PUBLIC PLACE MAKING IN ENKANINI - A SOCIO-SPATIAL METHODOLOGY FOR INTERVENING ON THE INFORMAL

submited in partial fulfilment of the requirements for the degree of

MASTERS OF ARCHITECTURE (PROFESSIONAL)

Tiago Rocha Damasceno|DMSTIA001|MArch(PROF)2010|UCT

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INTRODUCTION

"Systematic planning was often assumed only at the level of master plans informed by western assumptions that have little correspondence to reality." (Simone 2002, 15)

Architectural and urban design projects implemented on informal settlements tend to neglect the local existing patterns of living. As a result, these projects impose new social and spatial conditions that are often not liberating to the communities that they serve.

As an alternative, this thesis proposes a methodology that contrasts with this approach, a process that aims at understanding the socio-spatial conditions of a particular area in order to inform spatial intervention.

For this purpose, this thesis will incorporate a study of the general conditions that define Enkanini, an informal settlement of Cape Town. Such conditions will consequently inform where, how and when one must implement interventions on this settlement.

The outcome of this thesis will consequently not be the formal design of a singular building; but rather a series of key concepts that would guide strategic spatial intervention in Enkanini.

Interest

For a very long time I have had an interest in the underprivileged part of the societies that surround me. This interest has developed, through the years that I have spent in the school of architecture, to be an interest in spatial character. I have been concerned about making architecture that could reach the people that form this part of society with the intention of bettering their lives.

Through my studies, I have experienced systems that believe in the power of people to develop themselves. The most important of these experiences will be a period that I have spent in the Barefoot College, an Indian nongovernmental organization that is based on the local knowledge of villagers and helps their self-development.

The Barefoot College's approach is set in the belief that any rural development to occur in a successful and sustainable way must be owned and managed by its villagers. (Roy n.d.) Their aim is, therefore, to empower the local knowledge by spreading and developing it throughout the villages and their inhabitants. The college forms Barefoot Professionals in various areas through interchange of local knowledge, not depending, this way, on urban foreign approaches. The Barefoot College has come to be an international example of this self-empowerment philosophy of development.

From experiences like those and from the education I have gathered in the school of architecture, I have developed an interest in the natural development of underprivileged societies. This interest has particular relevance in the context of Cape Town for this city holds a large percentage of its population in informal settlements. The spatial character and qualities of these informal settlements will be the object of study of this thesis.

There is a tendency to deal with this issue by eradicating any existing system of living and by replacing it with complete new ones: rational, organized, planned. I want, with this thesis, to rest my focus on understanding the existing qualities of these organic settlements and studying ways of creating development from within.

Barefoot College Housing project - users designed the houses themselves - by author

An undesigned city - Esfahan - Google Earth

IMPORTANCE OF THE INFORMAL

The existence of economic opportunities in bigger South African urban settlements encourages people to immigrate to these regions. When arriving in an urban region these 'foreigners' settle wherever there is an opportunity to do so. These small settlements merge to form a larger, informal settlement.

Because the informal settlements are developed naturally, without interventions of master plans, they have a character that is somehow dissimilar from the more predesigned areas of South African cities. This natural way of spatial developing I will term as 'undesigned'.

The 'undesigned' areas of South African cities are spaces where spatial control or rules are not codified. These are areas where the informal development has created a sense of place different in many ways to the one observed in formally designed areas. A development exercised on a day-by-day basis rather than a major plan design aimed at predicting its growth is often referred to as "organic".

Parallel to this idea is the concept of 'emergence' theorized by Nabeel Hamdi and created by scientists which is described as

> "(...)the ability to organize and become sophisticated, to move from one kind of order to another higher level of order" (Hamdi 2004, xvii).

An emergent society would then be one that evolves in a natural way. It is a society that evolves without a prior planning, through a process of self-organization responding to need. (Hamdi 2004)

The undesigned settlements perform a very important role in the economy of South African cities. These are the entrance points to the migrants that want to be part of this much bigger economy. Migrants are seen here as people that are not originally from the city and most frequently come from rural areas or foreign countries.

It is in these undesigned spaces that the first economical opportunities start to be created for the newly urbanised people. Such opportunities rise exactly from the fact that these settlements are not formally and rationally planed, they are rather developed in an organic way showing the concept of emergence. The undesigned spaces, as will be seen later, are a reflection of the emergent society's needs and solutions. These spaces incorporate real problems but also reveal consequent solutions.

As a result I defend the position that the emergent society as a condition of certain South African urban spaces should be kept and not fought against. Attached to this emergent society is an undesigned space that reflects the needs and constructs of this society. This space should be built on, rather than eradicated exactly because it reflects the character of the resident emergent society.

This position must not be associated with the position that the informal spaces are ideal and do not need interventions. It rather sees this informal condition as an existing one, a condition typical of new cities and therefore part of the process of development of the city itself. It is a condition that is not ideal and therefore needs improvement in order to reduce the gap between it and the condition of the adjacent formal city.

"It is in these undesigned spaces that the first economical opportunities start to be created for the newly urbanised people"

Diagram: informal urban as opportunity area for newly urbanized people

Points of view

THE FAILLURE OF MASTERPLANS

It is argued that governments in post-colonial Africa tend to look down on the emergent systems that are existent in these undesigned spaces. They often consider such areas to be negative and ignore their social and economical importance. (Simone 2002, 15)

Consequently, these same governments try to meliorate such areas by creating interventions that eradicate the existing patterns of living and impose master plans based on western assumptions. These assumptions are often proved not to be in parallel with the reality of the society towards which the intervention is aimed. (Simone 2002, 15)

Today it is clear to whoever visits Khayelitsha that housing projects are being developed on a massive scale. These projects, following a political campaign to provide houses to everyone, run by the national government, exemplify, in my view, the two points explained above. By an informal observation this can be seen in the process of production of these houses which runs as follows:

1. Land is occupied as an informal settlement (a natural organization already exists)

2. Government takes a census of the number of people that need houses

3. People and built systems are removed from the area

4. A master plan is implemented

5. Government builds streets (orthogonal system), ordering and defining in this way the individual plots; water and sewage pipes are also placed and exposed outside

6. The people get allocated to a plot, frequently placed in a different location

7. People move in and build an informal shelter; build a toilet around water source

8. Government builds concrete toilet

9. Government builds house

It is proven, in the act of removing people and built systems, that the government does not believe in the power of the existing social and economical forces. As a consequence of this mistrust, the government wipes out the existing systems in order to create a blank page. This act reflects the lack of trust by the government in the people and their way of living.

On the other hand, the government imposes an orthogonal street plan, with occasional Cul-de-Sacs, on the previously cleared site. This happens after erasing the existent naturally developed system of spatial orders. This is an intervention that borrows the western ideas of rational urban design as opposed to using the existing local strategies. Therefore, the example of the Khayelitsha housing projects reflects the position posed by Simone.

The gap that exists between the westernized rational assumptions and the reality that those assumptions fail to meet, is seen as a potential ground for the failure of such projects. Hence, this idea constitutes a critique of the strategies of the South African government particularly with regards to the RDP housing projects.

It is important to avoid the imposition of predetermined plans when designing for emergent systems. (Hindes and Osman 2005, 59) By practicing these impositions in projects like governmental housing, the natural order of priorities that is observed in undesigned spaces gets deformed. (Turner and Fichter 1972, xi) The priorities set by the natural development of the society are suddenly replaced by foreign priorities which do not respond to the needs of that society.

Consequently, the users of the space formalised lose the control over their own environment. The product imposed in these interventions becomes one with material value only. This wastes and destroys the original social character of the dwelling society. (Turner and Fichter 1972, vii)

The eradication of this social character is of an extreme cost that is more than just economic. These radical interventions destroy the core of the civil society, their value system and their natural construct. They bring the progress of development backwards to an embryonic phase. This proves to be extremely costly in human social terms. (Low 2008, 16)

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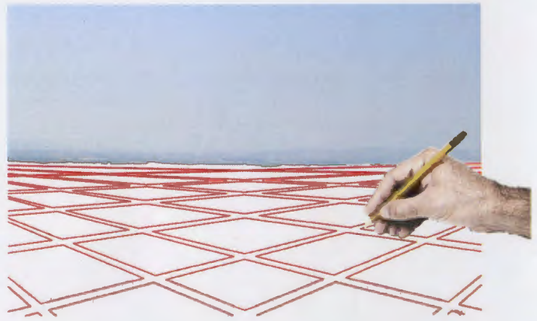

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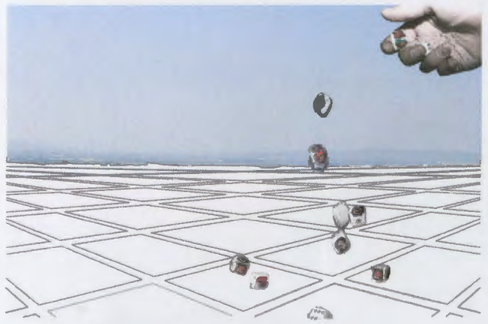
As such, alternative systems have to be imagined. One of such is a system that engages with the emergent society and builds upon it. It is only sensible and rational to 'build on the collective wisdom of people and organizations on the ground - those who think locally and act locally' (Hamdi 2004, xviii). By uplifting the existing social and economical conditions, projects have better chances of success. It is about building upon the continuum of development rather than restarting it. This way of working facilitates emergence and the consequent development of a social structure. (Hamdi 2004, xviii)

Parallel to this idea is the importance of vernacular architecture. The knowledge provided by this form of material development is one that informs the needs of the resident society. The vernacular architecture is a collective statement, not an individual one like the housing projects are. (Lekson 1990)

Departing from these points of view I propose that interventions in the informal areas should acknowledge the existing conditions of the settlement and try to learn from them in order to improve their condition.

"interventions in the informal areas should acknowledge the existing conditions of the settlement and try to learn from them in order to improve their condition"

Diagram: architect concerned with learning from the informal



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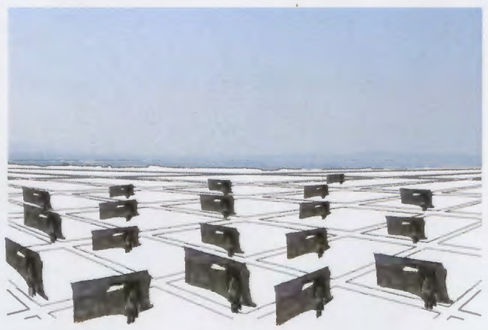

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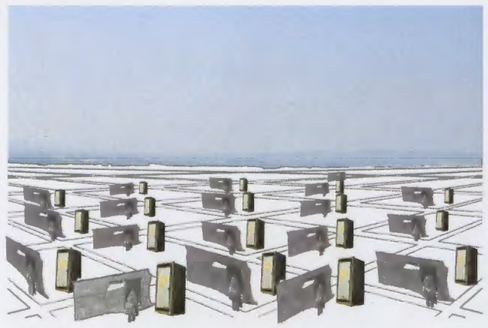

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process of housing delivery

ROLE OF THE ARCHITECT

> "It is about building densely interconnected networks, crafting linkages between unlikely partners and organizations, and making plans without the usual preponderance of planning" (Hamdi 2004, xix).

The everyday user of the undesigned space is the key for the emerging society. Individual contribution and need, when added to that of others, make the character of the emergent society. What the everyday user lacks, though, is the capacity to see the links between the individual and the rest of the community. Hamdi, in the passage above, is referring to this ability of seeing the detail from a broader perspective and argues that it should be taken forward as a tool to make constructive interventions in emergent spaces. He proposes that interventions are focused on intensifying the relationships between the actors of this condition. Through his book Small Change he translates these ideas into architecture terms by giving examples that have done this densification in a spatial manner. (Hamdi 2004)

Although his theory can only occasionally be linked to architecture, the argument is more focus on anthropological and economical issues. Borrowing from Hamdi's argument on an intervention informed by an outside perspective I will theorize another position of the architect towards this condition:

Let's imagine each user of this undesigned space and his spatial needs and contributions as a dot. Each contribution and need will have different and similar characteristics from one another. However, they all form part of the same emergent society and therefore will depend on each other to develop. Consequently there is a network of interdependency between the different spatial elements of this society that is denser as more dots are added to it. The architect, when introducing himself to the equation based on the principles presented by Hamdi, can have a role in the densification of these spatial networks. The aptitude of the architect is to understand space critically from a broader perspective. He can understand and identify the positive and negative spatial characteristics of the network. In addition he can also provide alternatives that can promote (or not) the densification of the networks.

Consequently, the role of the architect in this case is to imagine spatial interventions that start reordering the existing undesigned space. The reordering of the undesigned should unquestionably be a reflection of a spatial and social analysis of the area. It must be a response to the existing problems and enhance existing solutions. The intervention would be aimed at creating opportunities for the development of the society by providing spaces for social interchange. Thus, it would be an infrastructure for social interpretation and consequent emergence.

"the role of the architect is to imagine spatial interventions that start reordering the existing undesigned space"

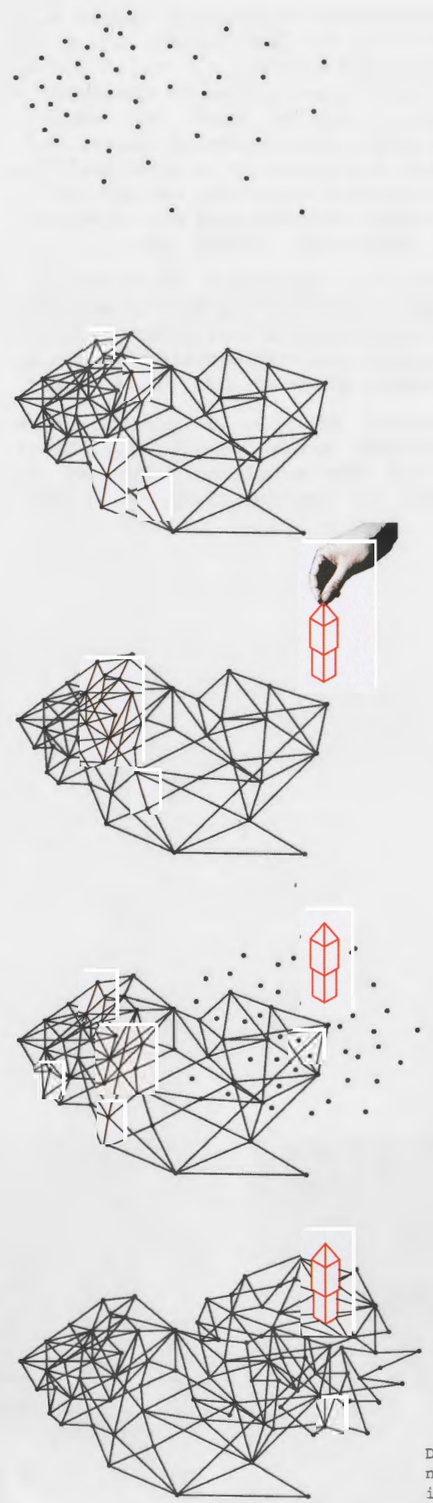


Diagram : individuals, their networks and architectural intervention

LIMITS OF DESIGN

At this point the question 'what are, therefore, the limits of design?' arise. How much does one intervene to allow for the informal to develop itself? At what point does the intervention stop being productive and starts being oppressive to emergence?

> "(…) that those who have been trained to support and enhance such fundamental human efforts as housing, education and health care have claimed possession of those activities, forgetting that a basic human right is the right to do for one's self what one is quite able to do." (Turner and Fichter 1972, viii)

The passage introduces to this document a concept that is very important to the interventional approach of architecture towards undesigned spaces. The notion of self help is not seen here as an imposition or a duty towards the users of these spaces, it is rather seen as their right to determine their own development. Professionals often tend to steal this right and impose their way of thinking onto the user's lifestyle. (Turner and Fichter 1972, viii) This critique can, again, be applied to the Housing projects produced in South Africa by the government. Turner calls the activity of housing a 'fundamental human effort' which is clearly a different perspective than the one of South African government if we look at the examples shown in the previous section.

Goetze, in a critique of the housing situation in United States, refers to a tendency that exists world-wide. This tendency is to

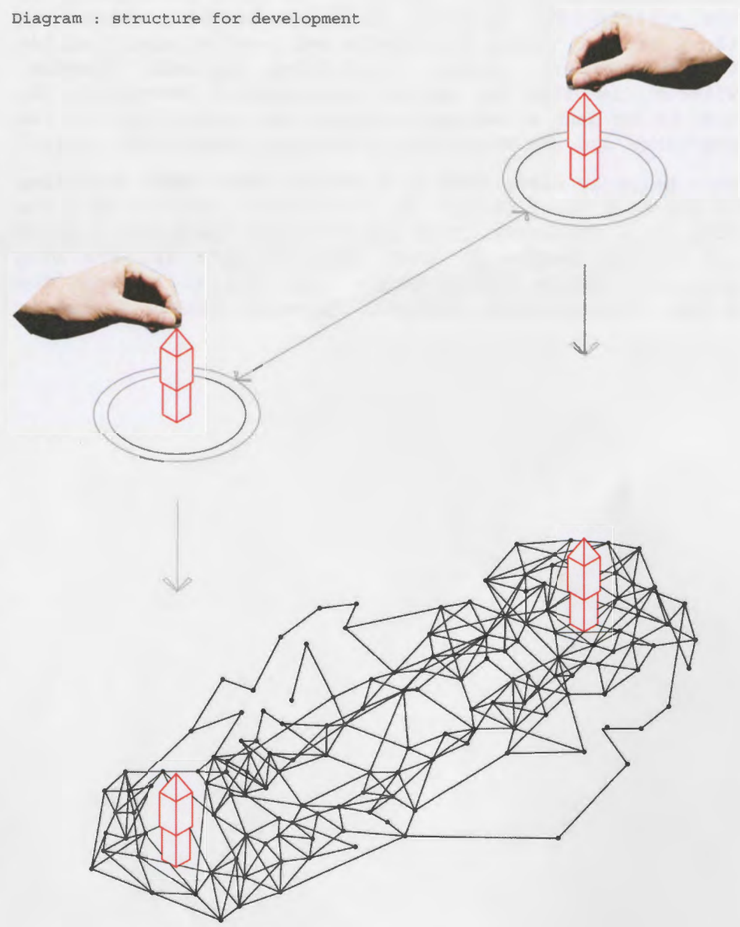
> 'do things for the "have-nots" rather than helping them construct their own self development.' (Goetze 1972, 53)

This essay is a comparison between two housing projects in similar social and economical conditions but that had completely different approaches and therefore different results. The quote above summarizes the difference between the two approaches. Goetze defends, with this essay, the positive outcomes of a participatory approach as a strategy for self development. He critiques the first approach where development is planned and imposed by professionals. (Goetze 1972) In a sense it is much more constructive to supply the resources for development than it is to provide the development itself. A charity approach is not necessarily positive to the construction of the society.

On a lecture given in April 2009, in UCT, Forjaz said that the government of South Africa asked him for advice about the best strategy to deal with informal settlements. Forjaz responded to this query by saying that what should not be done is the provision of government subsidized housing. (Forjaz, 2009) Forjaz's position is, also in parallel to Goetze's one, that development should not be given for free, almost like a charity action. The development of the informal should not be done by providing master plans, but by providing structure for development.

"The development of the informal should not be done by providing master plans, but by providing structure for development"

Diagram : structure for development



> "(…) development occurs in the minds and hearts of man or it does not occur at all. Housing roads, bridges, dams, are necessary but not sufficient conditions. Development without self-help is an impossibility." (Fathy 1976, x)

Hassan Fathy introduces another point to this discussion that supports what has been said.His quote shows an understanding of the importance of structure given by architecture. Simultaneously it stresses that this will not be enough if there is no engagement between this structure and the society it is meant to serve. As such it is essential the incorporation of the 'soul' of the society in a project because without it, development will not happen. (Fathy 1976, x) In a sense, it is not possible for development to happen if the user society does not root itself and take the decision to make that development. This is relevant because it puts the role of development in the user and not in one single developer.

At the same time, it is essential not to fall into the idea that architecture is irrelevant to development. The role of architecture, and of other sorts of interventions, can be constructive towards the act of self-help and natural growth. The aim is not to penetrate too much on planning the development of the emergence.

This point becomes clearer when reading Hamdi's work. He compares the growth of informal settlements to the development of simple cells into a large more sophisticated organization. The cells, he quotes Danah Zohar,

> "have no fully fixed identity until they are in a relationship. (...) All of nature's complex systems are at their most creative when they are delicately poised between fixedness and unfixedness - poised at the edge of chaos" (Hamdi 2004, xvii)

This dichotomy between the fixed and the unfixed is what gives the balance to nature's complex systems in general and to informal societies in particular. There is a slight difference though when looking at the human development processes rather than natural biotic systems. Human processes need a structure that informs occupation, they need a set of values that provides a binding force between the different elements of the whole; (Hamdi 2004, xvii,xviii) they need what I would call culture. In a sense, there is a binding force that provides unity to the society. This binding force is, at the same time, a set of limits or constraints that force a certain direction to the development of the society. The function of design is to construct on these sets of values and limits and provide opportunities for development without inhibiting personal freedom, without disabling the natural processes of emergence. The aim is to find a balance between the creativity of the emergence and the stability of design. (Hamdi 2004, xviii)

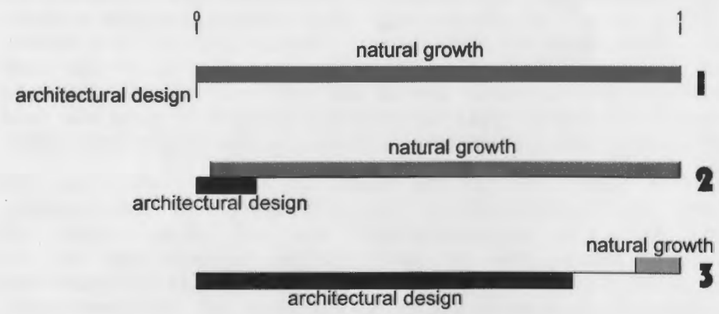
This point is exemplified in a project that Hamdi describes in his book Small Change. He talks about introducing a bus stop in a community. This intervention identifies a place and invites people to start engaging with it. The stop gradually starts having people that use it to wait for a bus. Consequently, informal commerce starts happening around the bus stop. This one space becomes an important site for community development, it becomes the beacon at night, it becomes the meeting spot, etc. Suddenly, one space has a huge influence on how this society lives the day.

When looking at local examples one can learn from a project occurred in Imizamo Yethu, a township adjacent to Hout Bay. Here, on the highest limit of the township, existed some taps that provided water to the community. The area around the taps was not formalized at all allowing for rivers of used water to run downhill into private areas.

A project was set up to intervene in this space in order to upgrade it. The intervention intended to create opportunities for more functions to happen in this space directly related to the already existing one of water supply. Now the area serves as a water supply, a washing area, toilets and seating. With the placement of structure that allowed for these activities to happen, the residents of Imizamo Yethu started to use the space. Soon this area became not only used for water related functions but also for social interchange. The area became a place. On it the residents meet, sit, chat, flirt and socialise. The intervention was subtle but simultaneously important for the development of the social construct of the inhabitants of this settlement.

These interventions bring the discussion of 'limits of design' into a physical solution. The intervention was minimal and concise taking the role of the designer and/or developer and used the most of its potential. The project provided a service that was needed in the community, and with it, a reinterpretation by this same community. With a succinct intervention, the project provides ground for inhabitants to produce their own development. These are examples of the provision of conditions that encourage emergence to take place. As such, these conditions become catalysts of development. (Hamdi 2004, 73)

The graphic alongside clarifies this position theoretically. The natural growth bar represents the self-help development of an emergent society. Parallel to this is the bar that shows the amount of intervention done by an outside force, taken here as architectural design. The graphic shows three different amounts of intervention by an outside force and their correspondent results of self-help development. One can see that there is a point where the combination of the two is constructive (2). In this point one force feeds the other in a symbiotic way and another opportunity is set for development.



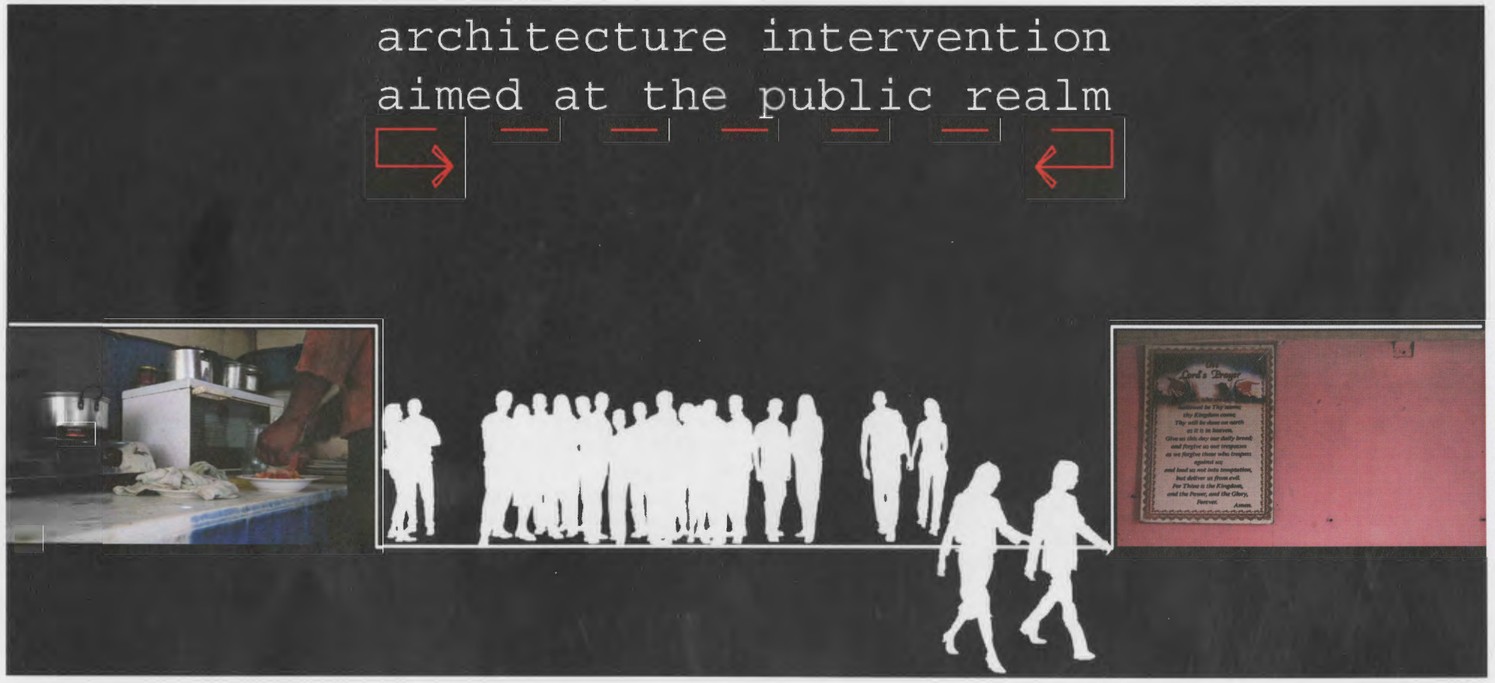
INTERVENING IN PUBLIC SPACE

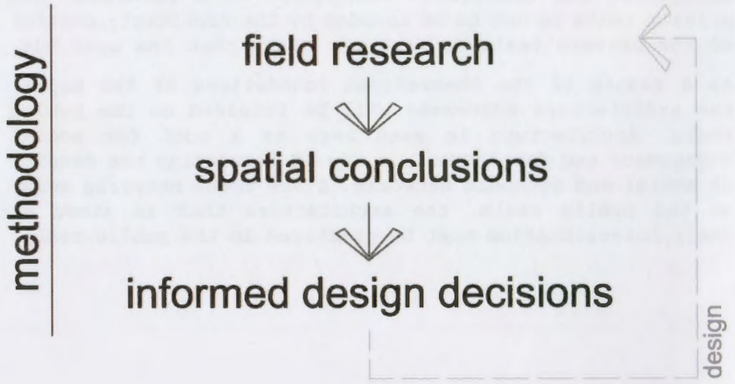
This essay has fore grounded the notion that the architect has an education to see the spatial characteristics and their networks from a broader perspective than the user's perspective. The architect can also critique the existent conditions and propose solutions for an intended change. On the other hand, it has been said that interventions are to be minimal, concise and productive encouraging social engagement and consequent emergence. In a parallel, the private realm is not to be invaded by the architect; control of the private realm is rather a right that the user has.

As a result of the theoretical foundations of the paper, the architecture addressed will be focussed on the public realm. Architecture is seen here as a tool for social engagement and development, a way of increasing the density of social and economic networks. Since these networks exist in the public realm, the architecture that is aimed at their intensification must be practiced in the public realm.

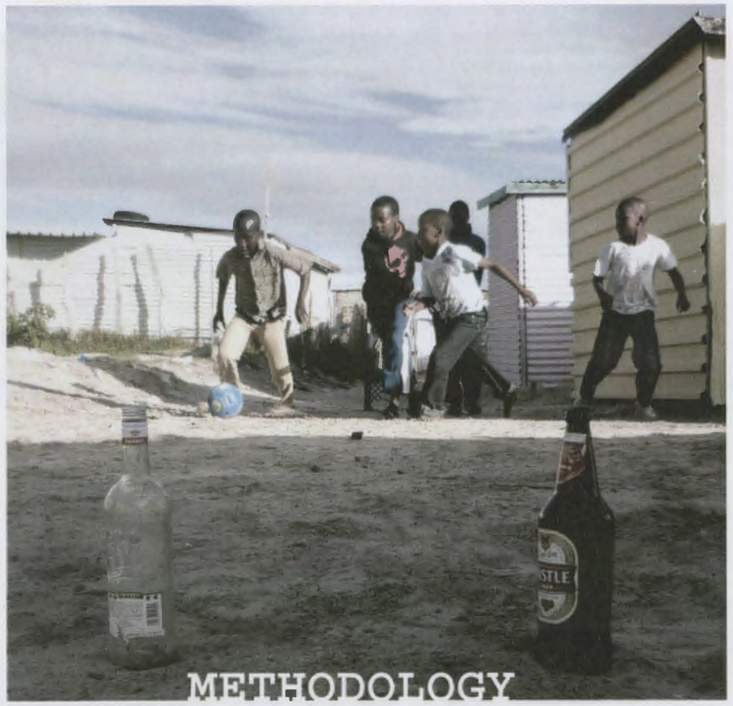
Architecture is a tool for social engagement and development and therefore must be practiced in the public realm.

Diagram : architecture must focus on public realm





methodology diagram



The process

The set of ideas suggested above allow this paper to position itself through a belief that the informal has the power to generate its own self-development. It also shows that the aim of an intervention towards this condition is to enhance the already existing system of development. Hence, the paper theorizes how to intervene onto tangible spaces. It becomes necessary to depart from the theory and engage with a situation where the social forces have a physical and measurable result in form of space. There is a need to start a project where these ideas can be explored in more physical terms, responding to real problems and existing conditions.

What follows is a methodology developed to test these theories on a more practical situation and to propose a different form of aproach to design projects on informal settlements. The area chosen to apply this test was Enkanini, an informal settlement of Cape Town that has very little formal input.

The methodology is intrinsically related to fieldwork and to the relations made with the local community as part of the study of the area. This activity plays a major role at understanding how the community works on a daily basis and on having a relationship to the site in study. With this approach one can understand general relevant facts of the history of the area as well as specific places of importance to the community.

Enkanini will be explained through three layers that range from general to specific. First will be a broad understanding of the history and location of Enkanini giving a sense of its character as a whole. Then, there will be a study of the public areas of the settlement. This will be a study that is focused on particular sites but that explains the spatial character of public space in Enkanini. The third will be a study done on private technological practices seen in the area. This study will inform how public space influences the private realm from a technological point of view.

All these studies will then be compiled into a series of conclusions that summarize the spatial conditions of the settlement. These conclusions will be an important starting point for the next phase of the methodology. This subsequent phase is focused on defining a general set of principles that should drive the planing of interventions for Enkanini.

Picking up from these principles begins the design phase. The designer has now a general understanding of the socio-spatial construct of the area. When focusing on a particular site, though, the designer has to restart the methodology process by conducting a focalised field work. This way the methodology process completes a cycle.

Hence, the aim of this methodology is to stress the value of local information in guiding the decision making process for design interventions on the informal. Regardless, this methodology still follows the design approach principles set above. These principles will become clearer on the design part of this document.

Choosing an Informal area

It became essential to define the guidelines of a program and to find a site that would respond to the theory so far developed. A set of pre-requisites were established in order to find a suitable site and a set of concepts were put forward to point the program's direction.

To explore the concepts being put forward a design would have to deal with the informal. The site, therefore, would have to contain a settlement of informal character that had developed with minimal or no planned intervention. The rational structure of the site would be slender or inexistent being undermined by the organic structure of the settlement. The population should be dense and in constant increase. Only a site dominated by emergent forces and lacking the intervention of the government would suit the point that this project is trying to achieve.

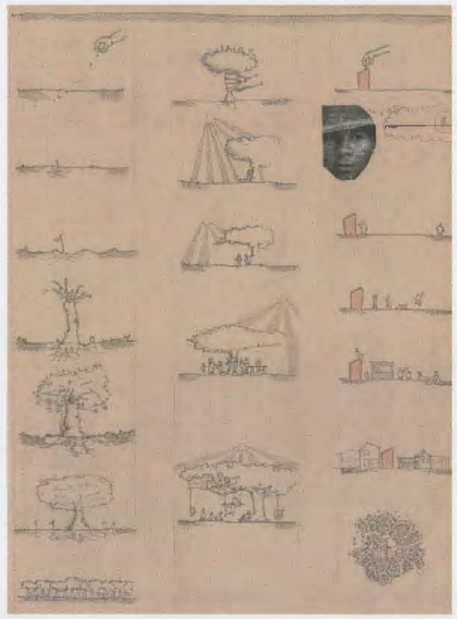
The program would comprise a subtle (or a series of subtle) intervention aimed at a strategic need of the site. In this sense, research done on the site would inform the character of the intervention to be used as a catalyst for development. The project would be aimed at the public realm and would address to the needs in terms of facilities and services.

These program guidelines were defined in a conceptual manner not to have commitments just yet towards the design of the project.

The next step would be to find the site that responded to the parameters set above. Being a foreigner in the country, I had little knowledge of the informal situation in Cape Town. I chose a personal way to achieve this goal and followed the links created by a group of compatriots that lived in an informal area. I reached Enkanini, a settlement placed at the end of Khayelitsha.

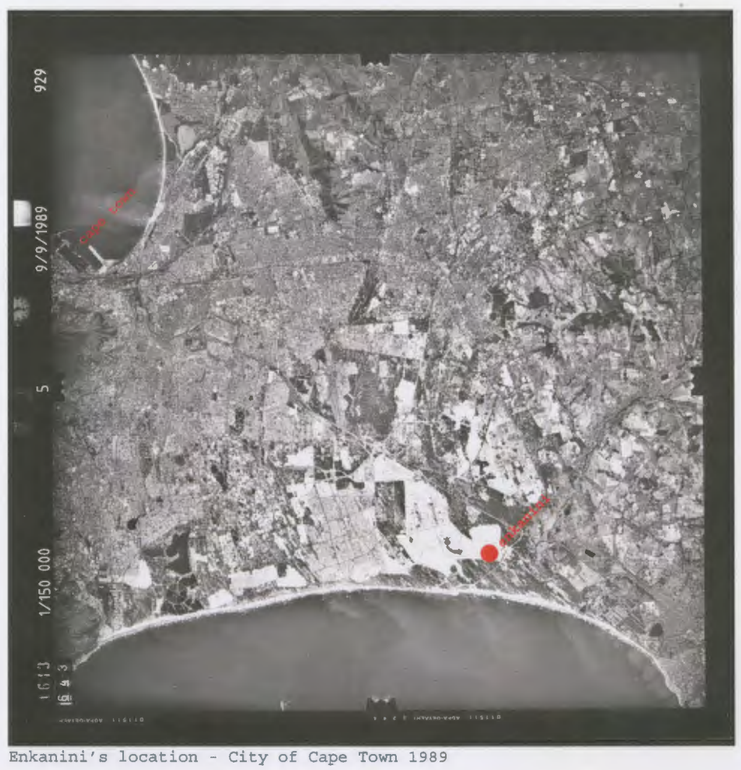
Enkanini became the appropriate site for this research. It is a fairly new site which implies that it is dominated by informal settlement and has very little input by governmental forces. Enkanini has no electrical power, no canalized water or sewage system. The waste collection system is weak and the public toilet situation constitutes a big problem within the population. There is one main road - Lhaze - that crosses the area built before the settlement started. The Khayelitsha train line has recently been extended until Enkanini. This, in itself, provides an opportunity for emergence around the station precinct in particular and for the whole area in general. On the other hand, the railway line splits a pocket of the settlement out of the main area. The population exists in a density that can accommodate growth comfortably. At the same time it is enough to give anthropological support to occasional changes.

General concept of 'what site to choose'



General concept of 'what program to follow'

Enkanini is situated in the furthest end of Khayelitsha in relation to Cape Town and about 15 kilometres from Somerset West. It is edged on the North by the Khayelitsha train line, on the East and South by the Baden Powell drive and on the West by a settlement called Kuyasa. It is situated relatively close to the beach, close enough for this to be part of people's recreational activity. Currently the train line that links Khayelitsha to Cape Town reaches Enkanini. It is believed, though, that it will be extended to Somerset West.



Enkanini's location - City of Cape Town 1989

Enkanini, an informal area with no services or formal input

Approach

What will follow will be results of a research conducted in the area of Enkanini during the period of March, April and May of 2010. The research involved various visits to the site and numerous conversations with the inhabitants of Enkanini. The research was carried out in an informal way with the intention of not interfering with the hopes and aspirations of the population. The intention was also, to try to get the most natural and accurate response from the people rather than getting a response that would suit a government official.

The work exposed here will come from the notes taken on these consecutive site visits and have no reference to edited work unless it is explicit. The information comes, therefore, from the people and from my analysis, as a student of architecture, of the area. The document tries to be as true as possible to the reality but it will contain a personal perspective and a creative flavour.

sit and talk - informal field research done by engaging with the residents of Enkanini

Study of the area

Role of Kuyasa and Makhaza in defining the density of Enkanini

Private houses with the graffitied

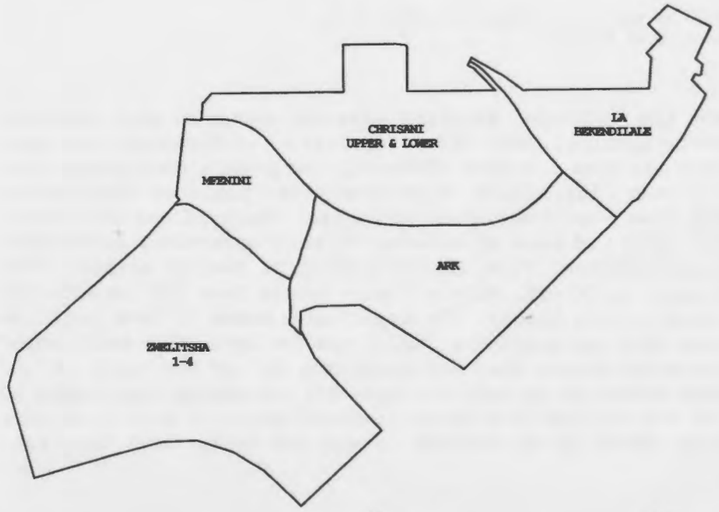
BACKGROUND

It was 2004 when the first people decided to use Enkanini as a destination for settlement. The area was virtually virgin, the landscape was shaped by pathways created by decades of occasional walkers. The area was near informal settlements that were in the process of getting formalised, Makhaza and Kuyasa. These became instantaneously the informants for the patterns of settling. The closest corners to Kuyasa and Makhaza received the first house plantations. Here, there were more opportunities of development because it was an extension of the social and economical blanket that came from these areas. The area quickly grew out of these centres using the original pathways as streets and building on the areas that were still controlled by bush plants.

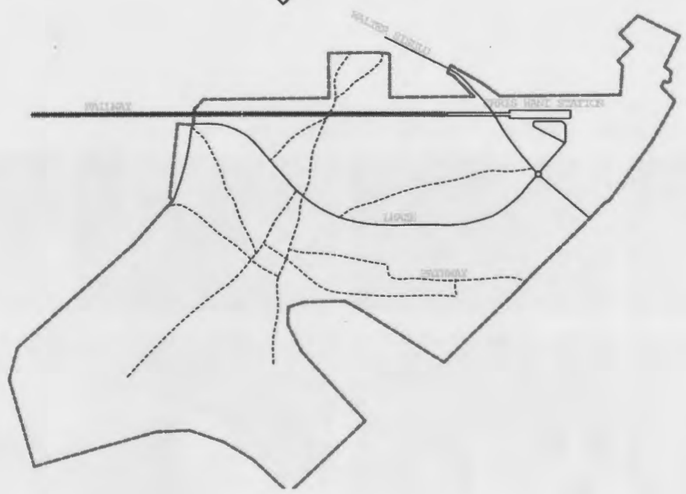
The land, some say, was destined to be developed into industry but the 'enkhane' settlers were not going to give up their newly acquired land. This character of stubbornness was what gave the area its name, Enkanini. The people were coming from all over Khayelitsha, some from other parts of the country and some even from other countries. The word was out that a new area had been discovered to have accessible settlement opportunities. From family member to family member, from friend to friend, more and more people came and constructed their little houses. The government seems to have realised that this was happening, but it was too late. They went around knocking houses down and graffiting Xs' on the walls of the next houses to be knocked down. But the people would rebuild and rebuild and show their communal power to stay in an area they chose to be because it was not being used thus far. Enkanini grew bigger, denser and stronger with a variety of religions, cultural origins, languages and people. Despite the freshness of this hybrid society, the population still regards themselves as the bottom of the chain. The level of formality seems to be of extreme importance to the self-esteem of the settlement and currently this self-esteem is undervalued. The population of Enkanini, similarly to the rest of the townships in Cape Town, has developed a hierarchy of settlements according to their level of formality. Thus, Cape Town is the top, followed by Cape Flats, Gugulethu and Langa, Khayelitsha, Makhaza, Kuyasa and in the bottom of the list Enkanini. The inhabitants of this place feel unhappy for living in an area dominated by informality and wait, with great expectation, for a housing project to illuminate their lives.

Hierarchy of settlement seen in the difference of scale of dwelling unit and organizing structure - images compared at the same scale

Borders of Enkanini



Enkanini neighbourhoods



Plan of movement routes in Enkanini

MY ENKANINI: ACTIVITY ON THE PUBLIC REALM

What follows represent the study of the public space of Enkanini. Before these are presented there is a need to define the general characteristics of the area.

The settlement of Enkanini is bordered by two older settlements, Kuyasa on the West side and Makhaza on the North side. The South-East side is edged by Baden Powell Dr and has nothing but unoccupied land beyond that road.

Enkanini is subdivided into five neighbourhoods. Each neighbourhood has an organized community that deals with the communal issues and that have defined the area into the different suburbs as in this page.

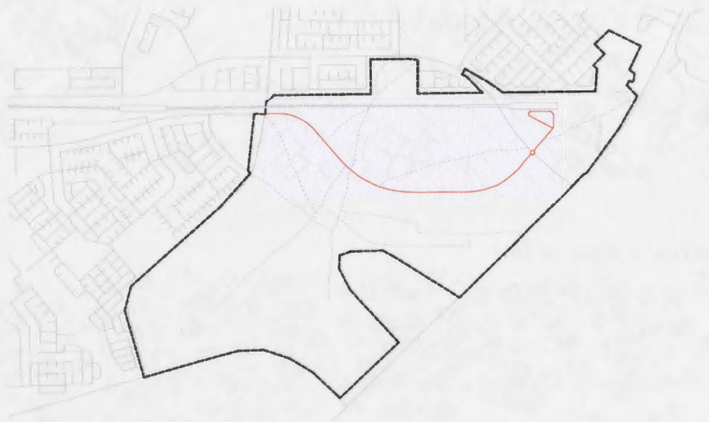
As mentioned before there has recently been an extension of the Khayelitsha railway line which opened a station on the grounds of Enkanini. The Railway line itself constitutes a barrier between Enkanini and Makhaza for being edged with a concrete fence. On the other hand, the station has been developed to accommodate a precinct. This, as will be seen later, constitutes an opportunity for development in the area.

The settlement has one main road that is of relevance as a corridor. Lhaze is a structure that existed in this area before it was called Enkanini. Now it is one of the busiest corridors of the settlement and will be, therefore, object of this study.

On the other hand Enkanini is characterised by the existence of a network of pathways. These, extended to accommodate the passage of cars, constitute an important part of the public space because every dweller of this settlement uses it to reach their houses. Their organic shape and the form that the dwellers use it will also be an object of study in this paper.

The range of Public spaces existent in Enkanini could not be fulfilled if only studied through the ways of movement. There are a few other areas of relevance that will be studied in order to better understand the qualities of the settlement as a whole.

As it was set out before the intention of the project is focused on the public spaces. The research of the area will be consequently a result of this decision. The document comprises the study of two types of streetscape existent in the settlement. It reflects on the conditions existent on each other and the contributions that they have for their inhabitants. The study is taken in spatial terms but enriched with anthropological perspectives acquired from conversations with the residents. The document includes also a study on important public spaces and their characteristics and contribution for the social construct.



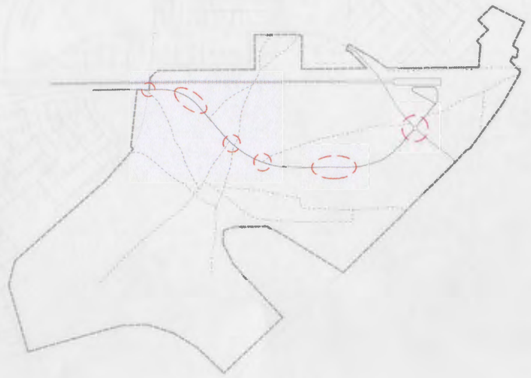
Lhaze the only tared road in Enkanini

A: LHAZE

Lhaze is a piece of tar road that has existed in this area for a long time as a link from the area of Khayelitsha to the Baden Powell Dr. When the settlers came to Enkanini they used the road has an informant to construct their houses. They kept this space as public as it was before, just changing the density of people that dwelled around it.

After the settlement was established the Walter Sisulu Rd, also coming from Khayelitsha, was extended to meet Lhaze, and consequently the R310. This happening made Lhaze be the only link to every vehicular exit from Enkanini.

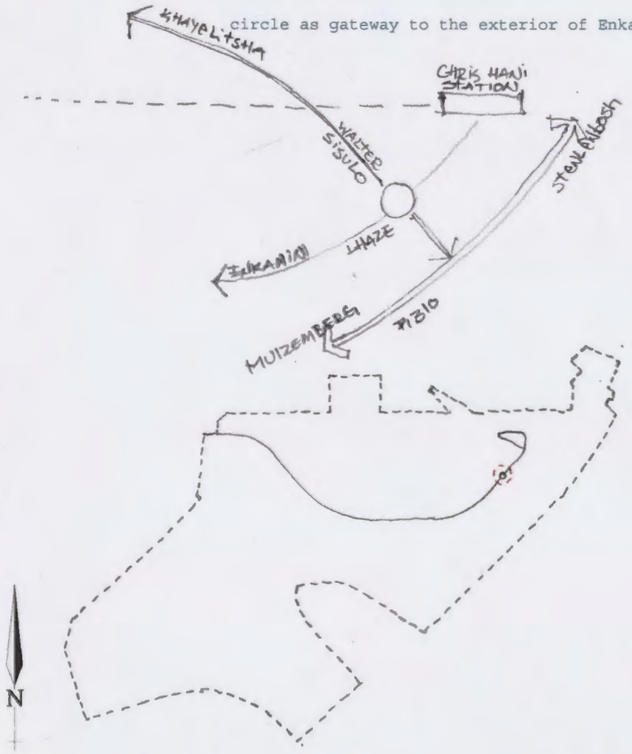
Nowadays Lhaze has a very important economic and transport function for the society of Enkanini and this will be expressed through the study that follows.



points of study in Lhaze

Subdivided neighbourhoods + space drawn back on the side of Walter Sisulo

circle as gateway to the exterior of Enkanini



Patrice's House Today "he does not even recognize it"

Patrice's House in 2006

THE CIRCLE

Patrice used to live in Enkanini. Now he has moved to the "Location", in Site B. He came to Enkanini on a visit and noticed a big change in the way things looked.

Patrice's house was near the kink that the main road does on the East side of Enkanini. The area used to be dense with houses that managed to survive the forces of the eviction. That kink was filled with neighbourhood stories often related to these struggles. In fact the road that defined that area of Enkanini was not particularly imposing to the lives of its inhabitants, it was rather beneficial. When they moved in, the road already existed, so it was seen as a limit to private property.

Today things seem to be different. Patrice is visiting that same corner and does not even recognize it. The houses, which were his neighbours, have disappeared to be substituted by an empty area. Walter Sisulu road got extended and met the road he knew as main road exactly on the corner where he used to live. Now this corner is a circle that links four sides of movement routes.

In a sense, Patrice thinks, this has a great deal of opportunity for the residents here, having a road that allows for transport to reach Enkanini can only be a positive thing.

On the other hand Patrice felt rather unsatisfied with the sense of scale lost on that urban project. The size of those roads and circle became so big that the people from one side are not even able to coexist with the other side. This created a separation that is witnessed by the definition of two different areas, Chris Hani and La Benkedilale.

Patrice just remembers the days when all were together fighting for the same principles and feels that despite the possibilities that this project brought, there are some negative aspects as well.

VACCINATION PROCESS

Today is in Enkanini.

Lisa is a public-health worker and is part of the free vaccination program run by the government. She is also from Khayelitsha but not Enkanini. Today, and for the week they will be applying vaccines to the children in this area.

Lisa has been doing this program for a while and has visited Enkanini a few times. She knows that Lhaze is the one and only road that crosses Enkanini and therefore provides the link between this settlement and the rest of the world. She knows that Lhaze is one place that the whole Enkanini population knows and goes through on their daily basis. It is only clear that the Vaccination takes place in a point of this road.

What Lisa also knows is that the area where Lhaze crosses Walter Sisulu road - the circle - is where there is more densification of street life. She believes that it might be because of the proximity that this area has with the neighbouring settlement, Makhaza. Makhaza's private houses supply electricity to some of the buildings in Enkanini. The proximity to this settlement provides an opportunity that is seldom in this area - electricity.

Since the vaccination place has been decided, what follows is an advertisement campaign to let people know that this is happening. For that Lisa organizes with the Kuyasa police to drive a car with a megaphone around Enkanini while she shouts out the information.

The day will be split into two parts taking lunch as a break between them. In the morning they arrive and look for a spot to seat and perform their function. This spot must be in shade and must be able to accommodate a queue that will be formed by kids and mothers. Through the unlinear edge of the buildings that frame Lhaze, Lisa and her colleague found a spatial pocket big enough to fit a long queue. Actually they found two, one on each side of the road, right in front of each other. It sounded perfect. In the morning they would set the function on the east side of the street, where the shadow was. In the afternoon they would move across the road to the west side.

Every day for that week Lisa set her table next to a house in the morning and to the Enkanini Church in the afternoon. Everyone knew where the vaccination was happening. They vaccinated close to 2000 children proving the mission to be a success.

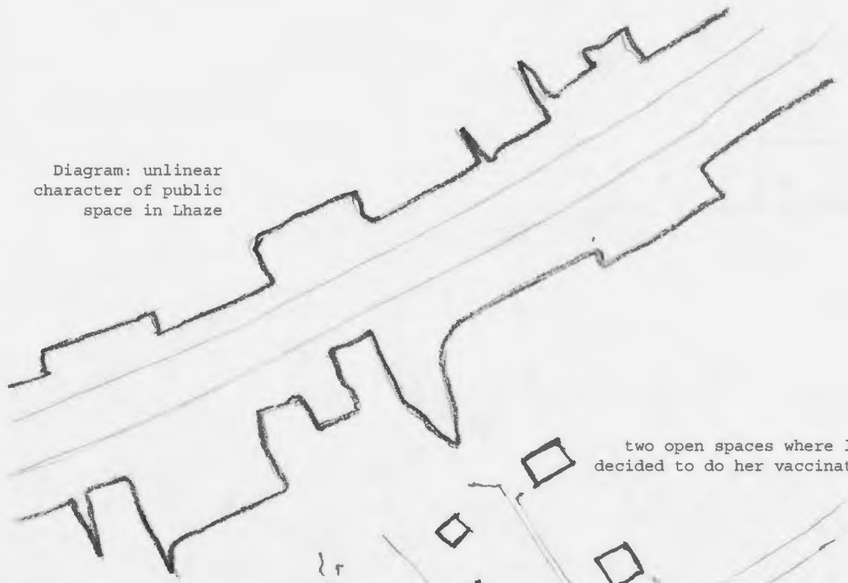
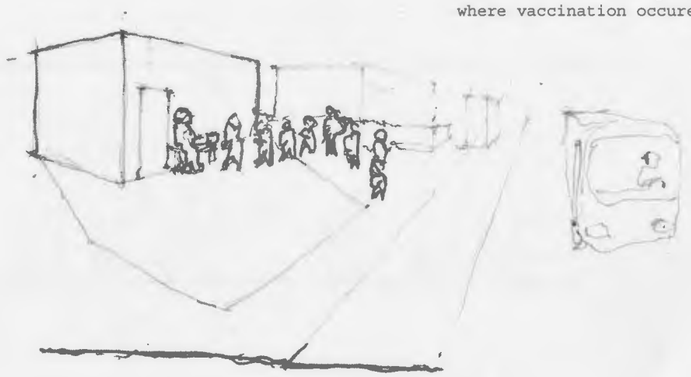


Diagram: unlinear character of public space in Lhaze

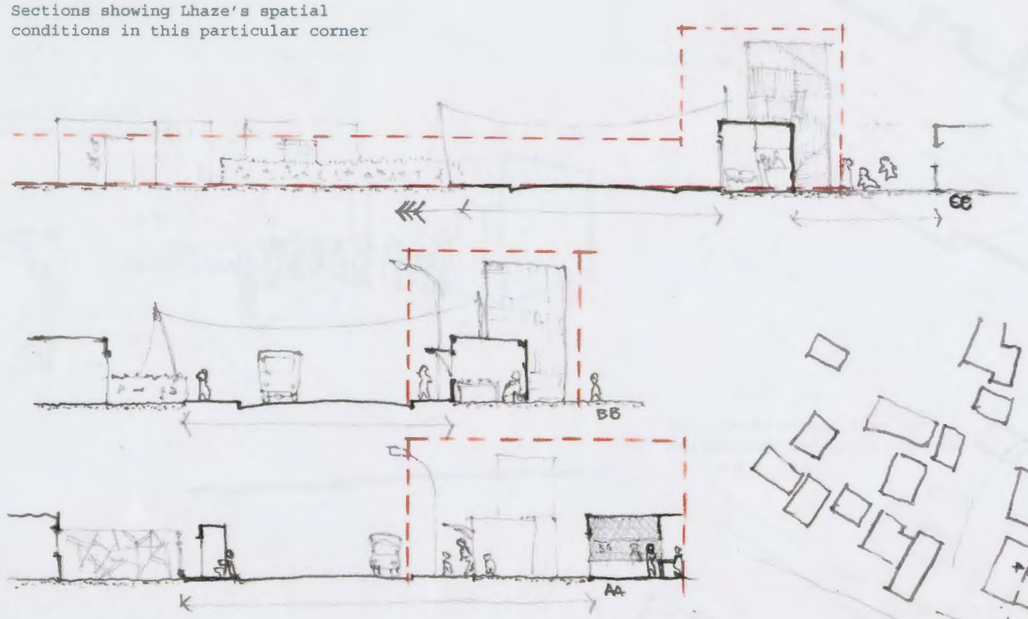


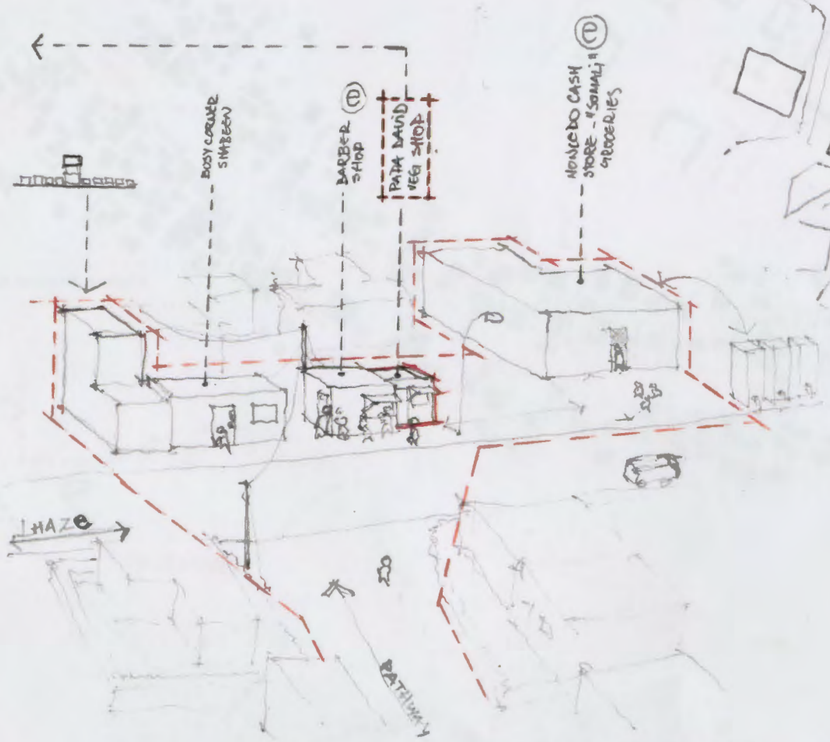
sketch of shaded place where vaccination occured

two open spaces where lisa decided to do her vaccination

Figure Ground of Lhaze

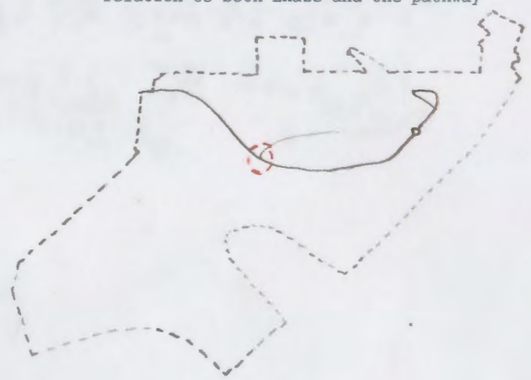
Sections showing Lhaze's spatial conditions in this particular corner





A perspective of Papa David's shop

Plan showing economic facilities in relation to both Lhaze and the pathway



ECONOMICAL END OF THE PATHWAY

He found a nice spot.

Papa David used to work in Somerset West. Eventually, like in every story told in this area, his boss didn't need him anymore. He became unemployed.

But Papa David is not one of those that dwell in misery; he rather takes decisions and makes moves. He decided to open a vegetable shop and he had already the perfect site for it: Lhaze, the main road, where the Chris Hani pathway joins, where there is already some commerce happening. Right in front of the path, positioned like a city hall there is a shabeen called 'Busy Corner'. This one has a second floor construction next to it that identifies the whole corner as an important one. Right next to it there is a barber shop. This one has a different way of promoting itself; it has a loud sound system that runs on electricity borrowed from Makhaza. On the other side of David's available site there is the 'Somali's' shop, popular place because it sells virtually everything.

The competition might sound rough for some. However, in this case it seems more like it is providing a hub where commercial activity happens rather than being a negative aspect of the area. That might, actually, be the reason why Papa David chose this site. This corner must be said to have great potential. It sits in the end of a pathway that is basically the highway of one of the neighbourhoods of Enkanini - Chris Hani. Every Chris Hani dweller goes through that corner to get to his house.

Vegetables it is! Everyone eats vegetables in Enkanini! David gets his in Khayelitsha, where the centre is. Comes back and sells them for a slightly higher price. But mabhujwang, the puffy-red-nik-nacks, is what he sells the most. The kids love it!!! So when he introduced this product in his shop, it became populated with young children.

His business has a great influence not just from the kids but also from some youngsters and adults as well. The shop to which Papa David's one is attached, is a barber shop that has music playing constantly. There are lots of people that just hang around on the outside of that shop because it provides something that other places do not provide, some entertainment.

The combination of all these factors provided Papa David to have his shop in a very alive spot. His shop brings him a limited amount of income, but the income it does bring is due to its location.

LIFE AT THE CORNER

Bonga is in a taxi coming from Site B. He will arrive in Enkanini in 5 min. He receives a call from his school friend Mzi. They are at the stop waiting for Bonga. They've been there the whole day standing by the corner where the pathway joins Lhaze.

When Bonga arrives Mzi tells him about an attractive woman that passed by, "yoooo!!!" is all he reply back. Bonga leans back against the wall and spends some time with his friends looking at the passersby and commenting here and there on their appearance.

Soon Mzi has to leave. He has to get some meat for his house. He crosses the pathway and meets Sishle on the Nyama stand. The walls are covered with the soot from the wood fire , but it smells good. There are at least 6 people waiting for food so they chat about common friends while waiting.

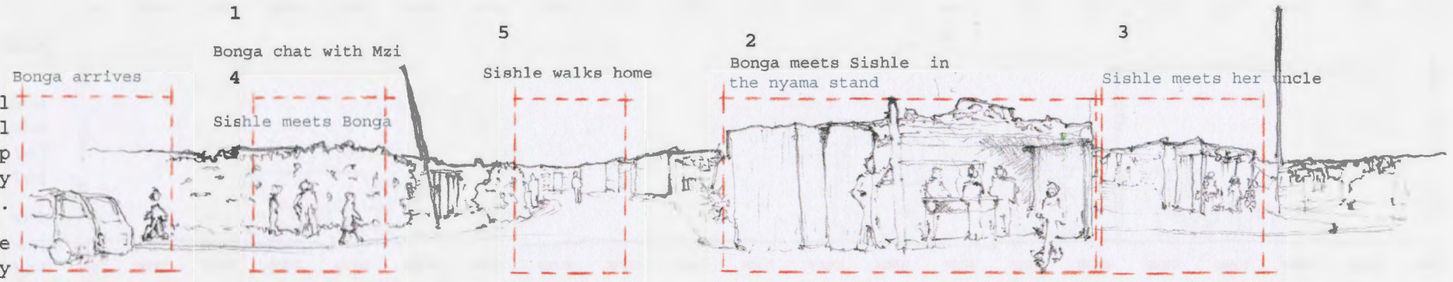
When the meat is right Sishle leaves Mzi and goes out to get some vegetables on the stand next door. The pavement is filled with vegetable buyers. Once inside she sees potatoes, tomatoes, onions hanging from the walls. After picking up what she needs she realizes that she has no money left. So she sees her uncle Mpafa and asks him to help her with the groceries. Mpafa has been a long time without visiting his family so he decides to go with Sishle to her house.

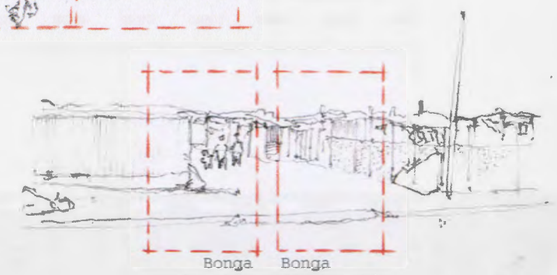
When they walk towards the pathway leading to Sishle house they see Bonga. A quick hello and a shy eye-locking pass between the two. Sishle leaves the pathway corner and walks back home with her uncle.

Bonga is happy to see her and runs after Mzi. Mzi had crossed the road already to buy some beer for his father's dinner. The shop sells a bit of everything, it resembles a minimarket. When Bonga gets there he is still exhibiting his smile, which leads Mzi to deduct that he has seen Sishle. They buy some cigarettes while chatting about Sishle on the shop but quickly Bonga realizes that he was late.

He had stopped on that corner with the taxi so that he could pick up his little brother from the crèche on his way back home. Mzi goes with him to the crèche, they cross the pathway pick up Kuhle. Kuhle was playing outside the toilets of the crèche because his friend was hiding in them. His shoes were filled with sand from the crèche's courtyard and had to be cleaned before the walk home. The three of them walked on the pathway, away from the intersection towards Bonga's house.

After a few hours, the life on that corner had gradually moved to the individual houses. Bonga had been there on the busiest half hour of the day. At that time, the corner was a stage for social encounters and for economical activity. It was the place to be.





Bonga takes his brother home

Bonga fetches his brother at the creche

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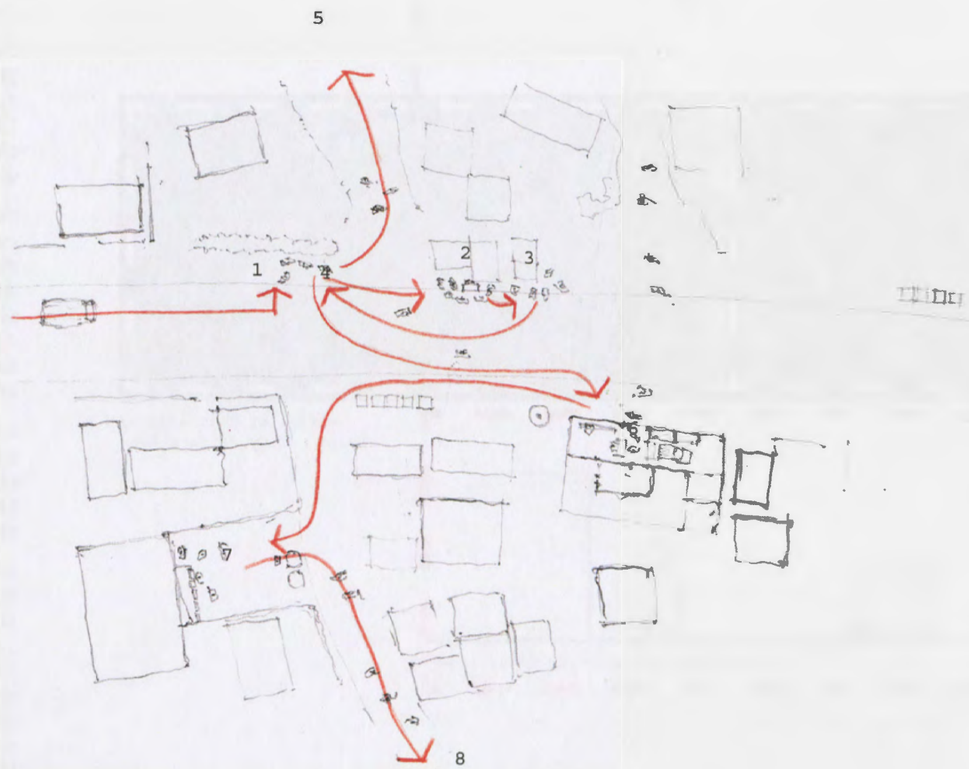
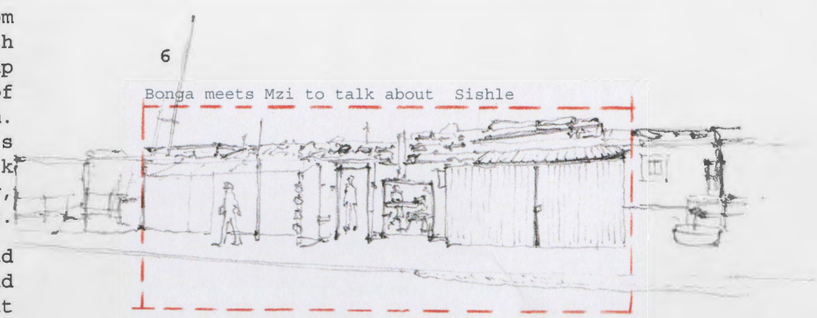
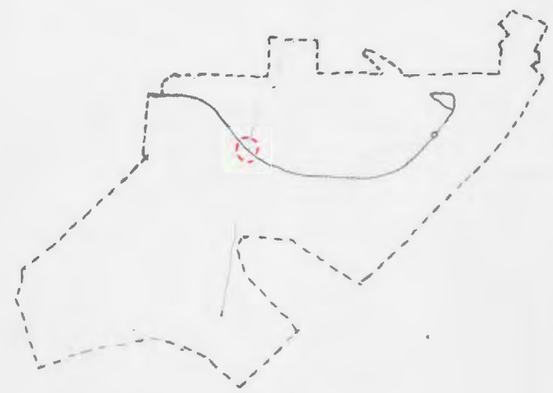
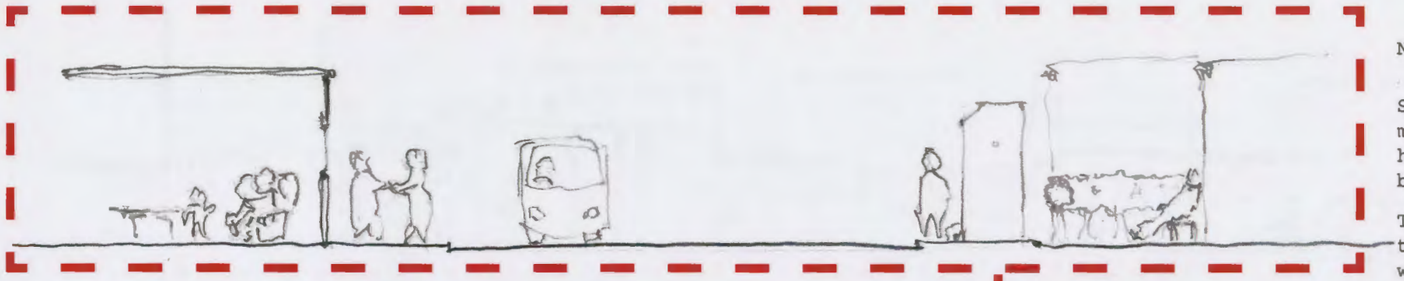


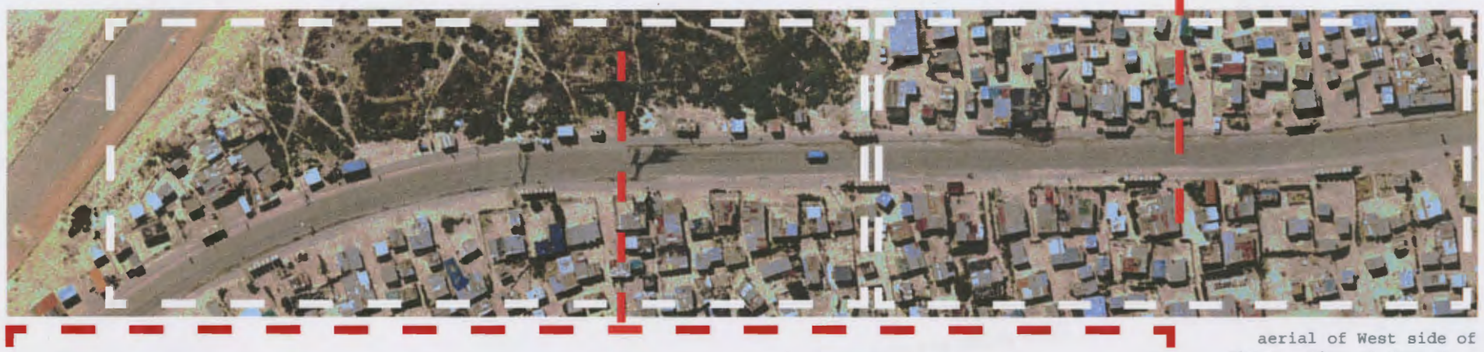
Illustration of "Life at the Corner Story"





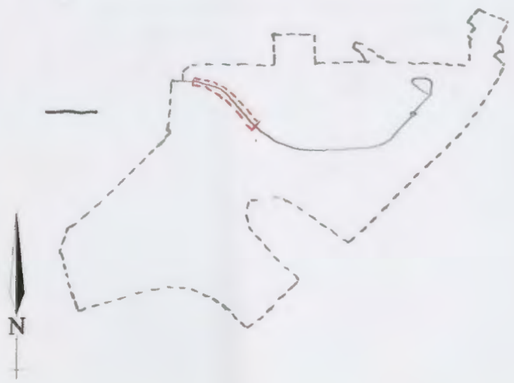


Section through Lhaze residential side



aerial of West side of Lhaze - City of Cape Town

Section through Lhaze on Sigqi side



NAMKO'S NYAMA STAND

She is walking along the west side of Lhaze. She just moved to Enkanini and is looking for a place to install her meat shop. Her name is Namko and, where she stayed before, she used to sell meat on the side of the road.

The place must have a lot of people, and she is aware that this might only happen at rush hour when the workers return home. It helps having the shop next to a taxi or bus stop, but it is not strictly necessary.

As she walks along the west side of Lhaze, she identifies two different conditions on that part of the street.

One, that it is a predominantly residential area. The street is edged by two sides of dense building fabric, the majority being houses. There is very little room for a new building there. Besides, there is already a nyama stand there, so it would not be a good idea to set up her shop here.

Two, that this is where Lhaze is not only the main road but also one of the edges to an area called Sigqi. As such, one of the sides of the road is dominated by private houses but the opposite side, where Sigqi is, has little development. Edging Sigqi are a few shops already established. These have varied functions related to the opportunity of access to electrical power borrowed from Kuyasa.

It seems to her like a nice place to set up shop. There are already other businesses here so she decides to follow the trend and set base there. She builds her shack facing the road and starts her business. As time progresses she starts realizing why people had set up shop there.

Firstly, it was an empty area that no one wanted to build on. The conditions of Sigqi define this area as an inappropriate area for residential construction which left the grounds unoccupied (read Sigqi). Secondly, there is a lot of pedestrian movement that comes from Makhaza and goes through that part of Lhaze to reach their houses. The empty area near Sigqi is the only one with enough space for shops to be built because the rest is occupied by residential development.

In contrast, this edge is known to be dangerous beyond the sun lit areas. Thieves take the opportunity offered by the shaded areas provided by the shops and of the vastness of the area of Sigqi to operate here. It is most dangerous during the night and in the early hours of the morning.

Because Namko only receives her supply after 10 am, she is not bothered with this situation. However, she is extra careful when she leaves at night after closing the shop.

Although the area is less densely built than most places in Enkanini, the shop does well and Namko plans on staying on this spot for a while. She has already established her shop and has a regular clientele.

FISSURE ON THE BOUNDARY

It is half past four in the afternoon. The school bell rang not so long ago. The children have left the school and are on their way home now. They make this moment of the day a big party. On one hand, it's a moment of freedom and relief, and on the other hand, it's the last opportunity to be with their friends for the day.

The walk back to Enkanini is filled with conversations and occasional group jokes about their absent friends. In Makhaza's school the walls have ears, so the gossip happens on the way home.

As they arrive at the Gqabi bridge, the group splits; some take the lower route and some take the bridge. The banter continues even with the participants being at different height levels.

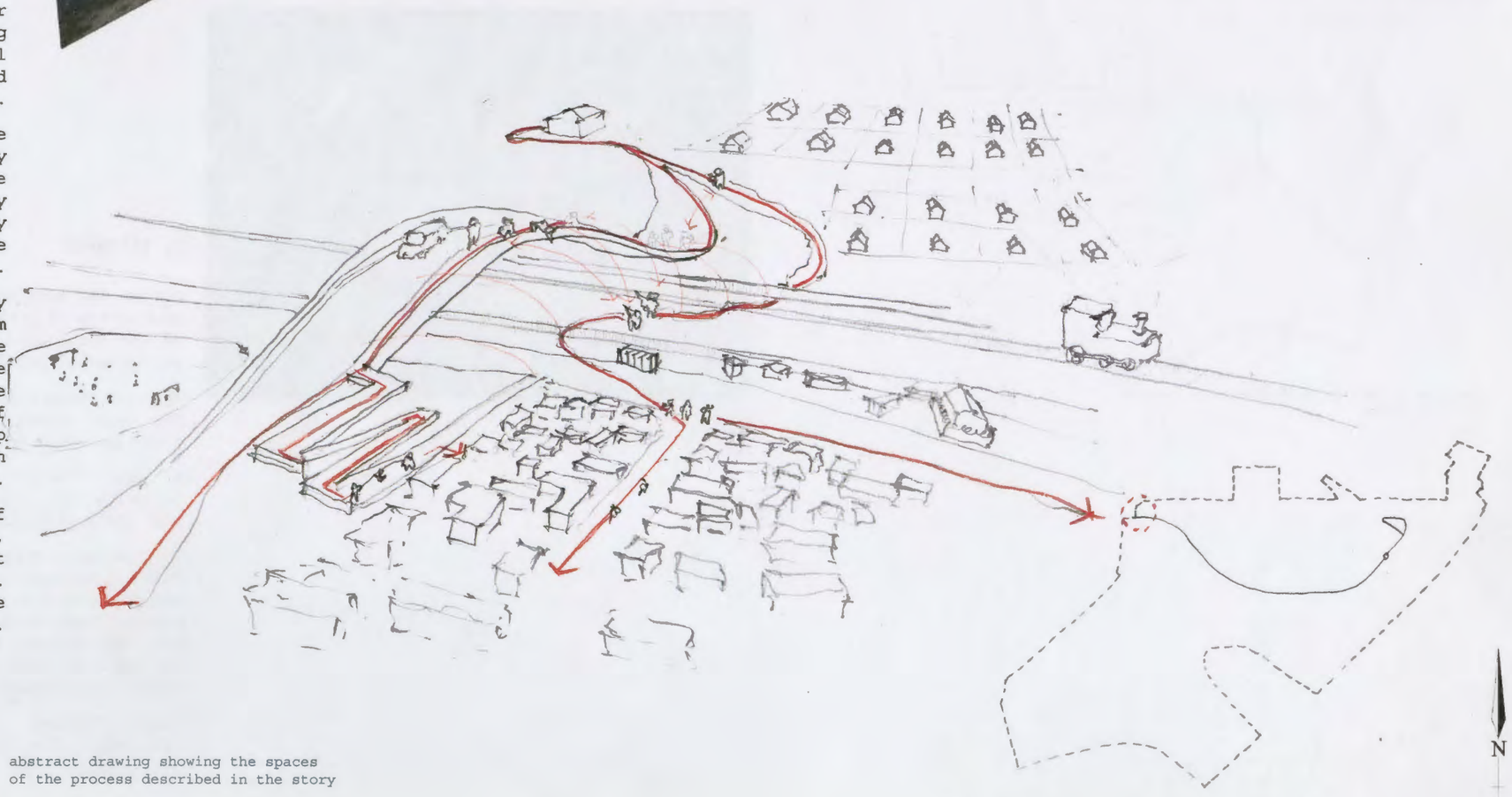
The ones on the bridge descend on the Enkanini side. As they take the ramp to reach their houses, they see the younger kids playing the "skipping-the-rope" game. The typical bullying happens on this cemented space and the older boys carry on to their houses.

At the same time, on the other side, the rest of the group is crossing the railway line. They get in through a gap on the fence that was made by lazy students. They cross the line walking on the already defined shortcut while continuing the talk with the group crossing the bridge.

As they leave the government property, they find themselves in Lhaze. A few meters from this entrance is the intersection of one of the Mfenini's pathways with Lhaze. The corner allows the group to stop and finalise their conversations with the elements of this neighbourhood. After a while the group continues its journey back home through the pavements and street corners of Lhaze.

At this time of the day, this end of Enkanini is filled with life, shouts, games, conversations. It is the gateway that symbolizes home for the returned students. For the rest of the day, the area under the bridge has very little value for its residents.

Montage showing the pathway that crosses the railway, the entrance in Lhaze, and the ramp where kids play 'skypping the rope' - photo taken from the bridge

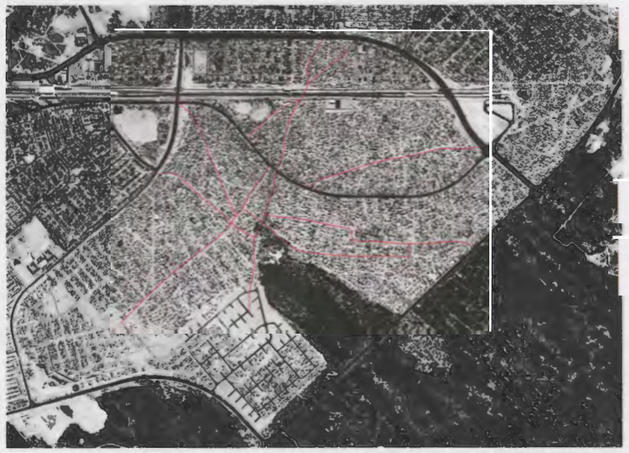


abstract drawing showing the spaces of the process described in the story

Some of the major pathways of Enkanini

Enkanini land in 1999

Pathway points where studies were carried in this paper



Enkanini in 2010 - original pathways as urban structure of today's settlement

B: PATHWAYS

Before the people settled in Enkanini, the area was designed by a series of pathways. The bush, that dominated the landscape of the site, had been cleanedwalked through creating, this way informal patterns on specific lines, created bythe ground.

When the people started constructing their houses in Enkanini, one value seems to have prevailed, the value of preserving those pathways and use them as informants to their settlement.

As such, the pathways seen today are the same as they were 20 years ago. The difference is that these are wide enough now, to accommodate for car movement as well as pedestrian.

The pathways are the only urban structure of the area of Enkanini excepting Lhaze road. These are the streets that define where the houses are built, they are the only access to these houses. Therefore, the pathways are filled with an occupation that is typical of residential areas. The inhabitants use the pathway to reach their houses, but also to engage with their neighbours and form part of the Enkanini society.

What follows is a study that represents this character for the pathway public space. It is aimed at showing how people use it and for what purposes.

N

SHABEEN PUBLIC SPACE

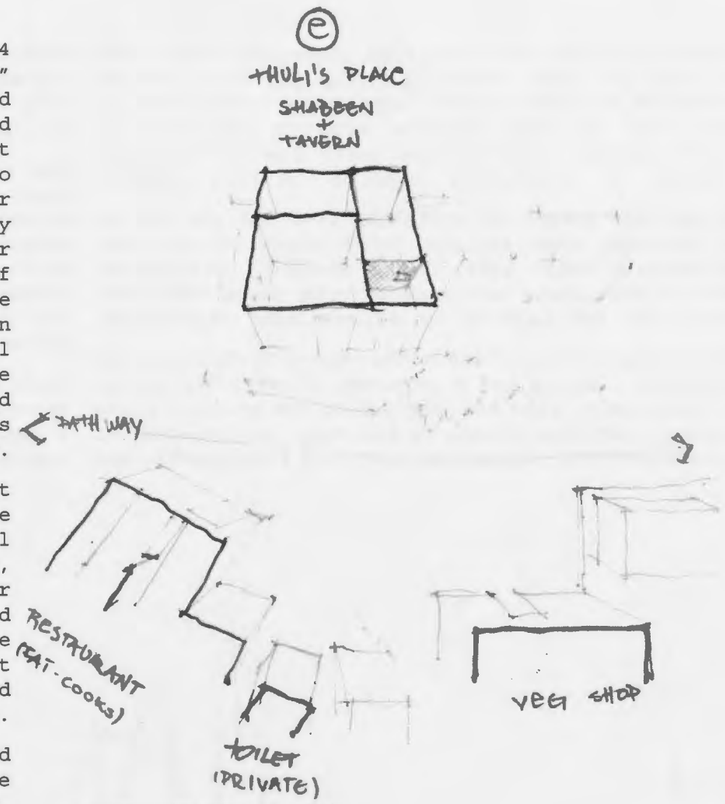
It has been a hard week! Beto has laid his hands on 4 cars in the last 4 days, all of them with that "urgent" character. He cleaned the rust, sanded it down, applied the paste and painted it back again. This one car had a problem in the engine; it wouldn't even turn on. It turned out to be a piece that was broken and needed to be imported from town. So … that's a job for another day! Today is Sunday and Patrice has come all the way from Site B to visit. Beto has not seen Patrice for at least a year. Its 9am and they go meet the rest of the friends in Thuli's Place. Thuli managed to create the most successful business by opening a tavern in one of the pathways selling beer, food and essential groceries. But what really attracts people is the massive sound system that he uses to play local Kwaito and international RnB. This is a feature that distinguishes Thuli's Place because this area has no electricity.

Thuli's Place is filled with early drinkers, and most of Beto's friends are there already. Patrice takes the chance to see old friends but they choose not to chill on the premises of the shop. Rather Beto and Patrice, after getting their beers go to the street where their other friends are. Charlie brought his bakkie and parked in front of the shabeen, opened the back and made a nice seat for his friends. The group grew bigger and got around the car. Eventually more cars came around and the space that the shabeen was serving became massive.

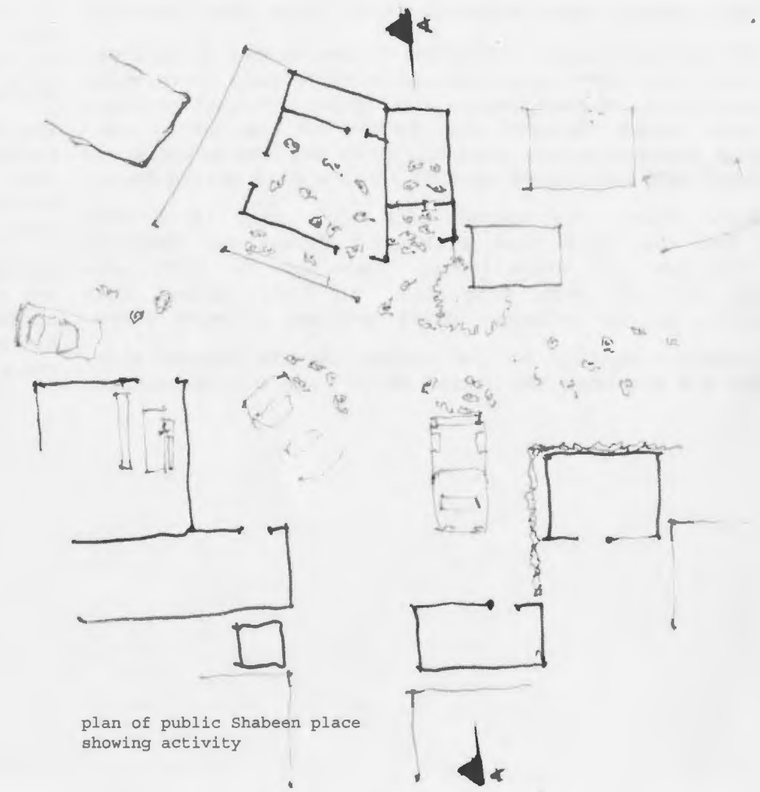
Edging this space were little shops that bloomed around the area because there was always so many people. One of them sells the best "Fat-cook" of the vicinity. Patrice had been thinking about them for months and went to buy a few for the group. When he came back he saw one of the drunk people urinating on the wall of a house. He observed attentively and asked himself if there would be people living right at the edge of such a live public space. There seemed to be a feeling of emptiness about that habitation, but one thing was sure, that one building gave a nice edge to the space, even if it was to go take a piss.

Beto carried on chatting with Patrice. This time was a conversation about their kids. They had just sent Beto's daughter to get some cigarettes on the shop and that's what sparked the conversation. The girl was playing around where her father was enjoying some good time with his friends. Patrice commented to Beto that since he had moved to the new house in the "location" his kids had not been as connected to him as they had been in Enkanini. His new area did not have a shabeen where he could go and spend some time with his friends and simultaneously watch his kids play. He was feeling nostalgic.

Patrice and Beto and all their friends ended that day before the sun was set. It was a good friendship revival. Patrice in particular returned home remembering the times that he used to live in Enkanini.

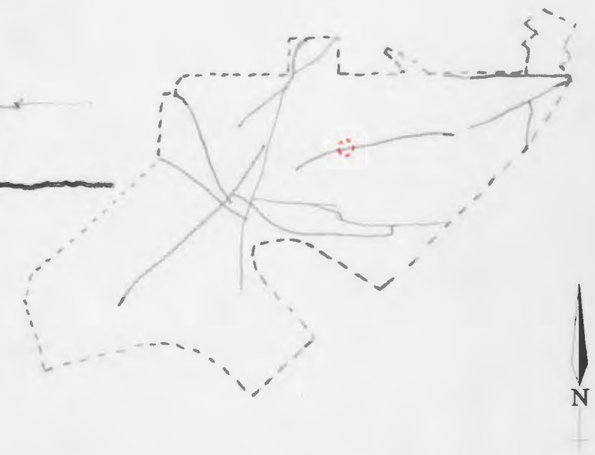


perspective plan of public Shabeen place showing volume



plan of public Shabeen place showing activity

Section through public Shabeen place



CROSSING GQABI

Mzakezeke is 26 and owns a vegetable shop on one of the busiest corners of this area. He lives in Zwelitsha 4 on the pathway that separates this area from Mfenini.

And what a busy pathway! He tried to open a shop on it about two years ago. He was feeling positive because there were, and still are, so many people passing through that pathway. But soon Mzaks realized that he was in the wrong spot. About a hundred meters from his shop was the point where Enkanini ends and Kuyasa starts; it is a road called Gqabi.

He knew Gqabi. The corner with this road is a taxi stop for the taxis that link both Kuyasa and Enkanini to the rest of Khayelitsha. There is so much more people and so much more life in this corner than there is on the pathway! Mzaks decided to move there.

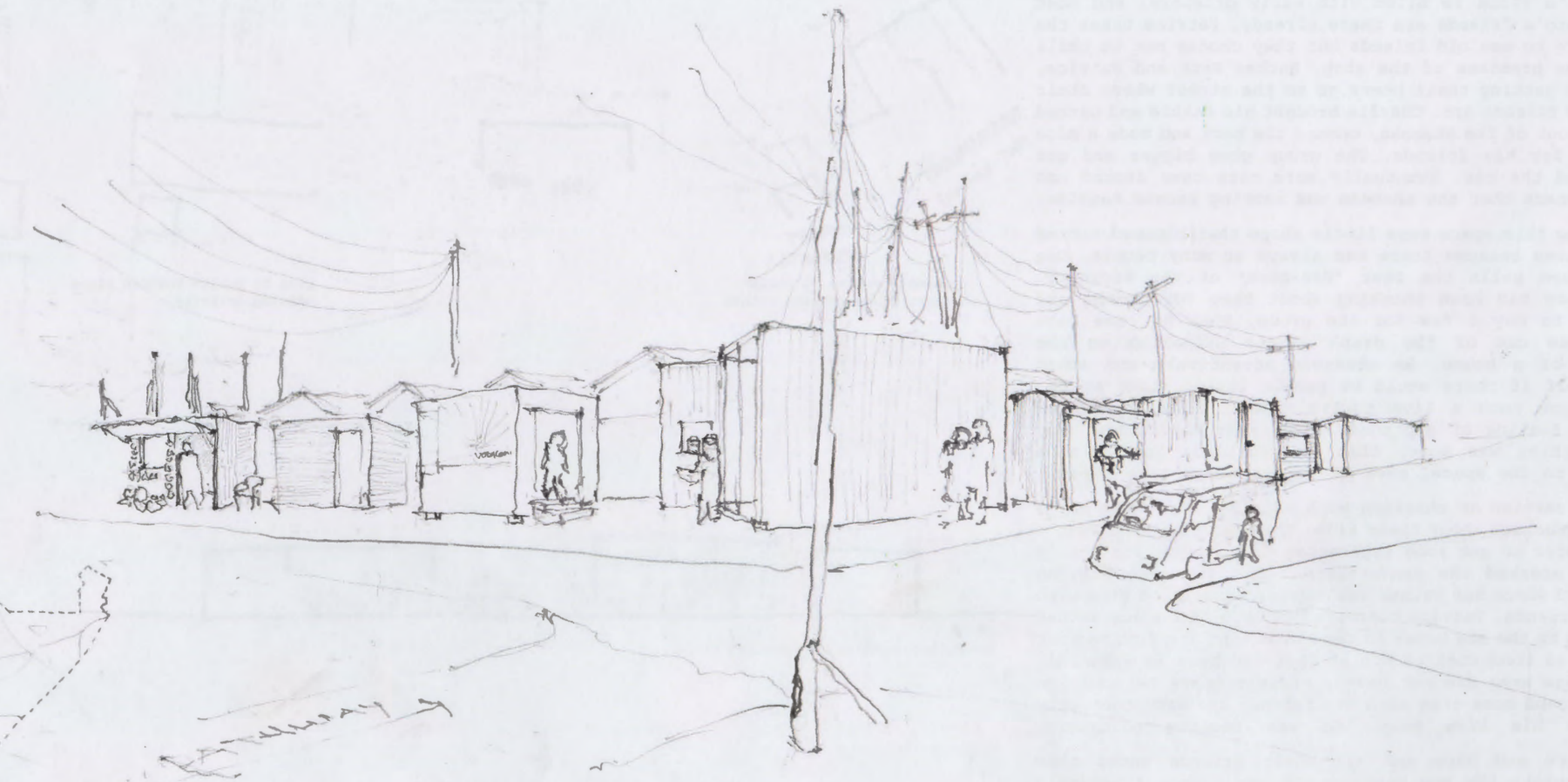
His shop is exactly on the corner, on the Kuyasa side. Behind him are some RDP houses which form a nice backdrop for his shop. In front is a tar road, something that Mzaks was not used to. This ended up being positive because it contributed to less client complaints about sand in the vegetables. On the opposite side of his shop is the most frequently used recreational area of Enkanini. Here, there is constantly someone playing soccer.

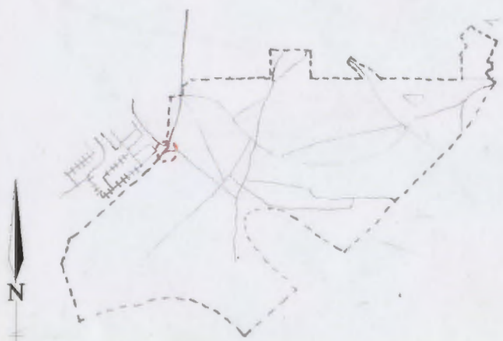
The life on this corner is different from the one on the pathway. Business runs solidly for 8 hours of the day, from the morning until late in the evening. Late in the afternoon is when there are more clients going back home from their job and passing by to get some vegetables.

Another advantage of being here is the ease with which one can get electricity. Kuyasa has a permanent electricity system already. Previously, when his shop was on the pathway, Mzaks had a cable pulled from Kuyasa to his shop. Now he looks at the roof of electrical cables over Gqabi and feels good to not have to be part of that system. This also brings to his side a host of other activities that did not exist on the pathway, like hair salons and phone booths. Having these businesses around contributes towards bringing clients to his shop.

Mzakezeke is concerned with one thing only. The soccer field towards which his shop is oriented often has some undesired activities. When it is dark that area is not very welcoming and often people get mugged in it. Since his shop is right in front of it, this constitutes a problem for his economical activity. Mzaks has therefore decided to open his shop only after the sun rises, even though there is a potential for business in the early hours of the morning.

Mzakezeke's vegetable shop has much more success in this corner than it did on the pathway. This corner is like a gateway between Enkanini and Kuyasa on a small scale, and with the whole of Khayelitsha on a larger scale.





UNDIZE

1… 2 … 3 … 4 …

Lihle counts

5 … 6 … 7 … 8 …

All the other kids run.

It's a frenetic run to find the perfect spot. They have to be hidden from Lihle when she stops counting and it's not too far from now.

10 … 15 … 20 …

Lihle is on 23, and is counting fast. Lizwe finds himself a spot behind his neighbour's tin dressed house. It's hot! The sun has shined on that wall the whole morning… It's worth it though, he can see Lihle but she can't see him.

On 29 Portia hides behind the water tap. He lies down under the thick grey cement base of this public infrastructure. He thinks to himself, Lihle will never come here. And if she comes, she won't recognize me behind the forest of plants that grew up from this life fountain.

On 34 Thabi moves from her original hidden spot behind the thick hedge of her house to the other side of the pathway. She thought: all of them are on this side, if she moves here I can go and 'count-me-out' from the other side. She goes around Lihle, slowly and quietly to enter a toilet room of one of her neighbours. It was the perfect spot, through the holes existent on the rusty tin door she could be aware of what was going on in the pathway.

At 45 Lihle stops counting, "IM COMING" she shouts. She crosses the pathway, up and down but always with the guard of her counting spot. Her shoes are filled with the sand that forms this walkway. She feels rather forgetful of this fact, she is focused on other things now.

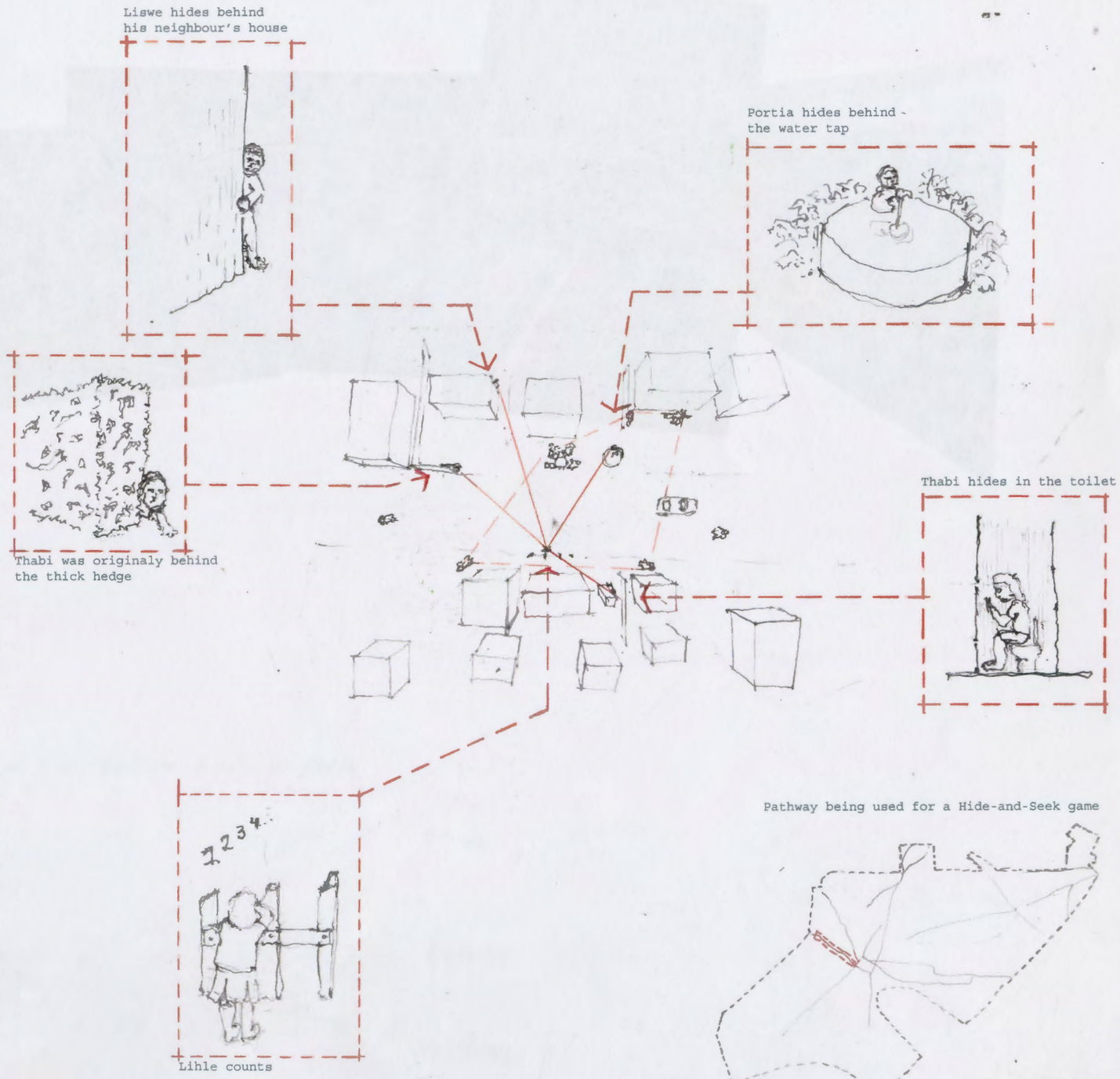
Lizwe hesitates, Lihle sees him in the corner of her eye and she crosses the pathway again to count his name. Lizwe also runs intensely and jumps to the timber plank that both structures Lihle's house fence and defines her counting spot. The jump was incredible, like the ones you see in American baseball games when its 'touch down'. He didn't make it though.

Lihle departs again with a victorious laugh that her parents can hear on the other side of the pathway. She is getting closer to Portia. He stands up and starts running. In the mean time, Thabi takes the chance and makes a run as well.

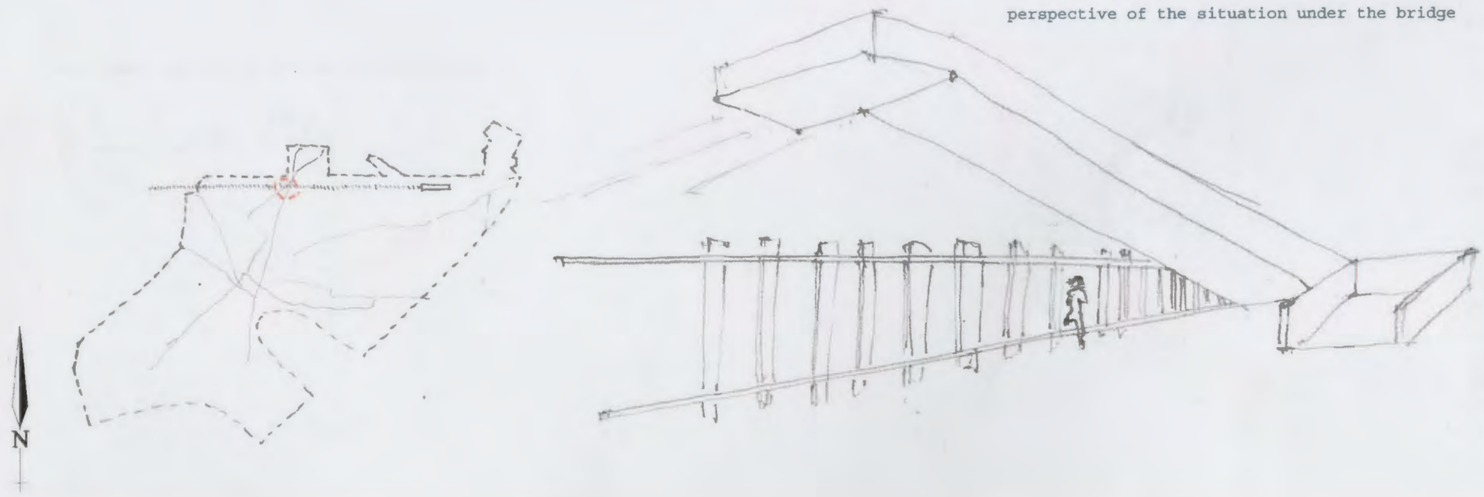
On this emotional process of wining attempts, Portia trips on an embankment of sand covered by grass. He falls, and in the process, unintentionally, trips Lihle. They are both on the floor when Thabi reaches the pole and saves them all.

Lihle is not impressed. She does not find this fair, and decides to go and play a skipping-rope game with the others. Her three friends are not happy with this decision either and go discuss the issue with the elders. Lihle's mom and some of her friends are sitting in a shadow of one of the houses that surrounds this pathway. She consults the other elders across the pathway. There is a short discussion about it, and most of the people of the area take part on it.

It becomes a communal decision to let the kids decide for themselves.



Montage from the top of the bridge looking at the space created from the intervention



perspective of the situation under the bridge

WHAT BECAME "THE BRIDGE"

Lunge arrived in Enkanini in January 2004 after being evicted from her previous house in Philippi. She and her family were one of the first families to move to this new settlement.

When the government decided to extend the Khayelitsha railway line until Enkanini, they evicted thousands of families in order to make space for the railway line to be built. Luckily, Lunge's house was situated just outside the area of eviction.

Her house, the one that survived the eviction, was situated near the pathway that crossed Enkanini from north to south. Because she was at this corner she could observe the evolution of this space.

Before the railway, the pathway was a continuous route that was used by many to reach the neighbouring settlement of Makhaza. As the railway invaded the space, the pathway was interrupted, breaking the continuum of street life.

To provide the link interrupted by the new railway line, the government built a bridge over the railway. The people of Enkanini quickly found a way of bypassing this system and crossing the railway through government property.

The end result of this development is a failed space. Lunge now lives in a place where there are no houses, no neighbours and no one to look after her newborn children. Moreover, this space is overwhelmed by the bridge structure, which provides the opportunity for illicit activities.

C: OTHERS

Enkanini's public spaces cannot be summarized by only looking at the two ways of movement in the settlement. There are areas that are of importance to the understanding of Enkanini as a whole and which will be relevant to define strategies for intervention.

As such, what will follow is a study of a few communal areas that have relevance for the everyday life of the dweller.

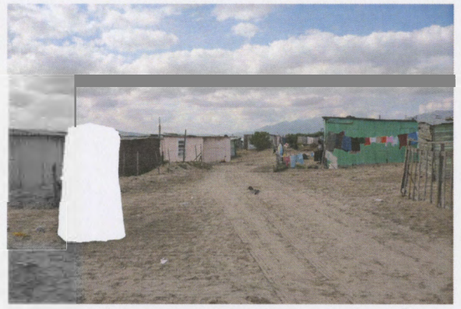
Some of the areas are noticeable because they constitute pockets where there is no existing settlement. These are areas that have geographical conditions that force for this situation to happen. However they become important spaces for the opportunities that they provide exactly because they are not inhabited.

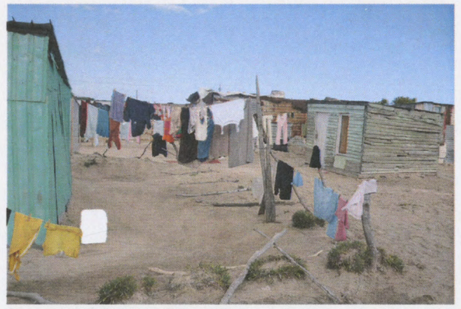
The government position towards the informal character of Enkanini has physical repercussions. The services provided (or not) have spatial implications. Some of these spatial implications will be illustrated here.

Also of interest is the spaces used by the community as a whole. The existence of these spaces is of relevance because they do not come from an individual need like the houses do. Rather they are formed out of a communal need. Their spatial characteristics and conditions will be part of this research.

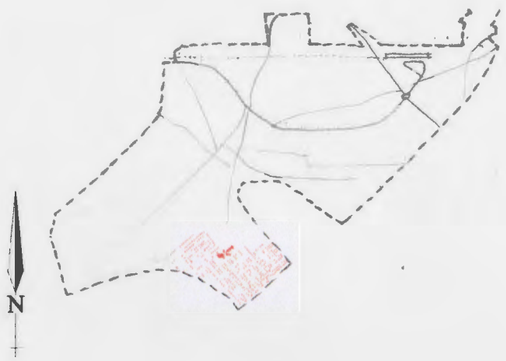
Once these studies are completed one has an understanding of the conditions that inform the everyday life of the Enkanini population. The study explains where, how and when the people use public space in general, and the ones studied in particular.

Areas of study in this chapter





different types of solutions provided by the government for the toilet situation in Enkanini



CONCRETE BOXES MAKE PLACE

Pilisiwe is seventeen and happy. She is living those beautiful times of adolescence. Today she found out about one of her friends affair and she is desperate to share this informatibn with Sishle, her best friend. She walks out of her house towards the main road of Enkanini. There she finds Sishle chilling with all the guys. They are on the south side of the Lhaze main road, some standing some sitting on the pavement with their feet on the road. The group is telling stories and jokes about their past week in school. Pilisiwe arrives, greets them all and falls into the conversation quickly. The distraction caused by her friends' conversation made her forget what she was there for but quickly she remembered.

Pilisiwe pulled Sishle away and dragged her to the other side of the road. There they stood leaning on the concrete walls that provided the only public infrastructure of the main road - the toilet walls. They leaned on those walls completely indifferent to the negative connotation normally attached to them and they gossiped. They gossiped about school, they gossiped about the people passing by, they gossiped about the boys across the road. It seems to be a custom for this group of friends to come to these walls and spend the day gossiping.

Pilisiwe was satisfied that afternoon when she went home but this procedure does not always happen on the toilet walls. The toilets installed in Lhaze by the government have little maintenance. Once installed, they are locked with a rusty locker and the keys given to a group of families that lives around. One of the keys is held by Pilisiwe's family but they don't take responsibility over the toilet. It is a shared property there is no money to invest in a communal belonging! Often these toilets get broken within six months of their lifetime and then, yes, they become a negative space. When a toilet is malfunctioning Pilisiwe and Sishle run away from that smelly wall and find other places to gossip and meet their friends.

LIVING WITH(OUT) THE TOILETS

Cynthia does not live in Lhaze… nor does she live in one of the main pathways that cross the neighbourhoods of Enkanini. She lives in one of the sideways, on a path that only she and her neighbours know. No one there has access to a toilet, only the Lhaze inhabitants do. In these early years of Enkanini Cynthia has to go to the bush to perform her necessities and at night this can be dangerous. Following complaints done by the community the government brought and placed blue plastic toilets on nearby pathways to Cynthia's house.

Wrong decision!

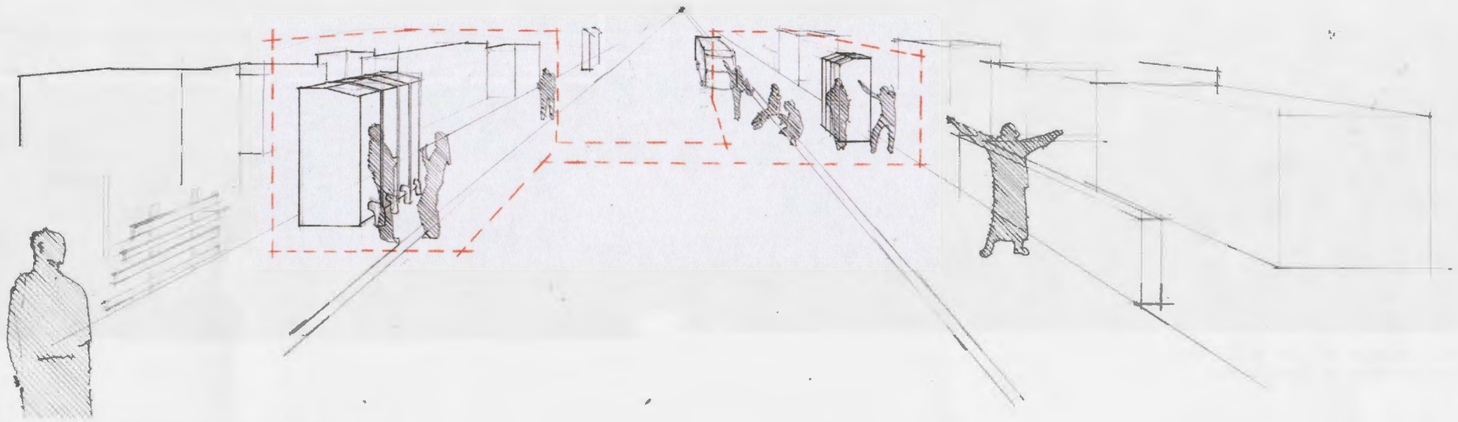
The people felt happy at first to have toilets close to their houses. But it soon proved to be a nightmare to have such dirty objects near their premises. No one took ownership of these toilets. They became dirty, smelly and disgusting and started interfering with the everyday life of the neighbourhood.

Cynthia moved the toilet positioned near her house to another place. She couldn't handle the smell and nor could her children. The toilet was moved from corner to corner until they found an opened space far enough from every house not to have it interfering with the private lives of its neighbours. A few of the blue plastics got so despised that some of Cynthia's neighbours took it to their own house and claimed it as theirs.

The situation was unbearable even though they had found a temporary solution for it. The issue was taken to the community meetings and then to the government. This one came with another temporary solution. It was a toilet box given to each household that could be taken inside, be privatized and then thrown away. There would be pick up points where a government truck would pass through every 3 days to collect the boxes and supply new ones. No one seemed to be strictly opposing this solution when it was implemented. But it was still a temporary solution which was costly for the government.

As a consequence, Cynthia is now seeing a new set of toilets being placed near her house, the same toilets that exist along Lhaze; the toilets that have a limited life span of 6 months only; the toilets that when faulty become a fountain for a river of waste water. Cynthia is not at all happy with this issue and nor are her neighbours. But the construction is going through and every day there is a new group of toilets placed around her neighbourhood.

For now they can't do much. They live in the hope of receiving a plot of land organized by streets and occupied with a house and a toilet, a private one.



Positioning of Pilisiwe and her friends

GARBAGE-DUMPING PLACES

They were installed to provide a service to the community. There is one garbage container in almost every intersection of pathway in Enkanini. The system is simple: the residents put the rubbish inside these containers and a municipal truck collects its contents every two days.

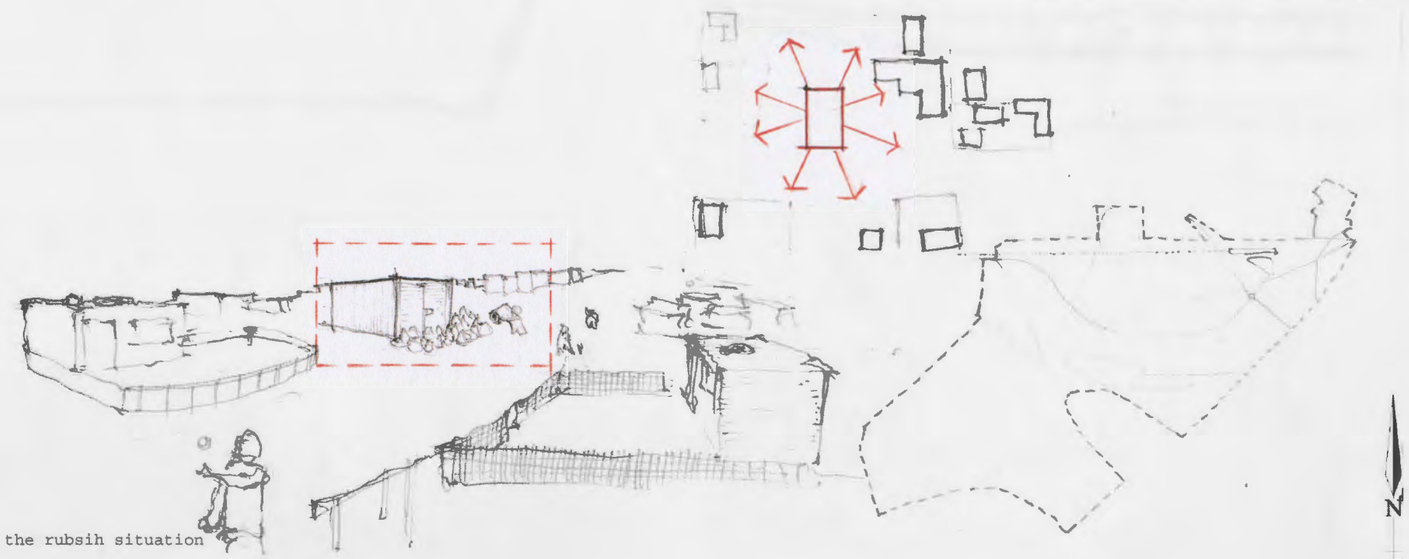
The containers installed by the municipality in the area of Enkanini are supposed to work efficiently, but the fact is that they do not. On one hand, the municipality blames the residents for being lazy and not dumping their rubbish inside. On the other hand, the residents find the containers locked and are forced to dump the rubbish on the street.

Whatever the reason is, the containers of Enkanini are associated with negative and filthy spaces, which constitute a problem in their vicinity.

The residents living in close proximity to these containers find ways of dealing with this situation. Since they cannot move the structure because of its weight and size, the people move their houses to the point in their plots furthest away from the container.

The consequence of this is that corners lack edges and immediately surrounding buildings. The corner thus becomes a negative space, and the residents avoid it rather than engage with it.

Rubish containers push residents away: negative space



View on the rubsih situation

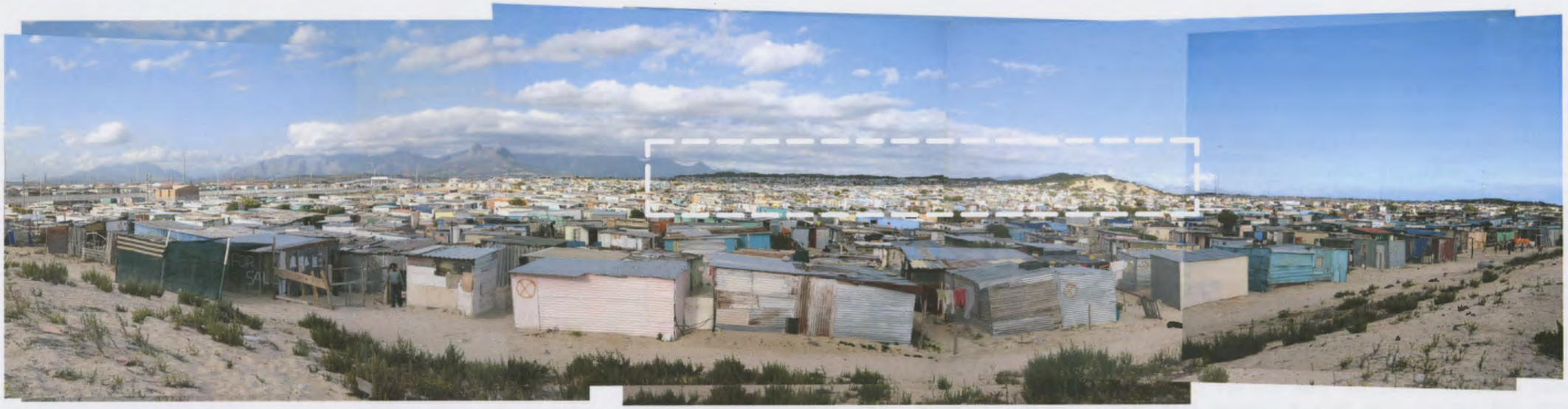
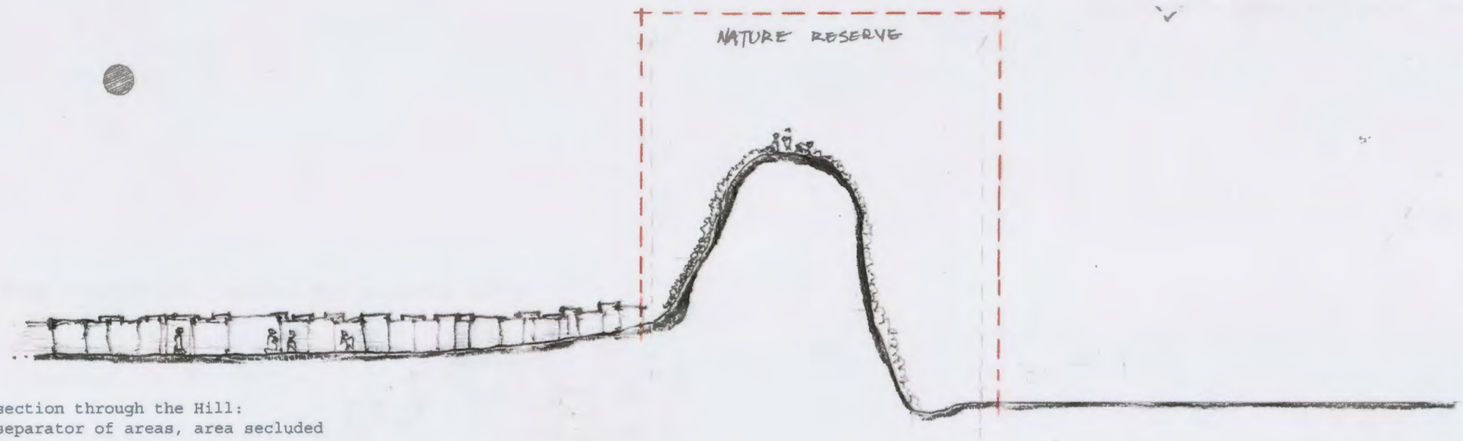


Photo montage of the Hill: seen from everywhere in Enkanini



section through the Hill: separator of areas, area secluded

THE NATURE RESERVE

"Welcome to the Hill", he says. My eyes were blindfolded but I knew exactly where I was. It was that mound at the end of Enkanini. He had taken me by mistake, I told him that. He wouldn't listen. I couldn't do anything else but pray.

I was, very unfortunately, passing by his house when a man shot his car. The man obviously ran away, and I didn't know what to do, so stupidly I remained standing there.

The owner was a Tsotsi, one of those new ones that didn't know exactly what was going on but wanted to make an impression in society. He pointed his shotgun at me and I froze with fear.

My face was covered and I was pushed into a car. We drove, not for too long, and we stopped. He pulled me out, I fought back but my hands were tight and I didn't know what to do. I was in a panic.

We started walking up. It was a steep hill and a difficult walk. I must say my emotions were not helping, but that sand was just too loose to allow me for any movement. The smell was equally disturbing… it felt like I was in the dumpsite of all of Enkanini… apparently I was.

We reached the top. He said those obvious words that I started this story with and uncovered my eyes. The view was splendid; the whole of Enkanini was in front of my eyes lit by the moonlight. At least I had a nice last image in my mind before I went to see my forefathers.

As I thought this, he pulled his cell phone to my face. He examined me and remarked, "But, you are not the guy that shot my car!? What are you doing here?"

I am sure that that moment was controlled by my ancestors. In any case, I managed to survive it but that hill will remain a scar in my heart. Every day I look at it and remember that night.

Photo of Zwelitsha in the process of being constructed

Photo of Zwelitsha's concrete toilet storage near Zola's house

LIVING IN THE NEW ZWE-ZWE

Zola bought a pint of beer. It's a hot day and his friends are all helping him out. There is a good reason to be happy. Zola is installing new cladding in his old house and is happy by the fact that they are doing this in his new plot.

Zola was one of the first residents of Enkanini to receive a house from the government. He is living in Zwelitsha 1, a neighborhood that was, from the beginning, intended to be developed as housing.

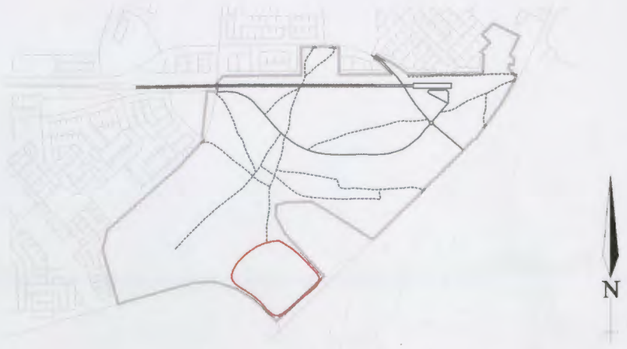
The area is to follow an urban design that is starting to be implemented. Today, Zola has a plot of land defined by a tar road. On one end of his plot he has a water pipe sticking out of the ground. This is meant to serve the toilet that will be placed here soon. In fact, a cemetery (or a birth bed) of pre-cast toilets occupies the group of plots opposite Zola's house.

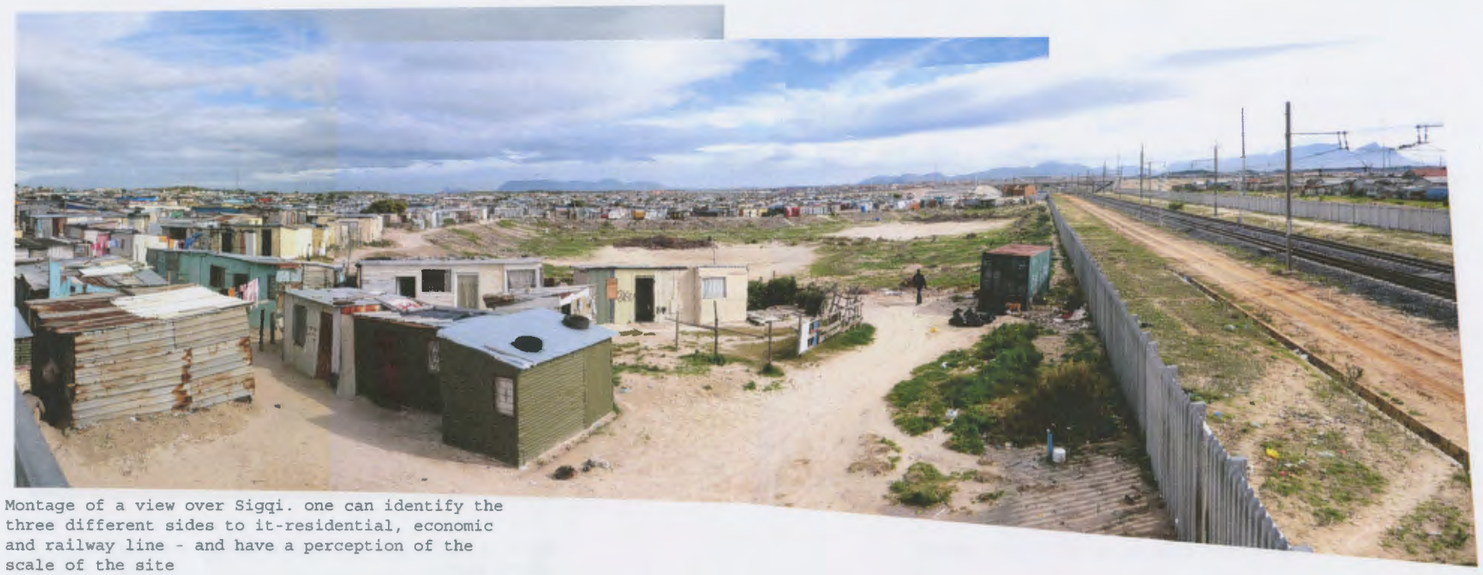
The tar roads design seems to be an orthogonal spider web with a single escape route. Zola relates it to the houses built in Kuyasa, where he sometimes gets lost when he visits them.

That, however, provides no reason for disappointment. The dream of having a solid house is finally being materialized - therefore there are only reasons to celebrate.

The area of Zwelitsha has been set aside for housing projects. The informal growth of the Enkanini settlement has not spilled over this neighbourhood.

An image of the future of Zwelitsha, the housing project on the neighbouring comunity Kuyasa





Montage of a view over Sigqi. one can identify the three different sides to it-residential, economic and railway line - and have a perception of the scale of the site

the three different edges

Section through Sigqi

SIGQI

Sigqi is a depression in the landscape of Enkanini, an area unoccupied by houses but with a fair amount of fame among the residents of this settlement.

Sigqi is seen as an inappropriate area for settlement since the very beginning of Enkanini. Even though it is situated right at the corner of Makhaza and Kuyasa, it is characterized by a small valley which creates the opportunity for water to pool during the rainy season, thus the people's decision not to build on this land.

On the first of three sides that delimit Sigqi, there exists the railway line's concrete fence. Even though this barrier was constructed, the people of Enkanini overcame it by opening gaps on the parts of the fence that blocked the already existent pathways. On the second edge of this space, there is a pathway that separates Sigqi from a line of privately owned houses. These provide the only source of surveillance to this space when no one occupies it. The third and last edge is a slim piece of land along Lhaze road, used by entrepreneurs of this settlement to run their businesses.

Sigqi has a varied character when related to the actions that happen in its space. To start with, this is an area that is not owned by anyone, neither the municipality, nor the residents around it. Consequently, the area is prejudiced by the dumping of rubbish by the neighbouring residents and the discharge of a sewage pipe of a part of Makhaza. Sigqi's scale does not allow for this to become the major problem, but it sure adds to the character of the site.

Because the valley is a no-man's land, at night it becomes a dangerous area for inhabitants to pass by. It is dark and, again because of its scale, is not easily seen from the surrounding edges. Sigqi becomes an area appropriate for theft and other illegal activities.

Sometimes, when a thief has been caught in the area, the residents take him to Sigqi in order to give him a communal judgment for his acts. If the police does not intervene on time, this often ends in a practice known as «neck-lacing» of the suspect, whereby the suspect is placed inside discarded rubber tires, doused with petrol and set alight.

In fact, the area of Sigqi has been, since the beginning of the settlement, used as a community gathering space. When there is a need to carry out a meeting about issues that influence the full extent of the community, this meeting occurs here.

The expansiveness of the area equally allows for children to play the games that require wider spaces than the pathways where they live in. During the day, as the kids play, other people cross Sigqi attempting to shorten their travel distance.

The area is positively used while there is sunlight, but as the moon rises or the rain falls, this space is transformed to be one with negative connotations attached.

THE COMMUNITY MEETINGS

Cynthia is a member of the community committee of Ark. Her attitude to life is simple and her house and children reflect this.

Her husband, Left, and her, had a meeting with the community last Sunday. It happened at 9 in the morning on the widest area of the path that runs past their house towards the west part of Enkanini. The "community hall" is an open space in a sandy pathway with one of the sides slightly raised by an accumulation of sand. It is edged by private plots that are fenced by single lines of wire supported by off cut pieces of erected timber. Two plastic temporary toilets supplied by the government are situated on one of the edges. Being abandoned, these provide normally a negative space on the pathways of Enkanini. Here the derelict toilets provide another edge to the community space on this East-West axis of Ark.

There was a set of speakers on the little raised part of the space. Cynthia and Left had chairs, and when they spoke they stood up to be seen and to be understood better. On the flat part of the site where all the other residents, some standing, some with their private chairs, some even leaning on the walls of the surrounding building structures.

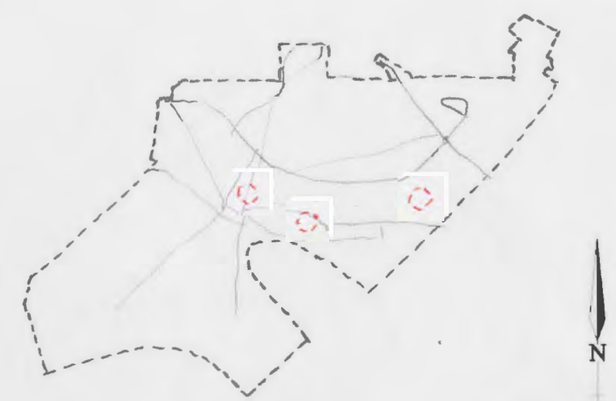
The main subject under discussion was a dispute between a member of the committee and a member of the community of Ark. The latter had brought a family member to build a house in the area without giving written notification to the Committee informing that this would be happening. Its inclusion in the meeting was an attempt to resolve it on that Sunday morning before it went to court in the new centre of Khayelitsha. Additionally to this issue, the meeting discussed a set of toilets that was being built by the government on this neighbourhood, one of which was 10 meters away from Cynthia and Left's house.

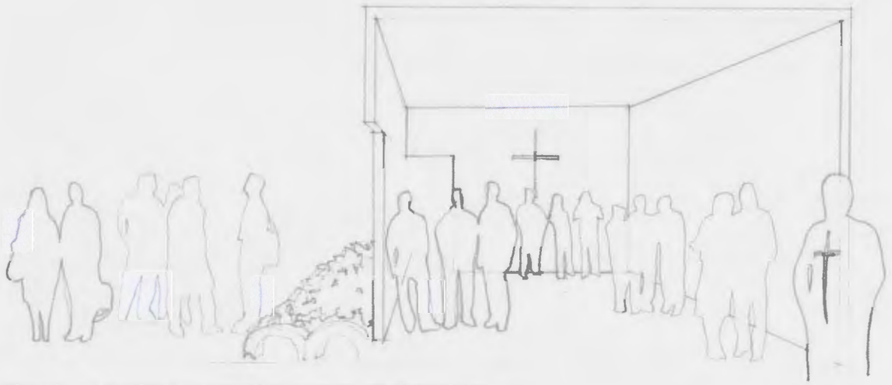
The people decided in favour of the committee for the first case. The toilet discussion was however more lively, because everyone pitched their own interpretation of the situation.

Cynthia and Left stayed behind after the meeting ended, and so did a few others. The space was now occupied by various little groups of friends and acquaintances giving a much more informal use of that communal area.

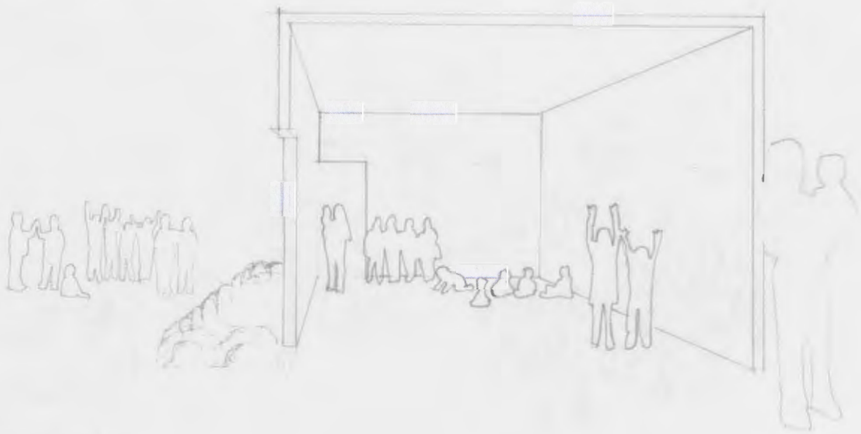
When it became too hot to be in the sun, Cynthia and Left returned home and continued the conversation with their friends in a more protected area.

The meeting happening in a part of the pathway that allows for more people to gather, where the pathway opens up



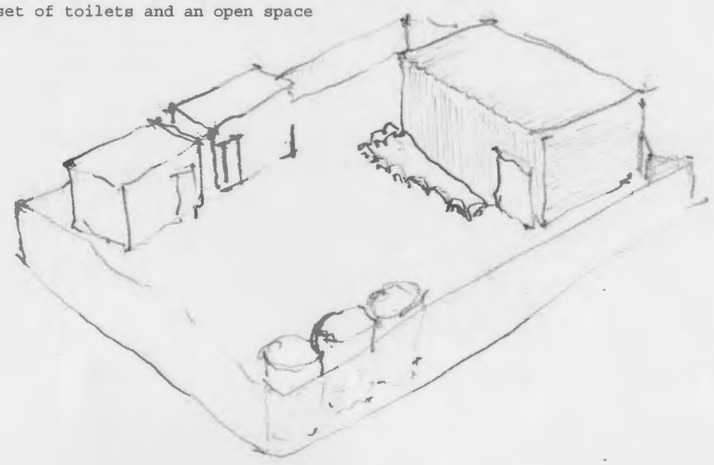


Church on Sundays; community centre on Saturdays



Creche during the week

One example of a Creche with and enclosed area, a set of toilets and an open space



CRÈCHE

Most of the kids have left the building now. It was a busy day for Sizwe. Because it was a nice day, the kids wanted to play on the courtyard of the crèche the whole day. The fence around this courtyard was the only limit to these kids' wildness!

Now Sizwe has to get the crèche ready for the Saturday community meeting. She has to move all the mattresses out of the room and create space for the 200 members of the community that will come tomorrow. There is a lot of work to be done, but she has her two children to help her. Once the job is done, they all go home to cook dinner and sleep to recharge energies for the next day.

On the following day the people start arriving for the community meeting. They are all wet because it is pouring with rain outside. Sizwe knew that this would happen; in fact, it's because they predicted rain that the meeting was held in her crèche and not on the pathway. So she organized a wet area for the jackets to be stored for the duration of the meeting.

Cynthia was there with her husband Left. The issue under discussion this time was different from the last meeting's. They were worried about the gunshots they heard on the hill the previous Wednesday and were determined to find out what had happened.

After the discussion, when the meeting finished,, the participants left the crèche. Today there was no after-meeting gathering because Sizwe needed the crèche space. That afternoon, she would have the party of one of her students in there. She needed, once again, to organize the whole crèche to accommodate for the party.

Some of the students' parents that came to the meeting stayed behind to help Sizwe getting the party ready. As soon as they were finished the kids started arriving.

The crèche was full again with the exact same children that Sizwe sees every day. The weather had changed, it had become sunny again. Outside, in the courtyard, the environment was again filled with life and play. This party had a different character from the everyday crèche session because the parents were part of it.

Sizwe had a busy but great day. She was not done yet though. After the kids' party, Sizwe had still to prepare the space for another function. Every Sunday the Adventists church rents her crèche to perform their service. Her own children are exhausted from such an eventful weekend but they still help their mother getting the space ready for the church service.

Sizwe does not go to church. Instead she decided to spend some quality time with her children. That afternoon they would have to get the rooms ready for the crèche on Monday again. The weekend was unusually busy, but Sizwe and her family are used to having community functions happening in their crèche.

DEFINING THE STATION'S PRECINCT

The people call him Tatu Mbeli. He is the community leader of the area of Chris Hani. He moved to Enkanini when this area was still starting to be occupied. He always had management skills and that helped him to be where he is now.

When Mbeli moved to Enkanini there were very few houses constructed. Soon he witnessed the quick building densification that happened here. The diverse community that blossomed around his house was something that Mbeli was not used to but felt somehow happy about.

The process of occupation observed by Mbeli was no different from the majority of people in Enkanini. He suddenly felt that he was in the middle of a dense residential area which was fighting for the right to settle there. Later, he saw the construction of the railway line and the people evicted from the space that this line now occupied. He was one of the few lucky ones whose house was not included on the railway space and is thankful for that.

With the construction of the railway line came the construction of a railway station. The Chris Hani Station was situated right next to Mbeli's house, and when it was inaugurated in mid 2009, it provided a service that was needed in the areas of Enkanini, Kuyasa and Makhaza.

When in 2007 this station was still being built, Mbeli could look towards west and see all his neighbours that fought for the right to settle in Enkanini with him three years before. Now in 2010, the view towards the west is not the same. These friends were also evicted and what is left is an area of about 1.6ha defined as the "station precinct".

Apparently this is an area that was reserved by the government as a future development area with the intention of making a precinct for the station. It is defined by a ring road that is meant to be used by taxis as a stop, which does not happen. Besides the tar road for the taxis, the surrounding area has simply sand covering a vast area filled with emptiness.

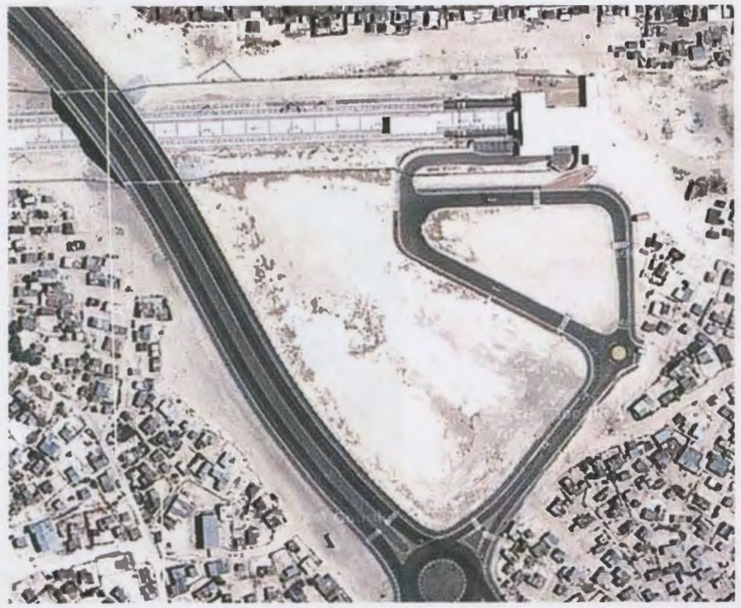
Mbeli uses the train when he needs to go to Cape Town. To do so he habitually crosses that space to reach the entrance of the train station. But his idea of the precinct is associated to another function, much more related to his role in the community.

Because the station precinct is so big, it is used to gather a very large group of people when this is needed. When political parties come to Enkanini, they advertise a gathering on the Chris Hani Station, which attracts hundreds of people.

Mbeli sometimes uses that exact same space to stage his neighbourhood meetings. However, some people feel overwhelmed with the scale of the precinct and prefer to have smaller meetings in smaller places.

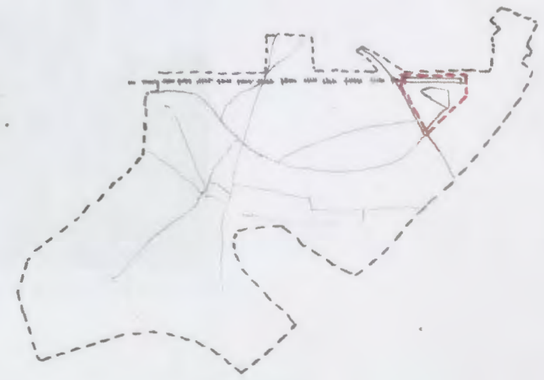
Mbeli sees the potential of the precinct to be an important area for Enkanini. For now, it doesn't do as much as he would like it to, but maybe the future will change this situation.

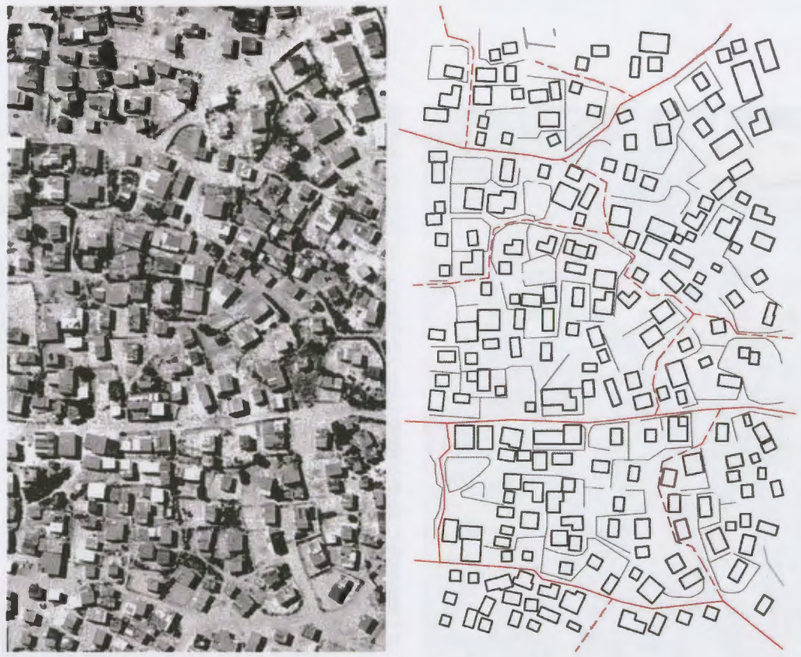
When the area was still dense 2005 - City of Cape Town



The changed space - Google Earth

A community meeting that involved the whole of Enkanini, in the precinct of the station





organic pattern of Enkanini - City of Cape Town

Photos showing the systems of borrowing electricity from Kuyasa and Makhaza

AT NIGHT

Thembelani comes from a family of six. He is the oldest kid in the house, most of his siblings got married and have left home. He speaks great English, without effort, without masks to try make it perfect like most people do in the area. Both his parents have a solid job and simultaneously partake in the community committees. They want a brighter future for their kids and one can see this in their educational value system.

Thembelani's little brother still goes to the local crèche and needs his older brother's escort to return to the house every day. Thembelani does this and other little things for his family that entails leaving the house to get or give messages to people.

Doing these sorts of favours has taught Thembelani the shortcuts through his neighbour's backyards. His map of Enkanini is not limited to the main pathways that one sees in the aerial photos, he maps his neighbourhood through identifying the houses that are less difficult to cross, the ones without fences or with two entrances in the fence. Thembelani is to Enkanini what a Parkour Artist is to French cities, he reads his urban space through the less difficult ways of crossing it.

This playful way of understanding urban space has its limitations. Thembelani finds it very difficult to go through his neighbours backyards after dusk. The sand pathways get invaded by shadows of potential criminals. Every corner, every tree, every shadow becomes a threat. The life that exists on the backyards of the houses gets faded as the sun goes to sleep and only solitude remains.

Thembelani has to sacrifice his playful ways of travelling in order to be safe. He, now, takes solely the widest path that will take him to the main road, where life still exists at night, where cars and taxis provide a minimal amount of light, where the economic activities that have borrowed electricity from the next settlement, still provide a little bit of clarity to the steps that he takes. His detour provides him safety.

density patterns formed due to the proximity to the neighbouring areas with electrical power

SUMMARY OF PERCEPTIONS

From the research observed above one can gather a few concepts that will be expressed here.

There are two types of transitory spaces in Enkanini, one is the Lhaze main road and the other is the Pathway. These two differ in scale but also in character.

To begin with the Lhaze main road is the one element of formalized structure that exists in Enkanini. For now, there are more of these elements appearing like the train station and the housing project in Zwelitsha. But the main road was always present in the lives of the dwellers of this settlement.

This fact provided the opportunity for the government to install services in the area like public toilets, water taps and street lamps. The placement of these services was denser along the main road which informed the character of this public space.

On the other hand Lhaze is the only link between the inside and the outside of the settlement. Consequently, every person that leaves Enkanini passes through this space. As such Lhaze is associated with being popular, in the sense that every one, irrespective of its neighbourhood, knows where it is. This makes projects like the vaccination of the children possible.

This Gateway character also provides the opportunity for economical activities to happen. Because the road is so busy there is always a potential customer.

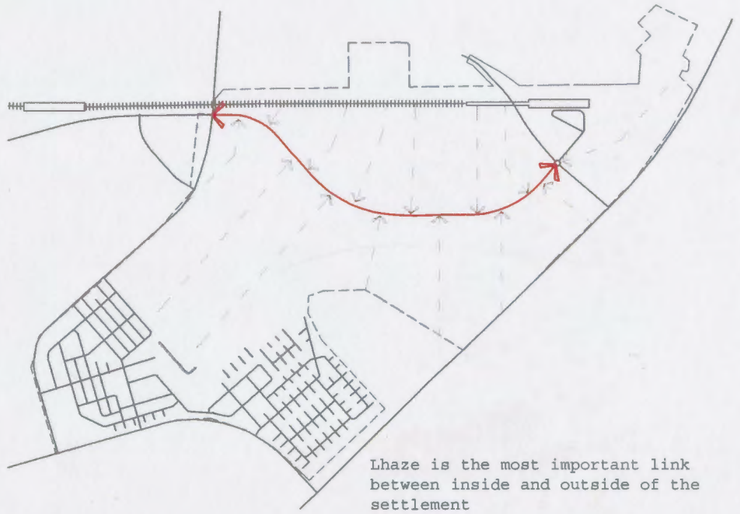
Attached to the high movement of people and cars comes a character that is typical of this space. The people get aware of the movement and do not engage with the space on the fast part of it. The activities performed in this space are limited to the pavement area. This condenses people (Life at the Corner) providing, this way, opportunity for engagement.

On the other hand, because the street has such a fast pace, it is not safe for children to play there. The parents also focus on using this space for the necessary activities only (shopping, public transport), avoiding spending too much time in it.

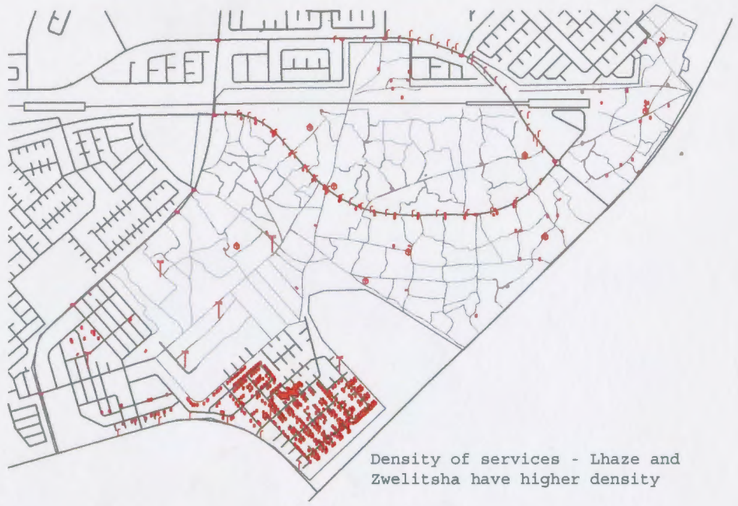
The more playful activities that happen in Lhaze are linked to the need to connect with the wider world. Like Mzi and Bonga that spend hours looking for girls on the corner, this is something that would not have the same effect if they were seating outside their house.

On the opposite we have the pathways which are a result of an informal activity (walking through the bush to make a shortcut) even in its conception. Both the form and the material of the pathways gives to the space a character that is very different from the one experienced on the main road.

One disadvantage associated with the informal pathways is the lack of services that exists in these spaces. More and more, the pathways are starting to get water taps and public toilets but their rare existence makes the lives of the inhabitants of Enkanini very difficult.

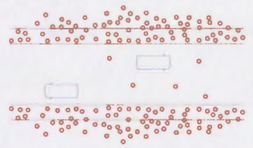


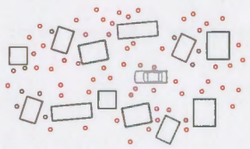
Lhaze is the most important link between inside and outside of the settlement



Density of services - Lhaze and Zwelitsha have higher density

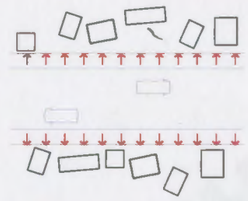
Foot steps: people's movement in concentrated on the pavement

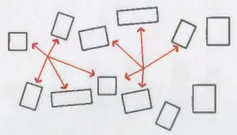




Foot steps: people's movement is spread with no boundaries

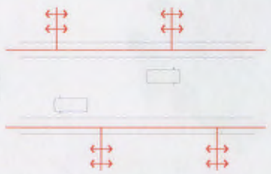
activities happen on one direction: away from the road

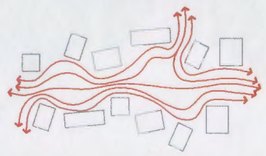




activities happen on all directions

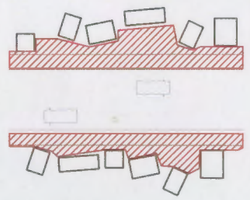
movement is directional and controlled

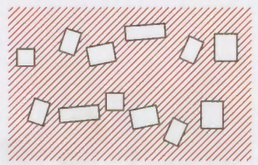




free flow of movement

public pedestrian space is not linear but has a boundary

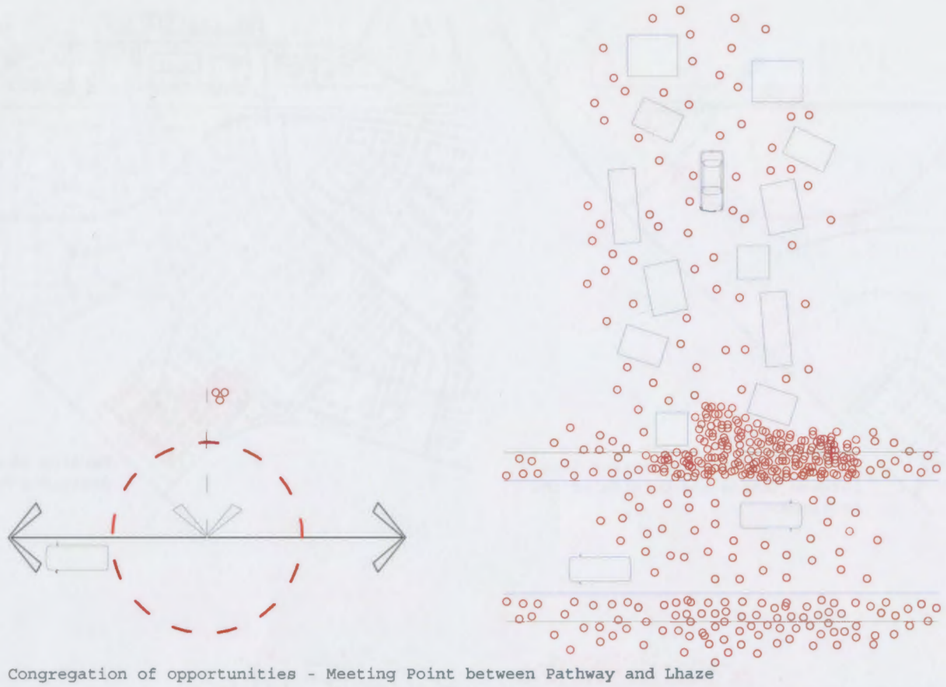




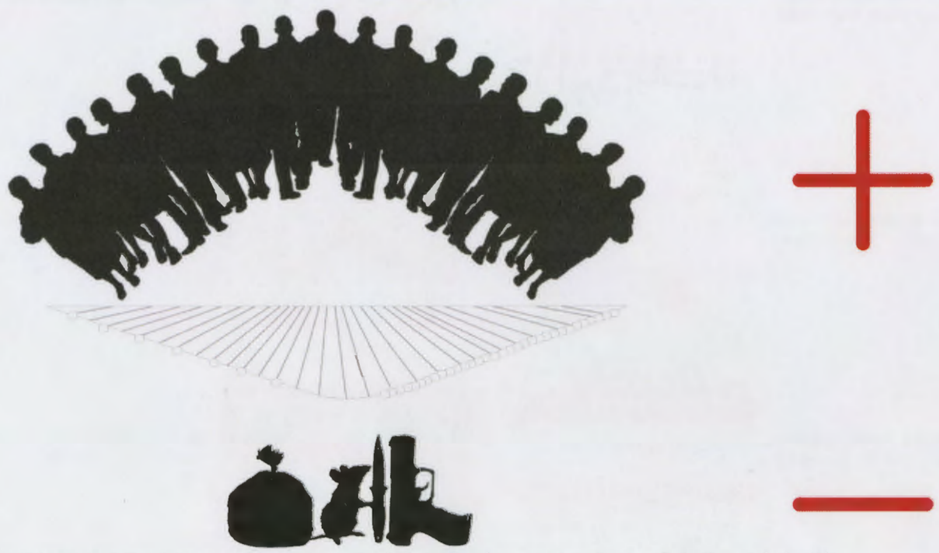
public pedestrian space free and as no bounderies

Lhaze- controlled environment; economical opportunities

Pathways- free environment; community life



Congregation of opportunities - Meeting Point between Pathway and Lhaze



Positives and Negatives - Sigqi as a social gathering area and as a hub for criminality

However, the informality of these spaces provides the opportunity for community life to happen. It is in these pathways that children are free to play while being in the company of their parents. The parents exchange thoughts with their neighbours and community meetings happen. The pathway is the space that provides the opportunity for social interaction, in an area majorly utilized by private spaces.

The informal form of the area allows also for the dwellers to reinterpret the spaces that surround them. Either by using the space as a hide-and-seek ground (Undize) or by finding shorter ways of reaching the destiny (At Night), the spaces allow for the inhabitant to experience them, live them, engaged with them.

Given the two types of public space, one with better economic opportunities and the other with social advantages, there is a third character that is worth looking at. When the two different types meet there is a congregation of opportunities . Life at the Corner is a good example of this situation. The economical opportunity gets mixed to the social interaction and creates a vibrant place. A reflection of the success of these spaces is the fact that taxis use these crosses as their stops.

If we look at the idea of architecture as a catalyst for development, these are the spaces that must be looked at primarily. The merging of the two different characters of public space has created a condition that would not be possible on any single one of them. Because they meet at that specific point, there is an opportunity for development.

One other idea gathered from the study was the negative connotations associated with geographically complex sites. The cases of Sigqi and the hill show us that these spaces, because they are so isolated, create opportunities for illegal activities to happen. Murders, thefts and rapes are the type of activities that occasionally happen in these spaces which create problems within the society.

Simultaneously spaces like Sigqi and the Station Precinct provide opportunities that were not planned for in the process of settling like big communal space for example. The existence of these spaces is crucial for the organization of the society, it is here that the people take decisions about Enkanini as a whole. Even though Sigqi is associated with negative activities, it allows for that crucial function of society.

The making of community spaces is another characteristic worth understanding. Because there is no infrastructure for this need to take place, the meetings happen wherever it is possible: sometimes in the pathway, sometimes in a crèche, under a shadow of a building on Lhaze, or even on opened pieces of land like Sigqi or the precinct of the station. The way people occupy these spaces are reflections of real needs by the community.

Another spatial characteristic, this one more linked to the private use of spaces, has to do with the interventions made to Enkanini in the provision of two basic services, toilets and collection of rubbish. The two systems applied in Enkanini seem to be regarded as unsuccessful projects between the inhabitants of the settlement and constitute the theme of many community meetings. The spaces attached to these interventions are a failure and become zones of avoidance.

All the spaces described above are spaces that are recognized by every resident of Enkanini. As such these spaces are of public knowledge and importance, they are reference points to the making of the settlement. As an example, everyone knows that the community meetings are at the crèche when there is a call for one or that the vaccination is somewhere on Lhaze near the circle wherever there is a shadow. All the spaces described in this document are of public relevance and are important in the personal spatial perception of Enkanini. For this reason I will call the spaces that I have studied 'public landmarks'. These vary in scale and even in definition but they all contribute to the resident's understanding of Enkanini as a unit.

Lastly, and one of the greatest concerns of the inhabitants of Enkanini, is the lack of electricity as a service . The implications of this fact can be linked to almost all the stories written above. The density of Enkanini is directly related to the distance to electricity areas; the security of people has also a direct link to the existence of light, the placement of economic activities is driven by the access to electricity, and so forth. A change in Enkanini, like installing electricity on the whole settlement, can be of exponential significance in reshaping the conditions of the area. If this is done tomorrow, this research will be somehow ineffective in a few years time because the conditions will be completely different.

As can be seen, the spatial character of Enkanini has a wide variety of conditions that must be worked around. The opportunities for development set by this settlement are endless for both improving the negative and enhancing the positive.

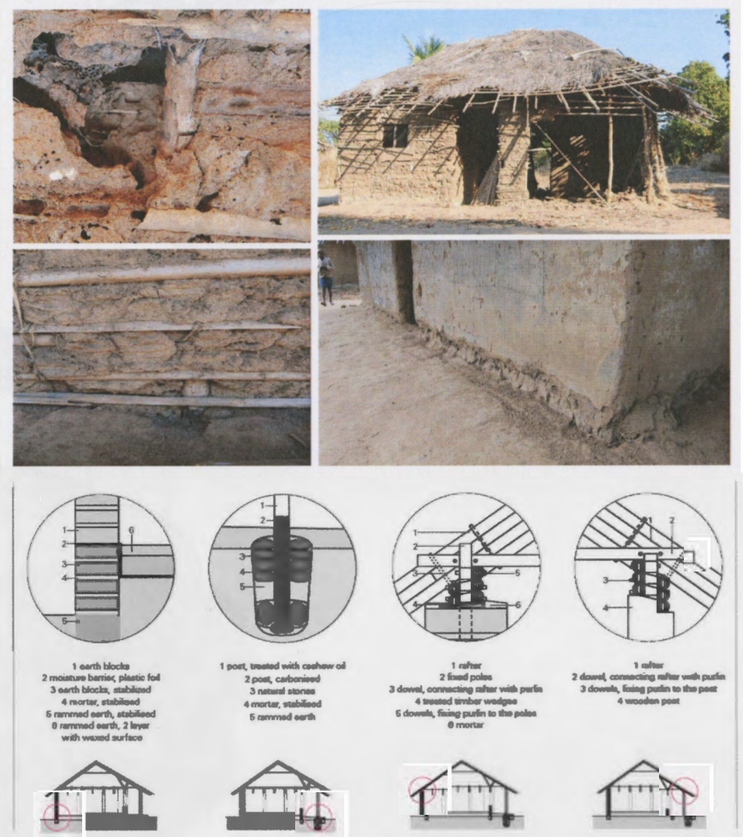
" 'public landmarks' vary in scale and even in definition but they all contribute to the resident's understanding of Enkanini as a unit."

Public Landmarks - places recognized by every resident of Enkanini

MY ENKANINI: TECHNOLOGY ON THE PRIVATE REALM

This part of the Paper is a study of the informal technologies practiced in the building construction in the area of Enkanini. It shows the strategies practiced by the locals of this settlement when constructing their private houses. The study focuses on their creativity when dealing with issues of environmental forces and material limitation.

This study is strongly influenced by the work of Eike Roswag done for the Aga Khan Foundation in Mozambique. Roswag engaged with the life of the locals in the villages of Cabo Delgado, and performed a research on the conditions of the existing buildings. He started by researching the spaces that characterised the typical house and the way people used to define the functions that happened there. He then looked at the different building types, investigating the community buildings as well, and the ways these were constructed. Through this, he came to study the materials used in the area and the construction methods applied. After having a thorough understanding of the material capacities and the methods used, he studied the problems that existed in this construction system. He identified the elements that caused these buildings to have a short lifespan and looked for technological solutions to change this. (Roswag 2010)



Roswag's project in Mozambique - he understands the vernacular architecture, identifies its problems and proposes a solution (Roswag 2010, 39)

The process followed by Roswag entails a strong understanding of the vernacular technologies existent on site. His studies are focused on comprehending the benefits and the weaknesses of these systems of construction.

After interiorizing the advantages of local techniques of construction, Roswag manages to be aware of the basic conditions that his design has to deal with. In other words, through the understanding of the solutions provided by the vernacular, he identifies the problems that this architecture tries to resolve.

The point of this work is that the vernacular brings local solutions to resolve local problems. By studying the vernacular solutions, one can understand the existing local problems.

Following Roswag's example, this section will focus its studies on the vernacular architecture of the site. The research that follows is a study of the solutions that were brought forward by the residents of Enkanini through the process of living in this area. The solutions exposed here will show architecture that responds to everyday problems. With this, the paper aims at understanding the struggles that the inhabitant of Enkanini faces in terms of architectural technology.

Adjacent to the analysis, will be a personal perspective of the solutions created by the locals. This critique will start identifying the general problems related to the solutions observed.

In order to solidify the foundation for the design project, this paper will be aimed at understanding the technological solutions created by the residents of the studied area. These solutions will represent responses to real problems that exist on the everyday life of these people. The solutions will also contribute to the comprehension of the social character of Enkanini.

HOUSE RATHER THAN A HOME IN ENKANINI

Thembe's house was set in Makhaza, the neighbouring settlement of Enkanini. Later, in 2008, Thembe moved down to Enkanini after being evicted from his plot. In Enkanini he bought a property of his own and brought his house from Makhaza to be rebuilt there. The house was the same, just in a different land.

Round this time Thembe had met Lisa, a beautiful woman that lived in Nonkqubela, Khayelitsha. Their love grew bigger and bigger and he started to sleep over her house. It was more convenient to stay there then at his place. Lisa had electricity, water, a private toilet and a street in front of her house. These luxuries are not common in Enkanini.

As the time passed, Thembe got used to stay at Lisa's place. However, he still had his house in Enkanini. That's where his friends stayed and where he returned occasionally to spend some time with them.

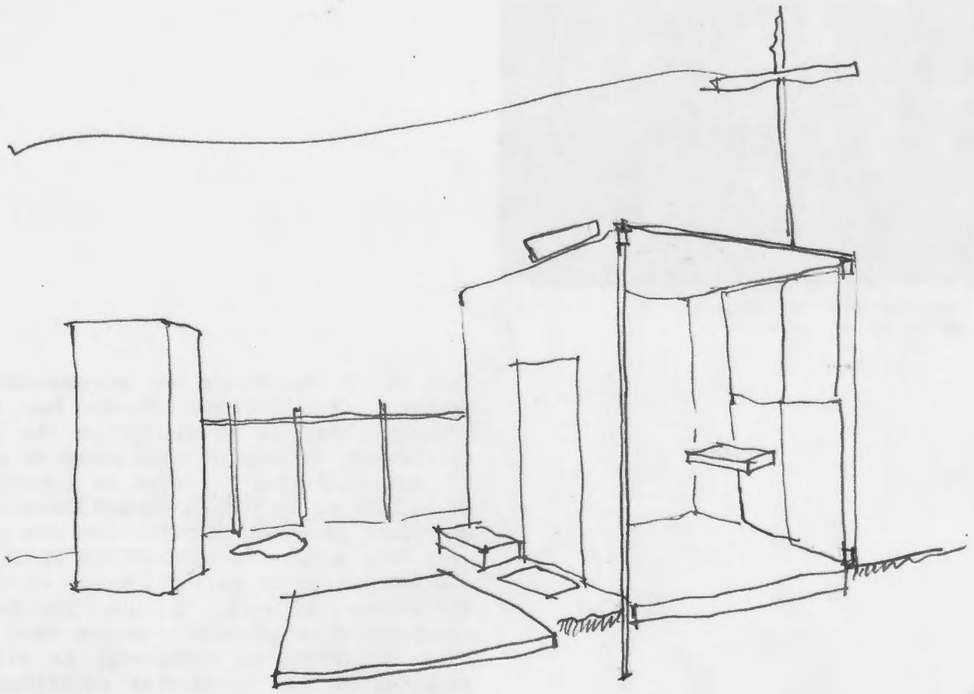
His returns to Enkanini had also another reason that was hidden from Lisa. Going back to Enkanini meant a sort of freedom from the 'conjugal' life that Thembe was having in Nonkqubela. Here he could flirt with other girls and eventually spend some quality time with them in his unused house. Having a shelter in Enkanini provided Thembe with this opportunity that he occasionally used.

One other reason for Thembe to have his house in Enkanini was that the census for housing done by the government had passed through his house already. His "Bungalow" had a number and if he just disappeared he would lose an opportunity to have a free brick house.

Having a house in Enkanini proved to be useful even though Thembe never tried to develop it into being his home.

After a few months Thembe lost his house. The population demolished it since there was no one living in it.

This story represents an introduction to the technology research that follows. Thembe has an approach towards Enkanini that is usual within the inhabitants of this settlement. He regards this place as a transitory phase of his life and sees no value in transforming his 'movable' house into a fixed home. Nowadays Enkanini has no services and therefore provides no conditions for people to choose this area over a more formalised one if they can. In addition, the population of Enkanini lives in the hope of receiving RDP houses. As such, the position shared by many of the inhabitants of Enkanini, is one that regards the life in this settlement as temporary. As will be seen, this is reflected on the vernacular architecture practiced here.

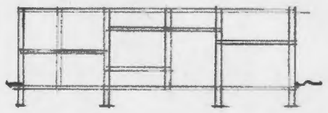


CASE STUDIES

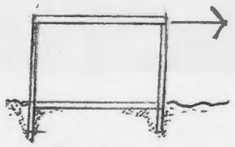
What follows are a series of studies that explore the solutions found by the inhabitants of Enkanini while overcoming the problems that they face on a day-to-day basis. The studies are focused on the solutions that are directly linked to architectural form and to space, representing the vernacular observed in this area. Because these solutions are formed by individuals, the ideas revealed here will be a reflection of the private realm as opposed to public constructions.

The study is carried out with two components, one graphic and one written that intend to show a clear understanding of the existent solutions. The written part will document the solutions and, when relevant, will provide a critical view over them.

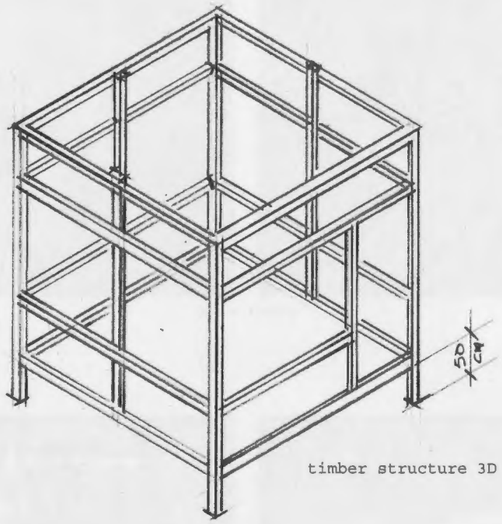
The picture on the side will serve as a map to localize the solutions being studied. This picture, as well as all the ones that follow, are created by the author.



structure braced by long walls



structural failure - twist and turn



timber structure 3D

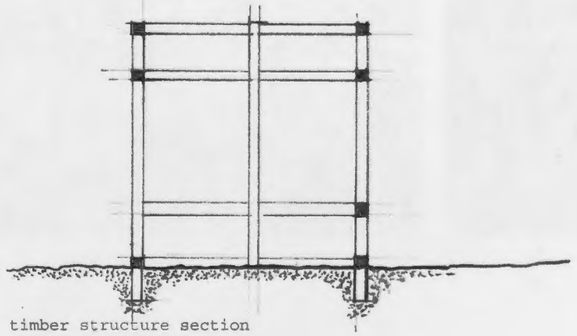
1 STRUCTURE OF HOUSES

There are two types of houses in Enkanini, the prefabricated ones and the ones made by the users. Both are typically built with a timber frame structure. The first is a fabricated frame with equal sized timber elements, and the second is done in an informal way having uneven elements.

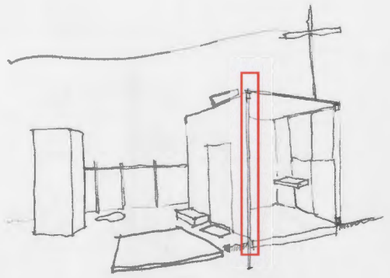
The timber columns are sunk into the sandy soil for about 50cm. On the ground the four columns are spaced with a ring beam, also done out of timber. The ring beam is repeated on the roof and twice along the height of the wall. The middle ring beams are often interrupted by the existence of a door or window. In this case the frame adapts itself to the change.

This structure is strong enough to accommodate one floor of lightweight cladding as this constitutes the typical material for a house of this area. However, the footing is sometimes not enough to allow for a durable stability. Some houses twist and turn after a few years of lifetime.

If the structure is to accommodate a second floor, this strategy will not be enough for a stable building. The structure is successful because it is often braced by long walls. If the building expands in height than the existent strategy will fail.

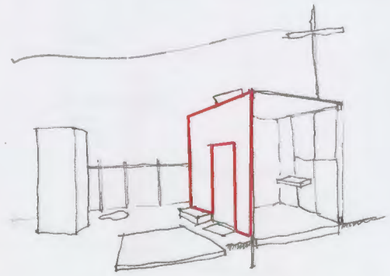


timber structure section



metal clad

timber clad



2 CLADDING TIMBER VS METAL

There are two types of cladding of the Enkanini houses. One is timber and the other is metal sheeting.

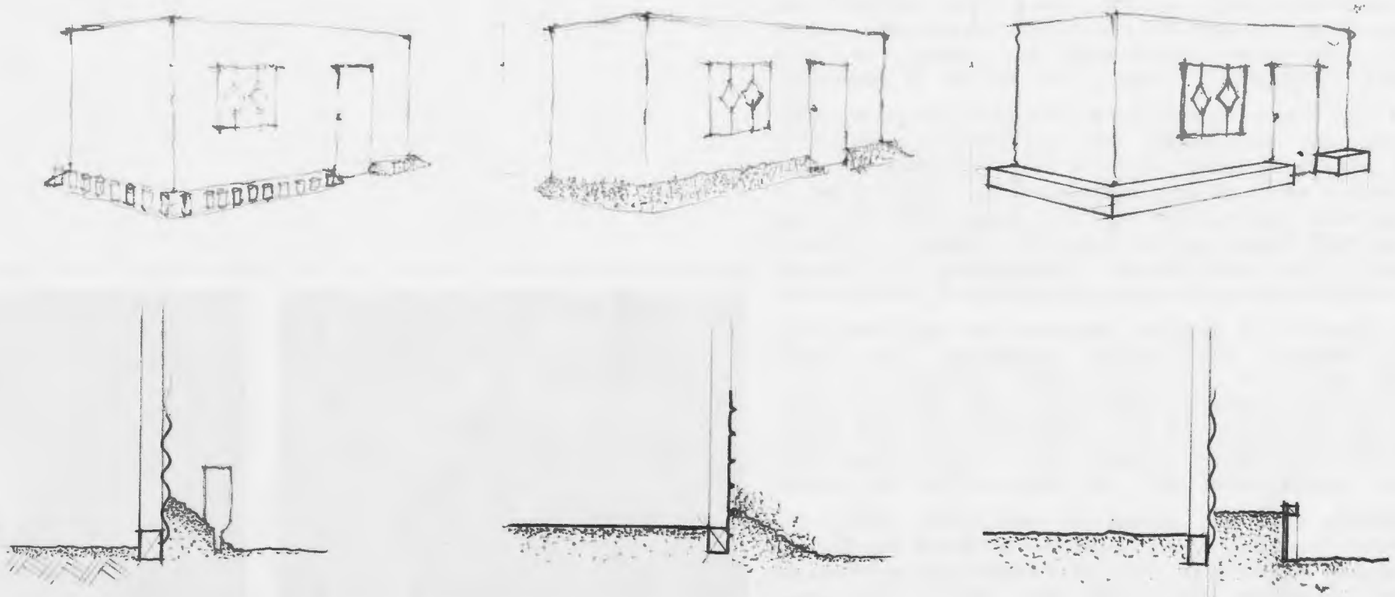
The timber cladding is becoming less popular than it was in the past because it is less durable than the new accessible technologies. Timber deals with the environmental conditions in a weaker way than metal does. In addition, timber is appealing to bugs and other animals which contribute to the rotting of this material. Also, timber is more flammable than metal which shortens the lifespan of the houses covered by this material. On the other hand, this type of cladding is done with slats. Because slats are a combination of individual parts, these provide another weakness to the structure, the lack of lateral stability.

The metal sheeting, besides having advantages over all the above timber weaknesses, provides lateral stability because it is a single piece instead of a combination of parts. Although the metal sheeting takes longer to rust than timber, when it does, holes are created on the cladding material becoming a problem to the dwellers. The biggest disadvantage to the metal sheeting, though, is its thermal conductivity. Thermal insulation with timber planks is slightly higher than the one observed on the metal sheeting. Because metal sheeting is becoming cheaper and widely available, this solution is becoming more common in this settlement.

There are ways, used by the population of Enkanini, to make both these materials more durable. The strategy is an application of a protection of some sort to stop them from getting damaged by the weather. The locals apply paint on the timber that protects it from water penetration. Also used as a solution but more rarely, is burnt oil which protects the timber from both bugs and weather. On the other hand, the metal sheets are also painted to get more durability. The paint used, delays the rusting of the metal from the salty sea air that exists in Enkanini.

One of the characteristics associated with these materials is their mobility. The houses, because of their materials, can be transported easily to a new plot. However, the materials lack in providing comfort to the dwellers. The lack of thermal insulation, for example, constitutes a big problem to the people who dwell in these houses.

the problem



3 BASE EMBANKMENTS

Throughout Enkanini one can find small sand embankments that edge the base of the walls of the houses. The embankments often have a bottle finishing or a timber box around them.

The solution comes to resolve a problem related to sand. Because the walls have a clad finishing, the end of the wall never seals completely with the ground. Through the gap passes sand blown into the house by wind forces. This creates a dirty and sandy environment inside the house.

To avoid this, the solution created was to cover the gap with an embankment of sand. The widely available element, when pushed against the wall, stops the wind from being able to blow into the house.

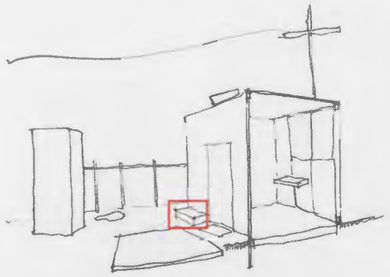
The bottles, inverted and buried in the sand, solve the erosion problem. They stop the embankment from sliding down and protect it from wind erosion. For the same problem the inhabitants came with other solutions. Sometimes a timber box is made or grass/weeds are planted in order to stop erosion.

Even though the solution is temporary, it resolves the problem that it is aimed to resolve. The solution not only is functional, but also adds an aesthetic character to the house. As such, this solution shows the creative ability of the residents to resolve problems with the available materials. The solution should serve as an example of what can be achieved with the vernacular architecture.

embankment protected by glass bottles

embankment protected by grass

embankment protected by brick box



4 INTERIOR FLOORS

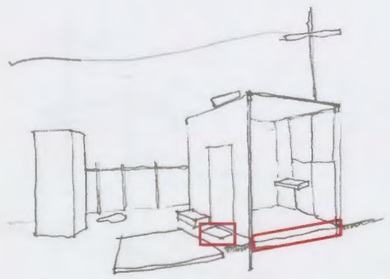
When the first settlers came to Enkanini, in 2004, the ground was filled with shrubs. When they settled the first thing they did was to clear the vegetation, before they built the houses. Underneath the shrubs was beach sand which constitutes, today, the ground of Enkanini.

When settling, the people often do not have enough money to build a floor for their house. When the house is constructed the sand is what is under people's feet. The first solution is to create a mound of sand where the house is in order to impede the sand from coming into the houses. Then the sand is covered with a material which can be a carpet, a plastic wall-paper or even timber boards. The majority of the houses are set like this due to the economical power of its dwellers.

However, there is a problem inherent in this temporary solution. Because the ground underneath the house is simply sand, it is occasionally invaded by rats. Mice construct tunnels underneath the houses which destroys the stability of the structure. The sand after being perforated with a tunnel loses its strength and collapses, moving, this way, the structure of the house.

The residents that can afford it cement the floor. The cemented floor provides a solid base for the house and for the structure that supports it. This also reflects an attitude of permanency, something that is not often seen in this area.

Different floor conditions: carpet on sand, wall paper on carpet, cement floor



Different entrances: carpet, bread crate, timber crate, elaborated stoep

5 ENTRANCE

The entrance is generally a very important part of a house. In Enkanini this importance is enhanced due to the two opposite floor conditions that this feature separates. On the outside there is a sandy ground and on the inside a clean homely surface. The entrance becomes an important point in trying to keep the inside clean.

As a result there are a few solutions that are aimed at resolving this problem. The residents often put a structure that serves as a step to lift the person off the ground while the feet get cleaned. The materials used for this are usually crates and timber or plastic pallets. Alternatively the solution is to put a carpet on the entrance. The more dedicated residents build a stoep making sure that the sand stays outside this area or simply build a cement step that can be swept when needed.

The solutions built with a permanent approach are often more successful in keeping the sand out of the houses. The temporary approaches tend to be get filled with sand easily and often constitute a problem rather than a solution.

6 NEWSPAPER IN GAPS

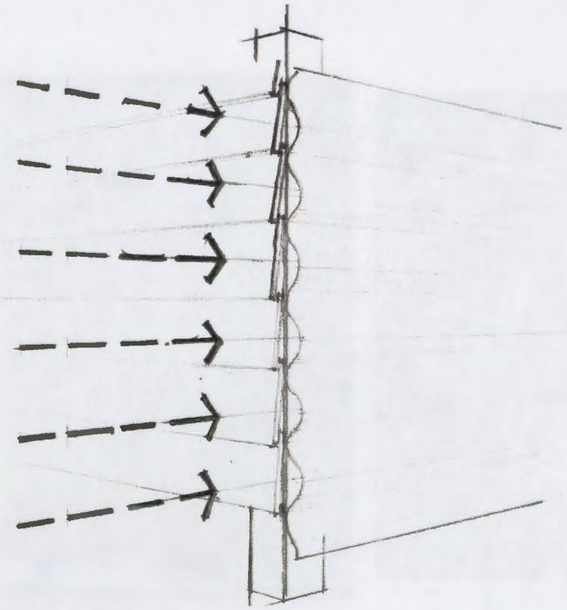
The interior of Enkanini houses is frequently filled with newspapers' advertisement colours.

The walls of the typical house in Enkanini has a timber or metal cladding has we have seen before. The Metal sheets come in different section formats. Some houses have corrugated iron sheets, other use IBR profiles, and others even use plain sheets of metal. The problem with the first two types is that their profile allows for a gap between the sheet and the timber column that forms the corner of the house. This corner becomes vulnerable for both the entrance of sand in summer and the escape of heat in winter. As a result one of the solutions created is to fill the gaps with newspaper. Along the whole height of the column, and sometimes along the length of the ceiling beam as well, the view is filled with colours of newspapers' ads.

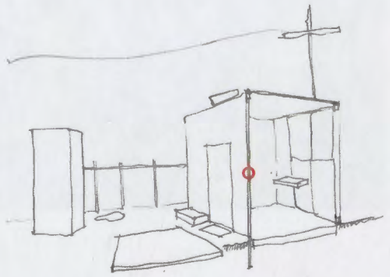
The flat sheet of metal is also used in order to resolve this problem. Because the sheet is flat, it doesn't have gaps and is nailed flash into the timber column. In some cases, the corrugated iron sheet laid on the outside of the structure is slightly longer than the wall. This allows it to be hammered around the column, closing this way the normal gaps.

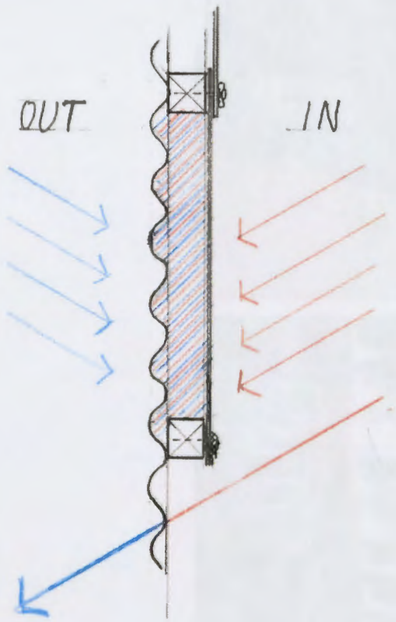
These solutions show how desperate the inhabitants are in terms of thermal loss through the structure. The solutions do not bring a solid difference to the temperature inside the houses but they do bring a difference. However, the temporary solution seems to resolve successfully the problem created by sand.

closing the gaps to stop sand from getting into the house

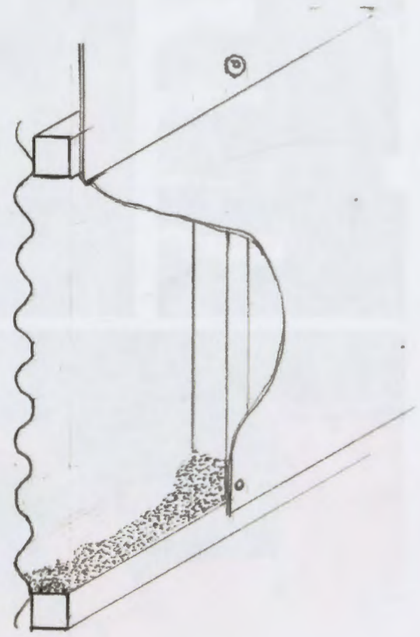


The problem: sand blown in through the gaps of the cladding





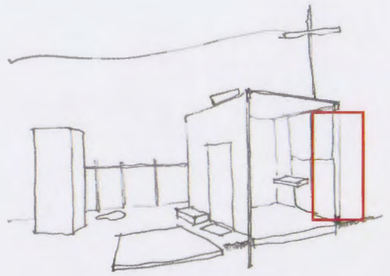
Ceiling board creates air gap that was inexistent before



Gap between the board and the metal sheeting provide space for sand accumulation. sand does not get into the houses

Interior cloth as decorative matter

Undertile roof membrane as interior cladding



7 CEILING BOARDS

Depending on the opportunities the owner has, some houses in Enkanini have an interior cladding.

Some walls of the Enkanini houses have ceiling boards as an interior cladding. The ceiling boards are arranged in order to cover one full wall when there is not enough for the whole house. The boards overlap on the corners not to allow space for gaps.

The solution comes to resolve the same problems as the previous point, but do this in a more permanent way. By cladding the interior, an air gap is created between the outside and the inside skin of the house. This air gap diminishes the heat transfer between inside and outside, keeping, this way, the interior warmer in winter and cooler in summer.

The air gap is also an in between space where the sand gets stored after entering the outside skin. In this way, the sand stays on the interior of the outside skin but does not invade the inside space.

The system is alternatively used on the roof for the same reasons. One other application is the use of different types of fabric. This solution is less permanent but usually more accessible.

The interior cladding is used for aesthetic purposes as well as functional ones. The boards are often painted in bright colours and the fabric used occasionally has patterns on it. The colours brought by these materials change the experience of the interior space providing a different feel to it.

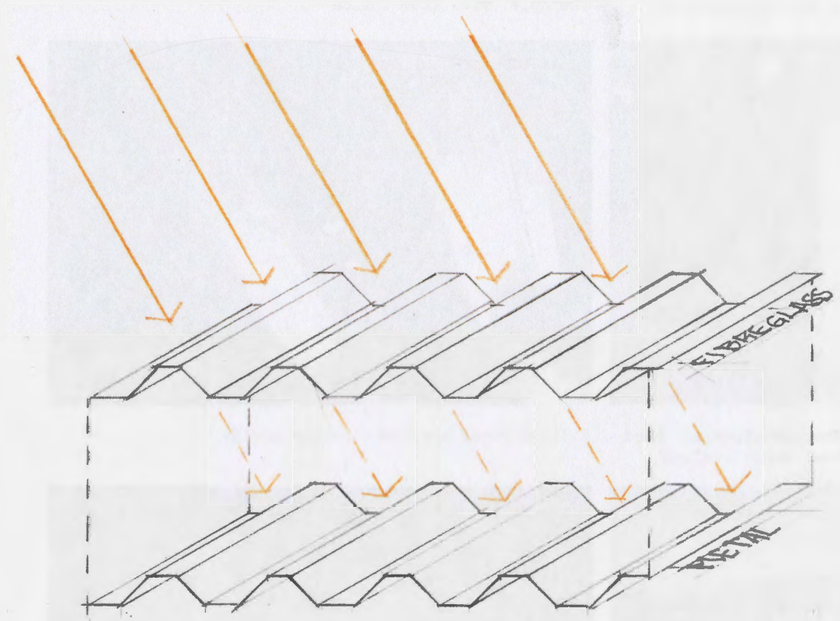
This solution has better results than the Newspaper solution. The concept of creating an air gap is what makes the solution successful. However, boards are costly and are not accessible to everyone.

8 TWO LAYERS ON THE ROOF

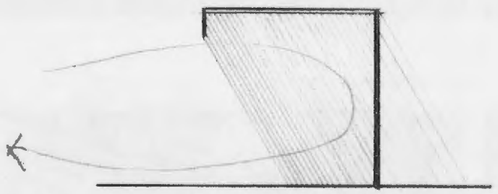
A few constructions in Enkanini have two layers on the roof cladding. The solution tends to provide a thermal insulation for the summer heat. The idea is simple: two sheets of roof cladding are placed on top of each-other. What provides the insulation is the choice of materials, one of the layers is metal sheeting and the other is fibreglass. The metal sheeting, when placed under the fibreglass membrane provides shade to the space. On the other hand, the fibreglass diminishes the radiated heat, protecting, this way the metal sheet from getting hot.

The solution is used normally in buildings that have public functions like small shops. The application is successful in this case because the shops are widely opened which allows for air ventilation. Even though some of these shops are low in height, they are extremely cool in summer because of this solution. The double roof provides a shade to the space that is not hot like it would be if it was just a metal sheet.

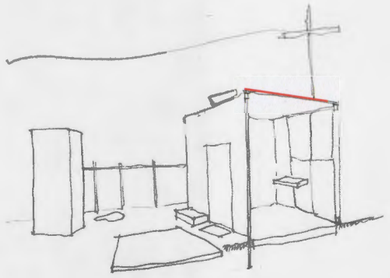
This idea is not widely used because the fibreglass is not always accessible. In terms of private houses the solution would not be as successful because the character of this type of construction is a more enclosed one. The solution works when associated with a ventilated space, therefore it would not be as successful if applied to an enclosed house.



Sun rays go through the fibreglass but not through the metal sheeting



Shaded space, when ventilated is cool



Plastic cover over roof. fixed to the underneath of roof structure

The hole. view from inside

Plastic sheet protecting from water penetration. fixed with extra timber plank to the main structure and heavy elements on top.

Silicon cover applied from the inside

Glue and net. application done from the outside

Applying glue

9 HOLES ON THE ROOF

The roof is caped with a bright yellow plastic membrane. The idea is to stop water from getting into the house through the roof.

The corrugated iron is a common material to clad the roof. Usually the sheets have been used before they are applied as roof cladding. On their previous uses, the sheets accumulate holes made by the nails that fix them to the structure. Therefore, when the corrugated iron is placed as a roof in Enkanini, it comes already with punctures. These perforations constitute a problem in rainy season for they allow water to infiltrate the interior of the house.

The plastic cover comes as a solution to this problem. Gotten as leftovers of some construction site or taken from boat's sails, the plastic material covers the whole extent of the roof allowing a protection to the existing holes. The membrane is then nailed to the structure after wrapping around an eave made by the form of the roof. In this way the water drips before it gets to the weakest point of this solution, the fixing joint.

When this material is not available there are other solutions for this problem. The holes are covered with a water proof element that stops the dripping into the houses. Usually glue is applied with a net to the holes. This application is done on the outside of the building. The ones who can afford apply tar which closes the gap for a very long time. The most common home-made solution, though, is to apply silicon on the inside of the sheet.

These solutions deal with a problem that is very common in the informal settlement, the recycling of materials. This is a condition that happens frequently and is not easily changed.

The solutions resemble practices observed in the formal building construction. Therefore the principles that are applied, which can be seen on the results, are appropriate for the problem. The plastic roof cover brings another difficulty though. Its' aesthetics is not the most pleasing one. On the other hand the hole-covering solution, which is more modest, is not as durable.

10 PROTECTING THE ROOF

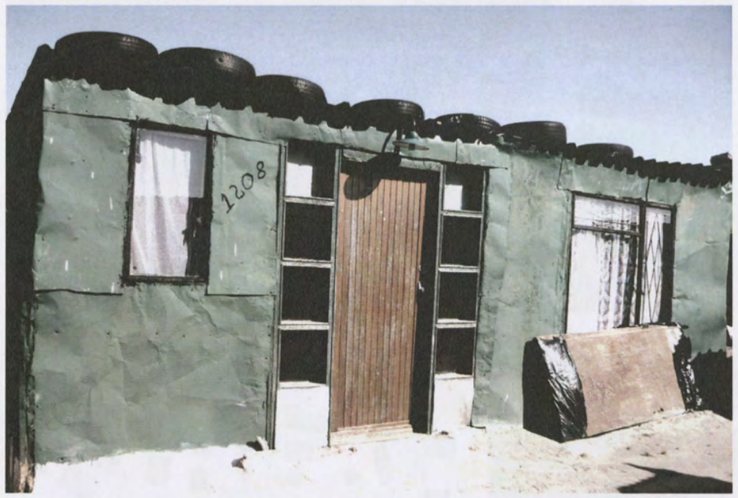
The skyline of Enkanini is shaped by weird forms.

After the roof is constructed the house has one final addition to complete the building. Heavy material is placed on top of the roof to keep it from flying away. The solution comes as a result of the strong winds experienced in this area. Often the original nailing of the roof to the timber structure is not enough to keep it attached to the house.

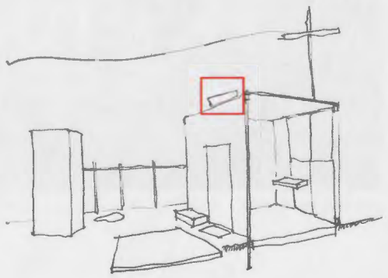
The idea of placing heavy materials on the roof not only resolves this problem but also provides a space for the inhabitant to store some of his possessions. Because the metal has very little sound insulation, the stored materials are safe whenever the house is occupied. In any case, the range of materials observed on the roofs of these houses is normally of useless need.

Due to the lightness of the materials that are common in Enkanini, this solution is one that is needed in order to keep the houses protected from becoming roofless. Because the objects placed on top of the house are of not economic value, this solution comes at no cost. However, the outline of the house is radically changed giving it an impermanent character. This is not particularly an advantage to the inhabitants of Enkanini.

Tyres protect roof



Various useless objects provide weight to the roof



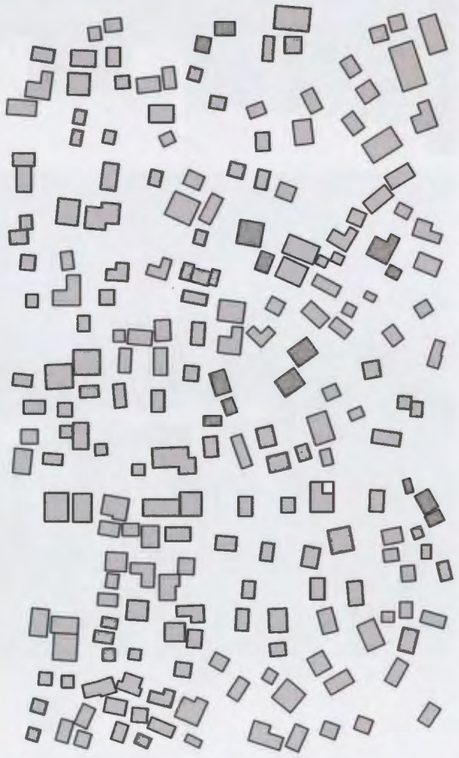
Gas stove safer than kerosene one. stove very close to inflamable timber boards

Fire does not expand more than one house

Shovel, the fire-fighter

Kerosene stove. flame is exposed to timber

kerosene lamp, a safer element than the candle



Enkanini has a low density

11 FIRE HAZARDS

A single house is burnt down. The neighbours have not suffered from the accident!

Enkanini is not as populated as other informal settlements of Cape Town. The area is new and the density is relatively low. So, even though fire is an important concern of informal areas in South African cities, in Enkanini this does not seem to be a major problem.

The houses, because the density is low, are set far apart from each other. This way it is difficult for the fire to travel from house to house. However, the use of timber, the most common material for construction, forms a high risk of fire.

Because there is no electricity in Enkanini, the people use candles and kerosene lamps to have light at night. The former represents a big risk in terms of fire, especially when there are children living in the house. On the other hand, the kerosene lamps have a protection that covers the flame which makes this product much safer with regards to fire hazards.

In terms of cooking, the people use either kerosene stoves or gas stoves. Depending on the outlet, the stove is more or less safe towards fire exposure. In general, gas stoves have a safer outlet but this system is not accessible to everyone due to its cost.

If there is a fire one of the solutions is to use the outside sand to put it down. As such some residents have always a shovel prepared in the house.

Even though at the moment this threat is not imminent, the timber structured houses in Enkanini provide an opportunity for an uncontrolled fire. The low density seems to be the functioning solution so far. If density increases, though, this issue must be considered.

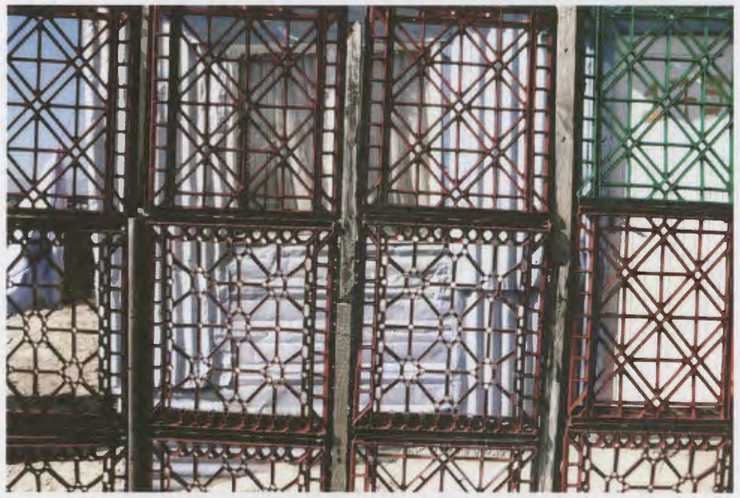
Different types of fence

12 BOUNDARY WALLS

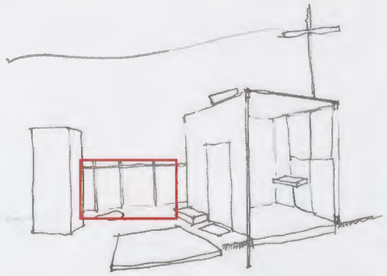
What defined the pattern of settlement in Enkanini was the pathways that existed in the area before the people moved in. These pathways are today the sandy roads that define public space in Enkanini. On the other hand, there is a system of organization that determines the size and the position of each of the inhabitant's personal plot. As such, the residents arrange ways of defining their property so that this is not invaded by strangers. By formalising this definition, the street also gets defined.

What is of interest though, is the ways used to build this definition. The fences around the houses vary in shapes and styles according to the taste of the owner, the desire for privacy or the age of the house. A bushy hedge, for example, means that the owner has been in that plot long enough for the plants to grow that thick. This type of fencing provides, also, a sense of privacy that is not achieved with the other types of fencing. To define the property some people use the most creative ways of mixing the available materials. The crate fencing forms, for example, a colourful pattern but has no sense of privacy or security attached to it. Some residents gather discarded objects and create a sculpture on the limit of their property.

The solutions are endless when the function is defining the private property. The character of the settlement is defined by these solutions since they represent the boundary between private and public.



Creative ways of defining property

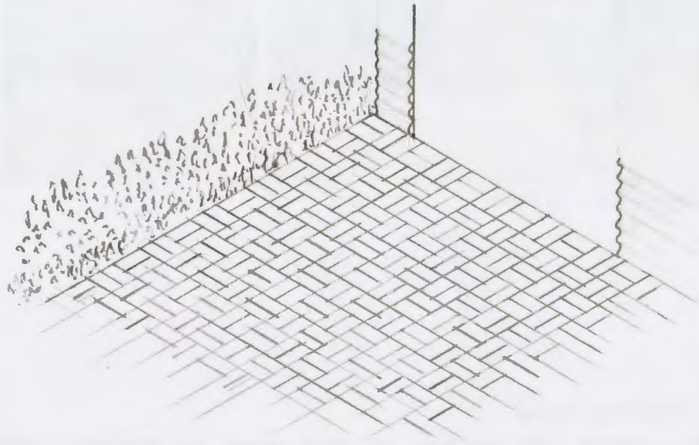


Grass patch that was not successful

Successful grass patch

Successful native vegetation patch

Brick pavement in front of a house door edged by grass.



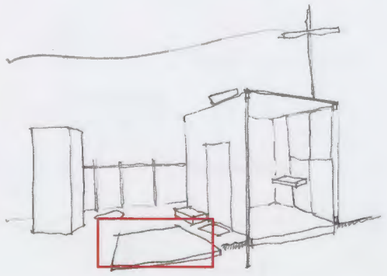
13 SAND CONTROL

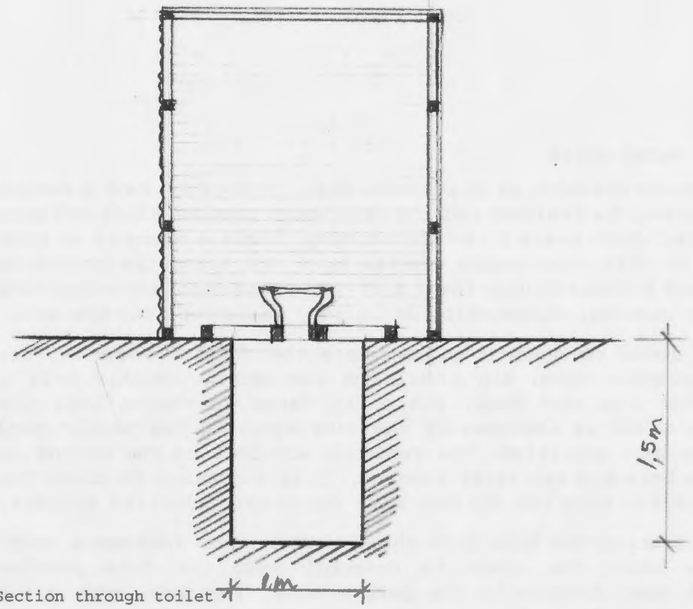
The gardens of the residents of Enkanini are often decorated with sand fixing elements.

Because the sand is such a concern for the inhabitants of this settlement, the gardens around the houses often have elements that are used to fix the sand. As such, grass or even the local vegetation is let grow in order to settle the loose sand. Alternatively bricks or cement are laid on the ground to give a finish to the garden that allows sweeping. On other occasions, vegetable patches are created and edged with the same means as the Base Embankments.

Whichever way it is done, the idea is to control the sand that is blown into the houses. This sand can be problematic not only in getting the inside of the house dirty, but also in polluting the food when people cook. Consequently this control is essential to the wellbeing of the resident.

Grass tends to be difficult to grow in this area but the local vegetation seems to work fine in breeding in this area. This solution is easily accessible and should be used more frequently. Because it is a native plant, it is complicated to be planted and controlled. The more fixed solution, like the cement and the brick laying, are costly and therefore not accessible to all. They do bring to its residents a more permanent character to their activity of dwelling in Enkanini.





Section through toilet

Inside and outside of a toilet

14 PRIVATE TOILETS

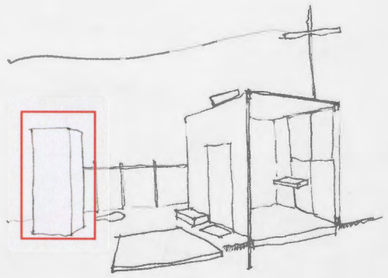
Enkanini has some public toilets that were provided by the government. However, these toilets do not fulfil the needs of the inhabitants of this settlement.

As a result of this indispensible need the residents have come up with a solution. Some houses have a private toilet constructed on the garden. The toilet room is a similar construction to the ones seen on the houses but has a smaller scale.

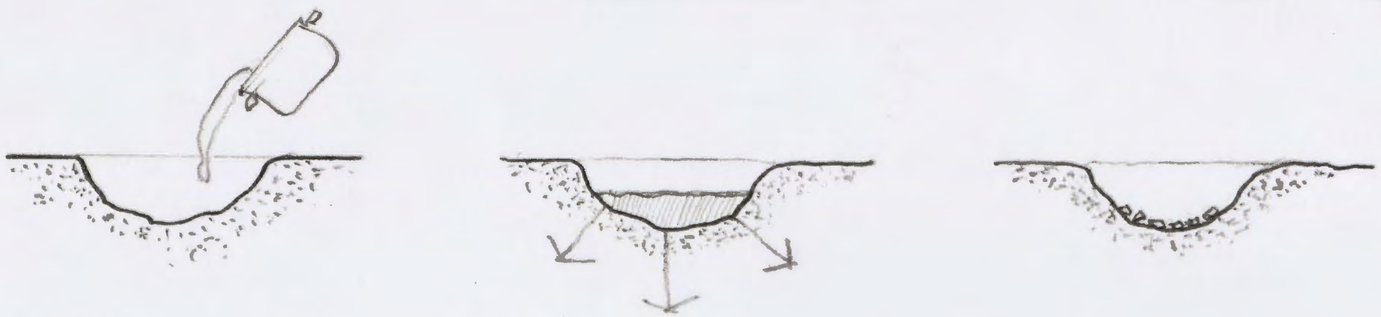
The actual toilet is constructed in a traditional way. A 1,5m deep hole is dug on the ground with an area of 1m². A timber structure is placed on top of the hole providing a lid to it. The seat for the toilet resides on this structure.

The hole is big enough to accommodate the needs of twenty people for more than six years. Once the hole is full, it is covered and another hole is dug. The process restarts again.

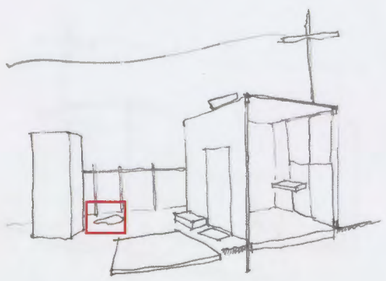
The solution exemplified here is one that should be replicated through the different houses of Enkanini. The residents of this settlement expect the toilets to be provided and complaint about the solutions given. The concept of having private toilets is one that should be pursued aiming to emancipating the people. The conditions attached to these toilets are not the best. However, the existing problems are not unsolvable.



Different ways of covering the drain



The water is absorbed by the sand, the residue remains behind



15 WATER DRAIN

Because Enkanini is an informal area, it does not have a sewage system. The residents of the settlement produce black and grey water which needs to be thrown away. Because there is no pipe to do this, the people use the sand that forms the ground of their gardens to dump their dirty water. As such, the water used for cooking, dishwashing or laundry is dumped into the sand.

In order to define a place where the dumping happens, the residents often dig a hole on the ground roughly half a meter wide and deep. The dirty water is thrown into the drain and is absorbed by the sand since it has really good drainage qualities. The residues are left on the bottom of the hole and are later removed. It is important to clean the hole for this can attract rats and other undesired animals.

To protect the hole from these animals some residents cover the hole. The crate is commonly used for this problem but most frequently the people cover the hole with solid elements like timber slats for example. By completely covering the drain the user is avoiding flies and the spread of the smell associated with the dirty water.

The solution is, again, responding to a common need of informal societies: the lack of services, in particular, a sewage system. The temporary solution draws from the qualities of the sand that grounds the area. This constitutes a maximization of the opportunity created which makes the solution successful. On the other hand, the residue that is left behind is a problem to the surrounding space. It is essential to control this condition, either by eliminating it or by sealing it. The existing short-term solutions fall short in resolving this part successfully.

16 ELECTRICITY

Electricity is a good that has not yet reached Enkanini. As a result, this area has major drawbacks in terms of development.

Enkanini was set on a corner between two older settlements. Makhaza and Kuyasa are far from Enkanini with regards to the process of formalisation. These areas already have streets, sewage systems, electricity and canalised water.

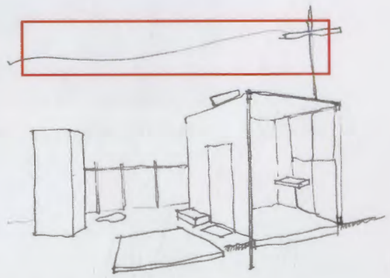
The inhabited pattern of Enkanini is directly linked to the border lines between this settlement and the two formalised areas. There is a higher density in the areas close to Makhaza and Kuyasa. One of the reasons for this is that these areas can 'lend' electricity to Enkanini.

As a result, the border lines that distinguish the two settlements are filled with cables that transport power from the formal area to Enkanini. Gqabi Street for example, the road between Enkanini and Kuyasa, has a tent of wires that crosses it in the air. On the other hand, Walter Sisulu Bridge, which edges Makhaza, has a carpet of semi-ripped wires that intersect the road. The rubber that wrapped the wires has been tore by the vehicle movement that crosses it. The metal that transfers the electricity is still intact though.

The children, in their broken English, advise the visitors of the area not to touch these wires while barefoot. The wires are a great danger to the residents of this settlement. If the network of cables could happen on a different level than the pedestrian one, it would be a big advantage already. However, the installation of electricity in Enkanini is needed as a permanent intervention.

Gqabi intersection area. cables run on the ground level and are suspended

Electric cables cross
Walter Sisulu Bridge



SUMMARY OF PERCEPTIONS

With regards to the study on Private Technology Solutions one can extract a set of environmental conditions that are inherent to Enkanini and inform the design of architecture. As such, sand constitutes one of the most significant environmental problems of the area when associated with wind. This element, that is so abundant on the settlement, has properties that make it difficult to be controlled. The size and lightness of sand make it an informant of almost every aspect of the construction of a building.

The materiality frequently used on the construction of buildings in Enkanini has strong weaknesses when dealing with thermal insulation. This problem becomes of extreme importance to the comfort of the residents of the houses. However, some solutions observed start diminishing the difficulty of overcoming this issue.

Wind, by itself, becomes a relatively important problem like it was observed on strategies used to Protect the Roof. However, the most significant threat comes when this natural phenomena is linked to blowing sand. We have gathered as well, that fire does not form an important danger thus far but that might be worth considering if density increases. On the other hand, the draining qualities of the sand that bases the area constitute a safety factor with issues related to water.

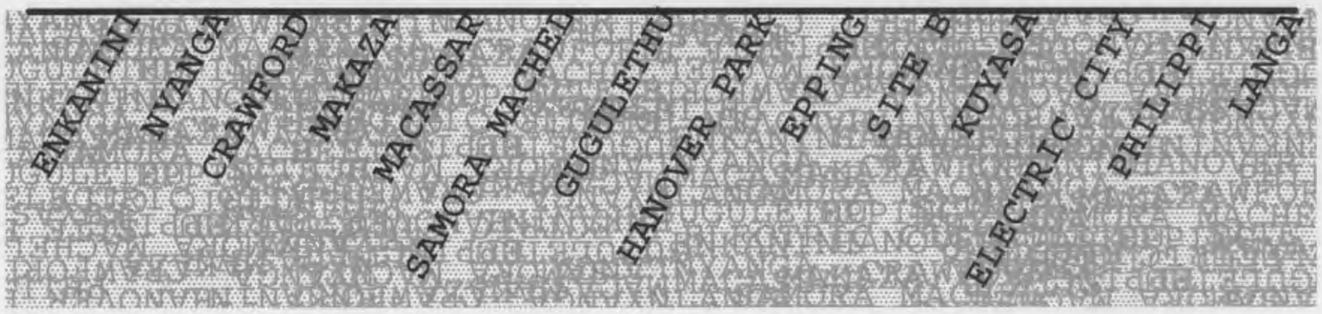
Besides the environmental conditions there are a set of constraints that promote the creativity of the inhabitants to design new vernacular solutions. The lack of services is one of the most important conditions that promote creative solutions. Enkanini has no canalised water, no sewage system, no electricity and no pavement on streets. The residents of the settlement have to deal with these conditions and find ways of overcoming them.

On the other hand, the weak economic power of the inhabitants forms a set back to the development of successful solutions. Many residents are blocked from existing and readily available solutions because they have no money to reach them. The solutions created do not fully-resolve discomfort, they rather delay it.

As a result of all these ideas, the solutions provided by the inhabitants of Enkanini tend to be temporary rather than permanent. The solutions are often focused on resolving the problem at the current time instead of fixing it. This can be observed on the Entrance example where the solution is to provide a facility to clean the feet instead of covering the outside space with grass for instance.

To some it is just impossible to have a more permanent attitude to construction. To others, like the example set by Thembe, the temporary, as an attitude, is a choice. This choice brings repercussions to the state of the buildings inhabited by these people and consequently to their comfort in these buildings.

In a sense, the informal character of the area, and the acceptance of this as a condition, forms an impediment to the development of Enkanini. An intervention that is applied to this settlement, besides having to deal with the environmental problems identified, would only gain if it incorporated the development of the solutions here observed into being more permanent .



Enkanini residents regard this settlement as a temporary residence

"An intervention that is applied to this settlement would only gain if it incorporated the development of the solutions here observed into being more permanent"

design aims

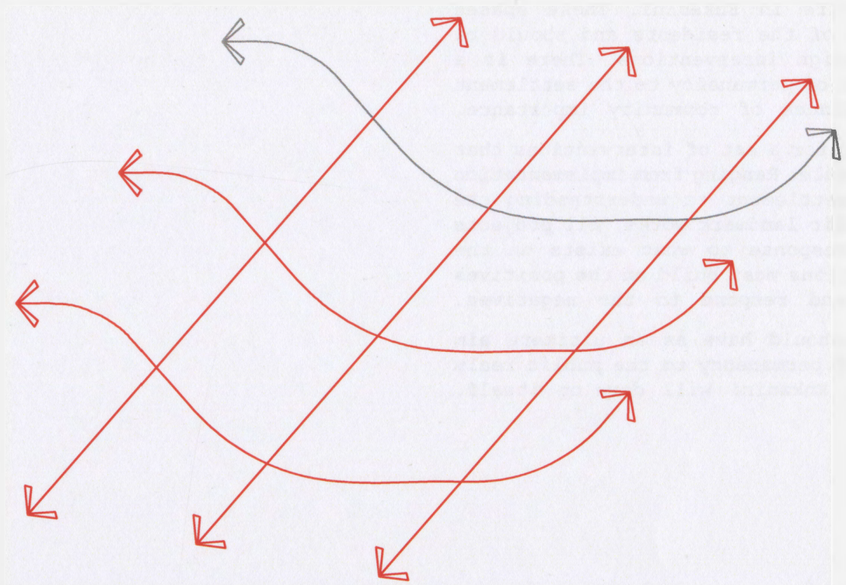
It is important now to develop a response to the ideas gathered through the study. Here will be posed a series of general concepts that must be implemented in Enkanini when designing a project of intervention.

There is a need for an extension of the network of economical corridors. The existence of a single corridor along Lhaze concentrates development in one specific area. By decentralizing this economic movement the area has a better chance to develop as a unity.

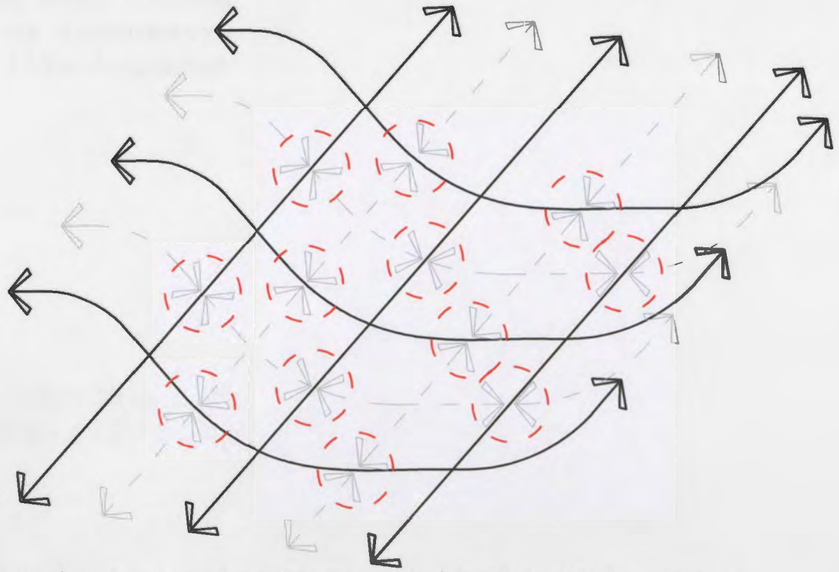
An installation of basic services such as street lights, electricity or water supply for example, is of utmost priority in the settlement as a whole. These are regarded as potential catalysts for development since they are so rare in the area. Bringing services to Enkanini will change the personal perspectives of its residents and will potentially help in providing a sense of permanency to the settlement as a whole.

However, the implementation of services or any project must acknowledge the social character observed on the pathways. The pathways constitute spaces for important social functions like the ones described in "Undize" or "the Community Meetings" and should, in general, be kept whenever it is possible.

Together with the expansion of economical corridors comes an increase of spaces that comprise the character of the two conditions above mentioned namely the economic corridor and the social pathways. The meeting points or corners between a socially important street and an economically important road are of extreme meaning to the development of the settlement. These must be extended to other, interior parts of Enkanini rather than happening only on the edges.



Need to extend the network of economical corridors



Creation of more Meeting Points between social and economical movement routes - towards interior of Enkanini

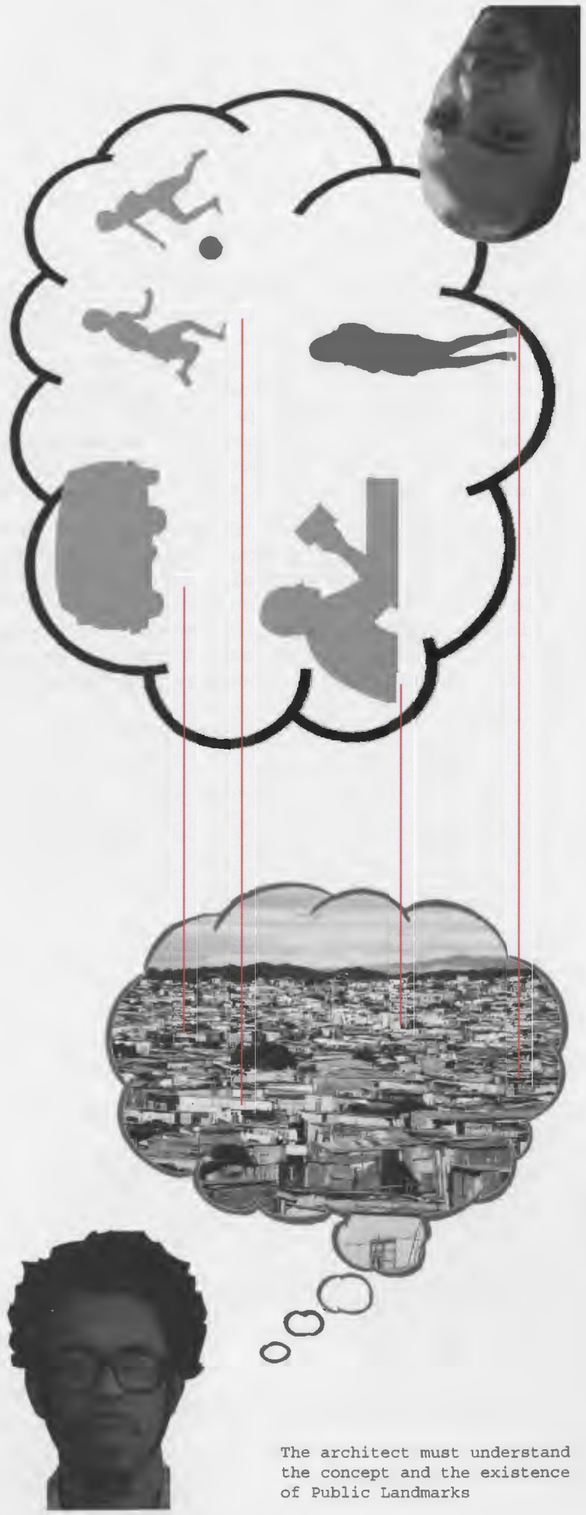
The idea of 'public landmarks' is a strong concept that must be conserved. The public spaces that were studied (and the ones that weren't) are of extreme importance for the existence of social life in Enkanini. These spaces represent the public needs of the residents and should be the foundation for the design interventions. There is a possibility to bring a sense of permanency to the settlement by working around these places of community importance.

As observed, there is a need for a set of interventions that are significantly varied in scale. Ranging from implementation of services in the whole settlement to understanding the detail of how a specific public landmark works, all projects must unquestionably be a response to what exists on the site. As such, the interventions must build on the positives of the public landmarks and respond to the negatives.

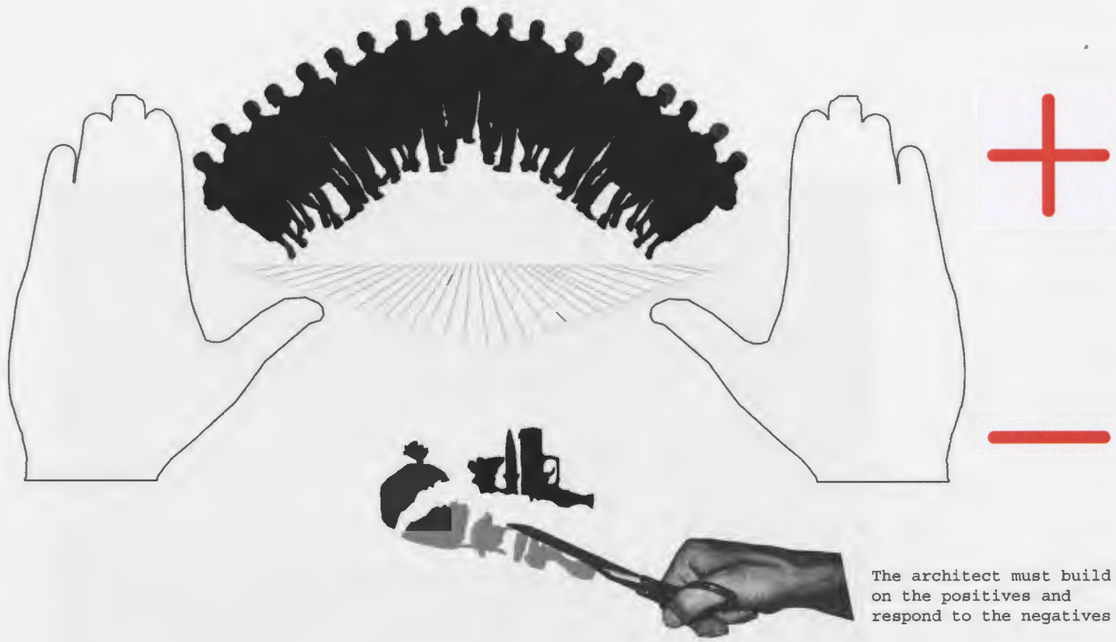
Lastly, all interventions should have as an ultimate aim the bringing of the sense of permanency to the public realm of Enkanini. In this way, Enkanini will develop itself.

"The interventions must build on the positives of the public landmarks and respond to the negatives. (...) interventions should have as an ultimate aim the bringing of the sense of permanency to the public realm of Enkanini. In this way, Enkanini will develop itself."

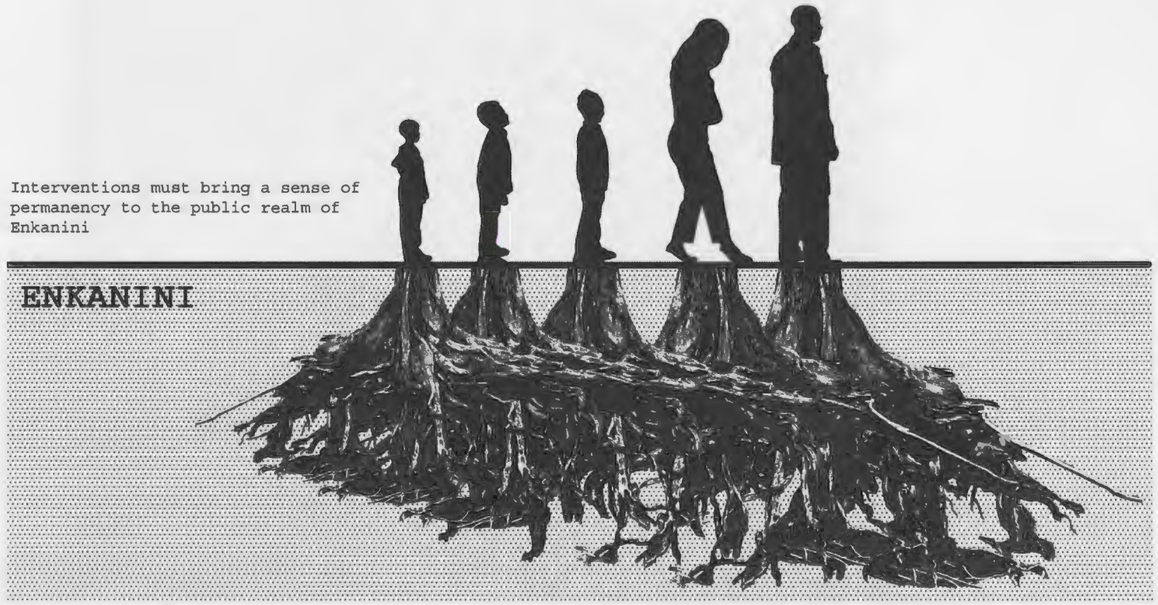
The architect must understand the concept and the existence of Public Landmarks



The architect must understand the concept and the existence of Public Landmarks



The architect must build on the positives and respond to the negatives



Interventions must bring a sense of permanency to the public realm of Enkanini

As the basic principles for design are set, there is a need to jump into the actual design of interventions for the settlement. Here is described a study of proposals that follow the stepped methodology outlined in Chapter 3 of this paper. The process is cyclical, starting with a field research that turns into findings and then into conceptual design responses. What is new in the design part of the methodology is the introduction of design attempts or proposals that will clarify the final design concepts.

The study will be carried in three different scales to represent different design disciplines ranging from urban design on to an architectural, focused intervention. Each scale will inform the next one , thus making the organization of scales relevant. However, this is not seen here as a pre-requisite for any intervention. What is important is to follow the methodology posed in this paper.

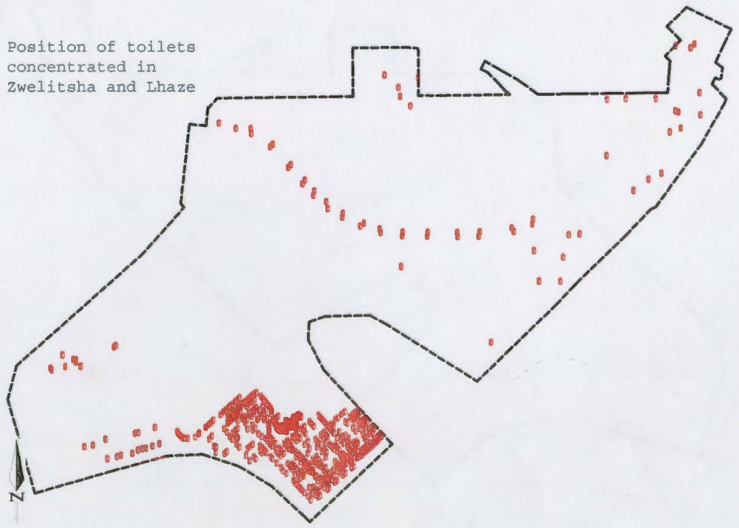
THE EXISTING

SERVICES: TOILETS

As it has been seen before, there are three types of solutions given by the government to the residents of Enkanini with regards to toilet facilities. The first is a fixed concrete toilet, the second a plastic portable toilet and the third is a small individual replaceable box. The first solution has a higher density along Lhaze and is presently being installed in more interior parts of Enkanini. This solution is permanent but rarely lasts longer than two months as he toilets become dysfunctional. The second solution is implemented as public toilets as well. Because these are plastic and temporary, and because there is no control over who uses them, they become unusable in a matter of weeks. Some get taken away for individual use. The third solution allows for private use of the toilet but brings a massive cost to the government that has to collect and provide new boxes every two days.

The future of this situation is believed to be an installation of concrete toilets around the whole area of Enkanini until the residents are relocated to a housing project like the one in Zwelitsha. Here each plot is given an individual toilet which a singular family looks after. This justifies the quantity of toilets in that area.

Position of toilets concentrated in Zwelitsha and Lhaze



Toilets in Lhaze - not functional and create a negative space around them

urban scale

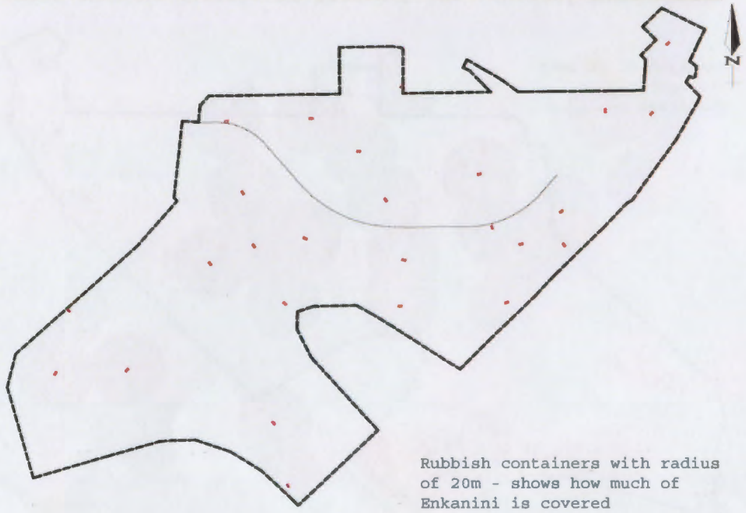
The urban scale looks at the full area of Enkanini and seeks to understand its urban conditions. The study will focus on services and public places that define the patterns of density of Enkanini. These will inform a set of proposed interventions at this scale. The proposals will be summarized into principles that must be applied in any intervention at the urban scale.

SERVICES: RUBBISH CONTAINERS

My studies have counted 27 containers provided by the city of Cape Town to serve as rubbish collection points in Enkanini. Officially these containers are opened from 8am to 5pm and are cleaned every three days. At night the containers are closed so that there are no baby dumping or criminal activities happening inside of them. The fact is that these containers usually stay closed for the entire day. This results in an accumulation of rubbish on the outside and its consequent disadvantages. The containers are placed around the whole settlement and normally serve an area with a radius of about 20 meters. This ratio proves to be insufficient, for people have created informal rubbish collection points. These have an informal system of collection of rubbish and of dumping it on the formal structures.

It is therefore fair to say that the formal rubbish collection system does not work properly. There are not enough collections points for the size of Enkanini and the container solution is not being a positive solution to the problem, instead it is creating other problems.

Locked Rubbish containers and the negative space attached to it



Rubbish containers with radius of 20m - shows how much of Enkanini is covered

SERVICES: STREET LIGHTS

The existing street lights in Enkanini are located along Lhaze and in Zwelitsha. These two areas happen to be the areas with most service input by the government in the whole of Enkanini. However, most of the street lights in these two areas do not work, leaving the public spaces of Enkanini in darkness after dusk.

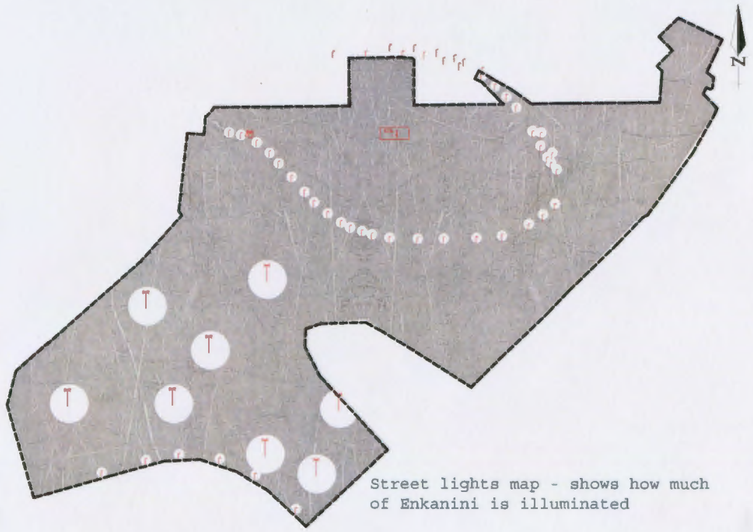
Electricity has been promised to the residents of Enkanini repeatedly though. Two power stations have been built next to the railway and were said to form part of the realisation of that promise. However, Enkanini does not have any formal system of electricity, nor there is any indication that it might have it in the near future.

As a solution, the residents of Enkanini group themselves on the edges of the settlement where they can informally pull cables from the neighbouring formal settlements.

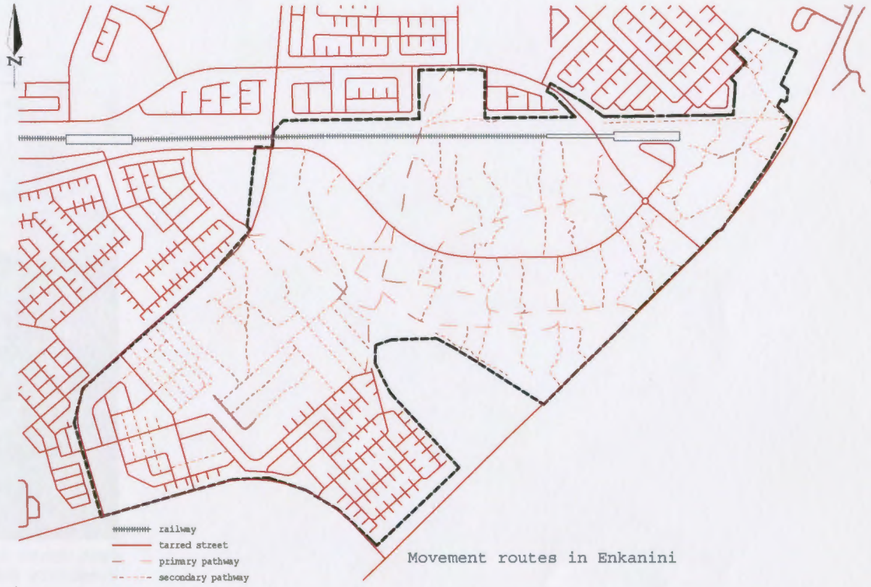
The inexistence of this service contributes significantly to the lack of safety in the streets of Enkanini.

According to a resident of Enkanini, an electricity network has not been installed here because Enkanini has no streets or corridors to run the cables on. In other words, the settlement is not formalised enough to have electricity installed in it.

Enkanini at night. most lights dont work. on the other hand in Makhaza and Kuyasa the lights are all functioning



Street lights map - shows how much of Enkanini is illuminated



Movement routes in Enkanini

SERVICES: MOVEMENT ROUTES

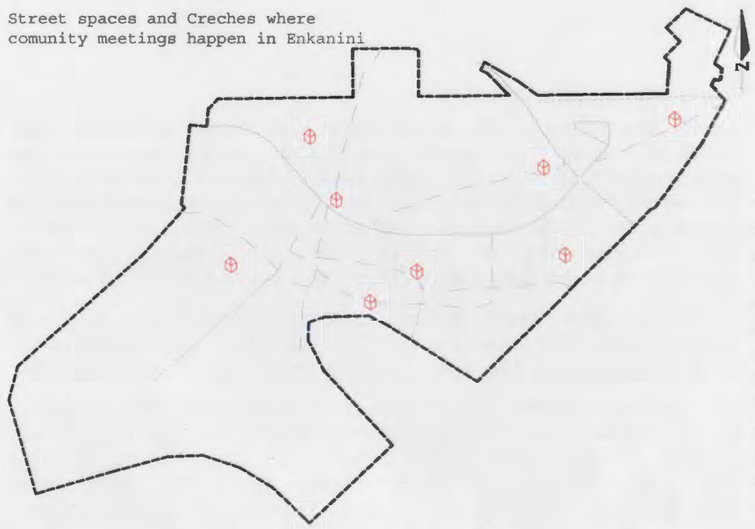
There are three types of movement routes in Enkanini. The railway, being the highest investment, is an important new development that has linked Enkanini to the rest of Khayelitsha. The settlement sits between the two newest stations of the Khayelitsha line - Kuyasa and Chris Hani Stations. However, the line has only two trains a day, which makes this line limited in providing mobility to the residents of Enkanini.

On the other hand, Lhaze accommodates for the bus and taxi routes that link Enkanini to the rest of Khayelitsha. This makes Lhaze the most used movement route in Enkanini.

The third movement route system consists of the pathways. These were created in an informal manner and are important to the movement on a local scale. The pathways constitute the bulk of the movement network of this settlement and have a clear hierarchical system of organization.

Open space in the street where
community meetings happen ocasionally

Street spaces and Creches where
comunity meetings happen in Enkanini



COMMUNITY GATHERING SPACES.

Even though there are no formal structures that can accommodate public gatherings in Enkanini, there is a need for this function. The residents therefore gather where they can. Usually they meet in the street wherever there is a big enough space, or in the event of bad weather, they use crèches to perform this function.

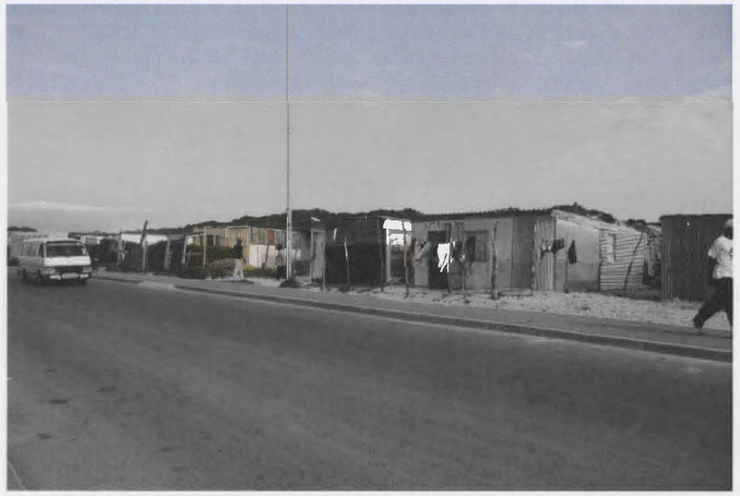
The crèches perform, in this way, the function of community spaces. They are used frequently for other communal functions as well.

The crèches and the spaces on the street where community meetings happen are important places, for they relate to the community as a whole. The ways these spaces are used reflect an important need of Enkanini currently that has no formal response.

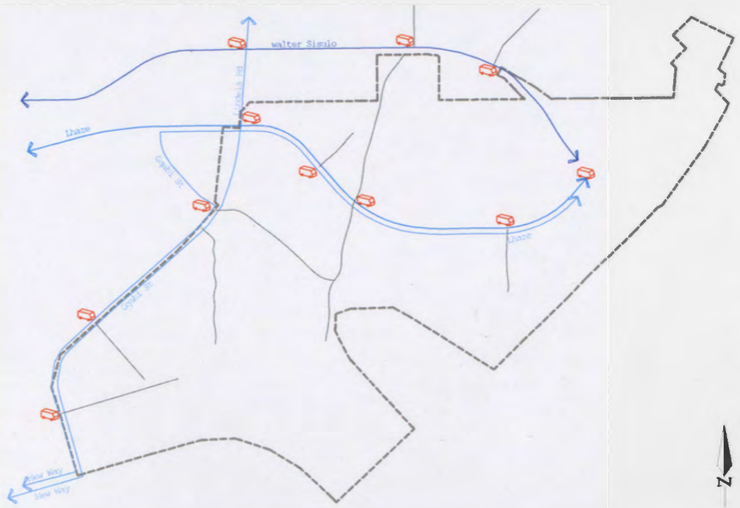
INFORMAL BUS STOPS AND ROUTES

There are no formalised bus stops in Enkanini. The taxis and buses stop at the junctions between the main roads and important pedestrian movement routes that link to these main roads. As such, Lhaze is an important public transport road of Enkanini. This road, together with Walter Sisulu, makes the east-west link to the rest of Khayelitsha along the railway line. Gqabi, by Kuyasa, links Enkanini to Mew Way which goes west, and to Lindela Rd which goes north. These two routes should meet at the cross between Lindela and Lhaze on the far northwest side of Enkanini. However, Lindela at that point is a bridge over the railway line, which makes it impossible for this to happen.

Lhaze as a taxi route



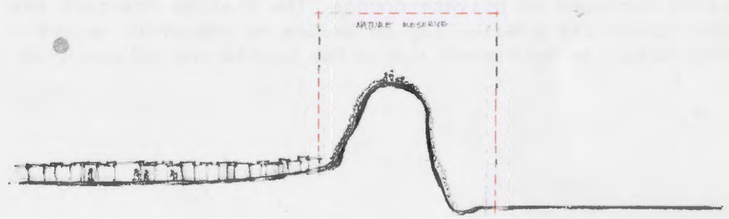
Bus and taxi routes in Enkanini



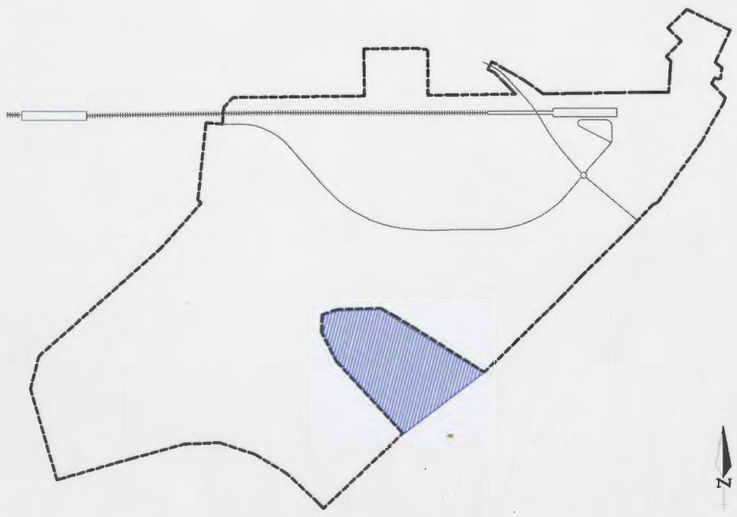
THE HILL

Because of its geography, the hill constitutes one of the most dangerous areas of the settlement. Moreover, this Landmark is the furthest away from any serviced area. These two conditions make the area near the Hill the least dense of the settlement. The government has started responding to this fact by implementing a housing project on its south side - Zwelitsha. The north side of the Hill, though, needs urgent densification in order to make this area safer.

Section through the Hill



placement of the Hill in relation to Enkanini

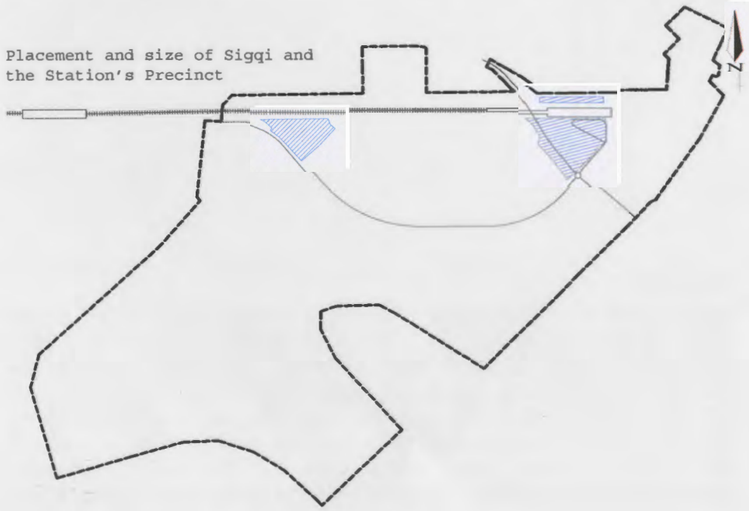


SIGQI AND THE STATION PRECINCT

These two areas are of importance to the Enkanini for they are the only existing open spaces at that scale. They have the potential for big scale uses of space like community gatherings that involve the whole of Enkanini, for example. These areas also provide the space for big scale public buildings considering that these cannot be implemented in areas occupied by private houses. The Station Precinct has the particular possibility to become an important economic centre for the settlement due to its link to the railway line.

Siggi - a vast open area in the heart of Enkanini

Placement and size of Siggi and the Station's Precinct

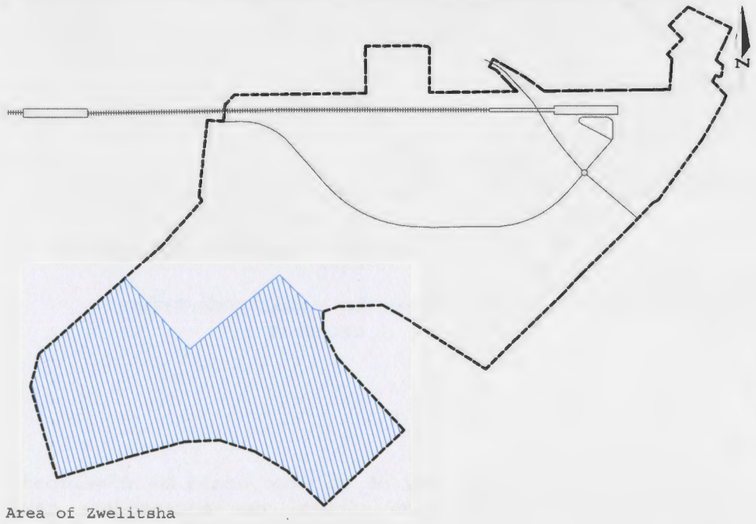


ZWELITSHA

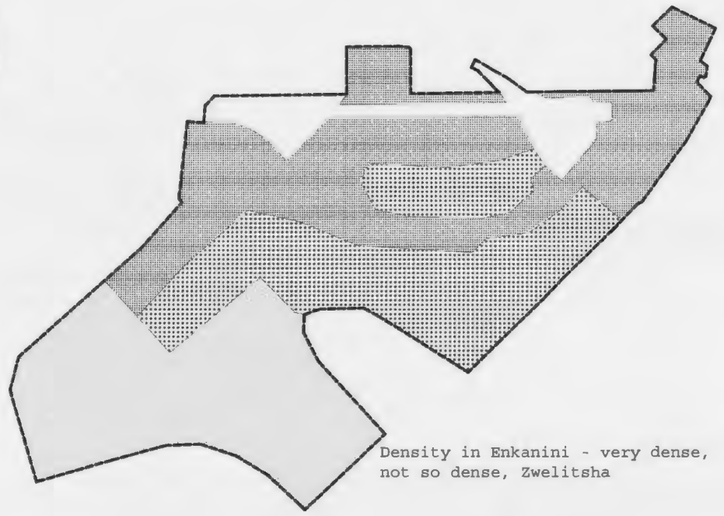
Zwelitsha was, since the early stages of Enkanini, an area allocated by the government for housing. During this year, toilets were installed and plots allocated to people. As such, this area is not informal; it is rather in an advanced stage of formalization. Therefore Zwelitsha is not a primary focus in this document. However, it is part of Enkanini and it is an informant to important design decisions, especially at an urban scale.

Zwelitsha is the first phase of the future of Enkanini. The government, on its political campaigns, and according to the residents of Enkanini, has promised to deliver housing to Enkanini. This delivery would come from two opposite sides and expand towards each other through the settlement, until they would eventually meet. Zwelitsha is the first of these housing projects to start in the southern side of Enkanini. The two power stations on the north would be the other starting point of this development. These two would eventually meet somewhere by the Hill.

Zwelitsha, an area in the process of being developed



Area of Zwelitsha

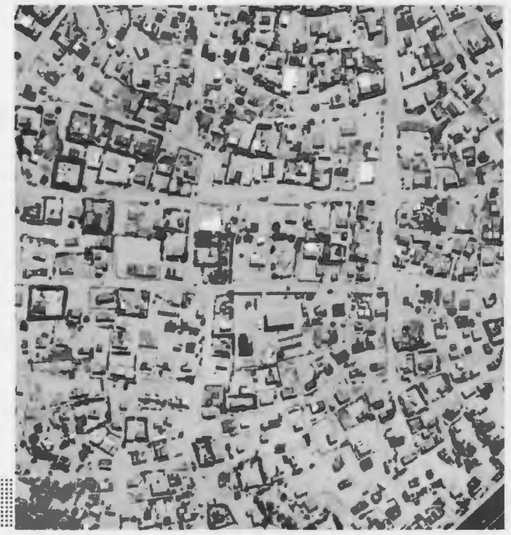


Density in Enkanini - very dense, not so dense, Zwelitsha

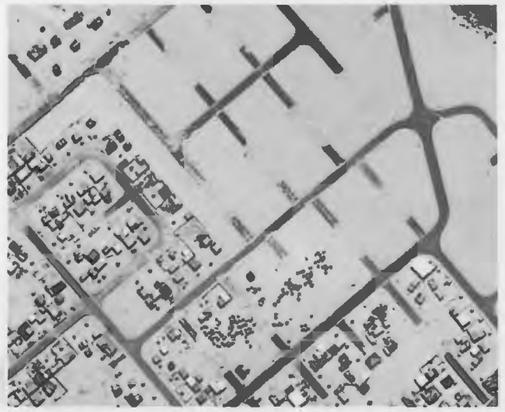
densities of Enkanini - City of Cape Town

very dense

dense

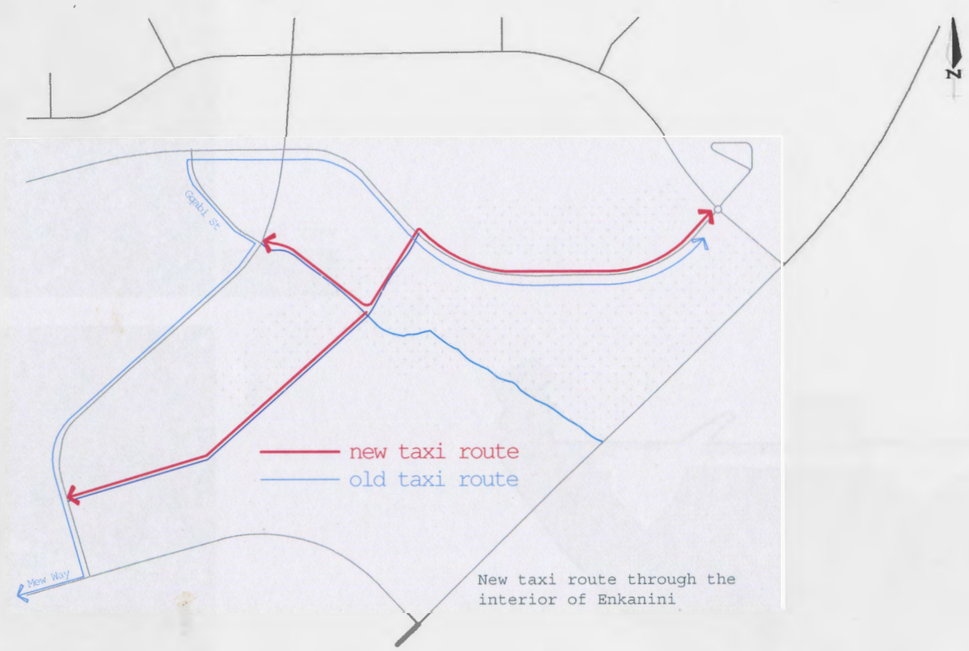


Zwelitsha



DENSITY

Very much related to the access to public services, the density of Enkanini is shaped along its edges. It is Kuyasa and Makhaza that provide electricity for their neighbours and it is in Lhaze that there is a higher concentration of toilets, movement and street lights. These factors were highly influential, in my view, for the placement of houses in Enkanini. As such, these factors can be used, through interventions, to reshape the density patterns of this settlement.



New taxi route through the interior of Enkanini

Phase 1 - implement two major vehicular routes - new taxi route and new road by the Hill

methodologyillustrated:n:_76

PROPOSED INTERVENTIONS

At an urban scale, there are important changes to be made to Enkanini. My design proposal will respond to the previous study and will be divided in four separate phases. These will be organized by order of need and intend to bring a sense of permanency to the residents of Enkanini.

PHASE 1

It is extremely important to develop the area near the Hill for this is one of the most run-down areas of Enkanini. This area needs to be denser in built fabric in order to make the Hill and the whole area safer. On the other hand, bringing development to this side of the settlement will balance the density patterns of Enkanini.

There is also an opportunity to bring transport routes to the interior of Enkanini. This act would provide a significant development of the areas around the new route and consequently to the interior of Enkanini.

As such, my proposal is to introduce a small, but important, amount of streets along the interior of the settlement. The streets are seen as an upgrade of the pathways with the implementation of services and hard surfaces. The streets would have water supply from the mains, electricity, sewage and drainage. They would also become important for a later development of other services like telephone or internet.

In this phase, a hierarchy of streets would be developed. The first, being a 10m wide street, can accommodate taxi routes. At the moment the routes do a loop around the Soccer field to reach the Gqabi - Lindela corner. A route through the interior of Enkanini is a shorter route and has the chance to be successful for that. Then, an 8m road would be introduced along the Hill. This would be able to accommodate a relatively fast movement of cars and would be an important link to the R310. This road would be an important asset to the area edging the Hill and would bring development to it. 6m streets would be implemented in heavy pedestrian routes. These are intended to maintain the pedestrian scale that exists on them and also provide an opportunity for car movement and access to emergency vehicles.

By providing a delivery of services through these less dense areas I intend to promote the beginning of a shift in density from the edges of the settlement to the interior.

Phase 2 - development of main pedestrian routes + definition of nodes by introducing small facilities

Phase 3 - expand street service delivery + implementation of higher grade facilities solidifying nodes

Phase 4 - pavement of smaller streets + deal with bigger areas

PHASE 2

Phase two would pick up on the first one. It would carry on the work of creating opportunities on less dense areas in order to make them denser. It would simultaneously expand the reach of the street layout to other areas.

The main idea of this phase is to provide small scale facilities that will start giving the sense of permanency to specific spaces. Bus stops, solid waste collection points, public phones or post collection points would be examples of small-scale interventions that would start defining space.

By making these interventions I also intend to start defining nodes in a very subtle way.

PHASE 3

In this phase a bigger scale of facilities would be implemented. Libraries, post offices, schools, clinics, community halls and centres would be implemented in specific points where there is a need for them. These facilities would become important in solidifying the nodes that have been created with the hierarchy of streets.

The expansion of the street/service delivery would carry on from phase one. In this phase, it would be focusing on important pedestrian movement routes implementing the last 6m streets.

PHASE 4

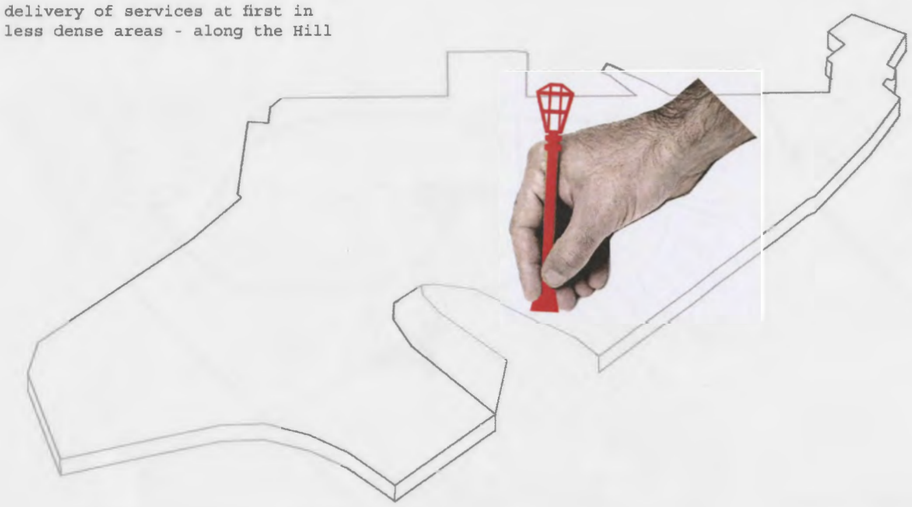
Phase four would be focused on resolving areas that need big investment. Sigqi and the soccer field are two examples. Once Enkanini has developed its character into something more permanent, these spaces will have a different social and spatial meaning. By then, a new strategy would have to be implemented that would respond to the specific, changed conditions.

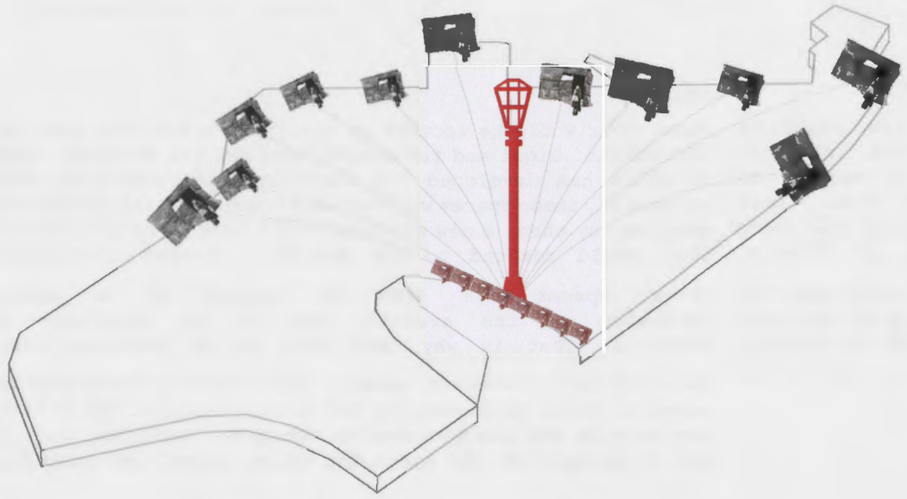
These spaces are seen as spaces of a lesser relevance to the everyday use of the residents of Enkanini. That is why they were to be resolved last.

Here will be implemented, as well, small scale streets that are aimed at being fundamentally for pedestrian use. The streets are 4m wide and can accommodate emergency vehicles, but are set to prioritise the space for being pedestrian friendly.

Proposed alteration of pathways into streets by width

delivery of services at first in
less dense areas - along the Hill





"delivery of services must be implemented on the less dense areas in order to create a magnet of density"

PRINCIPLES FOR URBAN INTERVENTION

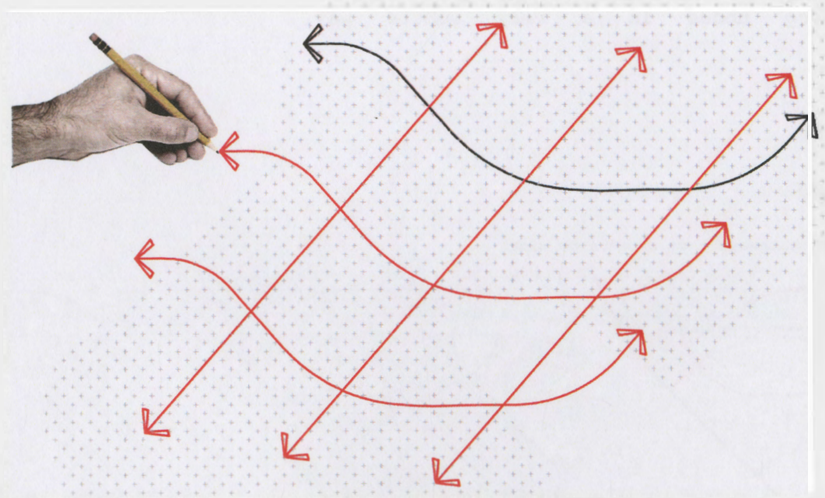
From what was gathered in the urban understanding of Enkanini, there is an uneven distribution of density which is caused by the access of services. Consequently, an urban intervention must unquestionably respond to this situation.

The delivery of services must be implemented at first on the less dense areas in order to create, here, a magnet of density. Within the less dense areas, Ark - the neighbourhood that edges the Hill - has a vital priority. This neighbourhood has serious problems as a result of its location near the Hill and of its distance to serviced areas.

It is equally important to introduce to the settlement a network of streets. The existence of streets will bring a new approach to self development in Enkanini. With this intervention, new economic routes will be created and social nodes will start to be defined. Because these streets spread to the interior parts of Enkanini, the intervention would help balance the density patterns of the settlement.

The main principles for an urban intervention must, therefore, aim at a spread of density through the whole of Enkanini. This must be accomplished by the delivery of services or facilities that bring a change to the character of the settlement into being one of permanency.

introduce a network of streets to
spread density



"The existence of streets will bring a new approach to self development in Enkanini."

Position of precinct studied in relation to Enkanini

precinct scale

The study of a precinct aims at understanding the conditions existent in Enkanini with more detail than those of the urban scale. This study will follow up on the interventions proposed at the previous, urban scale in order to inform how those strategies would be implemented with specificity.

The area chosen was the part of the intervention that would create a new taxi route. The study seeks to understand where this route would be created, as well as the ideal places where previously proposed interventions would be implemented.

THE EXISTING

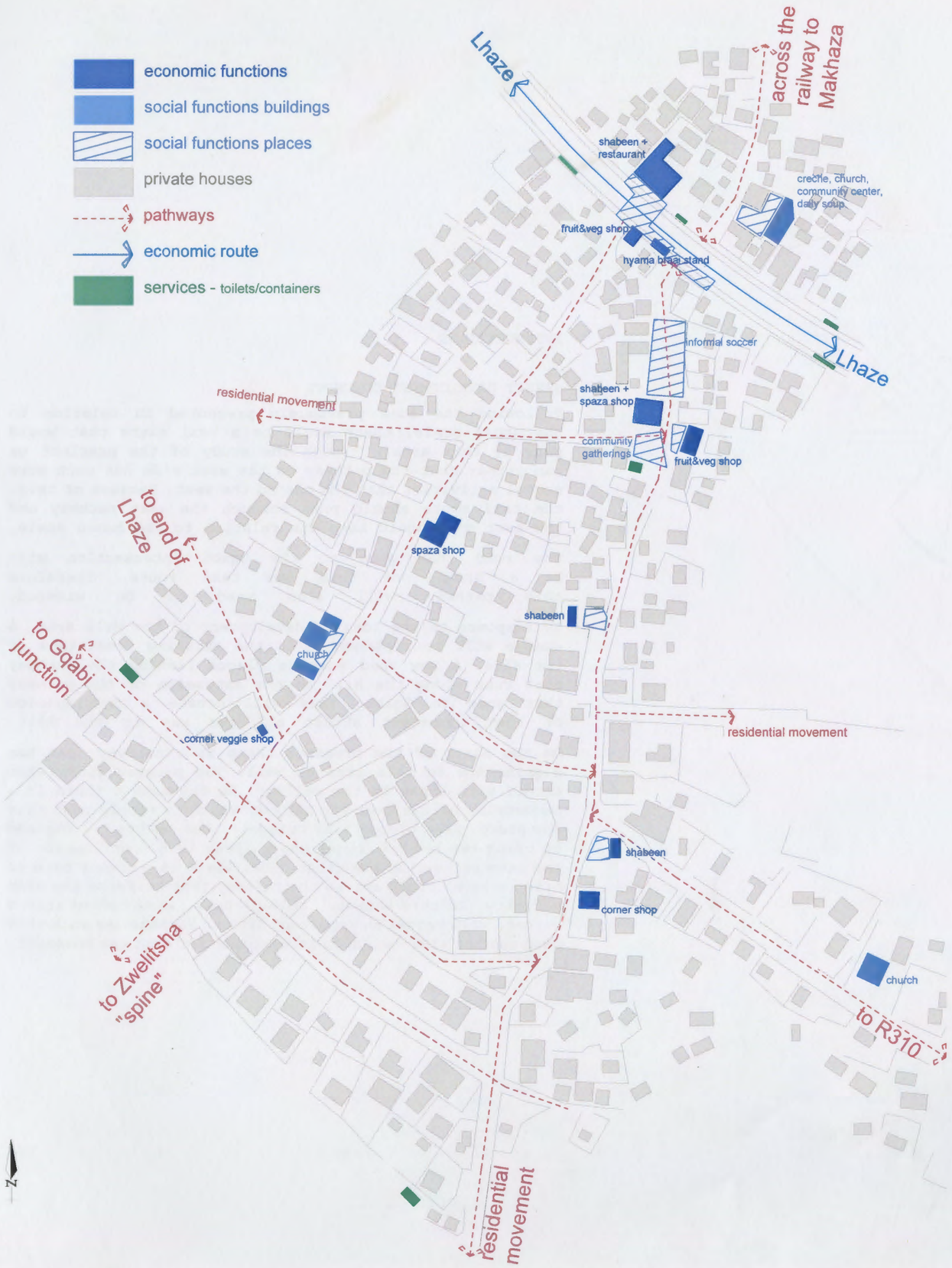
The most important point of this precinct is undoubtedly the corner between Lhaze and the two pathways. At this intersection, two different characters of space meet, one being the economical and the other, the social, previously talked about in my research.

Lhaze is obviously an important contribution to this condition, but the pathway that runs in the north-south direction equally plays a major role. This is the longest pathway of Enkanini and links Zwelitsha in the south to Makhaza in the north.

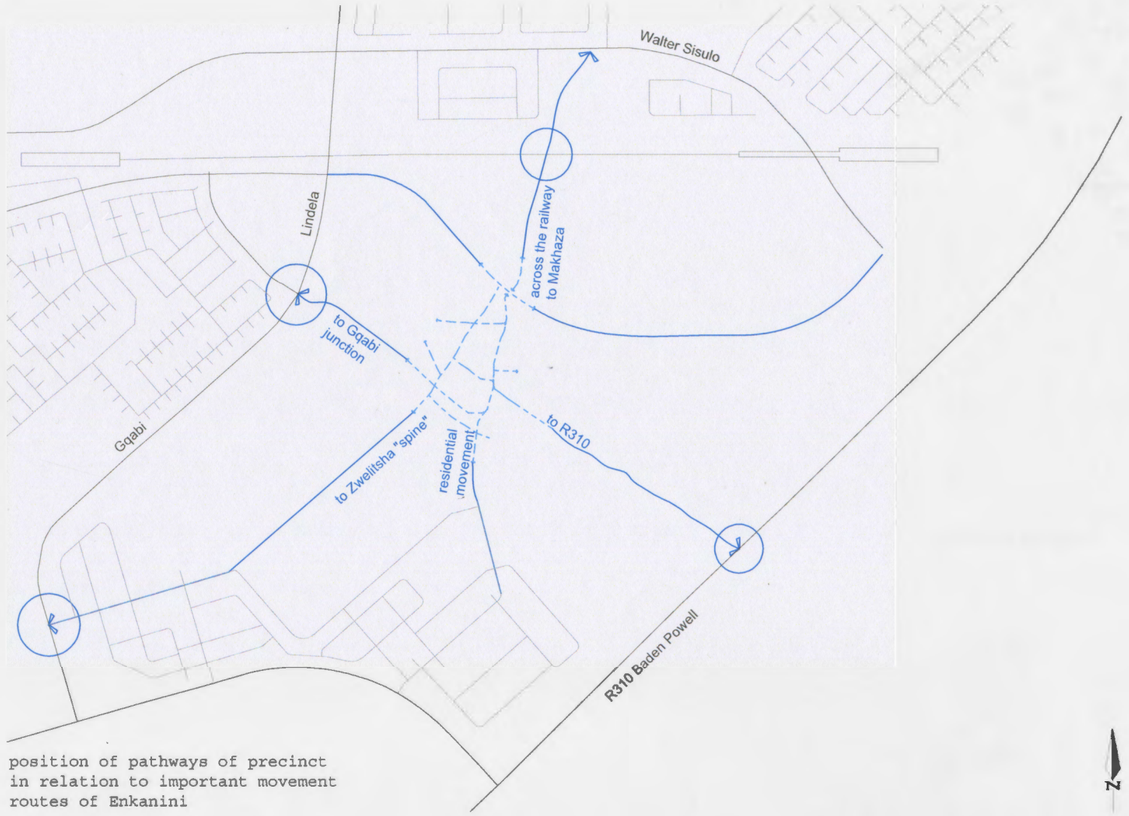
This pathway, as can be seen in the drawing, is populated with economical functions but also with socially used spaces. Between community gathering spaces and informal bus stops, or areas adjacent to shebeens where people gather or play soccer, this pathway has a spatial character that accommodates pedestrian movement and social exchange. It is also clear that this type of activity tends to get denser the closer it is situated to Lhaze.

The pathway that runs parallel to the one explained above, but on the west side of it, has a different spatial character. This pathway does not have as many social functions happening on its grounds. The pathway is used for pedestrian movement, linking Lhaze to an important street of the Zwelitsha neighbourhood.

Along these two pathways are other areas that reflect some activity. When these pathways meet other important pedestrian routes, there is an accumulation of activities. The existence of small corner shops reflects and brings identity to these hybrid spaces.



Plan of precinct showing economic and social activities: 1|1500



position of pathways of precinct in relation to important movement routes of Enkanini

INTERVENTIONS

STREET DEVELOPMENT CONCEPTS

Following the idea previously presented in relation to the urban scale, there would be a taxi route that would pass by this area. Through the study of the precinct we can gather that the pathway on the east side has much more social activities than the one on the west. Because of this, the taxi route should pass through the west pathway and the east one should keep its relation to the human scale.

The road that goes to the Gqabi intersection will be a branch of this new taxi route. Therefore this pathway will also need to be widened.

In response to the idea of development of the Hill area, a change will be implemented to the existing conditions of the site. A new road must be placed linking the pathway that runs along the Hill to the extension of the pathway that goes to Gqabi. This will create a continuation of that important street all the way to the R310.

On the north of the precinct there is a pathway that has significance to this area as well. The pathway links that corner with Lhaze to the railway. At the moment there is a pedestrian bridge over the railway which is rarely used (see the story: What became "the bridge"). The residents, instead of using the bridge, cross the railway to a continuation of the same pathway on the other side. There is a chance here to bring a level cross across the railway that performs the same activity. If this happens, this pathway, when turned into a street, will become an important link to Makhaza. As such this road must be wide enough to accommodate for fast car movement.

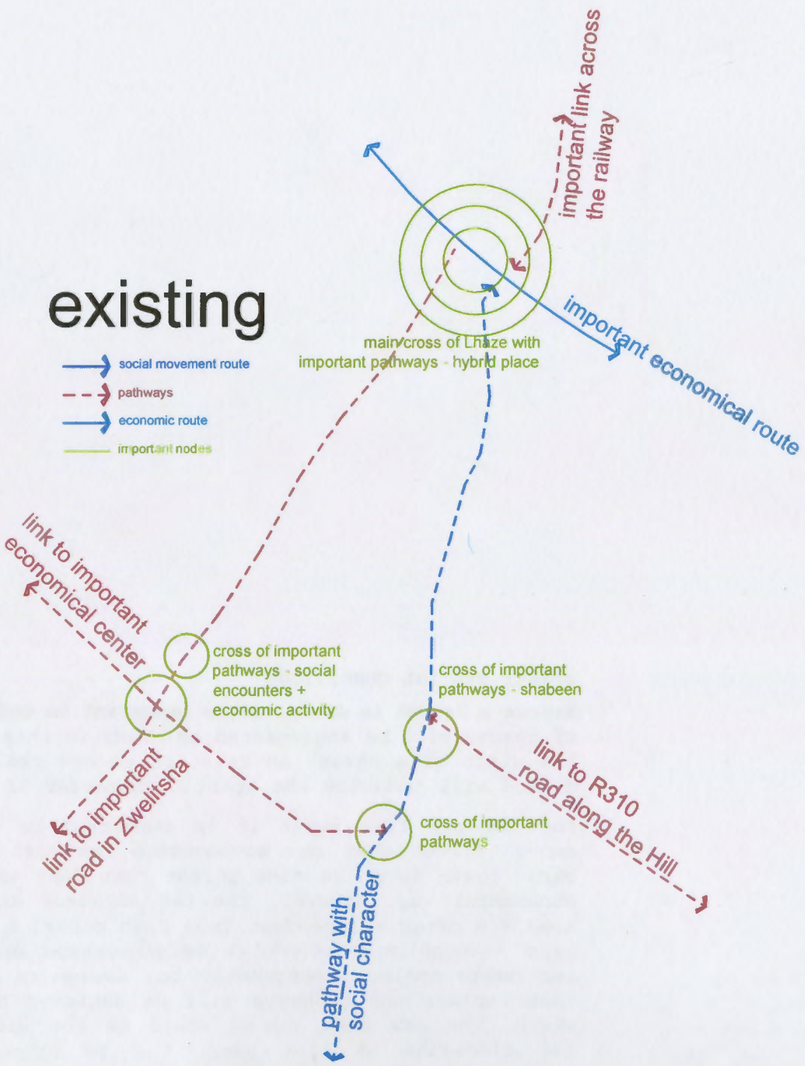


diagram showing east and west pathways, their use and the nodes created by their junction.

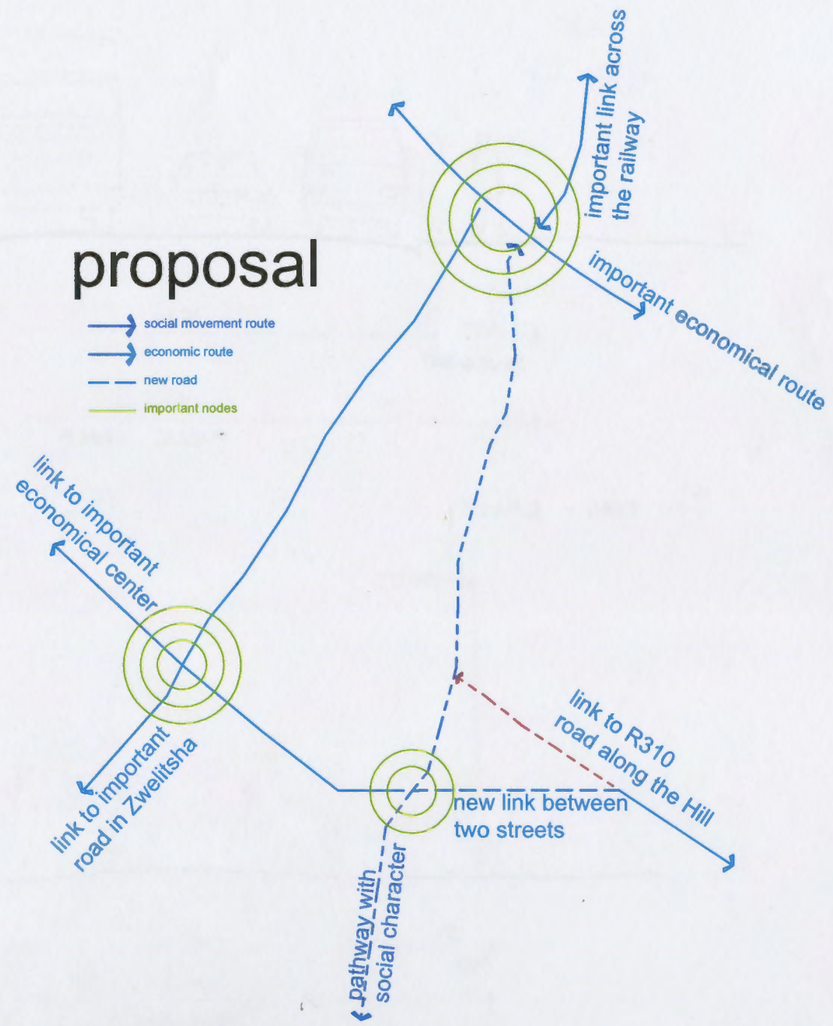
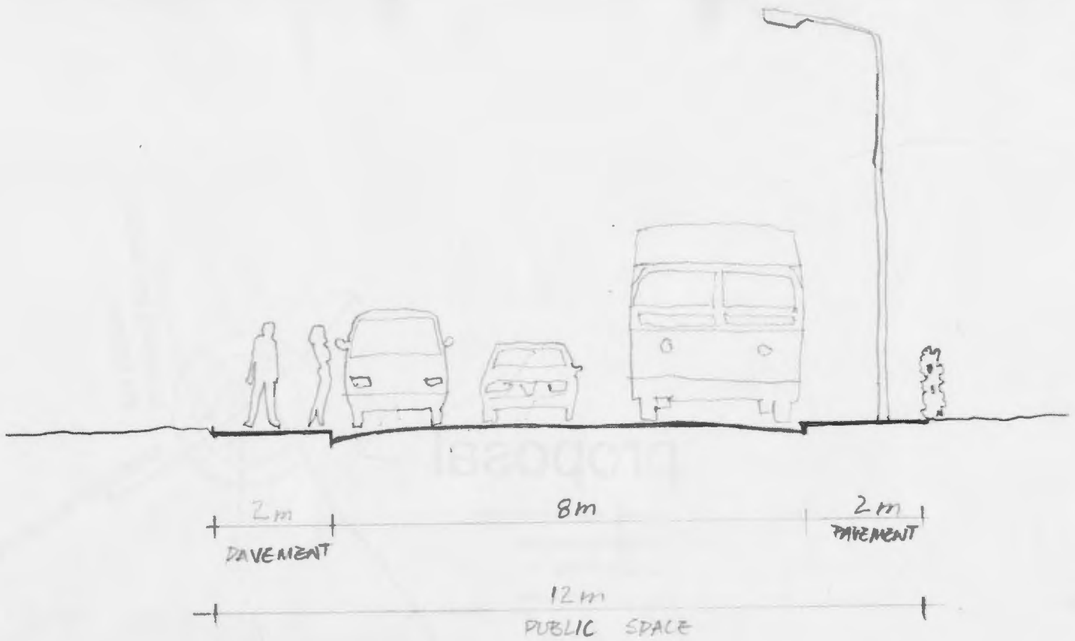
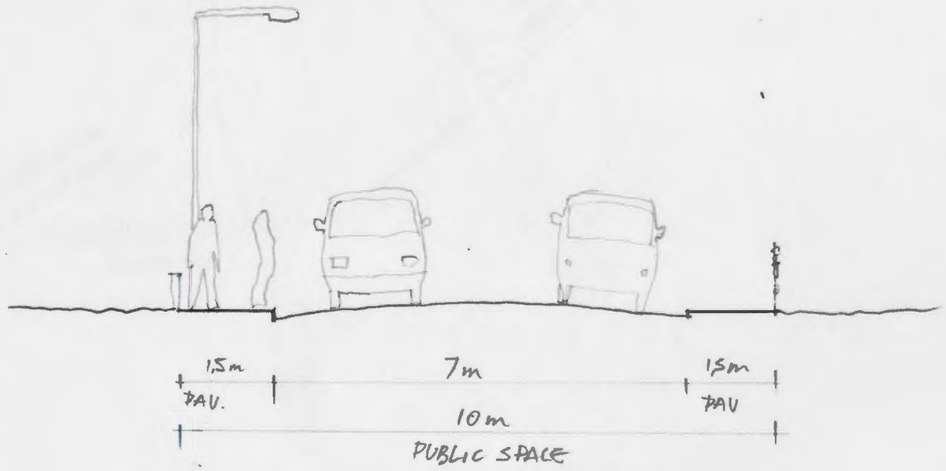


diagram showing proposal for east and west pathways, their use and the nodes created by their junction.

Spatial study of street sizes to be implemented as part of the proposal: 1|100



12m ROAD - LHAZE



10m ROAD - INTERVENTION

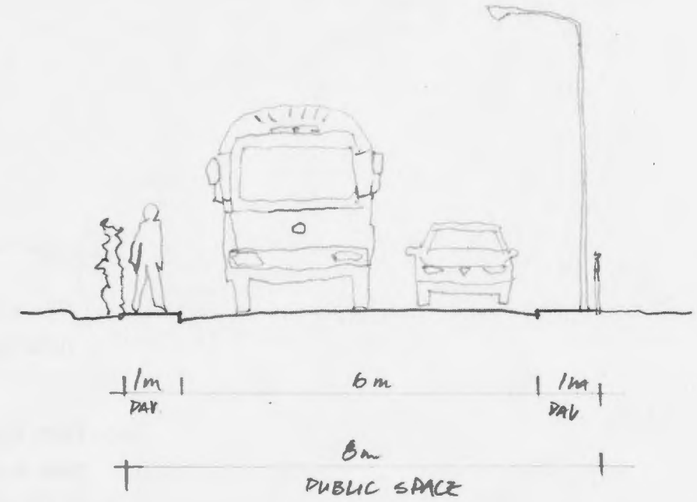
STREET SPATIAL CONDITIONS

Before a layout is drawn, it is important to define what type of spaces will be implemented as roads in this settlement. The width of a street in relation to how the pavement is defined will influence the spatial character of the street.

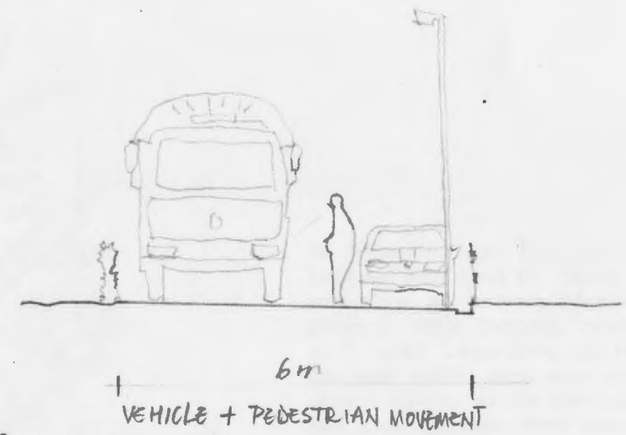
For the new taxi route it is important to have a wide enough street that can accommodate for fast movement of cars. Lhaze is a 12m wide street that does this job in a successful way. However, the two adjacent sides to this road are often independent from each other. A street that cuts through a residential neighbourhood must consider its human scale. Consequently the design of the streets that replace the pathways will be designed to a minimum width. The new taxi routes would be 10m wide including two sidewalks of 1.5m each. The 7m circulation area would accommodate two ways of movement and the walkways would create a space for pedestrians to move safely.

Other important roads, like the one that links this area to the R310 or the one that crosses the railway, would be 8m wide roads. 6m for vehicle movement accommodates two lanes of movement comfortably. The sides would have two walkways of a meter each to accommodate for pedestrian movement.

Spatial study of street sizes to be implemented as part of the proposal: 1|100



8m ROAD INTERVENTION



6m ROAD INTERVENTION

4m ROAD INTERVENTION

Because these roads are seen as arterial vehicle movement roads, they must differentiate pedestrian and vehicular movement. Other streets that try to accommodate social activities primarily merge these two movements into one singular space. The main arterial pedestrian movement streets, such as the pathway that runs north-south, will have a 6m wide street without pavements. This size allows for emergency vehicle movement but also gives the pedestrian ownership of the space. A smaller scale street would be implemented on pathways that are more confined. This one, being 4m wide, can accommodate for emergency vehicle movement, but only in emergency cases. This is a street that will serve local traffic only, so it is not meant to have high speed movement. It can accommodate for one way movement at all times with occasional pockets of space for vehicles coming in the opposite direction.

APPLICATION

It is important to keep the layout of the pathways as informants of the new streets in order to keep the spatial relationships that exist in the settlement. As such the process of placing the new streets started with drawing a middle line through the existing pathways. This line was offset to the width that was required. This process informed of the extent to which the new street would invade private properties. It must be said that this process has been done before in the settlement to get the pathways to be wide enough to accommodate vehicle movement. The residents accepted the drawback of their properties boundaries considering that it was for a communal good.

With the layout of the new streets, private property had to be shifted and redefined. Some residents would have to be relocated for the entirety of their property would be taken away by the new street. After redefining the boundary lines, a few more residents had to be relocated for their houses did not fit to their original plot. This process of private-public boundary re-definition resulted in an increase of public spaces that can be used for placing public facilities.

To define these new spaces as public, the pavement would be extended to those newly acquired areas. This same strategy would be used to define the existent pockets of public space. The pathways have pockets of space where small public activities happen like playing soccer or community gatherings. These spaces must be kept as public spaces and the extension of the pavement will be used to make this definition.

layout of the new streets - to follow the pathway lines: 1|2000

relocation and shifting private property - 12 families relocated: 1|2000

Public space plan: 1|2000

FACILITIES

When studying the urban scale, I have proposed the placement of facilities on the settlement. I have also explained that these facilities are of different scales. It is important, when studying a precinct, to identify areas where these facilities would be implemented according to their function or scale. However, the precinct scale is not detailed enough to determine the exact position of these facilities. The position of these facilities must be determined on the next scale - the community scale.

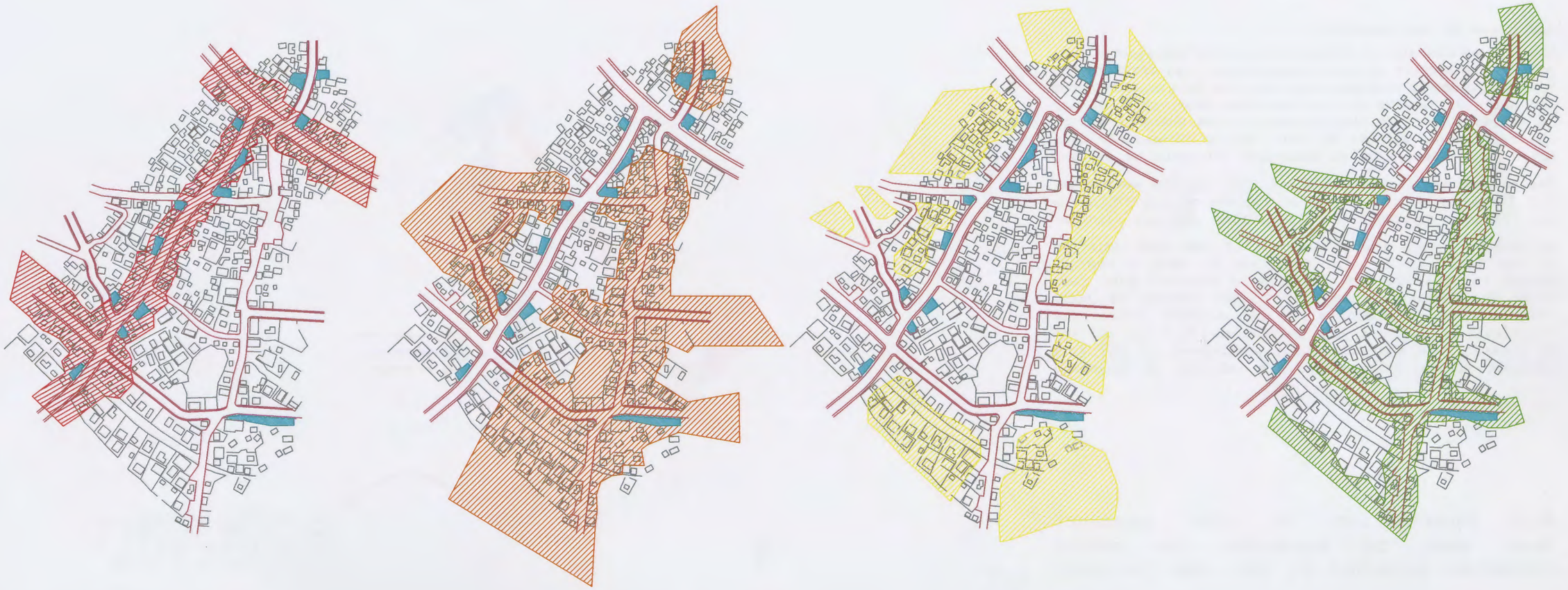
The work of Vanessa Watson and Roger Behrens is relevant for this exercise. In their book "Making Urban Place" (Behrens and Watson 1996, 79), they define five categories of facilities that are different in scale as can be seen in the adjacent table:

The first category is inapplicable to this precinct because it is of a higher order onto which this precinct does not belong, which is why we will not take it into consideration. The other four categories are mapped here as an exercise to understand where each category of facility must be placed within this precinct. It must be mentioned that this is an exercise that is based on the new condition of the settlement and not the existing pathway situation. The implementation of new streets results in the existence of a new corridor of public transport and activity routes which will influence the study of the zoning of facilities.

The mapping of zones of facilities is only needed at this scale as a concept. The placement of facilities on this precinct will be informed by a more detailed study that will come later on the Community Scale study. However, this exercise has been useful to understand the character of each zone of this precinct. It is clear after this study which areas are linked to busy, busty and fast movement environments, and which are more residential, quiet and safe.

5 CATEGORIES OF FACILITIES

Category	relation to the user	requirements	location	examples
1	Distributors of emergency vehicles across urban areas	Easy access to distributor roads	Higher order/multi-functional roads - regional	Fire stations; police stations; provincial and academic hospitals
2	Visible and accessible to as much people as possible	Easy access to public transport. Exposure to intense activity routes	Along linear public transport routes	Post offices; community centres; libraries
3	Accessible to as much people as possible but in quiet and safe surroundings	Easy access to public transport	A block or two away from more intense routes	Primary school; secondary school; day hospitals; clinics
4	Accessible to pedestrians	Quiet and safe surroundings	Inside predominantly residential areas	Crèche; day care centre
5	Visible and accessible to pedestrians	Visible and accessible to pedestrians	Easy walking distance of house hold, on busier road intersections	Collecting service points: post collection boxes; solid waste collection point; public telephones; water stand pipes



Position of 4 categories on precinct plan after street intervention

PRINCIPLES FOR PRECINCT INTERVENTION

PARTICULAR TO THIS PRECINCT

The pathway that runs north-south has a very important social role to the society of this neighbourhood. Any intervention that is applied to this area must take this into consideration and seek to preserve it. On the other hand, this pathway is an important link that extends to the whole length of the settlement. Because of that, it is extensively used which constitutes also an important informant of design.

The pathway parallel to that one, but one the west side, has little social or economic importance and therefore has better opportunities to suffer radical change.

In order to help the development of the area adjacent to the Hill, it is also important to make a radical change to this precinct. Building a movement path that links the pathway of the Hill to the pathway of Gqabi will open new opportunities for both movement routes. Now there will be a direct link between the R310 all the way to Kuyasa. This too will bring development to the area adjacent to the Hill and to the interior of Enkanini.

Any intervention in this precinct must seek to preserve the social character attached to the east pathway.

west side pathway has potential to change; east side must preserve its social character; must be a new link between the two pathways running east-west

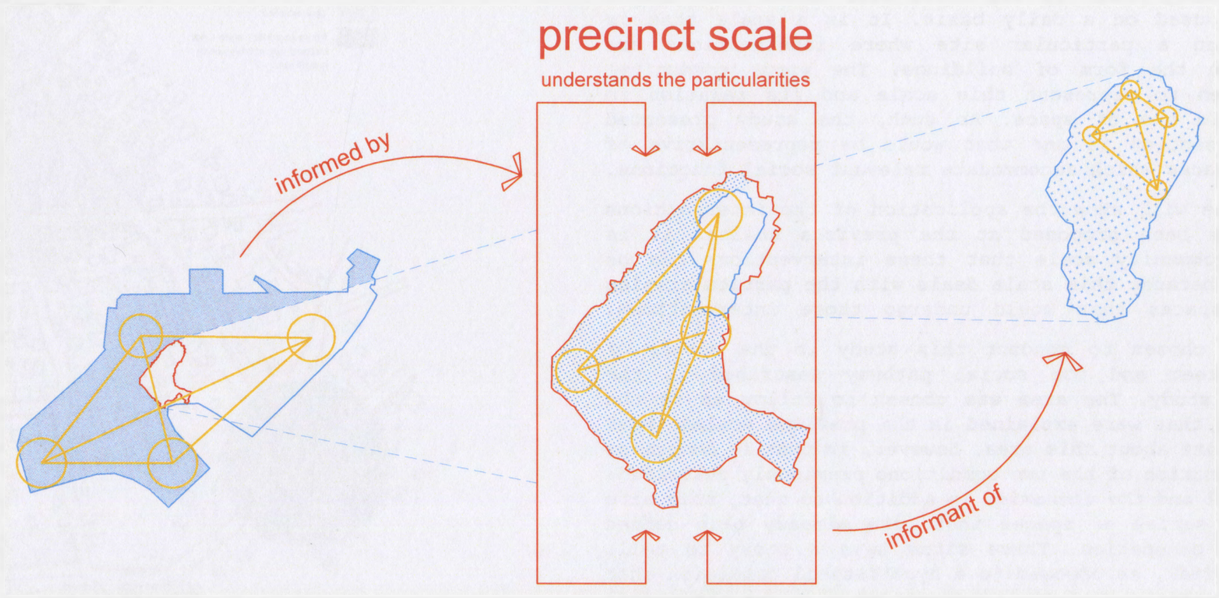
GENERAL PRECINCT PRINCIPLES

To make decisions at a precinct scale, one must be informed of the role that the site plays in relation to the broader urban system. By departing from this understanding, an intervention on a precinct scale functions for both the precinct in particular and for the urban scale. Therefore, an understanding of the urban scale is imperative in order to make decisions at a precinct scale.

In addition, a design proposal for a precinct must, unquestionably, be informed by a study of the particularities of the site. This study is essential to make conceptual decisions about what interventions to make and how to make them.

However, interventions done on a precinct scale should not make decision relating to the human scale. In order to design buildings as interventions one must make a more detailed study of a particular site. The function of a precinct intervention is to provide relevant information that will help the decision making of a human/community scale intervention.

It is, therefore, the role of the study in this scale, to bridge a gap between the urban and the community scales. This is a point that explains the urban interventions in greater depth and that informs design decisions on a community scale.



Precinct scale, an important study situated between two other scales

"It is, therefore, the role of the study in this scale, to bridge a gap between the urban and the community scales."

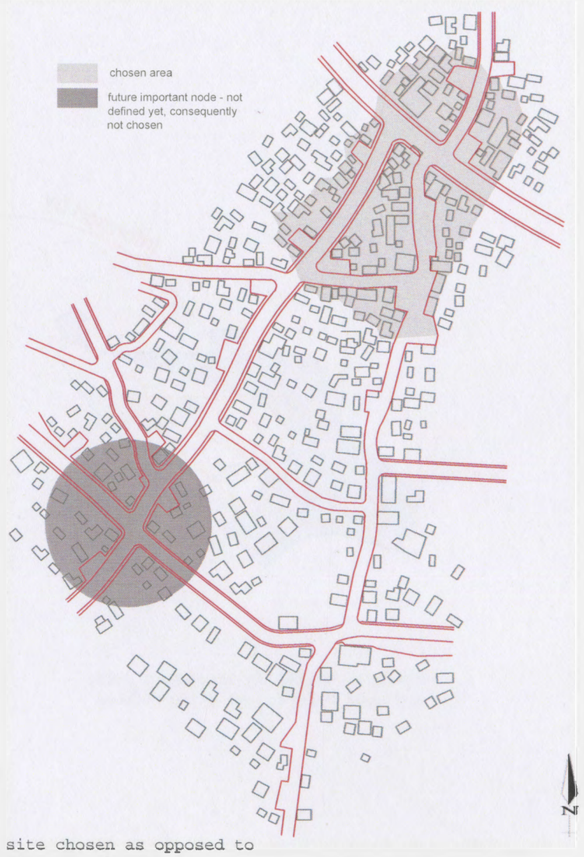
community scale

The community scale is the scale that deals with spaces that are used on a daily basis. It is a scale that is focused on a particular site where interventions are placed in the form of buildings. The word 'community' was chosen to represent this scale and its relation to the public use of space. As such, the study presented in this section is one that would be representative of public spaces which accommodate relevant social functions.

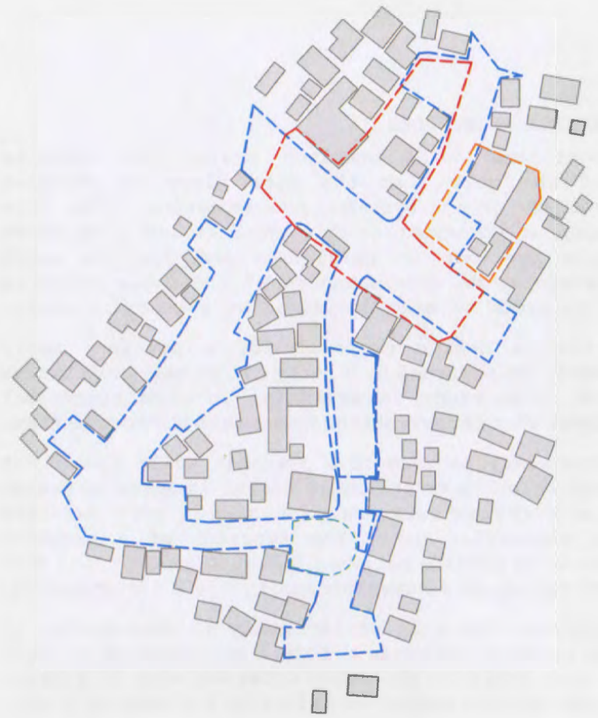
This scale will show the application of the interventions that have been proposed at the previous scales. It is at the community scale that these interventions can be designed because this scale deals with the particularities of the spaces that would undergo those interventions.

The area chosen to conduct this study is the corner of Lhaze street and the social pathway described in the precinct study. The area was chosen to follow up on the proposals that were explained in the previous scales. What is important about this area, however, is that it comprises the conjunction of the two conditions previously described: the social and the economic. In addition to that, this site covers a series of spaces that have already been defined by their occupation. These sites have a story to tell; they are real, as opposed to a hypothetical condition that would be created with the intervention of a new economical corridor through the interior of Enkanini, for example.

As a result, five projects will be studied in this paper as design proposals. These projects were selected to represent the range of socio-spatial conditions experienced in Enkanini in general, and on this site in particular. Therefore, the sites chosen are the "public landmarks" of the area of study. These projects will also be a reflection of the concepts proposed in the previous scales.



site chosen as opposed to site not chosen



projects chosen highlighted in different collors

EXISTING

PATHWAY, SOCIAL SPACES, PRIVATE GARDENS AND LACK OF SERVICES

The public space in Enkanini is not clearly defined. The residents live in informal houses that they call bungalows. Some manage to have some sort of fence surrounding the house. These fences define the private property of each resident of Enkanini as a result of years of discussion amongst the neighbours. Other houses have no physical or visible boundary between them but their residents, nevertheless, have a clear understanding of their private property.

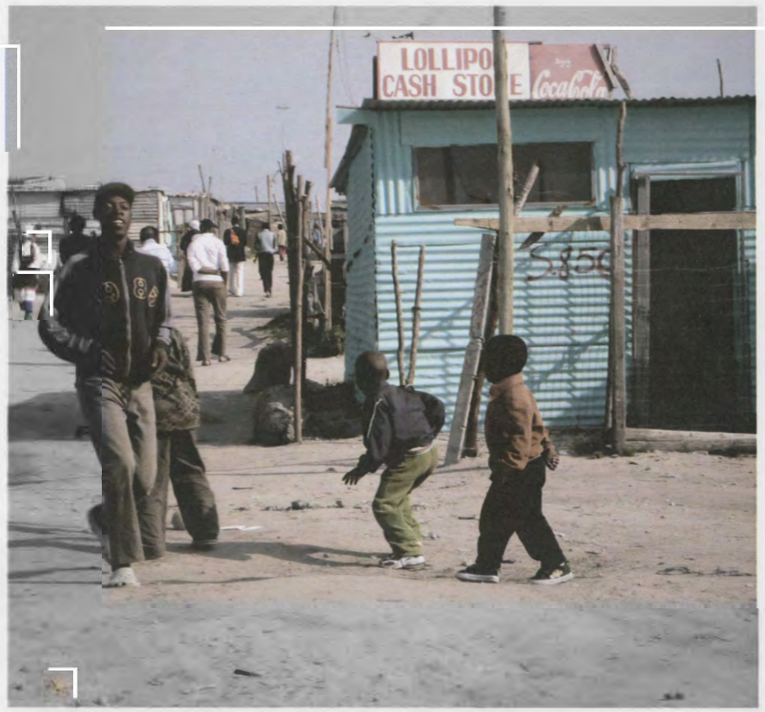
This system of plot organization has naturally defined a hierarchy of plot sizes and a system of movement between these plots. In some cases small public courtyard areas are defined within a block of private plots of land.

This pathway, as has been seen before, is used mostly for social activities and is an important route for pedestrian circulation. In this particular area of focus there are two spaces that provide an opportunity for social activities. The one is an area that is surrounded by well defined plots of land. These plots are slightly set back, which gives an extra width to the pathway. This provides an unusual open but defined space that is interpreted by the residents of this neighbourhood as a social space. Soccer is one of the activities that happen in this space. Children play in this ample space under the watchful eye of their parents or of the "Lollipop shop" that borders this space.

"bungalows" with informal fence define public/private boundary

Small public courtyard areas defined within private plots of land - City of Cape Town

Unusualy opened but defined space that is interpreted by the residents of this neighbourhood as a social space: 1|200



Children playing soccer in front of Lollipop Cash Store

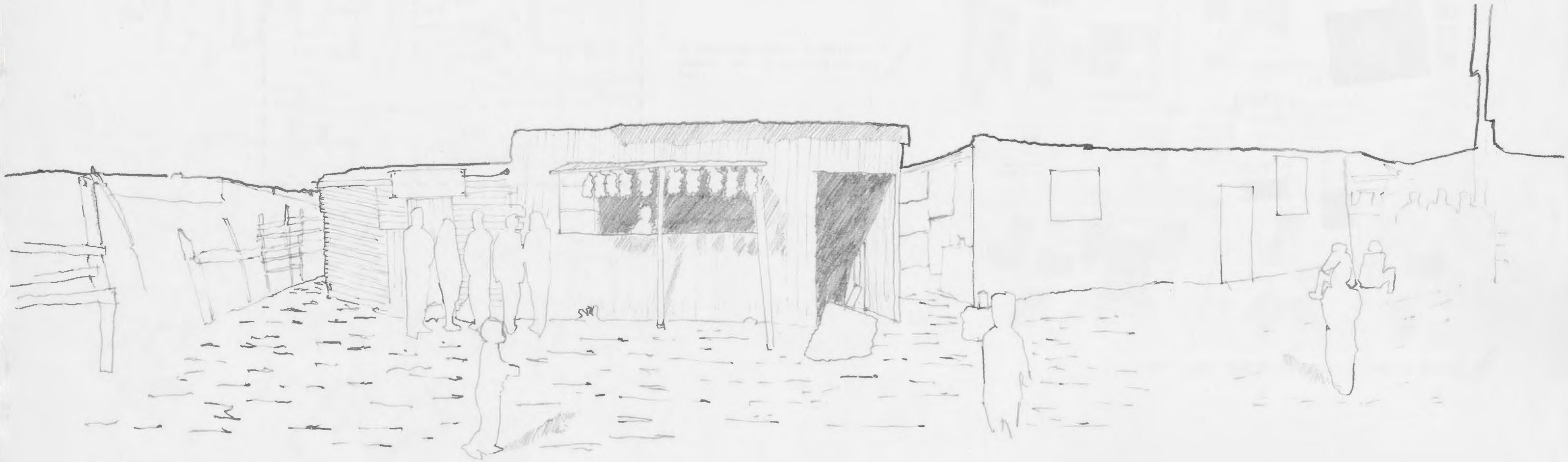
Space being used as a soccer ground,
social interaction and movement route

Position of the two spaces described in relation to Pathway: 1|500

"Tambase Fruit and Veg" is a shop that creates another moment similar to this. This shop is also set back from the main course of the pathway. The space resulting in front of the shop, which is adjacent to it, is frequently used by the customers as a meeting place.

The existence of these well defined spaces with particular functions attached creates spatial moments that promote social engagement and interpretation.

One other condition that characterises the pathways in general is the lack of services. In this particular case, the only services that exist are dysfunctional. The street lights that surround the site do not work, the rubbish container is constantly locked and there are no functioning toilets. Living in these pathways is unsafe, unpleasant and uncomfortable.



Tambase Fruit and Veg shop and the
adjacent space

Diagram of spatial conditions of this corner: 1|500

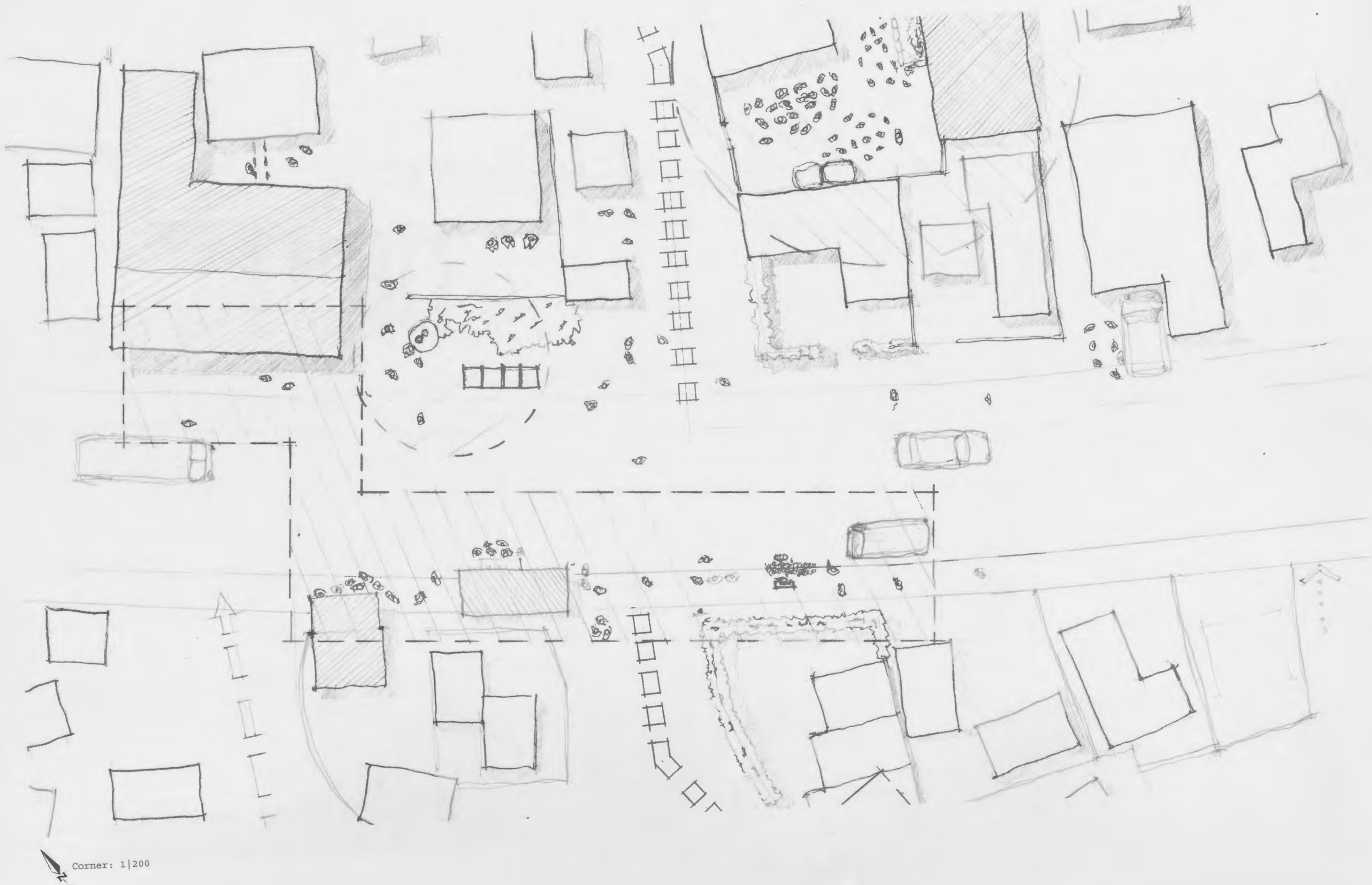
Position of corner described in text in relation to area chosen: 1|500

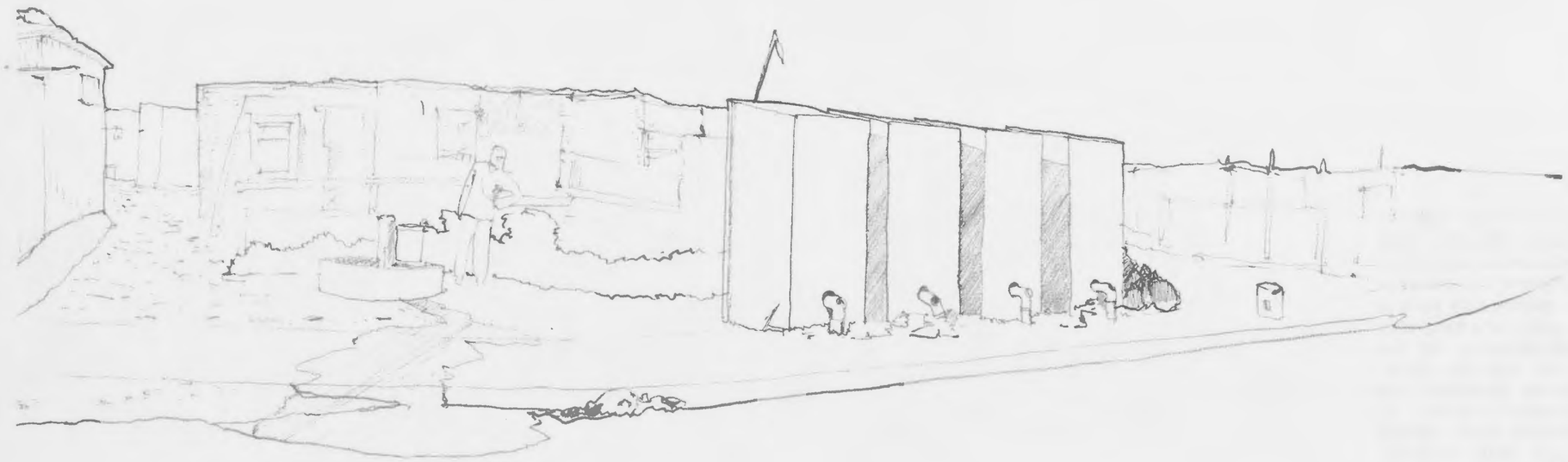
INFORMAL BUS STOPS

Because this economic corridor meets one of the most important pedestrian routes at this point, the corner has an unusual vibrancy. It is only natural that an informal bus stop should appear at this junction. The taxis, when heading west, back towards Khayelitsha, always stop just before the pathway. For this reason, some vendors make use of the 2m wide pavement to expose their fruits and vegetables. The pavement is clearly not wide enough for this activity which causes the laid out products, and even some shops, to invade the street space.

On the other side of the road, the taxis usually stop next to the shebeen/restaurant that is situated opposite the pathway. This side of the pathway has 6 dysfunctional toilets that accumulate dumped waste from the residents of this area. These conditions tend to repel the gathering of people.

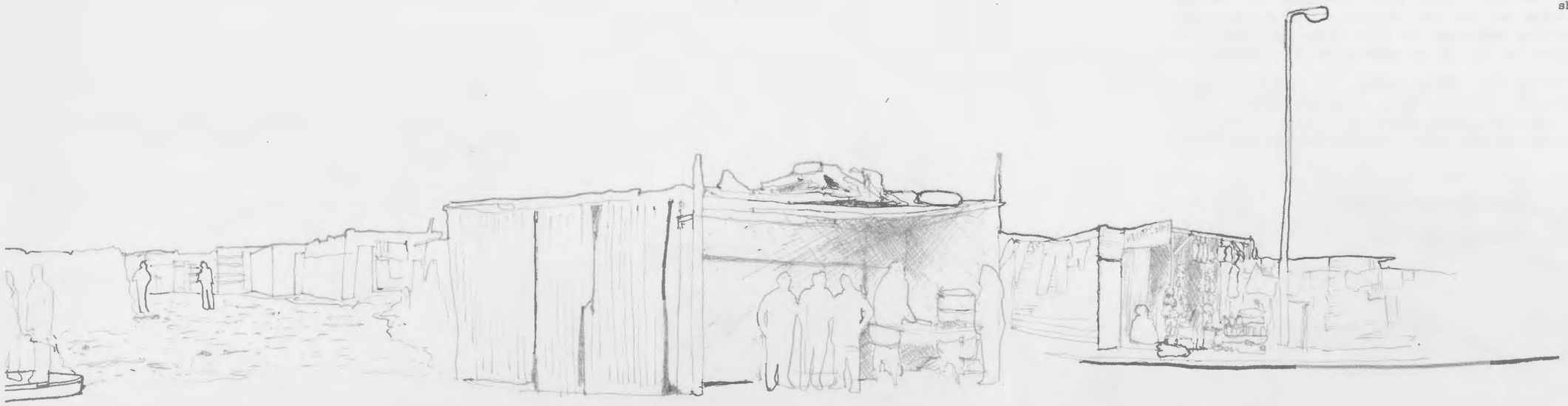
However limiting these spaces are, at peak hour this corner is crowded with people. It is a space to see and to be seen. The corner becomes a very important social and economic place that is widely used, as is described in the story "Life at the corner" included in the METHODOLOGY section of this document. This contributes strongly to the character of the neighbourhood.





North side of Lhaze - dysfunctional toilets with a rubbish on the side, one busy shop, one water point

South side of Lhaze - taxi stop, informal fruit stalls, informal shops, vibrant place



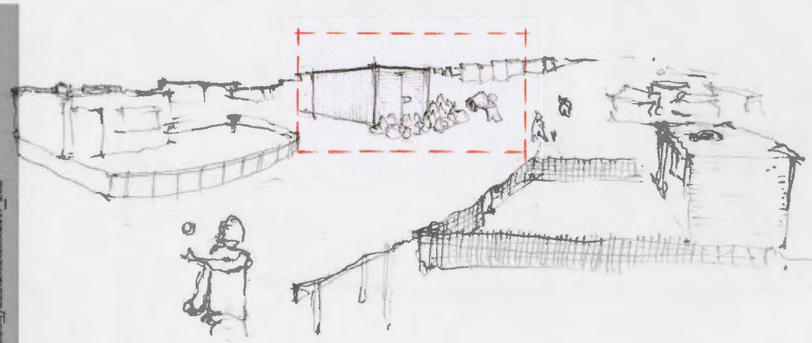
COMMUNITY GATHERING SPACE

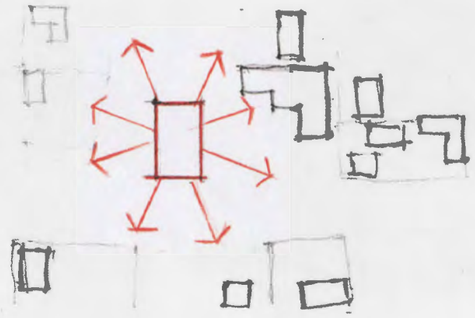
In the middle of this pathway lies one of the rubbish containers provided by the city to Enkanini. As has been explained in urban scale study, these containers are often closed during the day. As a consequence to that the rubbish accumulates outside the container, thus invading the public space of the pathway. This condition repels private property since it attracts rats and other undesired effects. On the other hand, because the private properties are set back, a public space is created. This space often provides the opportunity for public gatherings on a community scale. It holds community meetings or any other events that result in the gathering of people as a community (see stories: "Garbage-Dumping Places" and "The Community Meetings").

This particular site has the advantage of being situated on the corner of two pathways. Because of its situation, when in use, the space overflows to occupy the entire junction of the two pathways. If a community meeting is happening adjacent to the container, everyone around can be part of it as a member of the community.

It is relevant to say that these spaces, in general, have a small sand embankment. Whether this is coincidence or not, the leaders often use this higher platform to place themselves and be able to address the whole crowd that has gathered.

Rubbish container repelling condition caused the opportunity for a gathering space

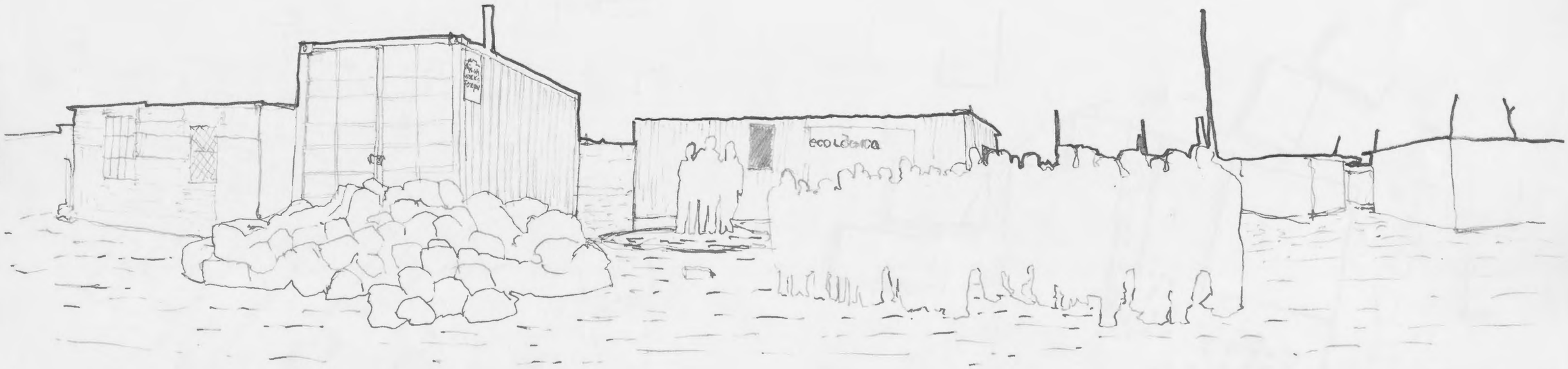




CAUSED

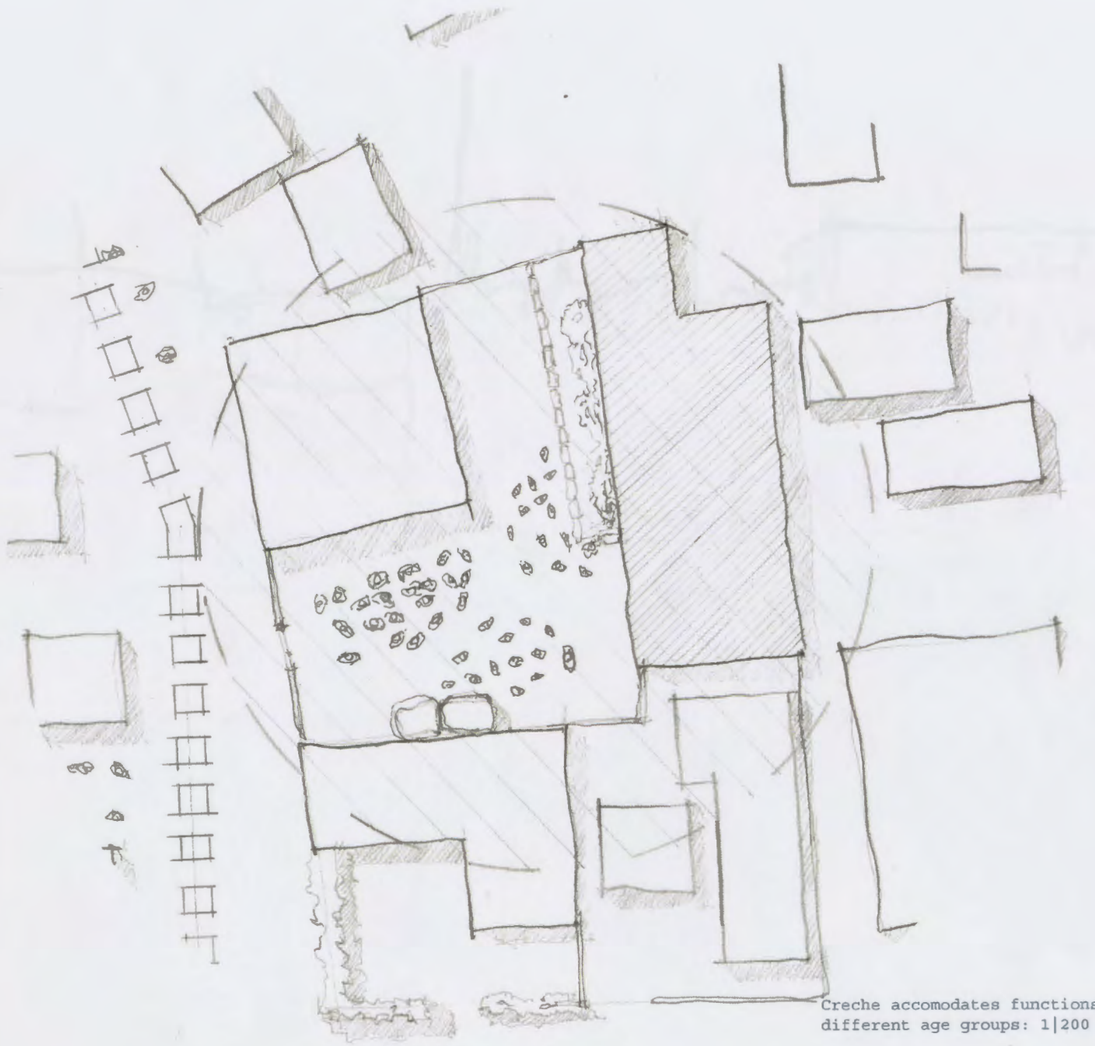
Position of Community Gathering
Space in relation to pathways:
1|500

Community Gathering Space - next to the rubbish container, reaches the whole corner, has small embankment: 1|200

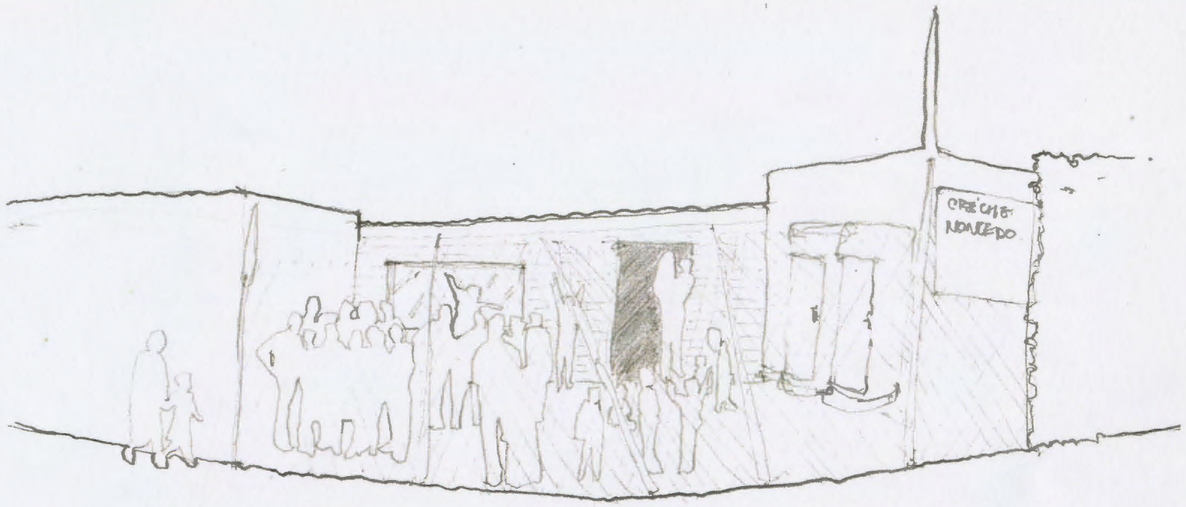


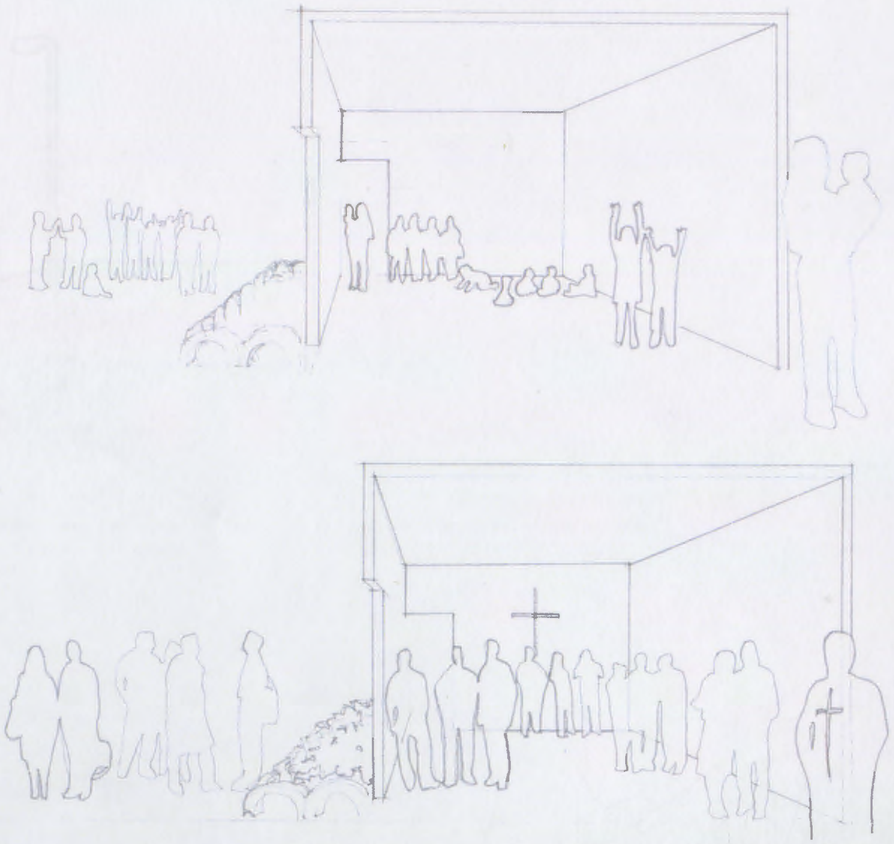
Garbage situation creates the
opportunity for community gatherings

Position of Creche in relation
to area chosen: 1|500



Creche accomodates functions for
different age groups: 1|200





CRÈCHE

There are fourteen crèches in Enkanini. Most of them serve only the function of taking care of young children, but one of them to the north of this site serves other functions as well. This Crèche accommodates various kinds of functions that host different types of crowds. As the story "Crèche" explains in the METHODOLOGY section of this document, this Crèche is used for church functions, children's parties, community meetings and for soup kitchens. The space is really narrow and has only one door that separates the interior from the exterior. The Crèche is used because it is a defined and enclosed space that has a roof on top which can protect the meetings from weather conditions. Moreover, the Crèche has an outside space that is used when the enclosed one is too crowded. But what makes the Crèche so popular for these functions is its public responsibility towards its neighbourhood. The Crèche is the only building that has a public social function in the area. Because it is a building and not an open space in the middle of the pathway, the Crèche provides an enclosed opportunity for social functions.

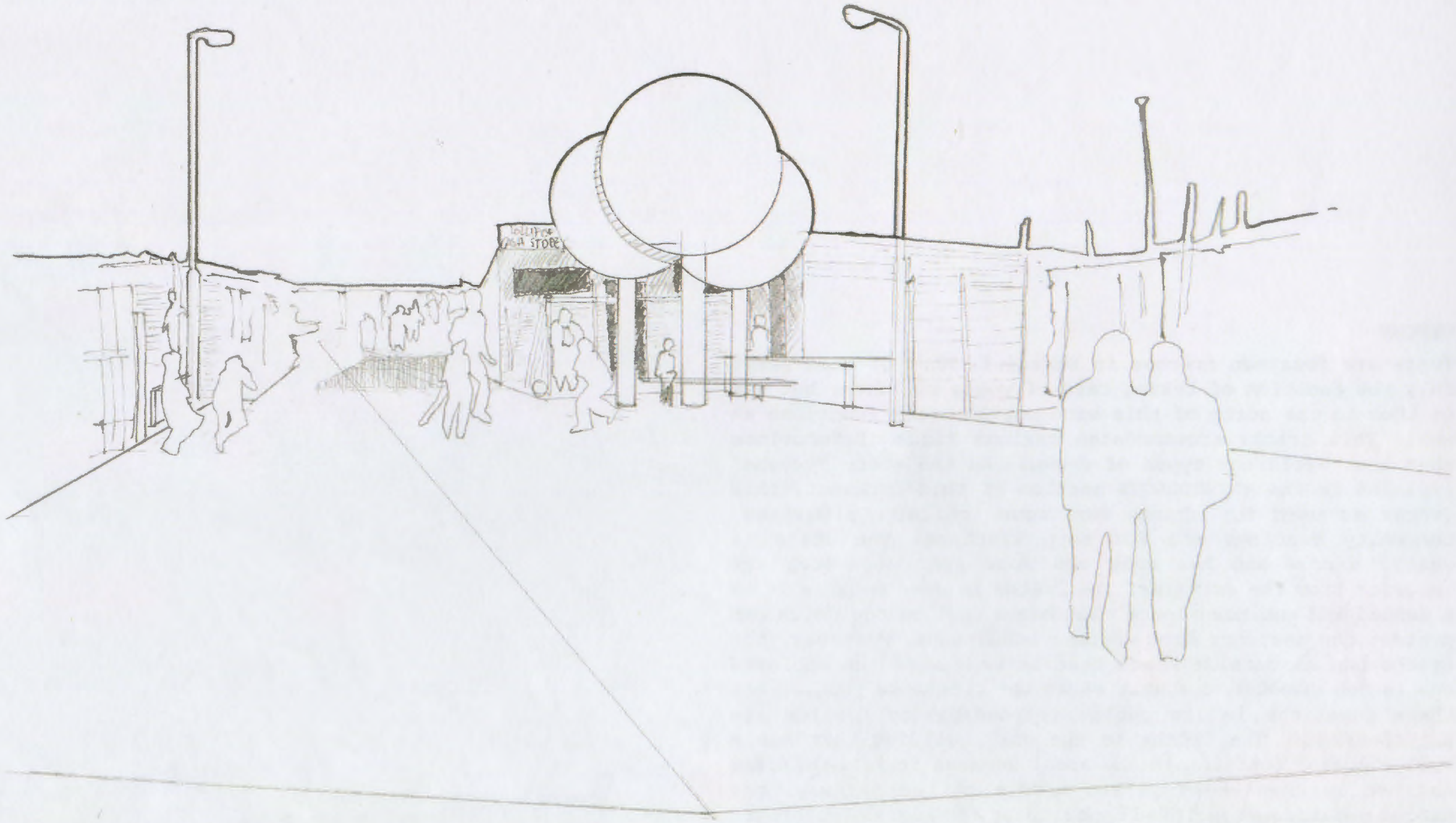
Creche accomodates functions for different age groups

PROPOSALS

STREETS, SOCIAL SPACES, PLOTS AND SERVICES

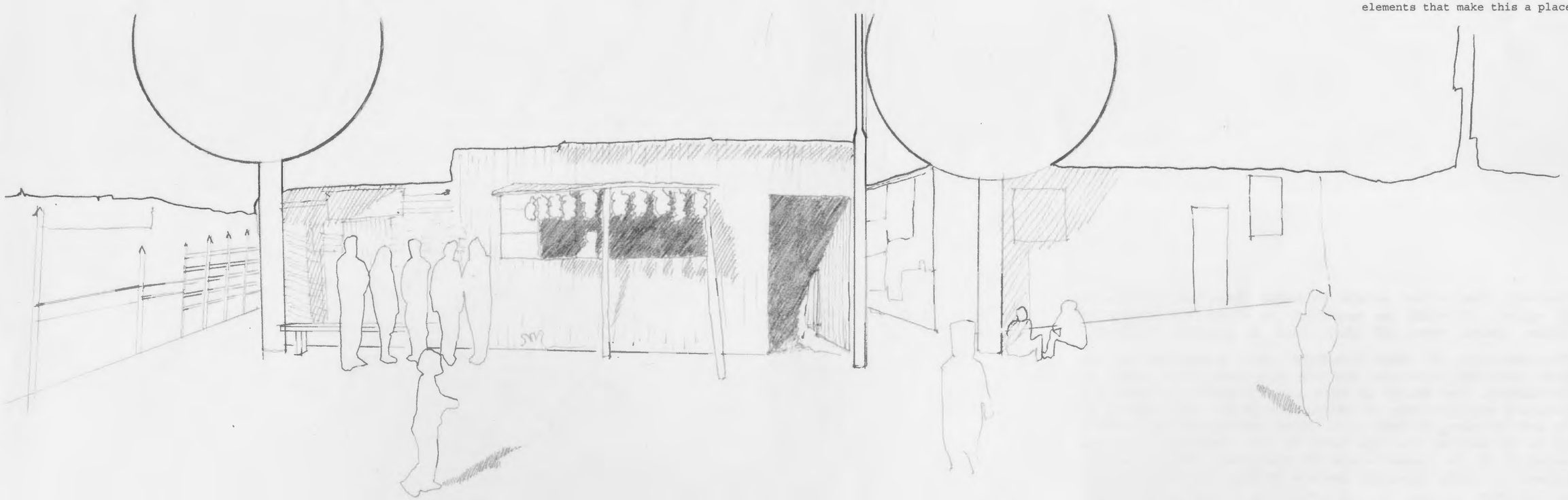
When studying the urban scale in this paper the delivery of services to Enkanini were proposed as a strategy to promote a sense of permanency and a shift of the density patterns. When this proposal was presented in the precinct scale, it defended the idea of keeping the social pockets of space along the pathways as places with a public use. Now that we have understood the particular existing functions of these pockets in the present study, we can provide design that promotes these functions and defines them through more permanent structures. Consequently, the placement of streets as solid structures would be followed by interventions that define these spaces.

Soccer Ground after street intervention - space is kept, there is an introduction of new elements that make this a place



If we look more closely at this idea, we can discuss the space being used as a soccer ground that was described before. Because this site belongs to the pathway that has been defined as a public social space, the implementation of a 6m wide road was proposed here. This road would be covered with a pavement that would be both comfortable enough for human activity and hard enough for vehicle circulation. To start defining the edges of this space with public functions is also proposed. There is already the "Lollipop shop" on one of the corners, but the introduction of shaded areas and structures for seating would heighten the sense of public place attached to this area. Similar strategies can be applied to the other existing pocket of space next to the "Tambase Fruit and Veg". The aim would be to have a solid ground that can accommodate both pedestrian and vehicle circulation and provide a public sense of place.

Tambase Fruit and Veg after street intervention - space is kept, there is an introduction of new elements that make this a place



Plot allocation + street implementation keeping spatial hierarchy, without radical changes: 1|500.

However, that is not enough to define these public pockets of space. It would be necessary to define the edges of these spaces even if they have a private function.

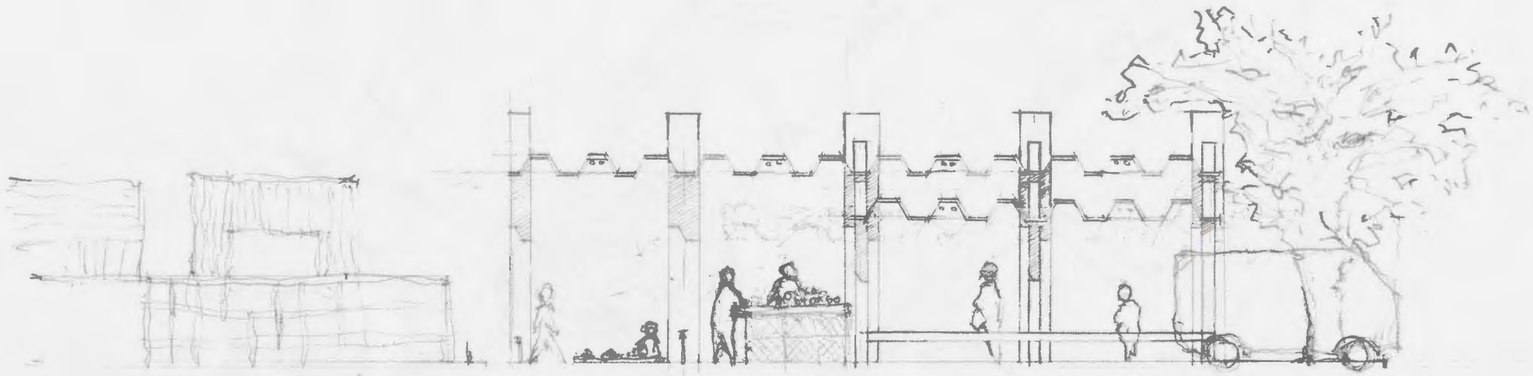
The definition of these boundary lines brings us to the most important strategy for the promotion of a sense of permanency. The design in this scale proposes to take the existing organization of private property, to keep it as is and to turn it into erfs. Some boundaries would have to be re-shifted for the good of the community, but the majority of the layout would be conserved. This strategy, according to the community leaders of this area of Enkanini, is believed to have the potential to be accepted by the residents. By doing this the spatial hierarchy of the settlement is maintained without radical changes. This intervention also changes the residents' perspective with regards to the settlement since it would bring a reason to promote the self development of their private properties.

Delivery of services provides opportunity for residents to develop their private property

One last intervention that is imperatively related to the placement of streets is the delivery of services. Throughout the entire document, the introduction of services is believed to be one of the catalysts for development with most potential to be successful. For example, introducing a system of street lights would bring safety to the streets of the settlement. Distributing the waste bin collection points throughout the settlement, into smaller containers with a good collection system, would clean up the streets and make the public space more pleasant. Installing a sewage system would offer the residents the opportunity to build their own individual toilets with a flushing system.

All three proposals have been discussed with the community and are believed to have potential for success.

Provision of street lights creates safety of public space 1|200



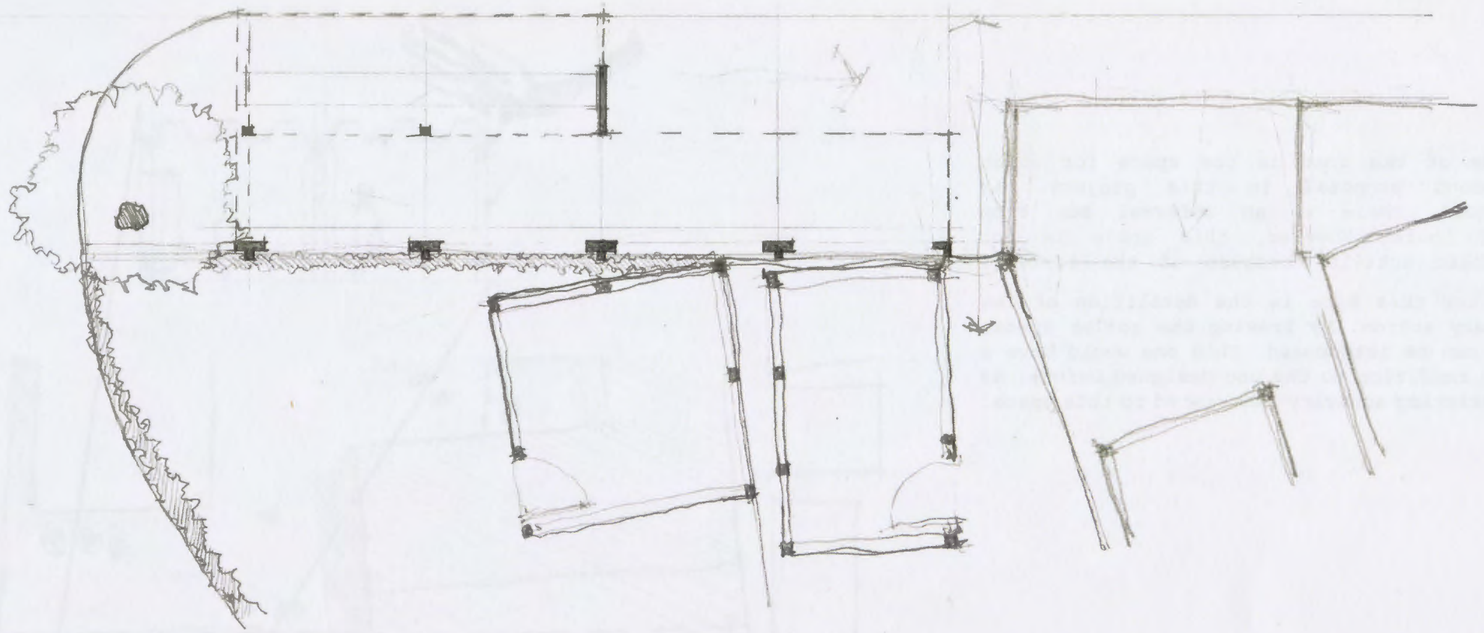
South side of Lhaze -
elevation - accomodates
existing functions: 1|100

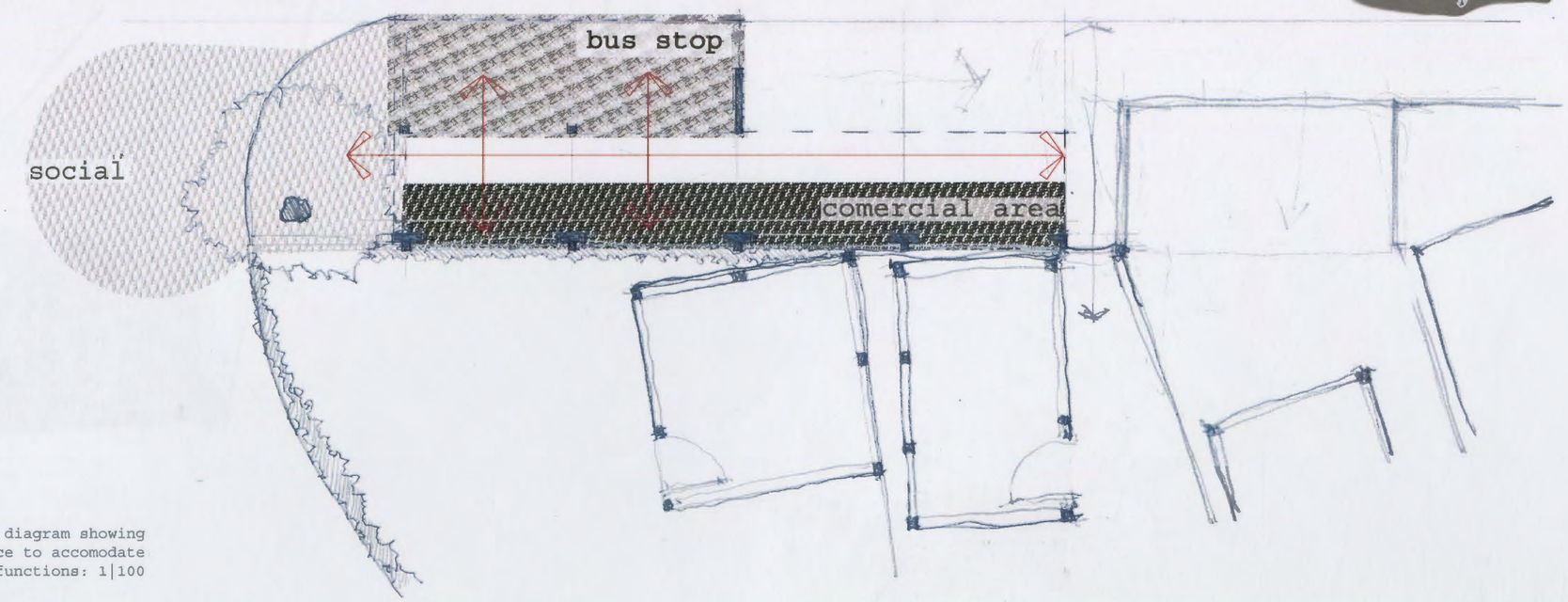
BUS STOPS AND PUBLIC SQUARE

It was learned that the south side of Lhaze, where the taxis stop when going west towards Khayelitsha, is a highly popular corner despite the limited space available. On the other hand, the north side is occupied by a set of toilets that repel the agglomeration of people on that side of the road. In response to this, two projects that differ in scale but that are seen here as necessary for the development of this corner of Lhaze, would be proposed.

The first proposal is to consolidate the existence of the bus stop on the south side and to provide better spatial opportunities for informal commerce and social gathering. The idea would be to implement a structure that creates shelter as a bus stop. Directly linked to the activity experienced at a bus stop are the activities of informal commerce and of social encounter. What is proposed is to expand the public space by taking a section of the adjacent private property. The new area would provide an expansion to the width of the pavement which would alleviate the overcrowding of this space. The extra space would accommodate for informal commerce and for a corridor for circulation between these two spaces. Attached to the building structure would be a space that would be opened up for social gathering.

The concept is to provide a wide enough space on this side of Lhaze that accommodates the functions that are currently struggling to exist in it. Besides this, the project intends to consolidate these functions and the spaces required for them. Hence, this building would be made of concrete. Its materiality and its scale are designed to represent the sense of permanency that the settlement is in such dire need of.

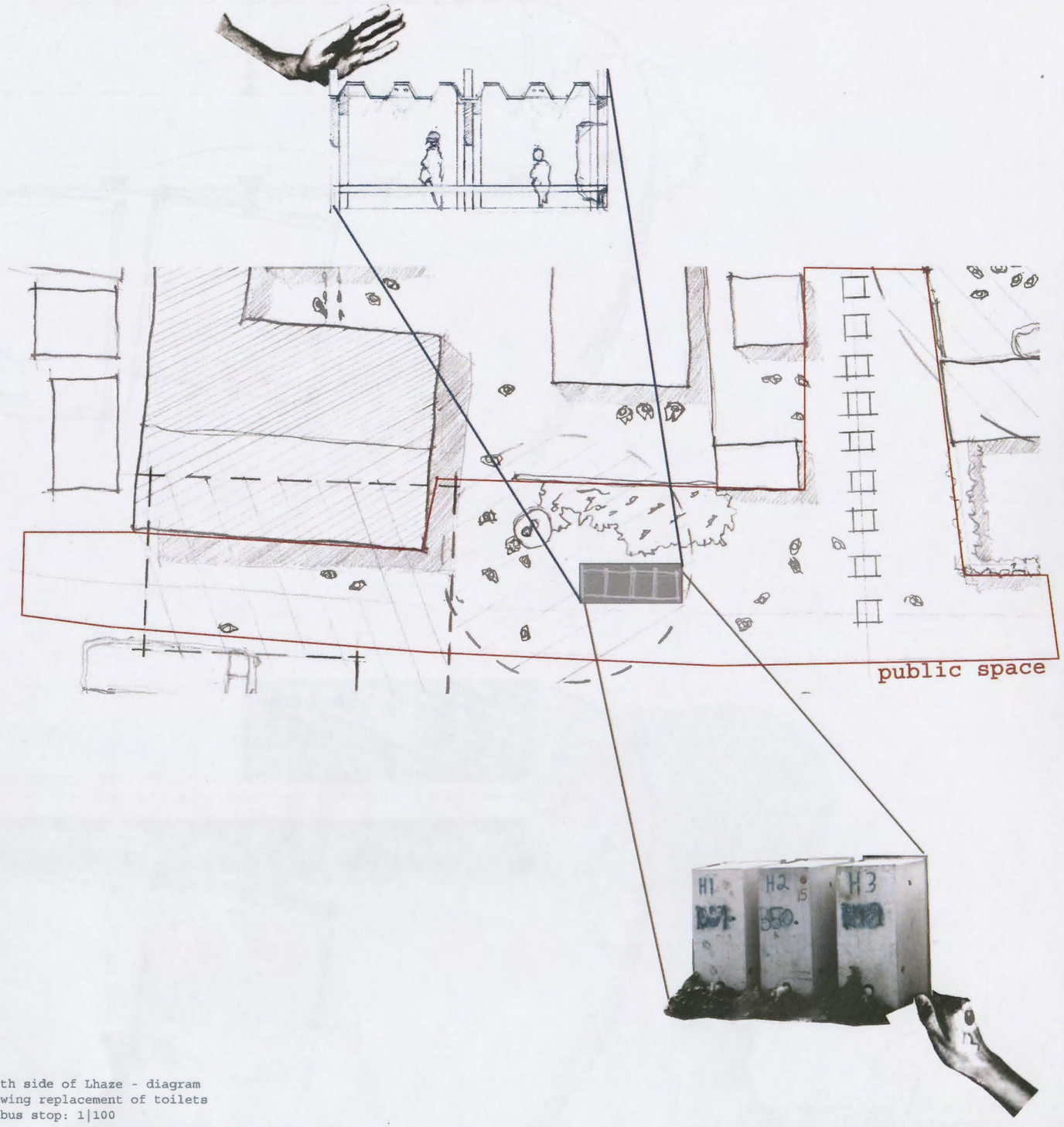




South side of Lhaze - diagram showing expansion of space to accomodate social and economic functions: 1|100

On the other side of the road is the space for which there is a second proposal in this project. As previously mentioned, there is an informal bus stop on this side of Lhaze. However, this space is not conducive for public activity because of the toilets.

What is proposed for this site is the demolition of the toilets as a primary action. By freeing the toilet space, a formal bus stop can be introduced. This one would have a slightly different condition to the one designed before, as there is no other existing activity associated to this space.



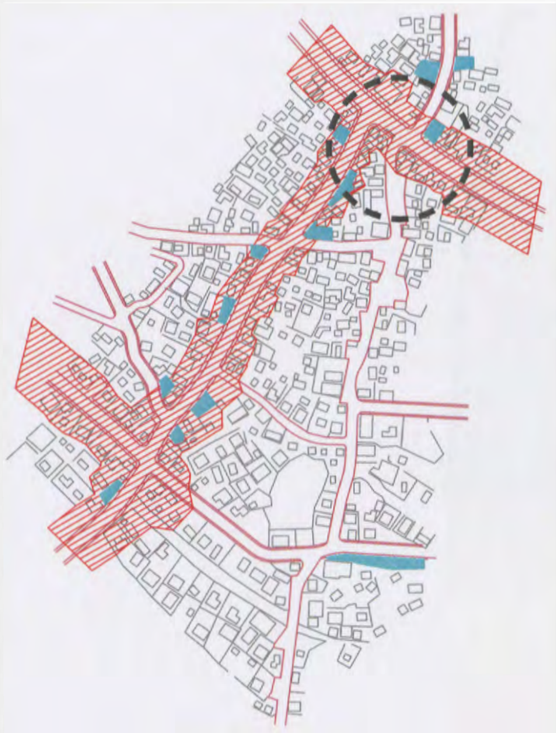
North side of Lhaze - diagram showing replacement of toilets by bus stop: 1|100

The study of this corner has however shown that each space is very reduced for proper use and often forces people to use Lhaze street. As such, it is argued that the accommodation of two bus stops would not beenough for the importance that this corner has for public use. This proposal believes that there is a need for a public square to be implemented in the area that can provide for a greater accumulation of people.

A strong definition of the limits is important for the success of a public square. A wide open space would only be used if there were boundaries that define the limits of this space and that contribute to its interior. A bus stop would certainly not be enough to provide these limits. There would be, therefore, a need to introduce a new function that strongly define this boundary. This should be a public function of great importance regarding the role of this square for the residents of the area. According to the study of placement of facilities conducted in the precinct scale, this site is ideal for a facility of category 2. In addition to this, there is a crèche situated directly opposite this site. The Crèche, as previously explained has a very strong presence in this neighbourhood and would not be likely to leave its premises. Lastly, as explained in the "Life at the Corner" story, many school children pass this corner on their way home.

Considering all these facts, the design of this space proposes a Library as a strong public facility that borders the Square. The existence of a Library on this corner would not only create a solid and constructive edge to the public square, but also emphasise the importance of this corner for Enkanini.

The execution of these ideas on the site would require the relocation of six private properties. Once acquired, there the plots would be enough space for the placement of a library and a public square that respond to the needs of this corner.



Corner fits under category 2 of facilities - examples of facilities are Library, Community Halls, Post Offices.

Six families are relocated for a communal good - the broadening of this public space will enhance the importance of this corner: 1|500

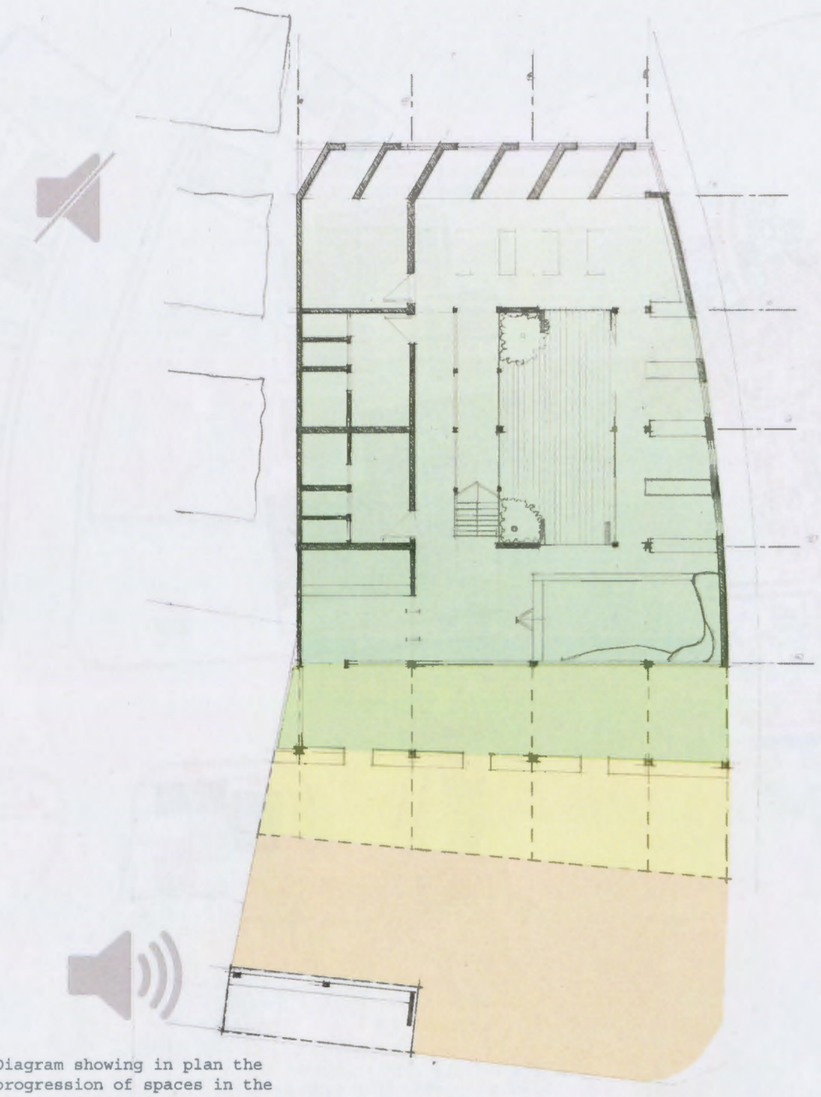


Diagram showing in plan the progression of spaces in the Library design from noisy to quiet/ from public to private: 1|200

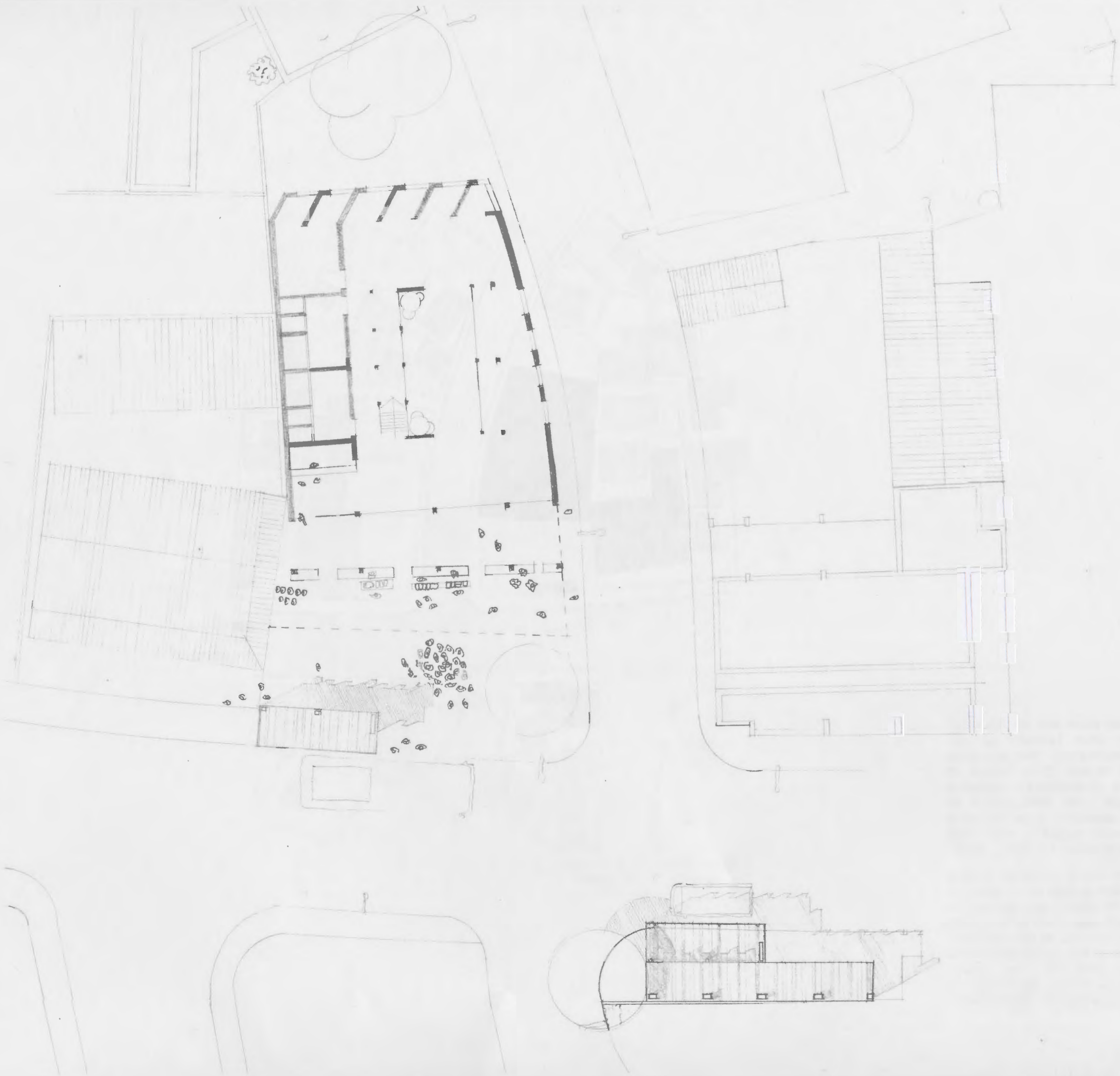
The Library should primarily respond to the reasons for which it was placed here. Fundamentally the library should contribute with an active edge to the public square. For this, the design implements a buffer zone between the interior of the library and the public square. On the outer edge of this buffer zone, opportunities are created for informal commerce. This activity, which would be expected to grow as the site develops, would constitute the edge to the Square and the Library would be solely in support of support this function.

One other requirement for the Library is to have a space that can be used by the Crèche children, since they are a relevant informant for the creation of this library. Therefore, this area would be placed on the border of the library that is closest to the public space. The concept would be to follow a progression of spaces that are quieter the further they are from the public square. Consequently, the back of the library would house the individual study rooms.

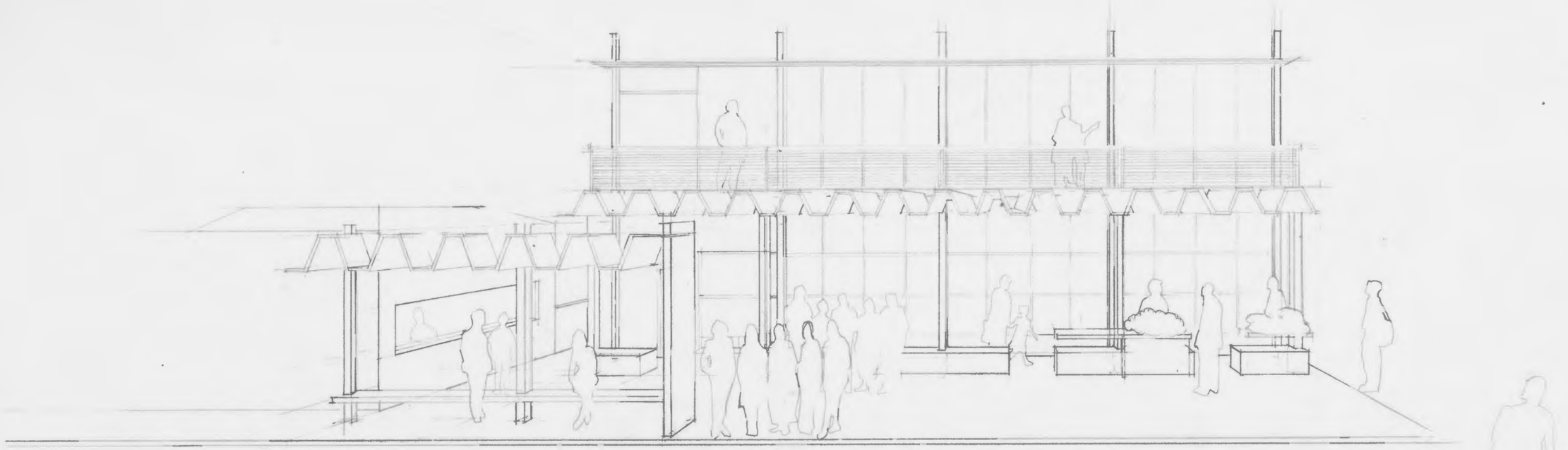
Because of its importance, both to the site and to Enkanini as a whole, the idea of including this library in the design would be something worth considering. The building would be designed to have two high floors. This would be intended to make the library apply a significant, imposing and permanent presence on the square. The idea would be that the residents would be able to identify this building as one of importance and which could signify that the settlement would now be acquiring the status of a small town.

As the importance of this corner grows there would be a need to define it as a small precinct. There would be a need to design a unity between the two sides of Lhaze, as opposed to two different ones, which would suggest that this is a unique site. For that, the design proposes that Lhaze, on this corner, has an area that would be paved differently, joining the two bus stops and all three streets that come out onto Lhaze. This intervention would promote a pedestrian ownership of this corner, a reflection of what is happening at the moment.

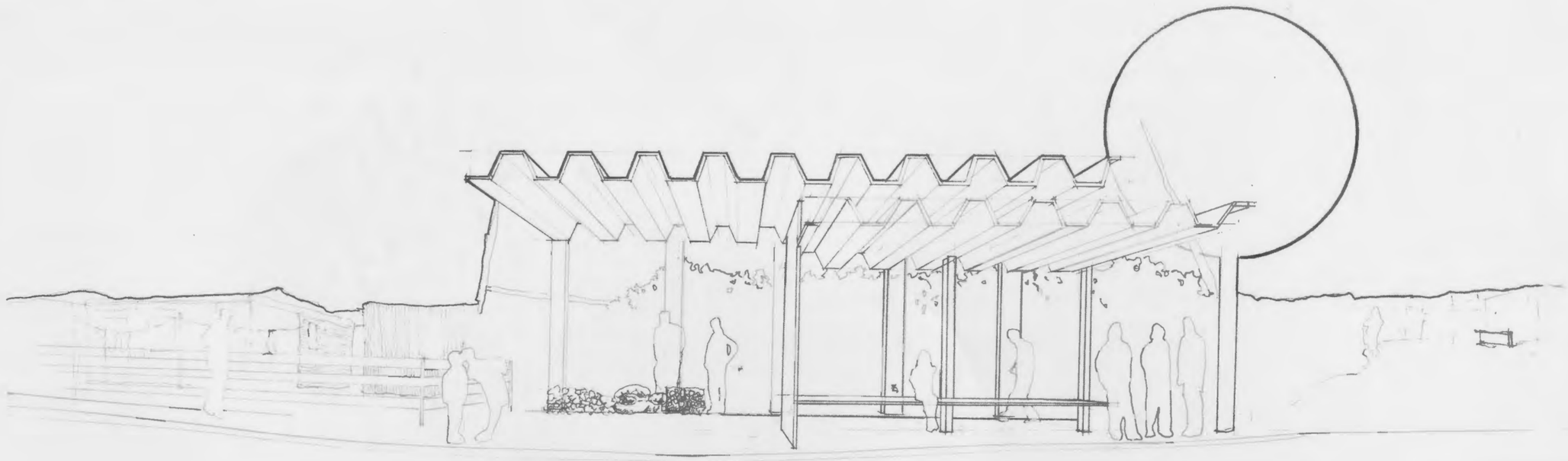
Diagram - define a link between the two sides of the corner:
1|500



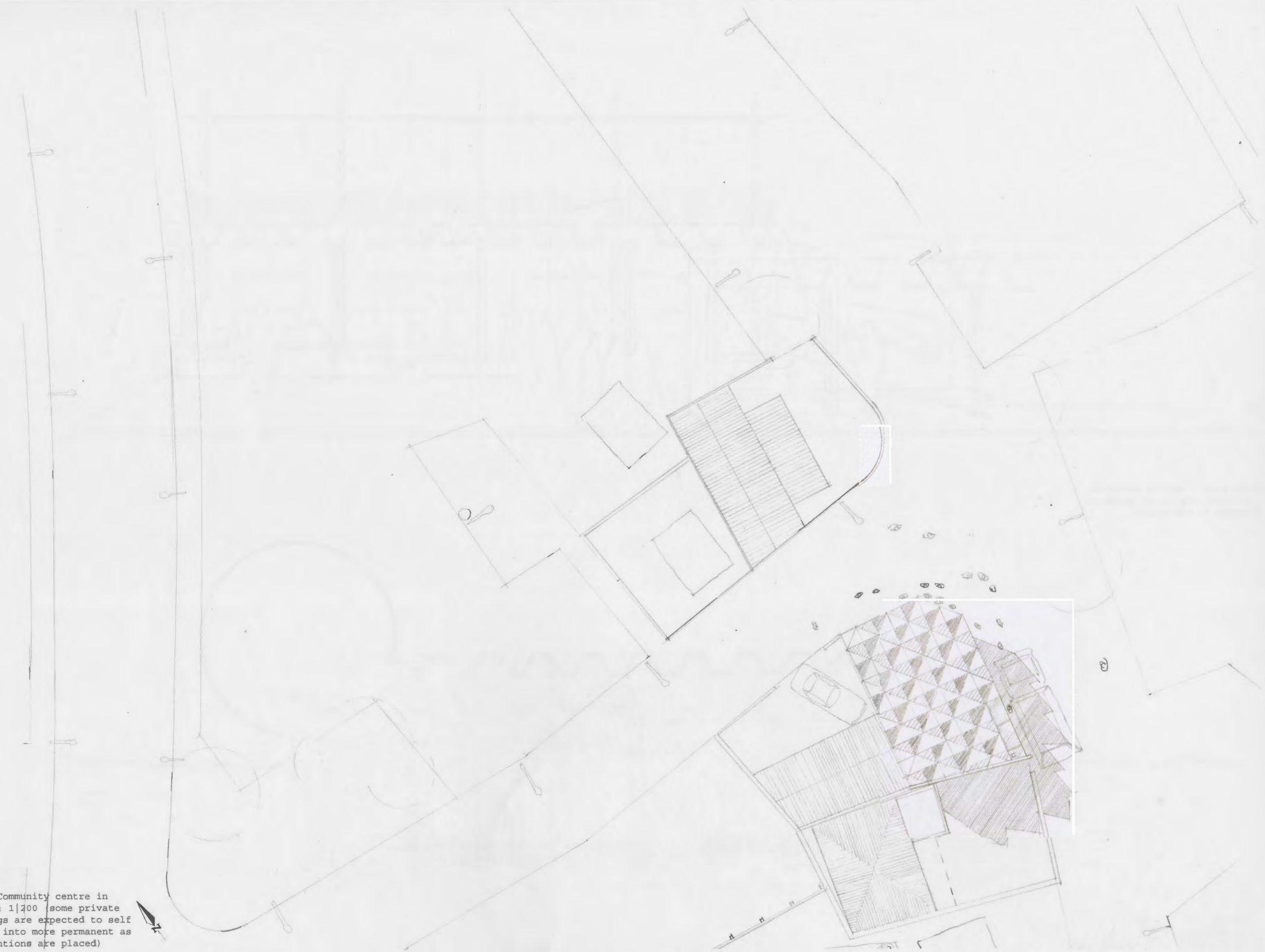
Plan of interventions on the corner: 1|200



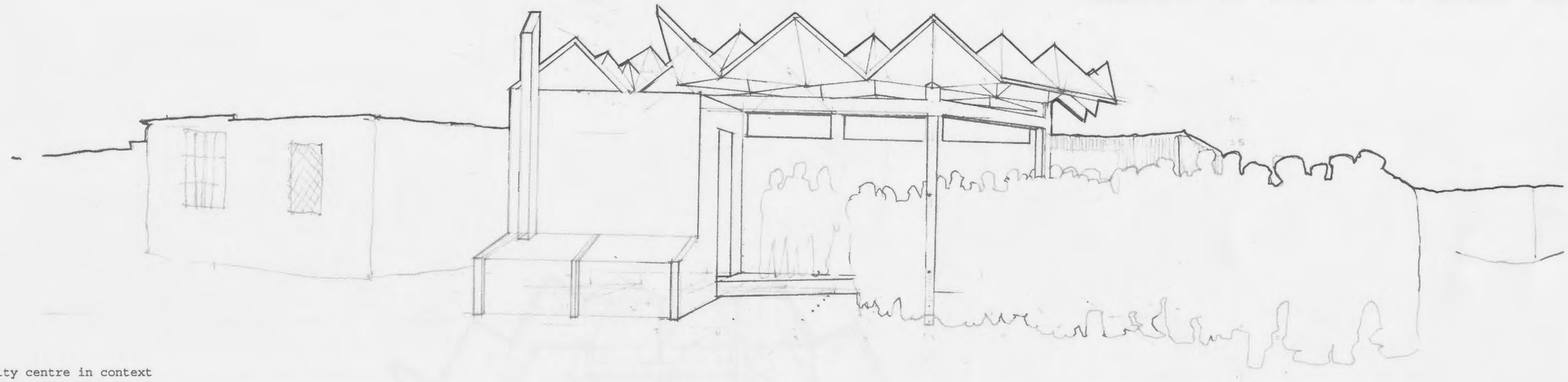
North side - Library aplies a significant strong and permanent presence to the square



South side of Lhaze - perspective of bus stop - accomodates existing functions



Plan - Community centre in context: 1|200 (some private buildings are expected to self develop into more permanent as interventions are placed)



Community centre in context
- extension of public space, existing function is given a structure that solidifies its existence, a public landmark

COMMUNITY GATHERING PLACE

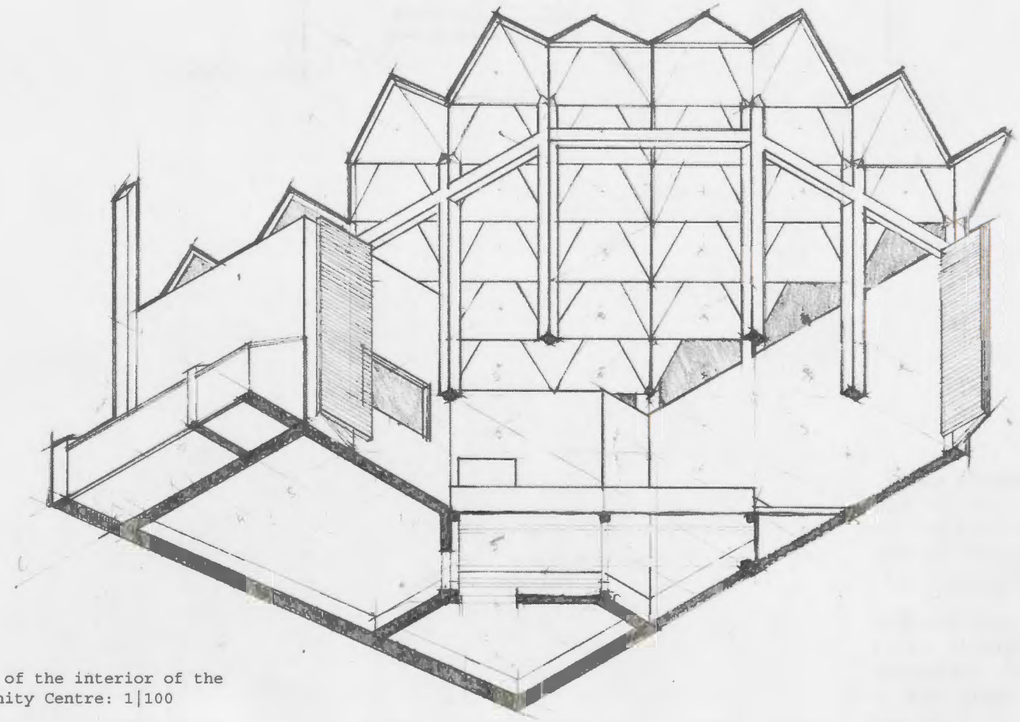
In the study that describes the Community Gathering space, we can understand a dichotomy linked to the existence of the waste container on this specific corner. On the one hand it is a structure that brings dirt and pests to public space. On the other, it provides opportunity for large public gatherings.

What is clear is that a space is needed to accommodate the function of community meetings. This function would have to be publicly accessible, almost like an extension of the public space. On the other hand, there is a critical need to resolve the waste condition in order to make public space cleaner and consequently more pleasant.

As a response, the introduction of a structure that consolidates the sense of place that already exists in this corner is proposed. This structure would also resolve the waste problem.

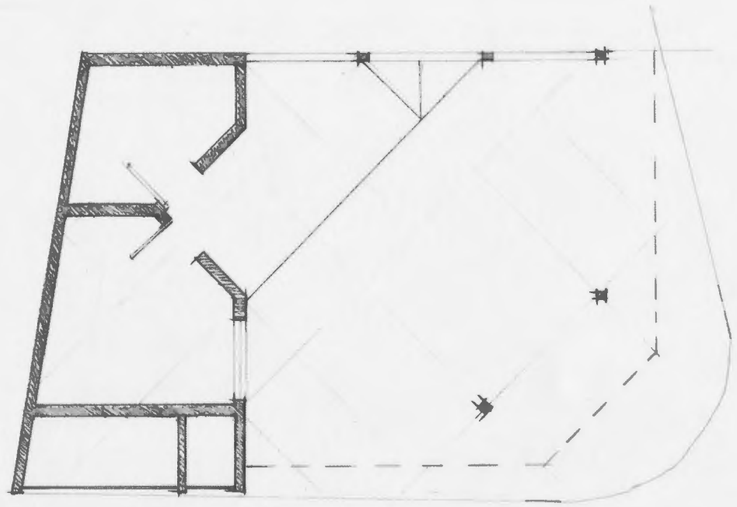
The structure would therefore be a roof over this space. The roof would be designed to provide shelter to the users of the space. It would also be designed to represent the importance of the activity that it shelters. Its materiality, form and scale reflect solidity, whichwould be meant to be interpreted by the residents of this neighbourhood as a symbol of permanency, a symbol of change.

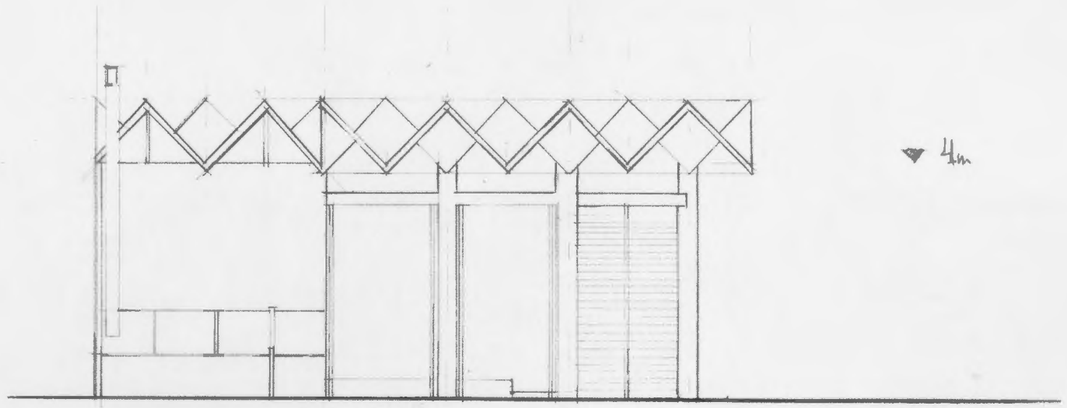
The covered space would be seen as a continuation of the outside area. The idea is for there not to be any boundaries that separate the interior and the exterior of this structure. This way the structure would perform the same function it did before the intervention.



Study of the interior of the
Community Centre: 1|100

Plan - two offices + one stage +
rubbish collection point: 1|100





Elevation: 1|100

The interior of the space would have a stage, following the idea of the embankment where a speaker can be raised above the crowd.

Two private rooms would be added to the public space which would lodge administrative functions.

Also important is the design of a waste collection point. This would be part of the building and would have to be under constant surveillance since it would be attached to such significant functions. Its scale would be much smaller than the existing container, which would justify a spread of this function to more points around Enkanini.

The main idea of this proposal would be to transform this space that is used as a public landmark into a place that would accommodate the same functions.

COMMUNITY HALL

It was gathered through the site analysis and the story "Crèche" that this public building provides very important opportunities to the area and, due to that, it is overcrowded with activities.

The Crèche caretakers, as well as the leaders of this area, believe that there is a need for an expansion of the Crèche space.

Here the proposal is the creation of a Community Hall that would be a continuation of both the space and the functions of the Crèche. The Hall would provide an enclosed room that can accommodate church functions, community meetings, or other activities that attract a large agglomeration of people. This Hall would perform a function that is needed at an urban scale.

Because of its importance, the placement of the Hall would require two families to be relocated. This way the Hall would fill the space between the Crèche and Lhaze. This location is also chosen to respond to the parameters set in the precinct scale about the positioning of facilities.

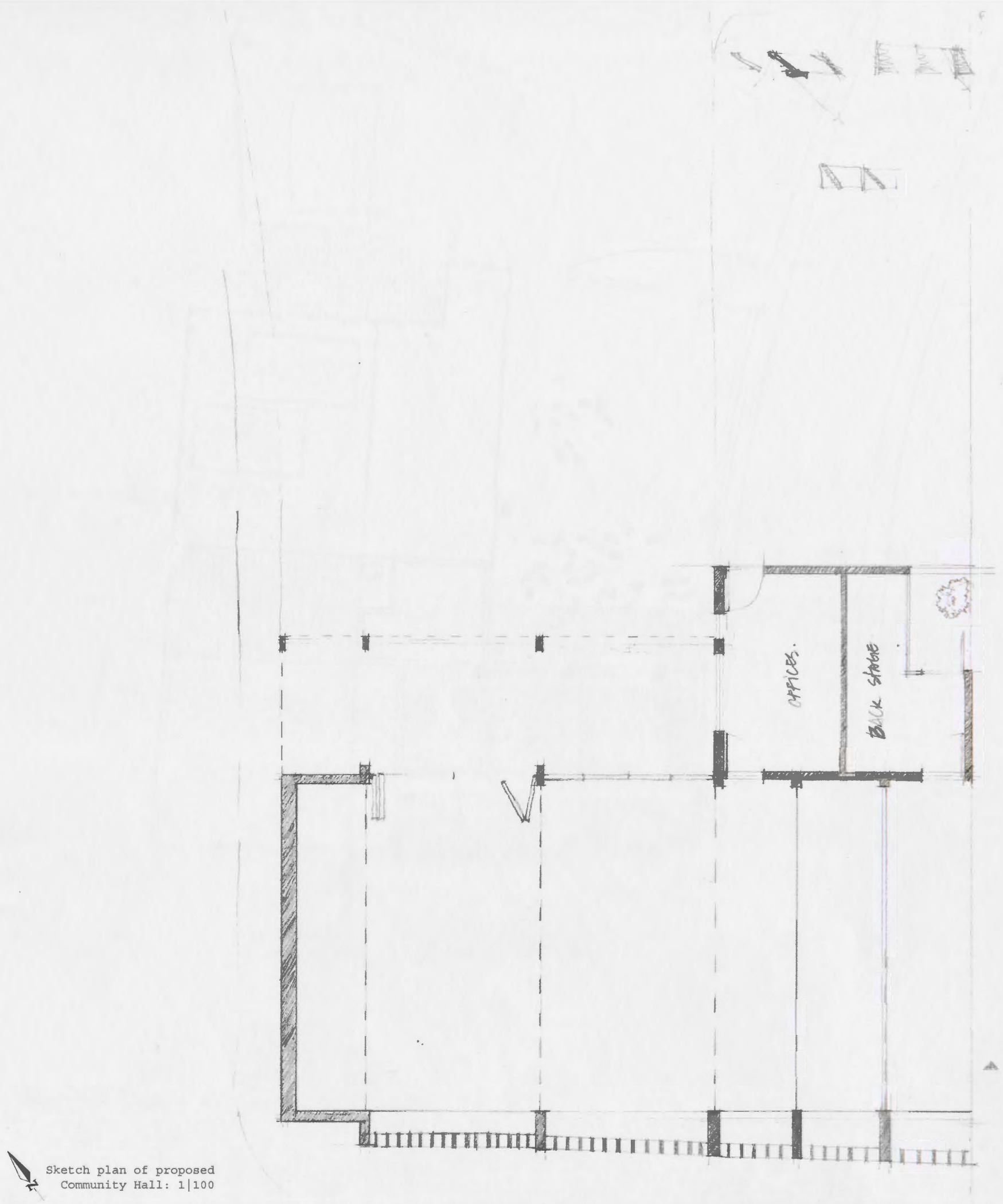
In terms of design, a spatial link is proposed between the two buildings. This would be achieved by opening the whole length of the Hall to the Crèche's courtyard. In this way, the functions of the Hall could be extended to the outside space of the Crèche whenever necessary. However, there would have to be the option of separating these two spaces for safety reasons for the children from the Crèche.

The functions that are usually held at the Crèche have a private character. This has influenced the design of the Hall to be enclosed. As a result there are no direct visual links to the exterior besides the ones to the Crèche courtyard.

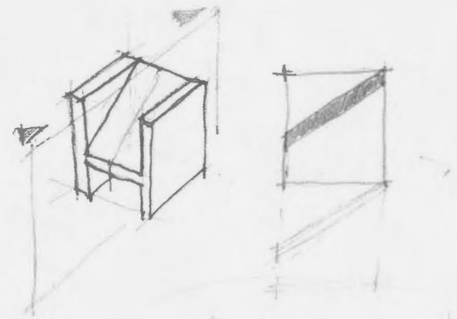
The roof and the outside architectural language would be designed to promote a sense of grandness in order to represent the importance of the building to the community. Hence, massive timber beams would define the interior ceiling of the Hall space. On the outside, prominent concrete columns would extend higher than the roof in order to strengthen the image of permanency set by this building.

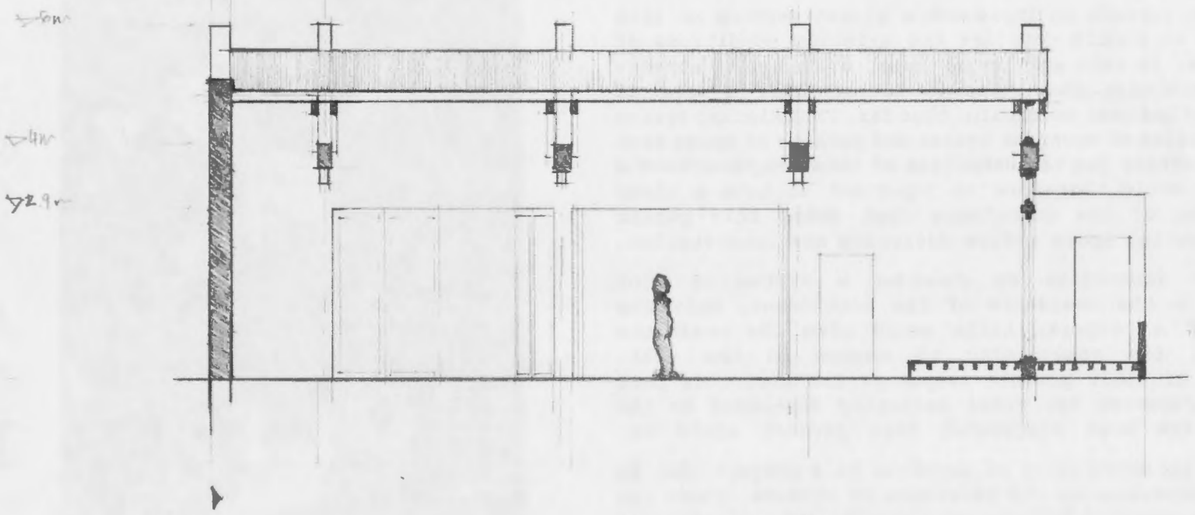
Therefore, this building would be designed to aid the spatial needs of the Crèche by providing a structure that would house the functions currently accommodated by this building. By providing a solid structure for these functions, the Hall would intend to change the temporary character of the Crèche and give reasons in order for this to develop into something more concrete.

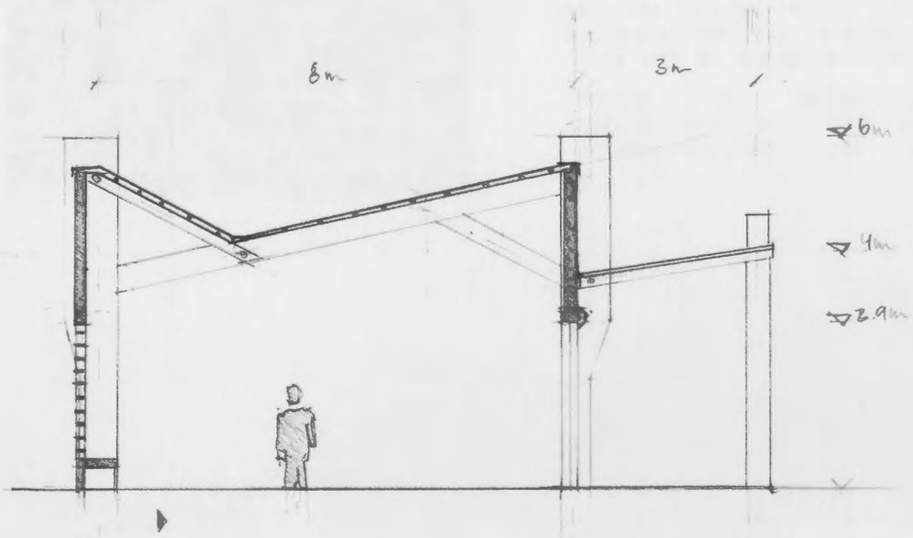
Position of Hall within
the Lhaze's corner: 1|200



Sketch plan of proposed
Community Hall: 1|100







Sketch sections of proposed Community Hall showing interior of space - big wide open space covered by timber beams - sense of warmth: 1|100

PARTICULAR PRINCIPLES

STREET IMPLEMENTATION

If a project intends to implement a street service on this settlement, it should consider the existing conditions of public space. In this particular case, a design of streets should acknowledge the existent hierarchical system of movement that has been successful thus far. The existing system would be a series of movement routes and pockets of space that would be important for the definition of this neighbourhood's society. It would therefore be important to have a clear understanding of the conditions that define this public space as a social space before designing any intervention.

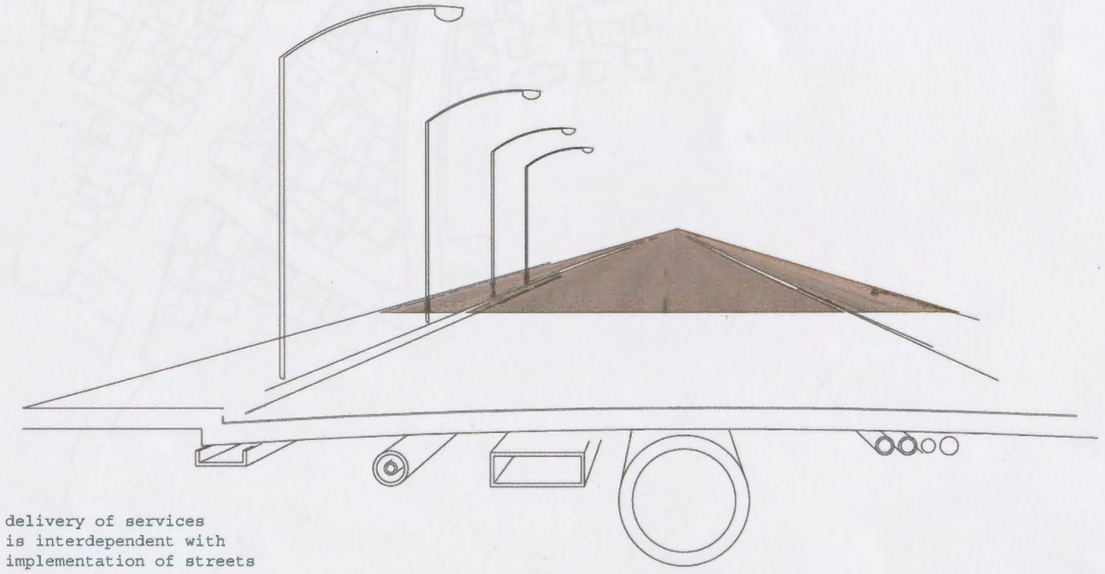
It is also imperative to consider a system of plot allocation to the residents of the settlement. Only the ownership of a property title would give the residents of Enkanini the opportunity to engage in the self-development of their private property. The more this part of design preserves the order naturally developed by the residents, the more successful this project would be.

Because the implementation of services is a project that is completely dependent on the existence of streets, these two projects are regarded here as one. The delivery of services is believed to be an important need to this settlement, a need that would certainly bring development to the area.

Consequently, the implementation of streets would be seen here as the most important project in promoting a ground for self-development.

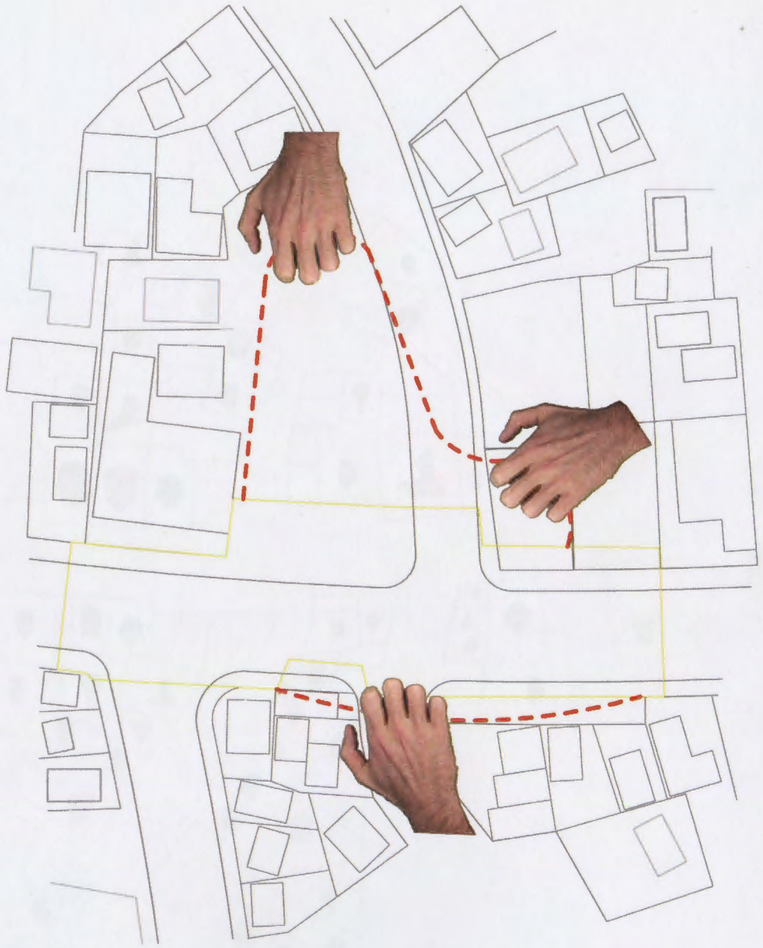
Street implementation must preserve existing socio-spatial hierarchy

Plot allocation is essential for self development; natural organization of neighbourhood must be preserved



delivery of services is interdependent with implementation of streets

Design interventions must acknowledge and enhance the importance of this corner



There is a need for augmenting the public space in this corner

BUS STOPS AND ITS PRECINCT

The presence of bus stops and economic activities on this corner of Lhaze reflect the importance that this corner has for its neighbourhood in particular and to Enkanini in general. Any project that aims at proposing an intervention on this space should acknowledge this importance and find ways of enhancing it.

A design for this site should also propose forms of augmenting the public space. At the moment, this is not addressing the needs of the society that uses this corner.

A proposal should promote the unification of the two sides of Lhaze

Enhance the importance of the site by making it permanent

From the study carried out on this corner it was observed that both sides of Lhaze work in conjunction, as a whole. This should also be taken into consideration when a project is proposed for this site. The proposal should acknowledge this existing condition and promote the unification of the two sides, or in other words, treat it as one single site.

Additionally, the site in question has the potential to house a facility of great importance. This would not be seen as a prerequisite but it is an important informant worth considering. However, it is required that a facility with such significance address specific needs of the site.

Ultimately, any design proposed to the site, whether on a small or a large scale, should aim at enhancing the importance of this corner by making it permanent.

COMMUNITY PLACE

The corner where the waste container is situated is a highly significant space to the community that lives in this neighbourhood. Therefore, this place should not be lost.

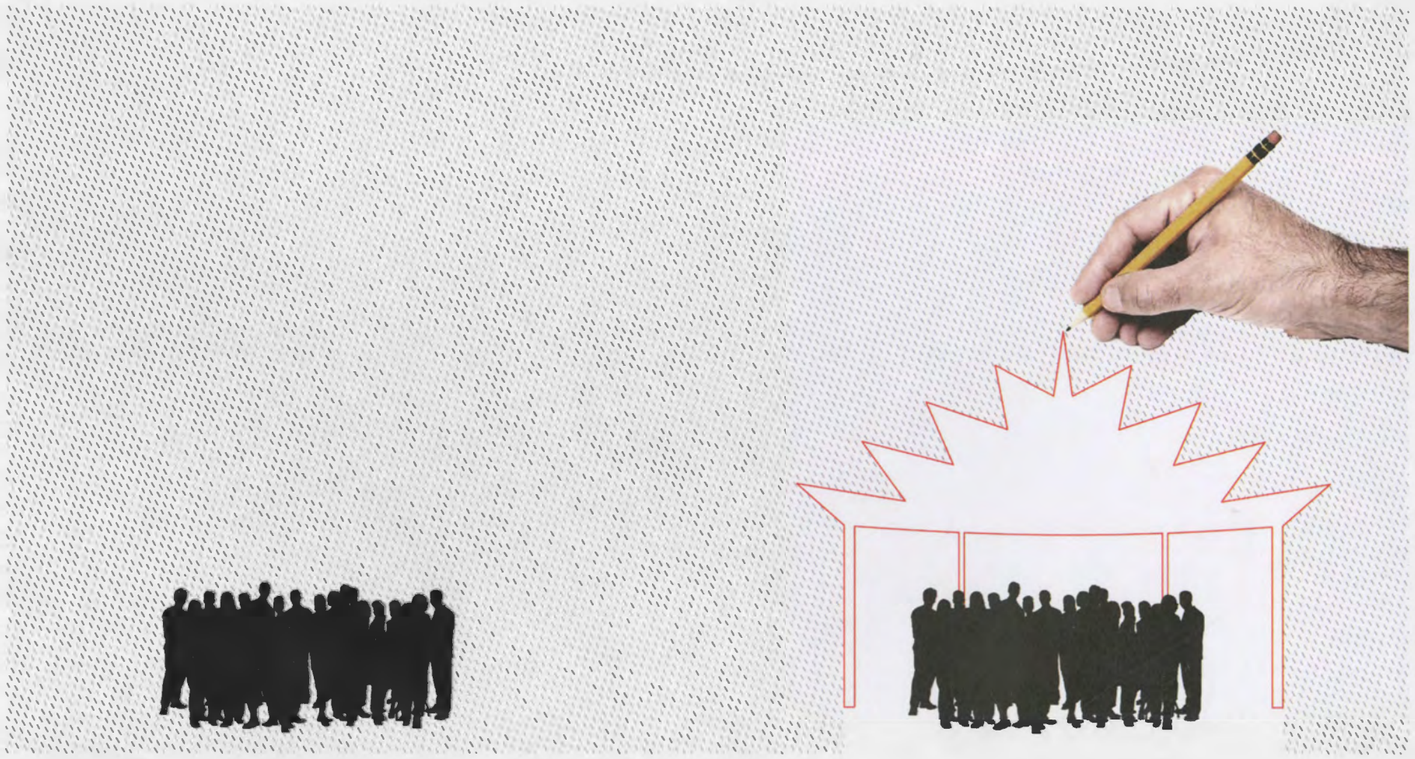
A design that proposes an intervention here, should therefore respect the functions that exist in this corner and design towards the rooting of these functions to the site in question.

The proposals should also address the problem created by the existence of the container. This service has promoted a negative connotation of this space, which should be inverted.

In addition, the project that proposes a change to this space should reflect its significance. Reflecting the importance of this corner should be a design concern, as this building could be used as an image representing the development of the site.

Consequently, a design proposal for this site should reflect the significance of small but important public moments, through the use of architecture.

Architecture that solidifies the importance of small public activities



SPACE OF IMPORTANCE AS AN EXTENSION TO THE CRÈCHE

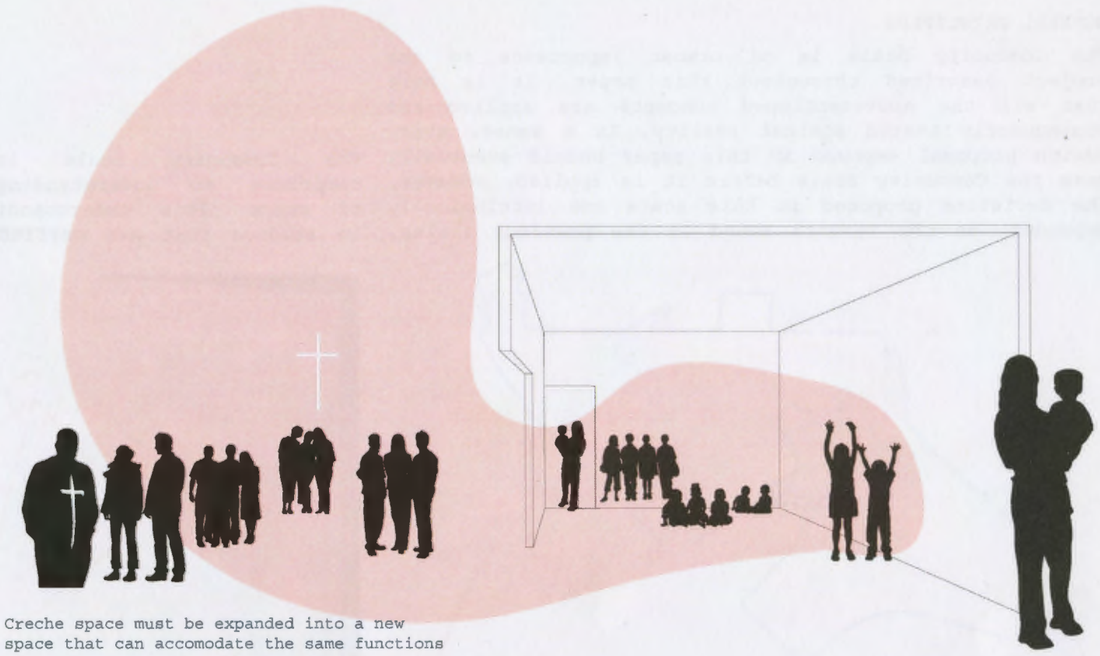
As was seen before, the Crèche is overcrowded with public activities. This justifies the design of a space that aids the Crèche. Hence, this space would become of great significance to the neighbourhood that it is situated in.

The adjacent space should be linked to the grounds of the Crèche since this building is currently an important public landmark for the neighbourhood residents.

This new space would accommodate activities that are vital for the functioning of a society. The proposal should reflect the strong presence and importance of these functions through its architectural form. At the same time, the building should create a sense of warmth in order for the community to take pride and ownership of the project.

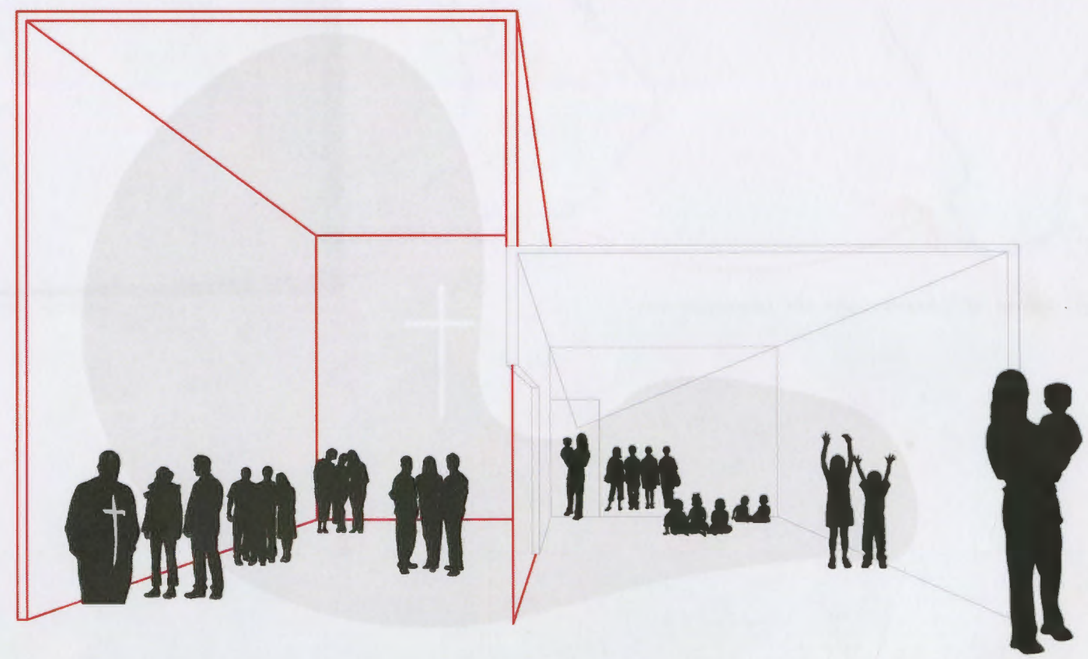
In the case of the proposal to be situated on the Lhaze corner, it would be important for the intervention to consider an engagement with this external space. The design should support a collaboration between the privacy of the intervention and the public nature of the corner.

This project would serve to promote the importance of existing public landmarks such as the Crèche. It should believe in conserving these spaces, their functions and their location. It should also encourage their development.



Creche space must be expanded into a new space that can accomodate the same functions

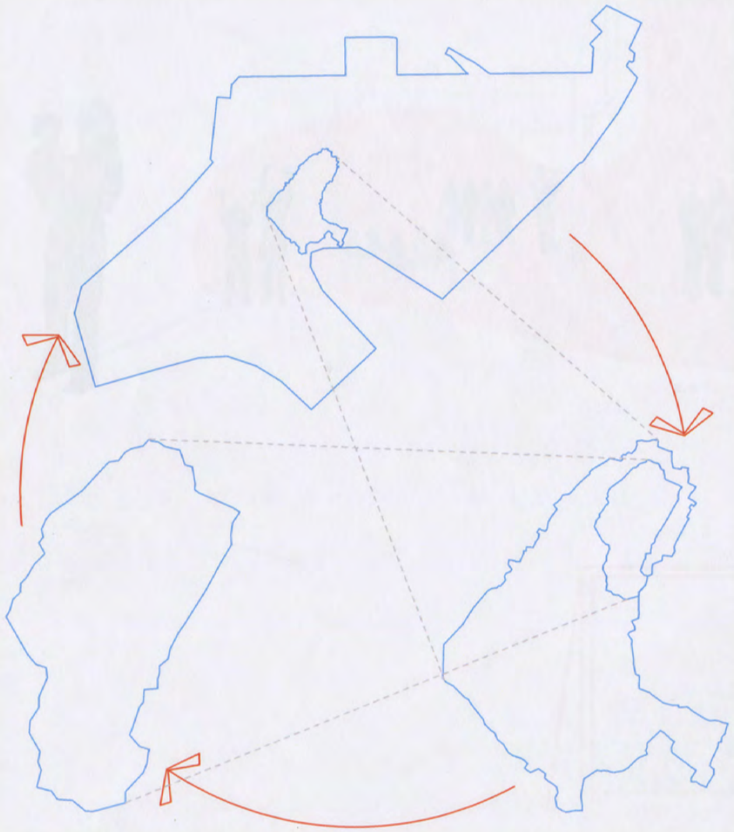
New space must reflect architecturally and visually its public importance



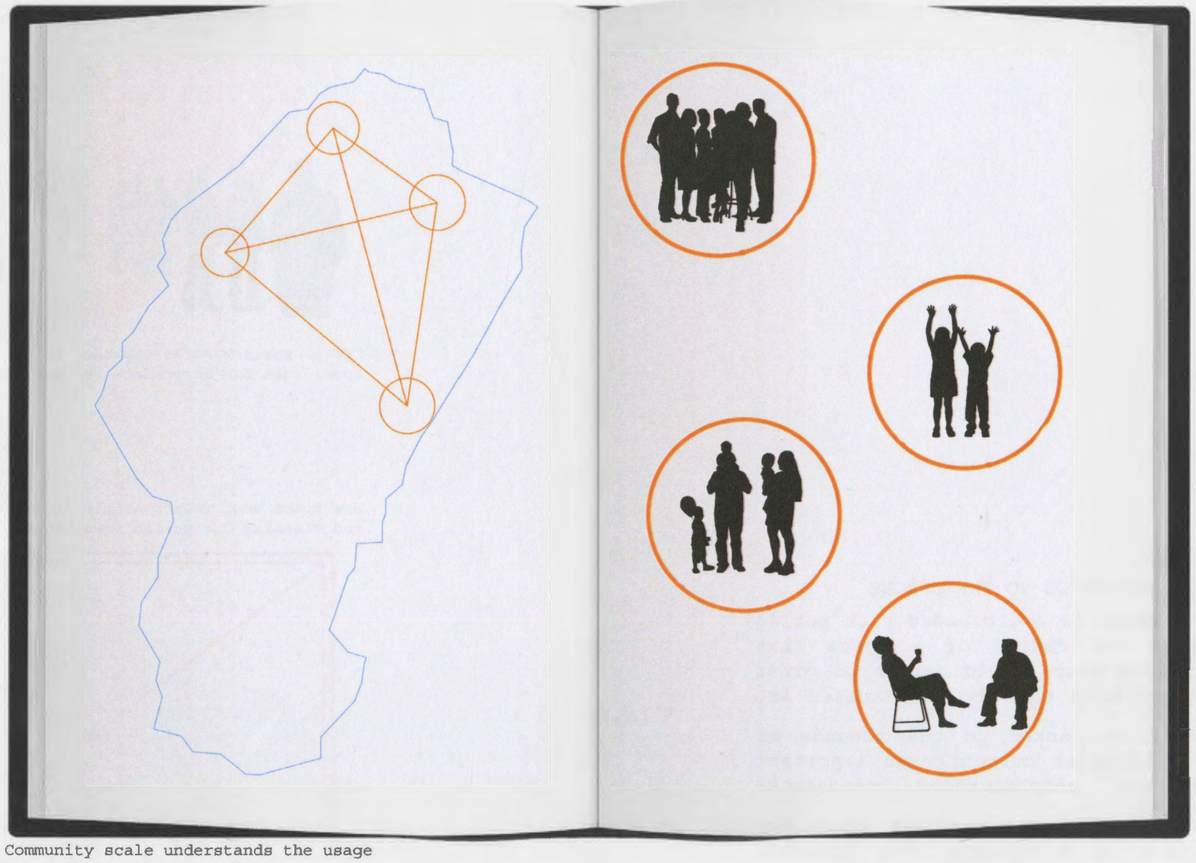
GENERAL PRINCIPLES

The Community Scale is of utmost importance to the project described throughout this paper. It is here that all the abovementioned concepts are applied and consequently tested against reality. In a sense, every design proposal exposed in this paper should eventually pass the Community Scale before it is applied. However, the decisions proposed in this scale are intrinsically dependent on the results found in the previous scales.

The Community Scale is important because it comprises an understanding of the everyday usage of space. This understanding would not be possible in studies that are carried out with a broader scope.



All scales of interventions are interdependent

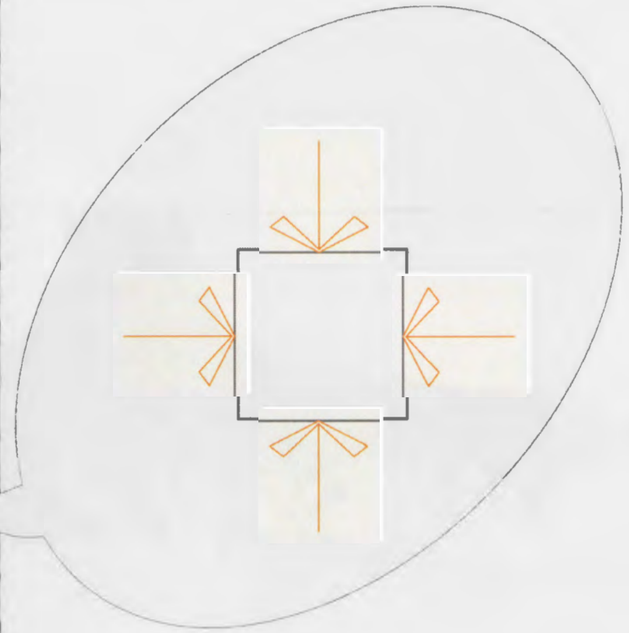


Community scale understands the usage of space in a human scale

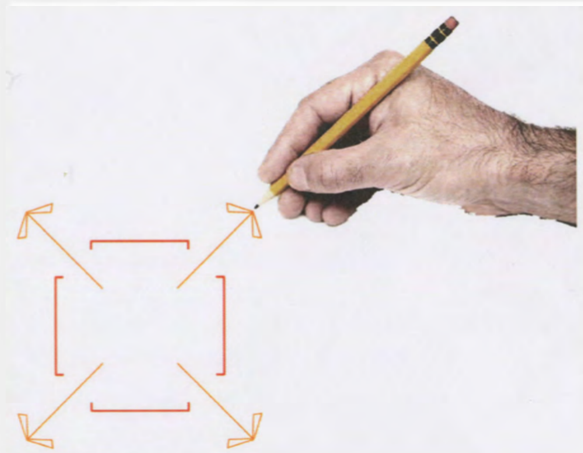
"every design proposal exposed in this paper should eventually pass the Community Scale before it is applied"

"The Community Scale comprises an understanding of the everyday usage of space"

However, this quality is attached to the responsibility of designing with a great understanding of the existing conditions of the sites under study. A proposal done in this scale, more particularly than in the other scales, should be a response to an in-depth study of the site's conditions. This obligation prevents the imposition of interventions on a site that are meaningless or detached from its conditions.



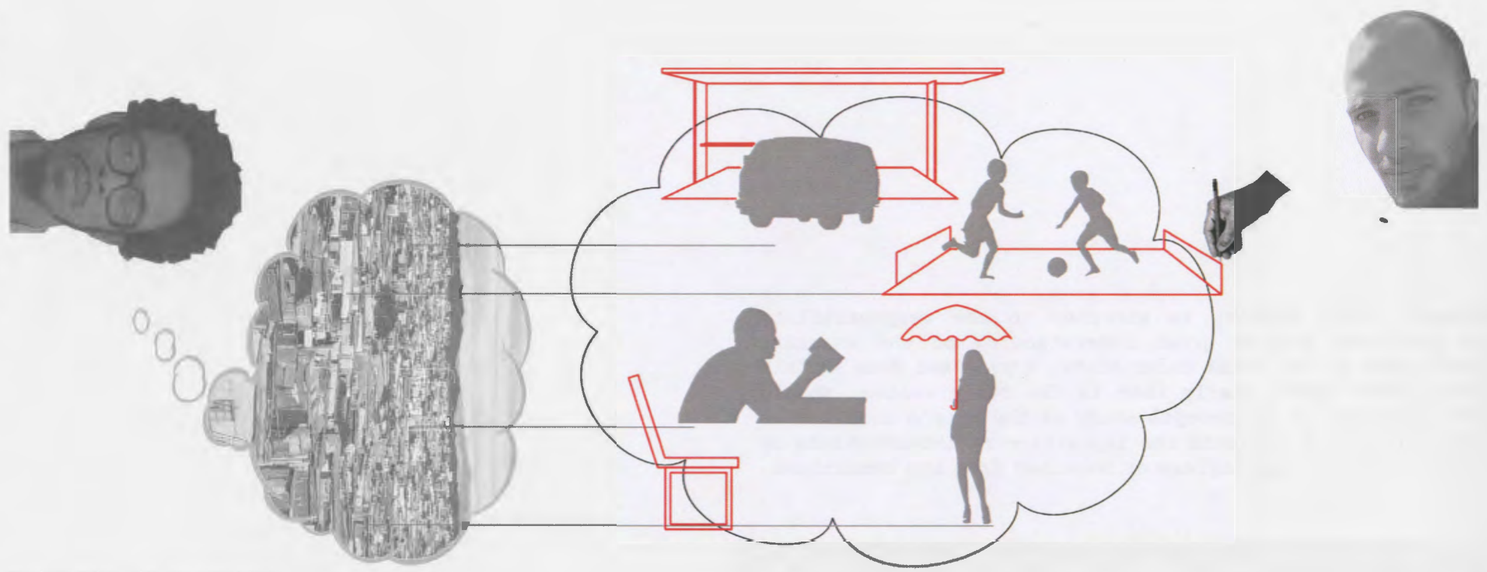
"A proposal should be a response to an in-depth study of the site's conditions. This obligation prevents the imposition of interventions on a site that are meaningless or detached from its conditions."



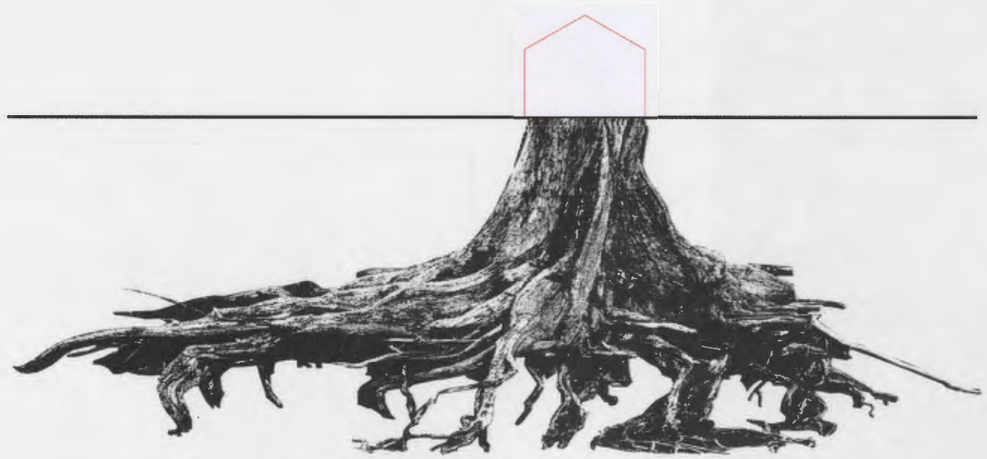
An intervention must come from an indepth understanding of the site

It has been argued that an informal settlement constructs itself according to a response to its needs. As we have seen in this study, this particular corner of Enkanini has its natural organization of spaces that accommodate functions or societal needs. The results of an intervention at this scale should respect this natural organization. Consequently, the Public Landmarks, as spaces of importance for the general functioning of the settlement, should be conserved. The interventions applied at this scale should be towards these spaces and should aim at enhancing their possibilities.

Finally, in response to the concepts proposed earlier, every design that is to be applied at this scale to an Enkanini neighbourhood, should promote a sense of permanency through its architecture.



Design must aim at creating responses to "Public Landmarks"



Any design proposal for Enkanini must promote a sense of permanency

"The interventions applied at this scale should be towards the "Public Landmarks" and should aim at enhancing their possibilities."

"every design applied in Enkanini, should promote a sense of permanency through its architecture."

It was gathered, through the study here presented, the importance of informed decision making when intervening on the informal. The paper stresses the significance of field research in understanding the local spatial characteristics in order to inform every design intervention across a range of scales. In fact, the paper defends that no design intervention on the informal must be implemented if it is not predetermined by a background research.

In addition, it was learned that all scales of intervention are interdependent and cannot be dealt with individually. Consequently the implementation of an intervention on the informal must imperatively have a cross-scale understanding of the site.

Furthermore, this paper defends that interventions on the informal must be limited to the public realm. It has proposed that change must be applied in order to affect a socio-economic group as a whole, rather than singular individuals.

It is also proved that interventions on the informal have to be precise in their choice of location and purpose. In this way, these can be important tools for the encouragement of self-development.

The paper understands that Enkanini as a settlement has a lack of stability which is related to a sense of temporality felt by its residents. The main design approach is to address this issue and suggest interventions that help create a sense of permanency in Enkanini.

In short, interventions on the informal must be responsive to the residents' existing socio-spatial conditions, needs and patterns of living, and aim at promoting development from within the community.

In short, interventions on the informal must be responsive to the residents' existing socio-spatial conditions, needs and patterns of living, and aim at promoting development from within the community.

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