

**A SEARCH FOR RESPONSIVE ENVIRONMENTS
WITHIN IN SITU UPGRADING**

Prepared By

K. SONI

Submitted in partial fulfillment of the Degree, Master of Town and Regional
Planning, Department of Town and Regional Planning, University of Natal,
Durban

December 1998

ACKNOWLEDGEMENTS

First and foremost I wish to offer my salutations to Bhagwan Shri Sathya Sai Baba, for giving me the strength and courage to complete this piece of research.

To my parents, I am eternally grateful for the sacrifices that you have made and the faith that you have maintained in me. Your guidance and inspiration has given me the strength and conviction not only to persevere but to realise my goals and objectives in life. It is a consequence of this gratitude that I humbly place this accomplishment at your feet.

To my loving sister Rita and brother Vinesh, thank you for all the nagging and encouragement that you have given me to ensure that I complete this step towards my career development.

To all the Consultants especially Nathan Iyer, Government Officials, the Community of Mshayzafe, the Designer of the area, I wish to extend my gratitude for the time that they afforded me amidst their busy schedules. A special thanks to Mr. Simon Mnqayi for his endless patience, assistance and translation during the community survey.

A debt of gratitude is extended to all my friends and colleagues at Scott Wilson (especially James, Kasturi and Puvendra) for providing their unconditional assistance in helping me complete this document.

To the librarians at the Architecture Library, I wish to say a big thank you especially to Jenine for the endless assistance that you afforded me. I am also grateful to Mukesh and Anita. Thank you guys.

But most of all, my sincerest and heartfelt appreciation goes out to my loving and understanding wife, Veesla. I thank you for all the encouragement that you have given me, for the ever present shoulder to lean on, for the words of wisdom when I was in doubt, and for the sacrifices that you have made to ensure that this document was completed. Without you, none of this would be possible.

TABLE OF CONTENTS

TITLE PAGE	1
ACKNOWLEDGMENTS	2
TABLE OF CONTENTS	3
LIST OF MAPS	9
LIST OF FIGURES	10
LIST OF TABLES & APPENDICES	11
CHAPTER 1	
INTRODUCTION AND RESEARCH FRAMEWORK	12
1.1 Overview	12
1.2 KwaZulu Natal Context	14
1.2.1 Housing Policy	14
1.2.2 The Role of the Metro Housing Unit	15
1.3 The Current Housing Situation within the Durban Metro Region	15
1.3.1 The Housing Backlog	16
1.3.2 Quantum of Residents within Informal Settlements	16
1.3.3 Predominant Housing Delivery Approaches	16
1.3.4 Overview of Current Housing Projects	17
1.4 The Need for Housing Provision	18
1.5 Summary	19
1.6 BACKGROUND AND MOTIVATION FOR TOPIC SELECTION	20
1.7 MOTIVATION FOR CASE STUDY	22
1.8 OBJECTIVE OF THE STUDY	23
1.8.1 Subsidiary Questions	23

1.9	HYPOTHESIS	24
1.10	METHODOLOGY	25
1.11	LIMITATIONS OF THE STUDY	27
CHAPTER 2		
CONCEPTUAL FRAMEWORK		28
2.1	PART 1 - UNDERSTANDING RESPONSIVE ENVIRONMENTS	28
2.1.1	Emerging Framework	30
2.1.2	Conclusion	31
2.2	WHAT CONSTITUTES A RESPONSIVE ENVIRONMENT?	32
2.3	PERMEABILITY AND LEGIBILITY	34
2.3.1	Other elements of Permeability	34
2.3.2	Public Space	36
2.3.3	The need for Public Spaces	37
2.3.4	What Constitutes Responsive Public Spaces	38
2.3.5	Indicators of Permeability and Legibility	39
2.4	VARIETY AND ROBUSTNESS	40
2.4.1	What is complexity?	42
2.4.2	How is complexity and integration achieved?	42
2.4.3	Indicators of Variety and Robustness	43
2.5	VISUAL APPROPRIATENESS AND RICHNESS	45
2.5.1	What makes Visual Appropriateness Responsive?	45
2.5.2	Indicators of Visual Appropriateness and Richness	46
2.6	PERSONALISATION	47
2.6.1	Indicators of Personalisation	47

2.7	Summary	47
2.8	PART TWO - INFORMAL SETTLEMENTS	49
2.8.1	Defining Informal Settlements	49
2.8.2	Socio-economic Characteristics in Informal Settlements	49
2.8.3	Summary	51
2.9	INTERNATIONAL PERSPECTIVES ON IN SITU UPGRADING	52
2.9.1	Predominant Approaches to In Situ Upgrading	53
2.9.2	Summary	56
 CHAPTER 3		
APPLICABILITY WITHIN THE IN SITU UPGRADE APPROACH		58
3.1	SAFETY	59
3.1.1	Surveillance	59
3.1.2	Neighbourhoods	60
3.1.3	Public and private spaces	60
3.1.4	Potential hiding places	60
3.1.5	Comprehensive approaches	60
3.1.6	Collaborative approaches	61
3.2	PARTICIPATION	62
3.2.1	A suggested Approach	65
3.2.2	Conclusion	65
3.3	REVIEW OF THE INDICATORS BY PRACTITIONERS IN THE FIELD OF TOWN PLANNING AND URBAN DESIGN	66
3.3.1	FINDINGS OF THE INTERVIEWS	66
3.3.2	Constraints in the design of In Situ Upgrades	66
3.3.3	Integrated Development Approach	67
3.4	SAFETY	69

3.4.1	Visual Safety	69
3.4.2	Service Provision Contributing to Safety	70
3.5	COMMUNITY PARTICIPATION	72
3.5.1	Recommended Approach	72
3.5.2	Identify Parameters of the Development	72
3.5.3	Conclusion	75
3.6	PERMEABILITY AND LEGIBILITY	76
3.6.1	Integration into adjacent and existing movement patterns	76
3.6.2	Topographical Constraints and their Implications for Design	77
3.6.3	Engineering Considerations	78
3.6.4	Conclusion	79
3.7	VARIETY AND ROBUSTNESS	80
3.7.1	Respond to Peoples' Needs	80
3.7.2	Locational Factors in the Provision of Facilities	80
3.7.3	Identification of Nodes	81
3.7.4	Identification of Activity Streets/Corridors	81
3.7.5	Land Use Control	82
3.7.6	Limitation of Robustness	83
3.7.7	Alternate Land Uses	83
3.8	VISUAL APPROPRIATENESS AND RICHNESS	84
3.8.1	Applicability at In Situ Level	84
3.8.2	Community Initiative	84
3.8.3	General Visual Appropriateness as a Consequence of Upgrading	84
3.8.4	Conclusion	85
3.9	PERSONALISATION	86
3.10	SUMMARY	87
3.11	CHAPTER CONCLUSION	87

CHAPTER 4

CASE STUDY BACKGROUND AND FINDINGS OF INTERVIEWS WITH DESIGNER AND COMMUNITY	88
4.1 HISTORICAL CONTEXT	89
4.1.1 Locality	90
4.1.2 Metropolitan Context	90
4.1.3 Socio-Economic Profile	91
4.1.4 Mshayazafe Demographic Profile	91
4.1.5 Project Initiation Background	92
4.1.6 Local Authority Jurisdiction	92
4.1.7 Community Representation	93
4.2 SITE DESCRIPTION	94
4.2.1 Topography	94
4.2.2 Land Uses	94
4.2.3 Existing Infrastructure Prior to Development	94
4.3 INTERVIEW WITH DESIGNER	97
4.3.1 Community Participation	97
4.3.2 Safety	101
4.3.3 Permeability And Legibility	103
4.3.4 Variety And Robustness	105
4.3.5 Visual Appropriateness, Richness And Personalisation	107
4.4 CONCLUSION OF FINDINGS	108
4.5 COMMUNITY SURVEY	109
4.5.1 Survey Method	109
4.5.2 Questionnaire Content	109
4.5.3 Pilot Survey	110
4.5.4 Approach	111
4.6 FINDINGS OF COMMUNITY QUESTIONNAIRE	112

4.6.1	SUMMARY OF FINDINGS	122
4.7	CONCLUSION	122
CHAPTER 5		
CASE STUDY EVALUATION		123
5.1	EVALUATIVE CRITERIA	123
5.2	PERMEABILITY AND LEGIBILITY	124
5.3	VARIETY AND ROBUSTNESS	127
5.4	VISUAL APPROPRIATENESS, RICHNESS AND PERSONALISATION	131
5.5	SAFETY	133
5.6	COMMUNITY PARTICIPATION	135
5.7	CASE STUDY FINDINGS AND RECOMMENDATIONS	138
5.8	IS MSHAYAZAFE A SUCCESSFUL RESPONSIVE ENVIRONMENT?	138
5.8.1	Permeability and Legibility	139
5.8.2	Variety and Robustness	144
5.8.3	Visual Appropriateness, Richness and Personalisation	148
5.8.4	Safety and Participation	149
5.9	CONCLUSION OF FINDINGS	150
CHAPTER 6		
STUDY CONCLUSIONS		152
7	BIBLIOGRAPHY	155
8	APPENDICES	160

LIST OF MAPS

Map 1: Locality of Mshayazafe within the Durban Metropolitan Area	Page 90
Map 2: Locality of Mshayazafe within the area of Inanda	Page 90
Map 3: Settlement Pattern Prior to Development	Page 96
Map 4: Designed Access Network	Page 104
Map 5: Planned Facilities	Page 106
Map 6: Composit Layout Plan	Page 108
Map 7: Identification of Households for Community Survey	Page 111

Note

The page numbers that are indicated provides an indication the page that ***precedes*** the plan. The reason for this approach is located in the fact that it was technically difficult to include some of the CAD drawings as a part of the document page numbers.

LIST OF FIGURES

Figures 1 – 6: Permeability and Legibility	Page 126
Figures 7 – 10: Variety and Robustness	Page 130
Figures 11 – 16: Visual Appropriateness and Richness	Page 132
Figures 17 – 25: Personalisation	Page 132

Note

The page numbering for the illustrations are those that appear **before** each set of digitised photographs.

LIST OF TABLES

Table 1	18
Table 2	112
Table 3	114
Table 4	118
Table 5	142

LIST OF APPENDICES

- Appendix 1: Interview with professional town and regional planners and urban designers.
- Appendix 2: Interview with officials from the Metro Housing Unit.
- Appendix 3: Interview with designer for Mshayazafe.
- Appendix 4: Community questionnaire.

CHAPTER 1

1 INTRODUCTION AND RESEARCH FRAMEWORK

1.1 Overview

“Housing the nation is one of the greatest challenges facing the government of national unity. The extent of the challenge derives not only from the enormity of the housing backlog, and the desperation and impatience of the homeless, but stems also from the extremely complicated bureaucratic structures, administrative, financial and institutional framework inherited from the previous government” (Housing White Paper:1994:3).

The structure of the South African City as we know it today is largely based on the functionalist concept of planning. After all, it was aimed at creating structures that supported the apartheid ideology. The apartheid city was brought about by clearing small, older locations and the laying out of large, separate areas on the periphery for new housing estates, i.e. segregated black townships (Tilman and Wall:1998:009). Many South African cities are presently characterised by random expansion, inefficiency and low-density sprawl. These cities are still segregated into formal and informal area as a result of former apartheid policies with related problems of poor socio-economic and living conditions for the urban poor. It is believed that there is an absence of models for integrated sustainable development that provide affordable housing for the poor and the new government is faced with great resource and capacity constraints (Tilman and Wall:1998:009).

It is perceived that the South African City exerts a growing magnetic force not only for people from other countries, but also for people from the countryside. The primary reason for this lies in the opportunities that the city presents for employment. This immigration has considerably increased over the years with the abolition of influx control. Statistics show that urban populations in South Africa have increased by 2.8 million from 1985 to 1991. By now 51% of the population live in the cities, and this percentage is constantly increasing. Demographic projections for the urban areas are in the region of 30 000 people

per annum for the next few years. The implications for housing, education and other facilities are immense (Tilman and Wall:1998:009).

The provision of housing has been identified as one of the key priorities in terms of reconstruction and development of South Africa. Addressing the current housing backlog has been targeted as a key factor in redressing the inequities of the previous regime. Housing policy in the apartheid era consisted of townships where housing was regulated for those who were allowed beyond the barriers of pass laws. These barriers were created to limit urbanisation to workers and job seekers who were allowed a temporary stay.

These townships are characterised by monotonous rows of virtually identical houses (with 51/6 and 51/9 as the basic models), low density neighbourhoods, and scanty facilities (primary schools, shops, public spaces). With the rapid increase in urbanisation over the years, occupancy ratios in these homes have increased. This has led to the concentration of people in the townships in the form of backyard shacks, commonly referred to as "shack farming" in South Africa. The density in the township is in the range of 5m² per resident, as against the 33m² per resident in the villa neighbourhoods, commonly referred to as the white suburbs. The sustained influx of people into these areas had increased to the extent whereby the population in the cities has virtually doubled and in most instances coupled with an associated growth of an emerging informal economy (Tilman and Wall 1998:009).

Problem

This influx of people combined with the emergence of informal economies has resulted in densely populated informal settlements without facilities, growing along the peripheries of the cities. The plots sizes in these areas is characterised by minimum lot sizes from approximately 100m² in places, with an extra 100-200m² in exceptional circumstances. The shacks are clustered in accordance with relief lines with minimal attention being paid to the public domain. The provision of facilities are scarce, even taxi and bus stops are considerable distances away from the residents.

It is asserted that although these districts are located at the peripheries of the urban centres, they maintain densities, somewhat rational structure and ecological qualities. What they lack is an urban context!

1.2 KwaZulu Natal Context

Like many regions in South Africa, KwaZulu Natal (KZN) faces a plethora of development challenges (Smit:1994:12). In his article entitled "All leaders will be tested to the full in the next couple of years", Smit alludes to the fact that the extent of the housing challenge in KZN is particularly daunting. Along with the fact that KZN is one of the countries more populous regions, it is also amongst the poorest. Furthermore, he adds that this region has the largest proportion of its housing stock in the form of informal housing (Smit:1994:12).

It is noted by Hindson and McCarthy (1994:32) that the sheer extent of informal settlements within KZN, combined with the limited state resources, points unavoidably in the direction of the need for their upgrading. The reality is that it is impossible to move millions of people, (many of who have been residing in a particular place for several decades) without causing severe disruption and trauma. Furthermore the current housing position is that there is neither the fiscal scope nor the developmental capacity to provide millions of brand new homes within a short period of time. This recognition has emerged in virtually every country with a similar level of development to South Africa (Hindson and McCarthy 1994:32).

Within KZN in particular, informal settlements are so extensive and well integrated into the overall settlement system and regional economy, that one must conclude that most will remain, and therefore need upgrading. Upgrading would simply become part of a broader low income housing effort in the province (Hindson and McCarthy:1994:12). The key policy issue that arises out of this reality is linked to the following approach; adopting the best methodology for prioritising settlements for upgrading, and linking this effort to an overall development strategy consistent with both national and regional priorities (Hindson and McCarthy:1994:12).

1.2.1 Housing Policy

Problem
Interviews with officials from the Metro Housing Unit has highlighted the fact that there is currently no "Policy on In Situ Upgrading", that has been appropriately ratified. However, they have acknowledged that a policy document is in its embryonic stages and is being formulated within a broader

housing development framework as identified by Metro Housing. Although there is no policy, there are however prescribed engineering guidelines (interview – Faizal Seedat and Laura Bedford).

1.2.2 The Role of the Metro Housing Unit

Apart from its role as a facilitator to the process of housing delivery, the Metro Housing Unit has made serious strides to be involved in the delivery process by providing bridging finance to priority projects. Metro Housing identifies its role as an active player in the delivery of housing to the poor. Currently, a Land Audit to identify all the portions of vacant land (public and private), suitable for low cost housing within the Metro is being investigated. This audit is also extended to identify all informal settlements within its boundaries. This process would enable Metro Housing to prioritise projects and provide the necessary finance for these developments. Agreements between the Provincial Housing Board and Metro Housing have been initiated to the extent whereby Metro Housing would be allocated a certain percentage of the total funds held by the PHB for subsidy purposes. This money will be in the control of the Metro and appropriately allocated to projects that are deemed priority in terms of the guidelines that are set out. As a consequence thereof, the Metro will be in a position to facilitate and direct the development of housing within a broader development framework. (interviews – Faizel Seedat and Laura Bedford from Metro Housing).

1.3 The Current Housing Situation within the Durban Metro Region

An overview of housing in metropolitan Durban was presented at The Housing Conference held at the Royal Hotel in Durban from the 20-21 August 1998. A series of documents (which were kindly made available for perusal) were presented in which some of the following issues were highlighted:

- Housing backlogs
- Overview of housing within the Metro
- Delivery momentum and performance
- Statistics on current housing projects

A synthesis of the findings in these reports will be highlighted in order to determine what the current housing situation is in terms of projects underway, housing backlogs; delivery projections, population projections, etc.

1.3.1 The Housing Backlog

The backlog estimates took into account both the populations residing in informal settlements and the creation of housing opportunities for those in inadequate formal shelter, such as outhouses. Moreover, it is noted that the backlog estimates ought to accommodate the future growth of the area over time. Initial estimates in terms of the net housing that needs to be met indicates that approximately 241 000 housing opportunities will need to be provided by the year 2007. This total includes both upgrading of the existing informal settlements as well as the indication of new housing projects on vacant land (Paper presented by Laura Bedford and Maurice Makhatini at the Conference:1998:6).

1.3.2 Quantum of Residents within Informal Settlements

Of the total population within the Metro region, more than 700 000 people are living in informal dwellings. This figure was based on an informal dwelling count based on 1994 aerial photography and other sources which has been accordingly adjusted from the 1994 estimate to 1997, at an annual growth rate of 2.25% per annum. This figure constitutes almost a third of the population of the metropolis, and over half the African population. The number of households that reside in informal dwellings is estimated at approximately 140 000 (Paper presented by Laura Bedford and Maurice Makhatini at the Conference:1998:6). The implications for the provision of housing within these regions require an appropriately managed and guided process that aims to deliver within a prescribed framework at an acceptable pace. This challenge is however daunting.

1.3.3 Predominant Housing Delivery Approaches

Within the Durban Metropolitan Region (Metro), there are 150 low cost housing projects that are underway (Metro Housing data base as at October 1998). The predominant approaches that have been adopted for the provision of low-income housing lies within two predominant housing delivery

systems: the first being Greenfields Development whilst the second is termed In-Situ Upgrading (Interview – Allan Gerber from the Metro Housing Unit). The differences between these approaches are indicated in the following common definitions that are attached to them:

Greenfields Development:

Relates to the development of a vacant piece of land whereby access to a minimally serviced site is provided to beneficiaries.

In Situ Upgrades:

Attempts to provide basic health and safety to an existing community that have “settled” on a site in the form of an informal settlement, through the provision of minimal services. The development objective is to minimise relocations and provide minimal services to the residents in their present location.

(adapted from Smit et al:1996:9/15)

In essence the one approach favours the development of a vacant piece of land whilst the other provides services to an existing community. There are different dynamics and approaches to each development approach however, the objectives of these approaches aim to provide basic services and tenure to beneficiaries.

1.3.4 Overview of Current Housing Projects

Currently, an effort is being made by the Metropolitan Housing Unit to establish the nature and status of each project that is underway or that has been approved by the PHB. As at October 1998, 118 of these projects have been audited in terms of the type of project, the number of sites, the developers and the densities of these projects. Of the 118 projects identified, 61 of these projects are in situ upgrade type projects whilst the other 57 are Greenfields development (Metro Housing Data Base as at October 1998).

Table 1: Overview of Housing Projects in Durban Metro Region

Project Type	No. of Projects	% of the total	% of Audited Projects
In Situ Upgrades	61	41	52
Greenfields	57	38	48
Audited Projects	118		100
No Data	32	21	
TOTAL	150	100	

Source: Metro Housing Data Base as at October 1998

It should be noted that where there is no data, it means that the details regarding these projects were not available at the time. Nevertheless, the data that has been provided reveals that approximately 52% of all the audited housing projects within the Metro region are in the form of in situ upgrades. Within the 52% of in situ upgrades that have been identified, 34 990 sites have been provided for in situ upgrade type developments (Metro Housing Database).

Within the current development context, it is submitted that approximately one third of the informal structures that exist will be upgraded by the turn of the century. The remainder of these will form part of the future delivery programmes that have been prescribed by the Metro as well as the PHB.

1.4 The Need for Housing Provision

All of the housing projects identified by the Metro Housing Unit are funded through the Provincial Housing Board (PHB) as part of the Reconstruction and Development Programme (RDP). Housing the nation has been endorsed by the RDP as a human right whereby all South Africans have a right to a secure place in which to live in peace and dignity (RDP:1994:23). Entrenched within this right to housing is the notion that the government takes responsibility to ensure that housing is provided for all South Africans. Furthermore, the approach to housing that is posited by the RDP is that "infrastructure and services must involve and empower communities; be affordable; developmental and sustainable; take account of funding and resource constraints; and support gender equality". The RDP is committed to establishing viable communities in areas close to economic opportunities and health; education; social amenities; and transport infrastructure (RDP:1994:23).

The guiding principles for the provision of housing have been set out in the White Paper for Housing. The White Paper aims to provide a broad policy and national strategy to guide the provision of housing to all South Africans within a prescribed framework. It should be noted that KwaZulu-Natal has no provincial policy of its own, rather the goals and objectives of the provincial housing drive are aligned within the national framework. Furthermore, it can be established at this point that a need for sustainable housing development has emerged within a prescribed broad framework that aims to maximise the benefit for beneficiaries within the given financial and sociological constraints.

1.5 Summary

What is evident though is that the in situ approach is predominant in the drive towards redressing the housing backlog that exists within the Durban Metropolitan Region. It is submitted that by the turn of the century approximately 35 000 homes would have been upgraded with the provision of basic services through the in situ upgrade type development. In order to sustain the provision of housing for all of the Metro Region's people, an approach that fosters delivery at a prescribed scale that is effectively managed and facilitated is required.

1.6 BACKGROUND AND MOTIVATION FOR TOPIC SELECTION

The topic that will be investigated aims to determine whether the environments that are produced within upgrade type developments are responsive to the needs of people. Criticisms have been levelled against the approaches to low cost housing development as the mere provision of a shelter and not the creation of a sustainable built environment that enhances the relationship between people and environments that they live in. Responsive Environments are identified as those environments that provide for human development based on the understanding that there is a strong relationship between people and the physical environment.

It is noted that the inspiration for this dissertation is located within the fact that informal settlements are a product of a political regime that aimed to segregate people on the basis of race. Now when previously disadvantaged people are receiving their basic rights as identified by the government, it is time to investigate what they are receiving, apart from the provision of shelter.

Low cost housing development has been severely criticised in the past as producing sterile and monotonous environments that are narrowly focussed on providing a shelter. However, most of these criticisms are located within a greenfields development framework. Minimal research has been carried within in situ upgrade type developments. It was deemed an interesting exercise not only to investigate the type of environments that are being produced, but also to contribute to the debate about making better places.

The Reconstruction and Development Programme refers to the minimal applicable standards necessary to within housing development: "all housing must provide protection from weather, a durable structure, a reasonable living space and privacy" (1994:23). Four years after this programme has been initiated, with some 61 identified in situ upgrade projects underway within the Durban Metro Region, it is deemed an appropriate time to initiate some thought on investigating the type of environments that are being provided in these developments.

It has been noted that “upgrade projects” are an approach that has been adopted by the housing authorities as a significant component in overcoming the housing backlog within the Metro. The scale upon which the implementation of upgrades are initiated at present is in the region of 35 000 sites. This figure has identified as a fraction (approximately 15%) of the existing backlog. It can therefore be assumed that there are going to be many more in situ upgrade projects in the future. An exercise of this nature may present inherent inconsistencies with related policy guidelines and implementation, it may highlight issues that can act as a catalyst for debate, it might even highlight new approaches than can be utilised to improve on the future development of the in situ upgrade approach.

1.7 MOTIVATION FOR CASE STUDY

The area of Inanda hosts one of the largest settlements of informal dwellers in the Durban Metro Region. Mshayazafe (meaning hit till death), is a community area that has been subject to a past of inter-community violence and political faction fighting. The community is a predominantly IFP community that is surrounded by a number of ANC communities. Most of the violence that has taken place is related to political affiliation. Over the years, the community differences have pacified and the community had settled peacefully.

Mshayazafe was one of a few in situ upgrade projects that were initiated in 1994, after the elections. This project was initiated by the community, which formed a Development Committee that would act on their behalf. The Development Committee selected the professional team and was involved in the negotiations and development process from the inception of the project through to the end. This upgrade was initiated four years ago and was completed in 1996. This means that the community would have consolidated and hence, be a suitable development to evaluate.

1.8 OBJECTIVE OF THE STUDY

The primary objective of this study is guided by the research question, which aims to investigate whether the environments that emerge from in situ upgrades are Responsive Environments. Low cost housing environments have been characterised as sterile functionalist due to the fact that they have been created on economic, engineering and quantitative needs alone – at the expense of qualitative and fundamental needs such as community interaction, resident control, security privacy and identity.

The concept of Responsive Environments emerged from a specific school of thought in the mid 1980's by urban designers, architects and town planners in Britain. This school of thought is related to elements of positive living environments. It has a strong urban design implication and is a First World Concept. However, the indicators of responsiveness have been noted as universal tools that can be used to determine whether the environments that have been created enhance human development and promote a positive relationship between people and the physical environment. Therefore, it is assumed that there is some merit in the use of these indicators. However, it is noted that these tools need to be modified to the local context such that an appropriate evaluative criteria can be developed to assess a selected case study.

1.8.1 Subsidiary Questions

Some of the subsidiary questions that will be answered relate to the following:

- Whether the indicators of Responsive Environments are a useful and appropriate translation from a First World concept to a Third World upgrade type development?
- Whether there are limits to creating Responsive Environments within in situ upgrade type developments?
- Are there other elements that should be considered apart from the Responsive Environment approach?

1.9 HYPOTHESIS

It is submitted that the study that is embarked upon is relatively new. There has been minimal research into an evaluation of the environments that emerge from in situ upgrade type developments. Therefore the nature of the study is exploratory, hence it was decided not to embark on any hypothesis.

1.10 METHODOLOGY

The approach that has been adopted is guided by the objective of the study which aims to investigate whether in situ upgrade developments result in the creation of Responsive Environments. In order to realise this objective the following research methodology is proposed:

Introduction and Research Framework

A brief historical overview regarding the location and emergence of informal settlements in and around South African Cities is presented. This section also aims to contextualise the proposed research within KZN by identifying the predominant development approaches to housing delivery. Thereafter, the parameters of the research through the research question, subsidiary questions, motivation for the topic and case study selection, and methodology is identified. This will be followed by the limitations of the study

Conceptual Framework

This component of the research is in two parts. The first deals with an understanding of what is meant by Responsive Environment are whilst the second provides some insight into in situ upgrading and approaches that have been adopted locally as well as internationally. This section primarily deals with approaches as posited by various theorists and extensive use of secondary material is made.

Contextualisation of the Literature within the In Situ Upgrade Approach

A review the literature is carried out by identifying the extent to which these indicators are applicable and within the in situ approach. This process will be embarked upon through a set of interviews with urban designers/ town planners as well local authorities.

Detailed structured interviews with three leading consultants in the fields of town planning and urban design will be carried out. It is perceived that these individuals deal with the practical considerations of the limitations and contextual realities and will therefore be in a position to provide valuable insight into the appropriateness of the approaches that are posited. Furthermore, they would enable one to determine the extent to which each of the indicators that

have been identified is applicable and how one would evaluate these in a layout.

Further input into the design process will be highlighted through a structured interview with the designer as well as a community questionnaire administered with the beneficiary community. It is submitted that the findings of these exercises will provide valuable input to carry out the proposed case study evaluation. These exercises are guided by the following objectives:

1. Structured interview with the designer

To identify whether the Responsive Environment indicators informed the design of Mshayazafe. To determine the degree to which these were used.

2. A detailed interview/questionnaire with the residents

To ascertain their perceptions of the development area now that it has been upgraded.

Once this information is collated, evaluative criteria will be established through a combination of the theoretical analysis, the input from practitioners and the findings of the interviews with the designer and community. The proposed criteria would entail a degree of theory, which would be contextualised within the practical realities that face urban designers, town planners.

Case Study Evaluation

The case study will be evaluated in terms of each of the indicators of responsiveness. Thereafter the findings of this evaluation will be highlighted.

Recommendations and Conclusions

The findings of the case study will be interpreted in terms of the conceptual material. Thereafter recommendations will be made in terms of how the Responsive Environment concept can be applied to an in situ upgrade type development as well as the extent to which this is applicable.

Finally the entire research process will be concluded to determine whether the objectives of this study have been addressed and achieved.

1.11 LIMITATIONS OF THE STUDY

At the outset, it is acknowledged that the findings and recommendations that would emerge are based on one particular case study that is restricted to a particular set of variables. Case study evaluations have been criticised in some instances to exaggerate the results such that the desired purpose is highlighted. The purpose of this paper is to contribute to the broader goals and objectives of producing better urban places. It is submitted at the outset that there are no preconceived notions or bias to achieve a particular result. This is an exploratory exercise that will be carried out in an objective manner that will aim to reflect the findings that emerge from the case study.

The evaluative criteria that are formulated are not based on a particular set of facts or figures. Rather it incorporates a developed criteria based on responses from various institutions that range from practitioners, planning officials, and the community in order to provide the most appropriate evaluation within the broader development constraints that are prevalent in the KwaZulu Natal. This by no means suggests that the criteria developed is universal because the priority that is afforded to the said indicators may vary from one individual to another. However, for the purposes of this paper, this approach was deemed most appropriate in order to address the said objective.

As will be noted, there is no universal definition for Responsive Environments. The indicators that are referred to in this document are utilised in a manner that would inform the said objective. It is therefore noted that depth and relevance of their content may not be shared by other individuals. However, every effort has been made to respond to most of the key principles that have been identified in the literature in a manner that is suitable and appropriate to realise the desired investigation.

In essence, this research document is an attempt at a focussed intervention into a specific subject. The findings and recommendations may not be universally applicable, however, the merit of this exercise lies in the assertion that more studies of this nature need to be initiated in order to inform the future development of a delivery system that has been adopted at a considerable scale.

CHAPTER 2

2 CONCEPTUAL FRAMEWORK

2.1 PART 1 - UNDERSTANDING RESPONSIVE ENVIRONMENTS

Responsive environments have been identified as those environments that are responsive to the needs of people and are based on the understanding that there is a relationship between the physical environment and the social well being of people (Iyer:1995:112).

Implicit in an understanding of Responsive Environments is an understanding that it emerges from a school of thought and is not a theory in its own right. It is one of a few expressions of a particular type of environment - an environment that enables human well being and hence is responsive to the needs of people. Other expressions of such an environment include: positive living environments, liveable environments, enabling environments, urbanity (Iyer:1995:22). These expressions share a common goal in that they all strive to sum up a particular set of qualities found in certain environments. It is also an acknowledgement of a relationship between physical environments, human development and human well being.

One of the more commonly held expressions of such an environment is the notion of Urbanity. Victor Gruen in his book entitled "Centres for the Urban Environment: Survival of the Cities", relates three interdependent conditions for which he believes form the essence of Urbanity:

1. The opportunity for direct human communication,
2. The opportunity for the free exchange of ideas and goods,
3. The enjoyment of human freedom as expressed by a nearly inexhaustible access to a multiplicity of choices.

(1973:85)

Gruen adds further that the "urbane" city has attracted people throughout centuries because it offers these three conditions. Freedom of choice especially is a persuasive attraction. It not only implies the availability of choice with regard to many types and places of employment, education,

environments of spirit and mind by expressions of art, and the possibilities of amusement: it also permits at different times and for different moods the following choices between:

- privacy and sociability;
- singleness, twosomeness;
- experiencing life's expressions within groups or masses of people.

(1973:85)

He believes that urbanity leads to a rubbing of shoulders amongst various economic, sociological and ethnic groups. Contact with others can sharpen the wits, improve skills, and develop the intellect (1973:85)

Essentially, Gruen posits the view that the maximisation of choice and integration leads to human development. What emerges from this definition is that the element of choice underpins the functioning of an "urbane environment".

Markewicz (1992:40) in his unpublished thesis makes substantial reference towards positing an approach to creating responsive environments or as he terms it "urbanity". Relating to the complexity of the concept he suggests that "urbanity is a complex concept that cannot be precisely or clearly defined as a universal entity. Rather, it is a phenomenon consisting of identifiable qualities or ingredients, each interrelated and interdependent on each other in a mutually reinforcing manner.

This sentiment is also endorsed by Dewar et al (1978:9), "urbanity is a complex phenomenon. The qualities of urbanity are complexly interrelated, interdependent and positively reinforce each other at every scale".

Pressman in his paper titled "Creating Liveable Cities" (1981:4), links urbanity with "human" and "humane" concerns. He suggests that a sensitivity to the human condition and its expression in physical terms is part of the "new urbanity". He proposes a revolutionary turnaround from recent town planning practices (which has contributed to urban alienation and a lack of identity), toward an alternative embracing new and more humane form of using as well

as organising urban space which promotes social contact and psychological composure.

2.1.1 Emerging Framework

The theorists that have made a contribution in defining the concept of Responsive Environments, inter alia urbanity refer to common ideologies, namely; Choice, Complexity, Integration, Human Development and Organisation.

These elements contribute to a broad definition of responsive environments that can be perceived as the complementary relationship between the physical environment, human development and human well being. This definition is underpinned by the elements of choice and complexity.

Another key component that makes an environment responsive is that of democracy. Within the current phase of South Africa's history: the democratic era, Noviwe Qegu postulates an approach to democratising planning within the country. Her article in Housing Generator (1998:031), asserts that one of the greatest challenges of the next decade is to implement new policies aimed at reconstructing and improving the viability of the South African City, thereby enabling it to yield the true qualities of a well integrated city. A democratically planned society has a personal concept of freedom in social relationships. It fosters flexibility, affords maximum opportunities for choice and favours self expression in small groups and personal expression (1998:031).

David Dewar in his paper on the housing issue in South Africa alludes to the fact that through appropriate approaches to the planning of urbane cities, freedom of choice can be enhanced. He believes that when rich choices are offered people are allowed to "self-actualise". He goes on to add that choice relates to various living conditions, from the private to the very exposed intense mixed use areas. He believes that greater freedom and more complex processes allows the ingenuity of many actors to inform the nature of settlements which result (Housing Generator:1998:029).

2.1.2 Conclusion

Responsive environments are those environments that illustrate the maximisation of choice and complexity in order to promote human development and well being within the physical environment.

2.2 WHAT CONSTITUTES A RESPONSIVE ENVIRONMENT?

✓ An integral part of understanding responsive environments is an examination of the performance criteria or qualities that should appear within them. Substantial attempts have been made to identify appropriate indicators that measure the performance or attainment of responsiveness, and provide greater direction to an understanding of responsive environments. These performance criteria have been detailed and extensively dealt with in a text entitled "Responsive Environments: A Manual for Designers" (Bentley et al:1995). There are a few important issues regarding this text that require clarification prior to moving further into this section:

- This text was used as the primary resource to identify the indicators of responsiveness, however, the content is located within a First World perspective. Therefore the level of detail that is afforded to most of the performance indicators has been edited and those elements deemed relevant to this study have been extrapolated.
- ✓ • It ought to be noted that this text is primarily a manual and is not explicitly linked to sound theoretical principles. It is tied to the notion that Responsive Environments is a school of thought that has no universal definition. The indicators of responsiveness are merely tools to determine whether a design is responsive or not.
- In view of the fact that the text offers no theoretical construct upon which to develop a rigorous theoretical framework, an attempt was made to locate some of the related theories (as posited by various authors) that emerged from an understanding of what was meant by the indicators.

✓ Although expressed in individual terminology at times, it should be noted that qualities of responsiveness are mutually supportive and therefore do not deviate from the central theme of Responsive Environments. An indication of those qualities/indicators that have been identified is briefly summarised, followed by a detailed explanation of what each of these means and how they contribute to the notion of Responsive Environments.

- ✓ 1. **PERMEABILITY & LEGIBILITY:** relates to the elements of access and identifies where people can and cannot go. Furthermore, it relates to how people would orientate themselves within an area.

2. **VARIETY & ROBUSTNESS:** affects the range and mix of uses that are available. It is also the degree to which people can use a given place, either public or private, for various purposes.
3. **VISUAL APPROPRIATENESS and RICHNESS:** relates to the interpretation that people put onto places and relates to the external image of a place.
4. **PERSONALISATION:** this elements is closely linked to contextual realities and is concerned with detailed level of design where people take the initiative at a personal scale to improve/personalise their area/spaces.

(adapted from Bentley et al:1985)

2.3 PERMEABILITY AND LEGIBILITY



Only places which are accessible to people can offer them choice. The extent to which an environment allows people a choice of access through it from place to place is therefore a key measure of its responsiveness (Bentley et al:1985:12). The greater the number of options given to the user, the more permeable a place is.

Kevin Lynch (1990:118) regards access as a key performance dimension in order to achieve good city form. He defines access as the “ability to reach other persons, activities, resources, services, information, or places including the quantity and diversity of the element which can be reached”. The central notion relating to access and how it may be classified is in accordance to the features to which access is given and to whom it is afforded. Most basic is access to people and places (Lynch:1990:118).

Emerging from the definition of access is the relation between people themselves as well as to place, hence its relationship to responsiveness.

2.3.1 Other elements of Permeability



Apart from the notion of access, the concept of integration has been closely related to the element of access. At a broad scale it has been argued that urban development is not a sector like other traditional sectors involved in the development of urban areas. The merit of urban development is the opportunity it affords to co-ordinate and integrate (based on opportunities and plans), various components on an area basis. The issue is whether or not such co-ordination and integration is possible and practical, and whether there is a limit to such endeavours (Badshah:1996:165).

Badshah adds further that most housing related development undertaken by government agencies is narrowly focussed and does not take into account the larger city of the urban development area. The site and urban design parameters are set by the local site specific decisions which are designed to be self sufficient. Cultural and commercial facilities are provided only for project use and the relationship to neighbouring development is generally not

taken into consideration. Design and site planning ought to recognise, incorporate and integrate conditions in the immediate vicinity (1996:165).

✓ Dewar notes that central to the phenomenon of urbanity is the integration of local areas into the larger metropolitan areas. He adds further that apart from the integration of the smaller areas into the larger metropolitan regions, it is also imperative to generate integration at a local scale. This he suggests that this can be achieved through the integration of a wide variety of land uses which are compatible with each other need to be integrated with residential development. This should be effected within a logical and structural framework that would realise the potential of the area in question (1995:9).

✓ A successful urban layout manages to incorporate in its design the requirements of various functions and to respond to both the private and public level. The scale of the solid and void, the size of the residential blocks, the street networks, both vehicular and pedestrian patterns, the relationship between residential and commercial areas, the provision of open spaces and the manipulation of the various zones are important for the creation of a successful urban fabric (Badshah:1996:164).

✓ "If everywhere accessible to everybody, physically or visually, there would be no privacy." (Bentley et al:1985:12). One of our basic sources of choice stems from our ability to live both private and public roles. For this capacity to flourish, both public and private spaces are necessary (Bentley et al:1985:12)

The relationship between private and public spaces is complementary and cannot work independently. People need access across the interface between them. Indeed this interplay between public and private gives people another major source of richness and choice (Bentley et al:1985:12).

Private and public spaces have different implications for permeability. Therefore in order to understand these implications, it is important to understand what they mean as well as their design implications for permeability to be achieved.

2.3.2 Public Space

Public spaces are viewed as common ground where people carry out the functional and ritual activities that bind a community. Whether in the normal routine of daily life or in periodic festivities (Carr et al:1992:xi) It is recognised that public spaces may be used for “private” purposes e.g. buying and selling items, gardening, self improvement, or simply finding a place to exist. It can also be the setting for activities that threaten communities like crime and protest. As a public life evolves with culture, new types of spaces may be needed and old ones discarded or revived. They are not a fix and aim to respond to a particular context determined by the realities of the time (Carr et al:1992:xi).

Factors to consider when differentiating between private and public space

Urban space is generally divided into domains distinguished by various rules and symbols. Their purpose basically is to establish boundaries between “us and them”, and private and public, thus ensuring the desired levels of interaction, inclusion or exclusion and providing appropriate defences. All these differ amongst various groups so that if privacy is defined broadly as the control of unwanted interaction, then “unwanted”, “interaction”, and “control” are all variables and matters of definitions. In doing so one may identify that there are differences in the tolerance and indeed preferences within various interaction levels (Rapoport:1977:289).

With whom one interacts, when and under what conditions, what constitutes withdrawal, where both interaction and withdrawal occur, all vary. The nature, placement and permeability of barriers also varies accordingly, as does the cycle of withdrawal and interaction which form a system, neither of which is comprehensible itself (Rapoport:1977:289). This highlights the interrelationship between private and public domains and indicates the factors that ought to be considered when designing for them.

Public space is the stage upon which the drama of daily life unfolds. The streets, the squares, and parks of a city give form to the ebb and flow of human exchange. These dynamic spaces are an essential counterpart to the more settled places and routines of work and home life, providing the

channels for movement, the nodes of communication, the common grounds for play, interaction and communication (Carr et al:1992:3).

2.3.3 The need for Public Spaces

Marcus and Francis in their text entitled "People Places, Design Guidelines for Urban Space", note that the privatisation of life has made obsolete the function a central public place. What remains are the "scattered, unconnected urban plazas used predominantly by one segment of the population at a specific time period. These spaces, do not constitute a recurring interest in public life" (1998:1). They further allude to the fact that historic precedents have been established in the study of and theory of urban form, much less attention has been paid to the historic precedents of urban functions, or to the interplay between form and function (1998:1).

Urban culture is characterised by people leading anonymous lives, isolated and confined to their cars. There is a hunger for pedestrian life. People are looking for ways to get out of their cars and live on human level in an urban centre.

Urban living involves much more than the use of a small room. The room or cell, is only one element in a whole system of spaces that people need. Firstly, space is needed by a family for private use like cooking, sleeping, and storage. Second, areas of intimate contact, such as the front doorstep, where children play, and adults chat with their neighbours is necessary. Thirdly, neighbourhood meeting places, such as the city watertap or village well, where people interact and become part of community are essential. Fourthly, the principal urban area, such as the *maiden*, that is used by the whole city is required (Correa:1989:33).

Just as most activities that used to occur in the home (work, education, marriage, birth and death), have been moved to other special purpose places, so too have the public activities been moved to other special places (stadiums, amphitheatres, shopping malls, hotels, parks and conference centres). Public life has not so much disappeared, it has been reconstituted (Marcus and Francis:1998:1).

The design and allocation of public spaces are essential elements not only to identify the private and public domains, but to contribute to permeability in that they define what is accessible and what is not.

2.3.4 What Constitutes Responsive Public Spaces

Public spaces suggest an image of accessible urban, suburban, rural and wilderness landscapes. The term public connotes the idea that these settings are accessible to everyone; people of a community, state or nation, regardless of age, gender, ethnicity, physical handicaps or other characteristics (Altman and Zube:1989:1).

The differential use of access which follows the mix of housing and other facilities and hence the proximity of various services are all interrelated to definitions of private and public which in turn impacts upon meeting places, recreation, shopping – in fact all aspects of urban organisation and activity. These are however, best understood through an analysis of the context within which they appear (Rapoport:1977:298).

Positively made and celebrated public spaces are essential social infrastructural elements of a successful urban environment. The role of public places in the lives of the poor is critical. Dewar notes that the full range of the families needs cannot be met by the limited range of the dwelling unit's resources. Public spaces offer the community the opportunity to focus their energies and resources therein. These spaces can act as an extension to the private dwelling unit. They are places where children play, people meet, lovers court, people read and study when the house is overcrowded. Therefore the manner in which public spaces are created can have an impact on the lives of many people. If public spaces are vibrant and rich, the external environment can be made positive regardless of the communities in which they are located within. The locality of these spaces should aim to complement the physical and cultural contexts as well as the needs and aspirations of the contemporary users (Dewar et al:1991:56).

In order to optimise the use of public spaces, Trancik suggests that the role of an urban designer not merely to manipulate form to make spaces but to

create spaces through a synthesis of the total environment, the physical, social and economic (1986:114).

The quality of the public spatial environment is critical in giving settlements dignity and a sense of confidence and permanence. All public spaces including street spaces, are social spaces or urban living rooms which accommodate most collective human activities. They need to be created in ways that enhance those activities. Furthermore, if these public environments are properly designed they would act as extensions of private dwelling units, thereby removing pressure from those units. The primary function of housing and other buildings, therefore, is "bound", or gives scale and definition to these public spaces (Dewar:1998:18).

2.3.5 Indicators of Permeability and Legibility

In order to determine whether a design is permeable and legible there are a range of measurement tools that have been identified. In order to promote permeability the site or area needs to be integrated at a local, sub regional and regional scale. At a sub regional and regional scale, a linkage to adjoining communities and major transportation routes needs to be provided for. Within the area, a clearly defined access network needs to be embodied in the design. This network would enable people to orientate themselves within the area, which also promotes legibility. A permeable access network also should provide a choice of access to get from one place to another. The street alignments need to be focussed onto the elements of place-making - like landmarks, which would result in nodes or focus points which promotes legibility and aims to promote the integration of people at common meeting places. The identification of nodes and public places through vehicular and pedestrian access would enable one to differentiate the public from the private domain.

2.4 VARIETY AND ROBUSTNESS

✓ Although these elements are commonly referred to independently in the literature, it was deemed necessary to deal with them together. The reason for this will be understood once the elements that constitute variety and robustness are detailed. It is submitted at the outset that these elements share similarity in meaning and complement each other directly. That does not imply that other elements of responsive environments are not mutually supportive or complementary, rather that some of these indicators are intimately related and more interdependent than others.

The relationship between variety and robustness can be illustrated in the following definitions of each:

Variety: relates to the range of uses that a place offers to its users;

Robustness: affects the degree to which people can use a given place for different purposes.

(Bentley et al:1985:10)

✓ Essentially the extent to which variety is provided for will ultimately impact upon the degree to which these places can be used for different purposes. What emerges from these definitions is that both these elements relate to people and the use of place. Therefore, it is submitted that whilst the elements of variety will be explored, issues relating to robustness will be addressed either implicitly or explicitly.

Variety of experience implies places with varied forms, uses and meaning. Variety of use unlocks the other levels of variety:

- A place with varied uses and has varied buildings types, of varied forms,
- It attracts varied people, at varied times, for varied reasons,
- Because the different activities, form and people provide a rich perpetual mix, different users interpret the place in different ways: it takes on varied meanings.

(Bentley et al:1985:10)

✓ Variety of use is therefore the key to variety as a whole. The purpose of promoting variety is to increase choice. But choice depends on mobility: people who are mobile can take advantage of a variety of activities even if these are spread over a wide area. However, the reality is that high mobility levels are restricted to those who can afford it. The majority of children, the sick, the poor, the disabled, parents with young children or even some woman do not possess high levels of mobility. Therefore real choice depends on the level of variety that prevails (Bentley et al:1985:29).

✓ It is recommended that public facilities which are functionally related should be located in clusters, so that in the face of limited public funds, the sharing of resources (e.g. halls, libraries, playing fields, teaching equipment, etc.) between facilities is made possible. The spatial clustering of facilities also enables a number of household needs to be satisfied in a single trip (Behrens and Watson:1996:83).

✓ "A characteristic of positive environments is the intensity and diversity of activity" (Dewar:1990:20). He notes that the most fertile ground for the generation of urban opportunities is created through intense interaction and high levels of population support. Similarly the need for ease of access demands the existence of diverse activities over relatively small distances. It is further added that successfully performing environments are necessarily complex: they contain a variety of overlapping conditions and activities; they provide the opportunities for the spontaneous and unexpected to occur and they accept conflict (Dewar:1990:20).

✓ Integration and complexity in a design are those elements that allow for a range of activities and responses that occur within a similar location to promote choice, experience and freedom. Complexity is also a result of a variety of responses in built form and through a change in the environment brought about by the integration of activities. Integration relates to how well functions overlap and in doing so, positively reinforce each other to create complexity.

2.4.1 What is complexity?

Complexity relates to the aspect of peoples' responses to their surroundings. It involves the number of different noticeable elements and the distinctiveness between those elements. Places that have a few elements or many similar elements appear relatively simple. The introduction of many elements having noticeable differences from one another increases the perceived complexity (Nasar:1998:75/76).

Amos Rapoport asserts that the underlying perception of both the social and physical environment is information flow. Between deprivation and overload there are desired levels of information. How these levels are combined constitute complexity (1977:207).

It is further noted by Rapoport that an interest in complexity, richness and perpetual opulence follows from the proposed distinction between what he terms perception and cognition. The purpose of cognition is to clarify the environment by simplifying it to what he terms "schemata", and concentrating on limited parts of it. On the other hand perpetual experience through the senses is one of richness and complexity. No matter how much of the environment one tunes out, the direct experience is always richer than any memory or "schema". This perpetual experience is desired and greatly influences the evaluation of environments (1977:207).

While people want to be orientated and understand the city cognitively, they want to experience its richness. It is the interplay of a comprehended order and departures from it which constitute complexity. From this perspective then, there are no conflicts between a stress on clarity and legibility in the city and a desire for complexity. Not only are they mutually exclusive, they are complementary: one is a matter of cognition, the other of perception. At a larger scale clarity is needed, at a smaller – complexity (Raporport:1977:207).

2.4.2 How is complexity and integration achieved?

Even when the shape that the city will take is determined or controlled by development authorities, housing projects must be designed in terms of what happens adjacent to them if one is to create public spaces that relate to the

city. In order to integrate uses and activities, commercial and communal activities need not only be dispersed within a development, but some larger areas need to be located where the township or neighbourhood meets the rest of the city (Badshah:1996:164).

Positively performing urban environments reflect a high degree of integration between different parts and elements of the city. The essence of urbanity is that, with increasing agglomeration individuals, groups and communities can benefit from a greater range of opportunities and facilities compared to those that can be generated by their operation in isolation. For this to occur, however, the more intensive activities and events (those that are dependant upon the support and participation of large numbers of people), need to be exposed to the inhabitants (and thus the support) of many local areas. In positively performing urban areas, therefore, it is possible for poorer inhabitants to gain easy access to the opportunities and facilities that are generated through the resources of the wealthy (Dewar (1990:20).

Most land use plans continue to separate commercial and residential activities, although many have criticised this practice. However, most low income and economically weak sections of society depend for their livelihood on having commercial activity near their homes. Unless such spaces are clearly identified and maintained by the people that use them, it can contribute to their economic sustenance. However, the chances of these spaces being misused is high (Badshah:1996:163).

2.4.3 Indicators of Variety and Robustness

The elements of variety relate to the integration of land uses and the existence of varied building types within an area. One of the primary objectives is to integrate a range of compatible land uses in a manner that promotes ease of access. Therefore, these ought to be located along the major transportation networks (vehicular and pedestrian) in such a way that they provide opportunities that are easily accessible to a range of users. The provision of a range of uses contributes to complexity. Therefore a measure of complexity would relate to the extent of the uses that are available and the way in which these have been integrated such that they reinforce each other in terms of their locality and the variety of use (robustness) that is offered to

people. In order to evaluate robustness, it is submitted that the public domain should support a wide range of uses. An example of this element is a town square which can be used as a meeting place for people, a place where people can relax and enjoy sunlight and shade in the same time and place, a playlot for children and a central focus point which people relate to.

2.5 VISUAL APPROPRIATENESS AND RICHNESS

Visual appropriateness is defined within the philosophy that appropriate detail design of particular locales and places promotes meaningful visual cues and in doing so increases choice. Richness relates to the sensory aspects, visual and non visual, that need to be accommodated at a detail or local scale (Iyer:1995:29). A combination of these elements will contribute to the uniqueness of a place.

The element of visual appropriateness focuses on appearance. This is deemed important because it affects the interpretations people put on place. Inevitably, the appearance of the environment will be interpreted by people and have meaning to them. When these meanings support responsiveness, it is termed visual appropriateness (Bentley et al:1985:76).

Visual appropriateness is particularly important in places that are most likely to be frequented by people from a wide variety of differing backgrounds. This is most prevalent in the public domain. Visual appropriateness appeals to our senses: sight, touch, smell etc. The degree to which an area can be perceived and mentally differentiated is based on the clarity with which it can be perceived and identified, and the ease with which its elements be linked with other events in a coherent mental representation of time and space as well as the fact that representation can be connected to non-spatial concepts and values (Lynch:1990:131). This is the link between the form of the environment and the human processes of perception and cognition.

2.5.1 What makes Visual Appropriateness Responsive?

The elements of visual appropriateness are linked to people perceptions. Their perceptions are guided by their senses. Therefore, in order enhance perceptions, senses need to be captivated in a manner that reinforces the pleasantness of a place. This in turn also relates to how a person perceives:

- (a) a place: Legibility
- (b) the richness enhanced by the mixture of land uses and buildings:
Variety
- (c) the multifunctionality of space: Robustness

(adapted from Bentley et al:1985)

✓ For an area to be determined visually appropriate its responsiveness in terms of legibility, variety and robustness needs to be maximised such that the combined effect of these elements enhance the relationship between people and the environment. In order to do this one needs to understand how people interpret places and the effect that these places have on their lives. This will be informed by the broader objectives of a design in terms of where publicly visible areas are located and determining which responsive qualities are attached to them. These will vary in places and are determined by their location, their multifunctionality and the level of variety that is offered to its users. Ultimately, this relates to how people perceive the use of these places which in turn would have an effect on the level of visual appropriateness that is attached to it.

2.5.2 Indicators of Visual Appropriateness and Richness

✓ The predominant areas that are frequented by people (the public domain) have been identified as those that ought to be visually appropriate. In order to achieve visual appropriateness it is noted that public spaces need to be legible, and entail an element of variety and robustness. These ought to be enhanced to appeal to peoples' senses (richness) and also enhance the surroundings within which they are located.

2.6 PERSONALISATION

It is submitted that the element of personalisation is closely related to how design can stimulate people to place their own mark on a place. It is noted however that this element is primarily driven by people's perceptions within an area. "Personalisation is not random. People personalise the space they control" (Bentley et al:1985:101). It is assumed that if people live in an aesthetically pleasing environment, they would like to blend into it. For example, if most households in a particular street are painted and look new, it is assumed that this would prompt others to do the same, thereby allowing each one to place their own stamp by painting their home in a different colour or style.

It is submitted that the element of personalisation can be induced via creative and pleasant environments where they do not want to stand out as "the ugly duckling". It is therefore essential to prompt this reaction from people by making sure that the places in which they live, work and play are a constant reminder that the environment is rich and diverse. This would inspire them to want to create their own little vibrant spaces, albeit in the form of a little garden in their front yard, painting the fence, planting trees in their yards, putting colourful curtains over their windows, or even just mowing the lawn and trimming the hedges. It is submitted that if each individual makes a concerted effort to enhance their living space, it would contribute to making their area a vibrant and pleasant environment. However, they should be given reason to do so!

2.6.1 Indicators of Personalisation

In order to determine how an areas has been personalised one needs to ascertain what people have done to enhance their own environment (individual place-making) which bears the stamp of their own tastes and values.

2.7 Summary

The elements that constitute Responsive Environments as noted by Bentley et al have been explored and the relevant dimensions of each of these components have been identified. Part two of this section will identify the

context within which these indicators will be tested. Furthermore an indication of the predominant approaches to in situ upgrading will be highlighted.

2.8 PART TWO - INFORMAL SETTLEMENTS

The purpose of this section aims to highlight some of the key socio-economic characteristics that are embodied within informal settlements. Doug Hindson and Jeff McCarthy have edited a text entitled "Here To Stay, Informal Settlements in KwaZulu-Natal". This provides a useful overview of the contextual realities that are presented within informal settlements in the province. It is noted that extensive reference will be made to this text as it is a combination of a 24 commissioned papers submitted to the Informal Settlements Project which relate to a variety of pertinent issues that are deemed relevant to this study.

2.8.1 Defining Informal Settlements

Informal settlements are defined as dense settlements comprising communities housed in self constructed shelters under conditions of informal or traditional land tenure (Hindson and McCarthy1994:1).

2.8.2 Socio-economic Characteristics in Informal Settlements

At the outset, "a common misconception that needs to be corrected is that informal settlements are uniformly harsh environments containing generally impoverished, relatively socially homogenous communities" (Hindson & McCarthy:1994:15). Some of the more common findings within these areas is as follows:

A varied income distribution

Surveys have indicated that the levels of income in informal settlements vary within and between settlements. A range of income levels has been noted where in peri-urban informal settlements, a significant component of households earns well above the average for the settlement. These earnings are mainly in the form of wages but also stem from other secondary or primary activities, whether urban or rural based. The most fragile sections of the settlements are destitute households and those dependant on pension payments or remittances from household members elsewhere.

Relationship of income to locality

Contrary to expectations, it was revealed that core city settlements were poorer on average than the longer standing peripheral settlements despite their favourable location in relation to employment opportunities. This may be due to the refugee status of many of their residents, combined with their lack of organisational consolidation and recognition by the municipal authorities.

Infrastructure and Services

Informal settlements in peri-urban areas occupy an intermediate position between formal and rural areas, with dense rural settlements by far the worst off in terms of services for health, water, sanitation and communications. Generally a very small percentage of people have access to the very basic services like tap water or electricity. Most of the people rely on mobile clinics for health services and a significant minority have no schooling available whatsoever. It is noted that the lack or poor quality of health and recreational services, for example, worsens as it moves away from major urban centres towards remote areas and smaller places.

The Distribution of Services

An analysis of the distribution of services indicates that with regard to "line services" like water and electricity, there is an association between the level of provision and accessibility to employment centres. Settlement with higher levels of water provision generally show higher levels of accessibility to major industrial complexes than the total sample of settlements that were reviewed. It is noted however that the worst degrees of deprivation occur in and around the urban centres in towns.

An important finding illustrated by McCarthy and Hindson was that there was no clear correspondence between line services and point services and settlement size. Thus many settlements with high service thresholds for a particular service, such as a fixed clinic or a secondary school do not have these services whilst a significant number of settlements with populations below service thresholds have these services. It is suggested that this lopsided distribution of services results from the fragmentation of service departments and spatial-political fragmentation of the past.

Housing Types

The condition of housing in informal settlements varies considerably. There is a common misconception however, that all informal settlements comprise flimsy, unhealthy and dangerous shacks. The reality is that there a range of housing types which differ in terms of their durability and the internal and external environment that they create, both for inhabitants and in terms of their impact on the wider natural environment. It is contended that the standard of housing in informal settlements tends to improve with time, with increased collective and individual tenurial security.

(adapted from Hindson & McCarthy:1994:15-22)

2.8.3 Summary

In order to posit an approach to the development of informal settlements it is important that one understand the general underlying dynamics in these areas so that the proposed interventions are aligned to best suite the identified beneficiaries. It is noted however, that most settlements vary in size, population compositions, they have socio-economic variances, and the levels of services within these are not necessarily the same. Therefore, each development initiative will be guided by its own contextual realities.

2.9 INTERNATIONAL PERSPECTIVES ON IN SITU UPGRADING

This section identifies the predominant approaches to in situ upgrading. Reference is made to experiences locally as well as internationally. It is contended that this element of the research would provide an overview of how in situ upgrading is utilised as a development tool in the provision of housing. An understanding of these approaches would highlight the objectives of this approach. In essence, it forms a basis of some of the broad policy approaches that have been adopted.

For many years and in many developing countries, governments and politicians from all ends of the political spectrum have responded to “spontaneous” or “informal settlements” with consternation and hostility (Urban Foundation:1990:7). Generally, informal settlements have been regarded as a blight to be removed by both right leaning (e.g. Chile) and left leaning (e.g. Cuba and Zimbabwe) governments. Smit et al (1996:7) note that in the 1960's, shack settlements were burgeoning in South American cities and the ruling elites were threatened by their emergence. Initially the response was to bulldoze informal settlements but this proved ineffective since they simply emerged elsewhere. The continuous emergence of these settlements is a consequence of the lack of provision of alternative land and housing options. Moreover, people living in these settlements began to resist removal vigorously (Urban Foundation:1990:7).

As a consequence of the failure of rigorous policy, governments began to respond to informal settlements with benign neglect and attempts to provide alternative housing options. Many governments then ceased removals and attempted to provide public housing. Usually no more than a few “model” estates were built before governments had to channel funding into other priority areas or simply ran out of money. Thus the policy produced a few monuments (in the form of a limited number of housing estates) to politicians, but little to ease the housing crises. Because informal settlements were considered “unacceptable” living environments, no attempts were made to improve conditions in such settlements. The result was that the masses received very little housing assistance at all, notwithstanding the stated intentions of their governments to house everyone (Urban Foundation:1990:7).

When it became apparent to many governments that the building of public housing estates was not the answer, many continued to neglect informal settlements, and shifted their attention to the provision of site and service schemes. However this attempt to resolve housing backlogs failed for two reasons: firstly, due the high costs of land near metropolitan areas, most site and service schemes have been provided in remote locations on the edges of the cities. Secondly, even after subsidisation, these schemes proved to be too expensive for many poor people. The result has been that people have preferred to remain in the better located existing informal settlements which they can afford, even if no services are available (Urban Foundation:1990:7).

Smit et al, note that by the late 1960's however, practitioners and authors such as Abrahams, Turner and Fichter were arguing strongly that the inhabitants of informal settlements were not marginal or a threatening group of indolent outsiders, but were instead law abiding citizens who were trying (often against the odds) "to pull themselves up by their bootstraps". Turner (1968,1969) argued that instead of being antagonistic, governments should recognise the achievements of people in providing their own housing (often in impossible circumstances) and seek to support them (Smit et al:1996:7).

It is concluded that in the past decade many governments of all political leanings have increasingly come to terms with the desirability of in situ upgrading programmes. Such acceptance is in large part due to the successful implementation of upgrading projects often facilitated by the World Bank (Urban Foundation:1990:8).

2.9.1 Predominant Approaches to In Situ Upgrading

In situ upgrading requires an acceptance of existing informal settlements as potentially successful and liveable environments (Urban Foundation:1990:8). Firstly, upgrading assumes the minimum disruption of an existing settlement. For this reason, housing interventions occur on already settled sites (i.e. in situ) and attempts are made to displace as few people as possible. Almost always a limited number of people are required to be relocated to an "overspill" site nearby in order to make provision for physical services like roads and other related infrastructure (Smit et al 1996:8).

The application of in situ upgrade development has varied widely from one context to another, however a common body of experience and some degree of consensus has emerged as to what upgrading should entail (Smit et al:1996:8). There are two major components that emerge from international and local experience. These entail:

- (a) The securing of basic health and safety
- (b) The creation of a momentum for improvement (Consolidation)
(Urban Foundation:1990:8)

Securing health and safety often include the following:

- Water
- Sanitation
- Roads and stormwater provisions
- Access for emergency vehicles
- Reduction of fire hazards
- Moving people out of floodplains or out of geologically unstable areas
- Lighting of public walkways and streets to make them safe at night

(Smit et al:1996:8)

Some social service provision (e.g. clinics) may also be necessary in securing of health and safety. In supplying the range of services needed, careful attention needs to be given to what people can afford. This does not necessarily imply that the lowest level of services should be supplied. Research has in fact shown that intermediate levels of service may be the most cost effective if maintenance costs are also taken into account (Urban Foundation:1990:8/9).

In this stage interventions are quite visible and immediate, once community sanction is obtained. It should be noted that whilst the level of service provided varies from one upgrade project to another, the view is held in many circles that the services should be rudimentary and the minimum necessary to secure health and safety. In some instances this derives from a primary concern to achieve costs recovery (and hence keeping the intervention

affordable). In most cases however, the concern has to do with recurrent costs that high levels of service impose on poor people.

The second stage of the process involves a series of interventions aimed at incremental and progressive improvement of the housing stock where the momentum for improvement is facilitated. This stage has become known in the literature as the “consolidation” process. The basic rationale is that, in addition to securing the health and safety of individuals, it is important to facilitate the overall development of individual and community environments. In other words people must be able to improve their shacks into substantial houses, and informal settlements must be able to evolve the range of facilities that are affordable to them. Typically, many interventions are aimed at facilitating or encouraging further investment by households themselves in their own housing. Examples of such interventions include (adapted from Smit et al, Urban Foundation):

- The provision of secure tenure (individuals will not invest in their housing if they believe that it can be taken away from them).
- Facilitating access to end-user finance (the availability of credit substantially increases peoples’ abilities to invest in housing).
- Investment in the public environment (experience has shown that when the public sector shows commitment to a housing environment, individuals are more likely to do so).
- The provision of building support and advice.
- Using the government bulk buying power to make materials available more cheaply.
- Providing training in enterprise related activities linked to the project such as building materials, manufacturing and small contracting (if peoples’ incomes rise because they are employed, they are most likely to invest in housing).
- Mobilising communities and individuals into a variety of “developmental” activities through a variety of means including community participation (e.g. savings clubs, building co-ops etc.).

The two stage upgrading process is based on the assumption that provided the said interventions are made appropriately, informal settlements will

develop a momentum towards improvement that will be self sustaining and mutually reinforcing. It is further noted that any form of a delivery system gains content and meaning within the specific circumstances that they are applied within. Apart from the recommendations that are presented by Smit et al and the Urban Foundation, the development parameters for each upgrade project will vary. However, the objective of these should embody the core principles of securing health and safety as well as contribute to the overall improvement of the individual as well as the environment.

In South Africa, the content and meaning of upgrading has to be considered in relation to a relatively generous capital subsidy scheme and other political and economic environment. A subsidy of R15 000 (plus R2 250 for terrain allowance – if applicable) for people who earn less than R1 500 per month, makes much more substantial interventions possible than is typical in upgrading internationally. Moreover, the range of choices is greater. For example, all of the subsidy could be spent on providing a very high level services. Alternatively, the absolute minimum necessary to ensure health and safety (pit latrines, standpipes, narrow gravel roads, open channel drainage, overhead lighting), could be provided for approximately, R5 000 to R8 000 per site with the remainder of the subsidy available for topstructure improvement. This solution generally requires that local authorities accept lower service standards or are prepared to pay for higher service levels themselves. Intermediate solutions are also possible where a compromise upon some high and low level services can be incorporated into a design which can be manipulated until such time that the community are satisfied with the outcome of the projected costings.

The approaches as posited by Smit et al and the Urban Foundation have noted that a two-stage approach is recommended. This entails at one level the design elements for the provision of health and safety, whilst the other relates to the consolidation phase. These processes are concurrent and occur simultaneously and are not exclusive to one another.

2.9.2 Summary

Informal settlements are a global phenomenon that is latent within most developing countries. Given the fact that there are various reasons that

people might settle informally, the primary reason has been noted as the search for a safe environment where housing and employment opportunities exist albeit in the form of illegal occupation of a parcel of land. In essence the approach that is posited relates primarily to the provision of health, safety and consolidation. Most discussions are about the levels/standards of infrastructure provision. Little consideration is given to the provision of environments that enhance the development of people and their relationship to the physical environment, i.e. Responsive Environments.

CHAPTER 3

3 APPLICABILITY OF INDICATORS WITHIN THE IN SITU UPGRADE APPROACH

The objective of this chapter is to ascertain the applicability of the indicators that have been identified by Bentley et al, in terms of the in situ upgrade context. This will begin by firstly identifying two important elements that are deemed important to the provision of Responsive Environments within in situ upgrade developments. These are identified as Safety, and Participation. It should be noted at the outset that Bentley et al have not explicitly identified these elements as indicators of Responsive Environments. However, the predominant approaches to in situ upgrade development have highlighted the importance of the provision of safety as well the active involvement of the beneficiary community, hence their relevance to the in situ context.

Implicit within the Responsive Environments approach is the attempt to enhance the relationship between people and the physical environment. The in situ approach is guided by an approach that attempts to minimise displacement and provide basic health and safety to an existing and settled community. Therefore, in order to enhance this relationship it is perceived that the community should be involved in the design process through the design of safer environments which takes the needs of the community into account, hence the relevance of these indicators to Responsive Environment approach.

For the purposes of this research exercise some of the design components of safety will be elucidated upon. Furthermore, it should be noted that debate regarding the participatory approach will not be examined, rather an investigations will be carried out in terms of an understanding of what participation means, the benefits of the approach within housing development and how it should be effected within an in situ development context.

3.1 SAFETY

In a text entitled "Crime Prevention through housing design", Stollard notes that surveys undertaken to determine opinions on social issues and the quality of life in residential areas have identified that low levels of crime as most desirable by the general public (1991:1). In order to enhance the relationship between people and the physical environment, the element of safety needs to be highlighted as a measure of responsiveness.

The links between low levels of crime and housing have been subjected to much discussion and research. It is noted that design does not cause crime or cause people to become criminals; however, some design features do appear to exacerbate local crime problems. These are however context related (Stollard:1991:1).

It has been argued that there are 3 main elements that are necessary for a person to commit crime. These are ability, opportunity, and motive. Measures need to be taken within the design of environments to reduce these elements. Stollard has made reference to six key measures that can help reduce the prevalence of the ability, opportunity and motives to commit crime.

3.1.1 Surveillance

Widely considered as the most basic and essential element in deterring crime by making intruders feel conspicuous. Natural surveillance can be defined as the impression that residents are keeping, or are able to keep "an eye" on their neighbour's property. Opportunist crime is likely to be reduced if the potential offenders feel they are being watched.

The design implications to be considered are those that maximise the residents' opportunity to keep an eye on the neighbourhood. These range from: careful assignment of space, to specific houses or particular blocks, the siting of car parking and play areas where they can be overlooked by a number of dwellings.

3.1.2 Neighbourhoods

Linked with the principle of surveillance, is that of neighbourhoods. The majority of researchers and practitioners favour the concept of territoriality, i.e. the idea that people identify will watch over and protect their own neighbourhoods.

It is submitted that a layout that fosters “neighbourhoodliness” or community cohesiveness, will contribute towards making intruders feel conspicuous since residents will be able to identify who does not belong.

3.1.3 Public and private spaces

The third principle is related to the concept of neighbourhood and concerns the importance of distinguishing between private and public space. There is tendency to make public spaces more private. Instead of creating neighbourhoodliness, such designs ensure that this privatised public space is in fact an “urban desert”, an area that nobody uses and cares about, hence, leading to areas where criminals can be invited to.

An interconnected network of public spaces contributes to visual links between them, which in turn helps differentiate between private and public space.

3.1.4 Potential hiding places

This concerns the elimination of potential areas where would-be intruders might lurk and commit acts of violence unobserved and undetected.

3.1.5 Comprehensive approaches

Design and layout should be considered in conjunction with other security strategies such as, informal community policing. These need to be incorporated into a comprehensive package where the broader objectives ought to take cognisance of the following:

- More secure layout planning,
- Security of private areas including safer car parking,

- Making entry into dwellings more difficult.

3.1.6 Collaborative approaches

These are primarily concerned with large housing estates where collaboration amongst all the relevant bodies is essential at two levels:

- inclusion of management in the design process
- daily management

In this way the responsibility for security is extended to the people rather than being the sole responsibility of the planners.

To make recommendations about design and layout can only offer potential solutions to the problems of crime. There is a range of socio-economic factors that can affect the levels of crime in a particular area. Defensive design has a role in crime prevention, but factors such as unemployment, poverty, social stress and bad management simply cannot be excluded. Security and safety is only one of many factors that need to be considered when designing an area. It might not be the predominant guiding design principle, but ought to be given consideration in order to enhance the area. Designing to deter does not necessarily detract from, nor require drastic change in building form or site layout, provided it is considered at the design stage.

(adapted from Stollard:1991:21-31)

3.2 PARTICIPATION

The element of participation in a development context relates primarily to the nature of relationships that emerge between the various role-players. Community participation is a very broad term that has emerged in the literature on low income housing in third world countries. It broadly relates to the **sharing**, by **people** in the **benefits** of development through **active contribution** by the people to the people and the involvement of people in decision making (Desai:1995:43).

The terms that are highlighted provide an indication what community participation very broadly entails. With reference to terminology, Desai in her text "Community Participation and Slum Housing", stresses that the terms "community" and "participation" are broad, complex and vague (1995:43). As consequence of this vagueness, clarity on what this term means is closely related to these two variables within a particular context. Therefore, the range of variables that function within a context guide the parameters and extent of community participation.

In developing countries in the mid 1970's participation was deemed necessary with the recognition by the World Bank that site and service schemes and upgrading was an essential and legitimate process in housing (Hamdi:1991).

Badshah defines community participation in housing and urban services programmes as the residents' involvement in collective activities aimed at improving their standard of living, including the houses in which they dwell (1996:30). In his definition, Badshah notes that this definition can be expanded to incorporate a range of institutional arrangements, services and standards. Essentially, the term is broad and varies from place to place.

Another definition as posited by Chapman is an approach where "involvement is conceived broadly and considered integral to planning and development, demanding open ended approaches and generating added value (1996:173). It is noted that a definition of community participation is broad and a comprehensive definition thereof is dependent on a range of variables within a specified context. There appears to be no universal definition of community

participation, and rightly so because each development context is defined by its own set of variables.

Community participation means different thing to different people. It usually reflects the ideologies of those practising community participation at a specific time, as suggested by Copely: “public participation is many things to many people, depending on what is understood by development” (1993:23).

Although there may be no consensus to what the term means, it is proposed that an understanding of the merits and the types of participation might initiate some clarity on what it means.

Merits of Participation

Francis in his article entitled “control as a participation concept”, asserts that direct participation in building, designing and managing environments has been found to increase user satisfaction. Research has indicated that participation has resulted in an increased sense of attachment and ownership, a sense of personal growth, self-actualisation and political efficacy for many participants (1989:157/158).

Control has been advocated as an important goal of participation. Arnstein is quoted in earlier and widely cited frameworks of citizen participation as identifying a “ladder of participation”, where citizen control is the ultimate goal of participation (1989:157/158). This view is however cautioned in the sense that participation does not always guarantee equity and justice. A model that proposes power sharing is proposed.

The use of participative approaches has recognised that community involvement does not always guarantee success, which in itself depends on good management (or control?) of the process, unrealistic expectations and real consultation taking place – not just information being disseminated. However, if an appropriate level of control is effected the positive involvement of communities can achieve the following:

- add value to development through the provision of quality environments that reflect the needs of its beneficiaries within prevalent constraints,
- help reduce potential conflict,

- aid in speeding up the development process through conflict resolution.

Critical to an understanding of what positive community participation should entail is the fact that participation is not an isolated phenomenon. It is characterised by the roles of a range of institutions. Copely asserts that the form of participation is strongly linked to the framework of development; of practitioners; dependency on theorists and reformists. He posits quoting Marden and Moser (1989), that there are 3 types of participation:

- where participation is seen as adjunct to a development project in order to ensure the project runs smoothly and that cost recovery is unproblematic,
- where participation is part of a process driven through “bottom up processes” which is considered to be authentic,
- where participation is a result of a bottom up approach within a context of fixed budgets and programmes, in other words, a more balanced approach.

Haricharan (1994:1), suggests that that there are two broad approaches to participation. These are the “centralised approach”, which views participation as a means to a particular product, in which the community is viewed as being homogeneous and where the process is based on a “manipulative” and “cynical” view of participation. The second approach is that of the “empowerment approach”. Within the latter approach, participation is seen as the vehicle to transfer political and economic power to disadvantaged groups thereby reducing radical change.

Essentially, participation is suggested either as being adopted as a means or as an end in itself, which is contextualised in the product versus process debate (Iyer:1995:40). Iyer quotes Pikhholz in defining this debate as follows, “crudely, the debate manifests in situations where choices need to be made whether or not for example; to save time and costs in the delivery of a “product” efficiently by sacrificing democracy and meaningful participation in the development process” This highlights the fact that participation entails a level of value judgements that need to be made.

Meaningful participation can only be achieved if community participation is adopted as an end in itself and rests within an acknowledgement that

development is part of an ongoing process. It is added that this involves enabling communities to take an active role in decision making through democratising the development process (Iyer:1995:40).

3.2.1 A Suggested Approach

A strong relationship between the community and a range of other role players needs to be effected in order to achieve meaningful participation. However, an element of control needs to be vested with some of the role players, most likely the planners. The reason for this assertion is that although communities might appear to know what is best for them or what they desire, the parameters of these needs are determined by the professional team. Therefore, the identification of what is achievable or not, does not vest with the community but rather with some other agency, be it the state, the developer or the designer. It is therefore proposed that the parameters of the development be clearly contextualised and the realities of development possibilities be made clear to the community in a manner that is sensitive to their needs and incorporates their best interests.

3.2.2 Conclusion

By defining the limitations of what is realistic to the community, a sense of relative certainty can be established as opposed to false promises. People will perceive what is achievable which will in turn curb unrealistic demands from being placed on the development. In doing so conflict at a later stage in the development process will be alleviated from a demand perspective. Parallel to the approach of defining the limitations of the development variables, it is recommended that community empowerment should be embarked upon. This would entail capacity building through training in administrative management, institutional arrangements, financial arrangements and the development process, thereby enabling them to shape their own future.

3.3 REVIEW OF THE INDICATORS BY PRACTITIONERS IN THE FIELD OF TOWN PLANNING AND URBAN DESIGN

At this stage of the research process it is envisaged that the indicators of Responsive Environments have been identified. In order to decipher whether these indicators are applicable tools and whether they have relevance within the in situ approach it was decided to interview three of the leading Urban Design and Town and Regional Planning Consultants in the Durban Region. (For a list of these Consultants and the content of the questionnaire that was administered, see Appendix 1). The reason for this approach lies in the fact that most in situ upgrades are designed by Consultants. Therefore these individuals would be in a position to highlight the practical considerations and contextual realities that the in situ process entails. The interviews that were carried out were guided by the following goals:

- To identify the applicability of the indicators of Responsive Environments.
- To determine the extent to which these are used in the design process.

An understanding of the applicability of these indicators coupled with the extent to which these are applied would contribute to an understanding of what criteria would be appropriate to evaluate an in situ upgrade.

3.3.1 FINDINGS OF THE INTERVIEWS

The information that was gathered from the Consultants is summarised in terms of the common agreements and differences. Each of the identified indicators are addressed in terms of their applicability/non applicability within the in situ approach.

3.3.2 Constraints in the design of In Situ Upgrades

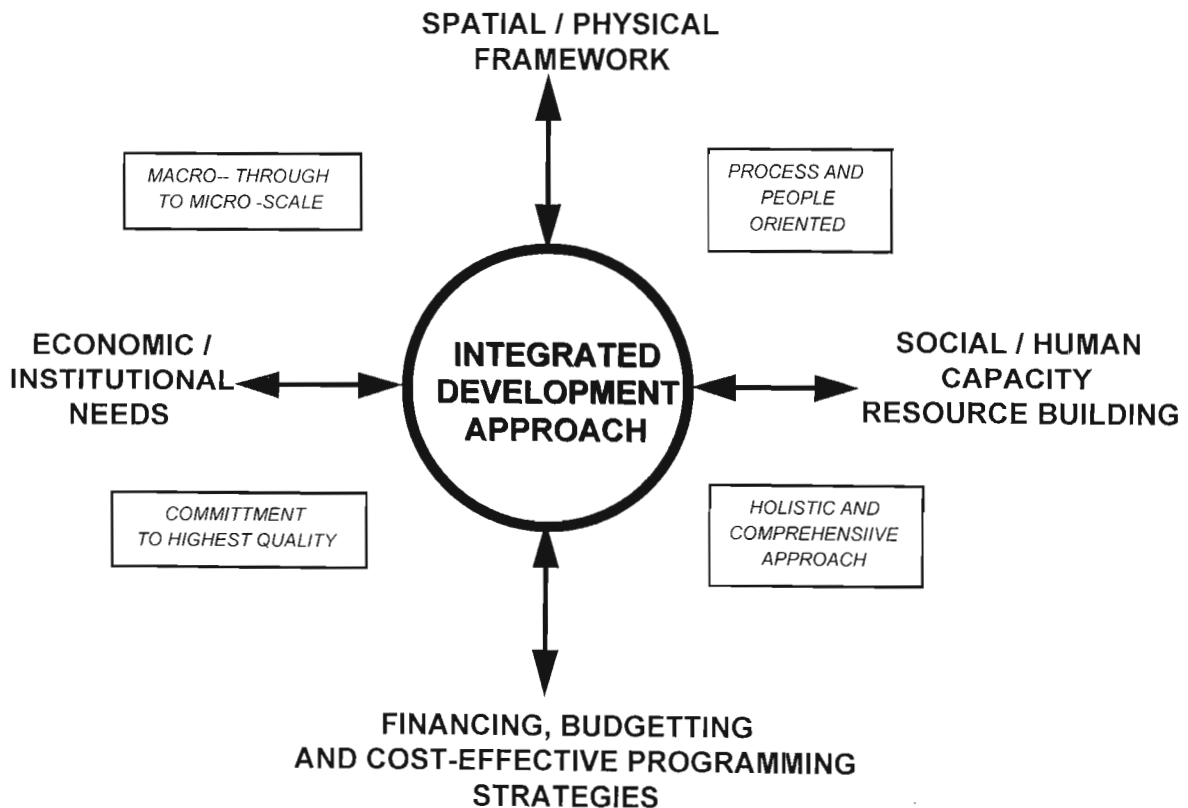
Common to most of the respondents was the fact that the parameters of the in situ approach is defined within the following two determinants. The first is the subsidy allocation as provided by the Housing Board. The second is addressing the needs of the community. Consultants agree that the objective of an in situ upgrade is to maximise the residual for a topstructure, however, providing the appropriate services that are required for basic needs (e.g.

water, sanitation, roads, electricity etc.), is equally important. The aim is therefore is to provide the most appropriate level of services that suite the needs of a community and maximise the provision for the construction of a topstructure.

3.3.3 Integrated Development Approach

Consultants note that the provision of services and the costs of each of the development options are generally presented to the community where they (the community) is guided to achieve the most viable product that satisfies their needs within the developmental and financial constraints. An integrated development approach is posited by them which is a process defined within development facilitation. In other words Consultants recognise that their position as facilitators to maximise the needs of beneficiaries within the given constraints.

The following illustration provides an overview of the main determinants of an integrated development approach:



In essence this approach is inclusive of a range of variables that need to be balanced such that the end product yields maximum benefit to all the community. The integrated approach attempts to highlight the fact that in situ development should not be isolated to a given site context. It should form part of a broader development framework that recognises the need to identify the spatial, social, economic and sectoral elements of a development and planning process at a local, regional and sub regional scale.

Throughout the broad policy approach it is noted by practitioners, that the role of the community is imbedded within the development process at all scales. Consultants strive to provide a comprehensive product which is the result of an integrated process extending from an acknowledgement of the prevailing social dynamics and the consequent integral involvement of the resident community in land, planning, engineering, implementation and management issues. Underlying this approach is the recognition that sustainable development can only be achieved through involvement of the community in all aspects of the development process leading to enablement and ultimate ownership of the development by the community concerned.

3.4 SAFETY

It was noted that there are varying degrees of safety that have implications for design. These have been identified as follows:

- Creating safer neighbourhoods that are crime ridden or subject to elements of crime,
- Providing safe places for children to play where parents can “keep an eye” on their kids,
- Clearly identifying the public and private domains,
- Provision of streets that are safe in terms of promoting pedestrian visibility as well as vehicular visibility,
- Ensuring that streets and taxi and bus stops are adequately lit up so that the surroundings are visible,
- Providing services that contribute to health safety like running water as opposed to river water and Ventilated Improved Pit Latrines as opposed to open pits,
- The provision of electricity so food and water do not have to be heated on fires that are hazardous for young children which have resulted in homes being burnt down,
- The provision of security of tenure contributes to a sense of security and hence safety in the sense that people now own a piece of land and cannot be removed illegally,

These elements can be divided into two forms of safety, namely Visual Safety and Service Provision that results in “Safer” area.

3.4.1 Visual Safety

These elements are linked to permeability and legibility. With regard to street design, it is proposed that intersections at curves should be made from the outer edge of the curve rather than the inner one. This promotes visibility for pedestrians and motorists to oncoming traffic.

It is recommended that long stretches of straight roads are broken up with the provision of intersections. This would avoid the creation of a "race track", and help break the speed of motorists.

The provision of cul-de-sacs as residential access routes results in limited traffic generation. Furthermore, the residents in these cul-de-sacs become familiar with one another and would be in a position to identify a stranger.

Playlots should ideally be located within a residential district that is surrounded by households or activity areas. This promotes surveillance for adults over younger children.

The distinction between private and public domains assists in defining where people can and cannot go. It is proposed that within informal settlements there is a dynamic where people know each other at a community wide level. A stranger can easily be identified. Therefore, should this person enter a private area, it is likely that he will be questioned about his presence.

3.4.2 Service Provision Contributing to Safety

Generally where there is no running water and no sewage disposal, it is noted that unhygienic conditions prevail. Sicknesses associated with the inadequate provision water or stagnant water is normally Cholera and Malaria. It noted that the provision of services like running water and effective stormwater management would contribute to the promotion of a healthier area, which would make it relatively safer from unhygienic conditions.

In view of the fact that there is generally no electricity in these areas, food and water is boiled or heated on open fires. These have resulted in various homes being burnt down as people often set up the fire, and do not monitor it. As a result thereof, these sometimes spread or even worse, enquiring children are keen to see what is in the pot. The consequences can be disturbing.

Another identified cause of fires is the use of paraffin lamps and candles within the households. If not properly monitored, they can result in a

household or many households being burnt down because of the dense nature of informal settlements

Linked to the above comment is the provision of adequate access into and out of the area for emergency vehicles. Should a fire break out within an informal settlement, a fire brigade would not be able to gain access due to the lack of access. Therefore, it is essential that this provision is made.

It is noted that there used to be a general concern that people will be removed from a particular piece of land as a result of their illegal occupation. The provision of secure land tenure instils a sense of security within people where they know that they own that particular piece of land and it cannot be illegally taken away from them.

In essence, there are various levels of safety that emerge from an in situ upgrade perspective. Some of these emerge from the provision of services whilst other emerge from the appropriate location of facilities. The common denominator is that they all have a design implication. Therefore, the objective is to provide for the maximisation of safety in all ways possible within the prescribed development and financial constraints.

3.5 COMMUNITY PARTICIPATION

All Consultants have noted that the community involvement at all scales of the development process is vital to the successful implementation of the project. However the approach that is posited by them stresses that the development process needs to be guided and managed by the professional team.

3.5.1 Recommended Approach

In order to achieve the above process, one of the first steps that need to be carried out is identifying the credibility of the Development Committee, or the representative body. It is noted that there have been instances where extensive planning and negotiations have been initiated only to find after a few months later that the body that is being dealt with does not fully represent the interests of the entire community. This results in conflict and delays the project in many ways. Consultants note that one of the first tests that ought to be carried out is a request to the representative body to call a mass meeting with the entire community at a convenient time and location. At this meeting the community should be introduced to the professional team. This initial meeting should table the concerns and needs of the community and spell out the development objectives of the project. Furthermore, it should be highlighted that the representative body would act on behalf of the community to meet regularly with the professional team to address the concerns of the people and transfer this information back to them. It is noted that planners are generally aware of the development area and the demographic details. Therefore, the attendance at this meeting and the issues that arise would provide an indication of the following:

- The ability of the committee to convey the message across to the community,
- The credibility of the representation would emerge once it is noted that the representative body will act on behalf of the community to liaise with the professional team on a regular basis,
- The needs and concerns of the community,

Should any discrepancies arise as a result of the credibility of the representative body, it is submitted that these be sorted out via the selection

of a democratically elected set of individuals by the community. Furthermore, it should be noted that the community should not be precluded from attending any meetings that are to be held with the elected or existing committee. This would promote transparency and instills a sense of certainty that the community needs will not be overlooked or ignored.

Once an appropriate committee is elected, the basic foundation would be prepared for development issues to be dealt with. A range of workshops are recommended to provide an indication of the various servicing options that have been proposed as a result of the community's identified needs. It is noted that the parameters of the development in terms of a range of viable servicing options be set out such that the community have a range of options to choose from.

3.5.2 Identify Parameters of the Development

It is noted that there are elements of the development process which the community may not be in a position to comment on e.g. the most viable Township Establishment procedure, or understand the implications of stormwater channeling, or the need for omnibus servitudes for services). Therefore, the parameters of the development in terms of servicing options needs to be identified by presenting the community with a range of options that are suited to the viability of the project. In order to do this effectively, it needs to be communicated to the people via community workshops that highlights each option and its implications for development. For example, these could include:

- A full range of services with maximum tar road access, full pressure water with individual connections, water borne sewerage and electricity. The costs of these services should be illustrated which would thereafter provide an indication of the residual for topstructure development.
- Other options should be illustrated with a lower level of the same services like pit latrines, fewer tarred roads, standpipes, and electricity connections. These costs should be illustrated indicating the residual for topstructure development.
- Finally, options with a range of high and low level options should be illustrated which might include tarred roads, pit latrines, water kiosks and

electricity. The costs of these will provide an indication of the residual for topstructure development.

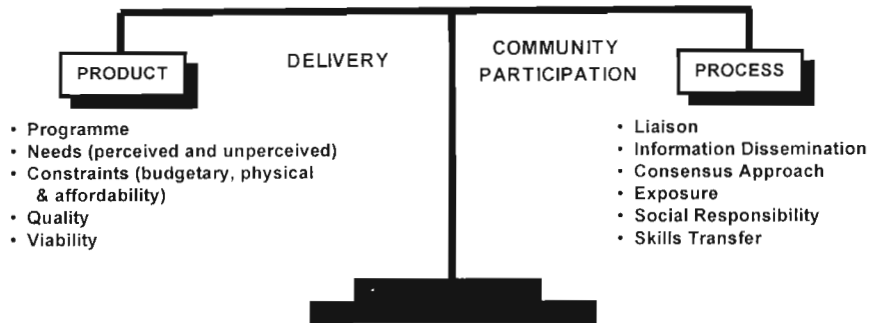
It is submitted that once a range of options is presented to the community, they would be in a position to pick and choose not only the services that they require, but also the level of these. This approach prevents the community making unreasonable demands on the development and it prevents them developing a false sense of hope. The options that are presented to them would have been carefully worked out by the professional team in terms of their viability and the financial implications of each. In essence although the process is community driven, there is a measure of control by the professional team who are in a position to decipher what is possible and feasible.

Another element that has caused considerable conflict and tension relates to relocations. Almost every in situ development has a percentage of residents that need to be relocated for various reasons. Firstly, the identification of those to be relocated needs to be highlighted on a plan and the reasons for the proposed relocation should be conveyed to the committee/community. Thereafter, negotiations with these individuals need to be initiated for alternative sites, the scheduled time of their removal, and compensation (if the project budget allows for this).

Once this process is complete, it is assumed that some of the key issues relating to community involvement in the development process would have been addressed.

The type of participation that is proposed combines a level of professional input up front and thereafter leaving the options to community who would be in a position to make the appropriate choices. However, it is noted that there are instances where the community is reluctant to desire certain other facilities like health care or a community hall, or a crèche. Personal experience has shown that in some cases, communities do not focus on the long term development of the area. In other words their needs are identified as short term and their responses are based on these short term needs.

The following illustration aims to identify the key elements that are identified with regard to the delivery of a product that incorporates the community in the development process.



3.5.3 Conclusion

In conclusion, the element of participation is deemed critical any in situ type development. However it is submitted that communities should be presented with a range of options from which from to prevent unrealistic demands and creating false hopes.

3.6 PERMEABILITY AND LEGIBILITY

It is noted at the outset that every design option varies and is context driven. Whilst every effort is made to provide the most appropriate solution to development, the extent to which this can be done varies from place to place.

3.6.1 Integration into adjacent and existing movement patterns

At the outset, it is noted that the development of informal settlements is not isolated from adjacent development and to existing movement systems. One of the key factors relating to permeability is the ease of movement into and out of the area via a choice of access points. Firstly, the objective is to link the development to existing transportation networks. Thereafter, internal access through a distinct hierarchy of road networks should be embarked upon.

One of the critical factors in considering the provision of access is that most informal settlements have an internal network of roads and footpath systems that have evolved over time. In a sense these networks have been created to suite the communities own needs, e.g. the route to the soccer field, or to the main road or taxi stop. This existing pattern forms the basis to understand movement patterns and linkages.

Consultants note the merits of permeability and legibility as a tool of responsiveness but stress that in an in situ upgrade, there is limited opportunity to alter existing movement patterns that would ideally promote permeability and legibility. The introduction of a new access network that ignores the existing one would result in large scale displacement of structures. This would not be consistent with the broad objective of an in situ type development which aims to minimise relocations and is subject to negotiations.

There are instances where there is a need for the creation of bus and taxi routes in certain areas. This provision might not conform to the existing movement network. Therefore, these new roads need to be identified by the professional team, which thereafter should be conveyed to the community. The cost implications and the resulting relocations need to be addressed. It is

recommended that graphical representations of these options need to be presented to the community such that they perceive the impact in terms of being able to identify those households that are to be relocated as well the impact that this would have on their subsidy. It is always important to realise that the community is a client. Their best interests need to be sought after. Any form of development needs to be ratified by them. In this way the community are the decision makers. The planners are merely to present the most viable options that the development can offer.

The approach that is commonly favoured is that which aims to enhance the existing movement patterns by upgrading the gravel tracks and footpaths that exist. Here too there are a range of options and choices that the community would need to make. These essentially entail an identification of the roads to be upgraded and the costs of each, and their implications for the overall budget of the project. Generally the approach is to identify the main road hierarchy to establish the main or potential taxi and bus routes, and the residential access roads. This would entail a site visit and a workshop with community. The range of available “viable” options should be illustrated to the community.

3.6.2 Topographical Constraints and their Implications for Design

One of the key limitations placed on promoting a permeable layout lies in the restrictions that are placed by topographical constraints. The topography dictates which movement networks are viable and those that are not. Some of the gravel tracks in informal settlements are located within slopes that are steeper than 1:4 and 1:5. A taxi or bus route is only viable engineering wise if the slopes are flatter than 1:6 or 1:8. It is imperative to note that a town planning layout is only viable if the plan “works” from an engineering perspective for costs to be kept to a minimum. Roads have severe cost implications if they lie in steep topography and are generally not a viable option within the upgrade approach. Generally the topography within informal settlements entails steep areas which limits the viability of many roads. This is primarily the reason why most informal settlements have a number of footpaths in the area.

3.6.3 Engineering Considerations

Linked to the upgrade of roads is the provision for stormwater and other services like sewer connections. These have implications for the residential layout. For a cost effective stormwater and sewer layout, it is preferred that the alignment of sites are in a straight line. The reason for this recommendation lies in the fact that this would minimise the provision of manholes that are necessary when the direction of the flow is changed. It is estimated that each manhole costs in the region of R 2000. In order to minimise the number of manholes (hence the costs), it is recommended that sites be aligned in a straight line. This is generally problematic in informal settlements because the settlement patterns are sporadic, and do not conform to any linear formation at all times.

Some of the engineering concerns identified might appear irrelevant to the provision of a permeable layout. However, it is noted that if these recommendations are not adhered to, they could inflate the costs of the development. Since the development options are guided by the subsidy it is asserted that severe costs for the provision of stormwater, sewage and roads in steep areas would reduce the subsidy and the possible upgrade of roads and footpaths. These essentially provide access and a choice of routes. By minimising these options, permeability could be limited.

Legibility

Legibility, as noted by practitioners is inherent in informal settlements. Generally it is assumed that the majority of people have been living in the area for a long enough period to identify where they are and how they would get from place to place. This is noted by virtue of the fact that people create their own roads and footpaths in informal settlements. Therefore, they can orientate themselves easily. It is their way of getting from place to place. Crudely speaking, they have “designed” their own movement system. Therefore, to promote legibility, designers should enhance the existing network and possibly introduce little elements to further enhance legibility like nodes, edges, paths, landmarks etc. For example, elements that could contribute to legibility or place making is identified as follows:

- small scale public squares or meeting places are created where footpaths converge,
- or the creation of open spaces (parks, playlots, kickabouts) which people can identify with,
- the creation of nodes at key intersection points where a range of activities take place, like an informal market or a landmark etc.

It is however noted that these options are context related and are not possible at all times for various reasons. It is generally noted that all the elements of place making cannot be introduced within each development. Some are possible and viable, whilst others are not. However, the extent to which these elements are introduced at various scales can be used as a measure of its responsiveness. Furthermore, it is noted that designers ought to strive to enhance these elements of place making and attempt to create vibrant complex environments within the limitations that are presented. Informal areas are characterised by people with financial resources, therefore, it is these people that most need access to an enhanced built environment. The scale at which can occur should be contextualised to the area such that legibility can be enhanced. A measure of legibility can be identified within the following observations:

- Whether nodes of interaction and concentration of people have been identified.
- Whether elements of place making have been introduced in the layout.
- Whether there are distinct edges defining the community boundary or residential precincts.

3.6.4 Conclusion

In essence it is noted that although there may be good intentions to enhance the legibility of an area, however, all the prescribed elements may not exist due to various constraints that the development has presented. Nevertheless, every effort should be made to enhance permeability and legibility as these elements are important indicators of responsiveness.

3.7 VARIETY AND ROBUSTNESS

The provision of a variety of land uses combined with the degree to which they can be used for different purposes is also constrained by the elements of the subsidy and the degree to which these can be introduced within a settlement. It is noted that the provision of a variety of land uses is limited by the following elements:

- available space,
- financial viability,
- topography,
- community ratification,

3.7.1 Respond to Peoples' Needs

At the scale of an in situ upgrade, one is dealing with the lower spectrum of earners. People generally do not have a lot of money to spend on luxury items. Therefore the elements of variety that can be introduced must respond to peoples' needs. More importantly to note is that the element of variety relates to a number of land uses like: parks, recreational facilities, shops, pubs, building types etc. These elements can be introduced to this form of development at a lower scale.

3.7.2 Locational Factors in the Provision of Facilities

Practitioners note that provided that there is sufficient space, a recreational facility or a mini park or playground may be feasible, but this is generally not the case. Settlements are characterised by limited open spaces and steep topography. There is minimal room for the establishment of large-scale recreational facilities. However, with regard to the provision of shops and other facilities like taverns or salons, it is noted that these can be catered for in the form of mixed-use sites. These sites can be used for a range of purposes and offer the flexibility to the user to utilise it to suite their needs. However, the locations of these sites are critical. Practitioners note that these sites should ideally be located where people agglomerate, or where the densities are high. In essence, reference is being made to the identification

of nodes or concentration points where there is a lot of pedestrian activity (i.e thresholds of support).

3.7.3 Identification of Nodes

The areas where people agglomerate are generally identified as: Taxi pick up points, Bus stops, common meeting places like churches, or even where footpaths and roads intersect. The reason for this recommendation lies in the fact that in order for these facilities to be accessible and viable, they need the support of the people. By locating them where people are means that they would be accessible, and by making sure that there are sufficient densities to support such activities, one is making sure that there are a sufficient number of users.

Furthermore, it is suggested that these facilities are clustered, such that they appear either adjacent or opposite each other in the same vicinity. This promotes a variety of uses for example, a muti shop, a spaza shop, a sangoma, a music store, a community centre, all appear near the taxi rank. This creates a concentration point – a node, which makes it convenient for people to carry out their daily purchases in one place that is convenient and promotes the integration of people. It becomes a place where people interact, or meet and recognise this space as their “shopping spot” or meeting area. The reason for this assertion as noted lies in the fact that informal settlements generally have an internal community dynamic where people know one another and are all part of one “family”. Therefore, by creating nodes like these, people would support these and identify with their own people thereby supporting these facilities, thereby making them financially viable.

3.7.4 Identification of Activity Streets/Corridors

Generally, the major transportation routes that are traversed by buses, taxis and people have been identified for the location of activity corridors. These corridors aim to provide a range of mixed uses where convenience for people to carry out their shopping is enhanced. At the scale of informal settlement, it is noted that mixed use facilities are supported by the local communities and outside support is minimal. However, if a settlement is centrally located and

lies alongside an intense movement system, it is suggested that the provision for small to medium scale enterprises should be made. However, a careful decision making process needs to be embarked upon in terms of the viability of this option. Therefore, it is also recommended that sites along these routes be zoned mixed use. The reason for this lies in the fact that a mixed use site provides for residential and commercial activity. Therefore, should the owner of this site decide to convert his house or a portion thereof into a business after a few years, he has this provision.

3.7.5 Land Use Control

An interesting point has emerged from discussions with the local authorities regarding the zoning of sites in less formal areas. They noted that once these areas are designated less formal via the township establishment procedure, there are no zoning restrictions. The implication of this is that people may use their site for any purpose. However, planners should provide guidance as to which are the most suitable locations for relatively large scale commercial activities. But, as noted the community are the ultimate decision-makers and the choice is therefore theirs.

Interviews with officials in the development control division of the City Council have noted that there is a procedural requirement to identify the type of land uses that would be embodied within informal areas. However, there are no regulatory frameworks to prevent any form of activity that is prohibited within the prescribed zone from taking place. In essence, it is noted the most common Township Establishment procedure is the Less Formal Township Application procedure. This procedure permits the removal of any restrictive conditions in an area, it allows for the removal of servitudes and does not impose building regulations by virtue of the fact the development is Less Formal. Hence, there is no control over these areas.

Therefore, it may seem contradictory to provide for a range of land uses within a development when “any” form of activity may take place at the will of the owner of the site. However, it is deemed necessary to guide the community and to provide for their future sustainability with the provision of business opportunities in an area that would benefit them in the long term.

This however, does not limit or deter people from carrying out their little businesses wherever they please.

3.7.6 Limitation of Robustness

The element of robustness is limited in upgrade type developments. Practitioners note that the extent to which a place can be used for different purposes is constrained by the fact that the primary land use in informal settlements is that of residential. Usable public open spaces or public places are limited. However, should the opportunity arise for these spaces to be created, they should be designed such that they can be used for a range of purposes which has implications for their location. Generally, areas that are too steep to develop, or floodlines are left vacant and “zoned” open space in most developments. These spaces are passive open spaces as they are not utilised by people.

In order for public spaces be robust they need to be accessible to a range of users. For example, a playlot can be used as a place where children play after school, where women meet during the day, where men get together to enjoy a few drinks in the evenings, etc. These spaces can be used for a variety of functions provided that they are suitably located. Their existence is dependent upon a range of factors: the availability of the space, the suitability of the location, the suitability of the topography etc.

3.7.7 Alternate Land Uses

With regard to open spaces that lie in steep topography or within or river beds and floodlines, it is recommended that some form of urban agriculture be promoted. These opportunities can be presented to the community on how these spaces can be utilised for other purposes other than lie vacant and await their maintenance by the Local Authority. However, it should be noted that this issue might also be a contentious one. Conflicts may arise out of who will be permitted to use the land for agricultural purposes. This should not be the responsibility of the professional team but is a community issue that is to be dealt with and controlled by the community themselves.

3.8 VISUAL APPROPRIATENESS AND RICHNESS

It was noted at the outset that visual appropriateness is context related. It is an element that is generally applied in built up areas (like the inner city) which is maintained by the Local Authorities. This does mean that at an in situ level, it should to be overlooked.

3.8.1 Applicability at In Situ Level

To enhance the appearance of an area, there are a range of elements that could be introduced namely; paved walkways, trees alongside roads, little gardens, trimmed hedges along some of the open spaces. These however have a cost implication. In view of the fact that the provision of services in the in situ upgrade projects are constrained by the PHB subsidy, these cost burdens cannot be borne by the in situ project budgets nor the Local Authorities who are constrained financially with maintenance and other costs. In essence, it is asserted that the provision of elements that enhance an area is viewed as additional constraints to a housing framework that barely caters for the provision of services and a residual for topstructure development.

3.8.2 Community Initiative

However, it is noted that should these elements be desired by a community, they can be implemented at a local scale by the people themselves. In other words, the community should take the initiative to enhance the appearance of their area by planting trees, or growing little flower gardens in front of their homes or even ensuring that their open spaces do not become dumping grounds for rubbish. In this way the appearance of the area would be improved if the community makes a concerted effort to ensure that the area is kept clean and enhanced in various ways.

3.8.3 General Visual Appropriateness as a Consequence of Upgrading

It is noted by the mere fact that the area would be upgraded from informal "shack" type dwellings with formal roads and hardened footpaths would in itself contribute to improving the visual appropriateness of the area. In

addition to this, a pertinent remark was passed by one of the Consultants which is quoted as follows:

“Well you know, when I first walked into the area, it consisted of structures that were not durable, with no ventilation, roads that looked that a landmine has exploded in it, streamlines guttered with murky water and filth, and to top it all, the smell that permeated was that of the open pits that were strewn all over the place. The upgrade has contributed to an efficient road network, brick homes, with windows, skips containing the rubbish and no smell!”

This comment notes that the basic appearance of the area was enhanced via the provision of some services. It indicates that the upgrade has provided the foundation for people to show their initiative and improve their area further.

3.8.4 Conclusion

Although visual appropriateness is desired and ought to be included in the design, the limited budgets preclude these services from being introduced. It is however contended that people have the ability to improve their area. The extent to which this is visible would be reflected in the effort that they make to ensure that the appearance of their community is further improved.

3.9 PERSONALISATION

The element of personalisation has been noted as the extent to which an individual wishes to “personalise” their living space. Consultants have noted that this element is closely linked to that of visual appropriateness in the sense that it is up to an individual to take the initiative to make his home look pleasant. As noted, one of the objectives is to maximise the residual available for topstructure development. It is noted that people can be very creative and resourceful should the need arise. It is contended that by providing people with their own site and secure tenure, they will improve on their household as they see fit. This however is an incremental process and is linked to the availability of finances.

There are many ways in which people have improved on the structures that they create. Some of these include; plastering, painting, planting little gardens, paving their driveways etc. It is however an individual effort.

3.10 SUMMARY

This chapter attempted to contextualise the prescribed indicators of Responsive Environments within the in situ approach. Interviews with practitioners have highlighted that varying degrees of importance have been associated with each of these indicators. Furthermore, the extent to which each of these indicators is applicable at a design and implementation level has been highlighted.

3.11 CHAPTER CONCLUSION

The purpose of this chapter was to perceive the extent to which the prescribed indicators can be applicable within a specific context. The information that was retrieved is to inform the evaluation process that is to be embarked upon. An understanding of what each of these indicators meant within an in situ upgrade also provides insight as to how one would evaluate these. It is submitted that the information collated from Consultants would serve as a critical component of the evaluation as it is the platform to understand the relevance of the indicators in terms of the degree to which they are applicable within the in situ approach. Furthermore, this information has highlighted the fact that a mere review of the layout plan would not suffice as an adequate evaluation. Other research techniques need to be carried out. These will be elucidated upon in the following chapter.

CHAPTER 4

4 CASE STUDY BACKGROUND AND FINDINGS OF INTERVIEWS WITH DESIGNER AND COMMUNITY

In order to evaluate each indicator of responsiveness, it is asserted that different research methods need to be carried out. Some of the indicators can be evaluated through a review of the layout plan (like permeability and legibility), however, other elements like community participation, personalisation, and visual appropriateness need to be determined by other means. Therefore, two research exercises that were deemed relevant in order to highlight the extent to which these indicators like participation, personalisation etc were utilised in the design process were carried out. These are:

(1) Interview with the Designer

This structured interview aimed to highlight whether an explicit attempt was made to utilise the elements of Responsive Environments within the design of Mshayazafe. Furthermore, it would highlight the opportunities and constraints that the development presented.

(2) Community Interview

This exercise entailed a questionnaire and site visit. The objective was to perceive how people felt about their area now that it has been upgraded. It aims to highlight; the extent to which they were involved in the development process, the extent to which they have personalised their area and their satisfaction as a result of the services they have received.

It is perceived that these exercises would provide the necessary information to complete the preliminary investigations of the case study such that it may be evaluated.

Structure of the Chapter

This chapter will firstly provide a brief historical overview of the settlement followed by an outline of the existing conditions prior to its upgrade. This background would highlight the opportunities and constraints that are presented by the site. An interpretation of the findings from the interviews

with the designer the community survey will be presented thereafter. A synthesis of this information and its relevance would be highlighted in the section entitled Evaluation Criteria.

It is submitted that the information that will be gathered by these two research processes would enable one to establish an appropriate evaluative criteria which can thereafter be used to determine whether the in situ upgrade of the Mshayazafe settlement can be perceived as a responsive design.

4.1 HISTORICAL CONTEXT

During the 1860s, formerly indentured Asian labourers began to acquire land for farming in the area, which later became known as Inanda Released Area 33. Local African subsistence farmers became tenants on land previously cultivated by them. This new socio-economic relationship had two consequences. Agricultural production in the area increased, whilst the growing African community provided the resident base on which a retail trade developed.

Although the Inanda Mission had been established by the turn of the century, much of the land holding owned by the various Mission Societies had been incorporated into the "Natal Native Trust". With the commencement of political Union, the Natal Native Trust was incorporated, along with other reserve areas, into the South African Development Trust. The introduction of racially based land legislation was also to affect the development of Mshayazafe. Following the promulgation of the 1913 and 1936 Land Acts, agriculture in the Asian farming areas began to decline. The introduction of the Asiatic Land Tenure and Representation Acts, further limited the Asian communities access to land. As a result shack farming became a major source of income for the Asian landowners and resulted in the settlement of land formerly used for agricultural production.

In 1958, forced removals from areas such as Cato Manor resulted in the resettlement of African residents in areas on the periphery of Durban with many people settling in KwaMashu and other parts of Inanda. Further influx from the

surrounding rural areas during the 1970s led to rapid population growth in the area and informal settlements like Mshayazafe began to mushroom.

During the late 1970s, existing tensions between the Asian landowners and retailers and the African tenants and consumers began to escalate and erupted into violence in 1985. Since that time, sporadic violence of a political nature has occurred in areas such as Bambhayi and Mshayazafe. The development of Mshayazafe has been strongly influenced by tension between this settlement and neighbouring informal communities such as Congo, Afrika, Ohlanga and, to a lesser extent, Newtown B. Since the elections of April 1994 however, this political unrest and violence has largely subsided. Recent local peace pacts and a general agreement on the need to develop the Greater Inanda area had brought these different groups together in a spirit of co-operation.

(adapted from Seneque et al:1994:18)

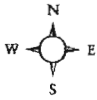
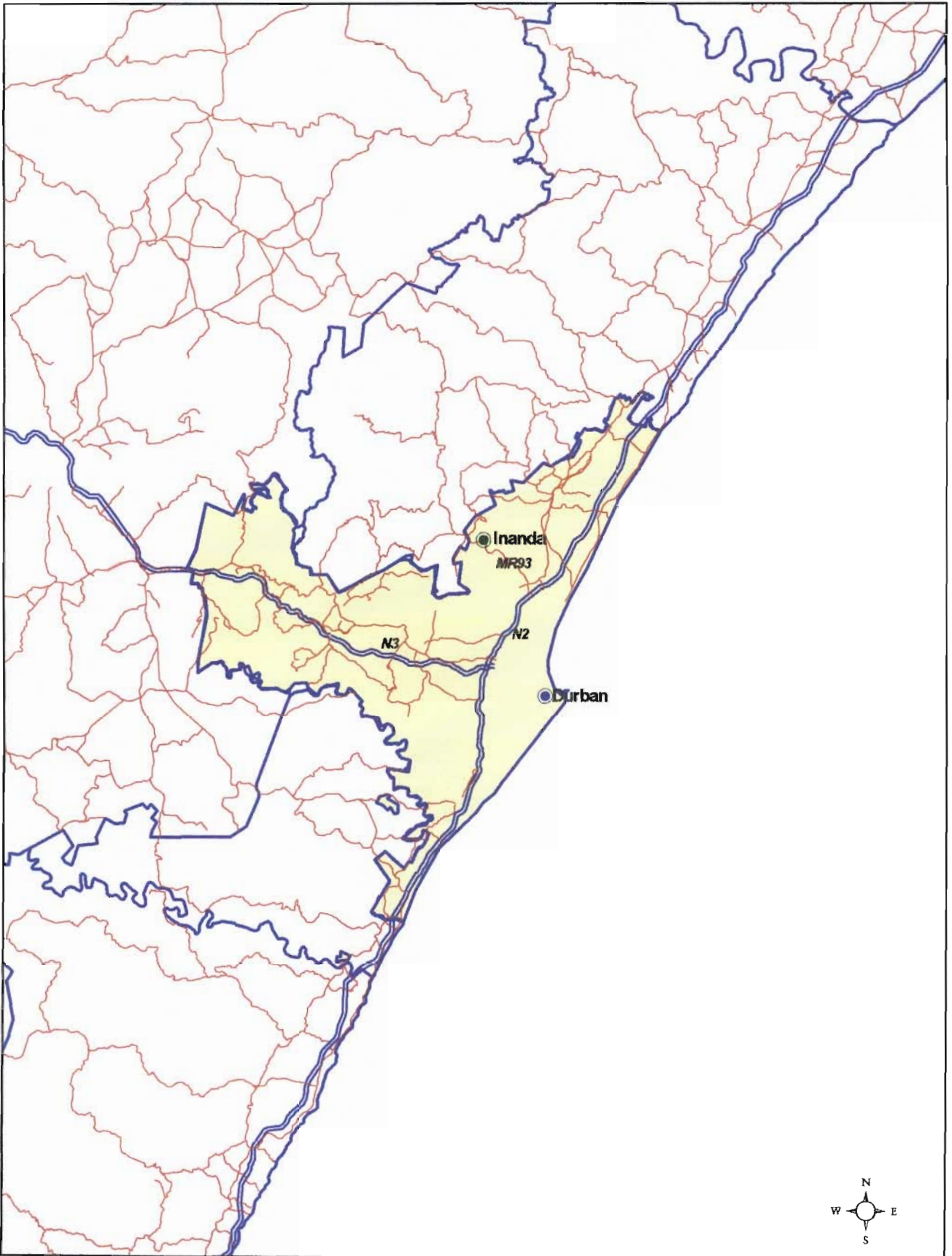
4.1.1 Locality

The Mshayazafe settlement is situated in the Greater Inanda area north of Durban. It forms part of a broad band of informal settlements surrounding the City of Durban. The settlement is some 25 km from the city of Durban, approximately 5 km from the Phoenix Industrial Complex and is accessed by way of the Main Road 93 (MR93), which runs close to the eastern boundary of the site (see Map 1).

Immediately surrounding Mshayazafe, as shown on the Inanda Context Plan are the Ohlanga settlement to the east, the formal townships of Inanda Newtown Unit A and Inanda Newtown B to the south-west and south-east respectively, and the Afrika informal settlement to the north (see Map 2).

4.1.2 Metropolitan Context





It was noted at the time of this particular development there were no definite figures or appropriate studies to indicate how much land was actually required within the Durban Functional Region to meet housing demand. Estimates for land needs were calculated using statistics drawn from anticipated population growth including in-migration, rates of urbanisation, and the estimated demand for housing within the metropolitan context. These sources formed

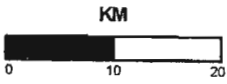


Locality Plan

MAP 1

Legend

-  Durban Metro
-  Regional Councils (March 1997)
-  National Roads
-  Provincial Road



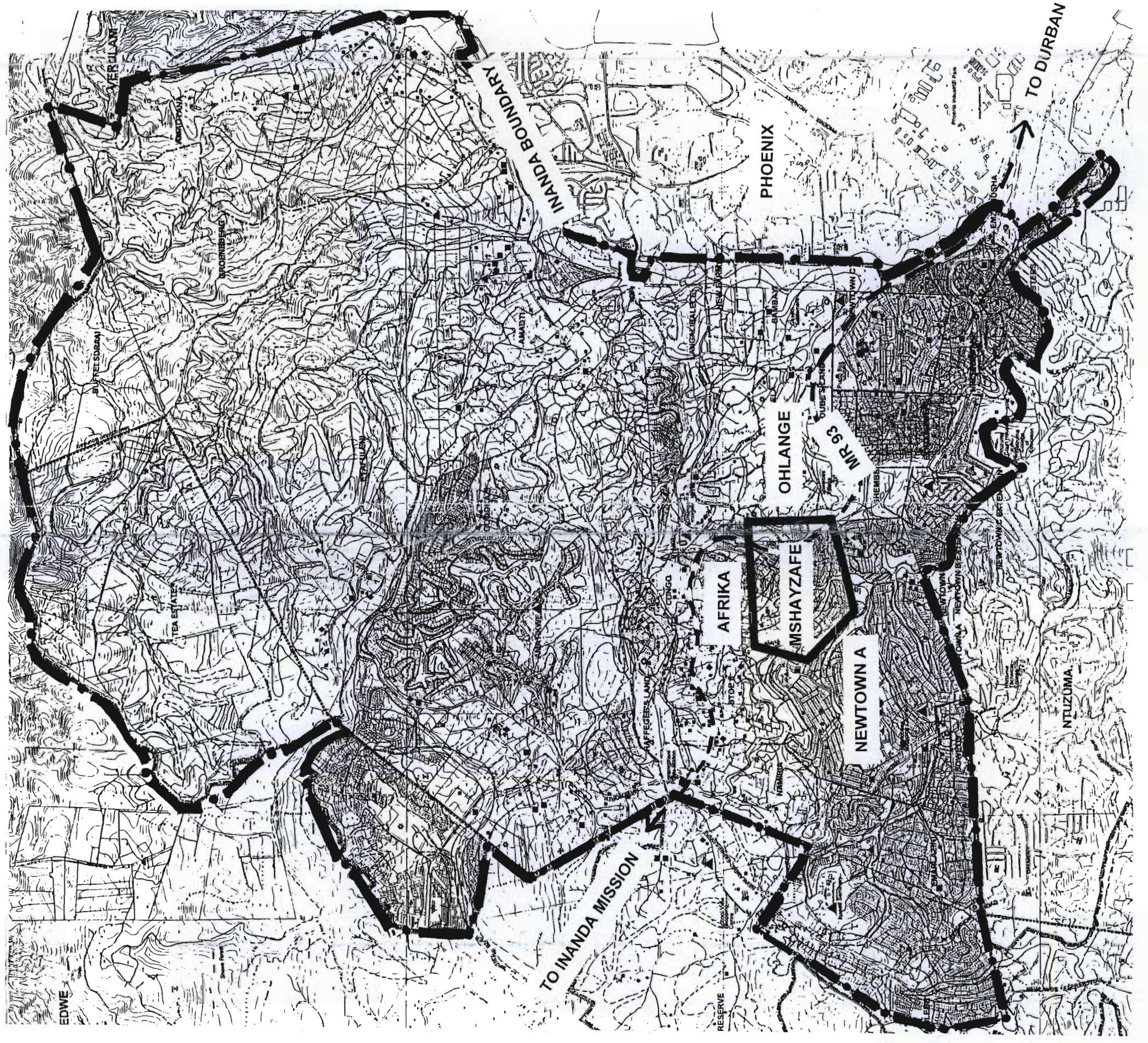


NOTES

MSHAYAZAFE
Inanda Contorted Plan

Scale 1:50,000
Date 1960

MAP No. 2



the basis in order to indicate the extent of the backlog at the time and also served as motivation for the development to be approved by the RHB.

The demand/need for land within the Durban Functional Region was most readily demonstrated by the myriad of informal settlements that grew within the confines of the city and along its periphery. Along with this phenomenon came the invasion and settlement of land both public and private as new migrants to the metropolis settled within its boundaries. The rapid urbanisation of the region's population added to the increasing pressure within the urban and peri-urban areas of Durban and only the urgent release and development of land was deemed to overcome this problem.

4.1.3 Socio-Economic Profile

It has been estimated that the Greater Inanda area accommodates a population of some 400 000 people, comprising 11% of the total population of the Durban Functional Region. Studies have shown that this population is generally poor with low levels of literacy, and average household sizes are generally in the region of 5 to 6 persons.

4.1.4 Mshayazafe Demographic Profile

Mshayazafe had an estimated population of 4500 living in approximately 900 dwellings, this yielding an average household size of 5 persons and an average residential density of 10 dwellings per hectare. Although a number of skilled people lived in the settlement and literacy levels were relatively high, unemployment was estimated at 50 to 60%. Surveys conducted in the area suggested that the major factors contributing to this high level of unemployment are past political upheavals, migrancy and the fact that the local population comprises more females than males.

Although income data for the Mshayazafe population was not readily available, the high level of unemployment and the female dominated gender profile would suggest that average monthly household incomes were low. Many residents undertook part time work or relied on pensions and assistance from employed relatives.

(adapted from Seneque et al:1994:18-22)

4.1.5 Project Initiation Background

In 1993, the Mshayazafe Development Committee requested that the Informal Settlement Unit of the Urban Foundation initiate a study into the feasibility of upgrading the informal settlement.

A multi-disciplinary team was then appointed to undertake the feasibility study, this team comprising the following members:

- The Informal Settlement Unit of the Urban Foundation (Project Managers).
- Seneque Smit and Maughan Brown (Town and Regional Planning Consultants).
- Davies Lynn and Partners (Geotechnical and Civil Engineering Consultants).

The feasibility study, which was completed in May 1993, concluded that the project would be feasible and would cost an estimated R15 million. Approval of the proposed upgrading, together with a portion of the necessary finance (R5 million) for the project was then obtained from the DFR Development Forum and the Inanda Development Forum and a professional team assembled to undertake the project. The project team comprised the same professionals who undertook the feasibility study, with the addition of Land Surveyors Williams Wynn CC. An application was made to the Regional Housing Board (now the Provincial Housing Board) for provision of the R12 500 "one-off" subsidy for one thousand sites. It is to be noted that there are in excess of a thousand sites and that the possibility for further funding of the project will need to be investigated.

4.1.6 Local Authority Jurisdiction

The informal settlement of Mshayazafe was administered by the KwaZulu-Natal Provincial Administration in terms of their delegated authority from Regional and Land Affairs to administer properties belonging to the South African Development Trust. Local administrative control is being effected from a township office in Ntuzuma. Currently, Local Authority control; vests with

the Durban North South Central Transitional Local Council (commonly referred to as the Durban City Council).

4.1.7 Community Representation

The residents of Mshayazafe were represented by a Community Development Committee called the Mshayazafe Development Committee. The Legal Resources Centre was engaged in negotiation for the formation of a Community Development Trust. This was thereafter the legal entity with whom the Regional Housing Board will reach a financial agreement for a “one off” subsidy.

4.2 SITE DESCRIPTION

4.2.1 Topography

The settlement is generally characterised by undulating hilly terrain with a variation in topographical elevation of about 70 metres and slope gradients ranging between 1:4 and 1:2. Steep, to very steep, hills slope from the highlands in the east and west to the Piezang River by way of pronounced valleys and tributaries.

4.2.2 Land Uses

Mshayazafe was an informal settlement that accommodated some 900 dwellings. The settlement is situated on a steep ridge and building has tended to follow the contours of the Piezang River valley. As a result of the topography of the area, some areas are fairly densely populated while others are only sparsely settled. Although the overall residential density is relatively low, there were distinct concentrations of high densities such as those along the main access collector. These settlement patterns influenced the formalisation process and site sizes in the planning layout.

The area displayed a very simple land-use pattern focused on the local institutional, social and economic infrastructure. Institutional uses were generally located at the heart of the community while economic activities tended to be located at the intersection of the main road and the local access collector. A distinct activity node was noted in the vicinity of a nearby store (Cassim's), where the post box facilities, public telephones and a taxi stop were situated.

Although the area was primarily residential in character, subsistence agriculture was practised on many of the plots.

4.2.3 EXISTING INFRASTRUCTURE PRIOR TO DEVELOPMENT

Roads

The existing road network was dominated by Main Road 93 that runs in a north-south direction, close to the eastern boundary of the site, forming the

main transport route through the area and linking the settlement with the surrounding townships. In addition, a minor collector route runs westwards linking with Newtown B. The remainder of the road network comprised dirt tracks and footpaths that connected Mshayazafe to the surrounding settlements.

Water Supply

Bulk water was supplied to the Greater Inanda area by Umgeni Water Board via Durban Corporation's pump station at Ntuzuma and via the JSB's North Coast Water inlet at Phoenix.

Although there was an adequate supply of bulk water to Mshayazafe, no reticulation systems existed in the area and access to this water supply was restricted to one kiosk in the eastern sector of the area on the MR93, and a standpipe at Newtown B. This situation was clearly unsatisfactory particularly as tensions arose over the use of the standpipe which the Newtown community perceived as their own. In addition, residents made use of the Piezang River, especially for washing of clothes, which tends to dry up in summer. Furthermore, children at the local crèche and primary school had no access to readily available water.

Sanitation

There was no bulk sewer trunk main serving Mshayazafe and sewage disposal was generally by means of pit latrines. Although the IDT installed some VIP latrines in the area to serve the crèche and local primary school, residents in Mshayazafe dug their own pit latrines which had a life span of about two years (depending on the size of the families). These self-made latrines were unsatisfactory as they flooded or overflowed during the summer rains, polluting groundwater and the river.

Solid Waste

Most residents in Mshayazafe dug their own pits in which refuse is buried and burned.

Electricity and Communications

The Greater Inanda area falls within the licensed supply area of Durban City's Electricity Department and a bulk electricity line runs along the MR93. Lines

were planned to serve Mshayazafe and, it is believed that Durban City Electricity had commissioned consulting Engineers Bosch and Associates to undertake the project at the time. However, in the interim residents had to rely on wood, coal, gas and paraffin which they purchased in Durban or Phoenix. With regard to communications, there was no provision for public telephones in the area.

Health

A mobile clinic visited Mshayazafe once a week and treated numerous minor complaints which are often a result of poor socio-economic conditions and an ignorance of primary health care. More serious cases were referred to the clinic at Newtown A, the KwaMashu Hospital or King Edward Hospital in Durban.

Education

Education facilities throughout Greater Inanda were woefully inadequate and this is reflected in the low levels of literacy among the sub-regional population. Mshayazafe had one crèche and one community-built primary school. The crèche is a pre-fabricated structure with very basic facilities, which, in 1993 served some 45 children.

The primary school was established in 1990 to obviate the necessity for children to travel to school through neighbouring areas, which are seen as politically hostile. The school now served over 160 pupils and had a staff of some 5 unqualified teachers who are paid by the community.

Other Facilities

Mshayazafe had no formal recreational or religious facilities apart from a piece of bare ground near the Piezang River serves as a soccer field. Lastly, Mshayazafe had its own cemetery located in the north-western portion of the settlement, an area which was largely abandoned during times of political upheaval.

(adapted from Seneque et al:1994:23-26)

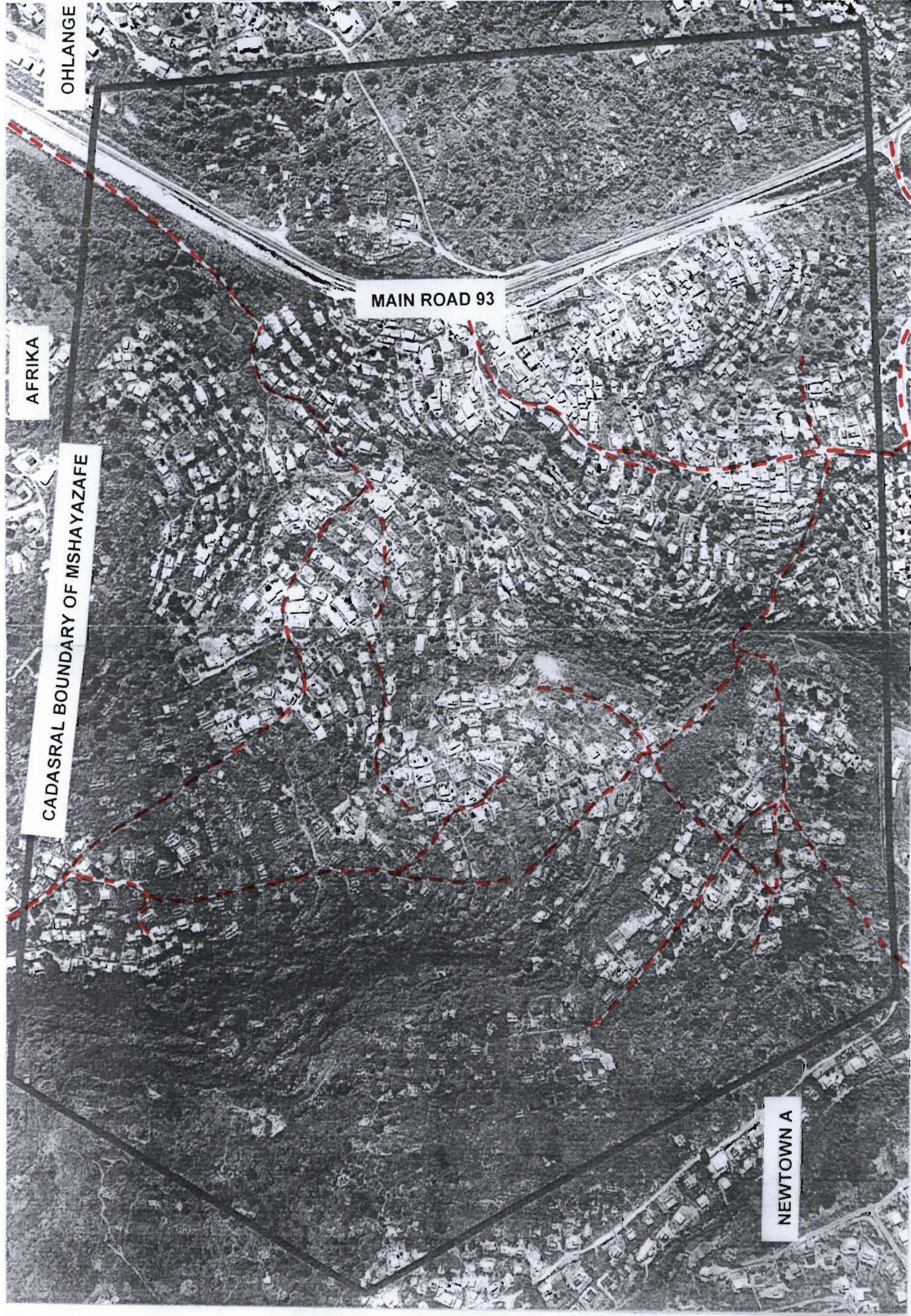
(See Map 3 for Existing Settlement Pattern prior to development)

NOTES

LEGEND
Existing Movement Track

MSHAYAZAFE
Settlement Pattern
prior to Development

MAP No.3



4.3 INTERVIEW WITH DESIGNER

The background provides the context within which the development was to be encapsulated. It provides a brief historical context indicating how the settlement emerged. Furthermore, it highlights how the project was initiated and indicates the existing conditions prior to the development. As noted in the methodology, a structured interview was to be carried out with the designer for this project in order to determine the approach and the objectives of this exercise. The interview was structured in a format that addressed all the indicators of responsiveness. Furthermore, the contextual constraints of the development were highlighted.

Background

The design philosophy that underpins the layout rests strongly on the basis of the need to address the legacy of discrimination and poverty that has left communities such as Mshayazafe without access to basic facilities and employment. This has placed a range of constraints on their ability to better their own lives. As a result the professional team attempted to design a layout that would aim to redress the negative historical influences while causing the least amount of possible disruption to existing dwellings.

The layout has been designed to ensure that the community remains sustainable in economic, social and environmental terms. For this community to remain sustainable, it is vital that sufficient thresholds were generated to ensure that a range of economic and social services remain viable. The layout of the Mshayazafe settlement would aim to maximise possible thresholds in the area in order for the community to obtain the most reasonable services available within the constraints that define their parameters of these services.

4.3.1 Community Participation

At the outset it was noted that the Community Development Trust initiated the development and selected the professional team. It was therefore established at the outset the community was essentially "in control" of the development. Hence, the professional team was answerable to them.

During the initial stages of the project, mass meetings were held to introduce the professional team to the community and to note all their concerns. A translator was always present to alleviate any communicative discrepancies that might emerge. In this way the community felt that their concerns were being heard. Giving the community an opportunity to voice their concerns was deemed the more appropriate approach as opposed to initially presenting the options that the community had. Although the development team had a conceptual design in mind, strategically they decided to approach the community such that the people felt a sense of security and that their concerns were noted and would be attended to as opposed to being told what was planned.

This process gave the planners a platform upon which to expand their concept plan and address concerns that were deemed most common. The next phase of the project entailed an illustration of these most common concerns via design (drawings and sketches) and costings. These designs indicated the levels of services, the associated costs, and the options that were available to them. In this way the community felt that the planners had taken their concerns into account and reflected these in the illustrations that were taken to the community meetings.

De Facto Survey

The preliminary design was informed by a De Facto Land Use survey whereby 6 unemployed youth from the area, identified by the Development Committee were trained in basic map reading and planning techniques at the offices of the Consultants. The intention was to carry out a door-to-door survey that identified the current land uses on each site. The purpose of this exercise was to ensure that the design of the township layout closely reflected the realities of the pre-existing urban settlement, and not impose a set of spatial guidelines determined by the Consultants.

Thereafter an identification of the perceived household boundaries and household sizes was carried out. The planners were provided with the appropriate survey material, however, the definition of the number of structures that belong to each household and their perceived boundaries needed to be ascertained. The community was requested to demarcate their perceived boundaries and households by placing painted rocks (white paint

was provided) at their perceived boundary points. These were measured via a “triangulation exercise”, on the ground. This exercise entailed the following:

The location and size of the structures was noted on the plan via the survey information. Once the appropriate site was identified, the community placed painted rocks at their perceived boundary points. Measurements were taken from either corner of the structure, to the rock. These measurements were noted on the plan. Thereafter, these were “scaled off” onto the 1:2000 Base Plan.

Once these exercises were completed a conceptual layout could be embarked upon. Evidently, the town planning layout was not simply a technical exercise, but rather a developmental tool that involved the community to inform the design process by indicating the site boundaries and the definition of the households. On the basis of this design approach, major disruptions of existing houses and infrastructure could be avoided.

The preliminary design was intensively workshopped with the professional team and the Development Committee. After a lengthy process of altering, adding to and refining the layout in response to the comments made by these people, a final layout plan was approved by the entire community early in September 1994.

Once this process was complete, the community was deemed satisfied with what they were to receive and understood the level and type of services they were to receive. As part of the planning process for Mshayazafe, the layout was designed in close consultation with the community. After a lengthy process of amending and refining the layout in response to the comments of these parties, the final layout was approved by the entire community in September 1994.

Land Legal Analysis

In order to prevent any land legal complications that might delay or complicate the delivery of secure land tenure, a Land Legal Report was prepared. This identified who the owners of the portions of land were, the implications for land rights, township establishment procedures, tenure issues, P.T.O Certificates, Title Deeds, S.G. Diagrams, . Once this was

established, a de jure analysis was carried out to establish the number of structures that existed on each subdivision within the area. The landowners were thereafter contacted and negotiations were carried in order to secure an agreement of sale. It was noted that there were no complications for consensus to be reached in terms of securing an agreement of sale as well as the land costs.

4.3.2 Safety

It was noted that the community of Mshayazafe was passive and resistant to violence. When one considers that this area was one of the most volatile areas in the Inanda Region, it is hard to perceive that a community once torn apart by conflict and violence is now passive and peaceful. There are few incidents of violence and theft that do occur, however nothing of substantial note.

Nevertheless, the designer agreed that the provision of services would contribute to an upliftment in peoples lifestyles and provided a healthier and safer environment, relatively safer from disease and sickness. The following Engineering services were proposed:

Water

Water standpipes were located alongside the road reserves throughout the site, with a provision of one standpipe for every 200 sites. Water was to be obtained from an existing water main that runs along the MR 93.

Storm water

It is proposed that the storm water drainage system comprises both the natural water courses within the settlement area and artificial drainage courses in the form of V-drains and trapezoidal drains either running parallel to the proposed roads or as dedicated storm water drains. These drains are to be lined either with concrete, grassed or unlined, depending on the flow velocities.

Erosion control measures, such as stone pitched weirs, gabions and reno mattresses are to be placed in all areas where erosion is likely to occur. At storm water road crossings, either concrete lined drifts or pipe culverts shall be utilised.

The footpaths will also form an integral part of the storm water system, and side kerbs of the footpaths will be constructed in block work to operate as shallow storm water drains.

Sanitation

With regard to sewage disposal Ventilated Improved Pit Latrines (VIP's) were proposed for the site. The engineering however noted that the Piezangs River Sewer Outfall that lies to the south of the site, could be feasibly extended northwards through the settlement. Furthermore, it was noted that the area has been designed so as to accommodate water borne sewerage at a later stage should funds be available.

Electricity

Electrification of this area is underway on a house to house basis where application is made for connection purposes.

Refuse

It is proposed that refuse collection is by way of communal skips strategically located throughout the settlement, with each skip servicing 100 dwelling units. This system will be augmented by smaller household collection bins, one per household, and a street cleaning service. In order to allay costs, it has been proposed that the removal of refuse and the emptying of the household bins into the skips be the responsibility of the homeowner. A final decision on this issue has yet to be taken.

It is envisaged that the 13 skips will be emptied on a once weekly cycle. Should the KwaZulu-Natal Provincial Administration continue as the Local Authority for the area, the refuse collected will be taken to the Inanda Solid Waste Disposal Site with an anticipated service charge of R2, 80 per month to each householder.

4.3.3 Permeability And Legibility

It was noted that the approach that was adopted to enhance the existing road network that already existed through a hierarchy of roads and footpaths. It was noted that there was very little private or public transport operating along the minor corridors within the area. Efforts were therefore made to design local facilities, services and transport stops within a 400m distance from any point in Mshayazafe. Furthermore it was ensured that all local access ways were easily accessible to both pedestrians and low order vehicles.

One of the key constraints presented to the designer was the topography of the site. At a local level, the topography of the site and quality of its environment is typical of the of the pattern prevalent in the Greater Inanda Area. The land has been sharply eroded by several streams, and the high rate of urbanisation has resulted in the degradation of most of these watercourses. A considerable percentage of the site (approximately 65%) is either below the 50 year floodline, or characterised by slopes steeper than 1:3. As a consequence thereof, the provision for a high percentage of road access was limited due to the topography and the implications for costs.

The road hierarchy consists of four road or access types and are described as follows:

Minor Bus Route

This is the main access into the area linking it with the Main Road 93 and forms to main public transport route in the area for buses and taxis. The road follows the existing pegged route along the ridge line, thus minimising the need for cut and fill embankments and maximising ease of access off the road. The road is designed with a 15m reserve and a 6m blacktop surface with the bus route being approximately 500m in length.

Taxi Route

This road is designed to run parallel with the minor bus route and, as a result of the surrounding steep topography, is forced to follow the valley line. The northern portion of the road follows an existing dirt track south from the MR 93. In the southern sector of the site, the road is designed to link with the proposed bus route by way of another existing dirt track.

The taxi route will have a reserve of 10,5m and a carriageway of 5m. Although these roads will be blacktopped with a total length of approximately 1 230m, the surfacing of the remainder was subject to the availability of funds.

Access Roads

These roads comprise the major portion of the access network, totalling a length of 5 000m. In general, they are designed along the contours, linking taxi routes and bus routes. These roads have 6m reserves and would not be surfaced in the first stage of the project.

Lanes and footpaths

These paths have been designed primarily to provide access to sites that are located within steep topography. Upgrading of these paths enhanced the existing pedestrian movement patterns. In the steeper areas, these were stepped in order to prevent people from slipping or falling. The detailed design of residential sites indicated the need for additional footpaths in areas where access was constrained by topography. These were accordingly introduced into the design.

Summary

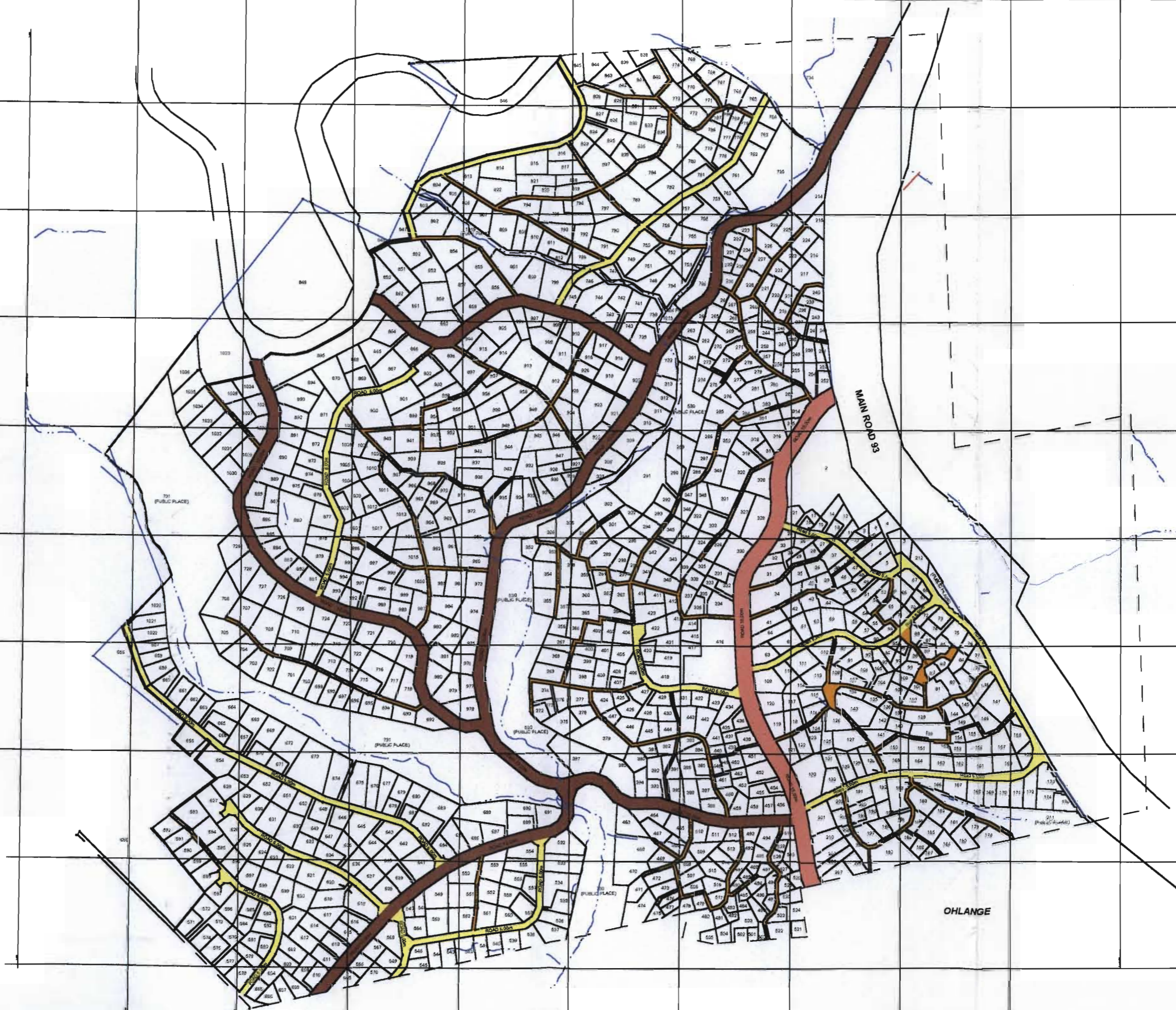
The design aimed to link the area into the major transportation network (MR 93) as well to provide linkages to the adjoining community areas. Internal access was enhanced through the upgrade of existing movement systems via the provision of taxi routes, access routes and footpaths. It is perceived that the upgrade has made the area more permeable as it provides a an easier movement system with a greater choice of routes through the area, hence making it more permeable.

See Map 4 indicating the Designed Movement Systems.





AFRIKA



NOTES



LEGEND

-  Bus Route
-  Taxi Route
-  Residential Access Road
-  3m. Lane

INANDA UNIT A

OHLANGE

MSHAYAZAFE
Designed Movement Systems

Scale 1:10000
Date: 2011

MAP No. 4

4.3.4 Variety And Robustness

As noted, the concentration of potential thresholds has been best achieved by means of the encouragement of an “activity corridor” along the MR 93 and “activity streets” within the community itself. Thus, while the concentrated flows of commuters along the MR 93 could support larger facilities and services along this route, smaller corridors through the Mshayazafe settlement will contain facilities that could be supported by the local residents. It is contended that this design pattern will also have the effect of making Mshayazafe more “legible” and easy to understand.

Residential

The predominant land use in the layout for the Mshayazafe settlement is residential, with provision for 1071 sites. However, apart from this, the following facilities were proposed;

Commercial

As Mshayazafe is a low income settlement typical of many in peripheral Durban, commercial thresholds are very low and spread very thinly. Residential sites with commercial potential have been planned to take advantage of concentrated thresholds. These thresholds were found at:

- Major and minor intersections,
- Along the bus and taxi routes,
- Adjacent to community facilities,
- Sites where commercial facilities already exist.

Some 14 commercial sites have been designed with 110 residential/mixed use sites being given the option to develop commercially along the identified routes and nodes. It is noted that the actual type of facilities or shops that could grow in the area was not specifically identified as it was assumed that these activities would emerge informally as and where economic demand dictates and where opportunities arose.

Education

Three school sites have been included in the layout, two of which accommodate the existing school and crèche. In following a policy of a

minimum displacement of existing structures, the primary school site could only be enlarged to 2620m² and the crèche to 870m² (crèche).

The third site proposed is in the northern sector of the settlement, situated on vacant, under-utilised land. Due to the presence of existing structures and the location of the MR93, the size of this site has been restricted to 6 460m². Although the site did not conform to the DET standards, it was however sufficiently large enough to accommodate school buildings and a small play area. In compliance with the DET threshold standards, Mshayazafe did not require a secondary school but required two primary schools that were provided. Communal active open space facilities in the settlement will be available for use by the schools. The schools are located on taxi and bus routes and are well within walking distance of the sports fields.

Active Open Space

There is one large open space approximately 2800m² in extent, located at the bottom of the valley below the residential sites. The site accommodates an existing soccer field that is shared among the community and between the two schools.

Passive Open Space

Passive Open Spaces have been provided along the main streamlines and valley lines to protect water courses and to allow storm water run-off.

An agricultural strip on the Piezang River flood plain in the southern sector of the settlement has been provided to encourage market gardening for local food consumption.

Provision has also been made for a cemetery in the northern sector, situated on the existing cemetery site.

Community Facilities

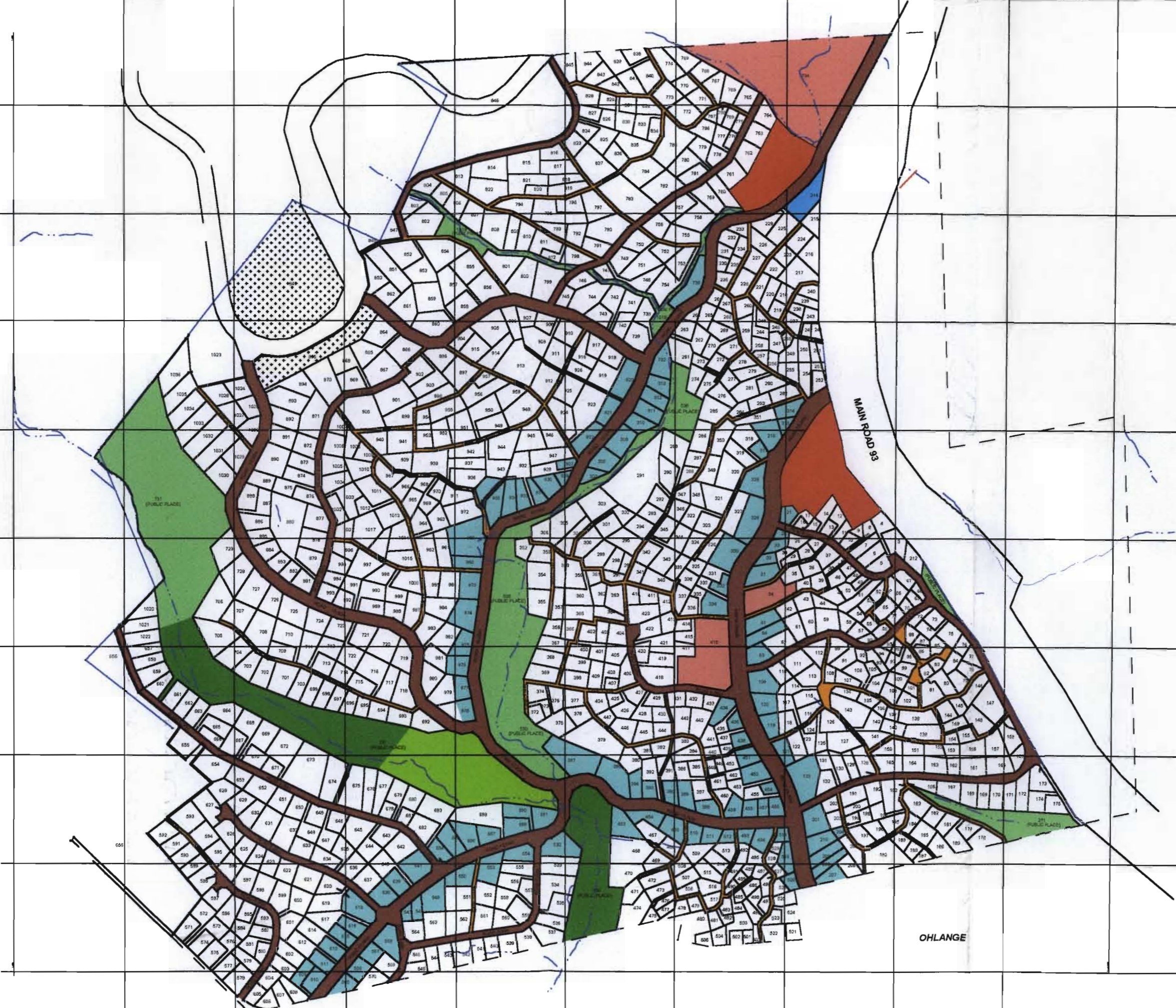
Sites for community facilities have been provided, mainly situated at major road intersections. The nature of these facilities were yet to be decided.

See Map 5 indicating the Planned Facilities

AFRIKA



NOTES



- LEGEND**
- Commercial
 - Mixed Use
 - Education
 - Community Facilities
 - Cemetery
 - Agriculture
 - Recreation
 - Open Space
 - 15m, 10m, 6m, Road
 - 3m Lane
 - Streamline

INANDA UNIT A

OHLANGE

Drawing Title

MSHAYAZAFE
Planned Facilities

Scale of 1:5000 Date: December 1999

MAP No. 5

4.3.5 Visual Appropriateness, Richness And Personalisation

The designer acknowledged that these elements were constrained by the funding of the PHB subsidy allocation, however it was perceived that the provision of infrastructure, a range of facilities and an upgrade of the existing movement networks would be visually pleasing as well as an improvement on the conditions that prevailed prior to development.

The element of personalisation was entirely dependent upon the residents of the area and could be enhanced at varying scales. Therefore, the formalisation of this area was the first step giving people their own piece of lands. Thereafter, it was up to them to "make the most of it".

4.4 CONCLUSION OF FINDINGS

The spatial and physical planning of Mshayazafe was undertaken within the context of an integrated development approach. This formed one of several components of a single plan aimed at facilitating and enabling a sustainable development process while also providing a framework within which development can occur.

In this way, the town planning layout for this community is seen as a developmental tool with which the professionals involved can assist the community in achieving their aims of upgrading the living conditions of the community.

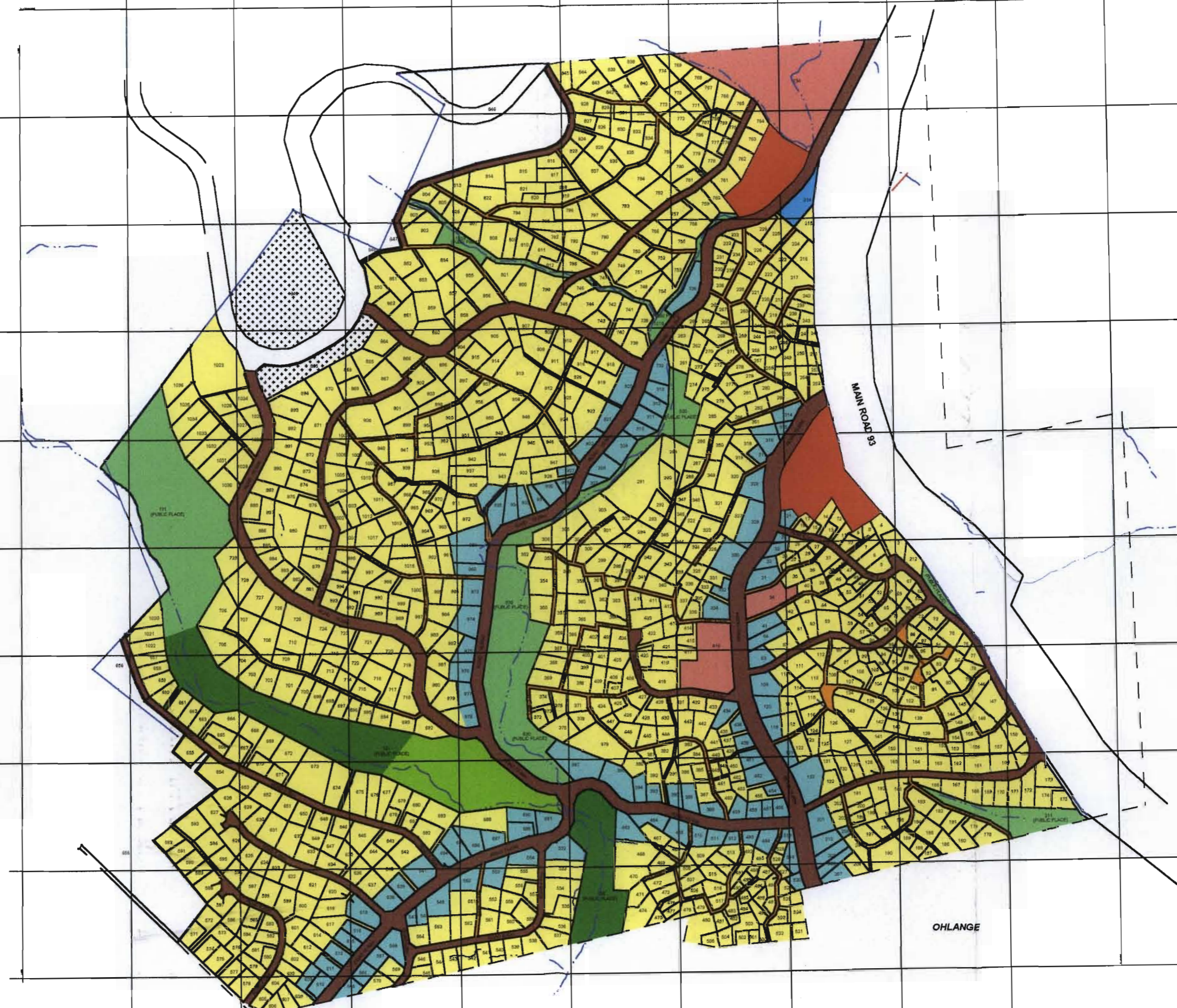
The design approach adopted emphasised community involvement in the process and in this way the professional team were able to design a layout that would enable the effective upgrading of the settlement while causing the least amount of disruption possible to existing dwellings.

The layout of Mshayazafe aimed to ensure that the community remains sustainable in economic, social and environmental terms. Thus the overall layout for the area combines the strength of activity corridors and the permeability of residential blocks or precincts, this in turn encouraging the concentration of potential thresholds and the consolidation of the settlement while also resulting in a far more legible settlement. A legible and permeable layout as designed will hopefully allow for the creation of a physical environment that will change over time in response to the changing needs of its own residents.

See Map 6 for Composite Layout Plan.

AFRIKA

NOTES



- LEGEND**
- Residential
 - Commercial
 - Mixed Use
 - Education
 - Community Facilities
 - Cemetery
 - Agriculture
 - Recreation
 - Open Space
 - 15m., 10m., 6m., Road
 - 3m. Lane
 - Streamline

INANDA UNIT A

OHLANGE

MSHAYAZAFE
Composite Layout Plan

Scale of 1:3000 Date Dec/2010

MAP No. 6

4.5 COMMUNITY SURVEY

4.5.1 Survey Method

As noted in the methodology, a community questionnaire was to be administered in order to ascertain the community's perceptions on the development that had taken place. The sample size was determined at 5% of the total residential dwelling units, which deemed a relatively appropriate sample for the intended purpose. This amounted to 50 households that were to be interviewed. The household identification was determined via a systematic sample. This process entails the region being divided into equal units in the form of a grid, and a systematic sample is taken at a regular basis. The reason for this approach lies in the fact that it necessitates no previous information regarding the area, which will contribute to the objectivity of the exercise. This would prevent any particular areas from being favoured over another to obtain the desired results. This process would obtain a spatially continuous sample, regulated by the grid from all areas of the site. In order to ascertain the overall input of residents from all areas within the settlement, this method was deemed most appropriate.

4.5.2 Questionnaire Content

The content of the questionnaire aims to identify each of the elements that have been noted as elements of responsiveness. These elements were systematically broken down into comprehensive questions that would inform the proposed research. The structure of the questionnaire is as follows:

- (A) Core Question dealing with broad issue relating to a particular element of responsiveness.
- (B) Subsidiary questions that are an expansion of the core questions.

Each question relates to a particular indicator and has been informed by the data that was gathered in the previous chapter. An attempt has been made to understand what these indicators would mean to a member of the community. Therefore, in formulating the questionnaire, one had to firstly identify what the objective of each question was. Secondly, one had to align the questions in such a way that they are easily answerable by the

community. In essence the questionnaire attempted to translate the literature to a format that was easy to comprehend and respond to.

At the outset of the questionnaire, it is noted that the questionnaire is primarily for research purposes. The primary reason for this statement was to avoid false hopes of further development being generated through this questionnaire. In order to ensure that this would not happen, the community appointed Development Worker, Mr Simon Mnqayi accompanied the interviewer throughout this exercise. Furthermore, the questionnaire appeared in English and Zulu to provide for any language discrepancies that might emerge.

4.5.3 Pilot Survey

A draft questionnaire was drawn up such that a pilot survey could be carried out. The purpose of this exercise was to determine the type of responses that would be received and whether the questions were adequately understood and responded to by members of the community.

This exercise proved very useful for the following reasons:

- Most of the questions could be answered via a yes or a no, however, when people were asked to substantiate their response, it was evident that they did not know how or in what context to answer.

In order to overcome this options or examples were given to the respondents (e.g. Did you understand what issues were being discussed at the community workshops(Yes/No)? Why (the information was translated, there were pictures illustrating what was to happen, people moved too fast and did not give us a chance to respond or understand etc.)

- There were certain questions that people could not comprehend and required more clarity.

As a result some questions were removed and replaced by ones that could be answered easily.

- Some of the questions were too long and required to be broken down because people could not respond adequately.

The long questions were broken down and made into subsidiary questions that related to the core question.

- Although the questionnaire was translated into Zulu, some of the people that were given the questionnaires could not read, secondly some of the respondents felt that it was too long and preferred to be asked questions.

It was therefore decided to administer the questionnaire with Simon Mqnyai accompanying the interviewer and asking the questions. Thereafter he would translate the response such that it could be noted.

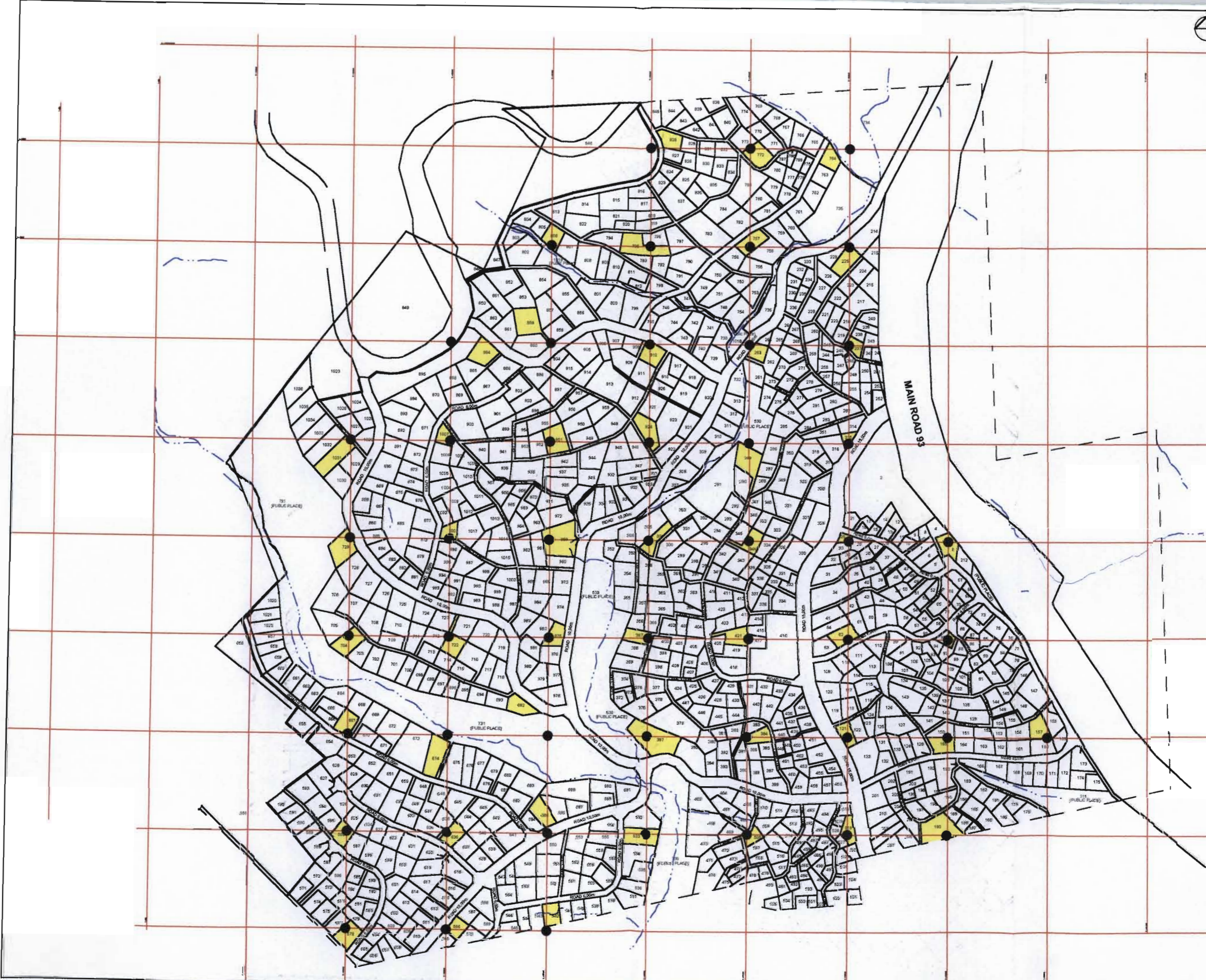
- It was noted via the pilot survey that the responses were very similar, therefore it was anticipated that the results of the final questionnaire therefore was expected to be relatively similar.

4.5.4 Approach

The questionnaire was revised and administered over a period of four days. Map 7 indicates the households that were to be surveyed via the systematic sample technique. As noted in the methodology, a sample size of 5% (50 households) was deemed appropriate for this exercise. However, it should be noted that if the residents of the specified household were not present, the contingency plan was to interview the closest neighbour. If they were not available, then the closest to them were selected and so on...

For a copy of the English and Zulu copies of the survey, please see Appendix 4.

See Map 7 which identifies the households that were to be surveyed via strategic sampling method



NOTES

SURVEY LOT NUMBERS		
1.	157	26. 824
2.	190	27. 810
3.	185	28. 795
4.	96	29. 828
5.	3	30. 806
6.	519	31. 859
7.	121	32. 951
8.	62	33. 959
9.	25	34. 975
10.	315	35. 685
11.	237	36. 542
12.	255	37. 566
13.	784	38. 836
14.	772	39. 674
15.	757	40. 722
16.	283	41. 1001
17.	289	42. 1007
18.	344	43. 1031
19.	421	44. 729
20.	384	45. 704
21.	508	46. 667
22.	533	47. 595
23.	397	48. 578
24.	367	49. 864
25.	304	50. 692

LEGEND
 ■ Identified Households to be interviewed
 ● Systematic Sample Grid Point

MSHAYAZAFE
 Identification of Houses to be Surveyed via Systematic Sample

4.6 FINDINGS OF COMMUNITY QUESTIONNAIRE

The findings of the community survey have been structured in such a manner that the reader would be in a position to understand the purpose of each question. The findings and conclusions are thereafter highlighted.

An evaluation of the responses that were that were received will now be embarked upon. Prior to the evaluation, a brief explanation will highlight the reason for the proposed questions, followed by an evaluation of the responses and a conclusion (Note when the terms every household/all households are used it refers to those surveyed).

Questions 1-3 – Background Information

Purpose

The first three questions were to establish site numbers, the occupation, and position held in the household by the respondents. The site number was for record purposes, the second (Occupation) was to identify the number of people unemployed whilst the third identified the household position (a decision was taken at the outset to interview the household heads – male or female firstly or the senior children. If these individuals were not available, the closest household that satisfied this requirement was interviewed).

Table 2: Employment Ratios

OCCUPATION	% OF TOTAL
Employed	78
Unemployed	20
Pensioner	2
TOTAL	100

Evidently, most of the household heads were employed in some form or the other. It should be noted that some of the housewives that were interviewed were unemployed, however members of their family were earning. For the purposes of this study it was deemed necessary to identify the percentage of residents that had some form of income to pay for goods and services therefore they were not classified as unemployed.

From the 39 respondents that had some form of income generated into the household, 11 respondents were self employed and engaged in employment within the community area like selling fruit and vegetables, owning a spaza shop, running a tavern, selling eggs, selling food, making mats and selling these to people, etc. Therefore, approximately 28% of the residents are self employed and rely on the support of the local people for income.

Question 4 – Length of Stay

Purpose

This question aimed to identify whether respondents lived in the area prior to the development. The purpose of this survey was to gain insight into the feelings of the people after the area has been upgraded as compared to the situation prior to development.

Findings

The range of responses is from 5 years to 37 years.

Conclusion

Evidently, all the respondents were in a position to comment on the area now that it has been developed.

Question 5 – Community Participation

Purpose

This aimed to determine the extent of the community's participation in the development process as well as an indication of the extent of each individual's involvement. It aims to investigate whether the community understood what the development process was about and to note whether they were fully aware of what was planned for the area and the type of services they were to receive. Furthermore it aims to investigate whether the community desired other services.

Findings

All the respondents were informed about the development through the development committee. They all note that they were made aware of the

community workshops and mass meetings. Their attendance is recorded in the following table:

Table 3: Attendance at Community Workshops

ATTENDANCE	%
All	22
Most	58
Few	20
None	0
TOTAL	100

It is noted that all the respondents attended the community workshops at some stage or the other. Although they could not attend all, they made sure that they attended at some stage or the other.

Evidently, the community attended most of the workshops and understood everything that was discussed. All the respondents have noted that the workshops were effectively translated and were carried out at a pace where they could understand everything. Furthermore, if there were any queries, the community indicated that they were not afraid to ask. However, most of the respondents noted that most of their concerns were dealt with therefore most of them did not contribute to these workshops.

Every respondent noted that they were fully aware of the levels of service that they were to receive prior to the development being initiated. With regard to the issue regarding an explanation of their understanding, all the respondents noted that the reason why they received certain services and not others, was as a result of the limited money that the subsidy provided.

In view of the fact that every respondent had attended at least a few of the workshops, the question relating to non-attendance was redundant.

All the respondents were satisfied with the services that they received primarily because they “got what they were promised”. However, all the respondents noted that they wished to have individual water connections. Furthermore, they

were all aware that they would have to pay for these services and their maintenance.

Conclusion

It is evident that the community had made an effort to be involved in the development process. The credibility of the Development Committee was established as representative of the community. People noted that they were aware of the development parameters in terms of the type of services they would receive as well as the reasons why they received some services and not others. Evidently, the community participated proactively in the development process.

Question 6 - Safety

Purpose

This question deals with the element of safety in terms of personal safety and security for the community. It aims to identify whether people feel safer in the area now that it has been upgraded and aims to understand why they feel this way.

Findings

All the respondents felt a sense of pride and security now that they own their own piece of land. Their reasons for this sense of security is indicated as follows:

- Safer because they own a piece of land with a durable structure,
- This property cannot be taken away from them illegally,
- It is an asset for them and their future generations

In terms of personal safety most of the respondents noted that over the past few years, Mshayazafe was a safe area where there is no need to feel intimidated by unsafe elements. They also noted that there were no “dark spots” in the area where people are afraid of entering. The lighting on the roads makes it easier to move around the area at night and the provision of services has made life more convenient.

Conclusion

The area is perceived safer and secure due to the permanence of owning a site and a house. The provision of services has contributed to making life more convenient. Generally the people of Mshayazafe felt safe and secure in their area.

Question 7 – Permeability and Legibility

Purpose

The questions relating to permeability and legibility aimed to investigate whether access and movement was made easier now that the area was developed. Furthermore, an attempt was made to understand how movement systems affected their lives and whether it was an improvement on the previous system that existed.

Findings

The most common form of transport indicated by all respondents was either bus or taxi. 2% of the respondents own their own vehicles.

All the respondents felt that the upgrade made movement more convenient and easier with the upgrade. Their reasons are as follows:

- It was noted that in the past, there were no internal taxi and bus routes, therefore people had to walk to the MR 93 to “catch a taxi or bus”,
- It was noted that in rainy weather, the footpaths could not be used as they were covered in water and since some of these were in steep topography, people used to fall or their children used to mess their uniforms before going to school,
- They had a choice of routes to get to from one place to another,
- It saves them time and inconvenience.

For those respondents that owned their own vehicles, it was noted that they could enter the area more conveniently and enter their driveways through formal roads. They noted that prior to the development, some of the roads were in a poor condition. As a result thereof, on days when it rained heavily, they had to leave their cars elsewhere and walk home. Furthermore, some of

the roads were in such a poor condition that their cars were damaged trying to get from one place to another within the area.

Conclusion

Essentially there has been consensus that the development has improved access into and out of the area. Furthermore, this has made it convenient for the people who now have internal access to the bus and taxi stops as opposed to the stop on MR 93. The upgrade has made movement more efficient in terms of ease of access and time saving.

Question 8 – Variety and Robustness

Purpose

These questions aimed to identify the existing services in the area and to determine whether these were easily accessible. Furthermore, it aims to investigate whether more of these were needed. The questions also aim to identify if there were any special areas of common interest to the community where they meet or gather. In terms of robustness, questions relating to the multifunctionality of households and other areas in the site were explored.

Findings

The community services that were highlighted were primarily:

- Community Centre,
- School,
- Spaza Shops,
- Telephones,

The community felt that the existing spaza shops and telephones were insufficient for their needs. The spaza's had a limited range of goods that served their daily needs. However, for their month end or weekend shopping, they needed to go out of the area to the nearby shopping centres to engage in their bulk buying. Furthermore the telephones that were provided are deemed insufficient as there were many residents without phones and needed access to public phones for private and business uses.

20% of the respondents had used their homes as places of business where they provided a range of services to the community in one form or the other. The following breakdown provides an indication of the type of services and the percentage of these as a total of the 20%.

Table 4: Types of Services Offered by Households

SERVICE TYPE	% OF TOTAL
Spaza Shop	40
Making Food	20
Tavern	20
Selling Eggs	10
Making Mats	10
Total	100

This indicates that the predominant business activity in the settlement was that of spaza shops. However, as noted the community feels that there ought to be more of these sites with a greater range of uses for their needs.

All the respondents noted that it was important to have places where people meet and socialise apart from each other's homes. There were no places in the area where people could meet and socialise. In essence there was a lack of public places like parks or community squares. Some of the responses to the need for these spaces are as follows:

- These places could sit around and have a few drinks,
- Places where the children could play,
- Places where social gatherings could take place,

The only noted place of historical importance was the cemetery. People gathered when there was a funeral or to pay homage to their loved ones.

Conclusion

Essentially the community noted that although there were a few services that were offered in the form of spaza shops and telephones, however, these were insufficient. More public telephones were necessary whilst the spaza shops needed to carry a wider range of goods. A need for the creation of playlots and

community spaces was noted because people felt that there were no places where they could socialise within the settlement.

Question 9 – Visual Appropriateness

Purpose

The aim of these questions was to investigate whether people felt that the area looked better than it did before the development. Furthermore, people were asked to identify whether it can further be improved such that one may perceive what is visual appropriateness to each one.

Findings

All the respondents agreed that the area has improved its image for the following reasons:

- There were no more shacks (Mjondolo) in the area,
- The roads were formal which appeared better than the dirt tracks,
- People had nice brick homes to live in,
- There were no more open pits used as toilets in the area.

They felt that the area could be improved with the planting of some trees and the growing of flowers along the roads.

Conclusion

Essentially, people felt that the development had contributed to improving the appearance of the area.

Question 10 – Personalisation

Purpose

The extent to which people have improved/alterd their own sites and homes was deemed an appropriate method of investigating the extent to which people have personalised their spaces.

Findings

It should be noted at the outset that each house was a brick structure that was constructed as part of the development. 8% of the respondents had made no improvement to the core structure. However the other 92% had made some form improvement to their house in one or more of the following ways:

- Plastering the house,
- Painting their homes and toilets,
- Concreting the floors,
- Purchasing fancy roofs
- Planting little gardens,
- Extending the unit,
- Using fancy window frames,
- Tiling the interiors,
- Partitioning the interior

Conclusions

In essence most of the households had personalised their homes in some way or the other by improving on the appearance externally or internally.

Question 11 – Length of Stay

Purpose

It was decided to investigate whether the residents of the area would want to move out of the area should they be able to afford to. The reason for this question lies in the fact that there is a common school of thought that notes that once people in informal settlements become more affluent, they migrate to “greener pastures”. It was deemed interesting to identify whether this assertion was true within Mshayazafe.

Findings

4% of the respondents were uncertain, whilst the remaining 96% very confidently noted that they would NEVER move out of their community. They felt safe and secure and felt part of one family. They note that Mshayazafe was a community ridden from crime and violence. It was a place they could call home and would not feel as comfortable anywhere else. Simon asked

each respondent if they had won the lotto jackpot, would they still remain in the area. They all said yes. They noted that the money would be used to build their own mansions with all the fancy trimmings that they desire, but they would not move from "home".

Conclusion

Evidently, the community feels a sense of security in an area that they are familiar with. They have indicated no intention to move.

4.6.1 SUMMARY OF FINDINGS

The community questionnaire highlights the people were relatively satisfied with the development that they received. It has contributed to uplifting their living standards within the provision of services that have made life convenient and secure. However, people have noted that there was a lack of public places and requested that there be more telephones in the area and the spaza shops needed to carry a wider range of goods. An identifiable level of satisfaction has been highlighted via the survey.

4.7 CONCLUSION

The objective of this exercise was primarily to ascertain peoples' perceptions of the area now that it has been upgraded. It is submitted that the questionnaire that was administered has to some extent highlighted this. The responses that were received were relatively similar in nature, which highlights the homogeneity of the settlement, nevertheless, it is contended that a sufficient of information has been retrieved in order to inform the proposed evaluation.

CHAPTER 5

5 CASE STUDY EVALUATION

5.1 EVALUATIVE CRITERIA

These criteria which have been developed for each indicator is the combined input of consultants, the designer of the area, the community survey, as well as a site visit. It should be emphasised at the outset that each of the indicators identified is mutually supportive. The reason for their isolation in terms of this study is to make the interpretation of these easier. These are all components of a broader development objective i.e. to achieve responsiveness.

It is noted that each element although mutually supportive in contributing to responsiveness, cannot be evaluated in the same manner. Therefore, whilst the evaluative criteria will be established, the method of evaluation will also be indicated by identifying the source of evaluation material (e.g. utilising the findings of the community survey to indicate whether the community was involved in the development process). It was perceived that the reader would be in a position to identify the source of the findings that are noted. This would preclude any concerns that vague assumptions are made in the findings.

5.2 PERMEABILITY AND LEGIBILITY

Criteria

1. Is the area integrated into the adjoining development areas as well into the existing transportation networks that link the area to the city or the region?
2. Has a clear hierarchy of roads has been established?
3. Are there elements of place making?
4. How have existing movement patterns have been enhanced?
5. Has the road access has improved movement systems within and out of the area?
6. Are there more choices in terms of routes have been created?
7. Is there is a clear movement network?

Source of Evaluation Material

- Review of planned road network prior to and after development (See Map 3 – after page 96 and Map 4 after page 104.)
- Community survey
- Site visit

Findings

1. If one were to refer to the settlement prior to development, it is evident that there was an existing movement system prior to development. The primary systems that were “fed” into the area originated from the MR 93. These road systems have been upgraded to the status of a bus and taxi route respectively. They can be differentiated by their widths. The bus route is wider than the taxi route.

The bus route is linked to the main transportation route (Main Road 93) and is linked into the adjoining community of Ohlange, whilst the taxi route forms a secondary loop that emerges from MR 93 back onto the bus route. From this secondary loop other access roads veer off into the adjoining communities of Newtown A to the south west, and Afrika

to the north west. The residential access roads are linked to the major transport networks that have been upgraded. These routes act as residential access roads. The footpath system is linked to all these systems at varying scales.

2. The hierarchy of roads is identifiable via their road widths and surface material. A clear hierarchy of roads can be identified from the plan (Map 4), which indicates that the major routes (Bus and taxi) are linked to the main road (MR 93) whilst the internal road network of access roads and footpaths feed into the major systems.
3. The elements of place making at the scale of this development are limited to the community facilities like the school, the crèche, the cemetery, and the soccer field in the adjoining community. Apart from these facilities there are no other facilities that enhance the public realm with usable public places.
4. The existing movement patterns, indicated by the plan showing the movement network of the area prior to development notes that most of the existing tracks and movement systems were enhanced on a distinct hierarchy of roads has been established.
5. The community has noted that the upgrade of the roads has made movement more convenient for them. The provision of an internal bus and taxi route network has made it convenient for people to gain access to public transport quickly and conveniently. Prior to the development they noted that the footpaths and roads used to be flooded in rainy seasons.
6. People have noted that that there more “usable” and upgraded routes that are available to them by virtue of the fact that these are surfaced and safer than before. Refer to Map 6 which indicates the roads and footpaths that were designed.
7. The movement network that has been designed has a clear structure (Map 4). The location of the bus and taxi routes have divided the area into in clearly defined residential “pockets” that are identifiable via the

hierarchy of roads. This distinction between the residential precincts promotes permeability and legibility because people can orientate themselves easily in the area and have a choice of options to get from one place to another.

Conclusions (refer to Map 4 after page 104)

The design of movement patterns within the area is characterised by an upgrade of most of the movement systems that existed prior to development. The approach that has been adopted has resulted in a clear movement pattern that is permeable and legible. Movement systems have been enhanced for the benefit of people in the area and has provided for convenient access to public transport and movement within and out of the area.

The site is adequately integrated into the adjoining communities and the major route to the city (MR 93). The internal transportation routes have divided the area into residential precincts which contributes to legibility. The footpaths are linked to the internal access roads as well as the taxi and bus routes which provides for convenient access to public transport. The movement pattern has a relatively clear structure given the topographical constraints that are presented by the site.

It has been noted that there are limited elements of place-making which people can identify with. This element is important to enhancing the environment that people live within. The community has indicated a desire to have places where they can meet and socialise. These places appear to be lacking in the development.

The upgrade of footpaths and movement systems as well as the creation of residential precincts has, in a sense contributed to legibility at the level of orientation.

It appears that the upgrade of movement systems has contributed to achieving a degree of permeability, however, the lack of usable places where people can meet or socialise is limits the extent to which this design is legible.

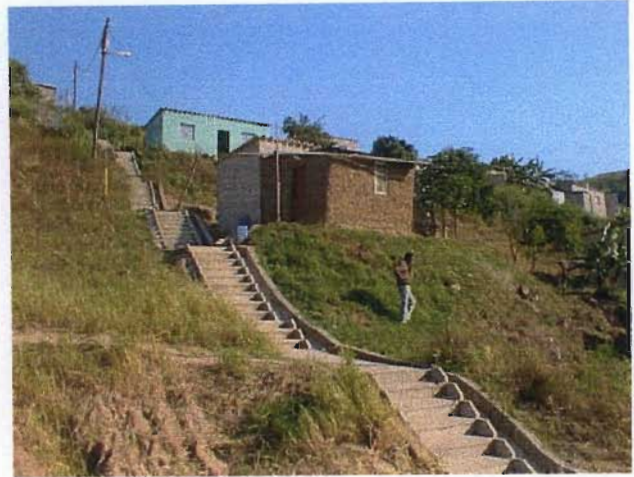
For illustrations of permeability and legibility refer to figures 1 to 6.

PERMEABILITY AND LEGIBILITY

Figure 1



Figure 2



Figures 1 and 2 provide an indication of the footpaths that were upgraded in Mshayazafe. Note that these have lights above them and are stepped to prevent people from falling as a result of the steepness. Furthermore, stormwater drains have been designed alongside these to channel the water into appropriate collection points.

Figure 3

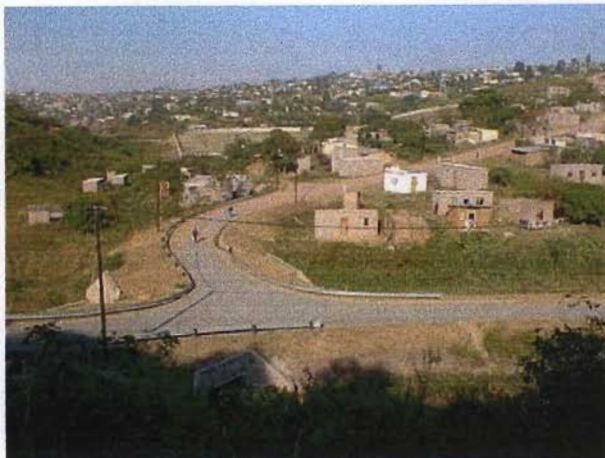


Figure 4



Figure 3 indicates the formal roads that have been upgraded and also notes where the water collects (note the culvert under the road) and is distributed. Figure 4 indicates the topographical constraints of the site. If one looks closely at the figure, it shows the footpath, adjacent to the brown structure joining the formal road which is the bus route.

Figure 5

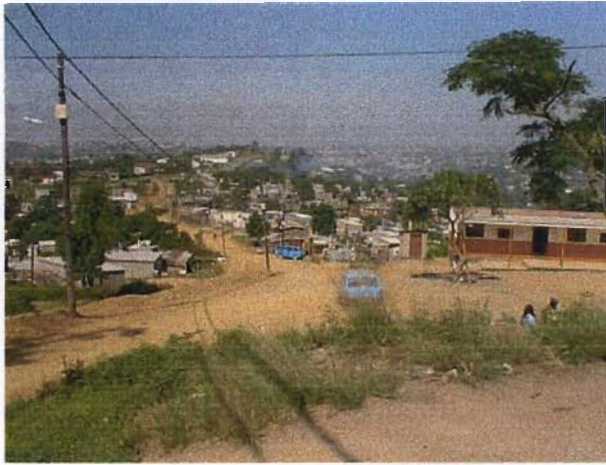


Figure 6



Figure 5 and 6 illustrate the conditions of some of the roads that were not tarred but were hardened. Figure 6 indicates a taxi route that is hardened which links into an adjoining community. Furthermore a view of one part of Mshayazafe is presented. If one notices, the taxi route is the main collector road and runs throughout the settlement to make transport accessible to most of the residents on the route. The footpaths are linked to these systems as noted in the previous illustration to ensure an ease of access to these routes.

5.3 VARIETY AND ROBUSTNESS

Criteria

1. The range of uses that have been provided for.
2. Whether these are deemed sufficient to suite the needs of the people.
3. Whether the economic opportunities are located within activity zones and nodes of concentration.
4. The current land uses that these sites have taken after the development has taken place.

Source of Evaluation Material

- Review of the layout plan identifying the facilities that were planned for the area (Refer to Map 5 after page 106),
- Community Survey,
- Interview with Designer,
- Site Visit

Findings

1. The plan indicating the facilities that have been planned (Map 5) notes the following land uses:
 - Mixed Use,
 - Education,
 - Community Facilities,
 - Cemetery
 - Commercial,
 - Agriculture,
 - Open Space,
 - Recreation,
2. The community has noted that the spaza shops and telephones are insufficiently provided for. With regard to spaza shops, the community feels that there are too few and these carry a limited range of goods. Therefore

they have to travel long distances either to Durban or Phoenix to do their bulk buying. The community also felt that the provision of public telephones was necessary for emergencies, private use as well business use. They note that they require more public phones in the area. One of the key concerns that the community have lies in the fact that they want little playlots or parks in the area where they can socialise.

3. The mixed use sites are located along the main transport routes that run through the area. It is evident from Map 5 that these sites have been located in close conjunction with the activity street concept. This aims to maximise the provision of economic opportunities along major transportation corridors. At a local scale, the bus and taxi routes are the most frequently used road networks, therefore it is rightly so that these mixed use sites are located therein.
4. It is noted that a site visit had confirmed that the majority of the sites that are "zoned" mixed use sites remain predominantly residential. There a few residents that have converted part of their household in this vicinity to engage in some form of business activity. However, there is no thriving mixed use zone with a range of goods and services in the allocated mixed use sites.

The community facility site has been converted into a community centre alongside the bus route in Mshayazafe. The other community facility site lies vacant. Most of the open spaces lie within steep valleys and watercourses and have been noted as agriculture on the plan. Some are vacant with no attention paid to their condition, whilst other areas have been used for the farming of vegetables that are sold locally. The two education sites are the primary school (larger site) and a crèche opposite it. The cemetery lies unattended to whilst its periphery is covered in uncultivated or maintained bush. There is one commercial site that has been designed for the area. This site lies vacant and undeveloped.

Conclusions

In theory it appears that the location of economic opportunities is ideal, however the number of people that use these sites for the noted purposes is

very limited. However, it should also be noted that there were many areas within the settlement where people carried out their business activities which did not lie within the activity zone. It appears that the people that occupied the mixed use sites probably do not have the additional funding to expand their household into a business. It must be noted that although there is limited control over the zoning and development in less formal areas, there is a stipulation that although a site may be "zoned" mixed use, it must comprise a residential component as part of this mixed use.

Other issues of concern are the vacant public places that have been designed. These spaces are not usable for any form of development due to their location either within watercourses or in steep topography. These areas will remain vacant unless a concerted effort is made to utilise them for some purpose, apart from a vacant bush (Refer to Figure 9 after page 130).

In essence the range of facilities that have been provided appears to respond to the needs of the people in most instances, however there is a lack in the provision of usable public places like little parks or playlots in the area, spaza shops with a larger range of goods and public telephones.

At a design level, it is noted that the provision of economic opportunities is located adjacent to the activity streets. However, a site visit has noted that a considerable proportion of these sites remain predominantly residential. Furthermore, it was noted that many of the households (not within the mixed use zone) carry out some form of business activity or the other. The reason for this inconsistency in land uses by the residents lies in the fact that there is no land use control by local authorities therefore people are not regulated in terms of what they can and cannot do. Nevertheless, it is noted that provision for mixed use sites has been made. Apart from the fact that they are well located, the existing development on the site does not conform to the proposed usage of these sites.

The range of housing types as noted by the illustrations has contributed to a variety at this level. With regard to the provision of facilities, the community has noted that there are an insufficient number of spaza shops and public telephones. The spaza shops need to carry a greater range of goods. It should be noted that the provision has been made in the design to

accommodate a sufficient number of mixed use sites. It is therefore not the responsibility of the designers to ensure that the range of goods provided suits the needs of the people. It is essentially a community issue.

In essence, the elements of variety have been provided for in the design of the area. However, the current uses of the sites does not necessarily conform to the zoning.

For illustrations of these elements refer to figures 7 to 10.

VARIETY AND ROBUSTNESS

Figure 7



Figure 8



Figures 7 and 8 are illustrations of the different housing types. These individuals run businesses from their homes. The resident from figure 7 retails eggs and sells food. His wife runs the egg business whilst he sells food at the taxi stop. The resident from figure 8 has extended his home to run a spaza shop which he will manage.

Figure 9



Figure 10

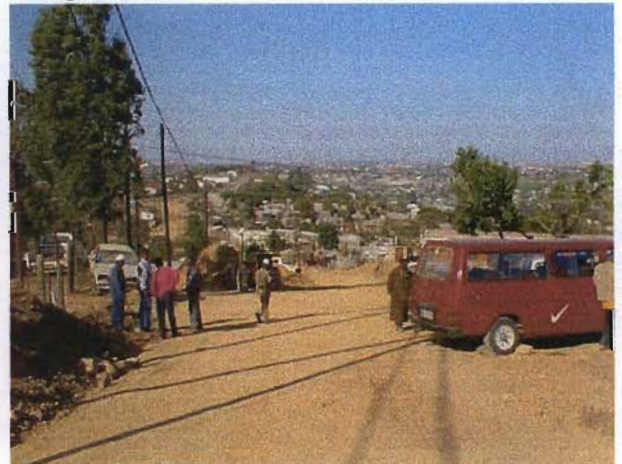


Figure 9 indicates the vacant open spaces that could be used for other purposes like market gardening. Figure 10 is an indication of the taxi stop which is identified as a key node. It is proposed that small business or mixed use activity be located at these stops because they are frequented by people. By locating business opportunities within this vicinity, it is proposed that people would support these as they are conveniently located.

5.4 VISUAL APPROPRIATENESS, RICHNESS AND PERSONALISATION

Criteria

1. Whether the provision of services and tenure has contributed to enhancing the health and safety of the people.
2. Indicate whether the area has a better visual appearance now that it has been upgraded
3. Investigate how people have personalised their homes and areas.

Source of Evaluation Material

- Community survey
- Site visit
- Interview with designer

Findings

1. The entire community acknowledged the fact that they felt safe and secure on their piece of land because they lived in a durable structure on a piece of land that could not be taken away from them. It was an asset that they can give to their children. It was further noted that the provision of services has made life more convenient and easier than before. Public transport was readily available, people could reach their destination quickly and safely even in rainy weather, they note that the area looks better now that there are no shacks and open toilets all over the place. People felt that the upgrade has given them a sense of pride and humanity with the provision of basic services and infrastructure.
2. Most of the community members have noted that the area looks much better than it has prior to the development. For an illustration of how people have made their homes more visually appropriate, refer to figures 11 to 16.
3. 90% of the households have indicated that they have made alterations and improvements to their homes. These were in various forms:

- Painting,
- Plastering,
- Concreting the floors,
- Using fancy window frames,
- Growing little gardens

Conclusion

The community noted that the upgrade of the area has contributed to a sense of safety and security in the area. An element of certainty and ownership that has emerged which was always an uncertainty given the nature of informal settlements. Now people have the opportunity to expand their homes and individualise their surroundings without any fear of being forcibly removed.

At a design scale, it was noted that funding for the provision of enhancing the built environment is limited in the in situ upgrade type developments. However, the provision of infrastructure and services has resulted in an improvement of the health and safety of people. The community themselves have noted that the area's appearance has improved now that it has been upgraded.

Illustrations of how the area has become more visually appropriate notes that individuals primarily drive this element of responsiveness. A combination of personalisation, and visual enhancement of the area can be initiated out by each individual at various scales. It has been noted that 90% of households have made improvements or alterations of some sort to their homes. Some of these are highlighted in the illustrations.

It can be concluded that the appearance of the area has been enhanced via the upgrade. Individuals have made efforts to improve on their homes by personalising them as they see fit. This has contributed to enhancing the built environment.

Illustrations of visual appropriateness and personalisation are highlighted in figures 11 to 16 and 17 to 25 respectively.

VISUAL APPROPRIATENESS

Figure 11

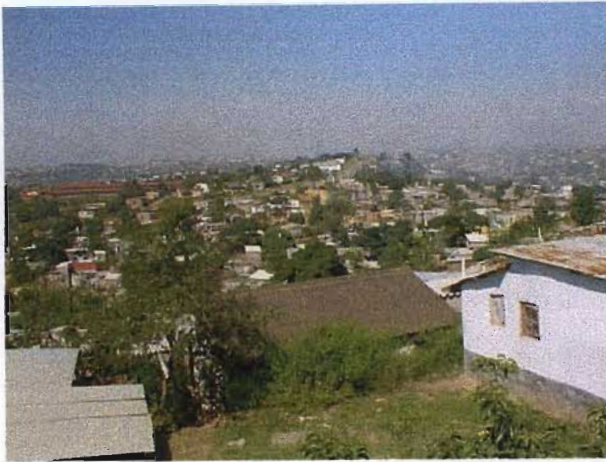


Figure 12

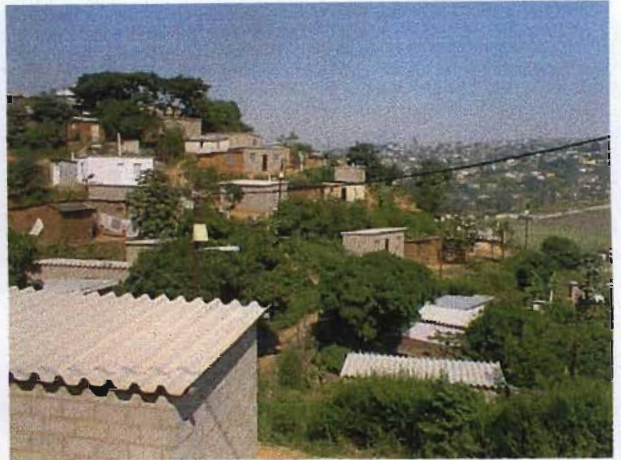


Figure 13

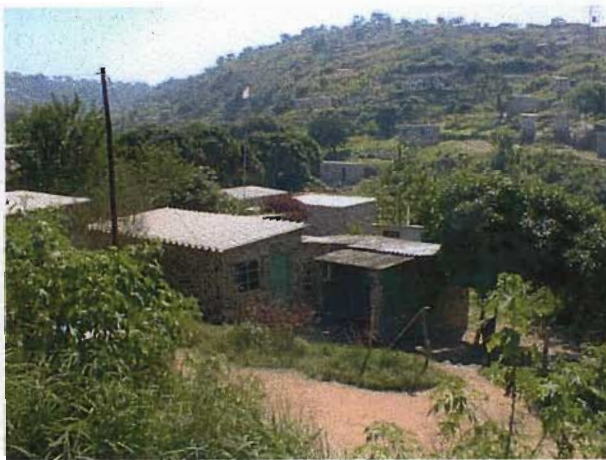


Figure 14



Figures 10 to 14 provide an illustration of how visual appropriateness can be enhanced as well as the scales at which it can operate. Figures 10 and 11 provide an indication of how trees can enhance the area. Figures 13 and 14 note visual appropriateness at an individual scale where the household can be enhanced by the planting of little gardens and trees.

Figure 15



Figure 16



Figures 15 and 16 provide a further illustration of what visual appropriateness means at the individual scale. Figure 16 indicates the use of a particular type of bricks with trimmed hedges and wooden logs as a fence. The painted door and window frame aims to blend into the surrounding green image that has been created. Figure 16 illustrates how the owner has compartmentalised his household. The pink structure is his toilet, the green his home and bright blue and white painting is his spaza shop. In this way each structure has a level of appropriateness and attractiveness.

PERSONALISATION

Figure 17

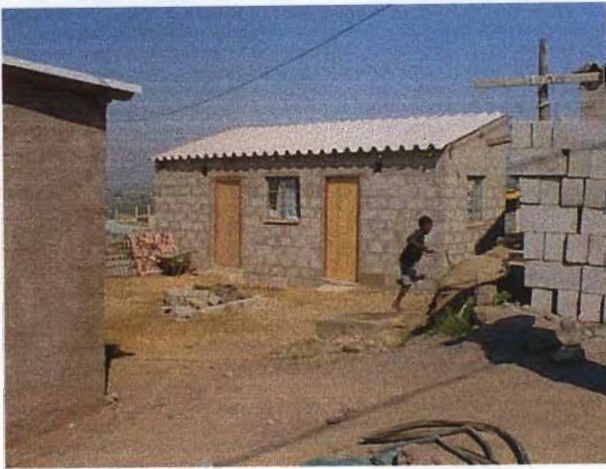
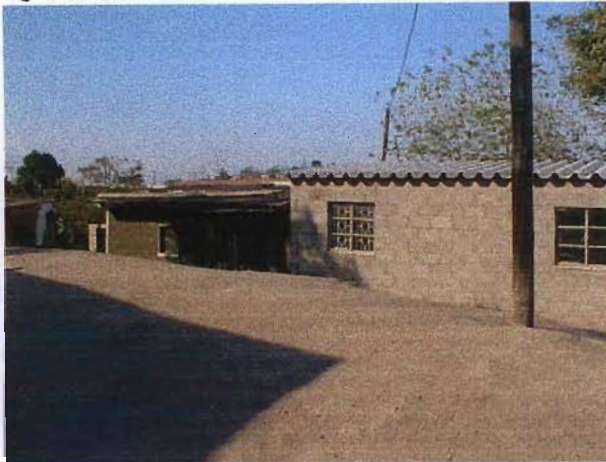


Figure 18



Figure 19



Figures 17 to 19 indicate some of the alterations that people embark upon in a desire to improve and expand their homes for various purposes. Figures 17 and 18 are residents intending to build a spaza shops. Figure 19 is an extension of a house to accommodate a newly wedded son and daughter in law.

Figure 20



Figure 21



Figures 20 and 21 highlight what can be done to a home in order to personalise it from the core structure that is provided for by the development. Figure 20 illustrates an extension from a core that has a unique type of brick, the doors are painted which match the window frame. The hedges are trimmed and a few logs are placed to identify the space that belongs to the household. Figure 20 illustrates a retaining wall and steps that built by the resident. A garden is planted in the front yard to create a private space. If one takes careful notice, there is a paved area between the two households in figure 21 which links the stairs tat have been built.

Figure 22



Figure 23



Further elements of planting gardens and painting are highlighted in figures 22 and 23.

Figure 24

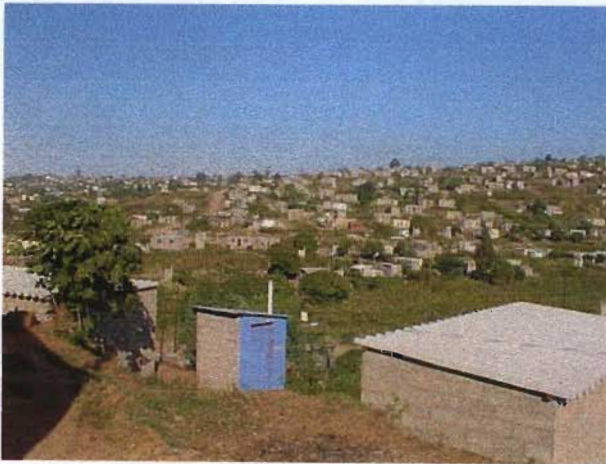


Figure 25



Finally the height of personalisation is noted in this multi coloured pit latrine illustrated in figure 25. It is noted that those who enter this facility always come out smiling because it reflects the happiness of the rainbow nation.

5.5 SAFETY

Criteria

1. Whether the road design promotes visibility and safety for pedestrians.
2. Whether there is adequate lighting for footpaths and streets
3. Whether surveillance by the community is possible.
4. Whether secure tenure has been established.
5. Whether the level of services that have been provided has enhanced the living standards of the people.

Source of Evaluation Material

- review of the road layout,
- community questionnaire,
- site visit

Findings

1. Refer to Map 4. The road layout appears does not limit visibility through entrance points at the outer edge of curves. Furthermore, there are no long stretches of straight roads without intersections that would tempt drivers to speed along these.
2. The community have noted that the lighting along the streets and footpaths have enhanced safety.
3. It is noted that the members of the community know one another and would be able to identify a stranger should he enter private spaces.
4. Secure tenure has been finalised. Residents are currently awaiting their Title Deeds that are being processed.
5. Individuals have noted that the provision of services and infrastructure has enhanced the living environment to ensure that they live in a durable structure on their own piece of land. Furthermore they note that

the development has improved their living standards and has made life more convenient in many respects.

Conclusion

With regard to the element of safety, all the requirements that have been set out in the evaluative criteria have been adequately satisfied, hence the proposition that the development has contributed to making Mshayazafe a safer place to some degree in design but to a greater extent in the provision of services. Essentially, Safety has emerged from the provision of secure tenure and the provision of basic services and infrastructure. People have noted that they feel secure because they own a piece of land and live in a durable structure, which cannot be taken away from them. The provision of services has resulted in an improvement of their living standards. This has instilled a sense of pride in them such that they are motivated to improve on their homes and personalise them to suite their needs. Finally, the upgrade has resulted in an element of safety and security for the residents of Mshayazafe.

5.6 COMMUNITY PARTICIPATION

Criteria

1. Identify if the community were happy with the representative body.
2. Determine whether the community was aware of the mass meetings and community workshops.
3. Establish whether the needs of the community were addressed.
4. Establish whether the community understood the development objectives and the constraints that the development was to operate within.
5. Determine whether the community was given a range of options to choose from.
6. Investigate whether the community was aware of what the levels of services that they were to receive were and whether they were happy with these.
7. Investigate whether they contributed to the decision making process.
8. Establish whether the community was happy with the services they received once the area has been upgraded.

Source of Evaluation Material

Using the information gathered from the:

- Community Survey

Findings

1. The community survey highlighted that they were satisfied with the representative body.
2. It is noted that the community was duly informed about the mass meetings and workshops.
3. All identified needs were addressed.
4. The community was aware of the constraints of the development and understood the issues that were dealt with in these workshops and meetings as they were easy to comprehend because they were

translated. It is also noted that the workshops gave them the opportunity to voice their opinion about issues that they were uncertain about or not satisfied with.

5. They acknowledge that the range of options were presented to them and the ultimate choices made were acceptable to them.
6. They were well aware of the services that they were to receive prior to the development taking place, and noted that they were satisfied with the selected option.
7. Most of the respondents noted that the issues that concerned them were adequately dealt with at the meetings and therefore did not need to contribute apart from agreement.
8. All of the respondents noted that they were satisfied with what they received as they got what they were promised.

Conclusion

It is noted that the community was actively involved in the development process at all stages of the project and was ultimately satisfied with the services that they received. The element of community involvement has been highlighted throughout the project. The community acknowledges the fact that they were fully aware of the development parameters and the level of services they were to receive. It should also be noted that the community ensured that they attended the community workshops on a regular basis. There was not a single respondent that did not attend at least one meeting.

The element of participation has been identified as a critical factor to enable the project to run "smoothly". Within the Mshayazafe development, the community has contributed to the upgrade process from the inception stage through to the final design and construction stage. The approach that was adopted by the professional team was to firstly ascertain the credibility of the Development Committee. Once this was determined, the necessary planning processes were initiated by presenting the options that were available to the community and

giving them the opportunity to make the final decisions in terms of their service levels.

Essentially, the approach to community participation by the development team has contributed to the successful implementation of the project and the satisfaction that the community has indicated at the services that they received.

5.7 CASE STUDY FINDINGS AND RECOMMENDATIONS

The research process that has been embarked upon has attempted to modify a set of analytical tools that emerge from a First World school of thought. The findings that emerge from the case study evaluation will attempt to address the following issues:

1. Is Mshayazafe a successful Responsive Environment in terms of all the indicators?
2. Could the design be improved in order to make the area more responsive? If so, how?
3. Are there limits to creating a Responsive Environment in an in situ upgrade development? If so, what are these and can these be overcome?

5.8 IS MSHAYAZAFE A SUCCESSFUL RESPONSIVE ENVIRONMENT?

The upgrade of the Mshayazafe settlement can be perceived at one level to have responded to the needs of the community. It has provided the necessary infrastructure and services to uplift the living standards of the people in the area. The development has instilled a sense of security into people through the provision of a durable structure and secure tenure. This has motivated people to improve and alter their homes to suite their needs. The successful implementation of the development can be attributed to the effective role that the community has played in the development process. However, with regard to whether the development has provided a Responsive Environment, there are elements that are lacking within this development.

5.8.1 Permeability and Legibility

Overall

Given the fact that the approach that has been adopted was to upgrade the existing movement systems, the road layout is appears permeable within this context. A clear hierarchy of roads (identifiable through their width and surface material) has divided the area into residential precincts. The residential access streets and footpath systems are linked to the major routes. Greater levels of choice in terms of routes for people have been created, which has made access into and out of the area more convenient. These choices emerge from the fact that people can get from one place to the another using a range of routes that are also usable at all times as opposed to the limitation presented by inclement weather which has contributed to ease of movement.

Integration

The taxi and bus routes have provided the opportunity for internal access to public transport, which has promoted convenience and time saving for people. The major road systems are integrated to the adjoining communities, and are linked to the major transport corridor of the MR 93 that leads to the city which has enhanced the degree to which the area is integrated at a local and sub regional scale. The provision of streetlights has contributed to ease of access at night.

Provision for long Term Interests

It is noted that implicit in the design of informal settlements is the fact that they are seen as a basic provision for people. It is assumed that once people become more affluent, they tend to move into more "formal" areas like suburbs. However, the questionnaire/interview that was carried with the community has highlighted the fact that the residents would never move out of the area. The community development worker that accompanied the interviewer asked some of the respondents if they had won the Natal Lotto, would they not want to own a beautiful home in a plush area? Every respondent asserted that Mshayazafe was his or her home and they would not move. They claimed that they would use the money to improve on their homes. It is accepted that the extent to which their response is a true

reflection of what they would do is questionable. Nevertheless, it is an indication that they view the area as their home and have a certain bond to it

Linked to this element of permanence emerges an interesting observation. The Mshayazafe design has made extensive use of footpath access. In most cases this was due to topographical constraints. However, there are footpaths that are located within topography that is suitable for the construction of a road but the budget would not permit this. It is recommended that provision be made for those paths that lie within developable topography to be upgraded to a road. The City of Durban has stressed that their policy on footpaths is that no vehicular access must be made possible. They would not approve any plan that does not prohibit vehicular access within these paths. Therefore, it might appear that planners are constrained by this limitation. However, it is recommended that those paths that can be upgraded to a road at a later stage should be designed as a road, with one portion hardened and raised to prevent vehicles traversing them, whilst the other half of the road remains as a road reserve. Essentially these would be registered in the General Plan as roads but would appear as paths until they can be upgraded by the Local Authority.

This recommendation is very pertinent to upgrade developments that are constrained by finances. The provision of road reserves caters for potential long term development and upgrade from a footpath. The merit of this recommendation lies in the following example:

If Mr Kuzwayo, who lives adjacent to a potentially "upgradable" footpath, saves some money over a ten year period, and thereafter purchases a car, he may have the opportunity to bring it home as opposed to parking his vehicle elsewhere or having to move out of the area because he owns a car.

What this example implies is that if the provision for further upgrade can be made, designers should not deny people this opportunity. Furthermore, engineers have noted that the costs that are associated with the construction of a footpath within a road reserve are the same as that of a footpath alone. Planners need to take into account the long term development of site and not only provide short terms responses.

Provision of Place Making Elements

In view of the fact that the design approach identified the existing movement patterns and upgraded them, it is noted that people would easily orientate themselves within the area. Apart from this element of orientation, there are a limited number of place making elements that have been designed for Mshayazafe. There are no usable public places or spaces. The provision for the establishment of facilities for the future development of the area is limited to the school and crèche (which were already existing).

One of the key elements that have been noted by the community is the apparent lack of usable public spaces within the area. To some degree it is accepted that the site presented topographical constraints and vacant land for use as public open space was limited. This layout typifies the general approach that has been afforded to in situ upgrade type developments namely, the mere provision of basic services. There has been a limited focus on enhancing the relationship between people and the physical environment.

Creation of Community Spaces

If one takes notice of the footpath design, they are all somehow linked to the major transportation routes. It is recommended that where these paths converge, mini squares or circles or provision of trees and benches can be introduced to provide shelter from the heat or to take a break from a tiring walk, or even to have a chat with a friend or neighbour. It is understood that there are limitations to the extent to which this can be done, but what is proposed is that a conscious effort needs to be made to enhance the qualities of place making. Planners need to promote or invoke the element of integration of people through the provision of these type of elements.

Limited Focus of Housing Policy

To some extent it is acceptable that the financial constraints outweigh the possibility for the provision of these qualities. Nevertheless, it is argued that if a conscious effort is made, this can be catered for in a design. One of the key limitations within the provision of low cost housing is directly linked to the Provincial Housing Board Subsidy Application. The primary elements of the financial summary of costs are rooted within engineering costs, professional fees, land costs etc., however no mention is made for the provision of public

facilities. The following table is a typical breakdown of costs that appears within the Township Establishment Document.

Table 5: Typical Example of a Financial Allocation from the Housing Board

	No. of Sites	
	Cost per Site	Total Cost
Land		
Professional Fees		
Project Management		
Town Planning & Township Est.		
Geotechnical		
Civil Engineering (Design)		
(Supervision)		
Land Surveying		
Sales Administration		
Conveyancing		
Contingency		
SUB TOTAL		
Servicing Costs		
Roads & Stormwater		
Sanitation		
Electricity		
SUB TOTAL		
Total Selling Cost		
Residual/Topstructure		
Total Subsidy		
Less Project Facilitation		
Balance of Subsidy Due		

Note: Included in the Project Facilitation is the following: Administration Fee, Escalation: Finance Charges, Capacity Building, Compensation
 Source: Scott Wilson Planning and Development Resources

This highlights the fact that there is no mention of the provision of social facilities. It should be noted that reference is not being made to the provision of schools, clinics, crèches etc. – these facilities are implicit to some extent within the provision of homes provided that there are sufficient thresholds. The focus is the public realm!

Trees and Park Benches

The total development costs that were associated with Mshayazafe is R17 500 000. It is imperative to note that this money belongs to the community. It is the composite of their subsidy allocations. The costs that are associated with the development are worth millions of rands. It is submitted that within the prescribed project budgets, an effort should be made to cater for the provision of social facilities. Hypothetically, if R100, 00 from each subsidy were utilised for the provision of park benches and the provision of trees within mini squares, a total of R100, 000 would be available. This is deemed a sufficient sum to provide some elements in the area that promote place making or legibility.

Provision of Public Spaces

The community of Mshayazafe hosts 1 000 residential structures, yet there is no provision for playlots, parks or community spaces that are "*usable*". Site sizes within informal settlements are relatively small - in the region of 150m² in the flatter portions and approximately 300m² in the steeper areas to accommodate a cut and fill embankment. There is limited space for children to play and even for adults to get together. An effort needs to be made by planners and Local Authorities to tap into the subsidy allocations to ensure that these facilities are introduced into the region. After all, it is the people's money that pays for professional fees and other related costs, the planners and authorities should consider the provision of elements that enhance the public realm.

5.8.2 Variety and Robustness

Limitations of Design and Development Control

At the outset it is imperative to note that planners and designers cannot determine the use that a site will entail. The provision for a range of mixed use sites or community sites does not imply that these land uses will take place. In an informal settlement upgrade, it is noted that there are no development control initiatives that are effectively imposed by the Local Authorities. This is primarily due to the fact that the prescribed zoning guidelines presented in the town plan are not necessarily adhered to by the residents. Furthermore, the regulations provided in the Less Formal Township Establishment procedures can override any restrictions that may be prescribed by building regulations or development control. In essence these areas are ridden of any development control which leaves residents with the opportunity to "do as they please" with their site.

Existing facilities within the area

Residents in the area of Mshayzafe have indicated that the provision of public telephones is too limited. Furthermore it is noted that more spaza shops are required in the area, which need to carry a greater range of goods and services. These particular needs as identified by the community cannot be addressed by planners primarily because the extent to which these facilities occur on the site is not in the planner's control. However there are implications for their design.

Relationship between Design and Land Use

Planners can attempt to locate mixed use facilities in areas where there is an identified or prescribed support threshold. However, whether these sites are actually used for these purposes cannot be ensured. A site visit to Mshayzafe has confirmed that many of the sites that were located within the "mixed use zone" assumed a residential purpose only. The reasons for these sites not being utilised for mixed use purposes cannot be speculated, however, it is submitted that the design has catered for this need. It has however not been realised.

Location of Mixed Use Sites

A critical examination of the location of mixed use sites indicates that these have been designed along the major transportation corridors of the area. In terms of planning theory this “mixed use activity” appears suitably located. The reality however is that most of these sites remain residential in use. A recommendation that might contribute to the establishment of a viable mixed use zone is to identify during the preliminary stages of the project those households that engage in some form of business activity and advise them to relocate to a more suitable location (the activity streets). The reality is that the relocation might not occur however if planners are convincing and present options to people they may be persuaded into moving or at least be aware of the merits of being located at these points. The objective of this exercise is for planners to highlight the merits of being located along the key nodal points as opposed to their present locality to informal entrepreneurs. However, it is accepted that this recommendation is context specific and might not be acceptable to these residents as the issue of relocation is a sensitive one.

Creation of Nodes as Opposed to Activity Streets

A second observation regarding the location of mixed use sites in the area relates to the provision for 110 mixed use sites. Evidently only a few of these sites actually engage in mixed use activity indicating that this provision is excessive. It would be ideal if nodes at key intersection points are created as opposed to activity streets. These nodes should entail a few mixed use sites located adjacent to other community facilities (like crèches or schools) should be designed. These mixed use sites can house those residents that are engaged in some form of economic opportunities or new residents.

Identification of potential and existing entrepreneurs

A suitable approach to provide an appropriate number of mixed use sites is that during the initial stages of the project, an attempt must be made to identify the number of households that are interested in engaging in business combined with those that currently are. Thereafter it should be indicated to these individuals that these households should ideally be located within the identified nodes. In this way the planners can provide the appropriate response to an indicated intention. Should this objective be realised, it is submitted that a viable activity node could be created. It is assumed that if business thrives in the area it might tempt other adjoining landowners to do

the same. This in turn would result in the node being expanded and result in the creation of activity street development. In view of the fact that there are no land use control mechanisms in place to prevent any business activity from taking place, there are limited restrictions for business opportunities to occur wherever an individual sees fit. Nevertheless, this does not imply that this is certain to happen as people might be quite content with their present location and do not wish to move. Planners are constrained by this reality but that does not mean that an effort should not be made.

Promotion of Awareness

It was observed through a site visit that some of the areas within water courses are used for agricultural purposes. The produce is sometimes sold or is used for subsistence purposes. If the community is informed of the merits of agricultural trade and provision is made for a suitable site where people can sell their fresh produce, the informal economy can be enhanced. These kinds of sites should also be located within the prescribed nodes that have been recommended.

Relationship between suitable location of land uses and actual use

It is noted that a commercial site has been provided for in the development. This site is located along the taxi route of the area adjacent to a community facility and an education site. It currently lies vacant. Although it is suitably located adjacent to the MR 93 and lies at the entrance to the community area alongside an education site and a community facility site, no development has taken place. This highlights the fact that suitable localities do not necessarily imply that the intended land uses would occur. The planners cannot be faulted for the creation of a commercial site at a suitable "planning location" where it is envisaged that appropriate thresholds of support would exist. However it highlights the realities of these areas. It can therefore be assumed that the residents of the area do not have the necessary resources or the desire to create a commercial facility where they can carry out their business from their homes.

The provision for a range of land uses within an upgrade type development is ideally desirable. However, the case study of Mshayzafe has indicated that although in principle some land uses are suitably located, there is no certainty that the land use would conform to the prescribed "zoning". Nevertheless it is

submitted that a conscious effort needs to be made by planners to make residents aware of the opportunities that an area presents. However, it is also noted that there is no guarantee that this awareness would result in any tangible difference. Despite this reality, it is noted that planners need to take a proactive role to provide platforms that would assist in the creation of vibrant local economies of scale within an area which will contribute to the long term development of the area.

5.8.3 Visual Appropriateness, Richness and Personalisation

These elements have all been addressed simultaneously because they have been identified by planners as elements that cannot be catered for in the design process, given the constraints of the subsidy allocation. The upgrade of the area has contributed to visual appropriateness by virtue of the fact that there are formal structures that have been constructed as opposed to shacks. The ablution facilities are enclosed and are more hygienic and visually appropriate. A sense of security and permanence has been instilled into people in view of the fact that they own a piece of land which serves as an asset that can be passed on to future generations. Most of the residents have altered or extended their homes in some form or the other by personalising it to suite their needs. Therefore, to some degree the area has become more visually appropriate and an element of personalisation has been highlighted. However, this is by virtue of the fact that people have initiated these changes through a sense of pride and security as well as the fact that they have been given reason to extend their homes.

Essentially, the provision for these elements of responsiveness have been identified as limited by planners. It is acknowledged that there are constraints to creating visual appropriateness and richness. However, if one takes note of some of the recommendations that were made with regard to the provision of public spaces, it is submitted that the provision of these types of facilities would enhance these qualities. Personalisation is an element that highlights the extent to which people change their personal environment to place their own stamp of individuality in a particular area. It is therefore acknowledged that planners cannot design for personalisation as it is primarily an individual expression of preference.

5.8.4 Safety and Participation

It is noted that these elements are addressed simultaneously as a result of the fact that the evaluation is based primarily on the input from the community survey. There is a limited extent to which these can be evaluated through a set of plans, however, for the purposes of this evaluation they will be evaluated in terms of the extent to which they have contributed to the responsiveness of the design to people's needs.

The active role that the community played in the development process has contributed to beneficiary satisfaction. Through effective communication between the professional team and the community, the beneficiaries have indicated that they were well aware of the parameters of the development in terms of their options. The note that they are pleased with the services that they have received and this relationship between the community and the professional team has resulted in the successful implementation of the project.

Therefore the provision of basic infrastructure and services in Mshayazafe is seen as responsive to the needs of the community as identified prior to the development. This has resulted in an upliftment of people's living standards and has contributed to promoting a sense of pride and security for people.

5.9 CONCLUSION OF FINDINGS

It is submitted that the Mshayazafe upgrade possess elements in the design that are responsive to the needs of people. As a consequence of this response, it has instilled within people a sense of pride and security. However, apart from the fact that the development is an appropriate response to people's needs, it is submitted that the design has focussed to a great degree on the provision of shelter rather the provision of a vibrant rich environment that enhances the relationship between people and the physical environment. It is accepted that informal settlement upgrading is an inherently complex process that is constrained by a range of variables. The development process is somewhat guided by the following issues:

- The existing settlement pattern,
- The PHB subsidy allocation,
- Topography,
- Engineering feasibility,
- Reaching appropriate compromises between beneficiaries,
- Limited vacant space,
- Minimising relocations,

These variables are in some instances severe constraints to the development process. They limit the extent to which planners have flexibility to design creatively. Despite these limitations, it is submitted that the need to provide sustainable environments that cater for the long term development of people needs to be incorporated into the design process. It is asserted that Responsive Environments are elements of design that enhance the development of people. A review of the indicators within the prescribed criteria has highlighted that there are positive and negative elements that have emerged.

Overall, the development has contributed to an upliftment of people's lifestyles. The design has made movement and access to public transport more convenient, it has provided incentive for people improve on their households and place their own personal stamp of individuality on their homes, it has instilled a sense of security in the lives of the poor, and finally it has contributed

to making the area a better place. However, there the design does limit the extent to which it can be identified as a Responsive Environment. The design lacks elements of place making and creativity. The focus that has been afforded to the public realm is limited to the detriment of the community. There has been no provision for usable public space that can promote the integration of people. This factor has been identified as limited in most low cost housing development. Sadly, Mshayazafe does not deter very much from this norm.

In conclusion, it is acknowledged that the extent to which a design can be enhanced is severely restricted at a policy and design level by a range of variables. However, changes to present approaches can only be made if an effort is made by planners and designers. Given the fact that the room for flexibility is limited, change can only take place if sufficient focus is given to the provision of positive environments. In conjunction with the provision of adequate shelter and access to basic services, it is recommended that elements that enhance human development should form an integral part of the design process. It is submitted that if this approach is given sufficient attention, it would act as a catalyst to promote creative thinking.

CHAPTER 6

6 STUDY CONCLUSIONS

The case study of Mshayazafe has provided the opportunity to investigate how the prescribed indicators of Responsive Environments could be evaluated within an in situ upgrade. The study that was embarked upon aimed to achieve the following goals:

- Identify what constitutes responsive environments,
- Locate the indicators of responsiveness within the in situ approach,
- Formulate an evaluative criteria,
- Test this criteria using a case study,
- Determine whether the design is in fact a responsive one.

It is noted that the Responsive Environments concept is a school of thought with no prescribed universal definition. An attempt however was therefore made to understand what it would mean within the context of providing better places. The indicators of responsiveness were categorised such that each one could be individually broken down into its component parts. Nevertheless, it was noted that each element of responsiveness was complementary and mutually reinforcing to the other. It is also noted that although this concept is not a particular theory, the search for related theory in terms of an understanding of what the indicators meant was relatively successful and thought provoking.

The review of the literature within the in situ approach has noted that informal settlements are characterised by a particular set of key variables. These are primarily that one is dealing with an existing settlement pattern, and the other is the development is carried out within the prescribed subsidy allocation. Therefore the criteria that was formulated needed to be located within these elements. It is perceived that the input provided by Consultants was useful and informative to determine the applicability of the indicators as well as the extent to which they can be applied within the set development context.

The essence of this exercise attempted to translate a theoretical framework into an evaluative framework. This entailed an understanding of what responsive

environments were as well as an identification of what the elements of responsiveness were. Once these were established they were translated to a format (through a process of interviews with professionals) whereby they were modified to suite the given context. The extent to which this translation of indicators has taken place has provided a platform to assess the case study. Therefore this objective as outlined in the initial section of this document has been realised.

It was useful to note that design within in situ upgrades cannot merely be evaluated as a desktop exercise. There are a range of role players including a professional team and a beneficiary community. In order to evaluate this design appropriately it was necessary to carry out a set of interviews/questionnaires with the designers of the area as well as the beneficiary community. The findings from these research processes has contributed to a better understanding of the area as well as an informative piece of research that could be utilised in the evaluation stage. It is submitted that the various processes that were embarked upon to inform the proposed evaluation was appropriate and informative.

One of the questions that have emerged as a result of the use of Responsive Environments as an analytical tool, related to whether the indicators themselves are useful and/or appropriate method to evaluate an in situ upgrade given the fact that it is rooted within First World development? It is submitted that within the Durban Metro, at a policy level, there is limited guidance apart from engineering input to direct the development of in situ upgrades in a manner that enforces the creation of meaningful environments. In addition to this development control in upgrade developments is virtually non existent. Therefore, the design component of in situ upgrades needs to be incorporated within a framework that aims to enhance the lifestyles of the economically challenged by providing not only the infrastructure for access to basic services, but rather the creation of an environment that is inherently complex, but also enhances human well being and human development. Therefore the Responsive Environment school has provided a framework which can be used as a measure of what is responsive and what is not.

In addition to the appropriateness of these indicators, it is submitted that Consultants have noted the merit of these indicators, however, it is asserted that they need to be contextualised within the constraints that the in situ process

presents. In order to do this an understanding of in situ development needed to be undertaken such that these indicators can be modified and effectively used.

An attempt was made to consider the replicability of the evaluative criteria. It is perceived that to a great extent, that this has proved to be an informative method of evaluation and can to some degree be replicated within other projects. It should be noted that each development context is bound by a set of variables that present variances in the constraints that emerge. Therefore these indicators need to be accordingly modified to suite each development context.

In essence the study has been both informative and thought provoking. It highlights the fact that responsiveness is not just about the provision of a shelter to the poor, rather it is the search for high performance urban settlements. Given the fact that more than 50% of all housing projects within Metropolitan Durban are in the form of in situ upgrades, it is time that planners, authorities and other related professionals make a more conscious effort to search for Responsive Environments within a prescribed set of constraints.

Finally it is concluded that the provision of low cost housing is not simply one of ensuring the provision of adequate levels of shelter, although this is clearly part of the problem. The real issue is creating total settlements which are pleasant places in which to live: settlements which not only accommodate the complex patterns of human needs and activities that characterise human life, but which do so in a way such that those activities are enriched and that an appropriately wide range of economic and social opportunities are created. Moreover, they need to be able to address the dynamics and uncertainties of growth and change. No settlement is a static, completed entity: settlements are always in the process of becoming. They need to be able to accommodate growth in such a way that it enriches and improves human development over time.

To address this problem, therefore, it is necessary to focus not just on shelter alone, but on achieving urban qualities through innovative and creative responses.

7 BIBLIOGRAPHY

- African National Congress (1994) **THE RECONSTRUCTION AND DEVELOPMENT PROGRAMME: A POLICY FRAMEWORK,**
Umyana Publications, Johannesburg.
- Altman, I
Zube, E.H (1989) **PUBLIC PLACES AND SPACES,**
Plenium press, New York
- Badshah, A.A, (1996) **OUR URBAN FUTURE: NEW PARADIGMS FOR EQUITY AND SUSTAINABILITY,**
Oxford University Press, South Asia
- Behrens, R.B
Watson, V (1996) **MAKING BETTER URBAN PLACES: PRINCIPLES AND GUIDELINES FOR LAYOUT PLANNING,**
UCT Press, University of Cape Town
- Bentley, I
Alcock, A et al (1985) **RESPONSIVE ENVIRONMENTS: A MANUAL FOR DESIGNERS,**
The Architectural Press, London
- Carr, S
Francis, M
Rivlin, L. G
Stone, A. M (1992) **PUBLIC SPACES,**
Cambridge University Press, New York
- Chapman, D (1996) **CREATING NEIGHBOURHOODS AND PLACES: IN THE BUILT ENVIRONMENT,**
E & F. N Spon, London

- Copely, J (1993) **PARTICIPATION AND DEVELOPMENT – SOME NOTES ON THEORY AND PRACTICE,**
Unpublished MTRP Dissertation, UND
- Correa, C (1989) **THE NEW URBAN LANDSCAPE: URBANISATION IN THE THIRD WORLD,**
Concept Media Ltd: Butterworth Architecture, North America.
- Department of Housing (1994) **WHITE PAPER: A NEW HOUSING POLICY AND STRATEGY FOR SOUTH AFRICA**
- Desai, V (1995) **COMMUNITY PARTICIPATION AND SLUM HOUSING: A STUDY OF BOMBAY,**
Sage Publications, Dehli
- Dewar, D (1998) A passion for the Disciplines **HOUSING IN SOUTHERN AFRICA,**
August 1998
- Dewar, D
Uitenbogaardt, R. S (1995) **CREATING VIBRANT URBAN PLACES: A PRIMER,**
University of Cape Town, Cape Town
- Dewar, D
Uitebbogaardt, R. S (1991) **SOUTH AFRICAN CITIES: A MANIFESTO FOR CHANGE,**
University of Cape Town, Cape Town
- Dewar, D (1984) “Urban Poverty and City Developments – some perspectives and guidelines”, published in **Architecture S A** March/April 1984 Edition

- Gruen, V (1973) **CENTRES FOR THE URBAN ENVIRONMENT: SURVIVAL OF THE CITIES,**
Van Nostrand, Reinhold, New York
- Hamdi, N (1991) **HOUSING WITHOUT HOUSES, PARTICIPATION, FLEXIBILITY, ENABLEMENT,**
Van Nostrand, New York
- Haricharan, S. (1994) "Community Participation and Housing",
Unpublished essay, Masters Programme in
Housing Studies, University of Natal
- Hindson, D
McCarthy, J (1994) **HERE TO STAY: INFORMAL SETTLEMENTS
IN KWAZULU NATAL,**
Indicator Press, University of Natal.
- Iyer, N. K (1995) **TOWARDS RESPONSIVE ENVIRONMENTS:
A CASE FOR URBAN DESIGN AND
PARTICIPATION,**
Unpublished MTRP dissertation, UND
- Lozano, E. E (1990) **COMMUNITY DESIGN AND THE CULTURE
OF CITIES,**
Cambridge University Press, USA
- Lynch, K (1981) **GOOD CITY FORM**
MIT Press, Massachusetts
- Marcus, C. C
Francis, C (1998) **PEOPLE PLACES, DESIGN GUIDELINES
FOR URBAN OPEN SPACE,**
International Thomson Publishing, Inc

- Markewciz, A. J (1992) **DESIGNING FOR CHANGE IN THE SOUTH AFRICAN CITY,**
Unpublished M.U.D Dissertation to the University of Witwatersrand
- Metro Housing Service Unit (1998) Papers presented at the Housing Conference at The Royal Hotel, 20-21 August 1998
- Nasar, J. L (1998) **THE EVALUATIVE IMAGE OF THE CITY,**
Sage Publications, California
- Neary, S. J
Symes, M. S
Brown, F. E (1994) **THE URBAN EXPERIENCE: A PEOPLE ENVIRONMENT PERSPECTIVE,**
E and F. N Spon, London
- Pressman, E. P (1981) **CREATING LIVEABLE CITIES, CONTRACT VOL. 13 NO. 2/3,**
University of Waterloo, Canada
- Rapoport, A (1977) **HUMAN ASPECTS OF URBAN FORM: TOWARDS A MAN- ENVIRONMENT APPROACH TO URBAN FORM AND DESIGN,**
Pergamon Press Ltd, International
- Seneque Smit,
Maughan Brown &
Associates cc (1994) **MSHAYAZAFE PRE DESIGN REPORT,**
Durban
- Smit, D (1994) Article, "All leaders will be tested to the full in the next couple of years" Masters In Housing Programme Reading File, U.N.D

- Smit, D &
Siyakana Consulting
Company (Pty) Ltd (1996) **INVESTIGATION OF APPROPRIATE
HOUSING DELIVERY SYSTEMS FOR LOCAL
GOVERNMENT,**
Durban
- Stollard, P (1991) **CRIME PREVENTION THROUGH HOUSING
DESIGN,**
T. J. Press (Podstow), Ltd, Great Britain
- Tilman, H (1998) "Integration or Fragmentation: The Housing
Generator Competition for South African Cities"
Published in **Housing Generator**, 1998 Edition
- The Urban Foundation (1990) **THE IN SITU UPGRADING OF BESTER'S
INFORMAL SETTLEMENT,**
Durban

8 APPENDICES

Appendix 1: Interview with professional town and regional planners and urban designers.

Appendix 2: Interview with officials from the Metro Housing Unit.

Appendix 3: Interview with designer for Mshayazafe.

Appendix 4: Community questionnaire.

Appendix 1

As noted, three of the leading town and regional planning consultants and Urban designers were interviewed. They are

- Nathan Iyer from The Iyer Rauthoug Collaborative
- Rob Kirby from Kirby and Associates
- Tony Marckewicz from Markewicz English and Associates cc.

The structure of these interviews was as follows:

1. Introduction
2. An outline of the objectives of the study.
3. The aim of the interview.
4. How the information received would inform the research.

Key Questions:

- A) What the predominant approaches that you take in designing in situ upgrade type developments?
- B) Do you think that the elements of responsiveness as identified by Bentley et al are an appropriate analytical tool to evaluate an in situ upgrade?
- C) To what extent is it possible to implement these indicators from a design perspective within the context of in situ upgrading?
- D) How does one identify these elements within a settlement (their spatial implications)?
- E) How does one evaluate these (what methods or means does one implement in order to assess these indicators, e.g. how does one assess whether a layout is legible)?

The information was collated via Dictaphone as well as notes that were taken throughout the interview. Each of the elements of responsiveness were discussed within the prescribed questions. Each interview took approximately an hour and fifteen minutes.

Appendix 2

This structured interview was guided by the following objectives:

- To identify the current housing statistics within the Metro,
- To identify Metro Housing's Policy toward informal settlement upgrading.

The following questions were deemed appropriate to realise the said objectives:

- A) What are the current housing backlogs within the Metro?
- B) What policy guidelines have put in place in order to guide the development of in situ upgrading?
- C) To what extent do these policy guidelines relate to the provision of better urban places?

The information was collated via telephonic interviews and meetings with Faizel Seedat, Allan Gerber and Miss Laura Bedford from The Metro Housing Unit.

Appendix 3

This interview was guided by the following objectives:

- To determine the preliminary design considerations as well as the constraints that the development presented,
- To determine the extent to which whether Mshayazafe was designed within a Responsive Environment framework.

In order to achieve these goals the following questions were identified as appropriate:

- A) Was the design of Mshayazafe influenced by the Responsive Environments indicators? If so, to what extent were these implemented within each of the prescribed indicators?
- B) Are these indicators a useful tool to use as a tool to guide in situ upgrade development?

The information was recorded via Dictaphone in conjunction with notes that were made during the course of the interview. Thereafter it was transcribed to be located within the appropriate sections.

Appendix 4

The community questionnaire was administered to 50 households. Each interview took approximately twenty minutes. Simon asked the questions from the Zulu questionnaire, and the responses were translated such that the interviewer could record the information on the English questionnaire.

COMMUNITY QUESTIONNAIRE

At the outset it should be noted that this survey aims to develop an understanding about how you feel about Mshayazafe now that it has been upgraded. The purpose for this is to assist me in completing my research on informal settlement upgrading. Your comments and input would serve as important pieces of information to inform my studies. This research does not aim indicate that there are more services that will be introduced or more development in the area. It is purely for research purposes.

Questions

1. Site No.
2. Occupation
3. Household position (Father, Mother, Grandfather etc)
4. How long have you been living in Mshayazafe years?
5. How did you find out about the development that was to take place in your area? (e.g. through the development committee, friends, meetings etc.)
.....
 - 5.1 Do you think that the development Committee represented you effectively and addressed all your needs? (Yes/No)
 - 5.2 Were you aware that there were community workshops and mass meetings (Yes/No)?
 - 5.3 If yes, how many of these did you attend (few, most, all)
 - 5.4 Was it easy to understand the issues that were discussed (Yes/No)?
.....
 - 5.5 Explain (they were made simple to understand, they were translated)
.....
.....
 - 5.6 Did you contribute to the discussions (Yes/No)?
 - 5.6.1 Explain (e.g. the questions that you had were dealt with, you understood everything and had no uncertainties, you felt that nobody would listen to you etc.)
.....
.....
.....

- 5.7 Did you understand what types of services you were going to receive (Yes/No)?
 - 5.8 Did you understand why you received these particular services and not other ones? (Yes/No)?
 - 5.8.1 Explain (e.g. the meetings indicated what the costs of each service was, they informed us what our options were, they indicated what the costs of the development would be etc.)
.....
.....
 - 5.9 If you did not attend any of the meetings, Why did you not go? (unsuitable venue, too late, other commitments, felt it not necessary etc.)
.....
.....
.....
 - 5.10 How did you find out about the what happened or what was going to happen in your area? (e.g. friends, the committee, was not interested, did not concern me)
.....
.....
 - 5.11 Overall, are you satisfied with the services that you have received (Yes/No)?.....
 - 5.12 Explain (e.g. I received what I was promised, I expected more etc.)
.....
.....
 - 5.13 What other services would you like to have in your area (e.g. more roads, more shops etc.)
.....
 - 5.14 If any, would you be prepared to pay for these services and their maintenance (Yes/No)?.....
 - 5.15 Explain
.....
.....
.....
6. Do you feel that the upgrade has made you feel more secure since you will own the land that you live on (Yes/No)?
- 6.1 If yes, why does this make you feel secure (e.g. it is a piece of land that belongs to you, you can make a nice home for yourself etc.)?
.....
.....
 - 6.2 Do you feel safer now that Mshayazafe is upgraded (Yes/No)?.....
-

- 6.3 Why do you feel this way (e.g. it is the same as before, only difference is that there are services now)?
 - 6.4 Are there any areas within Mshayazafe that are unsafe or dangerous (Yes/No)?
 - 6.5 Do these areas affect you (Yes/No)?
 - 7. What form of transport do you make use of to get from one place to another (e.g. bus, taxi, car, walk).....
 - 7.1 With the upgrade, do you find it more convenient to move around the area (Yes/No)?
 - 7.1.1 Explain? (More roads, saves time etc.)
 - 7.2 Do you have more choice in terms of routes to get from one place to another as compared to before (Yes/No)?.....
 - 7.3 Do you feel that the upgrade has made movement easier for you (Yes/No)?.....
 - 7.4 Explain (e.g. it saves time, no flooding of footpaths, no gravel run off into homes etc.)?
.....
.....
 - 8. What facilities exist within the area (e.g. taverns, salons, spaza shops, telephone shops etc.)?
 - 8.1 Are they located close by where you can get there quickly (Yes/No)?
 - 8.2 Do these facilities cater for all your needs (Yes/No)?
 - 8.2.1 Explain (too expensive, too far, always busy etc.)?.....
.....
 - 8.3 Do you feel that there should be more of these facilities (Yes/No)?
 - 8.4 Explain (too many, too few, very far etc.)?
 - 8.5 Do you use your home for any other purposes e.g selling goods, carpentry, panelbeating etc.(Yes/No)?
 - 8.6 Are there any special places in the area where you relax or meet your friends to socialise (Yes/No)?
 - 8.7 Where are these areas located (e.g. by the shop, on the street corner, at the sportsground etc.)?.....
-

- 8.8 Are there any places of historic value or that are special to the community in the area e.g. monument, grave, building etc. (Yes/No)?.....
- 8.9 If yes, how often do you go to these places (Daily, sometimes, weekends, holidays etc.)?
.....
.....
- 8.10 Do you think that it is easy to get there quickly (Yes/No)?

- 9. Do you feel that the appearance of Mshayazafe has improved noe that it is upgraded (Yes/No)?

- 9.1 If yes, can you give examples of ways in which it has improved (no soil erosion, muddy footpaths, etc.)?
.....
.....
.....

- 9.2 Do you think that the area can be improved further (Yes/No)?.....

9.2.1 If so, give examples
.....
.....
.....

- 10. Have you made any extensions/improvements/alterations to your house since the area has been upgraded e.g. painting, planting trees, etc.(Yes/No)?.....

- 10.1 If so, what types improvements have you made?
.....
.....
.....

- 11. How long do you see yourself living in the area (few years, forever, uncertain, short term etc)?.....

- 11.1 If you could afford to move out of Mshayazafe, would you (Yes/No)?.....

- 11.2 If so, why would you move?
.....
.....
.....

- 11.3 Where would you go to?
.....
.....
.....

Thank you for your time and your effort, it is greatly appreciated. Good luck and stay well!

IMIBUZO EQONDE EMPHAKATHINI

Inhloso yaloluhlelo ukuthola ukuthi umphakathi uchabangani ngendawo yakwa Mshayazafe ethuthukiswayo. Injongo enkulu ukusiza mina, ngikwazi ukuphuthula uhlelo lwami lokuphuculo imijondolo. Imibono nosizo lwenu kubaluleke kakhulu kuloluhlelo. Loluhlelo alusho ukuthi kunengqalasizinda noma ukuqhubeka kwentuthuko endaweni. Inhloso yohlelo ukuthola imizwa yabantu.

IMIBUZO

1. Inombolo yesiza
2. Umsebenzi Owenzayo
3. Ulunga lini lomndeni (ubaba, mama, umkhulu njalo, njalo)
4. Unesikhathi esingakanani uhlala eMshayazafe
5. Wezwa kanjani ngokuthuthukiswa kwendawo yangakini? (**isb.** Ikomidi lezentuthuko, Umngani, imihlangano njalo,njalo)
- 5.1 Ngabe ikomidi lezentuthuko liveza libuye lenze okudingwa umphakathi yini? (Yebo noma Cha)
- 5.2 Ubuwazi ngemihlangano yokusiza umphakathi? (Yebo noma Cha).....
- 5.3 Uma ubuwazi ngalemi hlangano, mingaki owaya kuyona? (emibalwa, eminingi, yonke).....
- 5.4 Yayizwakala kahle inkulumo ngalemihlangano? (Yebo noma Cha)
- 5.5 Chaza (kwakuyinkulumo enqondile nelula, noma yasuswa kolunye ulimi yalethwa olimini ozoluzwa)
- 5.6 Likhona uvo lwakho owalenza emhlanganweni? (Yebo noma Cha)
- 5.61 Chaza (imibuzo owayibuza, wezwa kahle awubanga nazinkinga noma wachabanga ukuthi akekho ozokulalela).....
- 5.7 Wezwa ukuthi iziphi izingqalasizinda enizozithola? (Yebo noma Cha).

- 5.8 Wezwa ukuthi kungani nizothola lezi kuphela? (Yebo noma Cha)
.....
- 5.8.1 Chaza (Imali edingekayo ngosizo ngalunye yabekwa obala, nezinye izindlela ezingasetshenziswa, nemali yentuthuko yachaciswa).....
.....
.....
- 5.9 Uma ungayanga, yingani ungayanga? (Wawungayazi indawo, eminye imisebenzi, awusibonanga isidingo).
.....
.....
- 5.10 Wezwa kanjazi ngokwenzenka noma okuzokwenzeka endaweni yakho? (Umngani, amakomidi entuthuko, awunandaba nokwenzeka).....
.....
- 5.11 Ngabe uyeneliseka ngengqalasizinda eniyinikezwayo? (Yebo noma Cha).....
- 5.12 Chaza (Ngithola engakuthenjiswa, bengilindele okungaphezulu).....
.....
- 5.13 Iyiphi enye ingqalasizinda ofuna iphuculwe noma ifakwe? (Eminye imigwaqo, izitolo, njalo njalo)
.....
- 5.14 Uma ikhona ngabe uzimisele ngokukhokhela lemisebenzi?.....
- 5.15 Chaza
.....
6. Ngabe uzizwa uphephile njengoba usuzoba umnini wendawo ohlala kuyona? (Yebo noma Cha).....
- 6.1 Uma uzizwa uvikelekile kungani?.....
.....
- 6.2 Uzizwa uvikelekile njengoba indawo yakwa Mshayazafe isilungiswa? (Yebo noma Cha).....
- 6.3 Yingani uzizwe uvikelekile noma ungavikelekile?(Kuyafana nakuqala noma umehluko ingqalasizinda kuphela)
.....
.....
- 6.4 Zikhona yini ezinye izindawo eMshayazafe eziyingozi? (Yebo noma Cha)

- 6.5 Ngabe ziyakuhlukumeza yini lezizindawo?
- 6.5.1 Uma kunjalo zikuhlukumeza ndlelani?
.....
.....
7. Hlobo luni lwesithuthi olusebenzisayo uma uya kwenye indawo?
.....
- 7.1 Njengoba sekuthuthukisiwe, ingabe sekuhambeka kalula endaweni ?
(Yebo noma Cha)
- 7.1.1 Chaza (Ngebe kukhona eminye imigwaqo edingekayo, ngabe konga isikhathi)
- 7.2 Ngabe imigwaqo eya kwezinye izindawo ivulelekile uma kuqathaniswa nakuqala?(Yebo noma Cha)
- 7.3 Ngabe ukuthuthukiswa kwendawo kwenze ukuhamba kwabalula?
(Yebo noma Cha).....
- 7.4 Chaza (konga isikhathi, kuvikela izikhukhula)
.....
.....
.....
8. Iziphi izindawo zomphakathi ezikhona? (Amajoyinti, izindawo zocingo lomphakathi, spaza shops njalo njalo)
.....
.....
.....
- 8.1 Ziseduze kufinyeleleka kalula? (Yebo noma Cha)
.....
- 8.2 Ngabe lezizindawo zifeza zonke izidingo zakho? (Yebo noma Cha)
.....
- 8.2.1 Chaza (ziyabiza, ziyakhoneka, ziqhelelene, zihlala ziphithizela)
.....
.....
- 8.3 Uchabanga ukuthi kumele zandiswe? (Yebo noma Cha)
- 8.4 Chaza (ziningi kakhulu, zincane kakhulu, zikude, zinomsindo, ziyingozi)
.....
.....
.....
- 8.5 Ngabe umuzi wakho ubuye uwusebenzisele ezinye izinto? (ukudayisa izimpahla, ukukhanda izimoto) Yebo noma Cha

- 8.6 Ngabe zikhona izindawo lapho nihlangana khona nizixoxe nabangani bakho? (Yebo noma Cha).....
- 8.7 Zikuphi lezizindawo? (ngasezitolo, ngasemgwaqeni)
.....
.....
.....
- 8.8 Ngabezikhona izindawo ezichaza ngomlando wendawo? (amathuna, izakhiwo ezibalulekile) Yebo noma Cha
- 8.9 Uma zikhona uyaya yini kulezizindawo? (nsukuzonke, ngezikhathi ezithile, ngezimpelasonto, ngamaholide)
- 8.10 Kulula ukufinyelela kulezizindawo? (Yebo noma Cha)
9. Ngabe ikhona impumelelo endaweni yakwaMshayazafe njengoba ithuthukiswa (Yebo noma Cha)
- 9.1 Uma ikhona, nikeza izibonelo (alusekho udaka, umhlaba awusaguguleki)
.....
.....
- 9.2 Uchabanga ukuthi intuthuko ingagqutshezelwa phambili? (Yebo noma Cha)
- 9.2.1 Uma kunjalo nikeza izibonelo
.....
.....
10. Ingabe lukhona ushitsho osulenzile emzini wakho, seloku kwaqala loluhlelo lwentuthuko. (ukutshala izihlahla, ukupenda) Yebo noma Cha
- 10.1 Uma kunjalo, ushintshe ndlelani?
.....
11. Uchabanga ukuthi uzohlala isikhathi esingakanani? (iminyaka emibalwa, impilo yakho yonke, awazi)
- 11.1 Uma ungaba namandla okusuka eMshayazafe ungasuka? (Yebo noma Cha)
- 11.2 Uma ungasuka, yingani ungasuka?
.....
.....
- 11.3 Ungayaphi?
.....
.....

SIYABONGA NGESIKHATHI NENTSHISEKELO YAKHO. SIBONGA KAKHULU. SINIFISELA INHLANHLA NENHLALO ENHLE!