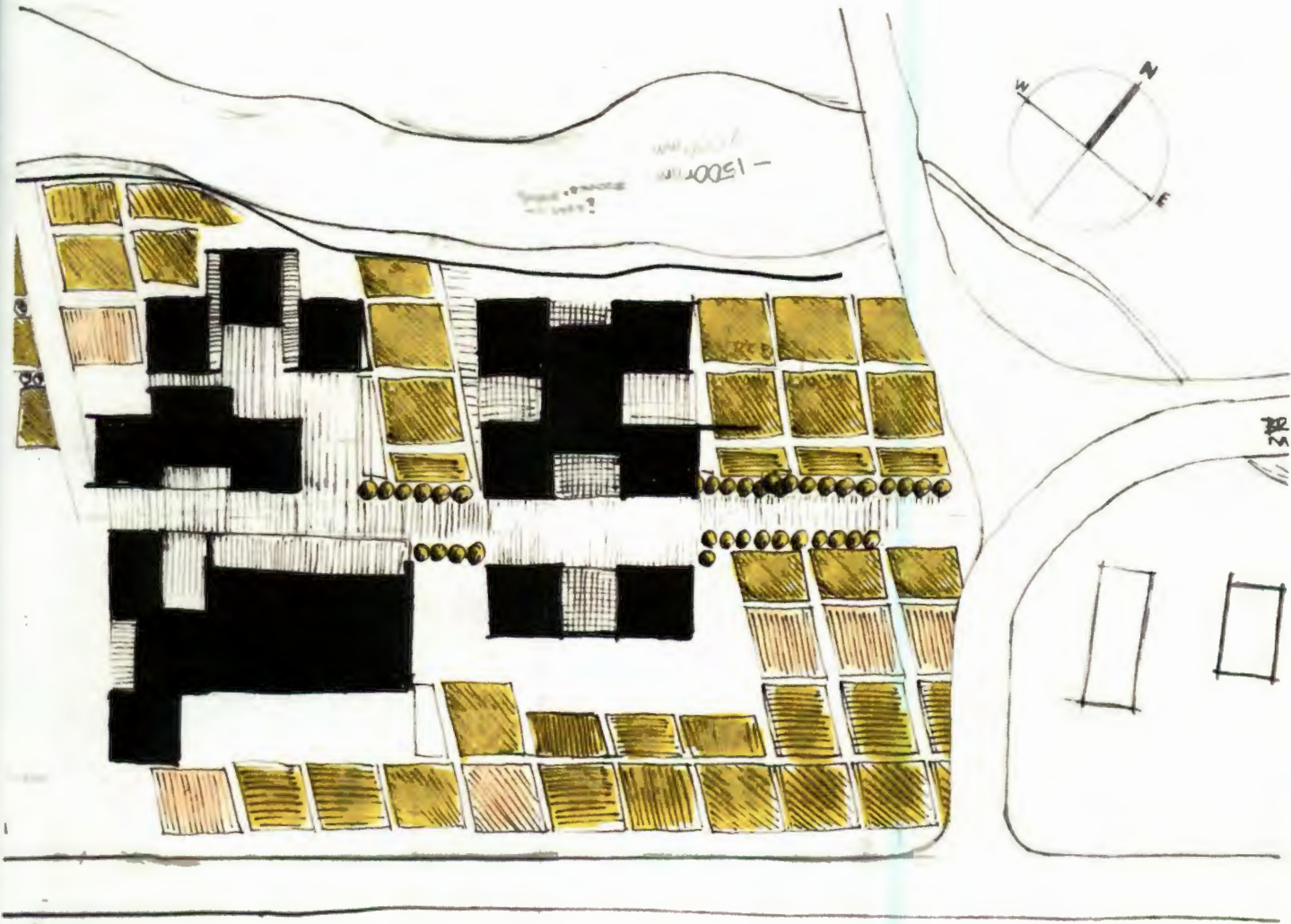
If the main openings in the building are orientated in the direction of the winds, it could be problematic as the wind could blow through the buildings, creating unpleasant environments. However if the buildings were twisted so that there were solid walls facing the winds, pleasant cross ventilated spaces can be created because the openings such as windows and doors can remain open in times of wind.

CONCEPTUALIZING THE SITE STRATEGY: Once the site strategy had been juxtaposed onto the site (that of forming a grid based on the ordering elements of the agriculture), this could conceptually evolve by overlying it with the programmatic invention. here the grid begins to show how it defines the positioning of the built fabric as well - as the agricultural intervention - and thus starts to become an integrated landscape.





THE CONCEPT DRAWING: The agriculture and building find a way of negotiating between themselves, both using the terracing and the grid as an informing element. The buildings are nestled amongst the landscaped agriculture. There is the formation of a language between building and land. It becomes a patterned landscape: integrated.

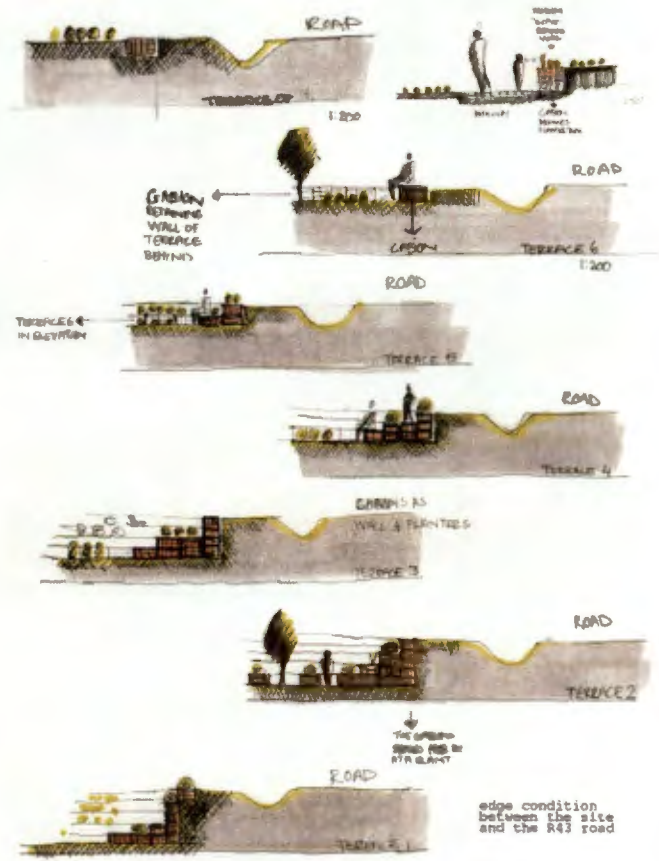




The pathways begin to happen on the edge of a terrace, form steps, seating and retaining elements.

Because the site sits at the bottom of the valley, the slope across the site is very gradual. There is about a four metre slope in a southwest to northwest direction (from R43 towards Waaihoek mountain). And then there is a localised slope on the site which slopes towards the stream on the edge of the site. Even though these slopes are gradual, they will be considered and incorporated to form a site design response. The general attitude in the farming realm is to plant with the slope, land is evened out for planting, but it never requires cutting out, or filling in land. And the traditional building approach is to level the site or level the building by building up the ground floor.

However, for my intervention, I would like to take another approach. In order to negotiate the two directional slope, I have decided to terrace the site. The terracing will relate to the grid that has been imposed on the site and furthers to act as an ordering device for the agriculture and the buildings. The terracing is seen as a way of negotiating between the built interventions and the natural landscape and agricultural aspects, and it becomes the way of creating an integration as the buildings respond to the terraces. Furthermore, it is taking the concept of ordering the landscape and patterning it to suit the needs of man as well defining man's intervention.



A idea is to use gabions and the local stone as retaining elements for the terracing, which can begin to merge into the buildings as well

AGRICULTURE

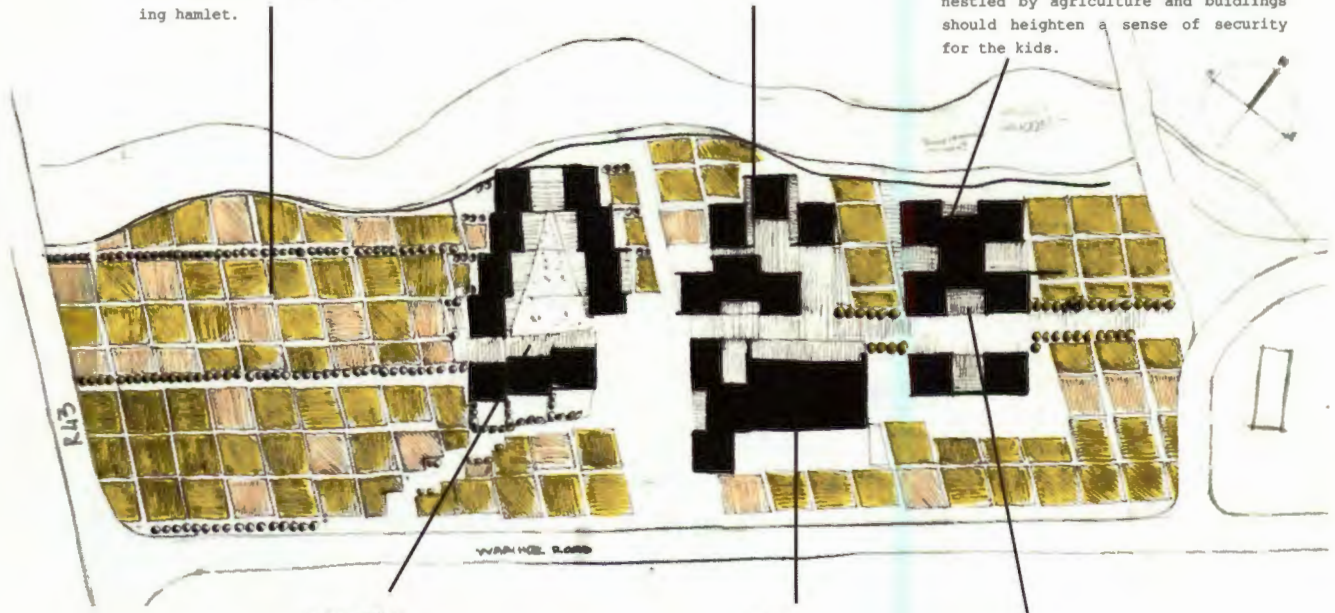
The Agriculture acts as a buffer between the road and the built intervention. It also allows for the positioning of the buildings towards the top of the site so to begin to densify the site in conjunction with the existing hamlet.

LIBRARY (EXTRA MURAL CENTRE)

It occupies the centre of the building node because like the hall, it is pivotal to the other functions on the site and is accessible to both the school and the day care centre.

DAY CARE CENTRE

Positioned near the access points, and roads, it is convenient for the children to be collected and dropped off. It can also relate to the library and has access to the clinic. Its nature as a creche, and its position on the site, almost protected and nestled by agriculture and buildings should heighten a sense of security for the kids.



SCHOOL

The school runs across the site, and in a way is the culmination of the route that goes through the site, past the other buildings. It begins to be fully embedded in the agriculture.

HALL

the hall is situated in-between all the buildings as it acts as a connector for all different activities. It will also be a hub of activity off which the site can be activated (hence, its middle position)

CLINIC POST OFFICE POLICE

These buildings are situated here as they are not directly linked to the educational aspect of the site. They also begin to mediate with the context (the shops, road, etc). Also, being on the edge, near a road makes its easily accessible.

THE SITE: This specific site was chosen due to its location. It can continue the density pattern along the road, and is easily accessible by all the roads - it is embraced by the three major roads around the site. It also allows for the agricultural development, and creates some distance from the shops and bottle store to create a safer environment for the children.



The turn off from the R43, up the Breerivier road.



A view onto the site from the R43, overlooking the stream. In the background is the old church building.



Standing on the site and looking up the valley towards the mountains and the Breerivier shops.



Standing on the T-junction of the Breerivier Main road and the Waaihoek Road. The view is over the site, with teh R43 lying parallel to the mountains in the back.

CONCEPTUALIZING THE SITE

DESIGN INTERVENTION

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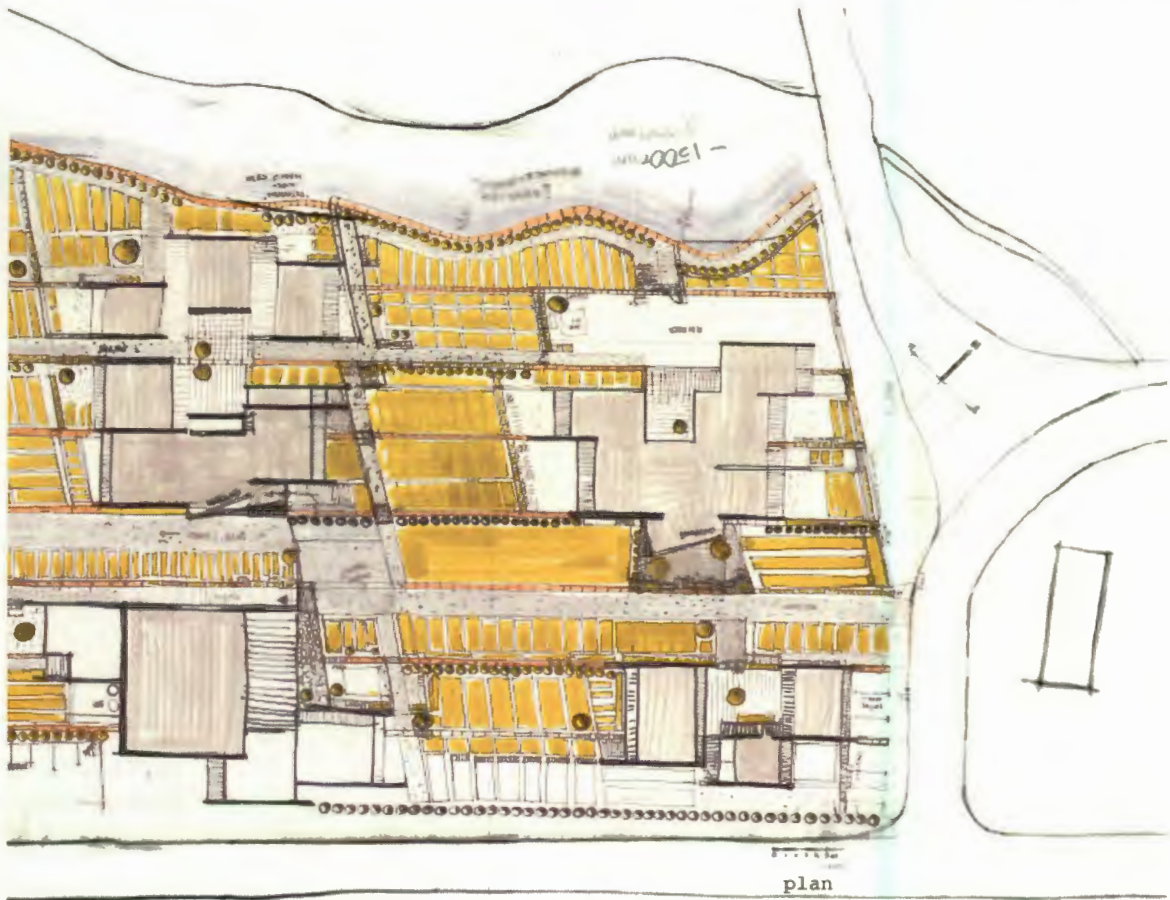
WAIHOLE ROAD



Section B
1:200
cross section B through site



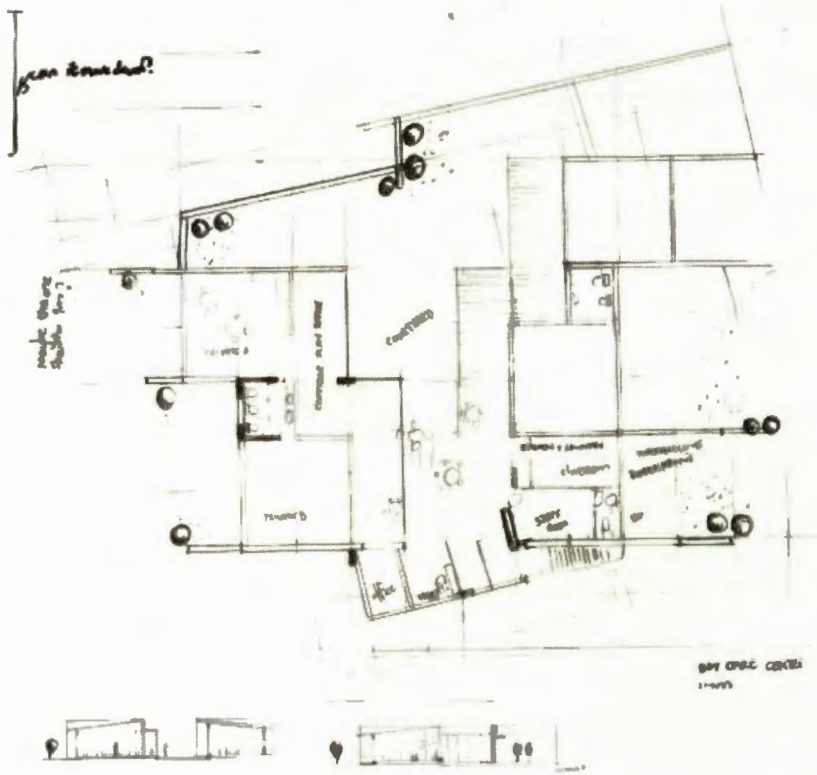
long section through site



plan



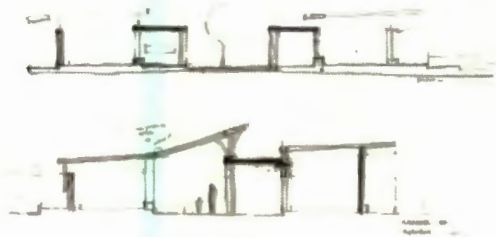
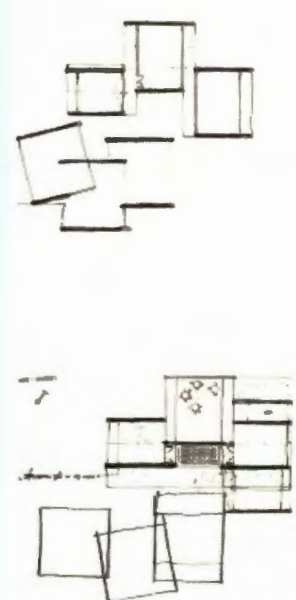
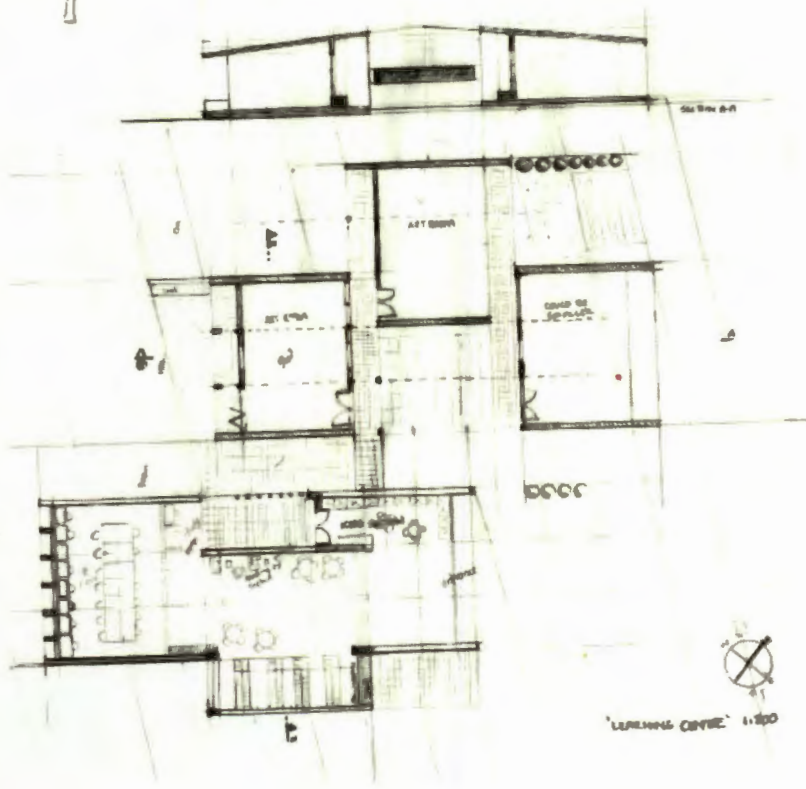
cross section A through site



DAY CARE CENTRE
1-1-1-1-1

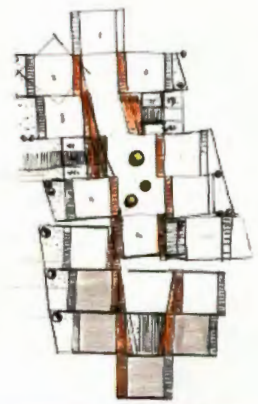
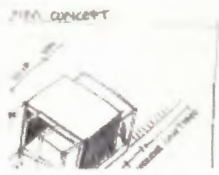


day care centre

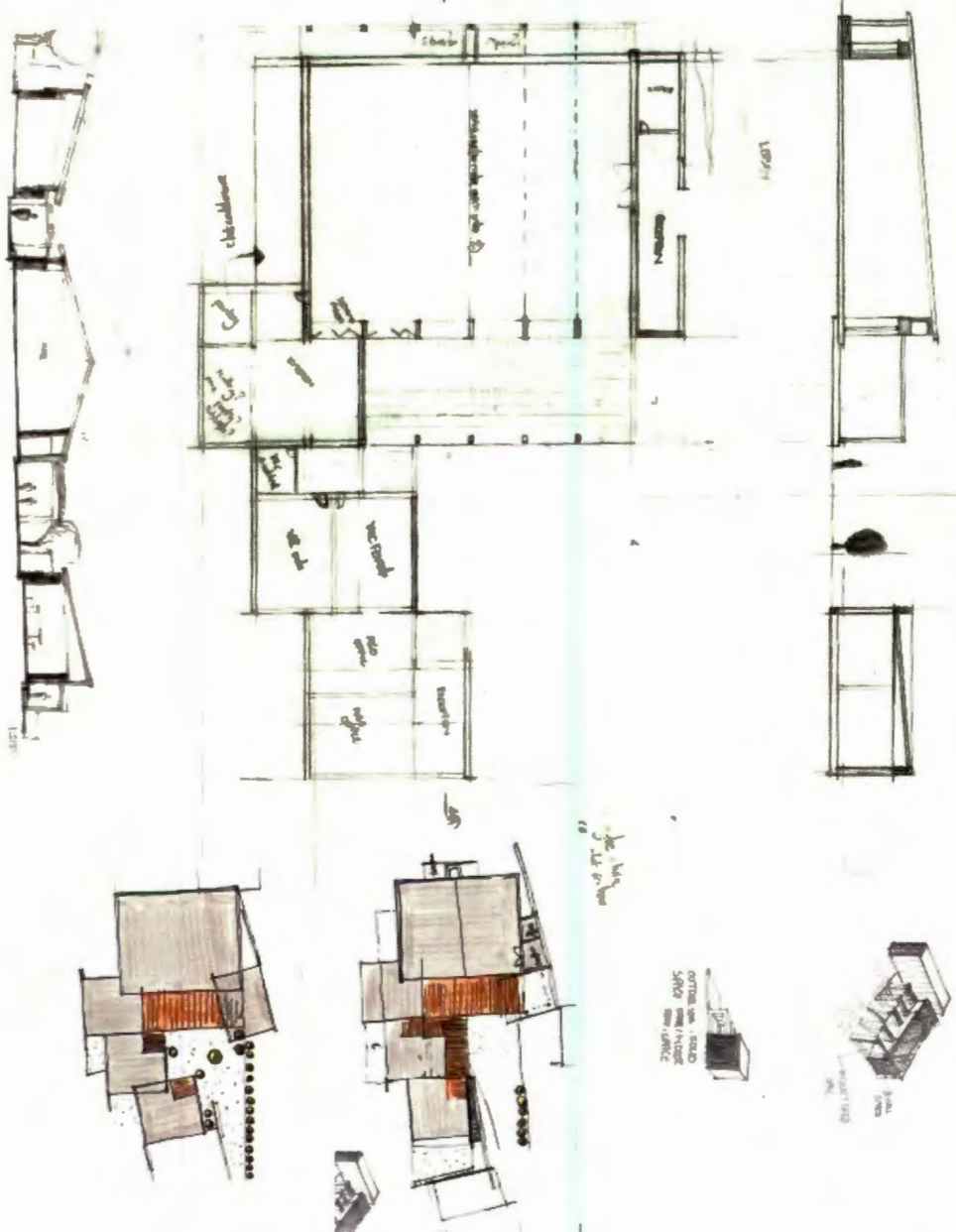


library [learning centre]

school



[school] hall with NGO facilities





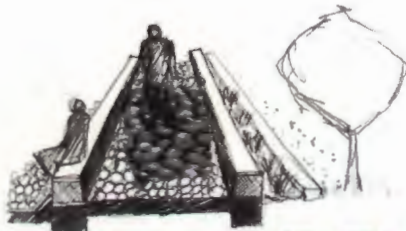
community care
[clinic, post office, ploice]



Using stone to define walkways and edges.



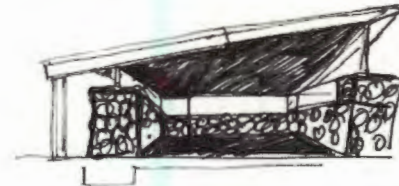
The edges and low walls can act as seating areas.



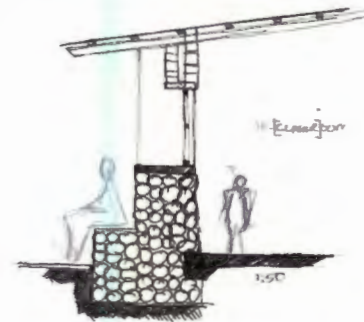
Exploring the materiality of a pathway.



Exploration of the use of the gabion baskets as outside walls.



Using stone to create bases and low thick walls onto which lighter structures can be clipped.



The thick stone walls become usable spaces.



the making of space

[some concept thoughts on materiality]

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to
06 [RE]SITING AND [RE]PROGRAMMING**

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FIG	DESCRIPTION	REFERENCE
5d	the brise-soleil: different forms of sunshading devices as a modern tenet.	Images a -f: Kidder-Smith, and Philip L. Goodwin. <i>Brazil Builds</i> . New York: The Museum of Modern Art, 1943.
5e	an illustration of modern technical tenets appropriated by the favelas.	Lara, Fernando Luiz. "Modernism Made Vernacular. The Brazilian Case." <i>Journal of Architectural Education</i> , 2009: 41-50.
26	Drawings illustrating the different house plans.	Walton, James. 1965. <i>Homesteads and Villages of South Africa</i> . Pretoria: J.L. Van Shaik Ltd.
27to33	Construction details of Cottage at Oudekraal fontein	Walton, James. 1995. <i>Cape Cottages</i> . Cape Town: Intaka (Pty) Ltd.
	Circular Image of the landscape on page 93	GIS aerial photo image from Mapping department in Mowbray, Cape Town.

