UNIVERSITY OF
KWAZULU-NATAL

INYUVESI
YAKWAZULU-NATALI

PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP:

A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

MATTHEW JONES

Supervised By

Silvia Bodei

Dissertation submitted to the School of Built Environment and Development Studies, University of KwaZulu-Natal, in partial-fulfilment of the requirements for the degree of Master in Architecture.

Durban, 2021

DECLARATION

I ________Matthew Jones________________ declare that,

1. The research reported in this dissertation, except where otherwise indicated, is my original research.
2. This dissertation has not been submitted for any degree or examination at any other university.
3. This dissertation does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
4. This dissertation does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:
   A. their words have been re-written, but the general information attributed to them has been referenced;
   B. where their exact words have been used, their writing has been placed inside quotation marks, and referenced.
5. This dissertation does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the dissertation/thesis and in the References sections.

Signed:

// ACKNOWLEDGEMENTS

I would like to make specific mention of the following individuals who have been an integral part of my dissertation.

To the research participants who gave of their time to contribute to this research study, thank you.

My supervisor Silvia Bodei, thank you for your dedicated engagement over the duration of the dissertation. Your time and guidance have been immensely helpful.

To my extended family you have been an incredible blessing to Kerryn and I, as well as Levi and Jude. Thank you for your prayer, support and encouragement.

Levi and Jude, Dad is so proud of you. You are a source of joy and I love you. I owe you a few soccer games…soon we can play!

Jesus, the Author of everything. You go before me and behind me. Without you this all comes to nothing. Your presence, in the midst of many storms, brought peace to my soul. Thank you for empowering and sustaining me and my family.

DEDICATION

This dissertation is dedicated to my wife. Kerryn, you have been a remarkable help over what has been a longer than anticipated journey with more challenges than either of us could ever have expected. Thank you for believing in me and encouraging me to pursue that which in many instances felt beyond me. You have had to sacrifice so many areas of your life to make this dissertation possible. Thank you!

ABSTRACT

As a result of the Group Areas Act No. 41 of 1950 (Republic of South African, 1950) and the apartheid city planning that followed, ethnic groups in South Africa were allocated specific areas in which they could live. One such allocation was the township area, exclusively demarcated for Black African, Coloured and Indian persons, located on the outskirts of the city, vast distances from employment opportunities (Smith, 1992:27). Townships were dormitory ghettos, under-serviced and overpopulated at their inception and they remain contexts with substantial inequalities, lack of public spaces, services and infrastructure (Darity Jr, 2008: 4979; Murray, 2007:51). Inadequate health facilities are a conspicuous feature of township areas.

Indeed, at present, the majority of clinics and hospitals that exist in townships were built during the apartheid era (1948-1993) and were conceived under an apartheid development framework that strategically enforced social and spatial segregation through the built environment (Kautzky & Tollman, 2008:20) that still presently affects these areas. Furthermore, the approach to the design of the health facilities lacks meaningful engagement with their surroundings. Therefore, the provision of community health centres in township locations is of particular relevance to these communities. These facilities are the coal face of the KwaZulu-Natal health care system, as they are the first point of contact for individuals and directly impact one's wellbeing (Department of Health, 2018/19 – 2020/21:2).

When one considers that the majority of government healthcare facilities exist within township environments, there is an even greater responsibility given to those undertaking projects of this nature as they are critical points of engagement for persons who historically have been disadvantaged. Clinics and health facilities, in general, can re-instil confidence, pride, and trust in communities (Lawson, 2004:95).

In order to address the needs and opportunities of the Umlazi health sector appropriately, Placemaking will be adopted as a theoretical lens. Placemaking encourages holistic community engagement that provides a framework for redressing apartheid urban planning ills that are commonplace in Umlazi. Placemaking recognizes that people are a city's greatest attraction and thus prioritizes engagement with those people, to facilitate community

upliftment and the long-term success of the proposed community health centre (Gehl, 2010:6, Hamdi, 2010:91-92).

Through the theoretical lens of Placemaking, the researcher seeks to engage with the multifaceted dynamics at play in the township context, to investigate how this context can inform the development of an urban and architectural response suited to the area, in the form of a holistic community health centre. Data will be collected using various secondary and primary means and analyse comparatively to extract meaning that will inform the community health centre design. Placing value on the importance of these facilities conveys the importance of the user and people and their connection with public spaces. These buildings can be places of liberation and form part of the development of sustainable, restorative spaces (Lawson, 2004:95). Of particular focus will be the development of architectural solutions and spaces of a civic nature that foster collective engagement by providing upliftment and empowerment through community health care within Umlazi, the largest township in the eThekwini Metropolitan Municipality (Durban) and the fourth largest in South Africa (Department of Economic Development, 2008).

Finally, the dissertation has revealed the extent to which effective placemaking, through the provision of healing community architecture in an urban environment that fosters community, can develop a healing community architecture that is holistic in its approach. In an environment of severe historical marginalization, sustainable transformation is possible. Through a strategic and considered approach communities can begin to redress townships' historical social and spatial inequities for the benefit of future generations.

TABLE OF CONTENTS

DECLARATION .... **ii**

ACKNOWLEDGEMENTS .... **iii**

DEDICATION .... **iv**

ABSTRACT .... **v**

P A R T O N E **1**

C H A P T E R O N E // PRELIMINARY INVESTIGATION **2**

1.1 INTRODUCTION 3

1.1.1 Background 3

1.1.2 Motivation / Justification of the study 4

1.2 DEFINITION OF THE PROBLEM, AIMS AND OBJECTIVES 6

1.2.1 Definition of the Problem 6

1.2.2 Aims 7

1.2.3 Objectives 7

1.3 SETTING OUT THE SCOPE 7

1.3.1 Delimitation of Research Problem 7

1.3.2 Defining of Terms 8

1.3.3 Stating the Assumptions 9

1.3.4 Key Questions 9

1.3.5 Hypothesis 10

1.4 LITERATURE REVIEW 10

1.4.1 Introduction 10

1.4.2 The South African Township 11

1.4.3 Theoretical approaches 11

1.4.4 Concepts 13

1.4.5 Conclusion 15

1.5 RESEARCH METHODS AND CASE STUDY 16

1.5.1 Introduction 16

1.5.2 Research Philosophy and Strategy 16

1.5.3 Research Methods 16

1.5.4 Research Materials 19

1.5.5 Research Analysis 20

1.5.6 Summary 21
1.5.7 Conclusion 22

C H A P T E R T W O // THE SOUTH AFRICAN TOWNSHIP 23
2.1 INTRODUCTION 24
2.2 APARTHEID SPATIAL & SOCIAL HISTORY 24
2.3 POSTAPARTHEID TOWNSHIP LEGACY 31
2.3.1 Spatial dynamics of the Post-Apartheid Township 31
2.4 CONCLUSION 33

C H A P T E R T H R E E // COMMUNITY PLACEMAKING 34
3.1 INTRODUCTION: THE EMERGENCE OF PLACE 35
3.2 PLACEMAKING DEFINED 36
3.3 THE DEVELOPMENT OF [PUBLIC] SPACE 39
3.4 BEYOND PLACEMAKING 44
3.4.1 Interpreting Urban Space 44
3.5 CONCLUSION 48

C H A P T E R F O U R // HEALING COMMUNITY ARCHITECTURE 50
4.1 INTRODUCTION: MODERN HEALTHCARE IN PERSPECTIVE 51
4.2 THE HEALTH OF HEALTHCARE 52
4.3 TOWNSHIP HEALTHCARE 55
4.4 HOLISTIC HEALTHCARE 56
4.5 CONCLUSION 60

C H A P T E R F I V E // PLACEMAKING & HEALING ARCHITECTURE PRECEDENT 62
5.0 INTRODUCTION 63
5.1 KHAYELITSHA URBAN PARK AND ACTIVITY BOX 65
5.1.1 Project Details 65
5.1.2 Introduction 65
5.1.3 Urban Context & Locality 65
5.1.4 Objectives 66
5.1.5 Programme & Planning 67
5.1.6 Placemaking & Healing Community Architecture Observations 68
5.2 UMKHUMBANE COMMUNITY HEALTH CENTRE 72

5.2.1 Project Details 72
5.2.2 Introduction 72
5.2.3 Urban Context & Locality 72
5.2.4 Objectives 73
5.2.5 Programme & Planning 74
5.2.7 Placemaking & Healing Community Architecture Observations 77
5.3 DU NOON COMMUNITY HEALTH CENTRE 79
5.3.1 Project Details 79
5.3.2 Introduction 79
5.3.3 Urban Context & Locality 79
5.3.4 Objectives 80
5.3.5 Programme & Planning 81
5.3.6 Placemaking & Healing Community Architecture Observations 81
5.4 CONCLUSION 86

C H A P T E R S I X // CASE STUDY 87
6.1 INTRODUCTION 88
6.2 KWAMASHU COMMUNITY HEALTH CENTRE 89
6.2.1 Project Details 89
6.2.2 Introduction 89
6.2.3 Urban Context & Locality 89
6.2.4 Objectives 90
6.2.5 Programme & Planning 91
6.2.6 Design Rationale 93
6.2.7 Placemaking & Healing Community Architecture Observations 94
6.2.8 General Observations 97
6.3 CONCLUSION 98

C H A P T E R S EV E N // ANALYSIS & DISCUSSION 100
7.1 INTRODUCTION 101
7.2 EXPERT INTERVIEW 101
7.2.1 Community Expert: Mr Mzamowenkosi Zondi 101
7.2.2 Community Architecture: Professor Rodney Harber - Architect 103
7.2.3 Township Medical Expert: Mr Sibusiso Mathibela 104

7.3 OBSERVATIONS: PUBLIC SPACE AS A HEALING ENVIRONMENT....105
7.4 CONCLUSION....106

C H A P T E R E I G H T // RECOMMENDATIONS & CONCLUSION 107
8.1 INTRODUCTION....108
8.2 CONCLUSION....108
8.2.1 Overview....108
8.2.2 Key Questions....110
8.2.3 Objectives....111
8.2.4 Shortcomings....112
8.3 RECOMMENDATIONS....112
8.2.1 Design Development....112
8.2.2 Site Selection Criteria....113

P A R T T W O 115
DESIGN DEVELOPMENT 116
REFERENCES 138
LIST OF FIGURES 146
APPENDICES 151
1.0 Appendix A....152
2.0 Appendix B....154
3.0 Appendix C....156
4.0 Appendix D....158

PART **ONE**

C H A P T E R **O N E** // PRELIMINARY INVESTIGATION

1.1 INTRODUCTION

1.1.1 Background

In 1994 South Africa made the transition from an apartheid governed state to a democratic republic. This transition put an end to more than one hundred years of oppressive rule controlled by ideals promoting racial segregation and control (Smith 1992:27). The impact of many decades of autocratic domination has left its mark on the South African landscape in innumerable ways. Smith and Maylam explain that one of the most catastrophic legacies was the introduction of the Group Areas Act No. 41 of 1950. This act cemented into law ideals that led to the strategic exclusion of non-whites within the urban areas and the formation of townships (Smith 1992:27; Maylam 1995:28). These were areas outside of the city bounds, that were designed to isolate and oppress Black African, Coloured and Indian people who were forced to live there. In addition to the social and spatial segregation that was central to the Act, basic services within the township were provided in a limited and informal manner with little to no consideration given to future growth of these areas (Darity Jr. 2008:4979).

During the transition to democracy, the African National Congress (ANC) was voted into government in 1994. This signalled the dawn of a new era. The ANC immediately set about addressing the wrongs of the past providing schools, clinics, hospitals, Reconstruction and Development Programme (RDP) houses and doing whatever else was necessary to ensure previously disadvantaged communities had access to basic services such as water, sanitation, electricity and roads (Department of the Presidency 2014:2). A large majority of these communities would have been township communities.

Unfortunately, due to the overwhelming backlog of services required and the exponential escalation of needs, they were not able to meet the demand. Twenty-five years on from this momentous occasion the optimism that was initially experienced has waned as the ruling African National Congress (ANC) has struggled to manage the unenviable task of rebuilding a fractured nation (Sandeep 2014:31). All of this was taking place amidst rampant corruption, skyrocketing crime rates and an unemployment rate of 29.1% (Department of Statistics South Africa 2019:1).

The uneven distribution of wealth between employers and employees is a global phenomenon that has further exacerbated the problems associated with township life. In 2018 it was estimated that the top 10% of wealth earners in China, Europe and the United States owned more than 70% of total available wealth (Alvaredo et al. 2018:200). In South Africa, the statistics are very similar with the top 1% of wealth earners owning 2/3 of the income (Alvaredo and Atkinson 2010:2). Factors such as these reinforce the importance of ensuring that services for the underprivileged are provided adequately and timeously. There has never been a time in history where various groups of people across the globe have been subjected to as much segregation and oppression, as one is able to experience today (Oxfam International n.d.).

As we move into the future, Alvaredo foresees that urban settings of the world, and their associated township communities that accommodate the displaced, homeless, underprivileged and marginalized will be influenced by and be at the mercy of global urban phenomena. It is anticipated that township settings will become even more strained, with limited access to resources, as governments across the world wrestle the tensions of 21st century global economies and unequal wealth distribution that so often accompanies it (Alvaredo et al. 2018:145). When one considers the increasing wealth disparity that plagues the 21st century city, it is imperative to ensure that facilities provided in township settings are suited to meet the needs of the marginalized through contextually responsive interventions.

1.1.2 Motivation / Justification of the study

Historically, townships were dormitory ghettos. Under-serviced and overpopulated at their inception, they remain contexts with glaring inequalities, a lack of public spaces, inadequate services and infrastructure and inadequate health facilities (Darity Jr, 2008: 4979; Murray, 2007:51). Indeed, at present, the majority of clinics and hospitals that exist in townships were built during the apartheid era (1948-1993) and were conceived under an apartheid development framework that strategically enforced social and spatial segregation through the built environment that is still evident in these areas (Kautzky & Tollman, 2008:20). Furthermore, the approach to the design of the health facilities lacks meaningful engagement with their surroundings. Therefore the provision of community health centres, in township locations, is of relevance to these communities. These facilities are the coal face of the

KwaZulu-Natal health care system, as they are very often the first point of contact for individuals needing healthcare and they have a direct impact on one's wellbeing (Department of Health, 2018/19 – 2020/21:2). When one considers that the majority of government healthcare facilities exist within township environments, there is an even greater responsibility given to those undertaking projects of this nature, as they are critical points of engagement for persons who, historically, have been disadvantaged. Clinics and health facilities, in general, have the potential to re-instil confidence, pride, and trust in township communities (Lawson, 2004:95).

The proposed research seeks to engage with the multifaceted dynamics at play in the township context, to investigate how this context can inform the development of an urban and architectural response suited to the area, in the form of a holistic community health centre. Placing value on the importance of these facilities conveys the importance of the user and people and their connection with public spaces. These buildings can be places of liberation and form part of the development of sustainable, restorative spaces (Lawson, 2004:95). Of particular focus will be the development of architectural solutions and spaces of a civic nature that foster collective engagement by providing upliftment and empowerment through community health care within Umlazi, the largest township in the eThekwini Metropolitan Municipality (Durban) and the fourth largest in South Africa (Department of Economic Development, 2008).

To address the needs and opportunities of the Umlazi health sector appropriately, Placemaking will be adopted as theoretical lens. Placemaking encourages holistic community engagement that provides a framework for redressing many apartheid urban planning ills that are commonplace in Umlazi. Placemaking recognizes that people are a city's greatest attraction and thus prioritizes engagement with those people, to facilitate community upliftment and the long-term success of the proposed community health centre (Gehl, 2010:6, Hamdi, 2010:91-92).

1.2 DEFINITION OF THE PROBLEM, AIMS AND OBJECTIVES

1.2.1 Definition of the Problem

Section 27 (2) of the South African Constitution enshrines the right to quality healthcare for all its citizens (Republic of South African 1996:(27)2). In order to deliver a healthcare system that meets the medical needs of the South African population, the government provides a range of medical facilities (central/academic hospitals, regional hospitals, district hospitals, specialised hospitals, community health clinics and clinics) to treat varying degrees of illness and injury (Department of Health 2016:8).

Even within such an extensive healthcare system there are shortcomings and challenges. This includes existing facilities that are unable to cater for patient needs, poor hygiene and poor infection control measures, high staff turnover due to demoralizing workplace environments and in Umlazi specifically, there is no Community Health Centre. This is despite the Department of Health guidelines requiring one for a population group as extensive as Umlazi (Department of Health, 2016:11; Maphumulo & Bhengu, 2019:2; Department of Health, 2018/19:14). In some cases, new facilities have been provided but remain unopened due to political contestation and administrative oversight.

At its inception, the Primary Health Care (PHC) approach was acknowledged by medical bodies, internationally, as being profoundly innovative.

PHC refers to "health care that is essential, scientifically sound (evidence-based), ethical, accessible, equitable, affordable, and accountable to the community. PHC is therefore not only primary medical or curative care, nor is it a package of low-cost medical interventions for the poor and marginalised." (WHO-UNICEF, 1978). Unfortunately, the provision of healthcare facilities accommodating this revolutionary system was not considered with the same conviction. As a result of this failure, many healthcare facilities that exist in townships today meet the clinical requirements of the community in a functional manner but they almost always do not consider the patients' requirements beyond their medical needs (Department of Health, 2019:2). Factors such as physical location, environmental conditions and the socio-economic status of the community need to be considered as these contribute

greatly to the development of holistic healthcare (Young, 1996:566). The specific focus of this research is that of community health facilities in township communities

1.2.2 Aims

The aim of this research is to investigate the importance of engaging with township placemaking related factors and the effect these have on the development of an appropriate architectural response, specifically a holistic community health centre.

1.2.3 Objectives

1.2.3.1 Primary objective

To investigate how Placemaking principles can inform the development of a healing architecture in response to the context of the South African township of Umlazi.

1.2.3.2 Secondary objectives

1. To explore community needs and spatial characteristics that exist in townships.
2. To investigate Placemaking principles in response to the social and spatial context of a township.
3. To determine the spatial requirements of a community health centre located in a township.
4. Understanding how architecture can enable the creation of a healing environment.
5. To develop a holistic community health centre typology that responds to the Umlazi community needs and spatial context.

1.3 SETTING OUT THE SCOPE

1.3.1 Delimitation of Research Problem

This research study investigates a means of developing a new civic built form typology that responds to the place and context it finds itself in. It considers the specific context of a township together with a wide variety of narratives present in the township and the impact that this would have on the development of a holistic community health centre for the community of Umlazi.

As a means of locating this study in its correct context, the researcher will look at the urban historical landscape of South Africa during both pre-apartheid and post-apartheid periods, with a specific focus on township placemaking. Townships, although not entirely unique to the South African context, do have strong identifying characteristics as they were formed through organized political, social and spatial segregation, along racial lines, and have become highly contested spaces of great challenge (Sandeep 2014:31).

To understand the township context appropriately, a focused analysis of the selected site, within Umlazi township, will be done to unearth the site-specific contextual dynamics at play. The following placemaking related factors will be considered in the site analysis: socio-economic influences, climatic conditions, political circumstances, safety and security, culture, materiality and psychological dynamics. All of which need to be assessed for their potential individual impact on the research and any need for further engagement.

Finally, to provide a holistic study, careful consideration will also be given to understanding the role and function of existing community health centres located in township environments or disadvantaged communities.

1.3.2 Defining of Terms

Civic Building - A building or space that brings people together around common interests and community purpose.

Government Civic Development Project (GCDP) – any government buildings or space orientated around public functions such as hospitals, schools, art centres, government administration offices and recreational areas.

Lockdown – an emergency protocol that prevents people or information from leaving an area and making physical contact with other persons.

Placemaking - An approach to urban design and architecture that places emphasis on the creation of spaces oriented around the needs of a specific group of people and includes various theories.

Township – A settlement strategically excluded from the traditional city extent by Apartheid planning regulations, that include both formal and informal settlement typologies and often has inadequate civic institutions and services. They are underserviced and overpopulated and are ordinarily places of urban decay where the displaced, homeless, underprivileged and marginalized make their home.

Informal Settlement - An unauthorised temporary settlement, built by the displaced, destitute, disadvantaged and disregarded on land belonging to government or under private ownership, which is often not safe for groups of people to reside on.

Urban Fabric - the interplay of various elements forming a whole within an urban setting, namely built structures, open space and walkways. It excludes environmental, economic and socio-cultural dynamics.

Community – A non-homogenous group of individuals unified by common characteristics and formed around common services.

1.3.3 Stating the Assumptions

The following assumptions are made in connection to this research:

- Existing interventions in township contexts lack relevance.
- There is a need for community-based healthcare services within Umlazi.
- The provision of a community clinic will be welcomed within the community by the chief and community members.
- The provision of a community clinic facility that engages with the community will create upliftment in the community.

1.3.4 Key Questions

1.3.4.1 Primary Question

How can Placemaking principles inform the development of a healing architecture in response to the context of the South African township of Umlazi?

1.3.4.2 Secondary Questions

1. What are the community needs and spatial characteristics that exist in townships?
2. How can Placemaking principles inform a response to the social and spatial context of a township?
3. What are the spatial requirements of a community health centre located in a township?
4. How can architecture enable the creation of a healing environment?
5. What Umlazi community needs can be addressed through the development of a holistic community health centre?

1.3.5 Hypothesis

The premise of this paper is that through the development of a contextually responsive architectural intervention that responds to the specific needs of the Umlazi township dwellers, so members of the community will have the opportunity to access a holistic healthcare environment that promotes openness, transparency and community empowerment while fulfilling their basic healthcare needs. Of particular importance will be the need to address the social and spatial legacies of Umlazi township.

1.4 LITERATURE REVIEW

1.4.1 Introduction

The literature review begins by investigating the context of the South African township, as a means of developing a framework of understanding in which the study could be expressed. The research adopts Placemaking as the primary lens through which the research will be viewed. Placemaking crosses a variety of fields including sociology, psychology, architecture and urban design as a means of gaining an informed perspective. Healing Community Architecture is incorporated conceptually, linking the literature to the final design typology, a Community Health Centre. The assimilation of the theories and concept will provide a foundation on which further thought will be developed to address the shortcomings within the Umlazi township healthcare system.

The effectiveness of placemaking principles articulated in the research through Placemaking and Healing Community Architecture is its ability to develop environments that foster community development and social cohesion and wellness. Healthy civic-public

environments, for example, are catalysts for community revitalization, no matter their form or location and facilitate the development of community, civic uniqueness and culture (Projects for Public Spaces, 2012:1).

1.4.2 The South African Township

Towards the end of the 19th century, the discovery of gold and diamonds in Johannesburg catapulted racial tension into the spotlight of South African history (Mahajan, 2014:32). During this period, racial segregation was already a part of the South African political landscape and was evident and enforced through social, economic and political life (Haarhoff, 2011:185). In the 1950's the Group Areas Act formalised the segregated city and rezoned areas according to racial groups (Haarhoff, 2011:190). Bonner and Segal (1998) characterised the process as "exerting control through form: The key focus of the specifications set down for townships was to enable the government to assert its control" (Mahajan, 2014:34).

Durban's spatial and social segregation is not dissimilar to that of other cities across South Africa. Following the 1950 Group Areas Act, the outer lying urban areas north and south of the CBD were allocated for black and coloured Africans, while Indians and whites were assigned favourably located areas within the city bounds. The spatial legacy of apartheid has been remarkably resilient to change, and after 25 years of democracy, South Africa's urban environment still embodies apartheid systems (Mahajan, 2014:32).

1.4.3 Theoretical approaches

1.4.3.1 Placemaking

Placemaking is a general approach in design and urbanism that considers interventions closely associated with the community and the context in which they are placed. This approach was defined by the works of Jane Jacobs and William Whyte, in the late 1950s. It queried existing assumptions linked to the success of cities, with a particular focus on ideas of identity, voice, inclusion, access and opportunity (The Rockefeller Foundation & ARUP, 2015:3). Jacobs' urbanism is one that develops organically over time within a framework of principles. To align with Jacobs' approach is to position one's self as a better listener, observer and enabler of different communities (Schubert, 2016:19). Subsequently, a key emphasis of placemaking is the creation of spaces oriented around the needs of a specific group of people while a defining

characteristic of place, such as a township, is that it derives its meaning from those who inhabit or use them (Project for Public Spaces, n.d.; Adams and Tiesdell, 2013:11). In this way, adopting perspective orientated around the development of an inclusive and equitable place through tactical interventions, that include the design of public civic spaces and buildings, is key to unlocking the potential within the Umlazi township community.

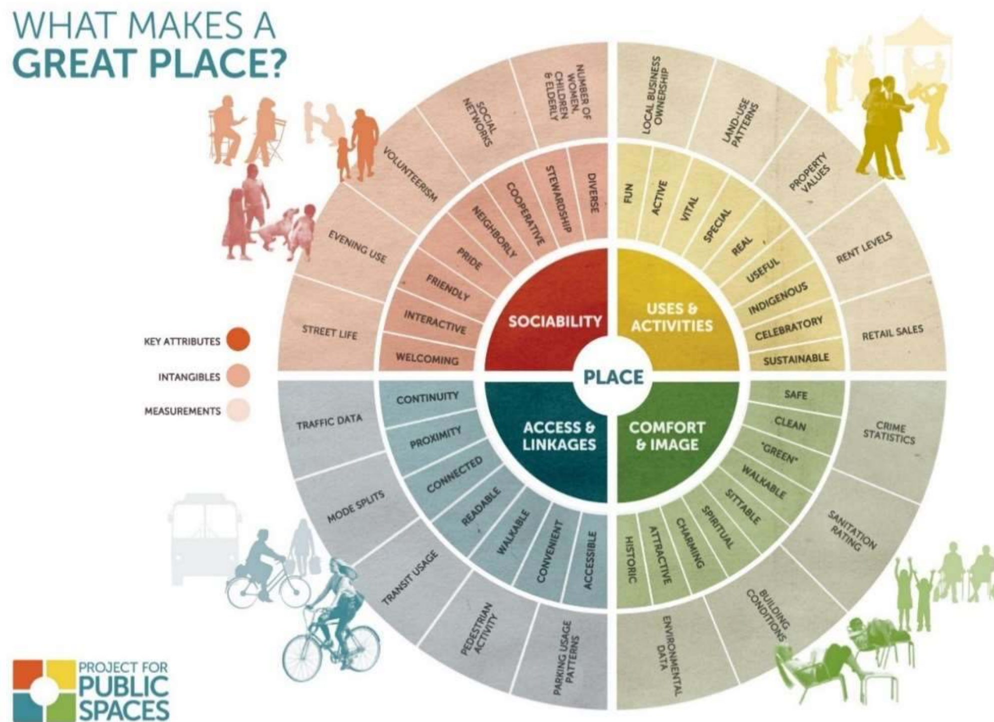


Figure 1: Projects for Public Spaces - what makes a successful public space? n.d. (http://www.pps.org/)

The postmillennial transition of the world’s population into urban environments has brought into focus the importance of the human dimension within urban environments. Gehl's proposal for addressing these needs are the development of lively, safe, sustainable, and healthy cities. It is essential to recognise that the greatest attraction of any city is its people. It is also true that people are naturally drawn to areas where there are higher numbers of people. A lively city encourages more significant people movement, which develops safety as a by-product (Gehl 2010:6).

Key to the creation of spaces that engage people is an awareness of the physical environment that one develops concerning human scale and senses (Gehl 2010:25). In disadvantaged

communities where strained and modest living standards are commonplace, and population densities are high, common outdoor areas play an integral role, acting as an extended living room, where many ordinary activities take place. In these environments, focusing on the small scale is crucial as this determines whether people feel invited into the space (Gehl 2010:207;216-217).

The value of successful public spaces is evident in the role they play in the psychological health of a community, as they provide a safe environment, stress relief and a form of escape from overwhelming circumstances for those living in crowded informal settlements. When public and neighbourhood streets are active, crime and gang-related activity are reduced (Projects for Public Spaces 2012:11).

It is therefore essential to consider the relationships between community, space and place, as communities develop on the foundation of many kinds of interaction. An understanding of place is fundamental to the concept of community development and empowerment. People inhabit and grow in places, they move within and between surrounding places, and rely on the movement of goods to and from places to survive (National Research Council 2002).

Placemaking and other Spatial Theories

Given that township environments have particularly poor spatial dynamics, it is essential that planning efforts, within townships, address these ills through development that is founded on the effective production of place. Four spatial planning theories are explored as agency for this expression, namely Figure Ground & Urban Morphology, Linkage Theory, Transitional Zones & Right to the City.

1.4.4 Concepts

1.4.4.1 Healing Community Architecture

For many years it has been known that natural environmental factors contribute to human wellbeing. In response to this, human-centric architecture considers the fields of psychology, sociology, biology, physiology and the effect of the environment on the health of persons (Mazuch & Stephen 2005:48). Mass urbanization has produced compromised infrastructure, high levels of social stress, social disorganization, and a general decline in social norms.

Accompanying these factors are chronic behaviour disorders, violence, drug abuse, alienation and hopelessness, that one would generally identify with a societal human ecology disorder (Butterworth, 2000:1). In response to this, healthcare architecture has a pivotal role to play in the provision of facilities that are environments orientated around community that foster healing and wellness. This is even more important in townships where extreme emotional and physical oppression are rife (Lawson, 2004:95).

At the foundation of South African public healthcare provision is the primary healthcare (PHC) system. This system aims to ensure that healthcare provided at community level considers the wider empowerment of the family and community as essential to develop and improve collective health (Kautzky & Tollman, 2008:18). Unfortunately, establishing healthcare facilities to accommodate this revolutionary system was not considered with the same conviction. As a result of this failure, many healthcare facilities that exist in townships today meet the clinical requirements of the community in a functional manner but they almost always do not consider the patients' requirements beyond their medical needs (Department of Health, 2019:2). Factors such as physical location, environmental conditions and the socio-economic status of the community need to be considered as these contribute greatly to the development of holistic healthcare (Young, 1996:566).

Defining a conceptual framework for a holistic healing community architecture is, therefore, an opportunity for a transition towards holistic healthcare that can meet the real needs of people, focusing on medical requirements together with socio-economic and environmental considerations (Onie et al., 2018). By immersing the hospital or clinic function in the culture and context, one will develop an outcome that will be inseparable from the community. 20th-century healthcare has been formed around function and efficiency. The concept of 'identity' and cultural distinctiveness is under threat, particularly in areas undergoing rapid urbanisation while rural areas are also in a transitory state. The rapid pace of societal change has morphed tradition. This change has brought about the production of new forms of commercial and retail structures and a resulting struggle to produce well-articulated and coherent urban and public spaces at the same rate as societal change (Derakhshani 2012:30).

By instituting a broad health agenda, one reinforces a public space agenda, as health care facilities become community centres that include community programmes in their services rendered. The value of a successful public space is evident in the role it plays in the psychological health of a community (Projects for Public Spaces, 2012:11).

1.4.5 Conclusion

The investigation in to spatial and social history of South African urban areas and townships, unearths the dystopia that resulted from racially segregation instituted through apartheid city planning and the 1950's Group Areas Act.

Placemaking, as pioneered by Jane Jacobs in the 1950's, places emphasis on place developed around the specific needs of various communities and their contextual dynamics. It places the human experience at the forefront of its agenda to develop lively, safe, sustainable and healthy cities. In disadvantaged communities' public urban environments that act as extended living areas providing opportunity for social connections. In this way placemaking contributes greatly to the physical, psychological and emotional wellbeing of township communities. In conjunction with placemaking Figure Ground & Urban Morphology, Linkage Theory, Transitional Zones & Right to the City are included to address the poor spatial dynamics within townships.

Finally, Healing Community Architecture considers the impact environmental factors have on people. Particularly the psychology, sociology, biology, physiology and the influence that these factors can have on the development of healthcare architecture orientated around the development of healing and wellness. While 20th-century healthcare is largely determined by function and efficiency the South African primary healthcare system empowerment of community and family worked closely together to improve collective health. Furthermore, there is opportunity within the South African Healthcare system to provide facilities that respond to contextual factors. This inclusive approach will in turn develop facilities with strong public space agendas which include community programmes.

1.5 RESEARCH METHODS AND CASE STUDY

1.5.1 Introduction

This section of the research details the methodological approach used in this dissertation. It sets out the procedures and means by which the data will be collected. The research will be undertaken in accordance with COVID-19 restrictions while all the primary data will be collected and processed using cellular and digital online platforms – WhatsApp/SMS, email, Dropbox.

1.5.2 Research Philosophy and Strategy

The research will be undertaken following COVID-19 restrictions. The primary data will be collected and processed using cellular and digital online platforms – WhatsApp, SMS, email, Dropbox.

The research undertaken for this dissertation is aimed at understanding the needs of Umlazi township dwellers, using Placemaking as the theoretical lens, to develop a holistic community health centre. Data will be collected using various secondary and primary means, described in more detail below. After the research has been synthesised, the researcher will analyse the primary data comparatively with the secondary data to extract meaning that will inform the community health centre design (Nowell *et al.,* 2017:(16)1-3).

1.5.3 Research Methods

Using secondary data collection means, the researcher adopted theoretical analysis to discuss theoretical and descriptive material in context, using detailed comparison of concepts and theories in terms of their applicability.

The secondary methods used were in the form of a literature review, precedent studies, case study, site analysis and Google Earth imagery analysis. Case studies were used to gain an understanding of the operational requirements of a community clinic. Primary data collection took place through three expert interviews and observational analysis. These were used to reveal the context-specific needs of those who are living within Umlazi.

1.5.3.1 Secondary Data Collection

Literature Review

This research was presented in the form of a literature review. It pertains to the analysis of theoretical and methodological information gained from experts across a wide variety of fields in the form of books, journal articles, reports, documents, academic papers, television broadcasts and the various media published on the world wide web (Grout & Wang 2013:143 & Badenhorst n.d.). To substantiate the research in question, Placemaking and Healing Community Architecture were adopted and examined to develop an understanding of the context.

Precedent Study

The ideas explored in the literature review were accompanied by three precedent studies which the researcher used to reinforce the validity of the concepts and arguments found in the primary research and literature review. The precedent studies were selected from regional examples of community centres, health centres and public space. The inclusion of three precedent studies was done to reinforce the ideas explored in the research.

Site Details

Details relating to the site selection were outlined in the Part Two of this document, that deals with the design development. Due to the Covid-19 restrictions, the site survey and analysis were conducted digitally through data available on eThekwini Geographical Information Services (GIS), Google Earth, Google Maps and Surveyor General online records. The information was reviewed analytically to ensure all the necessary information that might inform the design response was recorded appropriately. The site layout; boundary lines; building lines; general gradients; existing structures on and adjacent to the site; municipal structures; people movement patterns; prevailing winds and rains; view lines and traffic flows, both pedestrian and vehicular, were all documented.

Case Study

KwaMashu Community Health Centre, located in KwaMashu township north of Durban, was adopted as the case study because there was no community health centre in Umlazi or any

other contextually relevant township environments in the wider eThekwini region. The health centre addressed the legacies of marginalised apartheid communities’ access to public healthcare. It was selected on a compatibility basis concerning the theoretical framework set out in this research. It was analysed in a detailed manner to provide a reference point of departure for the design proposal.

The case study contained the following researchable elements: operational functionality, spatial arrangement and patient care requirements. These were analysed through sketches, drawings and photographs. At the same time, people movement patterns, spatial development and use of the built form analysis were conducted through the analysis of information received from the project architect and healthcare facility Chief Executive Officer (CEO) - Mr F.S. Mathibela. This analysis, in turn, assisted in the formation of a design brief and schedule of accommodation.

All the processes relating to the collection of data for the study were carried out in accordance with Covid-19 restrictions, including making use of all available digital platforms to avoid making physical contact with people. All relevant documentation was requested using email and digital filesharing platforms such as Dropbox, while the interview with Mr F.S. Mathibela, the KwaMashu Community Health Centre CEO, was conducted telephonically.

1.5.3.2 Primary Data Collection

Interviews

Three expert interviews were conducted telephonically with persons relevant to the research scope. These were done in a semi-structured and non-structured manner and were used to approach individuals with specific expertise in a field that is related to the research (Etikan et al., 2016:1-4). The following individuals were approached:

- Community Architecture expert: Professor Rodney Harber - an internationally recognized, award winning architect, whose work across a variety of contexts addresses community needs through socially sustainable architecture.

- Township Community expert: Treatment Action Campaign (TAC) - represent users of the public healthcare system in South Africa. They campaign and litigate on critical issues related to the quality of and access to healthcare.

- Township Medical expert: Mr F.S. Mathibela – Chief Executive Officer (CEO) at KwaMashu Community Health Centre, KwaMashu, Durban.

Observations

Two sets of observations were conducted with the intention of gaining a first-hand understanding of different environmental stimuli that act upon the study location and surrounding public areas.

- Firstly, the study location and its immediate surroundings were observed to establish an understanding of the existing norms and patterns of usage on and around the study location. Of particular interest was the movement patterns of pedestrians and vehicles on, across and around the site.

- Secondly, observations of formal and informal public space were undertaken around the study location and the surrounding areas. These observations were aimed at understanding recreational interests and activities, social norms, and gender composition of individuals and groups within these spaces.

The observations were conducted over the course of two days (one weekday and one weekend day) at selected times of day for a specific period at each allotted time. The exploratory nature of this undertaking assisted in unearthing social characteristics of the study location and surrounding public areas. The observation outcomes were thematically compared, analysed and interpreted in conjunction with the interviews. These were then interpreted and compared alongside the literature review to develop an informed response.

1.5.4 Research Materials

To garner a holistic perspective of the township environment, placemaking and community clinic typologies, a variety of research materials will be used to collate information and

formulate unbiased analysis of this data. These include the library and the various resources contained within it, the internet and the computer and its embedded systems.

1.5.5 Research Analysis

Noble & Smith (2015) emphasise the importance of research being done in a manner that strengthens the credibility of the findings, to ensure that the rigour and integrity of the study are reinforced (Noble & Smith, 2015:34-35). The research intends to investigate township community placemaking dynamics relevant to a holistic community health centre typology. By way of understanding the broader context of the study location, the researcher intends to unearth truths that will inform the study and resultant community health centre proposal. The following measures have been adopted to reinforce the credibility of the study findings:

Processes relating to data collection and analysis are to be clear, decisive and consistent. Observations will be conducted over the course of two days. One weekday and one weekend day will be selected to ensure a holistic perspective of usage is observed. Selected times of day 0h00, 12h00, 16h00 and 20h00 will be observed for a period of 10minutes at each allotted time for consistency. The researcher will undertake the observations on days with similar weather conditions as this may affect how participants make use of the public space. Furthermore, the observations will be unobtrusive, permitting participants to interact freely. Detailed records will be kept in a secure location (hard copy and digitally) to support findings.

1.5.6 Summary

Objectives	Research Question	Data Sources	Sample size	Data Collection Methods	Data Analysis Method	Data Presentation Forms and Style
To explore community needs and spatial characteristics that exist in townships	What are the community needs and spatial characteristics that exist in townships?	Published documents, journals, magazines Expert Interview ___ Study Location & surrounding public spaces	Adequate to address the research question 1 x Selected expert ___ 2 x locations	Desktop study/ Document analysis ___ Semi-structured interview – TAC representative Observation Study	Document analysis Content analysis Descriptive Statistics ___ Comparative / thematic	Text narrative, Frequency Graphs, Frequency Tables Themes, Tables, graphs, maps ___ Text narrative, Themes, Tables, graphs, maps
To investigate Placemaking principles in response to the social and spatial context of a township.	How can Placemaking principles inform a response to the social and spatial context of a township?	Published documents, journals, magazines	Adequate to address the research question.	Desktop study/ Document analysis	Document analysis Content analysis	Text narrative, Frequency Graphs, Frequency Tables
To determine the spatial requirements of a community health centre located in a township	What are the spatial requirements of a community health centre located in a township?	Published documents, journals, magazines ___ Expert Interview ___ Case studies	Adequate to address the research question ___ 1 x Selected expert ___ 1	Desktop study/ Document analysis ___ Semi-structured interview - Mr Mathibela Document Analysis	Document analysis Content analysis ___ Descriptive Statistics ___ Descriptive Statistics	Text narrative, Frequency Graphs, Frequency Tables Themes, Tables, graphs, maps ___ Tables, graphs, maps
Understanding how architecture can enable the creation of a healing environment	How can architecture enable the creation of a healing environment?	Published documents, journals, magazines ___ Expert Interview	Adequate to address the research question ___ 1 x Selected expert	Desktop study/ Document analysis ___ Semi-structured interview – Prof Harber	Document analysis Content analysis ___ Descriptive Statistics	Text narrative, Frequency Graphs, Frequency Tables ___ Themes, Tables, graphs, maps
To develop holistic community health centre typology that responds to the Umlazi community needs and spatial context.	What Umlazi community needs can be addressed through the development of a holistic community health centre?	Published documents, journals, magazines, case studies	Adequate to address the research question	Desktop study/ Document analysis	Document analysis Content analysis	Text narrative, Frequency Graphs, Frequency Tables

1.5.7 Conclusion

The chapter provides an overview and introduction to the dissertation agenda. It establishes and illustrates the social and spatial plight of those living in South African townships and the need for contextually responsive healthcare facilities. Of particular focus is the roll that Placemaking and Healing Community Architecture could play in the development of healing environments orientated around the needs of township users.

Chapter two reviews the state of South African Township with special consideration given to the social and spatial dynamics present. In chapter 3, Placemaking, the theoretical framework for the dissertation in reviewed while chapter 4 reviews the conceptual framework incorporated, namely Healing Community Architecture. Thereafter chapter 5 and chapter 6 reviews to selected precedents and case study that are in keeping with placemaking principles. Chapter 7 provides an overview of the interviews and observations undertaken while Chapter 8 gives detail conclusion as well as recommendations for the design development. Finally, Chapter 9 sets out the reference list and related appendices.

C H A P T E R **T W O** // THE SOUTH AFRICAN TOWNSHIP

These restless, broken streets where definitions fail — the houses: the outhouses of white suburbs, two-windows-one-door, multiplied in institutional rows; the hovels with tin lean-tos sheltering huger old American cars blowzy with gadgets; the fancy suburban burglar bars on mean windows of tiny cabins; the roaming children, wolverine dogs, hobbled donkeys, fat naked babies, vagabond chickens and drunks weaving, old men staring, authoritative women shouting, boys in rags, tarts in finery, the smell of offal cooking, the neat patches of mealies between shebeen yards stinking of beer and urine, the litter of twice-discarded possessions, first thrown out by the white man and then picked over by the black—is this conglomerate urban or rural? No electricity in the houses, a telephone an almost impossible luxury: is this a suburb or a strange kind of junkyard? The enormous backyard of the whole white city, where categories and functions lose their ordination and logic… a 'place'; a position whose contradictions those who impose them do not see, and from which will come a resolution they haven't provided for.

Nadine Gordimer, 1979
(Smith, 1992)

2.1 INTRODUCTION

In 1994 South Africa made the transition from an apartheid governed state to a democratic republic. This transition put an end to more than one hundred years of oppressive rule, controlled by ideals promoting racial segregation and control (Smith 1992:27). The impact of decades of autocratic domination has left its mark on the South African landscape, spatially and socially. Smith & Maylam explain that one of the most catastrophic apartheid legislative developments was the introduction of the Group Areas Act No. 41 of 1950. As a result of apartheid city planning and the Group Areas Act No. 41 of 1950 (Republic of South African, 1950) that followed, ethnic groups in South Africa were allocated specific areas in which they could live. One such allocation was the township areas exclusively demarcated for black South Africans, including African, Coloured and Indian persons, located on the outskirts of the city, vast distances from employment opportunities (Smith, 1992:27). The townships were dormitory ghettos, under-serviced and overpopulated at their inception and they remain contexts with substantial social inequalities, lack of public spaces, services and infrastructures (Darity Jr, 2008: 4979; Murray, 2007:51).

Despite the historical spatial, social and economic disparities of the past, it is imperative that facilities provided in township settings are befitting of the needs of the marginalised and that they contribute appropriately through contextually relevant means. A key to developing appropriate models of response is to foster an understanding of context. To develop this understanding, the spatial and social history of the South African township will be examined historically. After that, the spatial and social dynamics within the post-apartheid township context will be assessed.

2.2 APARTHEID SPATIAL & SOCIAL HISTORY

Towards the end of the 19th century, the discovery of gold and diamonds in Johannesburg “catapulted racial tension into the spotlight of South African history" (Mahajan, 2014:32). Over this time settlements populated by black people began to emerge on the peripheries of towns, in an unplanned manner. Before this most black people lived rural agrarian lifestyles.” (Mahajan, 2014:32).

During the late 19th century, racial segregation was already a part of the South African political landscape and was evident and enforced through social, economic and political life (Haarhoff, 2011:185). The persistence and severity of this enforcement was apparent in the Native Act of 1923, which stated: "…the natives should only be allowed to enter urban areas which are essentially the white man's creation when he is willing to enter and minister to the needs of the white man and should depart therefrom when he ceases to minister." This demotion of black people and various other ethnic groups was not a new phenomenon. Its roots can be traced as far back as the insurgency of colonialism in 1652. The denigration developed further and was crystalised many years later, as Apartheid, by the Nationalist Government who were voted into power in 1948. It was their forthright actions and schema which propelled engineered racial inequality, and its associated capture of wealth, into reality (Mahajan, 2014:31).

Towards the middle of the 20th century, decision-makers of the day faced a difficult task of ensuring black people were close enough to urban centres to provide cheap labour, while at the same time being far enough away to ensure definable social detachment (Mahajan, 2014:31). As far as possible black men and women were only to be in cities as labourers, and they could not be permanent residents or citizens of the city (Mahajan, 2014:31).

In response to the desire for controlled segregation and under apartheid governance, urban planning and housing policies for the township emerged. From 1950, the governing party's policymaking, aimed at formalising segregation, intensified as numerous policies and legislations relating to urban environments were instituted. These included "The Group Areas Act of 1950", "The Bantu Authorities Act of 1951 and the Black Homelands Citizenship Act of 1970", "Laws that Were Building Blocks for Apartheid". Part of the framework for urban developments were conditions under which the segregation would manifest (Mahajan, 2014:34).

While the Group Areas Act of 1950 legislated racial zoning, the act was merely the culmination of what was already commonplace in South Africa between 1930 – 1950 (Maylam, 1995:28). Agencies administering urban planning had racial segregation on their agenda during the first part of the twentieth century. It was, in fact, local authorities in major urban centres that

were unsettled by the expansion of uncontrolled black settlement within city bounds and needed assistance in regulating their future growth (Maylam, 1995:28). As a result, the 1950 Group Areas Act formalised the segregated city and rezoned areas according to racial groups. Green belt buffer zones measuring up to 250m wide, which were occasionally industrial corridors, were introduced to define racially distinct areas (Haarhoff, 2011:190; Zegeye, 2001:118). This was in line with the preferred industrialised model of decentralisation and was the rationale that supported this urban development structure. While providing a spatial and social divide, this separation further ensured a defensible line that could be cordoned off using barbed wire to maintain the divide if it was ever at risk of being transgressed (Mahajan, 2014:31). Buffer zones, as a result, enabled strict policing of townships which were under constant surveillance, while access routes into townships were limited to three or four primary roads that acted as chokepoints (Zegeye, 2001:119). These extended road links between segregated areas resulted in a dispersed low-density city form, known in modernist planning as urban sprawl.

Following the creation of the Black Homelands Citizenship Act of 1970, **t**he black population of South Africa was subjected to mass relocation. Between 1960 and 1983, a total of 3.5million black South Africans (including African, Indian and Coloured) were forced by the apartheid government to relocate. In most cases homelands were left without access to municipal services such as clean water, sanitation, refuse and electricity. The homelands were a trap of excessive abject poverty and unemployment (Department of Presidency, 2014:5).

A further impact of race-based residential segregation, as determined by the Group Areas Act of 1950, meant hundreds of thousands of individuals and families had land, on which they had lived for generations, expropriated for use by white South Africans. While the homelands were located great distances from white urban areas, to reinforce spatial disparity between race groups, large numbers of African people lived in townships and informal settlements on the outskirts of cities. The townships were spatially and socially isolated environments (Department of Presidency, 2014:4).

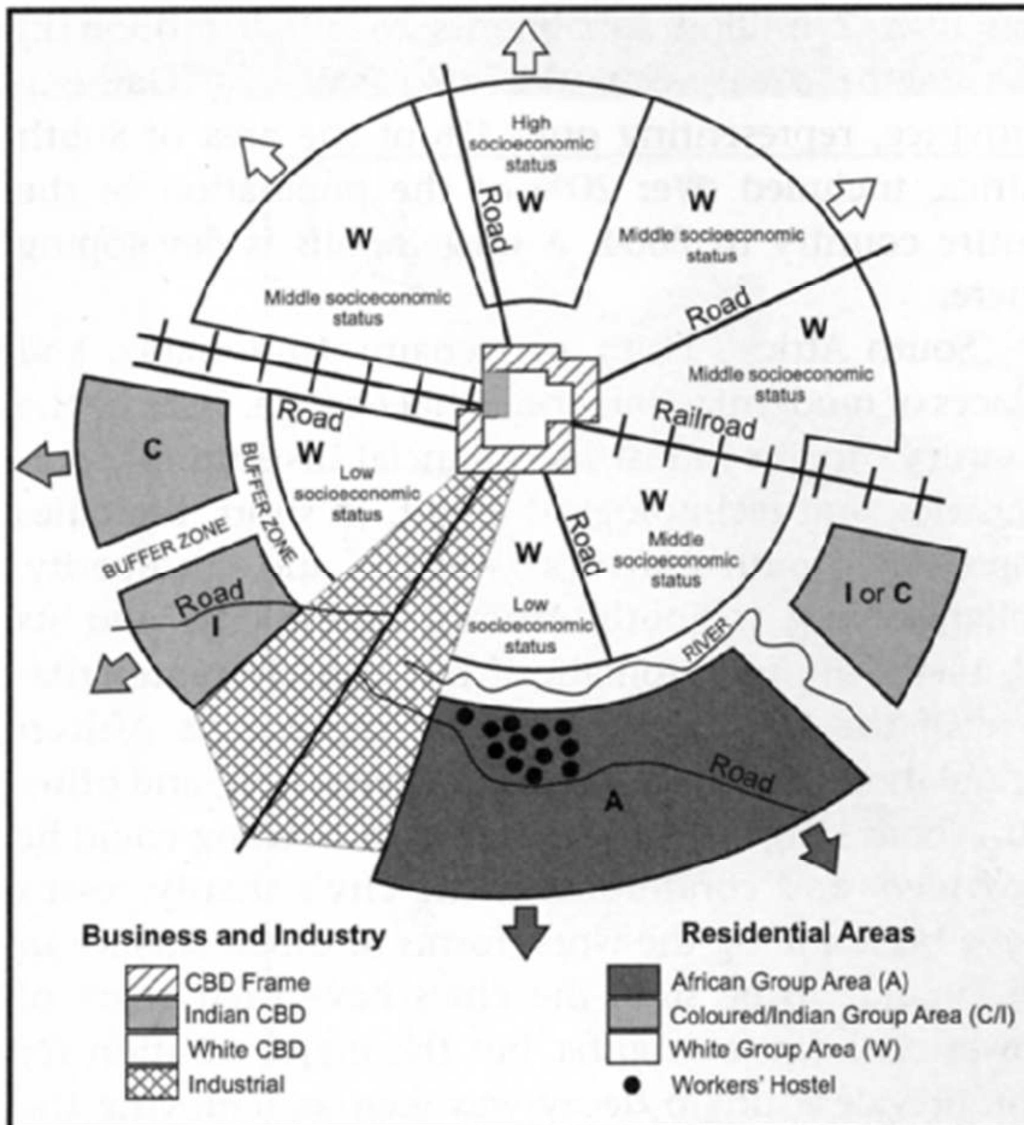


Figure 2: An Apartheid City urban plan (www.people.uwec.edu).

At present apartheid's urban planning and socio-economic strategy is evident in cities across South Africa (Mthiyane, 2019:10). This uniquely South African approach to urban planning led to the conception of the dormitory town. These were residential areas built in an easily identifiable layout of row upon row of identical houses stretching for kilometres. The framework for the dormitory homes was determined by the following factors (Mahajan, 2014:31):

- The site should be an adequate distance from the white town. It should be separated from the white area by a buffer where industries exist or are being planned.

- It should have land to expand away from white areas.
- It should be within easy distance of the town or city for transport purposes, by rail rather than a road.
- It should have one road that connects it to the town, preferably running through the industrial area.
- Open buffer areas should surround it.
- It should be a considerable distance from the main roads and national roads.
- Housing should be built and allocated in areas for different ethnic groupings.
- Although the standards and design of housing for Africans varied considerably before 1947, the central government thereafter specified the minimum standards for African and "Coloured" housing. The four-room, $40.4m^2$ prototype was the most typical house built under this requirement.
- A mix of formal housing, site and service schemes, and hostels should be provided.
- Housing should be provided on a rental basis.

Bonner and Segal (1998) characterised the process as "exerting control through form": "The key focus of the specifications set down for townships was to enable the government to assert its control. Row upon row of identical dirt streets radiating from a central hub, line upon line of drab, cheap, uniform houses—a colourless mind-numbing monotony. Through regimentation and uniformity, the government sought to establish a firm control that could not be challenged." (Mahajan, 2014:34). Townships such as Soweto (Gauteng) and KwaMashu (eThekwini) were planned strategically, using what became known as the '40-40-40 principles' (Mthiyane, 2019:10):

1. Residential housing is to be located excessively far from economic opportunities, forcing commuters to travel a minimum of 40km daily to and from their place of work.
2. This not only stagnates personal economic development and growth opportunities but also forces individuals to allocate 40% of their income to transportation costs.
3. Finally, $40m^2$ houses were provided. These small spaces ensured overcrowding and limited opportunity for economic self-employment within the home.

Figure 3: Umlazi township development 1967 (www.mut.ac.za).

Durban's spatial and social segregation is not dissimilar to that of other cities across South African. Following the 1950 Group Areas Act, the outer lying urban areas north and south of the CBD were allocated for black and coloured Africans, while Indians and whites were assigned favourably located areas within the city bounds. In many instances buffer zones were introduced to reinforce the racial segregation of zones. In many instances, Africans and Indians who had been living in specific areas for decades were forcibly removed from these areas to predetermined newly constructed zones on the CBD periphery (Marx & Charlton, 2003:3).

Located south-west of Durban is Kwazulu-Natal's biggest township, Umlazi. Umlazi covers an area of 47,46 km², with a population of more than 400 000 (2011) residents (Department of Economic Development, 2008; eThekwini Municipality, n.d.). Among South African townships Umlazi has the second-highest population density (Department of Health, 2016:11).

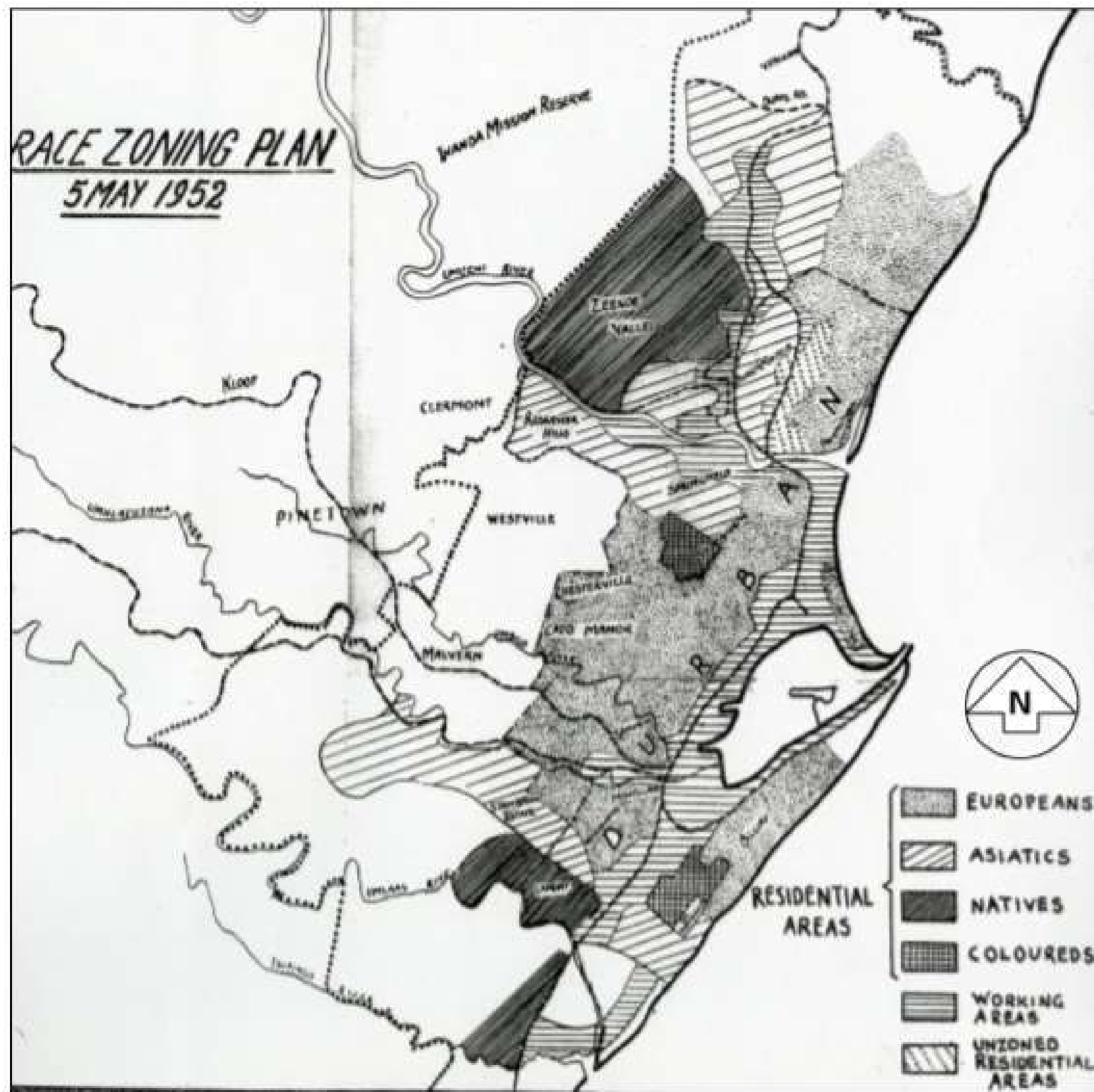


Figure 4: The approved Race Zoning Plan (1952) for Durban (Rosenburg, 2012:20)

Umlazi originated in 1845 when the British occupied by force what was then Natal, and established several 'native locations' for the Zulus. The Umlazi Reserve was established by the Church of England in 1862, to establish what were then deemed to be civilised and progressive norms for those living in rural areas. Through education and training, this would provide those living in rural areas with pastoral and agricultural occupations. In 1967 it was established as a black township under the National Party of the time while thousands of displaced Cato Manor residents were relocated under The Slum Law of 1934, to Umlazi (eThekwini Municipality, n.d.; Parnell, 1988, Mthembu, 2007:2).

2.3 POSTAPARTHEID TOWNSHIP LEGACY

During the transition to democracy (1994), the African National Congress (ANC) was voted into government. This change signalled the dawn of a new era. The ANC immediately set about addressing the wrongs of the past by providing schools, clinics, hospitals, housing and doing whatever else was necessary to ensure townships communities had access to essential services such as water, sanitation, electricity and roads (Department of the Presidency 2014:2). The primary post-apartheid approach adopted by the new democracy to reform the spatial and socio-economic legacy of townships was the Reconstruction and Development Programme (RDP). The RDP was a policy framework that included land reform, development of compact cities, efficient public transport and the development of industries and services that might meet and serve the local requirement. (Section 4.3.3, quoted NPC 2011) (Mahajan, 2014:40).

Unfortunately, due to the overwhelming backlog of services required and the exponential escalation of needs over time, the ANC government have not been able to meet the demand (Mahajan 2014:31). While the ANC government has introduced legislative frameworks to institute change, there has been little transfer of this onto the ground. Twenty-five years on from this momentous occasion, the optimism that was initially experienced has waned as the ruling ANC government has struggled to manage the unenviable task of rebuilding a fractured nation (Mahajan 2014:31).

2.3.1 Spatial dynamics of the Post-Apartheid Township

To this day, South Africa remains an economically, socially and spatially divided landscape (Murray 2007:1). The spatial legacy of apartheid has been remarkably resilient to change, and after 25 years of democracy South Africa's urban environment still embodies apartheid systems (Mahajan, 2014:32). A fundamental characteristic of township environments that has withstood change is the spatial divide between townships and urban centres. This resilience has been understood to be a result of post-apartheid urban policies that were adopted to redress these wrongs of the past, but that were implemented faster than intricate processes required to administer and roll out changes. The impact of this transformational conundrum is urban areas that - by and large - still reflect a social discord of racially homogeneous environments where economic disparity prevails (See Figure 4). In a nation where less than a

third of individuals have access to automobiles, it should be considered whether current planning efforts are inadvertently fortifying the very apartheid era methodologies that they were meant to redress (Mthiyane, 2019:10).

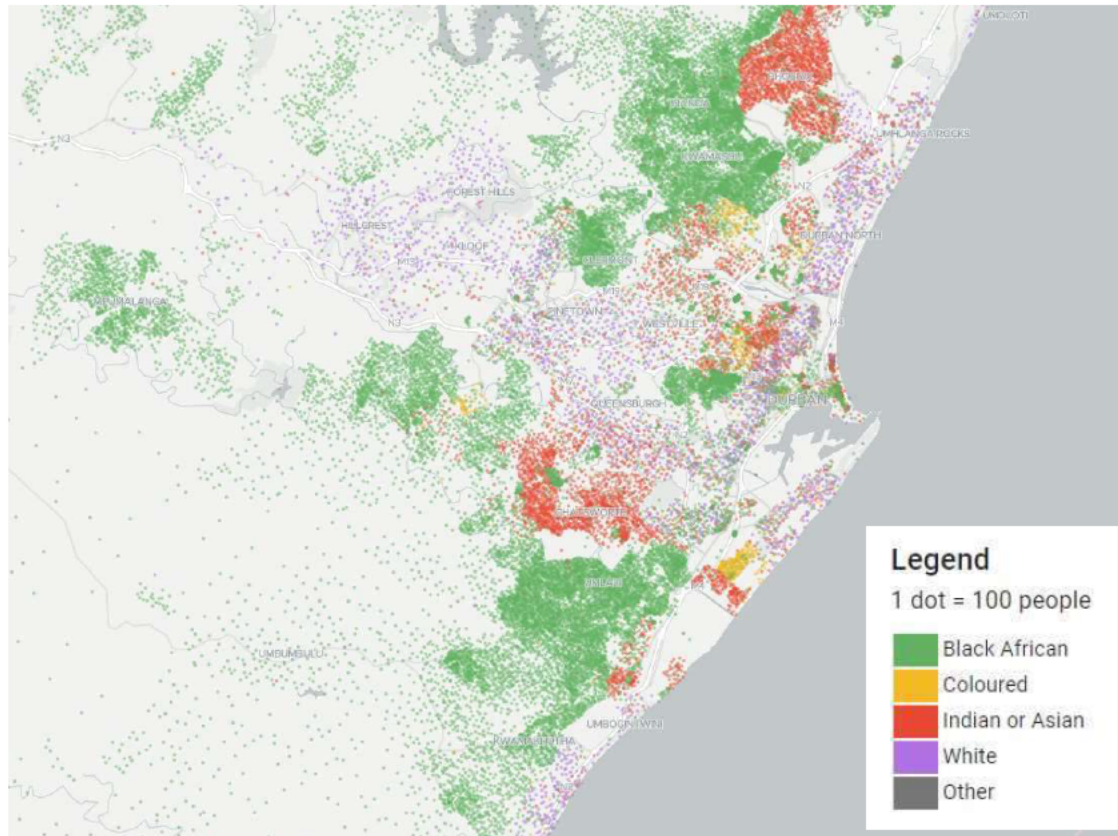


Figure 5: Dot matrix map of eThekwini (2011): 1 dot represents 100 individuals (www.adrianfrith.com).

A further global phenomenon that has exacerbated the problems associated with township life has been the uneven distribution of wealth between employers and employees. Under the apartheid planning framework, dedicated areas with services and resources were available to those with access to wealth, while the poor are located great distances from economic opportunity and services. In 2018, the global socio-economic outlook was very similar. It was estimated that the top 10% of wealth earners in China, Europe and the United States owned more than 70% of the total available wealth (Alvaredo et al. 2018:200). In South Africa the statistics are very similar, with the top 1% of wealth earners owning 2/3 of the income (Alvaredo and Atkinson 2010:2). Factors such as these reinforce the importance of ensuring that services for the underprivileged are provided adequately and timeously. There has never been a time in history where various groups of people across the globe have been

subjected to as much segregation and oppression, spatially and socially, as one can experience today (Oxfam International n.d.).

2.4 CONCLUSION

Twenty-five years after the fall of apartheid, the legacies of apartheid's divisive urban planning are still evident in the South African landscape. Inseparable from the country's apartheid legacy, South Africa's township history and culture are steeped in the struggle against oppressive rules and regulations while the economic infrastructure has been left in disarray (Mahajan, 2014:32).

As we move into the future, cities and their urban peripheries are increasingly going to be at the forefront of civilisations being outworked. While people are enticed by economic activity, opportunity and innovation, cities are very often places of massive stresses that often result in physical (infrastructure), emotional and economic collapse. By 2050, the urban population of the world is anticipated to double (United Nations 2017:3). This is an alarming prediction when one considers the inability of urban centres across the globe to address the challenges that come with population increase. Alvaredo outlines this concern in the World Inequality Report 2018, noting that urban settings of the world and their associated township communities containing the displaced, homeless, underprivileged and marginalised will be influenced by and at the mercy of global urban phenomena. It is anticipated that township settings will become even more strained, with limited access to resources, as governments across the world wrestle the tensions of 21st century global economies and unequal wealth distribution that so often accompany global economies (Alvaredo et al. 2018:145).

To this end, South Africa's unique spatial and socio-economic history must be addressed with renewed tenacity. While the 25 years that have transpired post-1994 have yielded much for previously disadvantaged individuals and communities, there remains the inescapable reality of a South Africa that is spatially and socially fractured, both physically and mentally.

Whelan describing township environments: ‘*nor was there any "public space." While there was a great deal of unoccupied land in most townships, it had no civic, social and cultural role. It was indeed "no man's land," with no owner, no rules, no maintenance. Footpaths to transit connections often crossed these weed-infested fields, but they were dangerous and strewn with trash. What little civic interaction occurred in the township during apartheid happened in people's yards, in churches or the marketplace'.*

Scientific Journal of Sopotia University (Pecz, (ed.) 2016:106)

3.1 INTRODUCTION: THE EMERGENCE OF PLACE

Place is a social construct that is experienced by an individual and defined by social interactions (Adams and Tiesdell, 2013:11). Vitruvius, in his evaluation of architecture's fundamental features, describes commodity, firmness and delight. These are still very much applicable to placemaking today. Expanding on Vitruvius, Adams and Tiesdell posit a fourth essential, economy. This is not only economy in the financial sense but rather a broader understanding of minimising one's environmental costs. It can be argued that successful places are meant for people, they are to be well-connected and permeable, mixed-use in nature with varied densities, distinctive and sustainable and resilient and robust (Adams and Tiesdell, 2013:10).

Yi-Fu Tuan's classic work, 'Topophilia' (1974) was among the first to describe and examine how people attach meaning to place (Manzo, 2006:337). In his work, he presented the notion that 'space' subsequently evolves into 'place' as we become more acquainted with particular places and bestow upon them value. Thus, places acquire a more significant meaning through the "*steady accretion of sentiment*" and familiarity (Tuan, 1974:33). The transitory nature of space is evident in a market that is transformed by the presence of spectators. Without spectators, the market is merely a space, but with customers using the space, it is transformed into a place. The success of a space is not only determined by the merit of its architectural features or design finesse but rather the attention that is shown to the environment in which it exists (Adams and Tiesdell, 2013:12). The defining factor of place is, therefore, that it derives its meaning from those who inhabit or use it. Without this interaction, a space would be defined merely as a collection of physical elements.

It is apparent that while human activities give meaning to how people live their lives, they also give meaning to place (Adams and Tiesdell, 2013:11). Places subsequently develop as the centre for participation in the activities of everyday life and human interrelationships. As a result, place forms from the overlapping of common community need, social structures, systems and parts (Menin, 2003).

The subsequent chapters seek to explore the notion of place from its inception as a marginalised ideology to an essential generator of urban form. Included in the exploration is

the contribution of Jane Jacobs, the founding theorist within this approach, as well as the role of people in the development of place and contemporary developments. The focus will then turn to the development of public space, as an expression of place and the role that this plays in the development of community public space.

3.2 PLACEMAKING DEFINED

Placemaking is a general approach in design and urbanism that considers interventions strongly related to the community and the context in which they are placed. In 1958 Jane Jacobs, an American-Canadian community activist, published The Death and Life of Great American Cities. This transformative work was "an attack on current city planning and rebuilding" within urban environments. Jacobs stated categorically that government officials and professional planners were wrong in their approaches (Schubert, 2016:13). Her ideas were particularly confrontational for those who strictly adhered to post World War 2 urban planning ideas that undermined old neighbourhoods and advocated de-densified cities. Her work was also critical of those claiming knowledge on how best to plan and design for the future of cities (Schubert, 2016:14).

Jacobs' laboratory for her arguments was her Greenwich Village neighbourhood, where she observed truths that were in turn related to larger realities in urban life. The neighbourhood, she believed, was the starting point for change as it was at this scale of the community that one experiences the character of a place. While Jacobs' observations involved real-life truths, these were not meant to form a prescriptive methodology for adoption in other contexts. The essence of Jacob's observation was what she saw evident in her neighbourhood community, and this she endeavoured to express (Schubert, 2016:16).

The primary focus of Jacobs' interrogation was prevailing assumptions linked to the city and urban planning, as she questioned what makes them flourish. Jacobs believed ideas of identity, voice, inclusion, access, and opportunity have become critical on a global scale, especially as we move into the age of urbanisation dominated by the city. Furthermore, the real-time challenges that exist in cities make them environments of extreme complexity, in which questions around economic futures, social sustainability and climate change are at the forefront of debates (The Rockefeller Foundation & ARUP, 2015:3).

While Jacobs recognised the myriad of structures, economies and ethics at work in the ecology of the city, she was unwavering in her dissatisfaction with the status quo within urban contexts she witnessed across the globe. To address these complexities, Jacobs advocated the adoption of a contextually nuanced response to differing environments. The complexity of Jacobs' ideological approach was that due to its organic nature, placing restrictive methodologies to her ideas would undermine the very nature of her approach. Thus, Jacobs' urbanism is one that develops organically over time within a framework of principles. To align with Jacobs' approach is then to position one's self as a better listener, observer and enabler of different communities. This very often is the challenge for the architect and planner who is, often, driven by programmes, outcomes and schedules (Schubert, 2016:19).

Central to Jacobs' approach was the concept of diversity and density, which combine to deliver the benefits of adjacency. (Schubert, 2016:21). The amalgamation of diversity and density produces environments of variety, at all times of day, with different kinds of people. These mixed-use environments allow a variety of activities that, together with acceptable policy and programmes, support the presence of immigrants, investment in culture and enables small businesses and local economies to thrive.

Jacobs has also advocated the use of particularity, differentiation, resilience and a bottom-up approach. These four principles speak to an ecological understanding of the evolutionary and adaptive nature of systems in contexts. She believed that the particularity of a situation aids the system to differentiate itself, avoiding standardisation, and encouraging a specific contextual response that develops resilience due to its contextual responsiveness or adaptability (Schubert, 2016:27).

A further awareness that Jacobs advocated was contextually responsive patterns of interaction through networks, feedback loops and self-regulation that reinforced the interconnected nature of systems. Jacobs urged individuals to pay attention to what was taking place in neighbourhoods and cities. This would provide local knowledge from persons within the context, to inform land use and planning decisions (Schubert, 2016:27-28).

Jane Jacobs' defining principles:

Density
Social capital
Patterns of interaction: Networks
Particularities and differentiation
Feedback loops
Self-regulating
Generative

Diversity
Non-prescriptive
Autonomy
Bottom-up
Informal
Organised complexity
Fractals

Jacobs was often thought to be against anything "big", but this is untrue. It was instead the structure that accompanied large systems that was not able to respond to varying context appropriately, that concerned Jacobs (Schubert, 2016:27). Jacobs' work was formalised further by an urban planning organisation, Project for Public Spaces (PPS). In response to Jacobs' work, PPS developed four primary factors that promote the idea of community, with principles contributing significantly to the development of place. These are Comfort and Image, Uses and Activities, Access and Linkage and Sociability with principles.

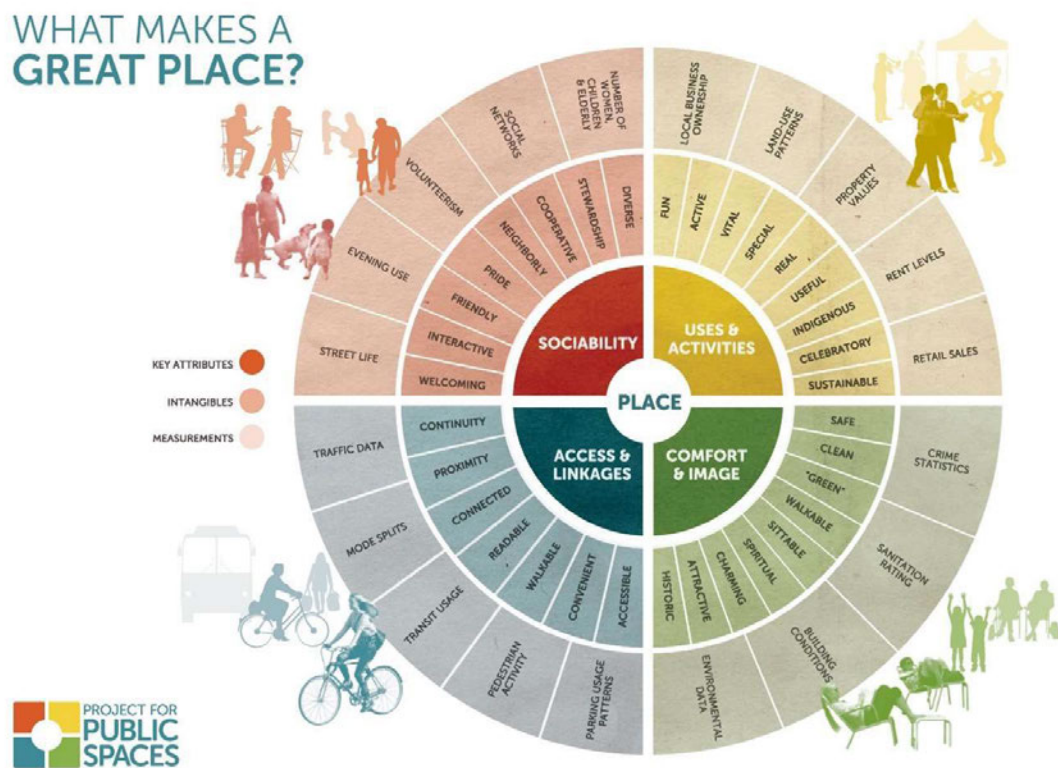


Figure 6: Projects for Public Spaces - What makes a successful public space? (www.pps.org).

These, in turn, develop environments that encourage diverse and sustainable developments, that help to create transformative cities, that encourage people to create and improve public

spaces. When place consciousness ideologies are incorporated into the multifaceted dynamics of township development, an architecture of meaning will develop. In time the benefit of adopting this approach will become evident as individuals, families and communities at large will experience upliftment.

3.3 THE DEVELOPMENT OF [PUBLIC] SPACE

Towards the end of the 19th century and in conjunction with the rise of modernism, public space and the pedestrian were marginalised as the traditional notion of the city as a place for meeting and social connection for those living in cities, was no longer central (Gehl 2010:3). Under these conditions, urban life and the pedestrian have progressively been undermined. In developing countries, where most daily activities take place in cities, the transition to a vehicular centric environment has undermined pedestrian modes of negotiating the city (Gehl 2010:6). There needs to be a reframing of the urban agenda that brings clarity to what is essential in order to address these and other perspectives.

Shortly after the millennium, the most considerable portion of the world's population lived in urban environments. This shift brought into focus the need for an emphasis on the human dimension within urban environments. Gehl's proposal for addressing these needs are the development of lively, safe, sustainable, and healthy cities. A lively city encourages more significant people movement, which develops safety as a by-product (Gehl 2010:6).

A key component of a lively, safe, sustainable and healthy city is public space. Public spaces are unique in that they appear to have no ownership, while they are owned by everybody who frequents them. Once accepted by a community, a public space can be used to strengthen and enrich the community (Projects for Public Spaces 2012:1). Another factor affecting the potential of a place to succeed is the ease with which people can move through a space. A well-thought-out movement network can open previously isolated areas, create connections and allow movement of people within them using the most direct route (Adams and Tiesdell, 2013: 17). In this way, restaurants, bars and shops are best suited to take advantage of pedestrian engagement. The success of a location is further emphasised through public transport networks, such as light rail, being able to access various areas with ease and efficiency (Adams and Tiesdell, 2013: 19).

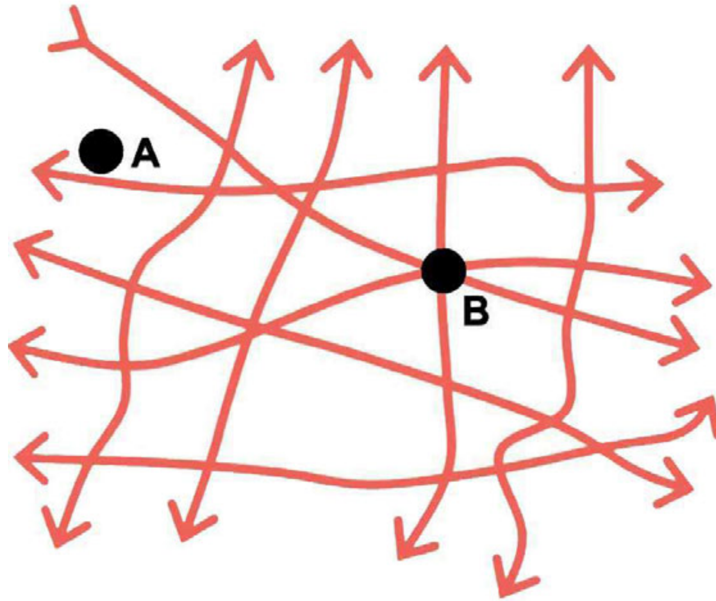


Figure 7: Destination A restricts access through its isolation, while Destination B is ideally located along several converging routes, as a nodal point of interest (Adams and Tiesdell, 2013:17).

While urban designers contend that connectivity and permeability can be achieved through the urban grid layout (Adams and Tiesdell, 2013), there is much to be said about the urban environment that results from this. It is one that contrasts the extreme modernist view of setting buildings as individual 'objects in space' surrounded, at best by landscaped parkland and, at worst, by expensive car parks and patches of poorly maintained 'left-over' land. Street oriented blocks create a much denser urban fabric in which the continuous façade of buildings serves to define and enclose space by setting a more apparent boundary between the public realm of the street or urban square and the private realm of the buildings themselves (Adams and Tiesdell, 2013: 19).

By promoting short walking distances, attractive public spaces and varied urban functions, city spaces that have reasonably cohesive structure develop into active environments. This activity results in more eyes on the street, both from the street and outside the street, producing secure surroundings. Through the promotion of green mobility such as travel by foot, bike or public transport, the economy and environment benefit; there is less resource consumption; decreased emissions and reduced noise levels. These active transport activities (walking and riding) become integrated patterns of daily life, promoting a healthy city (Gehl 2010:6).

Very often, city planning and urban arrangements directly influence human behaviour and how cities operate. In times gone by, medieval cities with their compact structures, short walking distances, markets, and squares assisted in the development of trade and craftsmanship centres (Gehl 2010:12).

Planners have traditionally addressed high traffic volumes in an area by providing more roads and parking garages. This approach has been proven ineffective at making an area more pedestrian-friendly, and rather substantiated the notion that what you cater for in your urban planning will produce a directly proportional outcome. It can thus be said, that "if you plan cities for cars and traffic, you get cars and traffic. If you plan for people and place, you get people and place" (Projects for Public Spaces 2012:7). Milam's study of Californian urban roads indicates that increasing the number of road lanes does not result in a decrease in road congestion (Milam, 2017:15). In the city of Copenhagen, a restructuring of road networks, to include cycling lanes, promoted safer conditions for bicycle traffic and stimulated an increase in users (Gehl 2010:12). The same can be said for pedestrian traffic in Venice, which has a dense city structure, short walking distances, engaging spatial development, many mixed-use activities, ground floor interactivity, renowned architecture and detailing – all of which takes place at the human scale (Gehl 2010:13).

Figure 8: 9th Avenue, Manhattan before (left) and after (right) a 2008 "Copenhagen style" bicycle path designed, so that parked cars protect bicycle traffic. Bicycle traffic has since doubled in New York, in only two years (Gehl 2010:11).

According to Projects for Public Spaces (Projects for Public Spaces 2012:16) the following principles foster public space stability and growth:

- Improving streets as public spaces, creating squares and parks as multi-use destinations
- building the local economy through markets
- designing buildings to support place
- linking a public health agenda to a public space agenda
- reinventing community planning and creating a comprehensive place agenda
- lighter, quicker, cheaper / start small, experiment, restructure
- government to support public spaces.

Figure 9: A new bicycle lane and widened sidewalk promote a lively, safe, sustainable and healthy City (Gehl 2010:6).

The notion of 'life between buildings', proposed by Jan Gehl, is the varied experience of common city space through various activities: exercise, short pauses and more extended stays, window shopping, informal and formal conversations, dancing, playing, street trade and begging (Gehl 2010:19). It is essential to recognise that the greatest attraction of any city is its people. It is also true that people are naturally drawn to areas where there are higher

numbers of people. Inner-city street studies of Copenhagen revealed that the majority of people would choose to walk down lively streets with life and activity rather than quiet streets. A simple activity such as construction work on a street will draw interest and encourage interaction, while performances and live music result in people lingering (Gehl 2010:25). Although the contexts may vary, the principles encouraged by Gehl hold true: people are drawn to environments that foster social, physical and experiential connection.

An awareness of the physical environment that one develops concerning human scale and senses is key to the creation of spaces that engage people (Gehl 2010:25). To engage people appropriately, Gehl proposes that spatial structures are organised using preferred walking and bicycling ranges, similar to settlements of old that were developed along paths and trade routes. This establishes a framework within which buildings can be arranged in a manner that results in fruitful interaction between life, spaces and buildings. By building on the effective functioning of human scale, broader district-scale developments can be outworked (Gehl 2010:198).

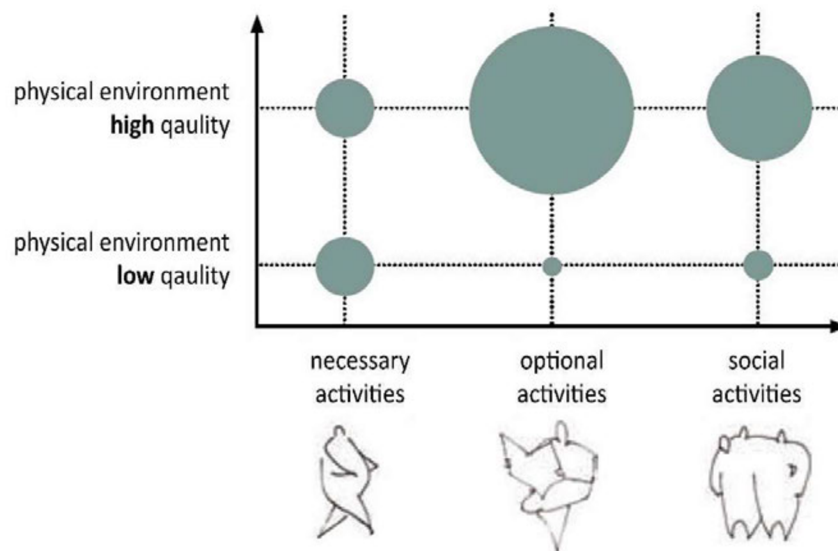


Figure 10: Graphic representation of the connection between outdoor quality and outdoor activities. An increase in outdoor quality gives a boost to optional activities. The increase in activity level then invites a substantial increase in social activities (Gehl 2010:21).

The design of architecture that supports place through engaging and permeable street-level interface is essential. This responsiveness addresses the human scale of the development,

creating buildings that facilitate opportunity for the surroundings, through the inclusion of multi-use elements that encourage interaction (Projects for Public Spaces 2012:10).

3.4 BEYOND PLACEMAKING

Given that township environments have particularly poor spatial dynamics, it is essential that planning efforts, within townships, address these ills through development that is founded on the effective production of place. The following review briefly explores formative spatial planning theories used to develop place.

3.4.1 Interpreting Urban Space

To help one interpret spatial dynamics of different urban environments, Figure Ground is used. Figure Ground is a visual analysis method used to understand the relationship between foreground and background space. It relies on perceptual grouping, determined by cognitive processes. (Jiang, 2014).

Figure Ground asserts that the space that results from an arrangement of figures is as important as the figures themselves. The space formed by an arrangement of figures can be interpreted as positive or negative (Fredrick, 2007:16). It is this interpretive dynamic of Figure Ground methodology which makes it such a powerful technique. Figure Ground approaches urban design as a manipulation of the solid-ground relationship that helps to create multi-layered environments of complexity (Jiang, 2014). Over time the fluid nature of urban environments gave rise to Urban Morphology, the study of the city as human habitat.

Urban morphology refers to a process of analysing the evolution of urban environments from inception through its current state, taking note of and identifying its components. Specifically, urban morphology analyses the effect of perceptible social and economic influences by analysing the outcome of detailed ideas and objectives that occur in cities and have influence on cities. Buildings, parks, gardens, streets and monuments are among the primary features analysed. These elements exist in a constant state of transformation because of the dynamic nature of built structure and the open spaces and public streets serving these areas (Moudon, 1997:3).

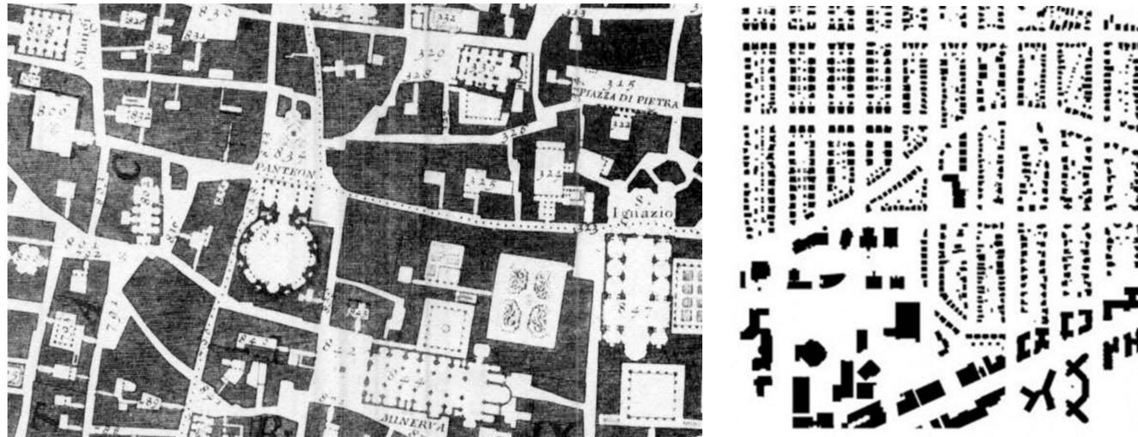


Figure 11 & Figure 12: Two figure ground images depicting contrasting spatial hierarch (www.tsarchitect.nsflanagan.net).

The city has been described by ethnographer Levi-Strauss as the most complex human invention, found at the meeting place of nature and artifacts (Moudon, 1997:3). To assist in analysing this transformational nature of cities, Lynch posits that people navigate urban environments through a system of mental maps. Lynch uses the term Legibility to describe the ease with which an urban environment's parts can be recognized and organized into a coherent pattern. Lynch subsequently describes how individuals adopt wayfinding, a consistent use and organization of definite sensory cues from the external environment, to navigate these mental maps. Lynch defines 5 urban elements that assist individuals in producing mental pictures of the physical world: (Lynch 1960:46-48)

1. Paths: routes by which people navigate the city
2. Edges: boundaries and breaks in continuity
3. Districts: Areas characterized by common attributes
4. Nodes: identifiable points of orientation such as squares or junctions
5. Landmarks: points of orientation that are easily identifiable in the urban landscape.

Linkage Theory thus derives its meaning from the 'lines' connecting elements to one another. These include streets, pedestrian paths, linear open spaces, rivers or any other element physically creating a connection between two points. Linkages are the glue of the city. They create a cohesive urban environment by joining that which is separate and otherwise disconnected. Through the expression of its parts, it makes otherwise disconnected parts within a larger whole understandable to the user (Trancik, 1986:106).

Figure 13 & Figure 14: Linkages visible in the urban formation of cities (www.citymetric.com & www.geoffboeing.com)

In the same way that Lynch's Linkage Theory assists in defining urban areas, Transitional Zones assist in encouraging movement from large public space into private space. The intermediary nature of these spaces develops a sense of security and ownership for the users. The combination of communal spaces that permit varying degrees of movement reinforces the sense of security and belonging that one feels in these spaces and increases the probability of one using the space more.

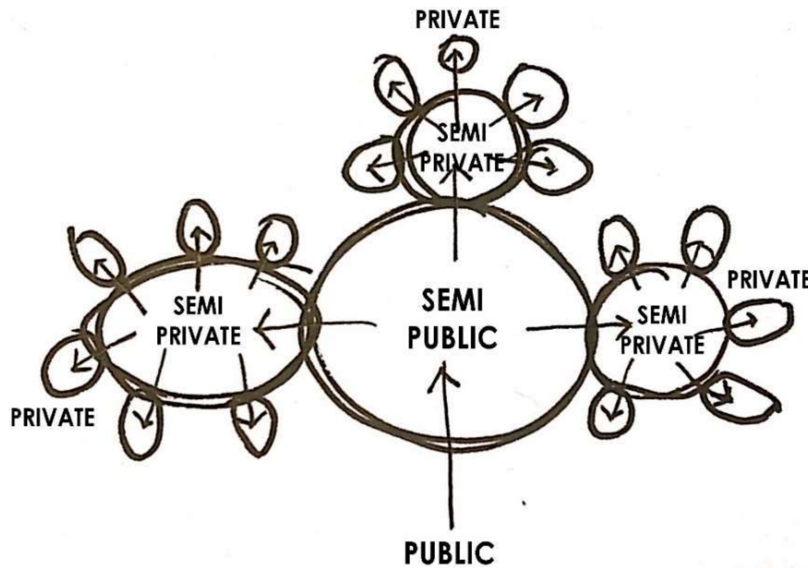


Figure 15: Diagram depicting a preferred transitional space pattern (Author).

It is important that transitional spaces can be experienced physically but do not impede on the social dynamics of a space by preventing contact one might have with other individuals (Gehl, 2011:61). Trancik in his writing referred to a hierarchy of streets (boulevard, street and

alley) and squares (plaza, square and courtyard) that reinforce the public nature of various spaces (Trancik, 1986:106).

3.4 PLACE-MAKING AND SPATIALISATION IN THE GLOBAL SOUTH

Existing models of urbanism in the global south reflect the ideologies of centralization of income and power, resulting in poverty and exclusion, contributing to environmental ruin, acceleration marginalization and privatization of common goods and public spaces. While cities of the 21st Century can be environments that foster economic, environmental, political and cultural diversity, they currently lack equity (Grahl, 2005:1).

In response to this, The Right to the City looks beyond the fundamental offering of improved quality of life linked to housing but rather encompasses a much broader city scale including its surrounding rural areas, to ensure stability and protection for those living in either context. It furthermore implies new patters of "promotion, respect, defence and fulfilment civil, political economic, social, cultural and environmental rights" guaranteed in regional and international human rights oversight (Grahl, 2005:1).

In disadvantaged communities where strained and modest living standards are commonplace and population densities are high, common outdoor areas play an integral role, acting as an extended living room where many ordinary activities take place. In these environments, focusing on the small scale is crucial as this determines whether people feel invited into the space (Gehl 2010:207;216-217). Through the provision of essential infrastructure services such as clean water, ablution facilities and sewage treatment, one creates a healthy city. It is also a place where women and children can walk unafraid and where individuals can enjoy public spaces without fear (Projects for Public Spaces 2012:11).

Instituting a broad health agenda is a way to reinforce a public space agenda, as health care facilities become community centres, including education programs in their services rendered. The value of successful public spaces is evident in the role they play in the psychological health of a community, as they provide a safe environment, stress relief and a form of escape from overwhelming circumstances for those living in crowded informal settlements. When public and neighbourhood streets are active, crime and gang-related

activity are reduced (Projects for Public Spaces 2012:11). Fundamental to the health agenda is the role of the wider community. The value of community interaction cannot be understated.

Similarly, it is important to recognize that while placemaking has a broad scope, placemaking connected to spatial dynamics of urban contexts should not only focus on the outcome of the placemaking intervention. Rather it must consider the process in conjunction with the outcome. The process of placemaking is an essential aspect of its effectiveness and is often overlooked. In instances where people are empowered, placemaking often creates positive social change (Strydom, et.al. 2018:12).

Placemaking over the course of time has developed and evolved. At its inception it referred to transformation with a physical (spatial) and environmental (product oriented) end product. This end product was the result of a particular design agenda, that ultimately results in social change. In recent years placemaking has transitioned to embody empowerment in different forms. While traditional placemaking empowered experts to understand and then implement placemaking process, recent placemaking developments deliver change to communities in which placemaking is practiced, through learning and sharing of skills and ideas (Strydom, et.al., 2018:11).

This dual process of information exchange and empowerment reflects placemaking's openness to top-down and bottom-up process. This duality is an essential feature of placemaking. It sets traditional channels of information exchange to one side and acknowledges the contributions of all parties to the creation of a holistic outcome.

3.5 CONCLUSION

Placemaking is a construct that addresses the heart of modern urban planning. It provides a framework to redress commonplace urban ills that are apparent in many of our public spaces. As a concept, Placemaking was explored widely in the early 1970s. It is an interdisciplinary, multifaceted concept linked to the likes of Jane Jacobs and William Whyte, who were fascinated by the connection between people and place. Of particular interest for early thinkers was the effect the physical and natural environment had on users of a specific environment (Strydom, et.al. 2018:12).

In recent times, the key concern of the work of placemaking is the need to respect a person's dignity. The dreams and desires of people across the globe are remarkably similar. This is because a people-centred approach has walking, sensory apparatus, movement options and necessary behaviour in common. To this end, the universal starting point for all aspects of city and urban development is the human scale (Gehl 2010:229).

It is therefore essential to consider the relations between community, space and place as communities develop on the foundation of many kinds of interaction. An understanding of place is fundamental to the concept of community development and empowerment. People inhabit and grow in places, they move within and between surrounding places, and rely on the movement of goods to and from places to survive (National Research Council 2002).

"Not long ago, operating rooms had windows. It was a boon and a blessing in spite of the occasional fly that managed to get in through the screens and threaten our sterility. For us who battled on, there was the benediction of the sky, the applause, and reproach of thunder, a divine consultation crackled in on the lightning. At night in an emergency, there was the longevity of the stars to deflate a surgeon's ego. It did no patient a disservice to have heaven looking over his doctor's shoulder. I very much fear that having bricked up our windows, we have lost more than the breeze; we have severed a celestial connection… And I in turn ask, where is the architect who, without sacrificing function and practicality, will think of the hospital as a pregnant woman who suffers the occupancy of a human being who enters, dwells for a time, and ultimately passes forth? Where is the architect who, from the very moment he or she begins his or her design, will be aware that in each room of his or her finished hospital someone will die? Where is the architect who, while seated at the drawing board, will pause to feel upon his or her naked forearms the chill wind of his or her mortality? One day he or she, too, will enter this building; not as its architect but as a supplicant in dire need of care. If I am wrong and such human emotions cannot be expressed in architecture, then it is time to surrender the hospital to writers who will build it out of words and dreams."

- Dr. Richard Selze - Seventh Symposium on Healthcare Design
(Young, 2010:571)

4.1 INTRODUCTION: MODERN HEALTHCARE IN PERSPECTIVE

While urban environments shape good health through access to education, healthcare, social support, physical security and material resources, they are also capable of enabling poor sanitation, crowding, contagion, accumulation of human excrement and household waste, social disorder, industrial incidents and pollution generally. Similarly, headaches, eye strain, respiratory problems, communicable diseases, depression, anxiety, injuries, vehicle accidents and cancer can all be attributed to poorly managed urban environments (Butterworth, 2000:1).

For many years it has been known that natural environmental factors contribute to human wellbeing. There has, however, been little empirical research expounding on how the physical aspects of the built environment impact human wellbeing (Aripin 2006:342). Despite this, much of the historical European hospital architecture reveals the centrality of environmental awareness to their arrangement. Buildings were set within a landscape and organised around central courtyards, both large and small, paved and natural, incorporating gardens, trees and lawn. Room volumes were generous, allowing ample light and ventilation throughout while strong roof forms often incorporated attics with openings. Beauty of form, connections to nature, literal and symbolic attributes for healing are central (Young, 2010:566).

Following the enlightenment, medical science advancements together with architecture orientated around strict functionality of science and systems, has resulted in hospital facilities that serve medical technology as opposed to hospital environments with meaning. This is not a sustainable approach, as healthcare costs have skyrocketed while the corresponding benefit for health and life is marginal. At the same time, recent research and technology have revived interest in the centrality of holistic and alternative therapies, previously discredited, to provide comfort and healing, if not cure (Young, 2010:566).

This chapter seeks to explore the broader context in which community healthcare is provided. The chapter begins with a brief investigation into the history of healthcare facilities and the link between healthcare and the built environment. The development of this relationship is explored in the 21st century as the influence of urbanisation and technological advancements grows. The focus of the chapter then turns to the state of healthcare within South African

townships in response to an oppressive spatial and social legacy, specifically because the researcher seeks to understand the prospects of developing a holistic community healthcare centre.

4.2 THE HEALTH OF HEALTHCARE

As a result of mass urbanization, cities are expanding at rates that exceed the planning of nations' governments. This has resulted in compromised infrastructure, high levels of social stress, social disorganization, and a general decline in social norms. Accompanying these norms are chronic behaviour disorders, violence, drug abuse, alienation and hopelessness, that one would generally identify with a societal human ecology disorder (Butterworth, 2000:1). To address the complex needs reflected in the human condition, one needs to consider technology together with physical, mental and spiritual selves, as opposed to technology in isolation (Young, 2010:566-567).

Human-centric architecture considers the fields of psychology, sociology, biology, physiology and the effect of the environment on the health of persons (Mazuch & Stephen 2005:48). To this end, healthcare architecture has a pivotal role to play in the provision of facilities that are environments orientated around the needs of communities; that foster healing and wellness. The experiential quality of architecture is intended to enhance the lives of patients, their families, visitors and staff (Young, 2010:566-567). The Hippocratic oath, which was once a declaration made by all new physicians, acknowledges the effect of climatic conditions and geography on human health. Similarly, most physicians recognise that illness is a result of one of three factors: disposition (e.g. genetics), stress (e.g. exhaustion) and agent (e.g. pathogen) (Aripin 2006:342).

The World Health Organization defines health as a 'state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity'. This implies that environments are to be free from significant health hazards, to satisfy the basic health needs of the community and contribute to reasonable social interaction. Considering this, it is worth noting that on average, an individual spends 90% of their lives within a building. It is therefore imperative that healing community architecture is founded upon environments that provide

an opportunity for the healing of patients, visitors and staff both psychologically and physically (Aripin 2006:342).

Hitler understood - and nefariously employed - the power of architecture to evoke community spirit, stir patriotism and produce faith in the future. According to his understanding, buildings and cities were not merely functional environments in which individuals were housed; they also represented the ideals of community, nation and race. One of the most effective and powerful representations of this was in the Zeppelin Field Stadium rallies. These rallies, with up to a quarter of a million troops, were bonding efforts aimed at reinforcing the notion of relinquishing personal identity for the benefit of the larger whole. They were a coordinated, multidimensional experience in which 'people, buildings, flags, insignia, acoustics and light were an essential element of a larger whole'. (Dovey 2002:57-58).

Figure 16: Zeppelin Field Stadium rallies in Nazi Germany (https://www.oreilly.com/)

Urban centres are traditionally where architectural and technological healthcare ideas and innovations are birthed and developed. These environments, however, are flawed laboratories, as they are developed around hyper rationality that in turn develops a particular outcome – large campus-like facilities housing labyrinth-like circulation patterns to a myriad

of functions (Young, 2010:567). The recent development of the New Public Health paradigm seeks to incorporate environmental, personal, preventative and therapeutic practice as critical considerations. It has an ecological focus with a specific emphasis on holistic health, that is achieved through environmental responses, public policy and individual behaviour (Butterworth, 2000:2).

Lawson points out how three key focus areas in healthcare facilities have conveyed a message of healing and wholeness: the façade, the corridor and the outdoor room. Historically hospitals were civic buildings with facades expressing their importance. During the 19th and early 20th century, facades reflected grandeur declarations, reinforcing their identity as places of importance and value. In stark contrast, during the 20th century, hospital facades with their utilitarian nature reflect the centrality of technology and efficiency within. Where elegant lobbies once existed there are now ergonomic spaces for employees and patrons, often accessed across an oversized and impersonal parking lot (Young, 2010:568). Furthermore, medical facility façades and their internal spatial arrangements are a visual reminder of the disconnect that exists in healthcare facility design (Young, 2010:569).

Considering these observations, new paradigms for establishing community connection and healing environments are emerging. Lobbies laid out like a food court cater for staff as well as the broader community by providing quick meal options for surrounding residents. Dry cleaning, car service, hair salon, a grocery store and even a bookstore are all integrated within these spaces. In this way, hospitals establish themselves as areas for community gathering. Hospitals thus transition from places of function into a new role of community gathering place. The intention with which the façade is treated must be transferred to the remainder of the facility. In most cases, facades thinly veil the dystopian reality of boxes of function accessed off long corridors with vinyl floor and endless rows of closed doors (Young, 2010:569).

Rebecca Onie points out that in the 21st century, medical care almost entirely revolves around patient care that takes place in a medical facility. Any problems the patient may be experiencing outside of the medical condition that is not directly related to the medical condition is deemed to be beyond the scope of the medical facility. They are deemed to be

secondary matters that are to be attended to by a social worker (Onie et al., 2018). This phenomenon is more apparent in township environments where patients come from home environments that are often financially, relationally and physically unstable.

4.3 TOWNSHIP HEALTHCARE

Section 27 (2) of the South African Constitution enshrines the right to quality healthcare for all its citizens (Republic of South African 1996:(27)2). In order to deliver a healthcare system that meets the medical needs of the South African population, the government provides a range of medical facilities (central/academic hospitals, regional hospitals, district hospitals, specialised hospitals, community health clinics and clinics) to treat varying degrees of illness and injury (Department of Health 2016:8). Even within such an extensive healthcare system, there are shortcomings and challenges. Some of the challenges include the lack of a Community Health Centre in Umlazi; existing facilities that are unable to cater for patient needs; poor hygiene and inadequate infection control measures; and high staff turnover due to demoralising workplace environments (Department of Health, 2016:11; Maphumulo & Bhengu, 2019:2; Department of Health, 2018/19:14).

At the foundation of South African healthcare provision is the primary healthcare (PHC) system. This system assures the provision of healthcare at community level that considers the wider empowerment of the family and community as essential to develop and improve collective health (Kautzky & Tollman, 2008:18). At its inception, the PHC approach was acknowledged by medical bodies internationally as being profoundly innovative, due to the way it included the wider family and community. Unfortunately, the provision of healthcare facilities accommodating this revolutionary system was not considered with the same conviction. As a result of this failure, many healthcare facilities that exist in townships today meet the clinical requirements of the community in a functional manner but they almost always do not consider the patients' requirements beyond their medical needs (Department of Health, 2019:2). Factors such as physical location, environmental conditions and the socio-economic status of the community need to be considered as these contribute greatly to the development of holistic healthcare (Young, 1996:566).

The majority of existing clinics and hospitals in townships were built during the apartheid era (1948-1993) and were conceived under an apartheid development framework that strategically enforced social and spatial segregation through the built environment (Kautzky & Tollman, 2008:20), the effects of which are still evident in these areas (Baker, 2010:79; Maphumulo & Bhengu, 2019:1)**.** Furthermore, the approach to the design of the health facilities lack meaningful engagement with their surroundings. Based on the strategic oppression and limited engagement with township contexts, the provision of community health centres, in township locations, is of relevance to these communities. These facilities are the coal face of the KwaZulu-Natal healthcare system, as they are the first point of contact for individuals and have a direct impact on one's wellbeing (Department of Health, 2018/19 – 2020/21:2).

When one considers the tumultuous spatial and social historical setting in which all government civic projects exist, there is an even greater responsibility given to those undertaking healthcare facilities in township environments, where extreme emotional and physical oppression are rife. These buildings can be places of liberation and form part of the development of sustainable, restorative spaces (Lawson, 2004:95). Defining a conceptual framework for a holistic healing community architecture is, therefore, an opportunity for a transition towards holistic healthcare that can meet the real needs of people focusing on medical requirements together with socio-economic and environmental considerations (Onie et al., 2018). Clinics and health facilities, in general, can re-instil confidence, pride and trust in communities. (Lawson, 2004:95).

4.4 HOLISTIC HEALTHCARE

In recent times there has been a progressive shift towards holistic healthcare that does not measure its success by the number of diseases cured but by the number of diseases prevented (Onie et al., 2018). By immersing the hospital or clinic function in the culture and context, one will develop an outcome that will be inseparable from the community. A key contributor to this healthcare approach is the establishment of a network of healthcare that includes family, friends and the wider community (Young, 2010:569).

Modern healthcare

20th-century healthcare has been formed around function and efficiency. The concept of 'identity' and cultural distinctiveness is under threat, particularly in areas undergoing rapid urbanisation while rural areas are also in a transitory state. The pace at which societal change is taking place has morphed tradition, producing new forms of commercial and retail structures; and resulting in a struggle to produce well-articulated and coherent urban and public space at the same rate (Derakhshani 2012:30).

Modern healthcare facilities have been spaces that tended to perform operational tasks functionally, as opposed to being spaces that considered patient wellness. During the Industrial Revolution, hospital layouts unintentionally assumed the systematic approach that was popular during that time, resulting in hospital planning that appeared to be more of a production assembly line than an environment for patient care.

A key component of hospital design that reflects the functional approach, are the passages and walkways linking different areas. Limiting walking distances for staff and patients is one of the critical economic and functional design considerations of any new healthcare facility. Corridors, however, have the potential to be more than wilderness links between place. Healing healthcare ensures corridors reduce stress through carefully considered wayfinding to become spaces that unite people, rather than dividing them. When viewing them as the public realm, one begins to envisage them as a place of connection between staff, patients and the visiting public. By linking these to atriums, staff workstations, kitchen, dining room and living room, all get a new lease on life (Young, 2010:569).

Healing Healthcare Environments

In response to the skewed approach of the industrialists, Christopher Alexander and his peers made a concerted effort to catalogue environments and, more specifically, design patterns that resonate with our humanness (Alexander et al., 1977). The results Alexander found indicated that living patterns free us from environmental stresses, which come from an incoherent geometry of objects and spaces. Architecture can thus protect us from stress, to liberate us to be more fully human, and keep us healthy in the long term.

An additional dynamic of holistic healing environments is that they connect patients to the cycles of nature. Historically, hospitals derived from medieval monasteries incorporated a central courtyard containing a healing garden. In the 20th century age of technology, connection to nature was deemed to be of marginal importance, as these could be mimicked artificially. As a result, hospitals became mass blocks in which operating theatres had no windows or connection to nature. Yet, ever-increasing evidence highlights the importance of connection to the environment. Essential to an individual's understanding of the environment, is one's senses. Having a holistic understanding of the true multi-dimensional nature and constraints of senses allows the architect to develop environments that are genuinely responsive to the needs of the user (Mazuch & Stephen, 2005:51). Growing evidence reflects the impact of the environment on patient recovery times. Patients in rooms with a view heal faster than those without a window, while therapeutic horticulture gardens form part of many hospitals due to their importance in occupational therapy healing processes (Young, 2010:570).

By instituting a broad health agenda, one reinforces a public space agenda, as health care facilities become community centres that include community programmes in the services they provide. The value of a successful public space is evident in the role it plays in the psychological health of a community. It provides a safe environment, stress relief and a form of escape from overwhelming circumstances for those living in crowded informal settlements. When public and neighbourhood streets are active, crime and gang-related activity (Projects for Public Spaces, 2012:11). Community healthcare facilities play an essential role within communities. They are public institutions that facilitate economic, social and physical wellbeing in contexts that are very often unstable (Young, 2010:571).

To develop healthcare environments that respond to the needs of patients, Nightingale Associates incorporate psychotherapeutic and architectural practice through three primary means: sense sensitive design, emotional mapping and design prescriptions. An awareness of sense sensitivity enables one to proactively develop and incorporate environmental characteristics that have healing and therapeutic benefits for the user. Characteristics include natural and artificial light, colour, views, artwork; aroma, modulation of form and space; the arrangement of furniture; manipulation of scale and proportion; sound, texture and

materials; movement through space and time, as well as indoor and outdoor landscaping. These factors are critically important when designing for specialised medical needs such as burns patients, for example, for whom the slightest draft will cause excruciating pain on the exposed skin (Mazuch & Stephen, 2005:49).

Very often nostalgia and historicism are associated with good architecture, resulting in an untouchable view of cities and villages that is unhelpful. Placing period architecture on a pedestal produces stagnation within the built environment of cities and villages. Contrastingly, locally produced structures do not have to be traditional in their materiality and technology to be deemed environments that are contextually responsive or representative. To develop a built environment that reflects the multiplicity of identities within a societal context, one must adopt an inclusive stance rather than an exclusive stance. Through their function, civic buildings present ideal opportunities for expression of the new local identity. (Derakhshani, 2012:31). Whether it is the arrangement of a courtyard in a particular manner that reflects the spatial organisation of a bygone era; the juxtaposition of traditional and modern materials; or the introduction of modern technological advancements while using mostly traditional techniques, these all contribute to the development of a new norm or local identity. Being cognizant of place-specific realities, particularly in larger developments, enables new local identities to develop and flourish (Derakhshani, 2012:31-32). As new identities develop, there is a need for these to establish a globally recognisable, inventive identity that produces a sense of belonging.

Using new material (bricks) and new technology, Fabrizio Carola designed and built a remote hospital in Kaedi, Mauritania. The success of the project is in the creation of a new hospital plan. Traditional Mauritanian practices of participatory, family centred methods of care and healing were adapted with modern healthcare systems. These practices together with new construction techniques using bricks and innovative construction typologies, invented a new architectural language that represents a specific place. Aspiring to pursue an inclusive new identity often results in these developments being accepted as part of the new cultural identity and becoming proudly local (Derakhshani, 2012:32-33).

Figure 17: Fabrizio Carola hospital in Kaedi, Mauritania amalgamated traditional and modern construction methods (Derakhshani, 2012:32).

4.5 CONCLUSION

People do not merely exist, unaffected, in an environment. There is an exchange that takes place, and meaning is derived. Furthermore, the physical environment also provides a framework for personal relationships to grow (Butterworth, 2000:6). Louis Kahn's conception of space emerged from his thoughts on the formation of a room. He believed 'the plan is a society of rooms'; the room is a place of the mind'; 'a room is not a room without natural light' and 'architecture comes from the making of the room'. In Kahn's mind, the room is a dynamic conception that inspires ideas of family and culture at large. Kahn's approach to urbanism stemmed from his ideas of the room. He was widely known to advocate for "the street as a room", an environment in which streets become the place that life is lived (Marcus, 2009).

Lawson similarly emphasises the need for healthcare that considers the entire individual. This small but significant change in approach is filtering into the minds of designers and healthcare professionals, who are beginning to consider the impact of architectural design on the effectiveness of healthcare facilities in providing environments that encourage and stimulate healing. Furthermore, there is a growing body of empirical researchorientated around hospital design and patient wellness that reinforces these ideas (Lawson 2004:95).

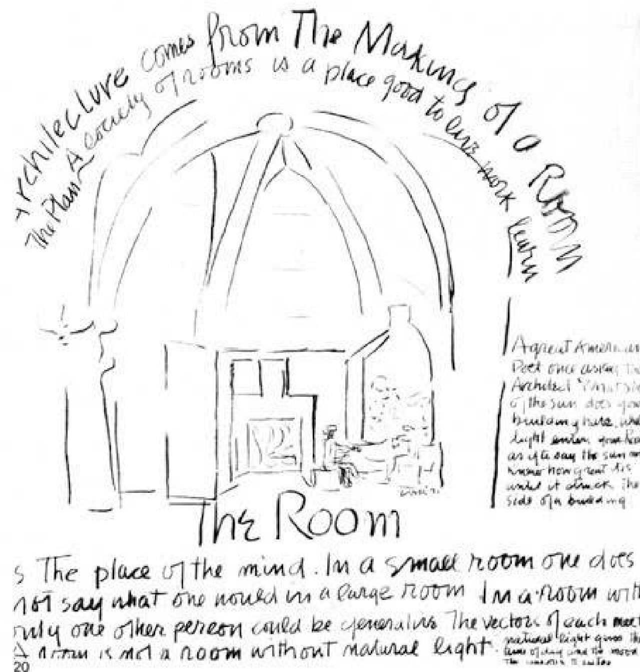


Figure 18: Louis Kahn’s conception of space emerged from his thoughts on the formation of a room (Marcus, 2009).

While the provision of shops, banks, post office and healthcare services can reinforce an existing sense of place, a massive new commercial hospital in an area can induce feelings of placelessness. The term ‘health of place’ (Kearns, 1991) refers to a community’s oneness and vivacity. Thus, it refers to the degree to which sense of place and sense of community has expressed itself. There exists within the healthcare sector unexplored potential to address medical needs within an area, while responding to people’s experience of place. The development of community health centres that engage local communities through the provision of outcomes that are locally relevant and foster a sense of place – such as environments enabling community conversations, peer networking and community - are vital (Butterworth, 2000:9).

When one considers the nature of healthcare facility design, and how intricately environmental factors impact directly on a patient’s wellbeing, it is imperative that healthcare facilities, particularly those in township environments where extreme emotional and physical oppression are rife, become environments that provide care and allow patients to recover. There is furthermore an opportunity for these facilities not only to meet a need but to actively reinforce the notion that prevention is better than cure.

C H A P T E R **F I V E** // PLACEMAKING & HEALING ARCHITECTURE PRECEDENT

5.0 INTRODUCTION

Placemaking to the Healing Architecture

To effectively link the Placemaking to the Healing Architecture precedent several Placemaking spatial principals that have influence on the development of Healing Architecture are laid out. These principles can be sub-divided into urban space, site space and internal space. The following briefly describe the principles.

Urban Space – it is cognizant of the value of public space in the urban environment, they consider the human scale, they have a public space agenda that ensures the provision of urban parks, they endeavour to ensure equitable access to land to both privileged and underprivilege sectors of society.

Site Space – They are aware of the importance of developing site-specific responses that fosters connection through linkages which in turn develops community and they consider the development of sustainable solutions which in many instances means an awareness of the impact of planning.

Internal Space – they seek to develop contextually responsive spatial solutions that promote sustainability, consider the spatial requirement to develop responsive spaces that foster social connection between users and community, make use of transitional zones to convey safety and security to users.

Furthermore, some of the spatial qualities of healing spaces include planning, space layouts, materials used, finishes, views, connection to nature, natural elements and features, public space agenda.

Precedent

Precedent studies are existing projects that are used to reinforce the validity of the concepts and arguments found in the primary research and literature review. Precedent studies are introduced to the research as a reference and departure point for the design development. Furthermore, they serve as stimulus for creative design response.

The projects included in the study are examples of effective community health centres and community centres. All the selected projects embody different aspects of Placemaking to varying degrees while they exemplify excellence in either their theoretical consideration, design approach, functional consideration and typology similarities.

The precedents will be analysed in connection with principles and concepts that emerged from the literature review. This analysis will inform the design development of a holistic community health centre that responds to the contextual dynamics that exist in Umlazi. Specific attention will be given to the ability of each project to develop place in their settings. The precedents included in the study are:

5.1 Violence Prevention through Urban Upgrading, Khayelitsha, Cape Town, South Africa.

5.2 Umkhumbane Community Health Centre, Cato Manor, Durban, South Africa.

5.3 Du Noon Community Health Centre, Du Noon, Cape Town, South Africa.

5.1 KHAYELITSHA URBAN PARK AND ACTIVITY BOX

5.1.1 Project Details

Client: South African Treasury, City of Cape Town and German Development Bank
Architect: Jonker and Barnes Architects
Location: Khayelitsha, Cape Town
Year: 2010

Figure 19: Violence Prevention through Urban Upgrading Urban Park and Activity Box (www.google.com/earth/).

5.1.2 Introduction

The Violence Prevention through Urban Upgrading (VPUU) Urban Park and Activity Box forms part of a wider "toolkit of initiatives" aimed at encouraging community decision making in connection with the functioning of the public realm. As part of this initiative, Harare VPUU Urban Park and Activity Box was developed in Khayelitsha, Cape Town, with the intention of addressing community-wide social problems. The Urban Park and Activity Box form part of the upgrading of a prominent pedestrian thoroughfare that is used widely by community members but is extremely unsafe (Knipe, 2010:95).

5.1.3 Urban Context & Locality

The Harare VPUU Urban Park and Activity Box is in Harare, Khayelitsha, Cape Town. Harare is an under resourced Khayelitsha community that is known to be one of South Africa's most dangerous urban areas (Fester, 2015:76). The neighbourhood surrounding the site consists of

a mixture of formal and informal dwellings. Like much of Khayelitsha, Harare comprises of vast expanses of low-density developments and large tracts of underdeveloped land. These portions of land are a risk to the community as there is very little opportunity for natural surveillance, that is, informal, pedestrian and community visibility (Knipe, 2010:94).

Figure 20: Harare VPUU Urban Park and Activity Box spatial arrangement (www.currystonefoundation.org).

5.1.4 Objectives

A central feature of the Harare VPUU Urban Park and Activity Box is the understanding that environmental design has the ability to shape the choices that individuals make regarding where they go, what they do and their general perception of a place. Bearing this in mind the Violence Prevention through Urban Upgrading (VPUU) programme strategically sets out to establish sustainable and integrated communities that address concerns and perceptions of communities while empowering residents to take ownership of their community (Knipe, 2010:94; Fester, 2015:77).

Figure 21:Children play in view of the mixed-use facility (www.vpuu.org.za).

5.1.5 Programme & Planning

VPUU is a result of a bi-lateral international financial partnership programme between the German government represented by the German Development Bank, the South African Treasury, the City of Cape Town and the residents of Khayelitsha (Fester, 2015:77). The foundation of the programme is built around five interconnected components (Knipe, 2010:94):

1. Communal Participation;
2. Social Crime Prevention;
3. Situational Crime Prevention;
4. Institutional Crime Prevention; and
5. Knowledge Management.

It is essential that the community members surrounding the development partake in the development of the intended project outcomes and furthermore, that they take ownership of the project in the long term. To achieve sensible, logical and cost-effective outcomes,

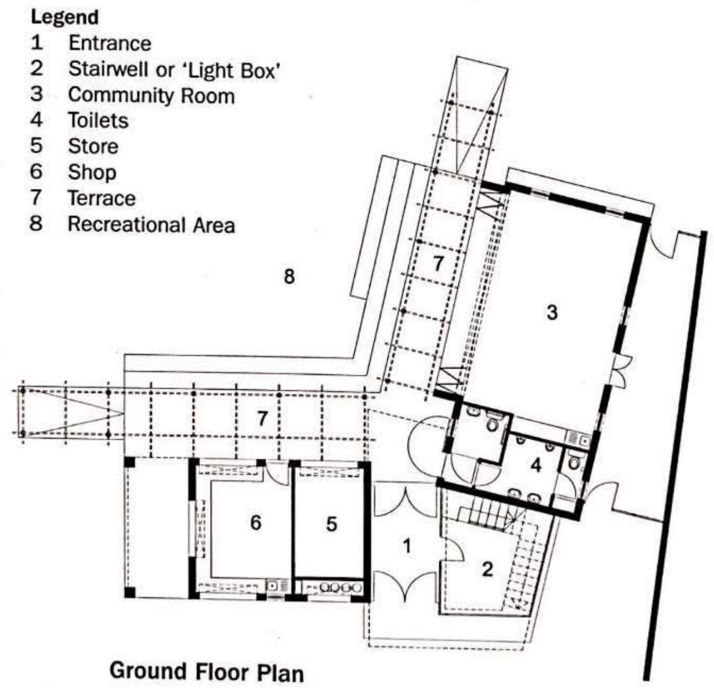
Participatory Rapid Urban Appraisal methods are adopted to develop neighbourhood strategies (Knipe, 2010:94; Fester, 2015:83).

Figure 22: Site Plan (Knipe).

5.1.6 Placemaking & Healing Community Architecture Observations

The project approach was to first consider the wider urban context in which the project is situated. The analysis of this resulted in the development of an urban framework that included the upgrading of an existing pedestrian corridor and the area surrounding

Khayelitsha Railway Station and Monwabisi informal settlement, through the suburb of Harare. As part of this upgrading, it was decided that a community urban park would be developed on an existing stormwater detention pond, within Harare. The urban park would also include a multipurpose facility that overlooked the entire site (Knipe, 2010:94).



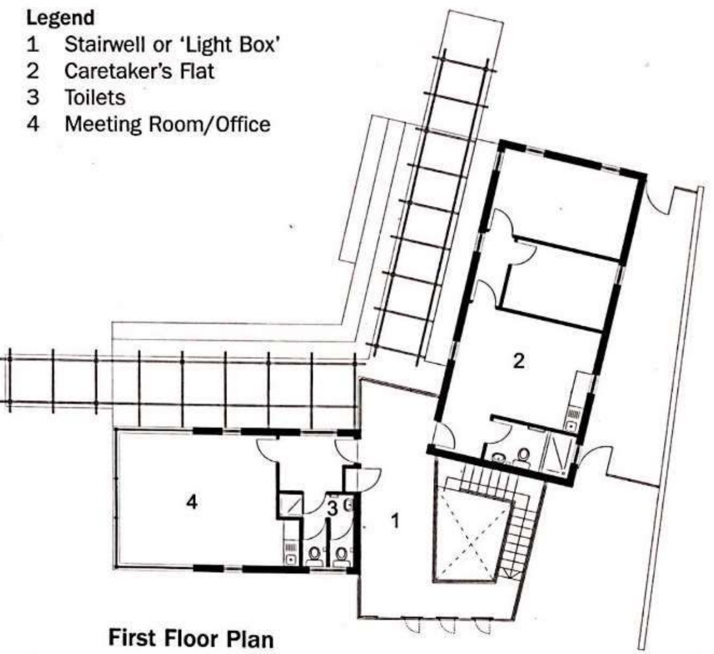


Figure 23 & 24: Harare Activity Box and multipurpose facility plans (Knipe).

The multi-purpose facility is envisaged as an activity box that forms part of the wider urban corridor upgrading. It comprises of a central staircase that anchors the site and surroundings. The staircase is extruded vertically to form a visual hierarchy on the site and within the area. The staircase tower is clad externally with a combination of steel mesh panels that enable surveillance and corrugated sheet metal that is painted red to reinforce its identity within the area. At night, the stair tower is lit up externally to create a glowing red beacon that serves as an orientation device. The multi-purpose facility, in conjunction with the wider urban corridor upgrading, develops a chain of refuge locations for users of the urban corridor. Should a situation of crime arise, the user has knowledge that this facility, a secure location, is within close walking distance (Knipe, 2010:95).

The landscape design would be integral to the success of the programme. As a result, the following were given as design guidelines (Knipe, 2010:95):

- Clearly definable public and private realm;
- Creation of well-lit and easily observable pedestrian routes;
- Employment of sustainable landscape norms, including climate amelioration through planting of trees and use of borehole water, porous surfaces and use of locally attained materials.
- Community participation in the design and implementation of the landscape features;
- High quality materials and design detailing, with a long-lasting nature, that community members would be able to maintain.

Part of the success of the VPUU was the decision to develop the site with the wider contextual dynamics in mind. Adopting this approach develops a resilient response that facilitates much broader community upliftment. For the Harare VPUU, this meant the development of a network of positively occupied spaces, that were previously perceived to be dangerous, along a major pedestrian thoroughfare. The perspective of community members - not merely the architecture and urban design - is a central concern of the development, while a fundamental part of the VPUU programme is participation of the community. This participation endeavours to unearth local knowledge that can inform the programme of the intervention.

Figure 25: Clearly definable pedestrian routes (www.vpuu.org.za).

Finally, the proposal is described as a programme. It is not an intervention that is built and then left to be neglected; there is ongoing participation. Through a participatory process community members establish maintenance related programmes for the long-term sustainability of the project. These processes develop ownership and maintenance of the communal facilities by residents of the surrounding neighbourhoods.

5.2 UMKHUMBANE COMMUNITY HEALTH CENTRE

5.2.1 Project Details

Client: European Union
Architect: Robert Johnson Architects and Associates in association with ZAI Consultants
Location: Cato Manor, Durban
Year: 2003

Figure 26: Umkhumbane Community Health Centre in its urban context (www.google.com/earth/)

5.2.2 Introduction

In 1995 Cato Manor, a township on the urban periphery of Durban, was identified as a context in which a Community Health Centre (CHC) was required. The provision of a CHC would bolster and stabilize the healthcare requirements within the area by complementing the existing primary healthcare services in Cato Manor (Peters, 2004:6). At the same time, the project would redress past inequalities and empower the marginalized community (Mngoma, 2014:114).

5.2.3 Urban Context & Locality

Cato Manor is a historically disadvantaged urban community on the periphery of the greater Durban precinct. During the 1650s the area was home to a multitude of small-scale chiefdoms. Many years later, during the mid-1840s, the area formally become known as Cato Mano (Mngoma, 2014:113). During the early 1940s, under apartheid governance, the township was an environment of turmoil and numerous political conflicts with apartheid

police. At the height of the conflict, Cato Manor residents were forcefully removed and relocated in Umlazi mission reserve, south of Durban (Mangosuthu University of Technology, n.d.). As a result of the neglectful and disconnected nature with which apartheid planning provided health facilities to informal settlements, it is imperative that these contexts receive facilities to redress the wrongs of the past.

5.2.4 Objectives

The primary objective of the scheme was developing the healthcare facility as 'Place of Wellness'. This meant that a person's wellbeing beyond their medical requirements would be considered. Services would be oriented around lifestyle, nutrition, diet, exercise, urban agriculture, therapy of various forms and counselling. These would all be facilitated within an environment of learning, teaching and the transfer of ideas. These services would be administered by academic institution post-graduate students who are completing their practical experience programmes (Peters, 2004:6).

Figure 27: Umkhumbane Community Health Centre 'high street' interface (www.zaiconsultants.co.za)

Included in the building requirements was the need for spaces that could be used by various departments, including seminar and research rooms; community group training space where activities could be facilitated; outdoor breakout rooms and creative 'activity' spaces. Based on the spatial requirement of the CHC, the anticipated area of proposal, and consequently its

cost, exceeded the original development budget framework by 45%. This led to vigorous debate amongst various professionals exploring the possibilities related to shared space. Exploring these possibilities would potentially enable CHC spaces to be used at different times by parties outside of the CHC ambit. It was agreed that non-specific, generic spaces, that could accommodate a range of activities would be reasonable. Once the schedule and cost estimates were finalized, a motivation was submitted to the City Council for additional funding. This was endorsed by the City Council who agreed to cover the shortfall (Peters, 2004:6).

5.2.5 Programme & Planning

The development of the CHC was not undertaken in isolation as it formed part of the wider development of the Cato Manor precinct. Up until 2003, this precinct proposal formed the largest post-apartheid inner-city development project in South Africa (Peters, 2004:6).

The development was undertaken with the following urban form framework:

- Pedestrian responsive 'build to line' edge conditions
- Adopt a fine grain for the development, encouraging 18m subdivisions
- Height restriction 2-3 storeys

It was determined that a new road on the site's eastern boundary would be the primary 'high street' of the development's central node. As a result, this would form the primary pedestrian accessway with entrance located here. Additional public elements of the development, that served the public in a semi-independent arrangement, should have direct access to the high street. Additional attention was also to be given to the development of a programme that sets pedestrian needs over that of vehicular function (Peters, 2004:6).

The Health Department requirements dictate that all the health services be at one level, that there is a clear separation between client, staff and service access and circulation. All visitor parking was to be off-site and it was essential that there be a high degree of security, particularly for the 24-hour Midwife Obstetrics Unit. Baby theft is a common occurrence as thieves can register the baby as their own child and claim the state subsidy linked to the birth of a new baby (Peters, 2004:6-7).

Figure 28: Umkhumbane CHC Entrance Approach off 'high street' (*KZ-NIA Journal*).

A primary dictator to the layout of the development was the principal concern to provide a circulation pattern that was easy for patients and visitors to negotiate their way around. This further evolved into the concept of a 'shopping mall' for health services. These services would be grouped into appropriate clusters and accessed directly off the primary circulation routes (Peters, 2004:7).

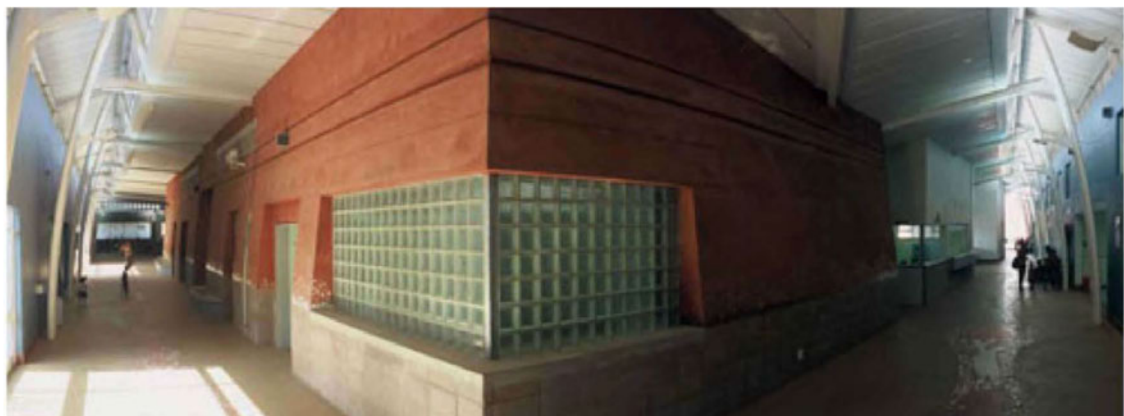


Figure 29: Clear wayfinding through simple primary corridors (*KZ-NIA Journal*).

Industrial building materials and technologies were incorporated to achieve a large floor plan area unhindered by structural walls or columns. These further assisted in achieving an economical outcome in keeping with project costs and enabled the floor plan to develop independently from the structural elements. The resultant roof design combined large mono-pitch roof elements that met at a central curved steel column structure. This central steel structure formed the central spine along which the primary circulation would take place. A

raised portion of roof over the central spine enabled natural light and ventilation within the spine and the adjacent rooms directly linked to the spine. The idea of a shaded avenue, with place for rest and recreation, filled with fresh air and sunshine was the intention of the architects (Peters, 2004:7).

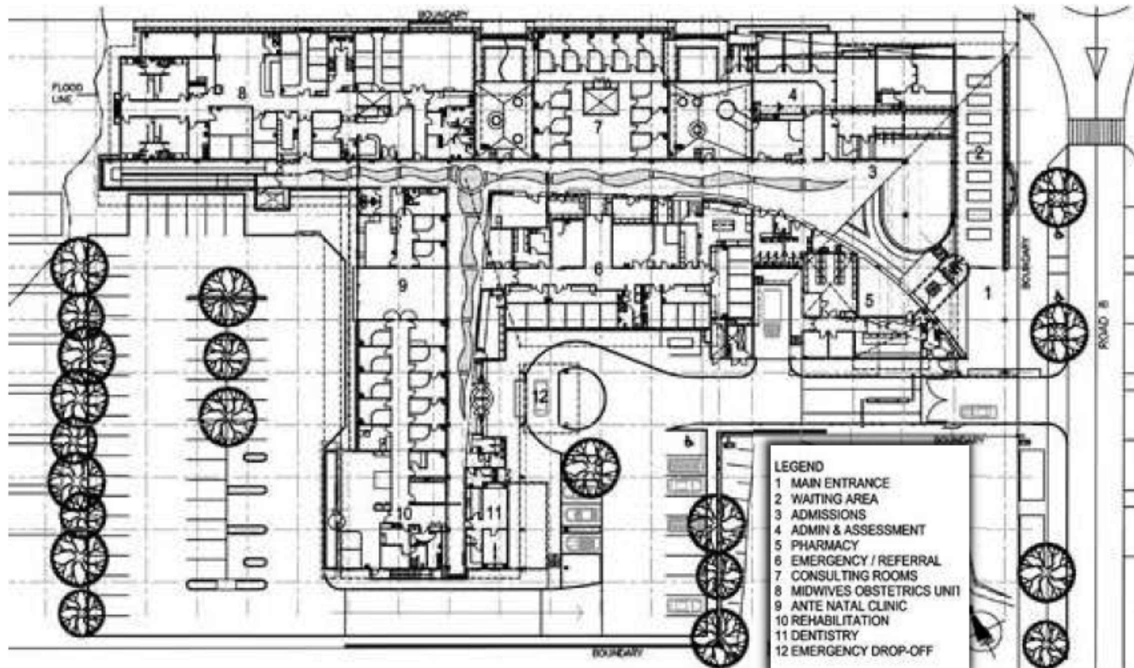


Figure 30: Upper Ground Floor Plan (*KZ-NIA Journal*).

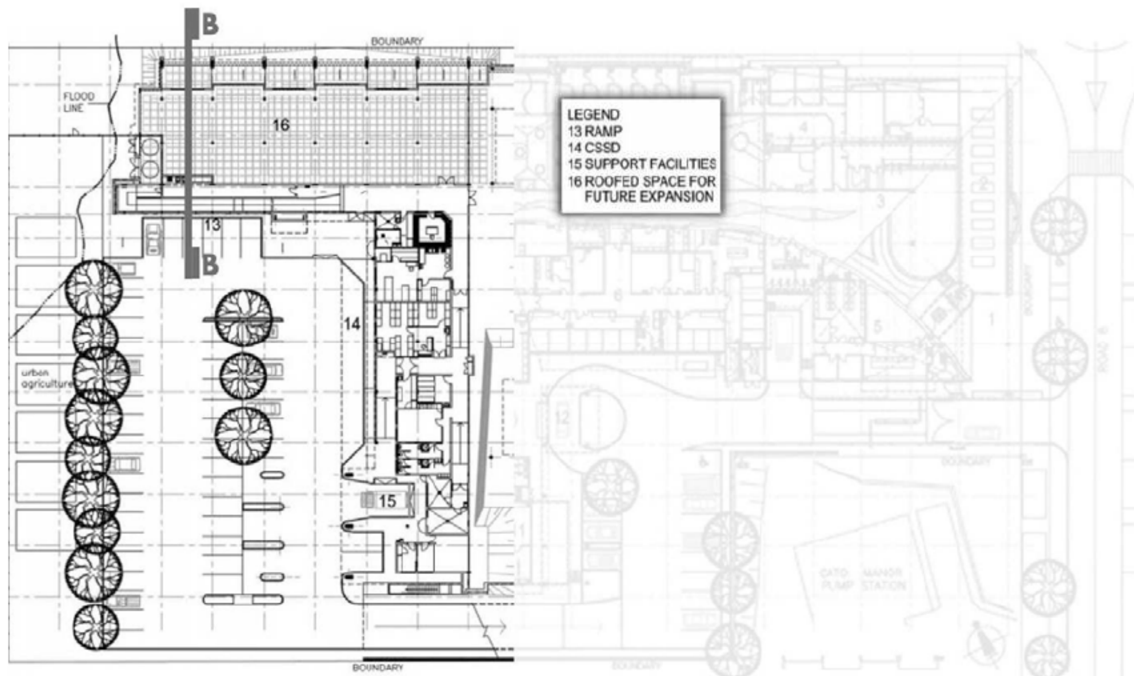


Figure 31: Lower Ground Floor Plan overlaid over First Floor Plan (*KZ-NIA Journal*).

Due to the natural gradient of the site from East to West and the requirement for all health services to be on a single level, the void that developed naturally below the building formed a suitable service zone for piped gas, water and sewer. This area was accessible both from within the building via a ramp and externally through the vehicle service road (Peters, 2004:6).

5.2.7 Placemaking & Healing Community Architecture Observations

Part of the success of the clinic was the willingness of the professional team to engage meaningfully with the project. The initial exploration of new ideas in the design development process stimulated opportunity for discovery and growth. Ultimately, the decision to develop a CHC as a wellness environment has resulted in the development of a CHC that considers patient beyond their specific medical condition as critical.

Unfortunately, the ideas behind this typology were not able to be outworked to their full potential. This may have been caused by several reasons:

- The site size limited the degree to which community wellness activities were able to be facilitated. These services were initially intended to be oriented around lifestyle, nutrition, diet, exercise, urban agriculture, therapy of various forms and counselling.
- The budget of the project did not permit exploring the outworking of these ideas fully in the final design development.
- The client may have not been willing to take on risks related to the development of a new healthcare typology that was not tested and proven. This is particularly relevant in cases where functionality and long-term sustainability are essential due to contextual dynamics.

To effectively apply the conceptual design, the site needed to be situated near the end user to respond to the community needs. The proximity of the CHC site to the end user is extremely beneficial in developing a CHC that addresses the specific needs of the community within which it is located.

While the CHC is successful conceptually and spatially, the CHC also has a robust materiality, which is essential for any civic development. The CHC makes use of steel, masonry and wire fencing as its primary materials. While these materials are incorporated for their durability

and effectiveness in achieving the design brief, they are integrated in a manner that does not appear impersonal. This is in part because each of these materials has its own tactility which, when combined, softens the facades. Additionally, the inclusion of varied paint colours (burnt red, sage green and shades of grey) to accentuate different parts of the building envelope successfully, making the building feel approachable.

A further successful design element that reinforces the conceptual approach, was establishing hierarchy between the different circulation walkways. To achieve this hierarchy the primary pedestrian spine connecting different parts of the CHC is expressed vertically. The inclusion of clerestory windows in this vertical extrusion allows defused sunlight to light up the walkway internally. The light reinforces the design concept, viz. a place of wellness connected to nature.

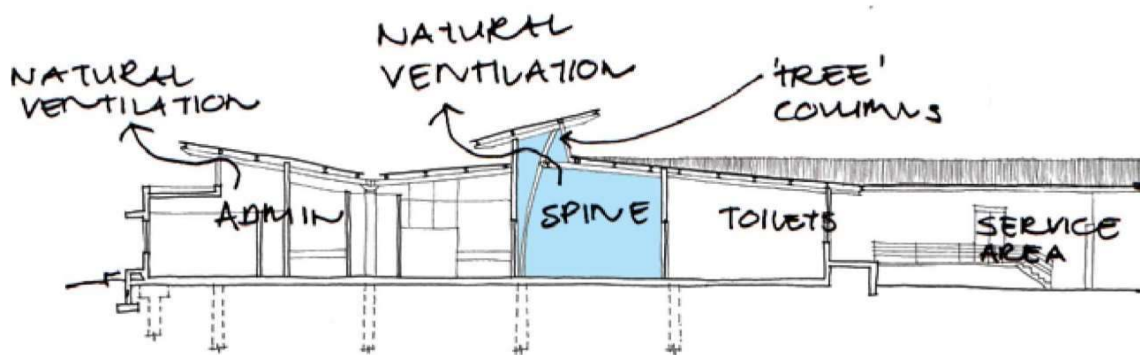


Figure 32:Typical Section through the pedestrian walkway (Mngoma).

5.3 DU NOON COMMUNITY HEALTH CENTRE

5.3.1 Project Details

Client: Western Cape Government
Architect: Martin Kruger Associates
Location: Du Noon Township, Cape Town
Year: 2015

Figure 33: DuNoon Community Health Centre in context (www.google.com/earth).

5.3.2 Introduction

Located in Du Noon Township, Cape Town, Du Noon Community Health Centre (DCHC) was developed as part of a national response to the apartheid legacy. The Western Cape Government determined that one of the key ways which the socio-spatial legacy of apartheid can be addressed, is through the provision of healthcare services in a meaningful manner that conveys value in the user (Barker, 2012:17).

5.3.3 Urban Context & Locality

DCHC is in Du Noon Township, Cape Town. The DCHC provides services to the surrounding Table View, Marconi Beam and Killarney Industrial areas. While Du Noon is a largely detached from economic opportunities, the township has grown dramatically in recent years both in a formal and informal manner.

The DCHC is in an industrial area, while the Du Noon township it serves is within five minutes' walk. The DCHC is fronted by a busy street and it is directly opposite the popular Killarney Racetrack. The need for a CHC in this area was determined by the size of the catchment area (Barker, 2012:17).

Figure 34: DCHC Potsdam Road forecourt with public seating, trees providing shade for clinic users and passers-by (www.architizer.com).

5.3.4 Objectives

A key dynamic influencing the spatial arrangement of the functions was the understanding that a site forms part of a larger whole. This understanding fosters an approach that is concerned with how any urban and architectural intervention contributes to the furthering of the city. Therefore, the site context, urban connections, climate and history need to be engaged with meaningfully (Barker, 2012:18).

Part of this contextual narrative is the political framework that the DCHC was developed within. The Western Cape Government (WCG) intended to introduce a degree of standardization to Primary Health Care (PHC) facilities. Through the process of the DCHC development and final design, these norms and standards would be refined and finalized. The WCG was intent on providing PHC facilities that are flexible and have potential for expansion by adopting a person-centred approach to development that was robust, easy to maintain and environmentally friendly (Barker, 2012:17).

5.3.5 Programme & Planning

The approach to the facility is fronted by a sizable public forecourt on Potsdam Road, with a permeable edge that enables both pedestrian and public transport visitors ease of access to the building. The forecourt is a large open area, with public seating that is shaded by trees. This makes the space suitable as a waiting area and gathering space for clinic users and visitors, while it also serves as a public space for the surrounding communities. The entrance façade of the DCHC is easily recognizable using bright red colouring (Barker, 2012:18).

Figure 35: Potsdam Road forecourt (Barker).

Upon entering the DCHC, users are lead through internal streets, to a Pre-waiting Courtyard, Helpdesk and Waiting Area within the main hall. Linked directly to the main hall are the Records Room, Pharmacy, Clubroom and Chronic Disease Unit. The centrality of the waiting area creates an efficient circulation pattern with two streets off this space linked to their related services. Located to the west of the hall are the Day Clinic, Oral Health Unit, Chronic Disease Unit, Rehabilitation Unit and Woman & Child Unit. The second street to the east houses the Emergency Unit, Radiology and Midwife Obstetrics Unit (Barker, 2012:18).

5.3.6 Placemaking & Healing Community Architecture Observations

Part of the WCG brief was to develop a new healthcare typology that would accommodate a Day Clinic, a 24-hour Emergency Facility and Midwife Obstetrics unit. These functions, prior to the development of Du Noon Community Health Centre, would have been provided

separately. Through an iterative process of refinement and exploration of multiple alternatives, what emerged was the need for a densified plan much like a city block that was punctuated by a series of squares and courtyards and connected by internalized streets. The decision to adopt a building as a city approach produces a compact spatial arrangement that has economic benefits in construction costs and services. It is also an extremely efficient circulation network for both the user and staff (Barker, 2012:18).

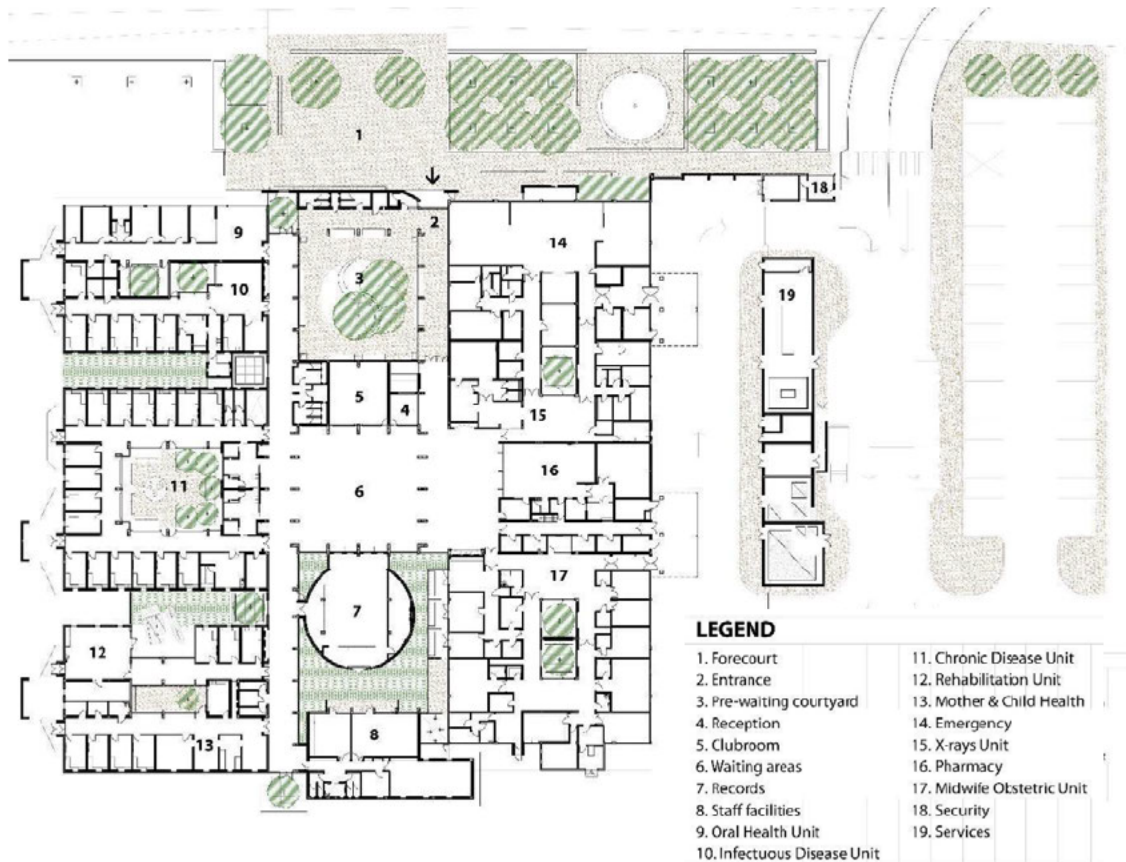


Figure 36: PHC functions oriented around public courtyards that anchor the facility (www.architizer.com).

The site is in a primarily low-rise industrial area connected to Du Noon township. In response to this, the architectural language of the precinct, the clinic adopts an industrial nuance that is evident in the concrete framed structure, high lightweight steel roofs, chimney stacks and galvanized steel sections. While this language has been incorporated, specific care was made to ensure the building relates to the human scale throughout (Barker, 2012:18).

Figure 37: The light industrial architectural aesthetic (www.architizer.com).

Part of the design language was the adoption of the universally recognizable Red Cross that is associated with a healthcare facility. This Red Cross reference is reinforced throughout the clinic design and particularly the landscaped courtyards which reflect this. The use of an iconic red colour as the CHC identifier is repeatedly used as a wayfinding system that does not require any level of literacy to be interpreted (Barker, 2012:18).

While the clinic will undoubtably meet the needs of the surrounding communities, it is unfortunate that none of the Du Noon township users are able to engage with such a dynamic facility directly, because of the clinic's disconnected location. In response to this, the value of incorporating the 'building as a city' methodology is evident in the compact spatial arrangement that it produces. The simple and efficient urban and architectural dynamics of this approach assisted in developing a new building that has a strong civic presence that addresses the socio-spatial dynamics of post-apartheid South Africa.

Figure 38: Compact spatial arrangement (www.architizer.com).

In a context with high crime statistics and social ills, the spatial arrangement of the DCHC produces an environment that users feel secure in. The progressive transition from public space to private space reinforces this spatial change. While the clinic effectively creates a safe environment for the clinic user and staff, it simultaneously creates an environment in which the public are welcome. The scale of the courtyard spaces creates appropriately scaled spaces that a user can feel secure in. It is this dichotomy of spaces that make the DCHC environment a successful space in the community.

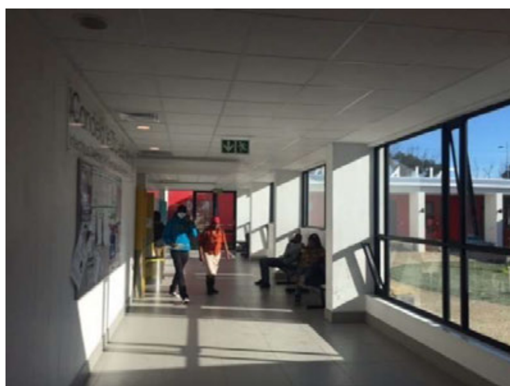


Figure 39 & Figure 40: Private internal spaces (left) are space are seamlessly woven together with open public space (right) (www.architizer.com).

To address the environmental context, clerestory windows, internal courtyards and natural light are integrated into the building, making spaces feel spacious, fresh and light. The required mechanical ventilation system is supported by natural ventilation, that displaces hot air through small openable sections, that maximize the mechanics of the natural stack effect. The architect took advantage of the sunlight hours and wind dynamics of the Cape Town area to assist in meeting these needs. The architect's awareness in incorporating these elements speaks to the value of a holistic approach to developing future projects.

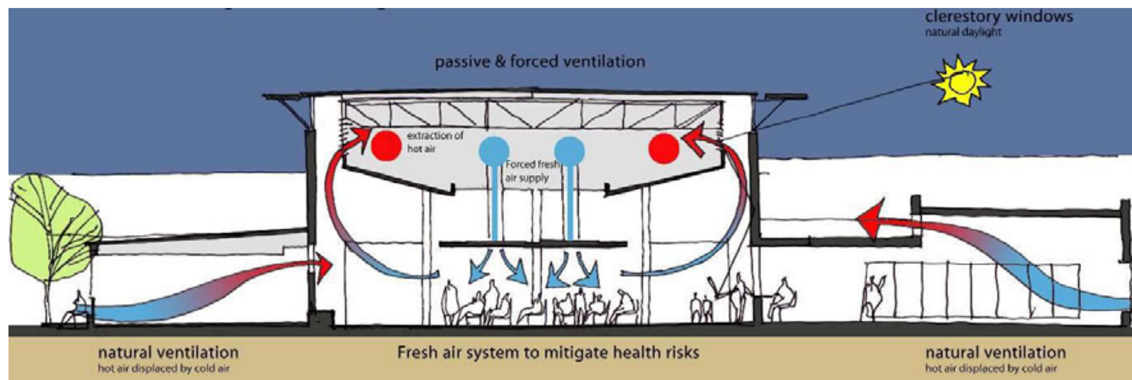


Figure 41: Cross section through Main Waiting Hall (www.architizer.com).

In conclusion, the name given to describe the DCHC, by the DOH, is that of a community health centre. While this description is given to indicate a particular set of DOH functions (maternity care, 24hr emergency etc), it is also an indication of the type of facility that the DOH intends to provide. Bearing this in mind, the DCHC appears to lack meaningful community participation from those in the surrounding communities. While the DCHC provides a high level of design excellence, the longevity of the facility may be jeopardized by the inadequate community participation.

5.4 CONCLUSION

The review of three precedent studies covering key areas aligned with the theoretical and conceptual approach of the research has assisted in broadening the research narrative knowledge base. Through the consideration of multiple dynamics connected to the development of place and community through contextually relevant responses, each precedent has aided the researcher in refining ideas that will inform the design development. Violence Prevention Through Urban Upgrading - Urban Park and Activity Box displayed the value of community participation and the importance of considering a design response connected to its urban surroundings. Umkhumbane Community Health Centre provided valuable insight into the needs of a community health centre located in a township with extreme social and spatial challenges. Finally, through a people-centred approach, Du Noon Community Health Centre developed an architectural language that consistently considered the experience of the user. In each of the above cases the response to community and contextual dynamics has been expressed in different degrees through social and spatial interventions.

C H A P T E R **S I X** // CASE STUDY

6.1 INTRODUCTION

KwaMashu Community Health Centre, located in KwaMashu township north of Durban, is adopted as the case study for this research effort. Due to there being no community health centre in Umlazi (the research site location) or any other contextually relevant eThekwini township, nor a facility that provides a full suite of community healthcare services in a contextually relevant eThekwini township, KwaMashu Community Health Centre was selected. The health centre addresses the legacies of marginalised apartheid communities' access to public healthcare. It was selected on a compatibility basis concerning the theoretical framework set out in this research. It will be analysed in a detailed manner to provide a reference point of departure for the design proposal.

The case study specifically contains the following researchable elements: operational functionality, spatial arrangement and patient care requirements. These will be analysed through sketches, drawings and photographs. At the same time, people movement patterns, spatial development and use of the built form analysis will be conducted.

6.2 KWAMASHU COMMUNITY HEALTH CENTRE

6.2.1 Project Details

Case Study: KwaMashu Community Health Centre
Client: KwaZulu-Natal Department of Health
Architect: ICA Architects and TJ Architects
Location: KwaMashu, Durban
Year: 2012

Figure 42: KwaMashu Community Health Centre (left) together with KwaMashu Poly Clinic (right) which it replaced in 2011 (www.google.com/earth).

6.2.2 Introduction

Situated 35 kilometres North of Durban is KwaMashu, one of South Africa's largest townships. Like all South African townships, KwaMashu has a history steeped in social and spatial injustice at the hands of apartheid. Prior to 1949, KwaMashu residents received medical care at King Edward Hospital, in Durban. To assist in reducing the patient demand on King Edward Hospital, KwaMashu Poly Clinic (KPC) was built in 1962 (Department of Health, n.d.).

6.2.3 Urban Context & Locality

In 1959 KwaMashu was founded. Off the back of the Black Authority Act 1951, KwaMashu was determined to be a location for black African people. KwaMashu was specifically intended to accommodate the Umkhumbane (Cato Manor) residents who were forcefully removed at the time. The land on which it was developed was donated by a sugar cane farmer, Mr

Campbell. It was from this background that the name 'KwaMashu" meaning sugar cane when translated into isiZulu, arose (Ibid).

During the 1950s, construction of homes in KwaMashu took place. Several years later, in July 1962, KwaMashu Poly Clinic was operating as a 24-hour service facility. It was handed over to the KwaMashu Community in that same year. The facility was managed by nurses that were transferred from King Edward Hospital, namely nurses Keen and Nkosi. During the early days of the facility operating, patient needs revolved primarily around infectious disease control and malnutrition. These were a result of inadequate nutrition and low socio-economic status of patients (Ibid).

At present, KCHC is in a primarily residential area that has several civic facilities in close proximity. These include a soccer stadium, churches, schools, a shopping mall, train station, and taxi rank. Like many townships there are several plots of undeveloped land surrounding KCHC.

Figure 43: KwaMashu Community Health Centre (www.google.com/earth)

6.2.4 Objectives

The KCHC vision is to be a centre of excellence, providing high quality healthcare for KwaMashu community members. The facility intends to provide sustainable, comprehensive and integrated healthcare based on the primary health care approach (Department of Health,

n.d.). The core values of KCHC are to be a space where the highest levels of excellence, learning, changing, innovation, open communication, transparency and consultation are pursued. (Ibid).

6.2.5 Programme & Planning

Following many years of service provision, the services rendered by the KPC had increased in complexity and volume. The clinic serves a population group of 750 000 people while it also serves as a referral clinic for six satellite clinics and 11 mobile clinics and health facilities in the PINK (Phoenix, Inanda, Ntuzuma & KwaMashu) region. The KPC was subsequently renamed the KwaMashu Community Health Centre (KCHC) in 2004, in line with DOH policy (Department of Health, n.d.).

Figure 44: Patient waiting to be seen at Kwamashu Poly Clinic (www.kznhealth.gov.za).

In 2004 the KwaZulu-Natal (KZN) DOH began development of a new KwaMashu Community Health Centre facility. This was developed as part of an investigation into the possibilities related to the KZN DOH adopting a CHC prototype for future use (ICA Architects). Having a prototype CHC available would enable the KZN DOH to commission new CHC facilities timeously, in the knowledge that when the facility is complete it will be effective in serving its purpose and providing a durable, long-term, primary healthcare solution.

Figure 45: An architectural rendering of the Main Entrance to the new Community Health Centre prototype (www.ica-architects.co.za).

Following the process of developing the new KCHC, the services offered by the facility were to be accommodated on different premises. The majority of the services would be at the new KCHC while the remainder of services that could not be accommodated on the new KCHC facility location would remain at the KPC facility. The following services were offered at the two locations. The specific reasoning behind the decision is unknown.

Services offered at KwaMashu Community Health Centre (new facility - 2011):

1. Minor Ailments
2. Child Health Care Services
3. Family Planning
4. Mental Health Services
5. Youth Friendly Services
6. HIV Counselling and Testing Services
7. Antenatal Care Services (Maternity)
8. Postnatal Care Services (Maternity)
9. TB Services
10. ARV Services
11. Trauma Counselling Services
12. PAP Smear
13. Prevention of Mother to Child Transmission
14. Mortuary Services
15. X-Ray Services
16. Laboratory Services
17. Health Education
18. Chronic Illness
19. Sexually Transmitted Infections
20. Support Groups
21. Nutritional Services
22. Rehabilitation
23. Dental Clinic
24. Eye Clinic

** 24Hour Services: Emergency and Maternity Unit.*

Services offered at KwaMashu Polyclinic (old facility 1962):

1. Mental Health and Substance Abuse
2. Male Medical Circumcision
3. HIV/AIDS, STD and TB Services
4. X-Ray Services
5. Rehabilitation Services:

- Speech Therapy
- Occupational Therapy
- Physiotherapy
- Psychological Therapy
- Stoma Therapy Services

6.2.6 Design Rationale

The plan comprises of 3 wings comprising of multiple healthcare functions, interconnected. The wings are separated by open courtyards which serve a functional purpose of providing light and ventilation to the different departments. The Courtyards additionally serve as public space for patients and staff.

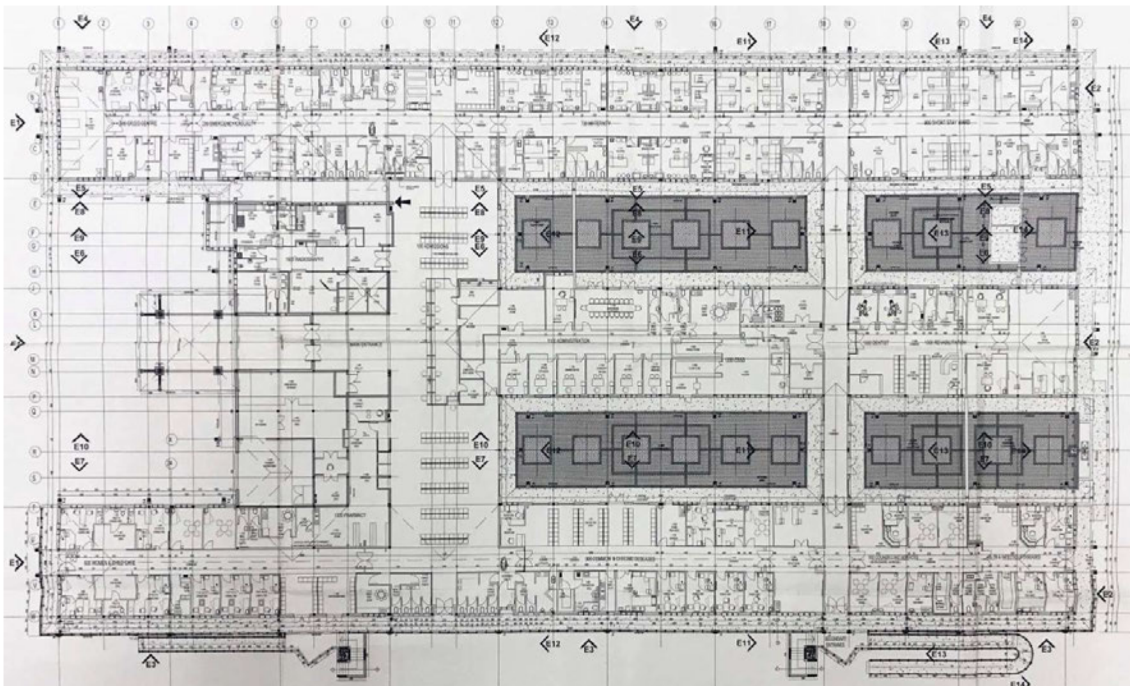


Figure 46:KwaMashu Community Health Centre Floor Plan (Author).

The plan comprises of a central core that includes the Main Entrance linked to the Information, Administration and Central Sterile Services Department (CSSD), with an end component of Dentistry and Rehabilitation. The Information Centre is flanked by two waiting

areas that serve the Radiography and Pharmacy Services. These waiting areas open onto two of the larger Courtyards on the facility.

The North West wing consists of a Crisis Centre and Casualty, Maternity and Short Stay Ward. The South East wing includes Women and Child Care, a portion of Pharmacy and Waiting Area. These are connected to the Common and Chronic Disease Unit and finally the Counselling Services together with TB and Infectious Disease Unit.

As per the DOH requirements, all the medical services are on one level throughout the facility. This has resulted in a 3m level change on the South East Elevation. To accommodate this level change, two pedestrian ramps are located on this elevation for patients and staff.

The double pitched roof of the KCHC has a 1.2m deep roof eave, that runs the entire length of the building perimeter. This functionally covers a plinth walkway used by patients and staff, while providing contextually responsive shading for the building walls and external openings. In addition to the solar shading the roof eave provides, the external walls are cavity masonry. This assists greatly in moderating temperature transfer through the walls.

6.2.7 Placemaking & Healing Community Architecture Observations

While the CHC serves community members who arrive using public transport, there is no formal area for this to take place and patients are often required to cross a road to enter the facility. The clinic plan is orientated around private vehicular circulation. This is evident upon entrance to the premises, which prioritizes vehicular circulation routes. There is limited consideration given to the wide scope of persons attending the CHC, including the elderly, disabled, mothers with children and families.

Upon entering the facility, staff, visitors and patients together with those accompanying patients to the CHC, are provided with few waiting areas. While multipurpose Courtyards have been provided within the facility, they are not suited for patients to use them with ease. Furthermore, neither seating nor shaded area is provided.

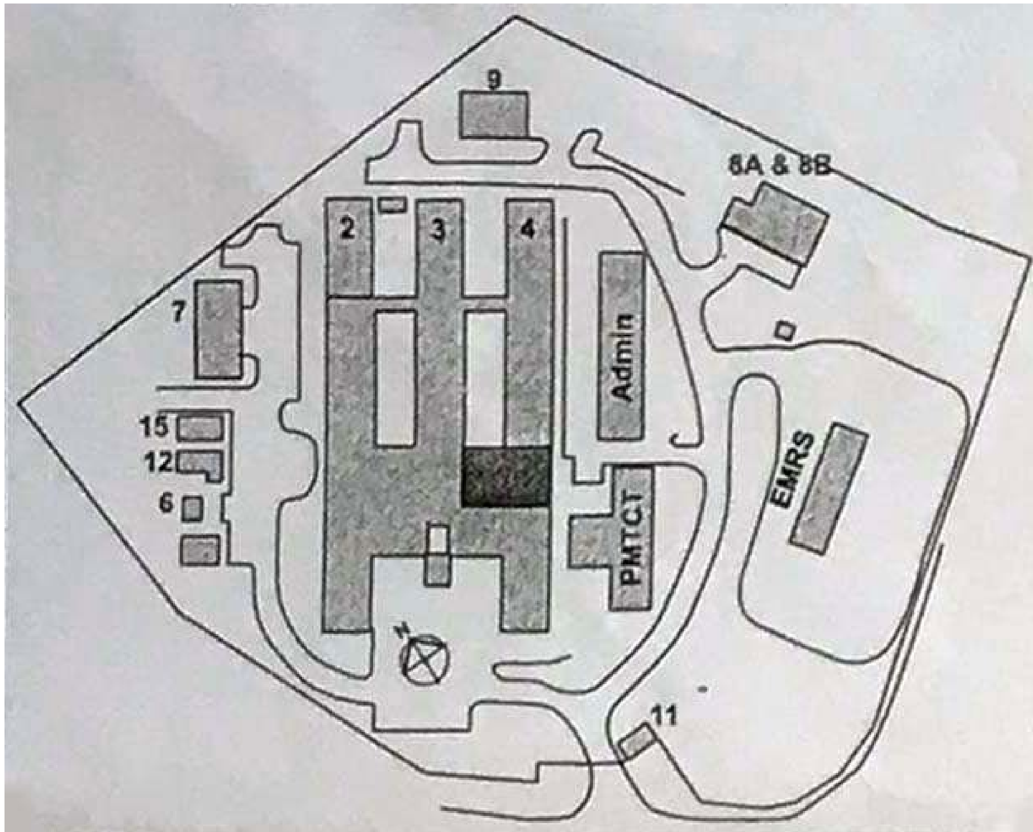


Figure 47: The KCHC site layout depicting the primary facility set within a network of roads that connect the various facility services (Author).

Figure 48, 49, 50, 51: Vehicle circulation dominates the facility planning. Patients and staff have to cross several roads to access the facility (Author).

Figure 52: Patients congregate in shaded areas created by buildings (Author).

Existing informal trade occurring directly opposite the KCHC property entrance indicates the presence of people wanting to purchase meals. An opportunity exists to incorporate a transitional public space that accommodates both transport and trade requirements. This not only addresses a need of commuters and KCHC users but also enables the traders by providing a secure trading environment.

Figure 53: Informal food stalls directly outside KCHC entrance serve the needs of clinic users (Author).

To address this, the clinic makes use of formal perimeter fencing, a security checkpoint and security guards posted at various locations throughout the clinic. While these provide a measure of security, it does not create a safe user environment. Persons visiting KCHC can circulate the entire facility unmonitored. KwaMashu has one of South Africa's highest crime

statistics but the facility lacks a holistic approach to ensuring a safe and secure environment for clinic users (South African Police Service, n.d.). It is also known that patient security is essential particularly for the Maternity Unit, from which new-born babies are commonly abducted.

KCHC has existing open courtyards that have been included to allow light and ventilation into the adjacent rooms. These courtyards have the potential to contribute effectively to the clinic functioning by providing secure, observable space that is easy to monitor but at present they are underutilised. They are also directly off the patient waiting areas, providing visual relief and the options of patient waiting areas or overflow spaces.

Figure 54: Central Courtyards are well maintained by unused (Author).

6.2.8 General Observations

The CHC incorporates a simple but effective material pallet that is durable. It comprises of concrete retaining walls, face brick masonry on the building façade, brick paving for external pathways and roof tiles. The limited pallet and durable materials serve the functional dynamic of the clinic, ensuring a facility that remains in a good condition for a long period of time.

From a design perspective, the KCHC reflects the limited scope for creativity that is commonplace on government projects. Due to bureaucratic systems, there is no room for

leniency as this may result in required outcomes not being met. The need for a specific service requires a specific outcome. This is evident in the master planning and detailing of the facility. The architects were not encouraged to explore alternative methodologies to achieve the DOH requirements. This has subsequently placed an unnecessary long-term administrative burden on the KCHC management as they must manage a facility split across two locations. Additionally, the architectural detailing on parts of the facility have been forced to achieve specific outcomes which undermine the function of the facility (refer to Figure 61 & 62).

Figure 55 & 56: Eave detailing reflects a lack of considered problem solving resulting in a poor architectural aesthetic. The windows and wall on this elevation are unnecessarily exposed to high levels of solar gain, as a result of the architect not being able to manipulate the facility footprint (Author).

6.3 CONCLUSION

KwaMashu Community Health Centre was selected as the research case study. While the community healthcare centre is a relatively new facility, it has a lengthy history within the

KwaMashu community. The KwaMashu Polyclinic (the previous CHC facility location) now accommodates several of the new KCHC facility services. The Polyclinic was the first community healthcare facility provided in the early 1960s to serve KwaMashu and its surrounding suburbs.

The analysis of the facility was undertaken to get an understanding of a township community health centre's requirements. Townships are dynamic environments that can often be volatile. For this reason, it was essential to review a CHC in a setting like the context of the research site in Umlazi. A specific focus of the analysis is the degree to which the facility encourages township community engagement while addressing contextual dynamics effectively.

A further feature of the KCHC that was investigated, was the planning of the facility. KCHC is a large facility that accommodates a broad spectrum of services. The analysis of the planning of the facility revealed a plan that lacks engagement with social and spatial dynamics of the surrounding community. These and other features of the KCHC will assist in providing an informed perspective towards the design development program.

C H A P T E R **S EV E N** // ANALYSIS & DISCUSSION

7.1 INTRODUCTION

This chapter presents an assimilation of the analysis and findings garnered from the various interviews and observations conducted both formally and informally with the research study participants. The gathered data correlates to the various aspects of the theoretical and conceptual literature reviewed in connection with the South African township, placemaking and holistic community healthcare.

Three sets of expert interviews were conducted with persons who have an intricate knowledge relating to township community dynamics, community architecture and township medical facilities. Mr Zondi is Provincial Co-ordinator of the Treatment Action Campaign (TAC) in KwaZulu-Natal. He was interviewed in relation to the nature of township community work. The TAC is a longstanding civil society group that has fought for the rights of the marginalized, specifically the medically marginalized in underprivileged communities. Professor Rodney Harber has practiced socially sustainable architecture in underprivileged communities for more than 50 years. His insights into community participation and empowerment will shape the design development agenda. Finally, Mr Mathibela, who is the CEO of KwaMashu Community Health Centre, was interviewed in connection with the functioning of a CHC in a township context. Mr Mathibela, as CEO, has a thorough understanding of township CHC functioning and planning.

Two observation studies were undertaken as a way of gaining insight into the routines and habits of the Umlazi community in and around the study location. This knowledge will develop responsive approaches to community-specific needs. Of specific interest were any social and spatial dynamics present in the community and how to address these dynamics in the design proposal.

7.2 EXPERT INTERVIEW

7.2.1 Community Expert: Mr Mzamowenkosi Zondi

As a member of the TAC from 2002, Mr Zondi (TAC Provincial Co-ordinator, KZN) has 18 years' experience working with communities. Much of the interview was orientated around what has enabled the TAC to be recognised, internationally, as one of the "world's most prominent

health activist movements", and how the TAC has remained relevant for such an extensive period.

Mr Zondi indicated that the TAC began by shifting "debate towards fundamental human rights" in the early 1990s. The initial focus was advocacy for those excluded from quality healthcare services. Mr Zondi emphasised on several occasions that the TAC cannot be understood in isolation from the community – "TAC is community and community is TAC". He went on to say that all "social mobilization initiatives are community-led; we engage everyone". In this way, "communities champion their struggle. We educate the community and empower community for community- led campaign" action.

One of the biggest community health needs Mr Zondi identified are "human resource shortages - doctors, nurses, specialists, community healthcare workers, porters, cleaners and security guards". These are all essential so the "community can get access to suitable healthcare." A failure to address this results in patients having "long waiting times; being turned away from facilities; higher rates of death; longer hospital stays; pressure on staff; staff are under resourced and overburdened." In many cases this leads to "medical negligence" and staff seeking "better work conditions, job satisfaction and better pay" in private institutions.

Secondly, Mr Zondi indicated the importance of CHC's taking into consideration the specific needs of the community. He referred to government regulations stipulating the provision of youth friendly health facilities when the reality is facilities that are not open at times when the youth can access them. One needs to ensure that all sectors of society can access facilities without prejudice. Mr Zondi went on to describe patients visited by "infrequent and inadequate mobile clinics that do not offer a full range of health services. Patients needing care between visits are forced to walk great distances to access healthcare, while others are forced to pay for transportation to access the clinic".

In closing, Mr Zondi indicated the importance of adopting a holistic approach to community work. While "the TAC is primarily a campaign group" that focuses on human rights, we work with other networks and campaigning with each other. Our relationship is of mutual benefit. Our focus must be on right to health and social justice" – these are inseparable.

7.2.2 Community Architecture: Professor Rodney Harber - Architect

Professor Rodney Harber is an internationally recognized, award winning community architect, whose work across a variety of contexts addresses community needs through socially sustainable architecture.

The majority of Professor Harber's responses emphasized that successful community projects prioritize finding out what the community wants. Professor Harber indicated that healthcare provision specifically, "is traditionally a top-down brief but it should be bottom up". This can be done if you "externalise the design process" and by not "coming with secret predesigned plans". Furthermore, the adage: 'long life, low energy, loose fit' is most important in developing "a building that is very easy to change - a series of rooms in which the programmes can change." One can envisage this as a "structural system, overriding roof on columns arranged around courtyards".

Professor Harber indicated further that a key aspect to understanding context, is culture. He gave the example of childbirth in traditional Zulu culture. "When a baby is born, the afterbirth has significance and cannot be incinerated. It is your "enkhabeni – it is where you are born. When one returns to their traditional home one says, "uzobuya enkhabeni yakho – I go back to my afterbirth. This is culturally very important".

In relation to the development of effective architectural interventions, Professor Harber stressed the inclusion of community participation processes. This can assist in understanding these contextual dynamics. Additionally, community participation can take place through community education and upskilling and employment opportunities at the facility while demonstration gardens, murals and art can encourage ownership.

While it is important to be mindful of culture and heritage, Professor Harber noted the importance of making use of technological advancements that serve the community. He specifically referred to "free WIFI, as a major drawcard. This can be mobile as well and taken into the community with information related to community healthcare. Ensure lots of information about healthcare, medicinal plans".

7.2.3 Township Medical Expert: Mr Sibusiso Mathibela

Mr Sibusiso Mathibela is the CEO at KwaMashu Community Health Centre, KwaMashu, Durban. Mr Mathibela's insights, that cover a wide spectrum of the CHC functioning, will assist in developing a detailed understanding that will develop an informed design response.

As a relatively new facility, KCHC was completed 2012. Many of the medical facilities' rooms and equipment are of a suitable standard and meet the community's needs. When Mr Mathibela was asked to describe any of KCHC facilities shortcomings, he identified three primary concerns.

Firstly, because of the KCHC site not being able to accommodate all the prerequisite functions of a PHC facility, all chronic patients coming to KCHC remained at the previous KwaMashu Poly Clinic. These services include diabetes, HIV, hypertension, mental health, Tuberculosis. A contributing factor to the KCHC site being too small was the transition in departmental filing requirement to an Integrated Clinical Services Management (ICSM), that was instituted in 2016. The change meant that all patient files were to be kept on site in a central facility-based filing system.

A second challenge raised by Mr Mathibela, was that of the facility security. The facility security has two dynamics that need to be managed. Firstly, the facility security. While the facility is a secure environment to be in for both patients and staff, the township is a volatile environment and, in some instances, communities have been known to burn or vandalize government facilities to evoke a response from authorities. Security guards are on duty 24hours a day at the facility. The second dynamic is related to the management of persons visiting the facility. Overcrowding has the potential to be a management and security risk for patients and staff. For this reason, KCHC has put in place a "one escort per patient" system to assist in reducing overcrowding. Many patients travel with family members, in some cases multiple family members or persons accompanying the sick individual.

Mr Mathibela's final observation related to the need for an improved staff public space where staff can spend break times. Connected to this was the need for a formalized canteen area that staff and patients could purchase meals from, as anybody wanting any meal or snack must drive to the shops down the road from KCHC.

7.3 OBSERVATIONS: PUBLIC SPACE AS A HEALING ENVIRONMENT

To effectively assist in understanding the contextual dynamics of Umlazi, two sets of observations were conducted on and around the selected site location. The first observation involved the assessment of pedestrian and vehicular movement patterns on and around the selected site. The second observation included several existing publics spaces that were analysed for strength and weaknesses, using four criteria developed by Projects for Public Spaces, namely Access and Linkage, Sociability, Uses and Activities and Comfort and Image. Incorporating these assessments will ensure that the development of the facility is not just functional but provides holistic healthcare that responds to community needs.

The site observations revealed no engagement of the site throughout the day by both pedestrians and vehicles. Conversely, pedestrian and vehicular movement patterns around the site peak at different times of day, in connection with persons commuting to their places of work. This contrast in usage patterns reflects the caution within the community to make use of areas that they deemed to be unsafe. A contributing factor to the lack of engagement is understood to be the size of the site which has little opportunity for surveillance from the surrounding neighbourhoods because of it being covered by dense overgrown bush. Unsupervised areas such as these, because of their compromised safety and security, are known to be hot spots in which crimes are likely to occur.

The existing public space observations revealed that there is very little urban public space in Umlazi. More specifically, urban public space that is suitable for residents to use. Township public spaces primarily occur in conjunction with public transport interchanges, both formal and informal. A common feature of any open piece of land was the presence of soccer fields that are used in the evenings, during the week and at numerous different times on the weekend.

Both sets of observations have revealed key areas that need to be contemplated in the development of the holistic community health centre. These focus areas specifically relate to the nature of activities included on the development of the site programme. In general, the public space analyses revealed little to no public seating for patrons and passers-by. This was

also evident in public transport nodes that exhibited a distinct lack of shaded areas and covered waiting areas for inclement weather protection.

A specific practice that is evident in all these spaces is the presence of informal traders (male and female), who take advantage of any opportunity to conduct trade along pedestrian and vehicular circulation routes. The traders often commute daily - with their trade essentials (box or bucket) and produce and stock - to and from their homes.

7.4 CONCLUSION

The analysis and discussions of expert interviews and observations have proven invaluable, providing insight into detailed norms and patterns of townships residents.

The expert interviews have assisted in confirming some of the theoretical and conceptual literature reviewed while each interviewer emphasised the necessity for a holistic approach to community work. Particularly evident through the observational studies was the lack of suitable public space for Umlazi residents. It is evident that where people and transportation converge, rudimentary but functional informal public space follows. In these instances, the opportunity exists to develop responsive spaces that cater for the users' needs (seating, shading, secure trade opportunities). Furthermore, there is a high demand for open space to play soccer.

While the expert interviews and observations were not exhaustive, they provide sufficient perspective into the dynamics of township life, township community healthcare and community architecture. The patterns of use emerged from the observation's studies within Umlazi. This knowledge will in turn develop responsive approaches to the needs of the community. The specific outcomes uncovered the social and spatial dynamics that are present in the community and how to address these dynamics in the design proposal.

C H A P T E R **E I G H T** // RECOMMENDATIONS & CONCLUSION

8.1 INTRODUCTION

This chapter sets out so provide a summative conclusion of the research study. By considering the entire body of work the researcher can provide a concise review a of the key areas of the study. These include the literature review, precedent studies, case study, as well as the primary and secondary data collection as well as As a final point of departure for the design development that makes up Part 2 of this dissertation, the researcher provides a series of design development and site selection criteria that inform the development process.

8.2 CONCLUSION

8.2.1 Overview

The emphasis of the research effort has consistently been to unearth norms and patterns of daily life for those living in a South African township that would inform the development of a responsive, holistic healthcare facility. The study was shaped by considering the theories and concepts that contributed to the exploration of the key questions and objectives of the dissertation. The theories and concepts were explored strategically, with the intention of understanding the contextual dynamics of township communities, that would develop a healing architecture.

The initial investigation of South Africa's townships endeavoured to establish a contextual framework within which further investigation and understanding could take place. Townships have been a key feature in South Africa's infamous social and spatial history. While there has been much meaningful transformation, they remain environments of disproportionate marginalization and trauma. This furthermore strengthened the argument for meaningful engagement. Placemaking was subsequently introduced as a lens through which the township context could be interpreted socially and spatially. It is an approach to planning, design and management of public contexts that places people and their communities at the forefront of any development. Communities are what give different contexts meaning, they transform space into place. Subsequently, participatory processes that engage communities are a key component of any design development wanting to introduce public space successfully. Finally, Healing Community Architecture was included as a formative perspective for developing contextually responsive healthcare. The exploration of Healing Community

Architecture ideas provided an understanding of the potential that lies in the psychology of space and the effect that this can have on the development of space.

The precedent studies provided insight into different aspects of the study scope. Khayelitsha Urban Park and Activity Box revealed the importance of developing an urban framework for development. It furthermore displayed the effectiveness of community participation in developing successful, responsive public space. Umkhumbane Community Health Centre is a privately managed facility, that looked to create a health facility that formed a critical part of a larger wellness environment that supported community healthcare. Finally, Du Noon Community Health Centre provided insight into patient-centred design methodologies that ensured a secure environment orientated around communal public space. The assimilation of these reinforced the importance of design that responds to its contextual influences in developing place, while ensuring that community participation is central to the process.

KwaMashu Community Health Centre, a government institution, was adopted as the case study for the research. The recently completed community health centre offered insight into the daily rhythms of a public health care. Some areas that were evident through the investigation was the importance of effective patient management ranging from how the patient accesses the facility, processing of the patient's details, waiting areas, circulation routes and administration services. Additionally, the insight into the specific spatial requirements of different aspects of the health centre were analysed. Finally, the investigation revealed the bureaucratic limitation of public healthcare facility design.

The perspectives of the interviewed experts provide insight into the functioning of different aspects of the research study, from individuals who have participated in contributing to the betterment of their respective fields through interventions linked to township community life, medical healthcare, community architecture. To effectively provide findings of both the site location and urban public space, observations were undertaken. These offer detailed insight into community healthcare; township community needs dynamics and the requirements for developing an effective community architecture.

The conceptual and theoretical framework together with the precedent studies and primary data collection from the case study aimed to answer the primary and secondary research questions of this dissertation. The outcomes to the questions are set out below.

8.2.2 Key Questions

Primary Question:

1. How can Placemaking principles inform the development of a healing architecture in response to the context of the South African township of Umlazi?

The dissertation has revealed the extent to which placemaking, through the provision of healing community architecture in an urban environment that fosters community, can develop a healing community architecture that is holistic in its approach. In an environment of severe historical marginalization, sustainable transformation is possible. Through a strategic and considered approach communities can begin to redress townships' historical social and spatial inequities for the benefit of future generations.

Secondary Questions

1. What are the community needs and spatial characteristics that exist in townships?

Townships are under-serviced, overpopulated, contexts with substantial inequalities, lack of public spaces, services and infrastructure, Inadequate health facilities and segregated communities spatially isolated from employment opportunity.

2. How can Placemaking principles inform a response to the social and spatial context of a township?

Placemaking principles promotes a responsive approach (observe, listen, enable), spaces orientated around the needs of township communities, environments with a diverse nature that are dense, non-prescriptive and encourage bottom-up feedback loops, are elf-regulating and organizational. The factors listed above effectively develop a contextually responsive social and spatial response.

3. What are the spatial requirements of a community health centre located in a township?

Direct or indirect link to public transport, public seating that cater for persons visiting the facility for many hours, opportunity for formal and informal trade, a children's play area, Free WiFi zones, Educational Material, Urban Agriculture, Sustainably systems maximizing solar and rainwater harvesting, the development of a safe and secure environment, durable materiality, mobile ambulance services, therapy/community gardens, public space that facilitates opportunity for formal and informal social interactions.

4. How can architecture enable the creation of a healing environment?

It must be contextually responsive, human centred, develop community through the inclusion of public space, be a diverse environment providing, and empower the surrounding community.

5. What Umlazi community needs can be addressed through the development of a holistic community health centre?

Unemployment, by providing public space linked to the CHC emotional and physical oppression are addressed, reduced disease burden provision of healthcare services, public space, informal and formal trade opportunities,

8.2.3 Objectives

The dissertation has furthermore addressed the objectives of the study to investigate how Placemaking principles can inform the development of a healing architecture in response to the context of the South African township of Umlazi. Furthermore, the dissertation effectively explored and addressed the community needs and spatial characteristics that exist in townships. Th investigation of the effectiveness of Placemaking principles in response to the social and spatial context of a township was successful. Similarly, the spatial requirements of a community health centre located in a township were explored thoroughly and found to be sufficient. Finally, a holistic community health centre typology was developed that responds to the Umlazi community needs and spatial context.

8.2.4 Shortcomings

While the author endeavoured to conduct the research study in line with the questions and objectives described at the outset of the study, the author recognizes that an opportunity for further engagement with regulations that in many cases contribute to the downfall of healthcare facility design development. There was an opportunity to make recommendations founded on Placemaking and Healing Community Architecture that would have contributed greatly to the development of wholistic healthcare.

8.3 RECOMMENDATIONS

8.2.1 Design Development

The following chapter sets out practical ways in which the research can inform the design of a healing community health centre in Umlazi township. Through the literature review, precedent and case study, the gaps and opportunities within the scope of community healthcare provision became evident. The following recommendations respond to these observations:

1. Apartheid planning adopted decentralization to justify sprawl as part of its spatial planning, disadvantaging townships socially, spatially and socio-economically. In many cases RDP developments reinforce these ideas and resultant inequities. In response to this, develop a proposal that is spatially considerate. Address the historical social and spatial legacy of township communities through the provision of a development that considers and responds to the broader urban narrative of Umlazi township. This will ensure the creation of a healing urban and architectural environment.
2. While the intention of the urban environment is open and inclusive, ensure the use of the concept of privacy gradient that develops a secure environment. Townships are contexts with high crime rates and persons in public environments need to feel secure. This can be expressed through threshold changes reinforcing transitions into spaces with different degrees of privacy and security. Furthermore, passive surveillance and high visibility throughout the site are essential to reinforce the sense of security.
3. Opportunities exist for collaboration beyond design development. Ensure the community plays an integral role in the longevity of the project. This can be expressed through

establishment of community feedback networks, employment opportunities (construction, healthcare, security, cleaning, urban agriculture) and management of the urban public space both formally and informally. These provide opportunities for the community to contribute to the life of the project.

4. While the site links different areas physically, the site program must produce a unified public space that enables people to make connection and foster community.
5. Ensure the facility engages dynamically with the primary street interface. Explore the opportunities that arise from this engagement – transportation, trade, public space. An opportunity exists to incorporate a transitional public space that accommodates both transport and trade requirements. This not only addresses a need of commuters and KCHC users but also enables the traders by providing a secure trading environment.
6. Empower the community through employment, education and participation. Formal and informal trade must form part of the design development programme.
7. Healthcare facilities are often insular and isolated environments, with limited community and contextual engagement. Produce a contextually responsive healthcare facility that is inclusive.
8. Healing Community Healthcare speaks to an architecture that is of the place, interpretable by the community, inclusive, materially legible and sustainable.
9. Townships are dynamic environments. Similarly, the development of an architecture that is dynamic and flexible, with interpretable spaces that provide opportunity for adaption expression and extension is key.

8.2.2 Site Selection Criteria

The site selection plays an essential role in facilitating the outworking of the research outcomes. The site on which the design is developed determines the degree to which the research can be outworked and expressed effectively. For this reason, the researcher has set out several parameters intended to guide the site selection.

1. The site must provide opportunity for direct engagement with various Umlazi township community members.
2. The site must be located strategically to creating links and continuity in the existing fractured and fragmented Umlazi public spaces.

3. Analyse the network of existing primary healthcare services (PHC) facilities to establish where and how a new, holistic community health centre can serve a specific portion of the Umlazi community, while adding value to the wider Umlazi PHC network.
4. The site dimensions must enable the provision of a development of scale that can express its intentions without unnecessary constraint, while developing a program of meaning and influence within the community.
5. Ensure the site is an uninhabited greenfield location that is largely usable, with a tolerable gradient suitable to accommodate a community health centre.

PART TWO

DESIGN DEVELOPMENT

PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP
A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

WHERE? 80 INWABI RAOD, UMLAZI, DURBAN

WHY? TOWNSHIPS WERE HISTORICALLY MARGINALIZED UNDER APARTHEID. THE RESULT OF THIS WAS A SPATIAL AND SOCIAL LEGACY THAT IS STILL EVIDENT TO THIS DAY. A SPECIFIC AREA OF MARGINALIZATION UNDER APARTHEID GOVERNANCE WAS THE MANNER IN WHICH HEALTHCARE FACILITIES WERE PROVIDED IN TOWNSHIPS AND THE DEGREE TO WHICH THEY MET COMMUNITY NEEDS.

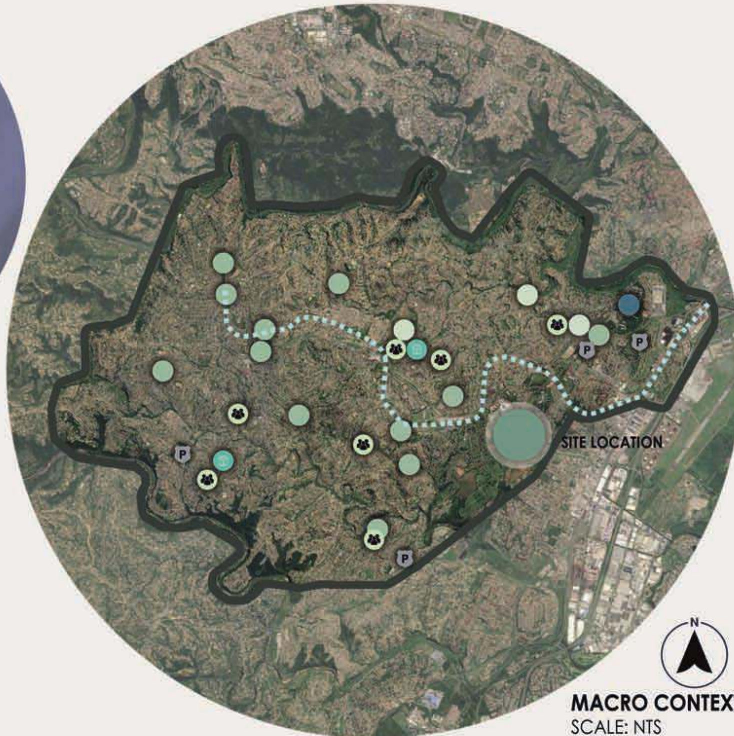
KEY PROBLEM? THE EXISTENCE OF TOWNSHIP HEALTHCARE FACILITIES THAT LACK MEANIFUL ENGAGEMENT WITH CONTEXT.

WHAT?
- THE DEVELOPMENT OF COMMUNITY THROUGH PUBLIC PLACE
- HOLISTIC COMMUNITY HEALTH CENTRE
- CONTEXTUALLY RESPONSIVE URBAN PLACE

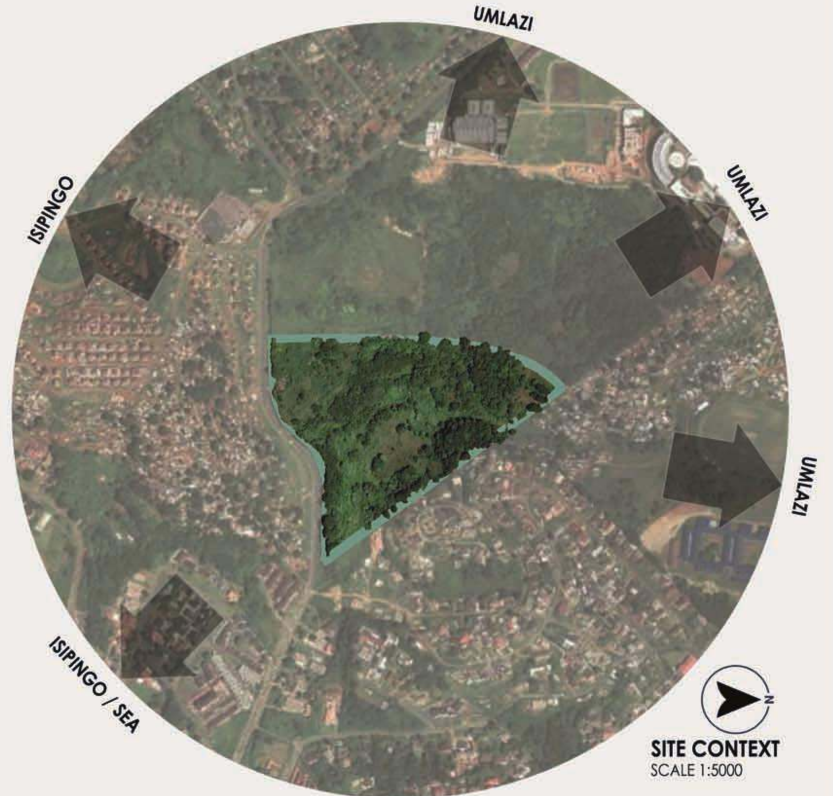
CLIENT
- THE EUROPEAN UNION: FUNDING 2021 WORK PLAN
- DEPARTMENT OF HEALTH STATUTORY BODY

LOCALITY MAP
SCALE 1:NTS

KEY: MACRO CONTEXT
- COMMUNITY HEALTH CENTER - GOV.
- COMMUNITY HEALTH CENTER - PVT
- DISTRICT HOSPITAL
- COMMUNITY HALL
- LIBRARY
- POLICE STATION

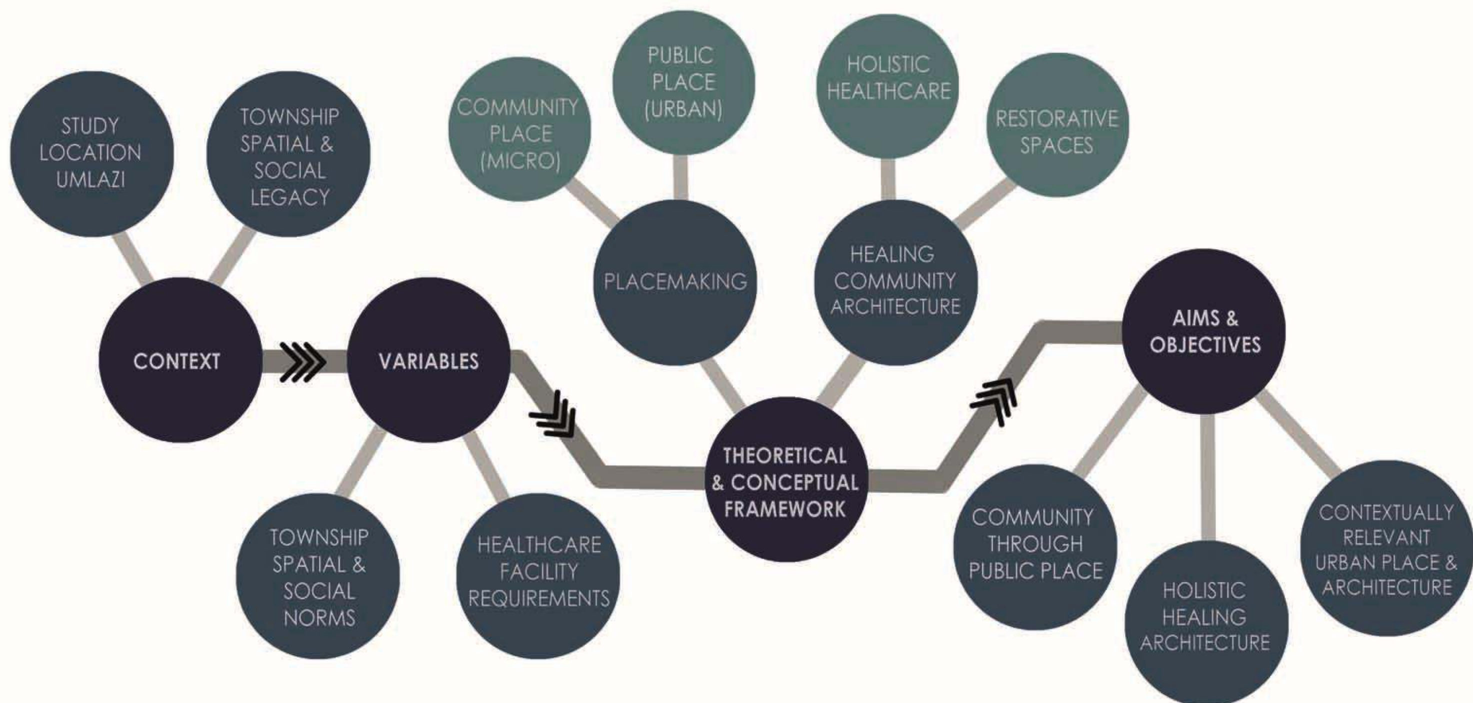


MACRO CONTEXT
SCALE: NTS



SITE CONTEXT
SCALE 1:5000

DESIGN SYNTHESIS & FRAMEWORK



THEORY & CONCEPT EXPLORED

PLACEMAKING

AN APPROACH TO **DESIGN & URBANISM**

CONSIDERS **COMMUNITY & CONTEXT**

RESPONSIVE APPROACH:
- OBSERVE, LISTEN, ENABLE
- CREATE SPACE ORIENTATED AROUND THE NEEDS OF SPECIFIC GROUPS OF PEOPLE
- CONGINIZANT OF HUMAN SCALE

DIVERSE NATURE:
- DENSITY, DIVERSITY, SOCIAL CAPITAL, NON-PRESCRIPTIVE, PATTERNS OF INTERACTION, AUTONOMY, PARTICULATIRY & DIFFERENTIATION, BOTTOM-UP, FEEDBACK NETWORKS, INFORMAL, SELF REGULATING & ORGANIZATIONAL

COMMUNITY & DEVELOPMENT OF PLACE:
- COMFORT & IMAGE
- USES & ACTIVITIES
- ACCESS & LINKAGE
- SUSTAINABILITY

PUBLIC SPACE IN DISSADVANTAGED COMMUNITIES:
- PSYCHOLOGICAL HEALTH - ESCAPE, SECURITY, EXTENDEDVLIVING ROOM
- REDUCE CRIME & GANG RELATED ACTIVITIES
- COMMUNITY DEVELOOPMENT & EMPOWERMENT

SPATIAL THEORIES GIVING AGENCY TO PLACE:
- FIGURE GROUND & URBAN MORPHOLOGY
- LINKAGE THEORY
- TRANSITIONAL ZONES
- RIGHT TO THE CITY

HEALING COMMUNITY ARCHITECTURE

NATURAL ENVIRONMENTAL FACTORS & HUMAN WELLBEING

HUMAN CENTRIC ARCHITECTURE:
- PSYCHOLOGY, BIOLOGY, PHYSIOLOGY

COLLECTIVE HEALTH:
- ENVIRONMENTS LINKED TO COMMUNIITY
- EMPOWER FAMILY & COMMUNITY

MEET THE REAL NEEDS OF PEOPLE & COMMUNITIES
- MEDICAL REQUIREMENTS
- SOCIO-ECONOMIC NEEDS
- ENVIRONMENTAL FACTORS

A BROAD HEALTH AGENDA REINFORCES:
- PUBLICS SPACE AGENDA
- HEALTHCARE FACILTIES AS COMMUNITY CENTRES FACILITATING COMMUNITY PROGRAMMES

PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP

A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

PRECEDENT

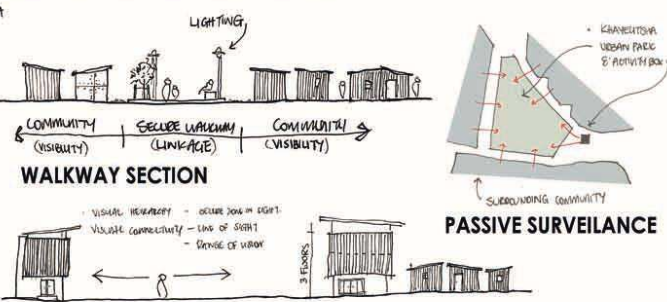
KHAYELITSHA URBAN PARK AND ACTIVITY BOX - YEAR: 2010 / LOCATION: KHAYELITSHA, CAPE TOWN / ARCHITECT: JONKER & BARNES ARCHITECTS

SUSTAINABLE COMMUNITIES

LINKAGE

COMMUNITY PARTICIPATION

URBAN UPGRADING



WALKWAY SECTION

VISUAL CONNECTION (HEIRARCHY)

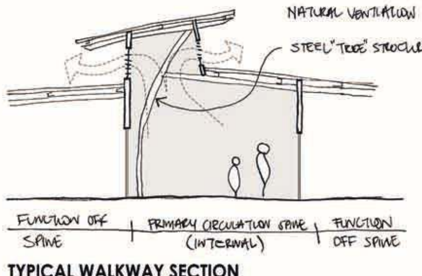
PASSIVE SURVEILANCE

UMKHUMBANE COMMUNITY HEALTH CENTRE - YEAR: 2003 / LOCATION: CATO MANOR, DURBAN / ROBERT JOHNSON ARCHITECTS IN ASSOCIATION WITH ZAI CONSULTANTS

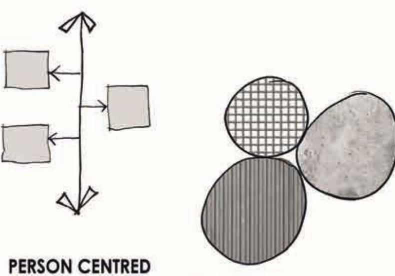
PERSON CENTRED WAYFINDING

PLACE OF WELLNESS

MATERIALITY



TYPICAL WALKWAY SECTION



PERSON CENTRED WAYFINDING

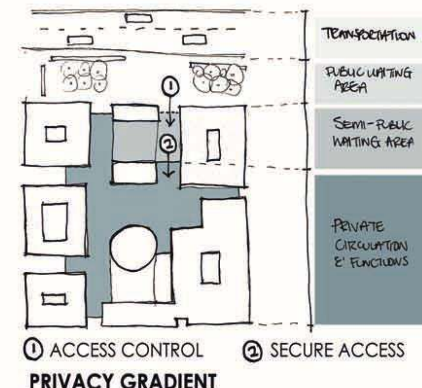
MATERIALITY

DUNOON COMMUNITY HEALTH CENTRE - YEAR: 2015 / LOCATION: DU NOON TOWNSHIP, WESTERN CAPE / MARTIN KRUGER ASSOCIATES

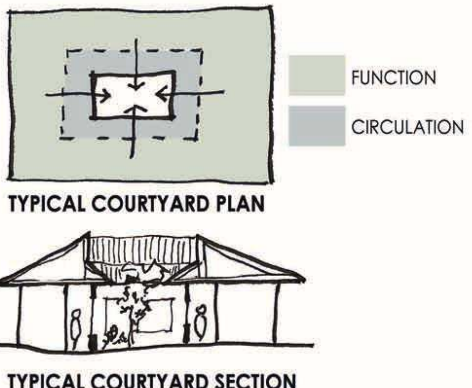
FUNCTIONS AROUND COURTYARDS

HUMAN CENTRED

TRANSITIONAL ZONES



PRIVACY GRADIENT



TYPICAL COURTYARD PLAN

TYPICAL COURTYARD SECTION

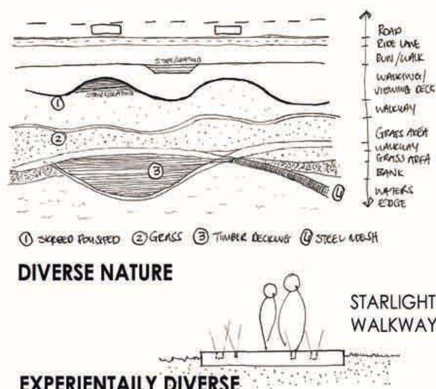
GUAIBA ORLA URBAN PARK - YEAR: 2018 / LOCATION: PORTO ALEGRE, BRAZIL / ARCHITECTS: JAIME LERNER ARCHITECTS ASSOCIATED

LINKAGE

DIVERSE NATURE

TRANSITIONAL ZONES

LINKAGE & DIVERSE ACTIVITIES



DIVERSE NATURE

STARLIGHT WALKWAY

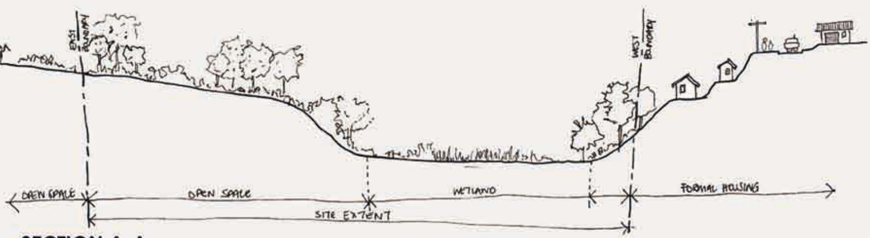
EXPERIENTAILY DIVERSE

SITE SURROUNDS

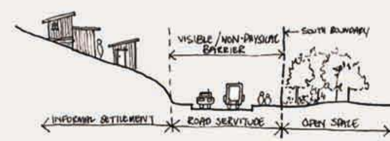
SITE OVERVIEW - ORIENTATION SOUTH WEST

IMMEDIATE SURROUNDINGS

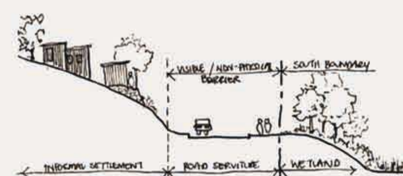
SITE BOUNDARY THRESHOLDS



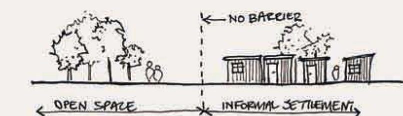
SECTION A-A
SCALE : NTS



SECTION B-B
SCALE : NTS



SECTION C-C
SCALE : NTS

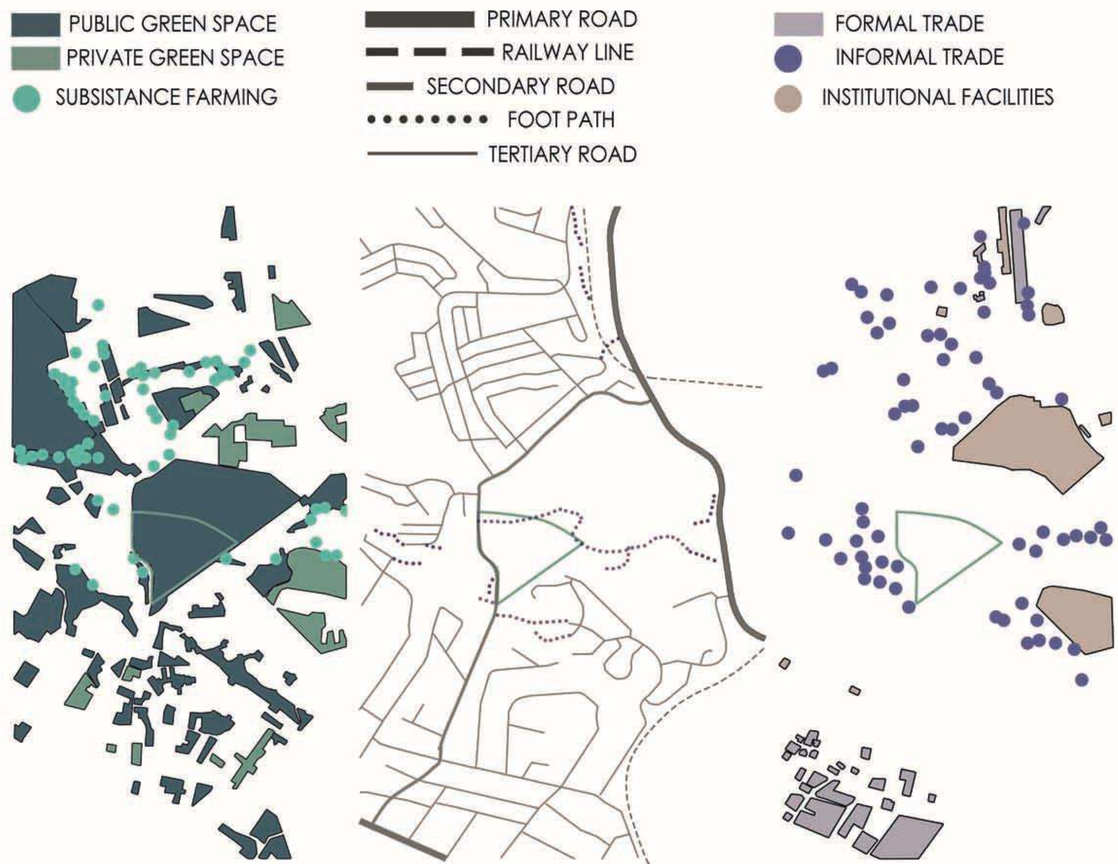


SECTION D-D
SCALE : NTS

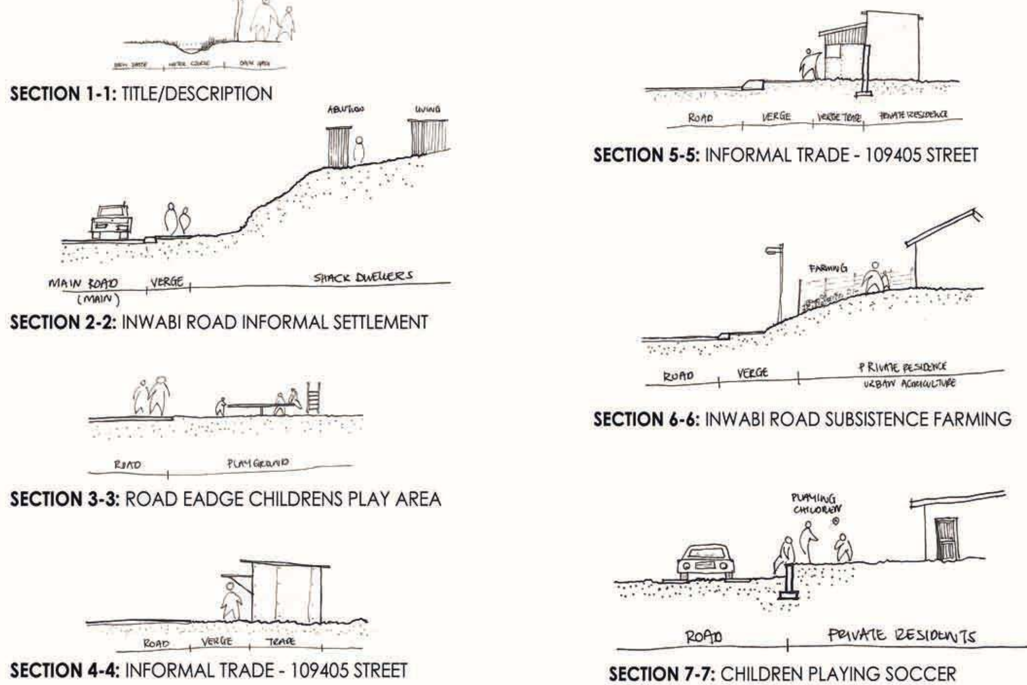
SECTION REFERENCE PLAN
SCALE : NTS

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

CONTEXT ANALYSIS



CONTEXT SECTIONS



SECTION 1-1: TITLE/DESCRIPTION

SECTION 2-2: INWABI ROAD INFORMAL SETTLEMENT

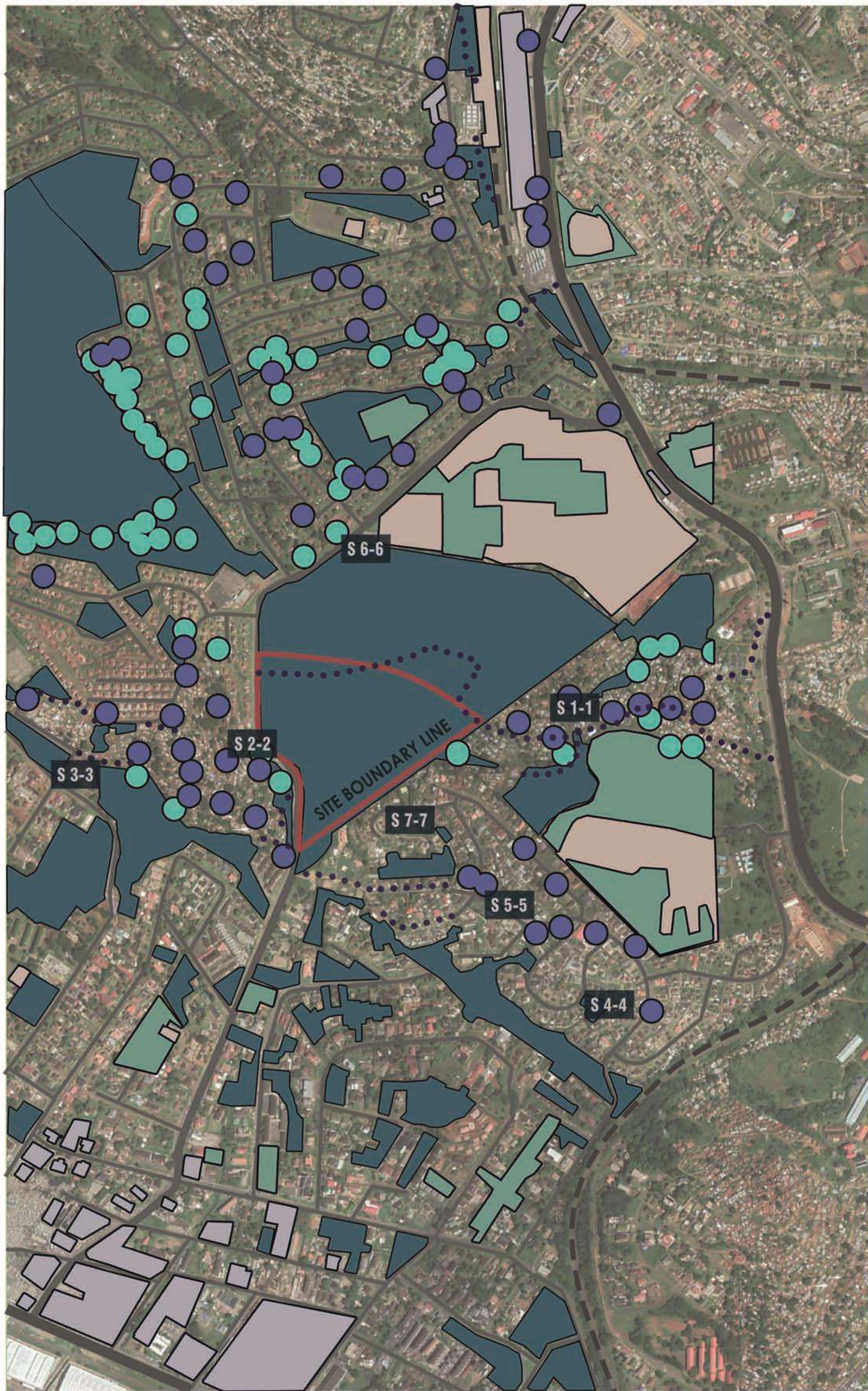
SECTION 3-3: ROAD EADGE CHILDRENS PLAY AREA

SECTION 4-4: INFORMAL TRADE - 109405 STREET

SECTION 5-5: INFORMAL TRADE - 109405 STREET

SECTION 6-6: INWABI ROAD SUBSISTENCE FARMING

SECTION 7-7: CHILDREN PLAYING SOCCER

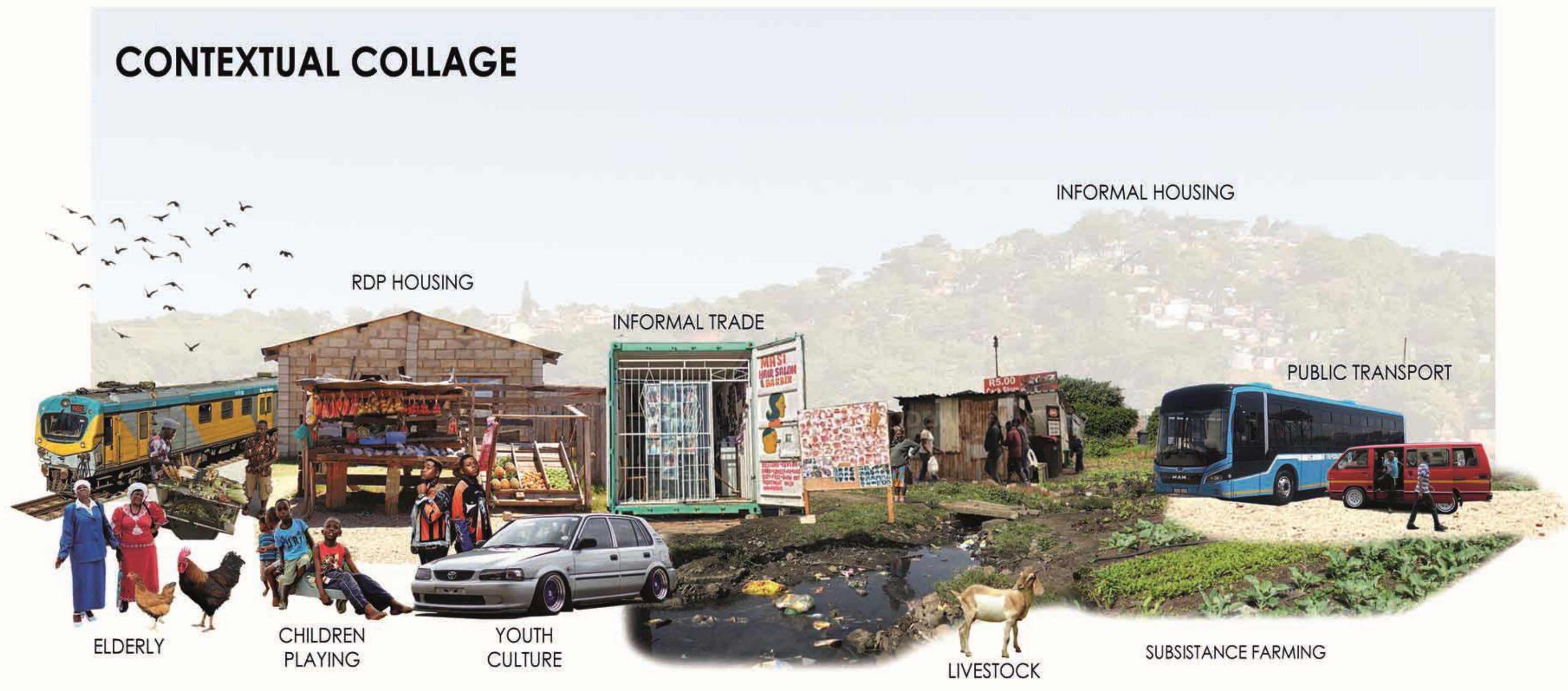


PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP

A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

CONTEXTUAL COLLAGE

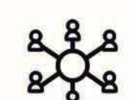


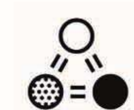
BRIEF

CONTEXTUALLY RESPONSIVE PLACE

HOLISTIC HEALTHCARE /PLACE OF WELLNESS

HUMAN CENTRED


COMMUNITY THROUGH PUBLIC SPACE


DIVERSE NATURE

ACCOMMODATION SCHEDULE

URBAN PARK

01. 7-A-SIDE SOCCER X 2
02. CHILDRENS PLAY AREA
03. PUBLIC SEATING
04. WIFI ZONE
05. EDUCATIONAL HEALTHCARE MATERIAL
06. OUTDOOR GYM
07. WALKWAYS
08. URBAN AGRICULTURE
09. RAINWATER HARVESTING

COMMUNITY HEALTH CENTRE

01. PUBLIC TRANSPORT	468
02. TRADERS MARKET	642
03. FORECOURT	638
04. PREWAITING COURTYARD	242
05. WAITING AREA	180
06. RECEPTION	27
07. ADMINISTRATION, ASSESSMENT, RECORDS	163
08. COMMUNITY TRAINING ROOMS	257
09. EMERGENCY + DROP OFF ZONE	820
10. X-RAY DEPARTMENT	102
11. MIDWIVES OBSTETRICS UNIT	812
12. KITCHEN	63
13. PUBLIC TOILETS	63
14. CENTRAL STERIL SUPPLY DEPARTMENT	180
15. PHARMACY	425
16. ANTE NATAL CLINIC	270
17. REHABILITATION	280
18. INFECTIOUS DISEASE	314
19. CHRONIC DISEASE	671
20. ORAL HEALTH / DENTAL	250
21. SUPPORT FACILITIES	60
22. WASTE MANAGEMENT	90
23.. SERVICE FACILITIES	148
24. MOBILE AMBULENCE SERVICES	360
25. MANAGEMENT OFFICES	660
26. THERAPY / COMMUNITY GARDEN	900
TOTAL	9085sqm

CONTEXTUAL ANALYSIS

SITE CONTEXT CHALLENGES

UMLAZI MACRO FACTORS:

- UNEMPLOYMENT
- EMOTIONAL& PHYSICAL OPPRESSION
- HIGH DISEASE BURDEN:
  - HIV/AIDS
  - TB
  - OBESITY
  - CHRONIC DISEASES OF LIFESTYLE
  - SEVERE MALNUTRITION
- HIGH MATERNAL MORTALITY
- HIGH NEONATAL DEATH RATE
- HIGHLY MOBILE POPULATION *(POOR ADHERANCE TO TREATMENT PLANS)*
- DRUG & ALCOHOL ABUSE
- POPULATION GROWTH
- SPATIALLY LARGE AREA
- SECURITY/SAFETY
- FOOD SECURITY
- INFRASTRUCTURE

SITE MICRO FACTORS:

- INFRASTRUCTURE
  - RUNNING WATER
  - ABLUTIONS
  - WASHING FACILITIES
- FLOODING
- SECTURE STORAGE SPACE *(TRADERS & RESIDENTIAL)*
- PUBLIC SPACE

HEALTHCARE CHALLENGES:

FACILITIES

- NO COMMUNITY HEALTH CENTRE IN UMLAZI
- EXISTING FACILITIES DON'T CATER FOR PATIENT NEED
- POOR HYGENE & INADEQUATE INFECTION CONTROL
- OLD FACILITIES
- OVERBURDENED BY POPULATION
- POOR RECORD KEEPING *INTEGRATED PATIENT MANAGEMENT SYSTEM*
- LIMITED MOBILE CLINCS
- SECURITY RISK - VANDALISM
- WATER & ELECTRICITY SUPPLY

PATIENTS

- NO WAITING AREAS
- PATIENTS WALK/COMMUTE FAR
- LONG HOSPITAL STAYS
- HIGH DEATH RATE
- ADVERSE EVENTS *(PATIENTS TURNED AWAY)*
- NO YOUTH ORIENTATED HEALTHCARE
- NEONATAL ABDUCTION

STAFF

- HUMAN RESOURCE SHORTAGE
- UNDER RESOURCED
- DEMORALIZING WORK ENVIRONMENT
- HIGH STAFF TURN OVER
- MEDICAL NEGLIGENCE *(LITIGATION)*
- NO JOB SATISFACTION

SITE ANALYYSIS

PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP

A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

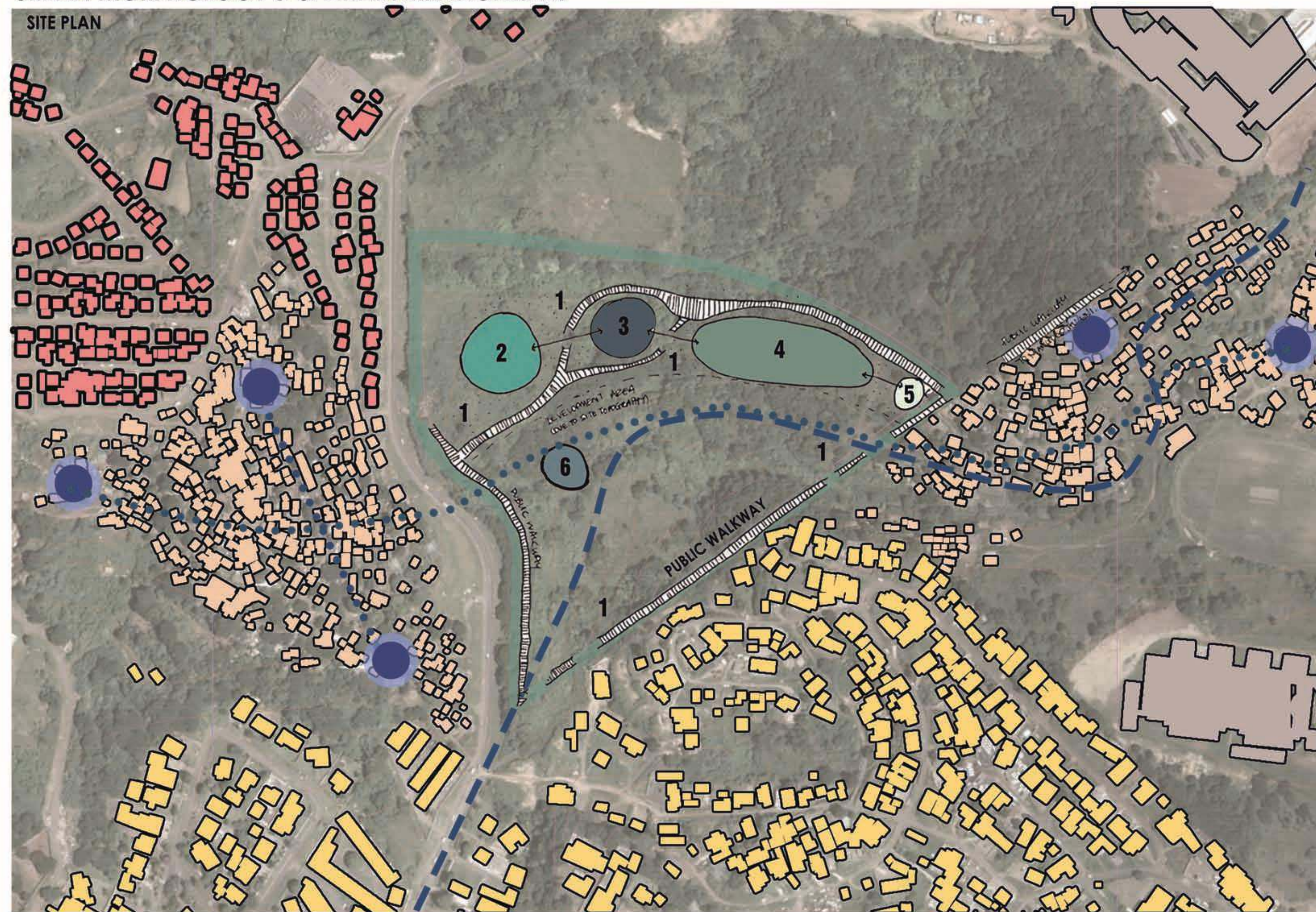
MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

SITE DESIGN DRIVERS

SOCIO SPATIAL RESPONSE: PUBLIC SPACE LINKING FUNCTIONS

1.TRANSITORY PUBLIC SPACE 2. COMMUNITY HEALTH CENTRE 3. ACTIVITY ZONE 4. URBAN AGRICULTURE 5. OUTDOOR GYM 6. WATER MANAGEMENT

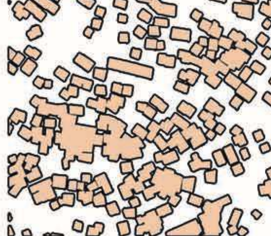
URBAN MORPHOLOGY & SPATIAL ARRANGEMENT



PEOPLE & PLACE

RURAL DEVELOPMENT PROJECT HOUSING

INFORMAL HOUSING

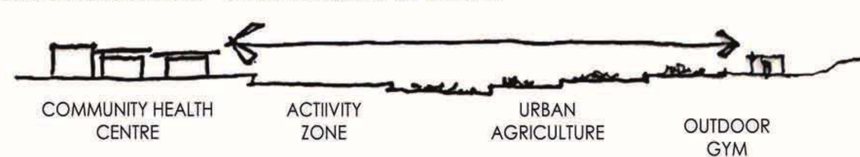


FORMAL HOUSING

SITE PLAN DEVELOPMENT

URBAN MORPHOLOGY LIKAGE & CONNECTIVITY INCLUSIVITY

PASSIVE SURVEILANCE - OVER THE EXTENT OF THE SITE



WATER MANAGEMENT

- TOWNSHIP CONTEXTS ARE SYNONEMOUS FOR POOR SANITATION AND STORM WATER MANAGEMENT RESULTING IN FLOODING AND ILLNESS. THROUGH THE REHABILITATION OF THE EXISTING DRAINAGE SYSTEM COMMUNITIES WILL REDUCED IMPACT FROM HEAVY RAINS.
- INTRODUCTION OF WASHING AND ABLUTIONS

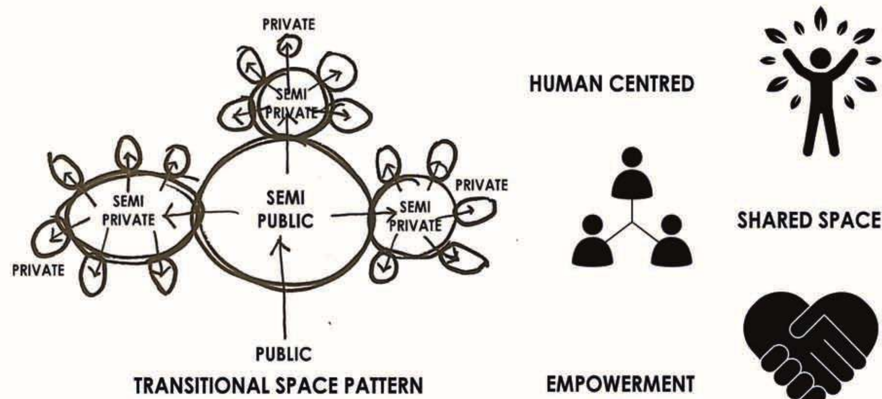
WATER MANAGEMENT KEY

WATER COLLECTION & WASHPOINT

WATER HARVESTING SYSTEM

EXISTING WATER COURSE

COMMUNITY HEALTH CENTRE DESIGN DRIVERS



TRANSITIONAL SPACE PATTERN

DEPARTMENT OF HEALTH STATUTORY DESIGN GUIDELINES

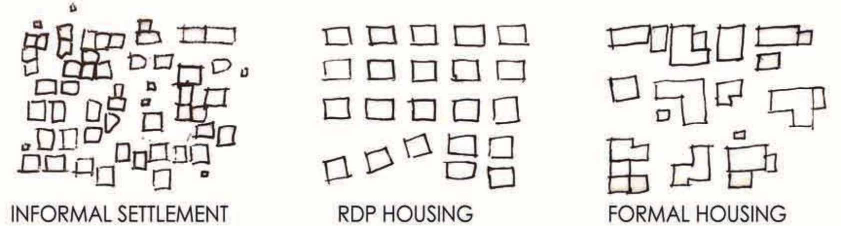
FUNCTIONS ORIENTATED AROUND CONNECTION TO ENVIRONMENT & COMMUNITY

PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP
A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

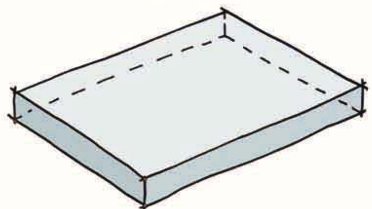
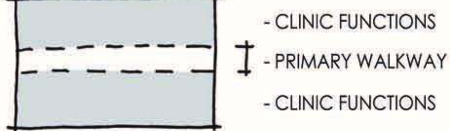
MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

COMMUNITY HEALTH CENTRE PLAN DEVELOPMENT

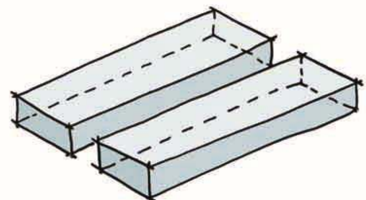
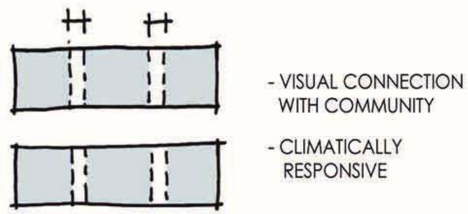
DENSITY
APARTHEID URBAN PLANNING ADOPTED DECENTRALIZATION METHODOLOGY TO JUSTIFY SPAWL ASSOCIATED WITH APARTHEID SATIAL PLANNING, PLACING TOWNSHIPS AT A DISADVANTAGE. CONSEQUENTLY TOWNSHIPS ARE SPATIALLY, SOCIALLY AND ECONOMICALLY DISADVANTAGED. DENSITY RESPONDS TO THIS NARRATIVE APPROPRIATELY



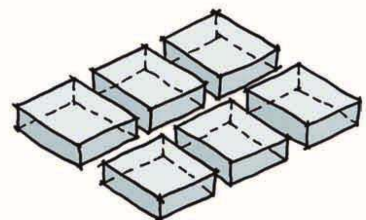
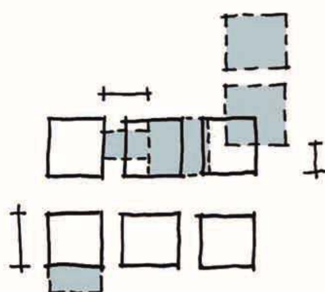
1. TRADITIONAL HEALTHCARE

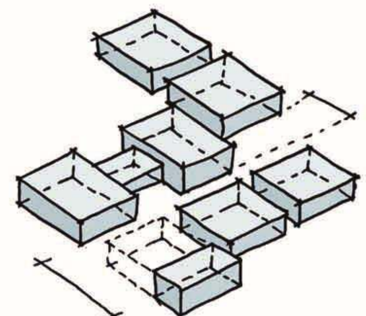
2. PRIMARY AXIS & CIRCULATION

3. CONTEXTUALLY RESPONSIVE MASSING

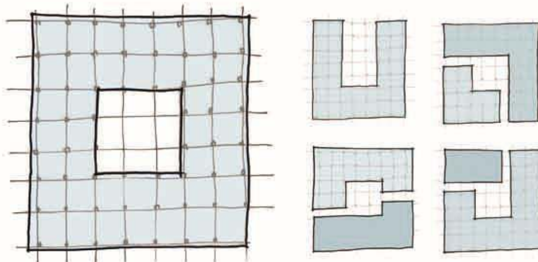



4. ASSYMETRICAL ARRANGEMENT

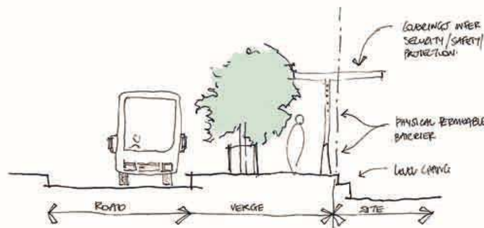


THE FINAL ASSYMETRICAL LAYOUT IS ONE THAT RESPONDS TO THE FUNCTIONAL NEEDS OF A COMMUNITY HEALTH CENTRE WHILE ENSURING A SPACE THAT IS CONNECTED TO CONTEXT SOCIALLY AND CLIMATICALLY. THE LAYOUT OF THE MASSING FURTHERMORE REFLECTS THE UNCONVENTIONAL SPATIAL ARRANGMENT FOUND IN TOWNSHIP CONTEXTS.

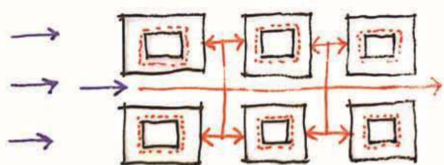
COURTYARD TYPOLOGY
THE FOOTPRINT OF EACH SELFCONTAINED WING CAN BE ARRANGED TO SUITE THE NEEDS OF EACH FUNCTION



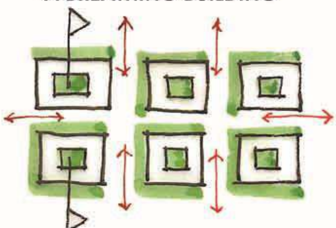
SPATIAL HEIRARCHY & PRIVACY GRADIENT
WHILE THE INTENTION IS AN OPEN, INCLUSIVE ENVIRONMENT CONSIDER USE OF PERMEABLE THRESHOLDS AS A MEANS TO ADDRESS SECURITY. BOLLARDS, COVERED WALKWAY, LEVEL CHANGE.



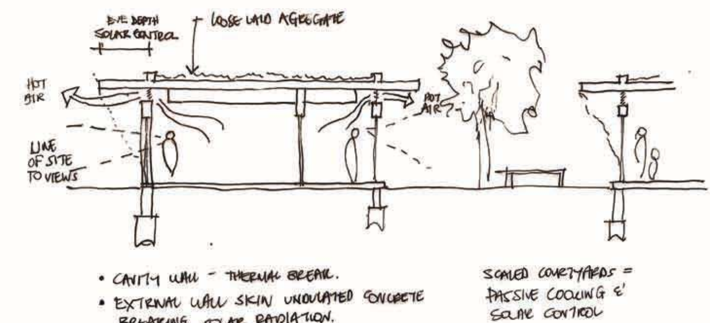
CIRCULATION HEIRARCHY



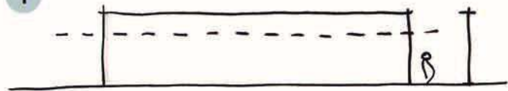
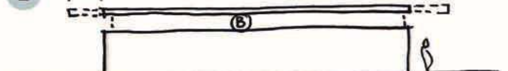
A BREATHING BUILDING

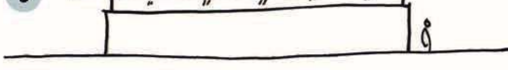
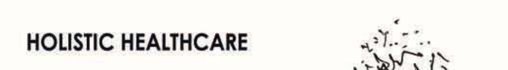


COURTYARD TYPOLOGY SKETCH SECTION



HUMAN SCALE
IN LINE WITH THE EXISTING PRECINCT BUILT FORM LANGUAGE, THE ARCHITECTURE NEEDS BE ONE THAT ACKNOWLEGES THE USER THROUGH A SCALED

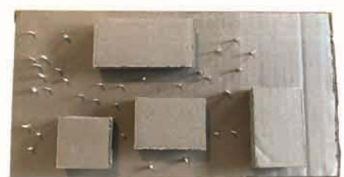
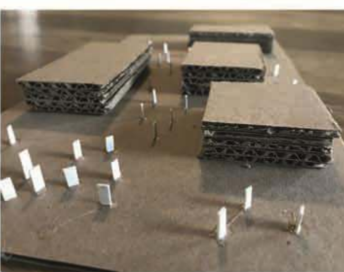



HOLISTIC HEALTHCARE

TRADITIONAL HEALTHCARE VS HOLISTIC HEALTHCARE

SITE MODEL 1:2000



CONCEPTUAL MODEL

SPATIAL MODEL

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

SITE PLAN & SURROUNDS

SCALE 1: 2000

PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP

A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

A PRECAST STAIRCASE ARE INTRODUCED TO FORMALIZE COMMUNITY LINKS ALONG THE ROAD EDGE ENABLE INFORMAL SETTLEMET RESIDENTS TO TRAVERSE THE STEEP ROAD EDGE GRADIENT WITH LESS EFFORT.

B RAINWATER HARVESTED THROUGHOUT THE COMMUNITY HEALTH CENTRE AND URBBAN PARK.

C A COMMUNITY WALKWAY CONNECTS TWO EXISTING PEDESTRIAN WALKWAYS TO ESTABLISH A THOUROUGHFARE THAT REDUCES THE TIME AND DISTANCE FOR THOSE WALKING TO CATCH TAXIS ON MANGOSUTHU HIGHWAY.

D A CONCRETE STRUCTURE IS SITUATED AT THE JUNCTION OF TWO WALKWAYS PROVIDES A VIISUAL HEIRACHY WITHIN URBAN SCHEME AS ONE HAS A CLEAR LINE OF SITE DOWN THE URBAN PARRK THOUROUGHFARE. THE STRUCTURE FURTHER SERVES AS A MEETING POINT FOR COMMUNITY MEMBERS.

E A SWALE WHICH SERVES ARE SEATING WILL BE INTRODUCED TO MANAGE FLOODING. THE COLLECTED WATER WILL BE DIRECTED TO THE EXISTING WATER COURSE THROUGH THE SITE.

F IN CONCJUNTION WITH THE STORM WATER MANAGEMENT PLAN, ABLUTIONS AND WASHING AREA WILL BE PROVIDED. JOJO TANKS COLLECT WATER FOR USE BY USERS.

A A A A

B B B

C C

D

G

CHC RAINWATER HARVESTING

1 RAINFALL → 2 CHC ROOVES HARVEST RAIN → 3 UNDERGROUND TRANSITIONAL STORAGE & PUMP IN OUR COURTYARDS → 4 TREATMENT & PERMAMENT STORAGE → 5 CHC USAGE

RAINFALL

URBAN PARK RAINWATER

1 → 2 WALKWAYS & HARD SURFACES COLLECT RAINFALL → 3 STORAGE IN JOJO TANK & PUMP → 4a WATER CROPS / 4b SURPLUS TO EXISTING WATER SYSTEM

G THE EXISTING WALK WAS LEAVING THE SITE WILL BE UPGRADED TO MANAGE PEDESTRIANS BEING WILL LIT USING SOLAR LIGHTING AND SHADED. A LOW SEATING WALL DOUBLES AS A STORMWATER MANAGEMENT AGENT.

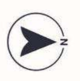
SITE PLAN

SCALE 1: 1000

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

COMMUNITY HEALTH CENTRE FUNCTIONS

A - PUBLIC TRANSPORT
B - TRADERS MARKET
C - FORECOURT
D - PREWAITING COURTYARD
E - ADMINISTRATION & RECORDS
F -COMMUNITY ROOMS
G - EMERGENCY
H - X-RAY DEPARTMENT
J - MIDWIFE OBSTETRICS UNIT
K - KITCHEN
L - PUBLIC TOILET
M - CENTRAL STERIL SUPPLY DPT.
N - PHARMACY
O - ANTE NATAL CLINIC
P - REHABILITATION
Q - INFECTION DISEASE
R - CHRONIC DISEASE
S - ORAL HEALTH/DENTAL
T - SUPPORT FACILITIES
U - WASTE MANAGEMENT
W - SERVICE FACILITIES
X - MOBILE AMULANCE SERVICES
Y - MANAGEMENT OFFICES
Z - THERAPY / COMMUNITY GARDEN

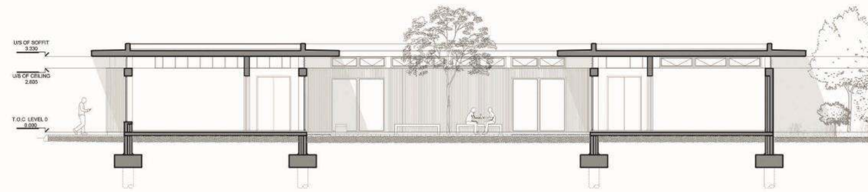


FLOOR PLAN
SCALE 1: 500

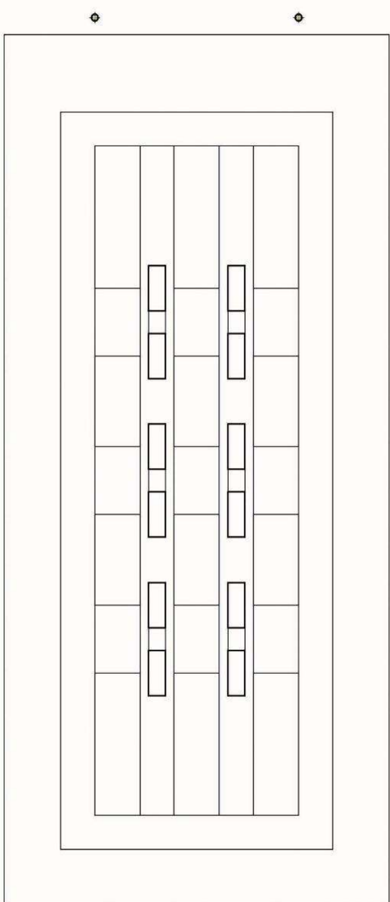
PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP

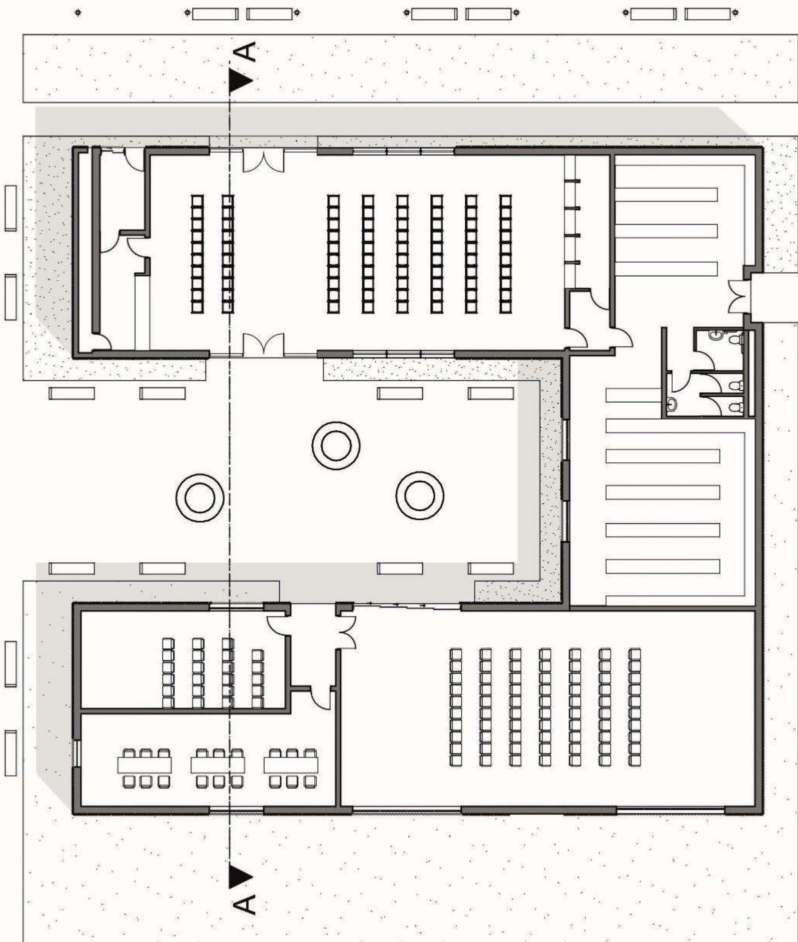
A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

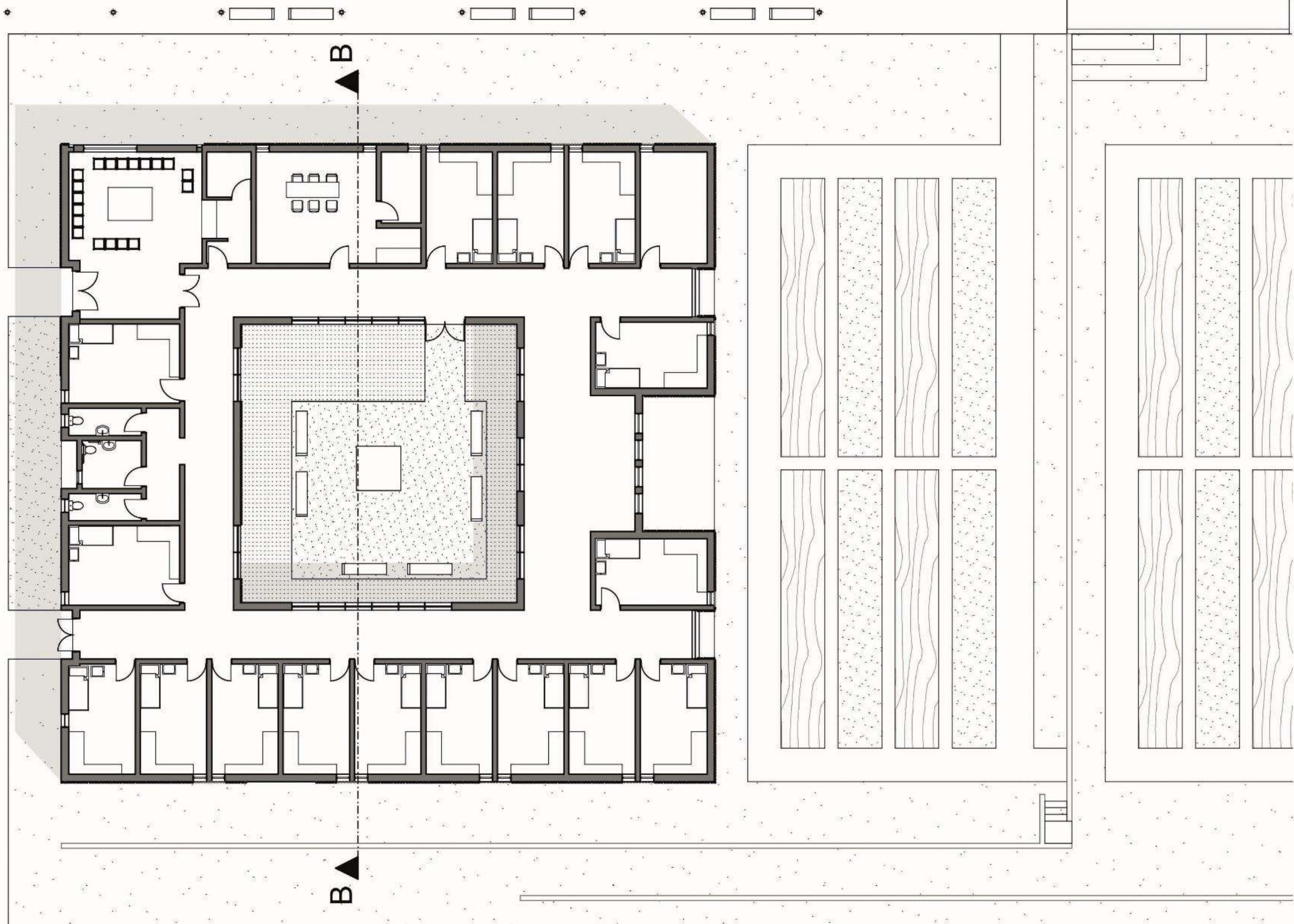
SECTION A-A
SCALE 1: 200



SECTION B-B
SCALE 1: 200







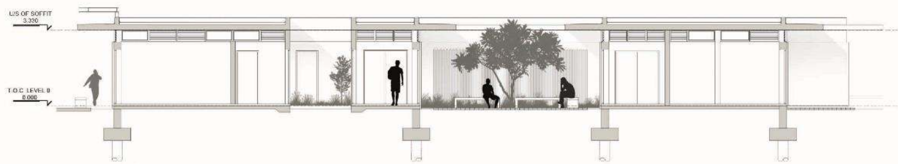
RECEPTION & WAITING
1. RECEPTION
2. STORE
3. OFFICE
4. STAFF REST ROOM
5. WAITING AREA

COMMUNITY ROOMS
COMMUNIITY ROOM 1
COMMUNIITY ROOM 2
COMMUNIITY ROOM 3

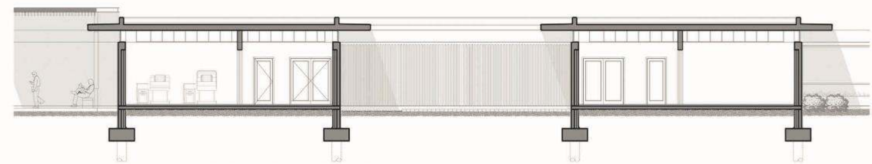
CHRONIC DISEASE
1. WAITING ROOM
2. TREATMENT ROOM
3. CONSULTING
4. ABLUTIONS
5. RECEPTIONS +STORE

COURTYARD FLOOR PLANS & SECTIONS
SCALE 1: 200

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI



SECTION C-C
SCALE 1: 200



SECTION D-D
SCALE 1: 200

EMERGENCY / CASUALTY
1. STORE
2. REHAB ROOM
3. REHYDRATION ROOM
4. POP ROOM
5. CONSULTING
6. TREATMENT ROOM
7. DIRTY UTILITIES

CRISIS
8. INTERVIEW CONSULTING
9. EXAMINATION ROOM
10. FEMALE
11. RAPE TREATMENT ROOM
12. RECEPTION & STORE
13. STAFF
14. COURTYARD

X - RAY DEPARTMENT
1. WAITING
2. ABLUTION
3. ULTRA SOUND
4. X-RAY ROOM
5. DARK ROOM
6. STORE

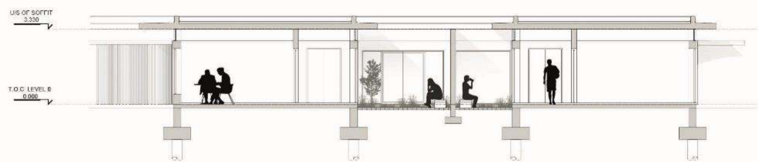
KITCHEN

PUBLIC ABLUTIONS
1. MALE
2. FEMALE

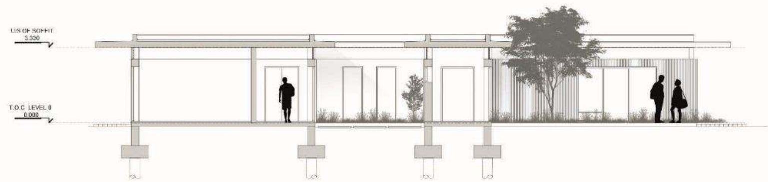
MIDWIFE OBSTETRICS ROOM
1. WAITING X 10
2. KITCHEN
3. DELIVERY
4. RESUSCITATE
5. PREP AREA X 2 BED
6. SLUICE
7. ABLUTIONS
8. PREM BABIES PREMATURE BABIES
9. NURSES STATION
10. STORE
11. STOCK ROOM
12. LINEN STORE ROOM
13_STAFF
14. COURYARD

COURTYARD FLOOR PLANS & SECTIONS
SCALE 1: 200

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI



SECTION E-E
SCALE 1: 200



SECTION F-F
SCALE 1: 200

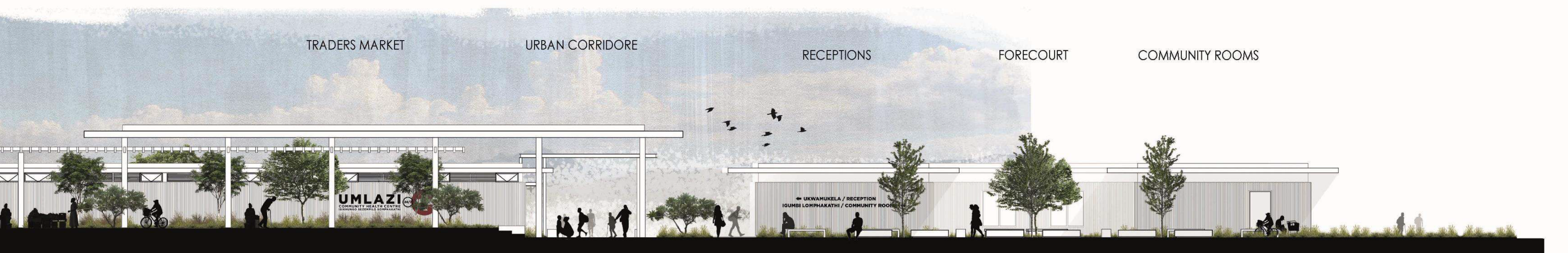
ORAL HEALTH UNIT
1. RECEPTION
2. WAITING ROOM
3. ABLUTIONS
4. TREATMENT ROOMS

REHABILITATION UNIT
1. RECEPTION
2. WAITING ROOM
3. ABLUTIONS
4. TREATMENT ROOMS
5. GROUP REHABILITATION

COURTYARD FLOOR PLANS & SECTIONS
SCALE 1: 200

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

SCALE 1: 200



SOUTH ELEVATION (PART B)
SCALE 1: 200

PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP

A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

URBAN PARK WALKWAY LINK

CHRONIC DISEASE

THERAPY GARDENS

URBAN CORRIDIORE

INFECTIIOUS DISEATH
& ORAL HEALTH

NORTH ELEVATION (PART A)
SCALE 1: 200

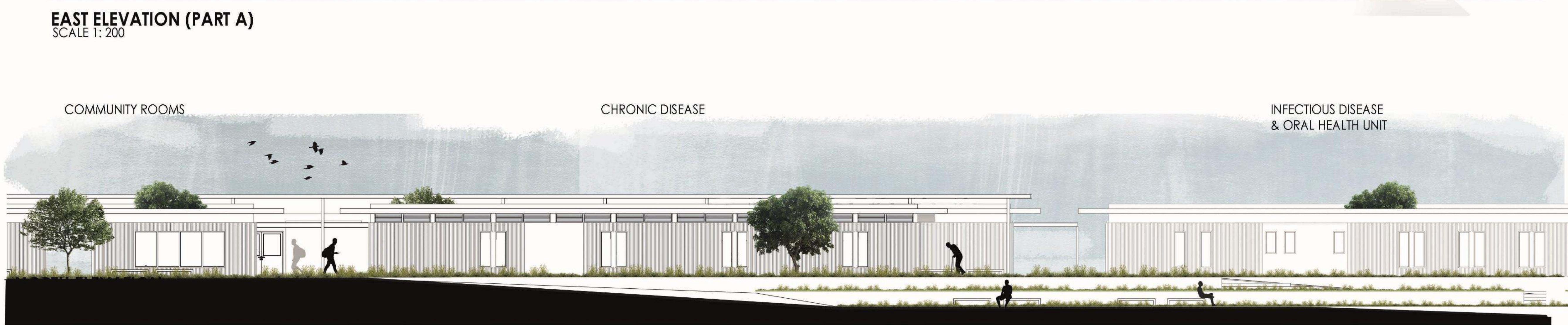
NORTH ELEVATION (PART B)
SCALE 1: 200

PLACEMAKING AS A CATALYST FOR THE DEVELOPMENT OF A HEALING ARCHITECTURE IN A SOUTH AFRICAN TOWNSHIP

A PROPOSED HOLISTIC COMMUNITY HEALTH CENTRE IN UMLAZI

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

EAST ELEVATION (PART A)
SCALE 1: 200



EAST ELEVATION (PART B)
SCALE 1: 200

EAST ELEVATION (PART C)
SCALE 1: 200

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

COMMUNITY FORECOURT

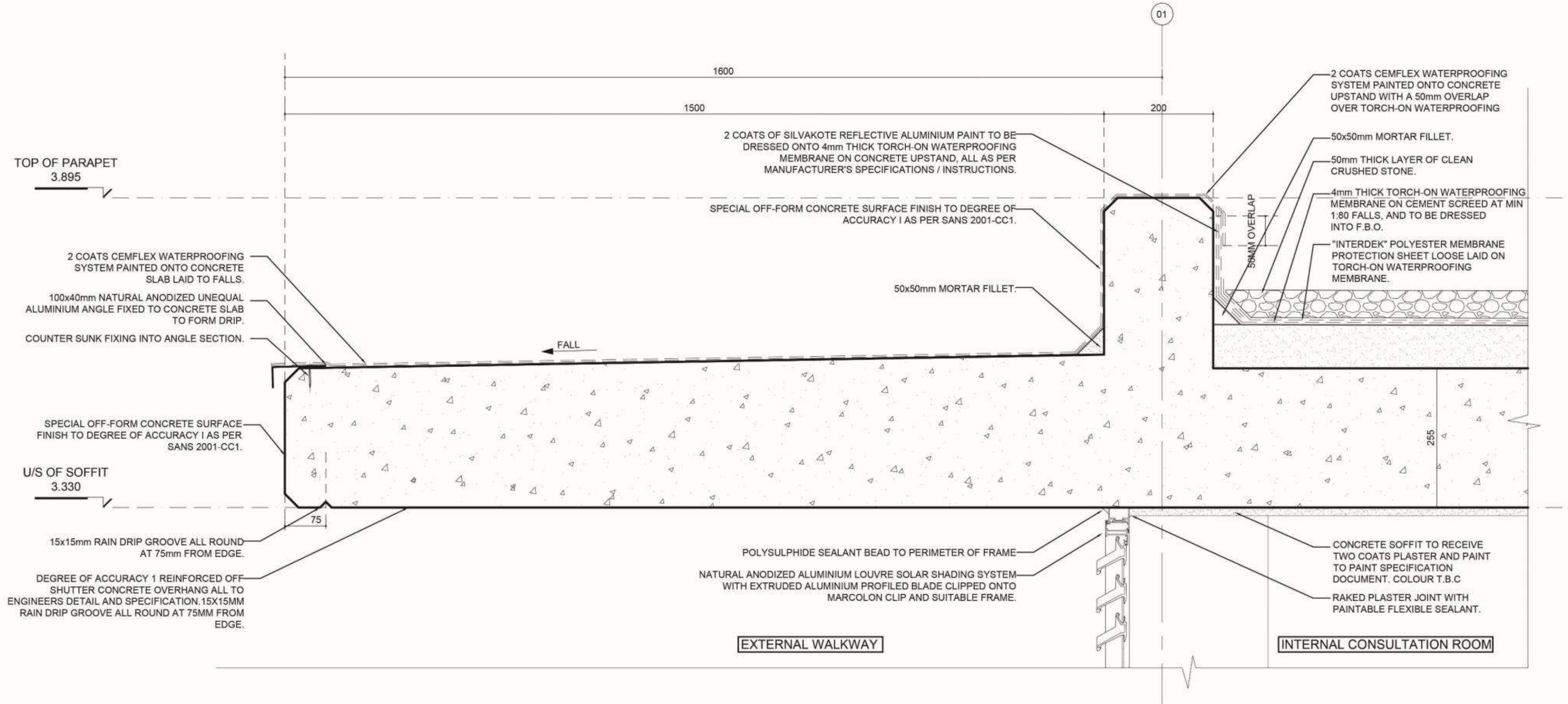
MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

UMLAZI COMMUNITY HEALTH CENTRE + URBAN PARK AERIAL VIEW

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI

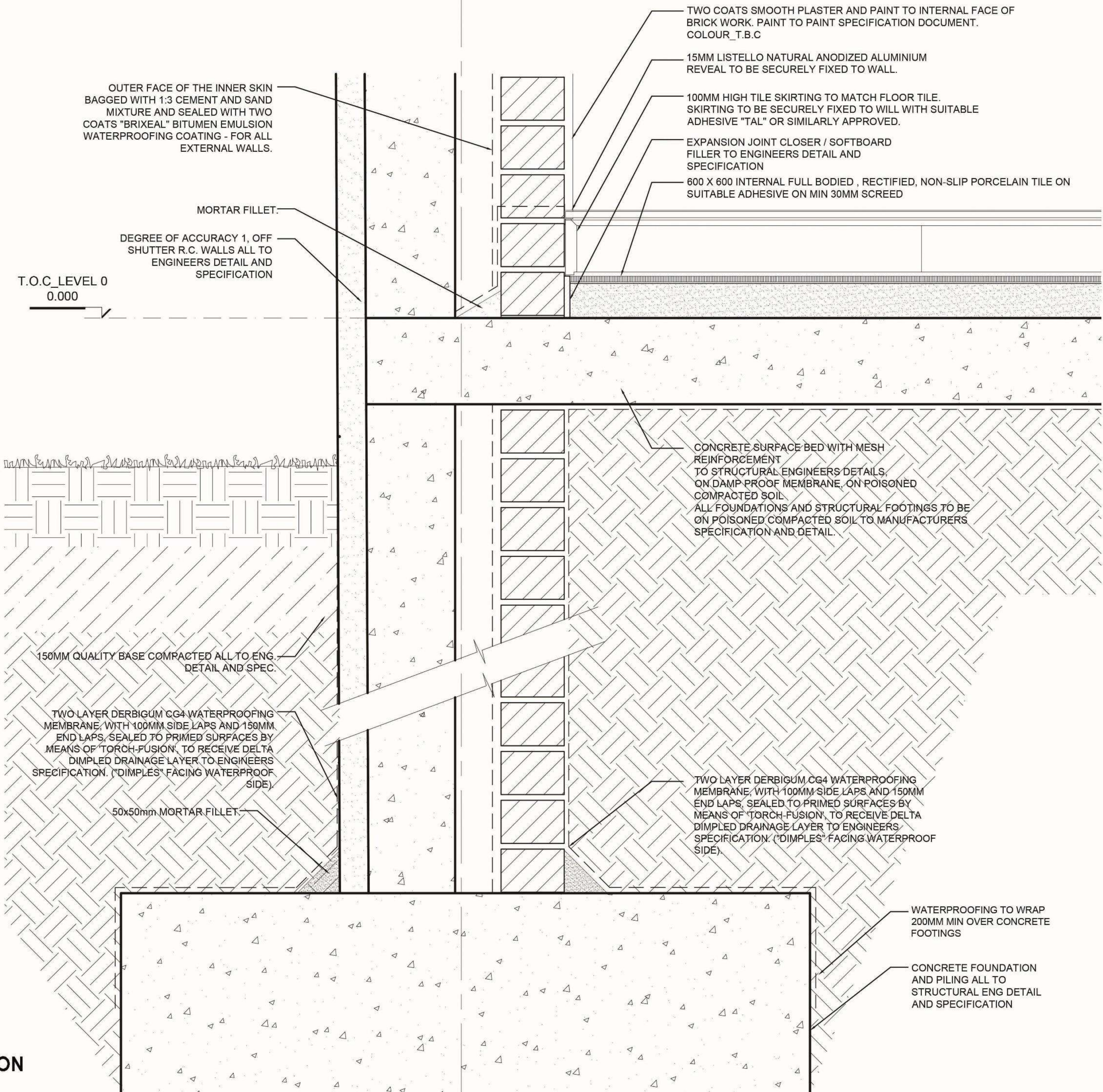
PART WALL SECTION
SCALE 1: 20

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI



DETAIL 1 - REFER TO PART WALL SECTION
SCALE 1: 5

MATTHEW JONES: 219080960
SUPERVISOR: DR. SILVIA BODEI



DETAIL 2 - REFER TO PART WALL SECTION

SCALE 1: 5

MATERIALS

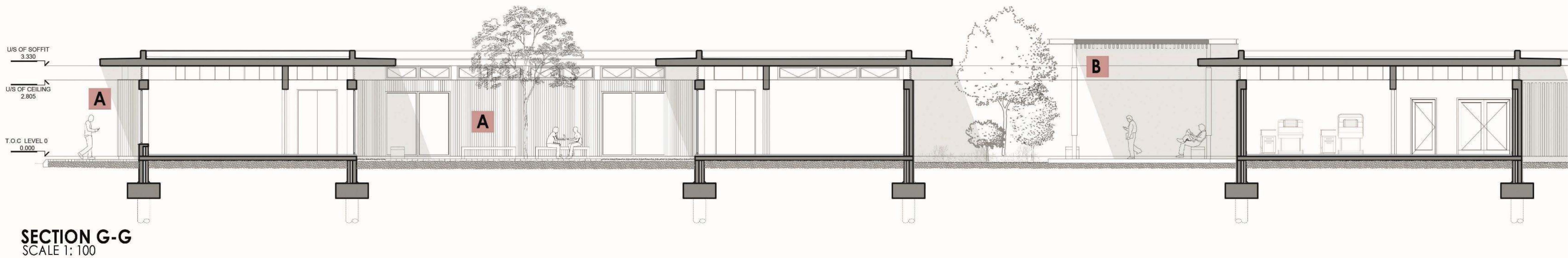
A THE MATERIALS USED ON THE COMMUNITY HEALTH CENTRE PRODUCE AN UNASUMING PALLETT AND RYTHMIC IN THE ACHITECTURE. THE DECISION TO USECONCRETE USED ON THE BUILDING FACADE WAS CHOSEN FOR 4 REASONS:

1. THE EXTERNAL FACADE OF THE COMMUNITY HEALTH CENTRE IS A RIBBED INSITUE CONCRETE WALL. THE FINISH WAS SELECTED SPECIFICALLY FOR IT'S DURABILITY. CIVIC BUILDINGS IN TOWNSHIPS ARE OFTEN VANDALIZED.

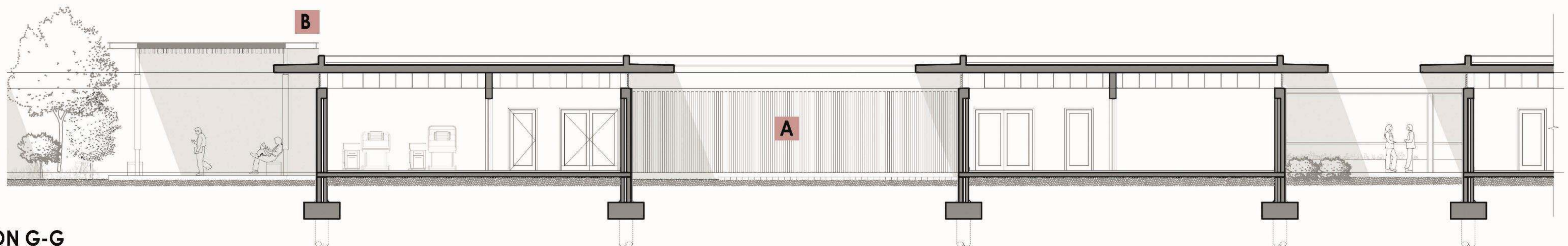
2. OFF SHUTTER CONCRETE IS A LOW MAINTENANCE PRODUCT.

3. THIRDLY A RIBBED FACADE REFLECTS THE TOWNSHIP CONTEXT WHERE MANY INFORMAL HOMES ARE MADE FROM CORRUGATED SHEETING.

B POWDER COATED STEEL WAS SELECTED FOR WALKWAY ROOF SUPPORT.



SECTION G-G
SCALE 1: 100



SECTION G-G
SCALE 1: 100

REFERENCES

Books:

Adams, D., & Tiesdell, S., 2013, *Shaping places: Urban planning*, design and development, London: Routledge.

Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I., & Angel, S., 1977, *A pattern language: Towns, buildings, construction*, New York: Oxford University Press.

Darity Jr, W.A., (ed.), 2008, *International encyclopaedia of the social sciences*, 2nd edn., Farmington Hills: The Gale Group.

Fredrick, M., 2007, *101 things that I learnt at architecture school*, London: The MIT Press.

Gehl, J., 2010, *Cities for people*, Washington: Island Press.

Gehl, J., 2011, *Life between buildings*, Washington: Island Press.

Gottschalk, L.A., 1995, *Content analysis of verbal behavior: New findings and clinical applications*, Lawrence Erlbaum Associates Inc., New Jersey: Hillside.

Groat, L.N., Wang, D., 2013, *Architectural research methods*, 2nd edn., New Jersey: John Wiley & Sons Inc.

Hamdi, N., 2010, *The placemakers' guide to building community: Planning, design and placemaking in practice*, London: Earthscan.

Harms, H.H., (ed.), 1972, *User and community involvement and its effect on professionalism*, New York: Freedom to Build.

Lynch. K., 1960, *The image of the city*, Cambridge: The MIT Press.

Murray, N., Shepherd, N., & Hall, M., 2007, *Desire lines: space, memory and identity in the post-apartheid city*, 1st edn., London: Routledge (The Architect series).

Neuwirth, R., 2014, *Shadow cities: A billion squatters, a new urban world*, Abingdon: Routledge.

Ots, E., 2011, *Decoding theoryspeak: An illustrated guide to architectural theory*, London: Taylor and Francis Group.
Pasteur, K., 2011, From vulnerability to resilience: A framework for analysis and action to build community resilience, Warwickshire: Practical Action Publishing.

Schubert, D., 2016, Contemporary Perspectives on Jane Jacobs: Reassessing the Impacts of an Urban Visionary, Farnham: Taylor & Francis Group.

Smith, D.M., (ed.), 1992, The apartheid city and beyond: Urbanisation and social change in South Africa, London: Routledge.

Trancik, R., 1986, Finding lost space, New York: Van Nostrand.

Tuan, Y.-fu., 1974, *Topophilia: a study of environmental perception, attitudes, and values*, New York, Columbia University Press.

Zegeye, A. & Kriger, R., (ed.), 2001, *Culture in the new South Africa*, Social identities in the new South Africa: After Apartheid – Volume 2, Cape Town: Kwela and South African History Online.

Journals:

Baker, P., 2010, 'From Apartheid to Neoliberalism: Health Equity in Post-Apartheid South Africa', *International Journal of Health Services*, 40: 79-95.

Derakhshani, F., 2012, "Appropriating, Reclaiming and Inventing Identity through Architecture", *Architectural Design*, 82(6): 28–33.

Etikan, I., Mus a, S.A., & Alkassim, R.S., 2016 'Comparison of Convenience Sampling and Purposive Sampling', *American Journal of Theoretical and Applied Statistics*. 5(1), 1-4.
Lawson, B., 2010, 'Healing Architecture', *Arts and Health*, 2(2): 95-108.

Haarhoff, E., 2011, 'Appropriating modernism: Apartheid and the South African Township', *A|Z ITU Journal of the Faculty of Architecture*, 8(1): 184-195.

Knipe, A., (ed.), 2010, Digest of South African Architecture, Picasso Headline Pty (Ltd), Cape Town, South Africa.

Lawson, B., 2010, Healing Architecture, *Arts and Health*, 2(2): 95-108.

Manzo, L.C. & Perkins, D.D., 2006. Finding common ground: The importance of place attachment to community participation and planning, *Journal of Planning Literature*, 20(4): 335–350.

Maphumulo, W.T. & Bhengu, B.R., 2019, 'Challenges of quality improvement in the healthcare of South Africa post-apartheid: A critical review', *Curationis,* 42(1): 1901.

Marschall, S., 1998, 'Architecture as Empowerment: The Participatory Approach in Contemporary Architecture in South Africa', *Transformation*, 35, 103-105.
Maylam, P., 1995, 'Explaining the Apartheid City: 20 Years of South African Urban Historiography', *Journal of Southern African Studies*, 21(1): 19-38.

Mazuch, R., & Stephen, R., 2005, Creating healing environments: Humanistic architecture and therapeutic design, *Journal of public mental health,* 4(4): 48-52.

Mthiyane, W., 2019, Ubuntu Architecture: Listen to Build, *SAIA-KZN Journal*, 2019, (3)44: 10-11.

Moudon, A,V., 1997, Urban Morphology as an Emerging Interdisciplinary Field, *Urban Morphology*, 1997, 1: 3-10.

Noble, H., & Smith, J., 2015, Issues of Validity and Reliability in Qualitative Research, *Evidence Based Nurs*, 18(2): 34-35.

Nowell, L, S., Norris, M, J., White, D, E., & Moules, N, J., 2017, 'Thematic Analysis: Striving to Meet the Trustworthiness Criteria', *International Journal of Qualitative Methods*, 16: 1-13.

Onie, R.D., et al., 2018, "Integrating Social Needs into Health Care: A Twenty-Year Case Study of Adaptation and Diffusion," *Health Affairs (Project Hope)*, 37(2): 240–247.

Peters, W., (ed.), 2004, Building the New South Africa, *KZ-NIA Journal,* 2004(1), 29: 6-7.

Parnell, S., 1988, Racial Segregation in Johannesburg, *South African Geographical Journal*, 70(2): 112-126.

Strydom, W., Puren, K., & Drewes, E., 2018, Exploring theoretical trends in placemaking: towards new perspectives in spatial planning, *Journal of Place Management and Development*, 11-12.

Reports and Government Publications:

Alvaredo, F., Chancel, L., Piketty, T., Saez, E., Zucman, G., 2018, *World Inequality Report*, World Inequality Lab.

Mahajan, S., (ed.), 2014, *Economics of South African Townships: Special Focus on Diepsloot*, World Bank Studies, Washington, DC: World Bank.

Marx, C, & Charlton, S., 2003, U*nderstanding Slums: Case Studies for the Global Report on Human Settlements, The case of Durban, South Africa*, London: Urban Slums Reports.

Projects for Public Spaces, 2012, *Placemaking and the Future of Cities*, Un-Habitat Sustainable Development Network.

South Africa, Department of Economic Development, 2008, *Executive Summary: Umlazi Local Economic Development Plan 2008*, n.d., viewed 15 April 2020, from: http://dag.durban.gov.za/Documents/Invest_Durban/Economic%20Development/5.pdf.

South Africa, Department of Health, 2016, *eThekwini District Health Plan 2015/16*, n.d., viewed 11 April 2020, from: http://www.kznhealth.gov.za/Strategic/DHP/2015-.

South Africa, Department of Health, 2019, *eThekwini District Health Plan 2018/19 – 2020/21*, n.d., viewed 11 April 2020, from: http://www.health.gov.za/DHP/docs/DHP201821/kwazulu_Natal/eThekwini_DHP_2018.19.pdf.

South Africa, Department of The Presidency, 2014, *20 Year Review*, viewed 21 April 2020, from: https://www.gov.za/sites/default/files/gcis_document/201409/20yearreview.pdf

South Africa, Department of Statistics, 2019, *Quarterly Labour Force Survey: Quarter 4:2019*, *Statistical Release P0211*, 11 February 2020, viewed 04 March 2020, from: http://www.statssa.gov.za/publications/P0211/ P02114thQuarter2019.pdf.

South Africa, 1996, *Constitution of the Republic of South Africa Act 108,* Author.

South African, 1950, *Group Areas Act No. 41,* Author.

The Rockefeller Foundation & ARUP (ed.), 2015, *City Resilience Framework*, December 2015, viewed 24 February 2020, from: https://assets.rockefellerfoundation.org/app/uploads/20140410162455/City-Resilience-Framework-2015.pdf

The Rockefeller Foundation & ARUP (ed.), 2015, *City Resilience Framework*, December 2015, viewed 24 February 2020, from: https://assets.rockefellerfoundation.org/app/uploads/20140410162455/City-Resilience-Framework-2015.pdf

United Nations (ed.), 2017, *New Urban Agenda*, Author, Republic of Ecuador.

Conference Papers and Proceedings:

Aripin, S., 2006, *Healing architecture: A study on the physical aspects of healing environment in hospital design*, 40th Annual Conference of the Architectural Science Association ANZAScA, 22nd to 25 November 2006, Adelaide, Australia.

Alvaredo, F., Atkinson, B.A., 2010, *Colonial Rule, Apartheid and Natural Resources: Top Incomes in South Africa, 1903 – 2007*, Discussion Paper No.8155, Centre for Economic Policy Research.

Barker, A., 2012, *Legacy in Architecture: Chapter Three*, viewed 23 April 2020, from: https://www.academia.edu/16300387/Legacy_3_on_http_www_futurespaces_co_za_architecture_education_aspx

Marcus G., 2009, *Louis I. Kahn: The Making of a Room*, Arthur Ross Gallery, University of Pennsylvania, Philadelphia, 7 February 2009 - 29 March 2009.

Mthembu, N., 2007, *The scourge of post-apartheid housing in Umlazi*, Centre for Civil Society, University of South Africa.

Pecz, G. (ed.), 2016, *Space, Economy, Society*, Scientific Journal of Sopotia University, 111-116, Sopot, Poland.

Young, J.E., 1996, *The Role of Architecture in Promoting Healing Environments in the Design of Small, Rural Hospitals*, 84th Association of Collegiate Schools of Architecture Annual Meeting, Open Sessions, 1996, 566-571.

Online Reports and Websites:

Badenhorst, C., n.d., *Writing the literature review*, viewed 08 April 2020, from: https://cecilebadenhorst.wordpress.com/carnegie-african-diaspora-workshops/writing-the-literature-review/.

Craft, S., 2014, *The economic impact of Placemaking*, The Michigan Municipal League, viewed 01 May 2020, from: http://placemaking.mml.org/wp-ontent/uploads/2013/02/mml-economic-impact-of-placemaking-june2014.pdf.

Department of Health, Province of Kwazulu-Natal, n.d., *History of KwaMashu Community Health Centre,* viewed 11 November 2020, from: http://www.kznhealth.gov.za/KwaMashu/history.htm#:~:text=KwaMashu%20is%20a%20location%20for,'KwaMashu%E2%80%9D%20translated%20into%20isiZulu.

Dilani, A., 2012, *The Influence of Design and Architecture on Health*, Health Management 12(4), viewed 7 February 2020, from: https://healthmanagement.org/c/imaging/issuearticle/the-influence-of-design-and-architecture-on-health.

Dovey, K., 1999, *Framing Places: Mediating Power in Built Form (1st ed.),* London: Routledge, viewed 20 April 2020, from: https://doi.org/10.4324/9780203017579

Ethekwini Municipality, n.d., *Introduction to Our Town*, viewed 23 April 2020, from: http://www.durban.gov.za/Discover_Durban/History_Communities/Our_Town/Pages/Introduction_to_Our_Town.aspx.

Grahl, J., 2005, *World Charter for the Right to the City*, Habitat International Coalition, viewed 14 December 2020, from: file:///C:/Users/mattf/Downloads/HIC-Document-2422-20201213-2207.pdf.

ICA Architects, n.d., *Community Health Centres*, viewed 10 November 2020, from: https://ica-architects.co.za/project/community-health-centres/.

Jiang, M., 2014, *Figure ground*, MIT, viewed 01 May 2020, from: Https://architecture.mit.edu/architecture-and-urbanism/project/figure-ground.

Jovancic, N., 2019, *4 Types of Bias in Research and How to Make Your Surveys Bias-Free*, Lead Quizzes, viewed 14 April 2020, from https://www.leadquizzes.com/blog/types-of-bias-in-research/.

Mangosuthu University of Technology, n.d., *History of Umlazi*, viewed 8 July 2019, from: https://www.mut.ac.za/mut40/history-of-umlazi/.

Marcus, G., 2009, *Louis I. Kahn: The Making of a Room*, Arthur Ross Gallery, University of Pennsylvania, Philadelphia, 7 February 2009 - 29 March, viewed 6 August 2020, from: 2009.https://search.proquest.com/docview/212385610/fulltextPDF/138C0BBB7B94EF5PQ/1?accountid=6724.

Martignoni, J., 2020, *Orla do Guaiba Urban Park*, Landscape Middle East, viewed 11 December 2020, from: https://online.anyflip.com/haxvj/szrc/mobile/index.html

Oxfam International, n.d., *5 Shocking facts about extreme global inequality and how to even it up*, viewed 2 August 2019, from: https://www.oxfam.org/en/even-it/5-shocking-facts-about-extreme-global-inequality-and-how-even-it-davos

Projects for Public Spaces, n.d., *What makes a successful place?, viewed* 8 July 2019, from: https://www.pps.org/article/grplacefeat.

South African History Online, 2019, *Quotes by Steve Biko*, viewed 14 August 2019, from: https://www.sahistory.org.za/archive/quotes-steve-biko.

South African Police Service, n.d., *Crime Statistics: Crime Situation in Republic of South Africa - 12 Months (April 2018 - March 2019)*, viewed 14 November 2020, from: https://www.saps.gov.za/services/april_to_march2018_19_presentation.pdf.

Vada, P., (ed.), 2018, *Guaíba Orla Urban Park / Jaime Lerner Architect Associates*, viewed 11 December 2020, from: <https://www.archdaily.com/907900/guaiba-orla-urban-park-jaime-lerner-arquitetos-associados>.

Brochures:

Project for Public Spaces, 2018, Placemaking: What if we built our cities around place, brochure, PPS.z.

Dissertations and Theses:

Claassen, J.M.P., 2014, *Regeneration in contested post-apartheid urban space: Towards the design of a remediation hub in the Durban south basin*, Unpublished thesis, M.Arch, University of Kwazulu Natal, Built Environment and Development Studies.

Fester, R.N., 2015, *Crime prevention through spatial planning: The case of Harare, Khayelitsha*, Unpublished thesis, Master of City and Regional Planning, School of Architecture, Planning and Geomatics, University of Cape Town.

Mngoma, T.K., 2014, *Processes of promotion of well-being as a generator of built environments: The design of a community healthcare facility for Durban*, Unpublished thesis, M. Arch, School of Built Environment and Development Studies, University of KwaZulu Natal.
Rosenberg, L.G., 2012, *A city within a city: vestiges of the socio-spatial imprint of colonial and apartheid durban, from the 1870s to 1980s*, Unpublished thesis, M.Arch, University of Kwazulu Natal, Built Environment and Development Studies.

Tickley, L., 2011, *Context as an architectural design generator: A proposed Art Centre in Durban, South Africa*, Unpublished thesis, M.Arch, University of Kwazulu Natal, Built Environment and Development Studies.

Unrau, D.G., 2012, Squatter agency: Architecture as empowerment in the global south, Unpublished thesis, M.Arch, Carleton University, Ontario, Ottawa.

LIST OF FIGURES

Figure 1: Projects for Public Spaces - what makes a successful public space? n.d. (http://www.pps.org/)

Figure 2: An Apartheid City urban plan (www.people.uwec.edu).

Figure 3: Umlazi township development 1967 (www.mut.ac.za).

Figure 4: The approved Race Zoning Plan (1952) for Durban (Rosenburg, 2012:20)

Figure 5: Dot matrix map of eThekwini (2011): 1 dot represents 100 individuals (www.adrianfrith.com).

Figure 6: Projects for Public Spaces - What makes a successful public space? (www.pps.org).

Figure 7: Destination A restricts access through its isolation, while Destination B is ideally located along several converging routes, as a nodal point of interest (Adams and Tiesdell, 2013:17).

Figure 8: 9th Avenue, Manhattan before (left) and after (right) a 2008 "Copenhagen style" bicycle path designed, so that parked cars protect bicycle traffic. Bicycle traffic has since doubled in New York, in only two years (Gehl 2010:11).

Figure 9: A new bicycle lane and widened sidewalk promote a lively, safe, sustainable and healthy City (Gehl 2010:6).

Figure 10: Graphic representation of the connection between outdoor quality and outdoor activities. An increase in outdoor quality gives a boost to optional activities. The increase in activity level then invites a substantial increase in social activities (Gehl 2010:21).

Figure 11 & Figure 12: Two figure ground images depicting contrasting spatial hierarch (www.tsarchitect.nsflanagan.net).

Figure 13 & Figure 14: Linkages visible in the urban formation of cities (www.citymetric.com & www.geoffboeing.com)

Figure 15: Diagram depicting a preferred transitional space pattern (Author).

Figure 16: Zeppelin Field Stadium rallies in Nazi Germany (https://www.oreilly.com/)

Figure 17: Fabrizio Carola hospital in Kaedi, Mauritania amalgamated traditional and modern construction methods (Derakhshani, 2012:32).

Figure 18: Louis Kahn's conception of space emerged from his thoughts on the formation of a room (Marcus, 2009).

Figure 19: Violence Prevention through Urban Upgrading Urban Park and Activity Box (www.google.com/earth/).

Figure 20: Harare VPUU Urban Park and Activity Box spatial arrangement (www.currystonefoundation.org).

Figure 21:Children play in view of the mixed-use facility (www.vpuu.org.za).

Figure 22: Site Plan (Knipe).

Figure 23 & 24: Harare Activity Box and multipurpose facility plans (Knipe).

Figure 25: Clearly definable pedestrian routes (www.flickr.com).

Figure 26: Umkhumbane Community Health Centre in its urban context (www.google.com/earth/)

Figure 27: Umkhumbane Community Health Centre 'high street' interface (www.zaiconsultants.co.za)

Figure 28: Umkhumbane CHC Entrance Approach off 'high street' (*KZ-NIA Journal*).

Figure 29: Clear wayfinding through simple primary corridors (*KZ-NIA Journal*).

Figure 30: Upper Ground Floor Plan (*KZ-NIA Journal*).

Figure 31: Lower Ground Floor Plan overlaid over First Floor Plan (*KZ-NIA Journal*).

Figure 32:Typical Section through the pedestrian walkway (Mngoma).

Figure 33: DuNoon Community Health Centre in context (www.google.com/earth).

Figure 34: DCHC Potsdam Road forecourt with public seating, trees providing shade for clinic users and passers-by (www.architizer.com).

Figure 35: Potsdam Road forecourt (Barker).

Figure 36: PHC functions oriented around public courtyards that anchor the facility (www.architizer.com).

Figure 37: The light industrial architectural aesthetic (www.architizer.com).

Figure 38: Compact spatial arrangement (www.architizer.com).

Figure 39 & Figure 40: Private internal spaces (left) are space are seamlessly woven together with open public space (right) (www.architizer.com).

Figure 41: Cross section through Main Waiting Hall (www.architizer.com).

Figure 42: Orla Do Guaiba, Porto Alegre, Brazil (www.google.com/earth).

Figure 43: Orla Do Guaiba Urban Park's undulating plan (www.architizer.com).

Figure 44: The waterfront project connects the city to the water edge (www.architizer.com).

Figure 45: Walkways and public seating take advantage of the site topography (www.architizer.com).

Figure 46: A well-lit promenade encourages community engagement at night (www.architizer.com)

Figure 47: Kwamashu Community Health Centre (left) together with Kwamashu Poly Clinic (right) which it replaced in 2011 (www.google.com/earth).

Figure 48: KwaMashu Community Health Centre (www.google.com/earth)

Figure 49: Patient waiting to be seen at Kwamashu Poly Clinic (www.kznhealth.gov.za).

Figure 50: An architectural rendering of the Main Entrance to the new Community Health Centre prototype (www.ica-architects.co.za).

Figure 51:KwaMashu Community Health Centre Floor Plan (Author).

Figure 52: The KCHC site layout depicting the primary facility set within a network of roads that connect the various facility services (Author).

Figure 53, 54, 55, 56: Vehicle circulation dominates the facility planning. Patients and staff have to cross several roads to access the facility (Author).

Figure 57: Patients congregate in shaded areas created by buildings (Author).

Figure 59: Informal food stalls directly outside KCHC entrance serve the needs of clinic users (Author).

Figure 60: Central Courtyards are well maintained by unused (Author).

Figure 61 & 62: Eave detailing reflects a lack of considered problem solving resulting in a poor architectural aesthetic. The windows and wall on this elevation are unnecessarily exposed to high levels of solar gain, as a result of the architect not being able to manipulate the facility footprint (Author).

APPENDICES

1.0 Appendix A

COMMUNITY ARCHITECTURE INTERVIEW

Professor Rodney Harber – Community Architect

GENERAL NOTICE: Participation in this questionnaire is voluntary. Participants are informed of the nature and purpose of the research and institution with which the research is associated with. All information gathered from the interview is solely for the purpose of this research study. Participants are free to withdraw from the research at any time should they wish to.

Date: ……………………. Contact details: ………………………………………………..

1. INTRODUCTION

The aim of this research is the development of architectural solutions and spaces of a civic nature that foster a collective engagement by providing upliftment and empowerment through holistic community health care. To address the needs of the township community clinic user one needs to understand how to appropriately engage with community contexts. To this end Professor Rodney Harber, an internationally recognized community architect, will be interviewed. His multi-award winning socially sustainable architecture practice places a specific emphasis on the empowering communities through architecture.

2. GENERAL INFORMATION

2.1 How many years have you practiced architecture orientated around community?

2.2 What sparked your interest in ethical community architecture?

3. COMMUNITY CONTEXT & PLACEMAKING

3.1 How does one successfully develop a space that creates community and how can this be expressed in built form?

3.2 Much of the literature on community participation speaks to the power of this approach to foster ownership, galvanise communities, break barriers, build co-operation and include marginalized. Has this been your experience?

3.3 Many of the material solutions on your projects appear to be contextually responsive. Can you explain the reasoning for this? And how it is applied?

3.4 Which of your projects best imbodies the principles of social sustainability and community empowerment? Why was this successful and was there any specific architectural emphasis that resulted in this?

4. HEALING COMMUNITY ARCHITECTURE

4.1 Many of your projects, although not specifically medical facilities, are environments that heal (by showing respect for the individual/community, commercial environments that empower persons and community facilities that foster connection). What are the keys to developing a built environment that communicates this?

5. CONCLUSION

5.1 Do you have any specific advice for working with communities?

5.2 Is there anything that has not been covered above that you would recommend in relation to the development of a holistic healing community architecture?

- Thank you for your participation -

2.0 Appendix B

TOWNSHIP COMMUNITY EXPERT INTERVIEW

Treatment Action Campaign (TAC): Mzamowenkosi Zondi - KZN Provincial Co-ordinator

GENERAL NOTICE: Participation in this questionnaire is voluntary. Participants are informed of the nature and purpose of the research and institution with which the research is associated with. All information gathered from the interview is solely for the purpose of this research study. Participants are free to withdraw from the research at any time should they wish to.

Date: ……………………. Contact details: ……………………………………………..

1. INTRODUCTION

The aim of this research is the development of architectural solutions and spaces, of a civic nature, that foster a collective engagement by providing upliftment and empowerment through community health care in Umlazi township. To appropriately address the needs of the township user one needs to understand context. To this end the Treatment Action Campaign's insights into the daily rhythms of the township community life will prove invaluable.

2. GENERAL INFORMATION

1.1 Please can you explain your role as a civil society group?

1.2 What principles set the TAC apart from its compatriot civil society group and how can these be incorporated into the design of new community health centre?

3. COMMUNITY CONTEXT & PLACEMAKING

3.1 What are the biggest needs of the communities that you work in currently and how can they be addressed in the design of a new community health centre?

3.2 How do you ensure that the needs raised by community members are addressed appropriately and timeously? How can these principles be integrated into the design of a new community health centre?

3.3 The TAC has been in existence for more than 20 years, have you seen a change in the nature of challenges that township communities are experiencing?

3.4 How has the TAC remained relevant over the course of 20 years? Do you have any advice on how to create an environment and spaces that will meet the needs of communities over time?

4. HEALING COMMUNITY ARCHITECTURE

4.1 According to the TAC its' flagship 'treatment literacy programme' remains central to its grassroots activism. Please can you expand on how this function in addressing community needs? How can these principles be incorporated into the design of new community health centre?

1.1 From a medical perspective, what would you say are the main things to include in a township community health centre and what kind of spaces are required?

4.2 Do you have any community health centres or clinics that you work with that are more effective in addressing community needs?

5. CONCLUSION

5.1 Is there anything that has not been covered above that you would recommend in relation to the development of a community health centre.

- Thank you for your participation -

3.0 Appendix C

TOWNSHIP MEDICAL EXPERT INTERVIEW

Kwamashu Community Health Centre: Mr F.S. Mathibela – Chief Executive Officer

GENERAL NOTICE: Participation in this questionnaire is voluntary. Participants are informed of the nature and purpose of the research and institution with which the research is associated with. All information gathered from the interview is solely for the purpose of this research study. Participants are free to withdraw from the research at any time should they wish to.

Date: …………………… Contact details: ……………………………………………..

1. INTRODUCTION

The aim of this research is the development of architectural solutions and spaces, of a civic nature, that foster a collective engagement by providing upliftment and empowerment through community health care, within Umlazi township. To appropriately address the needs of the township community one needs to understand context. To this end Mr. Mathibela's insight into the daily rhythms of the health centre users, staff and facilities will prove invaluable.

2. GENERAL INFORMATION

1.1 Please can you provide some backstory to your involvement at the clinic?

1.2 What is your role as Chief Executive Officer at Kwamashu Community Health Centre (KCHC)?

1.3 Please can you explain what medical facilities you have at KCHC?

3. COMMUNITY CONTEXT & PLACEMAKING

1.4 What is the biggest need in the community and does KCHC cater sufficiently for this need? If not, what would be required to meet this need and is there a spatial dynamic to this need?

1.5 Does the KCHC building cater sufficiently for all your medical needs? If not, what is needed spatially to address this?

1.6 Does the KCHC facility provide a secure environment for patients and staff? How is this achieved?

1.7 Is there an area with facilities for patients with children who are visiting KCHC?

1.8 Are you affected by energy supply and do you have facilities to manage this? Please explain what exists currently and if there are any spatial recommendations related to this?

1.9 Are you affected by water supply and do you have facilities to manage any shortages? Please explain what exists currently and if there are any spatial recommendations related to this?

1.10 What is the biggest challenge with the KCHC facility related to patient needs? How would you recommend addressing this in the design on a new community health centre (CHC)?

1.11 What is the primary way that patients travel to the clinic? Does the KCHC facility cater for this need adequately? If not, what needs to be included spatially to respond to the need?

4. HEALING COMMUNITY ARCHITECTURE

1.12 Does KCHC provide a pleasurable work environment for staff? What can be incorporated into the design of a new CHC to address any shortcomings?

1.13 What can be done to the building facility to improve the patient user experience?

1.14 Does KCHC have a communal space for patients?

1.15 Does KCHC have a community food garden and is it used successfully?

2. CONCLUSION

1.16 Is there anything specific that you would recommend including in a new community health centre to make a patient experience better? If so, what spatial requirements are there for this?

1.17 Is there anything specific that you would recommend including in a new community health centre to make a staff working environment better? What spatial requirements are there for this?

- Thank you for your participation -

4.0 Appendix D

OBSERVATION SCHEDULES

Study Location and Surrounding Formal and Informal Public Space

INTRODUCTION

The aim of this research is to investigate how Placemaking principles can inform the development of a healing architecture in response to the placelessness that exists in Umlazi, a South African township. The development of architectural solutions and spaces of a civic nature, that foster a collective engagement providing upliftment and empowerment through a holistic community health centre.

To effectively address the needs of the township community clinic user one needs to understand how to appropriately engage with community contexts. Observations will be conducted over the course of two days to unearth the contextual norms. One weekday and one weekend day will be selected to ensure a wholistic perspective of usage is observed. Selected times of day 06h00, 12h00, 16h00 and 20h00 will be observed for a period of 10minutes at each allotted time for consistency. The researcher will undertake the observations on days with similar weather conditions as this may affect how participants make use of the public space. Furthermore, the observations will be conducted in an unobtrusive manner permitting participants to interact freely.During the course of traveling between observation points the researcher will make an effort to observe various space, activities that might be of relevance to the research. These must be documented along with the location of such activity.

OBSERVATION SCHEDULE A: STUDY LOCATION

Date: ……………………

WEEKDAY - NORMS AND PATTERNS OF USAGE				
Score Rating: Non-Existent (0) Low (2) Medium (4) High (6)				
Observation Time	06:00	12:00	16:00	20:00
Transport Movement Patterns				
Public Transport – Taxis				
Public Transport – Buses				
Private Transport – Car				
Private Transport – Motorbike				
Bicycles				
Score Sub-Total				
Pedestrian Movement Patterns				
On Site				
Across / Through Site				
Around Site				
Score Sub-Total				
Grand Total				

WEEKEND - NORMS AND PATTERNS OF USAGE				
Score Rating: Non-Existent (0) Low (2) Medium (4) High (6)				
Observation Time	06:00	12:00	16:00	20:00
Transport Movement Patterns				
Public Transport – Taxis				
Public Transport – Buses				
Private Transport – Car				
Private Transport – Motorbike				
Bicycles				
Score Sub-Total				
Pedestrian Movement Patterns				
On Site				
Across / Through Site				
Around Site				
Score Sub-Total				
Grand Total				

OBSERVATION SCHEDULE B: SURROUNDING FORMAL AND INFORMAL PUBLIC SPACE

Date: ……………………. Time: ……………………….

PLACEMAKING OBSERVATIONS						
Score Rating: Non-Existent (0) Low (2) Medium (4) High (6)						
Observation Point Number	**1**	**2**	**3**	**4**	**5**	**6**
Access & Linkage						
Modal Split						
Transit Usage						
Pedestrian Activity						
Parking Availability						
Proximity						
Connected						
Walkable						
Accessible						
Convenient						
Score Sub-Total						
Sociability						
Street Life						
Evening Use						
Number of Women, Children, Elderly						
Volunteerism - *clear litter & waste, fix damaged property*						
Diverse						
Welcoming						
Neighbourly						
Stewardship						
Score Sub-Total						
Uses & Activities						
Local Business Ownership						
Land-Use						
Active						
Fun						
Vital						
Special						
Real						
Score Sub-Total						
Comfort & Image						
Sanitation						
Building Conditions						
Crime / Security						
Environment						
Safe						
Walkable						
Sittable						
Attractive						
Historic						
Score Sub-Total						
Total						

OBSERVATION SCHEDULE B: OBSERVATION POINT DETAILS

Observation Point Number	Location Description
1	
2	
3	
4	
5	
6	

OBSERVATION SCHEDULE C: INFORMAL OBSERVATION NOTES

Location	**Description** – date, time, activity