

**THE INFLUENCE OF INSURGENCY ON SOCIALLY RESPONSIVE
URBAN DEVELOPMENT**

A Proposed Informal Recycling Facility for the Informal Cardboard Recyclers
of the Durban CBD, South Africa

By

Dennis-lee Stols

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Supervisor: Mrs. B Horner

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DECLARATION

A document submitted in partial fulfilment of the requirements for the degree of Masters, in the Graduate Programme in Architecture, University of KwaZulu-Natal, Durban, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is submitted for the degree of Masters in Architecture in the Faculty of Humanities, Development and Social Science, University of KwaZulu-Natal, Durban, South Africa.

None of the work has been submitted previously for any degree or examination in any other university.

Dennis-lee Stols

Student Name

05.02.2013

Date

DEDICATION

This document is dedicated to the urban informal recyclers of the Durban CBD, namely Afrika, Maria, Menzi, Musa and Victoria respectively, without whom the inspiration for this research would not have been realised. The humility and strength you show in the work you do daily will serve as a reminder of the unwavering human spirit for many years to come, and for that I am truly grateful and humbled. Thank You.

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ABSTRACT

Lining the streets and the interstitial spaces of the developing cities of the modern world is an emerging citizenship that exists and thrives in the in-between. These are the new urbanites, the *Insurgent Citizens*; a socio spatial product of the rapid urbanisation processes that have shaped and will continue to shape the urban landscape. The physical make up of concrete and glass that forms the fantastic images of cityness and modernity house the minority population, the haves. However, in the spaces left behind, in the alley ways and on the pavements in so called residual spaces, this new insurgent citizenship is growing. Having been left out of the planning processes that define these city imageries, within exclusionary constructs these citizens are redefining how the city functions as they stake their claims to be active participants within the metabolism of the modern city. This conflicting rationality of what a city is, and for whom it shall serve is effected by the minority striving to modernise and the majority striving to survive within the same physical environment.

There are countless research efforts established to disseminate cityness for the minority of haves; however this dissertation posits itself within the construct of the have-nots and their rights to the city and therefore their socio-spatial rights to redefine it. This redefinition of cityness is established as a means to support their livelihood strategies to contest their conditions of spatial and economic poverty, as shall be defined herein. This insurgent citizenship is not survivalist nor merely informal, but rather an active social agent contesting the exclusionary processes that continue to define the cities of the developing world.

It is the aim of this dissertation to establish the historical and current construct under which these socio-spatiality's exist. Thus by identifying these strategies by which these insurgents survive and contest these realities, this dissertation will explore informal recycling as a means of insurgency. By understanding the global and local phenomenon of informal recycling; considering the environmental and socio-economic benefits it yields, this dissertation seeks to uncover strategies by which inclusive developments can be adopted to facilitate this insurgent practice. The objective of this dissertation is to establish a grassroots up architectural design solution for the informal recyclers of the Durban CBD, South Africa.

TABLE OF CONTENTS

PART ONE

DISSERTATION DOCUMENT

Declaration	ii
Dedication	iii
Acknowledgments	iv
Abstract	v
Table of Contents	vi
CHAPTER ONE RESEARCH BACKGROUND AND METHODOLOGY	11
1.1 Introduction	11
1.1.1 Motivation/Justification of the study	12
1.2 Definition of the problem, aims and objectives	13
1.2.1 Definition of the problem	13
1.2.2 Aims and objectives.....	15
1.3 Setting out the scope	16
1.3.1 Definitions of terms	16
1.3.2 Delimitation of the research problem.....	18
1.3.3 Stating the assumptions	19
1.3.4 Hypothesis	20
1.3.5 Key questions.....	20
1.3.6 Research Methods and Materials.....	21
1.4 Theoretical and conceptual framework	24
1.4.1 Theories.....	24
1.4.1.1 Insurgency.....	
1.4.1.2 Complexity Theory.....	
1.4.2 Concepts.....	25
1.4.2.1 Exclusion and Inclusion.....	
1.4.2.2 The Right to the City.....	
1.4.2.3 Identity.....	
1.5 Summary	26
1.6 Conclusion	27

CHAPTER TWO THE MYTH OF THE CITY	28
2.1 Introduction.....	28
2.2 The image of the city	28
2.3 Migrant Cities	31
2.4 On Questions of Cityness.....	33
2.5 Our urban future.....	35
2.6 Conclusion	37
CHAPTER THREE SOCIAL EXCLUSION IN THE CITY	39
3.1 Introduction.....	39
3.2 The loss of public life in the name of modernity.....	40
3.3 Modernisation in Service of the Apartheid State.....	44
3.4 Post Apartheid Economic Segregation.....	47
3.5 Post Apartheid Urbanisms.....	49
3.6 Conclusion	51
CHAPTER FOUR RESISTANCE	53
4.1 Introduction.....	53
4.2 The Right to the City.....	53
4.3 Insurgency and Fractured Urbanism.....	56
4.4 Insurgent Spaces in the Heterogeneous City.....	62
4.5 Conclusion.....	68
CHAPTER FIVE INSURGENCY IN THE DURBAN CBD	69
5.1 Introduction.....	69
5.2 Precedent Study: An investigation into Warwick Junction, Durban, South Africa ..	70
5.2.0 History.....	70
5.2.1 Insurgent Citizenships.....	71
5.2.2 Contestation.....	71
5.3 Case Study: The Traditional Herb and Medicine Market of Warwick Junction, Durban, South Africa	75
5.3.1 Introduction.....	75
5.3.2 Intervention.....	77

5.3.3 Analysis.....	82
5.3.4 Conclusion.....	85
5.4 Case Study: Rural to Urban Migration – Transitional Housing in the CBD.....	86
5.4.1 Introduction.....	86
5.4.2 The Urbanisation of Durban, South Africa.....	87
5.4.3 Thokoza Women’s Hostel, Durban, South Africa.....	88
5.4.4 Analysis.....	94
CHAPTER SIX WASTE PICKING AS A MODEL OF INSURGENCY.....	96
6.1 Introduction.....	96
6.1.2 Waste Picking as a Livelihood Strategy.....	97
6.1.3 Socio-Cultural Aspects.....	99
6.1.4 Intervention.....	100
6.1.5 Exclusion.....	102
6.1.6 Conclusion.....	104
6.2.0 Precedent Study: ASMARE, Belo Horizonte, Brazil.....	105
6.2.1 Introduction.....	106
6.2.2 ASMARE.....	106
6.2.3 Impact of ASMARE.....	109
6.2.4 Conclusion.....	110
6.3.0 Informal Waste Collection and Recycling in South Africa.....	111
6.3.1 Introduction.....	111
6.3.2 Informal Waste Collection within Johannesburg, South Africa.....	111
6.4 Case Study: House 38, Doornfontein, Johannesburg.....	113
CHAPTER SEVEN CONCLUSIONS AND RECOMMENDATIONS.....	121
7.1 Introduction.....	121
7.2 Conclusions.....	121
7.3 Suggested design guidelines	124
LIST OF FIGURES.....	127
REFERENCES.....	132
Published research.....	132
Thesis.....	134

Journals.....134
Television Broadcast.....135
Specialised Sources.....135
Interviews and Discussions.....136

APPENDICES.....137
Appendix A.....137
Appendix B.....139
Appendix C.....141

“A lot of architects who come into the business want to build monuments; they want to become star architects or rich planners. We have to re-educate them so they realize that they are agents of social change. We need to highlight that architecture is not just Frank Gehry and Renzo Piano...it’s not just about beautiful houses. It is all about everyday people’s lives.”

Amelia Gentleman “Architects aren't ready for an urbanized planet”

The New York Times

20-08-2007

CHAPTER ONE | RESEARCH BACKGROUND AND METHODOLOGY

1.1.0 INTRODUCTION

We currently live in a time of unprecedented global urbanisation (Holston 2007) where the economic refugees of the rural hinterlands are flocking to the major metropolitan centres of the world in search of better prospects and opportunities. *“People don’t leave their farms for work in the city but rather there is no work on the farms so they have no choice but to go in search of work in the city”* (Dessai 1995, p. 157), this is further compounded by the fact that it is estimated that by the year 2020 the global countryside will have reached its maximum population, and will thus begin to shrink (Davis 2004). It is for this reason that this research paper will seek to explore the condition of urbanity.

Modern cities have been credited with absorbing as much as two thirds of the world’s population since 1950 (Davis 2004) and it is suggested that as much as two thirds of these new urbanites are contained within the “developing” or “third world” (Hardoy & Satterthwate 1989). It can be agreed that *“The 20th century has been the century of urbanisation”* (Harvey in LeGates & Stout 2003, p. 229) and furthermore *“[t]here has been a massive reorganisation of the world’s population, of its political and its institutional structures and of the very ecology of the earth”* (Harvey in LeGates & Stout 2003, p. 29). This trend does not seem to be slowing down or reversing any time soon and Davis (2004, p. 5) suggests that *“As a result, cities will account for all future world population growth, which is expected to peak at about 10 billion in 2050”*.

The city therefore has become an urgent social question in the construct of mass globalisation and as DeFazio (2002) suggests, world cities have become the most *“explosive site[s] of social contradiction”* (DeFazio 2002, p. 1). This contradiction is born out of what some scholars label the “Dual City”, which is a city of two realities, in the one reality citizens live with access to water, education, sanitation, healthcare and affordable housing and in the other reality, that of the “Other 90%” (Smith 2011), the city represents sites of contestation, devastating poverty and unemployment, lack of healthcare and education as well as unaffordable public transport and housing (DeFazio 2002, p. 1).

It is within this construct that this research paper posits itself as an investigation into what Laura Vaughan refers to as “inbetweenness” or the proverbial “them and us”, thus understanding the duality of the rapidly modernising cities of the world. Holston in Sandercock (1998) suggests that cities are arenas for self creation, and thus are

metamorphosized into sites of conflict in hypothetical war zones, as the dominant classes of the proverbial “haves” meet the advances of the “have-nots” by means of new strategies of separation, segregation and privatisation. Therefore, as it is theorised by Holston in Sandercock (1998) the resulting erosion of citizenship is manifest in the cities by means of disintegrating and increasingly privatised “public space”, and thus as policy fails, local democracies may produce even further anti democratic results.

Understanding the social and economic exclusion present within the post modern city of the 21st century under the construct of mass urbanisation and migration, cities also present morphologies of exclusion and separation as throw backs from the modernising era of the last century, and thus the socialism of exclusion is made manifest through the architecture of exclusion. Although citizens of the “inbetween” stake their “right to the city” (Lefebvre 2001) by means of activating the interstitial and residual spaces of the city, it is the role of the planning profession to understand and facilitate this insurgent citizenship (Holston 2008) to design and conceptualise more inclusive cities.

1.1.1 MOTIVATION/ JUSTIFICATION OF THE STUDY

“The multicultural city cannot be imagined without a belief in inclusive democracy and the diversity of social justice claims of the disempowered communities in existing cities. If we want to work toward a policy of inclusion, then we had better have a good understanding of the exclusionary effects of planning’s past practices and ideologies. And if we want to plan in the future for heterogeneous publics, acknowledging and nurturing the full diversity of all the different social groups in the multicultural city, then we need to develop a new kind of multicultural literacy”

-Sandercock (1998, p. 30)

This dissertation sets out to investigate the role that architecture and urban design can play in facilitating the urban poor through socially responsive urban redevelopments from the grassroots up (Badshah 1996) as opposed to the current modernist trend of master planning by means of top down interventions, which as Hou (2010) suggests cannot be viable in inclusive city design as the decision makers are divorced from the site specific conditions and dynamics.

In the current urban reality, not enough is being done in terms of designing and providing for the “other 90%” (Smith 2011), those we shall refer to as the urban poor or insurgent citizens. Brown (2006) suggests that culture and power within the planning profession more often than not involves the exclusion of certain groups of people, particularly those which Whyte (1980) refers to as the “undesirables”. Considering the statistics, and warnings presented in UNFPA’s State of World Population Report 2007, this is an irresponsible approach for any planning practitioner to attempt and furthermore Robinson (2006) motions that in “*a world of ever expanding cities, more likely than ever before to be home to poor people, urban studies cannot continue to base its theoretical insights on the experiences of a few wealthy cities: this would doom it to irrelevance*” (Robinson 2006, p. 167).

James Wolfenohn of the World Bank (2001) states that the fight against poverty in global city-regions is truly a fight for peace and stability on our planet and thus the ability to design and provide for the urban poor within our cities is no longer a matter of question or opinion, but rather a matter of urgency. Therefore what is called for, as Sandercock (1998) suggests, is a re-conceptualisation of the planning profession and its duty to serve those who require its services most, because the reality is that “*architecture is not being created by architects but in spite of them*” (Doxiadis 1963, p. 37). Thus the primary motivation of this dissertation is to seek ways in which architecture and urban design can facilitate the livelihood strategies of the urban poor, and how the morphology of the built environment can create sites of social and economic exclusion.

1.2.0 DEFINITION OF THE PROBLEM/AIMS & OBJECTIVES

1.2.1 DEFINITION OF THE PROBLEM

This research paper posits itself in the climax of the urbanization process, where cities are playing host to some of the most devastating of social conditions such as poverty and unemployment, lack of healthcare and education as well as unaffordable public transport and housing (DeFazio 2002), paradoxically as Payne (1977) suggests, despite the desperate situation within cities, the informal poor continue to struggle under the conditions of urbanity rather than returning to the hinterlands. This pluralism of what cities represent, in terms of being the primary economic drivers of most countries as well as sites of contestation and conflict (Holston in Sandercock 1998) for those who are marginalised and excluded, have lead to perceived “dual cities” (Van Kempen 1994). These dual cities are cities where the

social divide between the “haves” and “have-nots” is distinctly visible in the fabric of modern society.

Therefore the primary problem that is defined within the research is the reality of exclusion in the rapidly developing cities of the third world in an age of mass rural to urban migration. The contestation of these exclusions can be seen in the physical manifestations of slums, favellas and urban peripheral squatting; however this is but a part of a larger socio-political contestation which will be described within the study as insurgent citizenship. Questions of who the city is for are becoming increasingly difficult to answer, where what is fast becoming the urban majority are still being deliberately excluded, marginalised and pushed to the outskirts of the city. It is in these sites of contestation that the subject of the study is manifest as insurgency, as a demand to urban participation, and socio-spatial inclusion.

“...this ‘working against’ defines what I[sic] called an insurgent citizenship; and its spatial mode, as insurgent urbanism. This insurgence is important to the project of rethinking the social in planning because it reveals the heterogeneity of lived experience, which is to say, in the ethnographic present and not in utopian futures”

-Holston in Sandercock (1998, p. 53)

The future of the human population is undoubtedly poised to be urban, and thus a paradigm shift is required in how cities are viewed and designed, as the rhetoric post industrial frameworks and euro-urban models of the previous century are rapidly becoming superfluous within the context of human and spatial rights. The heterogeneity of the modern developing city needs to be acknowledged, along with the multitude of issues that heterogeneity brings with it, in order to provide plural answers to seemingly singular problems.

Therefore the problem statement of this research is thus: *In an age of mass rural to urban migration, a paradox exists within the developing cities of the world, whereby the livelihood strategies of the urban poor actively contest their rights to the city within perpetually exclusionary environments.* Compounding this paradox is the continual “top down” strategies adopted by policy makers, which do not adequately adhere to the needs of the new migrants. As a resistance to this state of exclusion, the urban poor contest their spatial and social rights

to the city by adopting livelihood strategies that allow them to operate and live “in-between” social and structural systems of the city in what will be defined as Insurgency.

1.2.2 AIMS & OBJECTIVES

AIMS

The primary aim of this dissertation is to identify insurgency and thus insurgent urbanism (Holston 2008) within the Post Apartheid city of Durban, South Africa; as a contestation of the perpetual exclusionary processes that continue to shape our socio-spatial urban landscape. By identifying and describing insurgency, this dissertation aims to produce an analysis of the conditions by which these contestations of exclusion occur. This dissertation will further develop a theoretical outcome that would seek to address these findings through processes of inclusive and participatory socio-spatial facilitation, and thus suggest adequate socio-spatial solutions. The result of this analysis will assist in the conceptualisation of a Proposed Informal Recycling Facility for the Informal Cardboard Recyclers of the Durban CBD, South Africa

OBJECTIVES

The primary objective within this dissertation is to disseminate the current context of insurgency by researching the histories that have contributed to the processes of exclusion that are still perpetuated today. The South African socio-economic and spatial construct is a unique case study in these exclusionary processes, being Post Colonial as well as Post Apartheid, much of South Africa’s planning and policy histories are deeply entrenched in methods and concepts of exclusion. Although these exclusions have been politically abolished, the remnants of planning policy set up in these separational histories continue to be practiced under guises of “modernity” supporting Hall in Murray, Shepherd & Hall (2007) in his sentiments that the area boundaries that shaped the Apartheid city will continue to shape the future city.

The concept of insurgency within a South African construct needs to be postulated, in terms of identifying who these insurgents are, how their insurgent urbanisms are manifested and by what mechanisms they contest their exclusion. This dissertation endeavours to not only view these livelihood strategies as a survivalist mechanism employed by the increasing numbers of urban poor, both globally and locally, but seeks also to view this survivalism under a different theoretical framework of resistance. This resistance, as shall be defined as

Insurgency, implies active participation and contestation of social and spatial rights, as well as rights to the city. This is a departure from concepts of mere “them and us”; in this theoretical framework the “them” are active in their contestation, not merely existing inbetween, but through their unique livelihood strategies are contesting their conditions of poverty and exclusion.

1.3.0 SETTING OUT THE SCOPE

1.3.1 DEFINITION OF TERMS

In order to determine a clear understanding of the topic and problem statement, the following terms have been defined in order to delineate their meaning in the context of this dissertation (these will however be elaborated on in later chapters in the body of the dissertation):

Architecture: Is the profession that involves the skill of designing and erecting structures that constitute the built environment, as undertaken by the professional known as the Architect as he/she shall be known within this dissertation. Within the dissertation however, architecture may refer to structures formally built by professionals conversely architecture may also refer to structures not constitutive of a professional person; such is the case of squatterisation and informal settlements. Appropriate architecture should serve the needs of the community in which it is built, and it is under this premise that the research posits itself.

Autarky: As defined by the Oxford dictionary refers to economic independence or self sufficiency, and within a rural community autarchy is a Utopian dream. The term is used interchangeably with “self help” within this dissertation, as a means of motivating the ingenuity of the poor to self provide in terms of spatial as well as economic self sufficiency due to persistent exclusionary processes.

Built Environment The built environment refers to the physical or perceived construct of any city, town, suburb or other. These environments are characterised by architectural and urban designed elements that make up the spatial and structural networks of a man made environment. The built environment may refer to solid, in terms of buildings and structure, but it may also define void in terms of space, linkages, networks and streets. Therefore the built environment is the perceived “place” that these solids, voids and experiences culminate in, in what we may call a city for example, although the term is not reserved exclusively to describe cities

Citizen and Citizenship within this paper refers to the contestation for inclusion within the city and thus follows Sandercock's (1998) suggestion that citizenship is fragmented by identity and this diversity should be celebrated rather than repressed. She goes further to suggest that society is made up of different groups of diverse peoples, not a universal whole as "community" or "public" would suggest.

City Cities are manifestations of cultural, social and economical interchanges and thus cannot be singularly described. For the purpose of this dissertation however, the city will be described conceptually as a site of contestation and struggle, sites of ebb and flow where rights are abused and contested on a daily basis.

Community Pertaining to this dissertation, community refers to a collective body of people who may share a common identity in terms of their relationship to the built environment or shared social circumstance such as exclusion. Therefore community may not refer to a body of people that have entered into this categorisation knowingly or voluntarily however may be classed within a said community by virtue of similarity. These community and class labels are assumed by outsiders, therefore stigmatising and "othering" that said community.

Identity Although identity is discussed theoretically in later chapters, it is pertinent to note that within this study where reference is made to identity with regards to those excluded and marginalised, this identity is an identity given by another and not claimed by that said sample. Identity in this regard does not refer to a shared communal representation, but rather an umbrella term for an otherwise unrepresented user group. The purpose of identity is not to distinguish difference, and thus perpetuate "othering" but instead to give the reader a reference for the selected sample under investigation.

Insurgency As defined by Holston (2008) is the persistence of inequality and its contestation, in the context of Industrialisation, Post Industrialisation, Urban migration and City transformation. Insurgency, compared to Informality is the act of resistance, whether it be in the form of mass action such as strikes, or in terms the interstitial squatter settlements within the urban fabric and on its peripheries. Insurgency is the contestation of exclusionary processes, and the right to spatial, social and economic equality.

Livelihood Strategy Is a term used within this paper to describe a means of income generation, generally informally. What defines a livelihood strategy from survivalist methods of income generation by the urban poor, such as begging, is that it implies a specific choice or strategy of activity to generate that income. As such these strategies will be expressed in terms of informal trading and informal recycling within a developing city such as Durban, South Africa.

Migration Within this dissertation refers to the movement of groups of people from one geographic location to another, typically in search of greater economic opportunities or better living conditions. The migration investigated is multi faceted, as the research seeks to explore how the middle to upper class are migrating out of the city, and the rural to urban migrants are flocking into the cities. Within the South African construct however, there is another level of migration, where the squatterisation and migration of the urban poor is following the trends of the middle class and the perpetual sprawl is not only seen in the new urbanist towns of the urban elite, but also in the settlement patterns of the peripheral squatter settlements.

Planning Practitioner Within this study, a planning practitioner will refer to any registered or unregistered professional working within the field of the built environment, and may include amongst others Architects, Urban Designers and Town Planners. Although the specific fields of profession may vary, their impact and requirements for creating inclusive, participatory environments is viewed as universal within the study.

Squatting refers to the act of unlawfully occupying uninhabited buildings or urban peripheral squatting on illegally acquired land. As compared to the slums and favellas of other developing countries, South Africa is somewhat unique in that due to the years of racial exclusion by means of Apartheid planning, most of the informal settlements or squatters occur the on urban peripheries and not within the city centres proper.

1.3.2 DELIMITATION OF THE RESEARCH PROBLEM

The researcher acknowledges that this study alone cannot provide all the answers, nor all the theoretical concepts with regards to such a broad and contested field of investigation. The problems postulated are socio-political and socio-economic and therefore extend beyond the realms of architecture and the built environment. Therefore the researcher endeavours to research at best the interpretations of the problem statement within the fields of planning,

architecture and the built environment. Attempting to investigate various social theories, these will provide a context for the built environment and solutions thereof, but not a social agenda per se.

Although this dissertation's primary focus is fixed on the urban poor, and a celebration of their ingenuity in the face of exclusion, it is not the purpose of the study to romanticize poverty, but rather to expose the survivalist mechanisms that have been employed by the sample in order to provide sound inclusive and participatory architectural solutions to these conditions of poverty. Furthermore, this dissertation wishes to be objective, and thus non-exploitative. Although the strategies employed by the poor offer valuable lessons in terms of planning for the future, these methods are survivalist and desperate at best.

As shall be explored in the literature review, the researcher does not wish to perpetuate the polarity and duality of the modern city. This dissertation proposes a right to difference, and an acknowledgement of the heterogeneous nature of the modern city. These heterogeneous identities are theoretically part of the same, inclusive social system. In summation, celebrating difference is the acknowledgement of binaries, but not making the mistake of "othering", which perpetuates the exclusionary principal of "labels".

Although the morphological and physical manifestation of insurgency can be most obviously viewed in terms of housing, such as squatters in South Africa, slums in India and favelas in South America, this is not the focus for this study. As such, housing policy will not be researched as it is not in the interest of this dissertation.

1.3.3 STATING THE ASSUMPTIONS

This dissertation assumes that current planning policy and practices continue to exacerbate the separational planning practices of the Apartheid era and furthermore, suggests that racial exclusion has merely become economic exclusion. Based on this assumption the researcher further assumes that the exponential growth of the urban centres when compared to the rural hinterlands will continue and thus the paradox exists, where exclusion is being met with the migration of the rural to urban poor. It is in this site of conflict that this dissertation assumes a state of insurgency.

1.3.4 HYPOTHESIS

“The poor can easily survive with nothing. As they are doing right now.”

-Correa (1989, p. 13)

Although the poor can be seen as Autarkic, possessing ingenious ways in which to survive off little to nothing, and therefore supporting Correa’s (1989) sentiment that their resilience and inventiveness is truly incredible, this does not justify the current lack of intervention and support. Therefore Architects, Planning Practitioners and Policy makers working with an understanding of the construct and social conditions under which these survivalist activities and urbanities occur, can play a significant role in the positive redevelopment of these insurgent environments, creating more inclusive and participatory landscapes.

1.3.5 KEY QUESTIONS

PRIMARY QUESTION:

- Within the context of rapidly urbanising cities of the developing world, where the division between the haves and the have-nots is growing exponentially, what can be learnt from the livelihood strategies of the urban poor in order to create more participative and inclusive urban environments?

SECONDARY QUESTIONS:

The Myth of the City

- What defines an appropriate cityness in the context of rapid urbanisation and increasing levels of poverty within the developing cities of the world?
- What will define the image of the city in the future, if current studies suggest a split between dystopia and developmentalism considering the proposed strategy of inclusion of these “undesirables” within this dissertation?

Social Exclusion in the City

- Has there been a redefinition of “publicness” within the cities of the modern world, and thus how has this “publicness” exacerbated the exclusionary principals of modernist planning?
- Are the boundary lines established by the apartheid regime perpetuated currently by new socio-economic exclusions, thus providing a platform for insurgency?

Resistance

- What is meant by insurgency and its physical manifestation, insurgent urbanism?
- How has this insurgent citizenship and insurgent urbanism redefined the spatiality within the existing, generally exclusionary constructs of the developing cities of the modern world?

1.3.6 RESEARCH METHODS AND MATERIALS

This section outlines the research approach and methodology applied to this dissertation. It defines the procedures for data collection and identifies the techniques and methods used to gather all information.

Primary Research:

Material gathered in terms of the primary resources has been gathered by means of focused interviews as well as an investigation into the “daily life” of an insurgent citizen as shall be delineated as below. Further to this, as shall be evidenced within the second half of the dissertation is the spatial mapping of the insurgent citizens of Durban, South Africa. As stipulated the population chosen for this dissertation is that of the insurgent citizens of the developing cities of the world. The samples thus selected, as explored through the following primary research and analysis is that of the informal workers and the urban poor, adopting various strategies of insurgency to develop and support their livelihoods. By understanding the broader context of insurgency, this research will facilitate in developing a design proposal for the selected insurgent citizen for which this paper shall serve.

Focussed Interviews:

Asiye eTafuleni: Is a local NPO working within the Warwick Junction Precinct, of Durban, South Africa. Having released a seminal book documenting the evolution of the markets of Warwick Junction, Asiye eTafuleni provided invaluable primary research regarding the Herb Traders Market and Markets of Warwick case studies. The *Imagine Durban Cardboard Recycling Project* that the NPO is currently engaged in will form part of the second part of this dissertation whereby an architectural response will be provided for the informal recyclers currently active within the above mentioned project. Through consultation and guidance with the NPO, unprecedented access was granted by means of social facilitators

to gain primary research within the market by means of photographs which shall be documented herein.

Jacki McInnes:

An artist based in Johannesburg, South Africa who has documented the working lives of the informal urban recyclers as per the House 38 case study herein. McInnes has assisted not only through the focussed interviews which form the case study, but also through the distribution of copyright protected photographic material for which permission was granted for use within this dissertation. McInnes's nine month documentation process of the informal recyclers of House 38 has provided invaluable research material as a means of understanding the unique socio-spatial constructs under which these insurgents live.

Angela Buckland:

An artist based in Durban, South Africa who has documented both the Jacobs Mens Hostel, not included herein and the Thokoza Womens Hostel which is explored as a case study. Bucklands' *Block A* exhibition was a showcase of the intimate lives of the women living within Thokoza Hostel and thus the primary research gained through focussed interviews provided succinct life strategies of these woman as documented by Buckland. To support the literature and interview, Buckland also shared the photographic images that are contained herein, which provide an intimate analysis of these women's living conditions under the construct of insurgency.

Rodney Harber:

Further to the focussed interviews conducted with Angela Buckland, Rodney Harber has published many articles regarding the Thokoza Hostel, having also provided the forward to Buckland's exhibition. Harber, being a well respected socially driven architect practicing in Durban, South Africa was able to provide socio-spatial descriptions of the living conditions of Thokoza Hostel to support the research and photographic evidence acquired from Buckland.

Sonia Dias:

Is a Waste Sector Specialist working for WIEGO (Women in Informal Employment: Globalizing and Organizing). Dias has published many articles for WIEGO documenting the conditions of informal recycling within South America. Through personal correspondence with Dias, valuable information was gained related to informal recycling, most particularly with ASMAR, which is discussed in the primary research o this dissertation.

Life of an Insurgent Citizen: Having identified the urban informal cardboard recyclers of the Durban CBD, South Africa as a micro community of insurgent citizens, this primary means of research constructs an analytic social map of the complex lives these citizens live. Through the mapping processes discussed below, photographic and analytical documentation was also undertaken as a means to investigate the life of an insurgent citizen which will aid in site selection and architectural pragmatics as shall be identified in the second half of this research. Due to the grass roots up methodology suggested throughout the text, this primary research provides a means in which to execute this methodology, by intimately understanding the client for which the intervention shall be provided.

Spatial Mapping: The very concept of informality and “insurgency” is based on the premise of using the morphology of the city in ways, in which it may or may not be designed for, such as markets under bridges, or sidewalks playing host to informal recycling and cardboard collection, spaces which Villagomez (in Hou 2010) refers to as “post-it spaces”. Therefore, it was imperative to the study that the spatial mapping of these informal and insurgent activities be undertaken, in order to better understand the symbiosis that plays out on the city streets between those “excluded” and the urban built environment. This spatial mapping has provided insights into how these citizens “fit in” to the bigger picture of the city system, by understanding their routes, routines, visibility, security as well as the origins and destinations of these routes. By understanding this insurgent use of “public” space, the research endeavoured to provide answers to such questions as, who is public space for, how is public space used and does the insurgent citizens’ existence rely on being “in-between”?

Photographic Analysis: The author has endeavoured to photograph personally much of the work contained within the primary research. Through site visits and thus photographic essays, suitable analysis can be drawn to support the arguments and information drawn through other means of primary research. Photography has allowed for an exposure of the insurgent citizens and resulting insurgent urbanisms.

Case Studies: The case studies contained within this dissertation have been delineated into two groups, namely *working* and *living*. The *living* case studies focus on the Thokoza hostel as a housing strategy for the insurgent female citizens of Durban, South Africa. These women by living within a transitional housing strategy are in a constant state of in-between and thus insurgency. This is in contrast to the *working* case studies, whereby the

research focuses on specific livelihood strategies employed by the urban poor as a means of insurgency. These case studies demonstrate succinctly the choice of income generation adopted by these citizens in order to contest their condition of poverty and exclusion. Through *work and live*, it is hoped that conclusions, albeit generalised, may be formed as to the lives these insurgents follow in the in-between.

Secondary Research:

This form of research is comprised of various published media such as:

- Books by various authors
- Journal articles by various authors
- Reports, documents and academic papers
- Television Broadcasts
- World Wide Web

Through this dissertation, the researcher endeavours to build on the “concepts and theories” that may be pertinent to the research question. Furthermore this research will form part of the literature review chapter whereby the researcher can explore the various bodies of literature that have been published that relate to the research question in order to build and strengthen the argument that will be presented in terms of exclusion and insurgency. The empirical studies gained from the above sources will aid in generating a sound argument posed by the research question that can thus be tested by the primary sources and data analysis.

1.4.0 THEORETICAL AND CONCEPTUAL FRAMEWORK

1.4.1 THEORIES

Insurgency: Sandercock (1998) notes that during periods of mass urbanisation and migration, particularly by the urban poor, the socio spatial temporalities of the city become hosts to “spaces of insurgent citizenship” (Sandercock 1998, p. 39), furthermore she suggests that because of this insurgency the landscape of the post modern city is a landscape marked with difference and struggle as “ethnoscapes” are marred with sites of xenophobia, racism and social exclusion. Thus in the context of this research effort, insurgency is the manifestation of the socio spatial temporalities, as the excluded and the in-between jostle for position within the city, creating their own identities and spatial constructs based on their imagined uses of the city, generally in contrast from which the city was planned. Therefore it can be assumed that insurgency is the act of resistance and self proclamation by the urban

poor and excluded to claim their right to the city, the resulting insurgent urbanism is the resistance made manifest through the informal construction of their environment. The cure for the most urgent problems in planning and architectural theory suggests Holston in Sandercock (1998) is the need to develop a different social imagination, one that is not modernist but that “nevertheless reinvents modernisms activist commitments to the invention of society and to the construction of the state” (Holston in Sandercock 1998, p. 39) Furthermore, Holston agrees that the source of this paradigm shift cannot lie in any specifically architectural or planning production theory, but rather a symbiosis of socially responsible architecture and planning in what he dubs “spaces of insurgent citizenship” (Sandercock 1998, p. 39).

Complexity Theory: Complexity theory has its roots in the 1950’s when the sociologist Herbert Gans postulated that the wealth and power within a city was dependant on the series of sub cities or “urban villages” that are “hidden” from view. These “urban villages” create a complexity of alternative ways of life, ethnic groups and “unseen” minorities that are obscured by the dominant classes and cultures (Jencks 1995). Further to this, Jacobs (1961) attacks the homogenous modernist concept of cityness, suggesting that these divided zones of modernism created purified zones of described function. Furthermore Jacobs (1961) suggests that a city is a problem of organised complexity (Jencks 1995). It is this self organising complexity, which behaves like a living organism, as opposed to a “machine for living” that reflects the true nature of the city, and as such cities cannot be wholly defined, as a city is a constitutive of its parts, some small, some large, some informal, some formal but all of which contribute to the making of cities and cityness.

1.4.2 CONCEPTS

Exclusion and Inclusion: Exclusion will be explored in terms of policy, such as that being seen currently in contemporary cities who continue to exclude the “undesirables” (Whyte 1980) as well as historically, if we consider colonialism and more recently Apartheid in South Africa. The paper does suggest that social and racial exclusion has in modern times evolved into economic exclusion (Daniel et. al cited by Meskell in Murray, Shepherd & Hall 2007). The researcher endeavours to get a broad understanding of socio and spatial exclusion within the construct of the modern city in a paradigm of mass urbanisation and migration, and thus through the findings of the paper learn how to propose more inclusive built environments and planning practices.

The Right to the City: Theorised by Henri Lefebvre (1991) as part of his seminal texts on understanding the importance of “The Production of Space” (Lefebvre 1991), the “right to the city” (Lefebvre et al. 1991) has become part of many political, planning and policy agenda’s and has been embodied in the proposed “World Charter on the Right to the City 2004”, “*this right commands widespread acceptance in principle by those in every part of the world concerned with the development of urban life inclusive of all those living in cities, without discrimination or exception*” (Urban Policies and The Right to The City 2005, p. 30). These works have deeply influenced current urban theory, as seen in the work of authors such as David Harvey who will be discussed in this dissertation, and in the contemporary discussions around the notion of spatial justice. Therefore when the right to the city is described within this research paper, it is defined by the way in which citizens rights within the city “are not only being refused or abused in practice, but systematically violated and denied” (Brown & Kristiansen 2005, p. 30). This is particularly relevant within the construct of South Africa, where the rights to the city during the apartheid era were violated by racial injustices, and paradoxically how this may or may not be translated into the socio-economic exclusion of its cities within the current urban landscape.

Identity: Much of recent planning literature that seeks to understand our physical environment features an investigation into the “*spatiality of identity as a predominant theme*” (Borden, Rendell & Thomas in Sandercock 1998, p. 140). **Hybridity** as will be explored does not take on the meaning that Jacobs (2004) warns us against as a means of “mass amnesia” by absorbing one culture into another, but rather hybridity in what Noble (2011) refers to as a cultural hybridity, where the built environment starts to reflect the needs of the user group rather than the ideals set out by the minority policy makers. In this way, Noble (2011) challenges the “white skin: black masks” concept, in that architecture shouldn’t just be a mask, or pastiche symbol of the user group for which it is designed, but it should respond to the genuine needs, culturally, spatially and socially before concerning itself with kitsch or pastiche facadism which falls close to the post modern theories the scenographic.

1.5 SUMMARY

Through the investigation of the various theories thought to be relevant to an academic framework that could assist in the conceptualisation of what cities are, how they function and ultimately how they create platforms for inclusion and exclusion, the researcher aims to use

this knowledge as a means to inform an inclusive architectural model for a particular Insurgent citizenship. Each of the concepts and theories chosen represent part of the complexity of being a citizen, particularly within a developing city and most especially what this means for the in-between citizens.

1.6 CONCLUSION

In conclusion, this chapter has established, by means of the research background and methodology, research and design parameters for the dissertation. Techniques used by the author have been documented and the information collected has set out the theoretical and conceptual framework which will be referred to and drawn upon throughout the dissertation. The following chapters will draw conclusions from the various forms of research undertaken by the researcher in order to inform strategies toward facilitating insurgency in the built environment.

CHAPTER TWO | THE MYTH OF THE CITY

2.1 INTRODUCTION

We currently live in an epoch of dual cities, where even the concept of what a city represents in the current age of mass urbanisation, migration and urban poverty has conflicting rationalities. The following chapter will explore the concept of city-ness, as well as question the nostalgic references that may hinder the true representation of city life, by endeavouring to understand these conflicting urbanities. If more inclusive urban environments are to be imagined, this myth of the city needs to be readdressed.

2.2 THE IMAGE OF THE CITY



Figure 1-The New York skyline, one of the great modernist city skylines that come to mind when conceptualising the image of the city.

The term city inspires fantastic images of the post industrial age and clearly defined icons of high rise buildings and clover leaf highways (Correa 1989). These concentrated centres of wealth, commerce and prosperity reach toward the sky and jostle for position and attention, knitted together by the road networks that form the arteries of these urban worlds. *“The concentration of electric lights in a city landscape can still inspire viewers’ enraptured attention, more than a hundred years after cities in some places first began to draw on this*

modern invention” (Robinson 2004, p. 569) and thus the image of the city is as motivating as it has ever been and thus motivates Beall’s (1997, p. 3) suggestion that “*cities are literally concrete manifestations of ideas on how society was, is and should be*”, physical symbols of the modern age of humanity. Correa (1989) questions this obsession with the “image of the city” suggesting that the ideologies that are manifest by the built form are creating the “myth” of the city, and this myth is blinding us to what a city actually is. Furthermore Correa (1989) theorises that if one did not know of the name of Manhattan and thus could not comprehend the myth, one would see a city, the same as any other anywhere in the world, a conglomeration of steel, glass and traffic jams, no better or worse than any developing city for that matter.



Figure 2-An aerial view of lower Manhattan, the symbol of the developed world.

Perhaps it is for this reason that Robinson (in Pieterse 2010) suggests that much of the contemporary urban theories that have emanated from the west for the last century continue to be characterized by an urban sociology of city-ness and modern city living. However, much of this literature has derived its concepts within first world cities, and thus “[w]estern urban theory has framed for itself a particular phantasmagoria of city-ness” (Robinson 2004, p. 570). This “phantasmagoria” in the current epoch of mass urbanisation, globalisation and urban poverty is threatening the ideologies and concepts rooted in western urban theory to irrelevance. As the developing world expands exponentially, the consequence is that these

“new urbanities” cannot be described within these fantasies and therefore “*many aspects of urban theory, it seems, are barely relevant to many poorer cities around the world*” (Robinson 2004, p. 570).

During the 20th century much of the research in urban theory produced a comparative framework that endeavoured to research various kinds of city experiences, which included cities outside of the western paradigm (Pahl in Robinson 2004). However, Robinson (in Pieterse 2010) suggests that with the rise of developmentalism, cities outside of the western context, and thus the poorer “developing cities” were increasingly viewed as “*incommensurable with western cities, on which most urban theories depended*” (Robinson 2004, p. 570).



Figure 3-Dharavi, Mumbai, India known as Asia’s largest slum stands in stark contrast to the city imageries of the developed world. The disorderly appearance and uncontrolled sprawl of slums such as these posit them against their counterparts in the west, resulting in separate urban theories.

This switch in conceptualising and studying cities meant that cities characterised by informality, poverty, lack of housing and poor economic growth were rendered irrelevant and incomparable to the cities of advanced industrial capitalism (Robinson 2004). This

authoritative assumption by the West to the relevance and universality of their urbanity and thus cities; has resulted in the social bias and denial of cities and regions that do not fall into this narrow gap of Western ideology and city-ness (Robinson 2004). This universalising is both detrimental to the concept of cities outside of the western paradigm, as well as to the West itself, as these universalising tendencies deny difference, and hinder on nostalgia. Therefore perhaps these urban theories should as Robinson (in Pieterse 2010) suggests, attend *“to the diversity of urban experiences when theorizing about cities”* (Robinson 2004, p. 570). Furthermore, if urban theory moves beyond West only or developmentalism only contexts, tracking city-ness as the globally defining theory across borders and continents, *“then the resources for understanding cities everywhere would be enlivened”* (Robinson 2004, p. 570).

2.3 MIGRANT CITIES

“The rise of urbanization in the aggregated Third World is broadly comparable to the same process in the West over a century ago. What is unusual is the absolute increments of Third World urban populations, which clearly exceed any historical precedent. By the best accounts, urban population increase in developing countries is roughly double that experienced in the West at comparable levels of development.”

-Preston & Williamson in Kasadra & Crenshaw (1991, p. 468)

At the beginning of the century there were little more than a dozen cities in the world with more than a million inhabitants, and almost all of these cities were in advanced capitalist countries. As pointed out by Harvey (in LeGates & Stout 2003) this indicates that just 7% of the world’s population was urban, yet by the turn of the century there were as many as 500 cities in the world with a population exceeding a million inhabitants, and thus 50% of the world’s population could be classed as urban (Harvey in LeGates & Stout 2003) many of which were contained within the so called “developing” world. Today 3.5 billion people now live in cities (Smith 2011), and of this figure 1 billion people are *“living in impoverished and environmentally hazardous conditions”* (Badshah 1996, p. 88) in slums, favella’s and squatter camps and these figures are set to double by the year 2030 (Smith 2011).



Figure 4-Kibera, Kenya is one of the largest slums in Africa, dating back to 1918. As the new immigrants flock to city centres in search of employment, slums like Kibera often provide the only affordable housing solution for the urban poor.

It is important to note that an estimated 200 000 people are pulled into cities each day by processes of migration (Smith 2011), both national and international and although basic causes of migration seem straightforward, as described already as a means to escape rural poverty for example, migration is of a highly variable nature. Kasadra & Crenshaw (1991) suggest that although most demographers and urbanists have focused on mainly rural-to urban migration, recent investigations point to much larger and complex streams of migration. *“Urban-to-urban migration, rural-to rural migration, and at early stages of development, circular migrations are among the types of migration found to predominate in many Third World countries”* (Thomas et. al in Kasadra & Crenshaw 1991, p. 475) further to these concepts of migration is that which Massey (in Kasadra & Crenshaw 1991) presents a theory of migration which posits that forces of development and modernization combine to destroy traditional rural life in Third World countries, resulting in a constant impetus to emigrate from rural areas.

The reality as suggested by Smith (2011) is that cities don't manufacture poverty, but rather attract it, because as the statistics suggest while cities aggregate poverty there are still more opportunities per square meter in the city than the rapidly diminishing hinterlands. These new urbanites view cities as the only possible way of emerging from poverty (Smith 2011), thus often rely on their own human ability to survive in a state of Autarky (Payne 1977). This autarky is often compounded by the fact that cities physically cannot cope with the large proportions of low income groups that are continuously being swelled by the arrival of additional rural to urban migrants (Payne 1977). Therefore modern cities of the developing world as Murray, Shepherd & Hall (2007) suggest, are sights of conflicting rationalities where on the one hand there are the rationalities of the technical, infrastructural and managerial systems which are used to order these urban environments. On the other hand there exists the rationalities of those who are attempting to survive materially and culturally in what are often regarded as alien environments.

2.4 ON QUESTIONS OF CITY-NESS

“Very often we fail to recognise fragments of the new landscape because our view of the third world is both limited and egocentric”

-Correa (1989, p. 16)

As expressed, in the current epoch of urbanisation and migration, many of today's megacities are within the third world, what this means therefore is that concepts of urbanism and characteristics of urbanity are being defined beyond the boundaries of western planning literature (Robinson 2004) and thus a dichotomy of what constitutes city-ness exists. What a city is, how it functions and how it looks is beginning to be hard to define due to the limited theoretical narratives, which are still firmly fixed on the “Euro-urban” and “Eurocentric”.

“Our compact, physical city layouts directly mirror the more primitive technologies at the time these were built” (Daedalus in LeGates & Stout 1998, p. 475) and thus cities of today, as it is suggested represent modernity, however are not a true representation of the reality of today's modern, global city.

What is required before any postulation of ideas toward social integration and facilitation of the informal poor in the developing world, is a new vocabulary that speaks of true city-ness (Robinson, Mbembe & Nuttal in Pieterse 2010), and particularly within an African construct

as African urbanism. However, currently the academic literature on the concept of “city-ness” and the “urban revolution” (Pieterse 2010) is highly polarised with two conflicting developmental strategies. Davis (2004) suggests a city of slums, painting an image of dystopic devastation, with no foreseeable end in sight so as long as *“the global structural drivers of economic inequality are not addressed”* (Pieterse 2010, p. 2). On the other end of the developmental question is the political ability and will of governance to *“take up the task of arresting and reversing the crises of urban poverty”* (Pieterse 2010, p. 3).



Figure 5 and Figure 6-Makoko is a sprawling slum situated off of the mainland in Lagos, Nigeria. As policy in Lagos seeks to clear up slums on the mainland, Makoko is spreading prolifically along the waterways. The dystopia that is visible within this slum shows succinctly the struggle that developing cities face, trying to modernise whilst being overcome by the dire needs of the exploding population of the poor.

What is evident within these fields of thought is that within the concepts of urbanism in the West, socio-spatial theories are largely equated with complex social, natural and material interactions, whereas concepts driven from non-western cities *“are only good for describing absences and wanting, even if fuelled by a moral agenda to alleviate material deficiencies”* (Pieterse 2010, p. 3). Robinson suggests that *“once we turn our gaze to the unique particularity of specific places and the myriad of practices that reproduce relations, institutions, networks and generative energy in general, we will also notice more innovative options that can be activated to deal with the profound development challenges which exist”* (Robinson in Pieterse 2010, p. 4). Therefore the challenge of writing the social back into our understanding of African urbanism requires an examination of everyday practices and imaginaries as they create socio spatial urbanisms unique to a specific place, perhaps outside of the conceptualisation of development and modernity.

“Rather than seeing Africa as an incomplete or deteriorated example of modernity, we might focus on how Africa, and its many different parts, is—through the resourceful responses of its residents to conditions of vulnerability—in the process of becoming something new that is both part of and separate from western modernity. This new imaginary may provide a conceptual opening that would allow us to think about Africa in ways that are more hopeful and positive; that acknowledge the success of Africans in constructing productive lives at a micro-scale, and economies and societies at a macro-scale, that work despite major structural constraints”

-Harrison in Pieterse (2010, p. 5)

What is evident is the idea that theory and development need to readdress the way in which they conceive afro-urbanism, that these urbanities are unique and thus cannot be viewed in terms of developed city frameworks, or forced identities. Perhaps what is required is a better understanding of the plurality and dynamism of African city-ness as a complex layering of society that cannot be rationalised in European terms. Only once what was conventionally regarded as underdevelopment or failed modernisation, is re-postulated as resilience, pluralism and inventiveness can true African city-ness be revealed, and only once city-ness has been revealed can we move on to addressing the many and ever growing list of policy changes (Pieterse 2010, p. 12).

2.5 OUR URBAN FUTURE

Radical political economists such as Mike Davis (2004) suggest a city of slums, a firmly fixed concept of dystopia where the new world order is one of poverty, disparity between the classes and a landscape marked by conflict. This view is supported by current trends in urbanisation and migration that indicate population growth in spite of negative or stagnant economic growth and therefore what is evident is the rise of what some researchers have labelled “over urbanisation”, which as Davis (2004) suggests is just one of the resultant paths down which “*neoliberal world order has shunted millennial urbanization*” (Davis 2004, p. 10).

“The primary direction of both national and international interventions during the last twenty years has actually increased urban poverty and slums, increased exclusion and inequality, and weakened urban elites in their efforts to use cities as engines of growth”

-UNICEF in Davis (2004, p. 11)

If one considers then that residents of slums constitute a staggering 78.2% of the urban population of some of the least developed countries in the world, constituting as much as 1/3 of the global urban population, then it can be assumed that this is our urban future, cities within a planet of slums.



Figure 7-An Aerial view of Barrios, Caracas, Venezuela a slum city engulfing all available land, creating extreme population densities of urban poor.

“...when all the maidans [open area’s in the city] and all the staircases of all the buildings are full, where will the people go then?”

-Correa (1989, p. 23)

The question posed by Correa (1989) is a valid point of departure, as it questions the holding capacity of the cities of the developing world. Correa (1989) suggest that although slums and squatterisation are survivalist activities undertaken by the poor to contest their desperate situations, legalising or “turning a blind eye” to such activities brings into question the fulcrum of cities and their ability to cope, further warning that “*cities grow...and die...much faster than we think*” (Correa 1989, p. 82).

Correa (1989) postulates the concept of a great city but terrible place, where in this climate of urban population growth, the densification is allowing for positive interactions between groups of people that would otherwise not have made contact. However, the suggested paradox is that whilst these environments are “*improving as a city-a place where different people meet, where things happen, where ideas incubate*” (Correa 1989, p. 79) they are also decaying as physical environments by the same processes. Correa (1989) once again suggests that this is due to the “myth” of the city, and the myth is shrouding our view of the realities of the urban crisis being played out in the developing cities of the world. Correa (1989) compares this to the science experiment of the frog and the boiling water, where in this metaphor the city is the frog and the boiling water the complex issues that are challenging cities today. If the frog is dropped into boiling water it will immediately try to escape, knowing the dangers of its predicament, however if a frog is placed in the water and the temperature is raised slowly, it will not react and will in most instances enter a state of euphoria just before being cooked alive (Correa 1989). Although graphic, this may illustrate astutely the current condition of “city-ness”, where perhaps theorists such as Davis (2004) are correct in assuming the coming dystopia of our urban future by knowing that the water is hot, and conversely theorists such as Robinson et al. (2006) may be in a state of pre death euphoria not seeing cities for what they are and not knowing the dangers of the persistently rising water temperature.

2.6 CONCLUSION

This chapter explored the understanding of the myth of the city, the false universalising of western planning policy, concepts of urbanity and the applied urbanisms which are irrelevant in the planning agendas of the developing world. Although theories are emerging that are rooted within the developing construct, it remains unclear as to the strategy that needs to be employed in order to solve some of the most pressing issues within these urban environments.

It is the responsibility of planning professionals within this shifting paradigm to understand these spaces of insurgency so as to develop more inclusive dialogues to facilitate this growing citizenship.

To paraphrase Correa, the twentieth century composer Hindemith was once asked how he composed his music, to which he replied *“It is like looking out of a window into the black of night of a thunderstorm. Suddenly there is a flash of lighting, illuminating the entire landscape. In that one split second, one has seen everything-and nothing”* and thus a composition is the patient recreation of what one might have seen in that flash of light. So the question may be asked, will the cities of the third world survive this seemingly dystopian and apocalyptic future? The answer to this may depend on whether or not we have the perceptiveness to see everything in that flash of light, in order to compose our new urban landscape today.

CHAPTER THREE | SOCIAL EXCLUSION IN THE CITY

3.1 INTRODUCTION

The planners role historically has above all been to control the production and therefore determine the use of space, and thus who can do what, where and when (Sandercock 1998). Sandercock (1998) notes how planners control space by closing parks at night to exclude the homeless, prevent street trade by outlawing informality and continue to create laws, legislation and “planning principals” that create subtle ways in which to control certain groups of people.



Figure 8-How public is public space? With strict measures on who can do what, where and when, public space may no longer be public.

In this epoch of mass urban migration and urbanisation a paradox exists within cities, in that whilst they may be the primary urbanising tools, symbols of a better life and magnets for the rural to urban migrants they are, as postulated in this dissertation, agents of segregation and exclusion. The perpetual quest for modernity (Payne 1977) and monoculturalism (Esteva & Prakash 1998) within the rapidly globalising framework of modern urbanisms ultimately results in a denial of histories and culture. This chapter will focus primarily on the exclusionary processes of Modernism and how the Apartheid regime used the image of Modernism to serve its exclusionary principals (Murray, Shepherd & Hall 2007). The chapter

concludes in the Post Modern paradigm posited in this dissertation as that being after the election of the democratic government, as a means to explore the evolution of exclusion from racial to economic exclusion within the post apartheid cities of South Africa. By understanding the current construct under which these exclusions occur, the research will endeavour to then explore various contexts under which insurgency is manifest which will be explored in the following chapter.

3.2 THE LOSS OF PUBLIC LIFE IN THE NAME OF MODERNITY

“[The] spatiality of social exclusion is constructed through the physical organisation of space as well as through the social control of space as ensured by informal codes and signs and formal rules and regulations”

-Madanipour in LeGates & Stout (1998, p. 188)

The concept of decontextualisation was one of the eight pillars of modernist planning that was established at the Congrès International d'Architecture Moderne in 1928 (Sandercock 1998). The city was envisioned as a machine, and thus was reengineered with a blatant refusal of any accommodation of the existing urban and social conditions and a denial of history (Sandercock 1998). Therefore these methods of decontextualisation and shock with a redefinition of the social functions of urban organizations (Sandercock 1998) forged a new urban identity in the face of history and context. Modernisms' planning was and still is an endeavour to transform an unwanted present to a utopian future (Sandercock 1998). This process of urban transformation in the name of modernity and utopia has an even darker reality, as Harvey (2008) suggests this often entails repeated bouts of urban restructuring through “creative destruction”, which generally has a class dimension since “*it is usually the poor, the underprivileged and those marginalized from political power that suffer first and foremost from this process*” (Harvey 2008, p. 9).

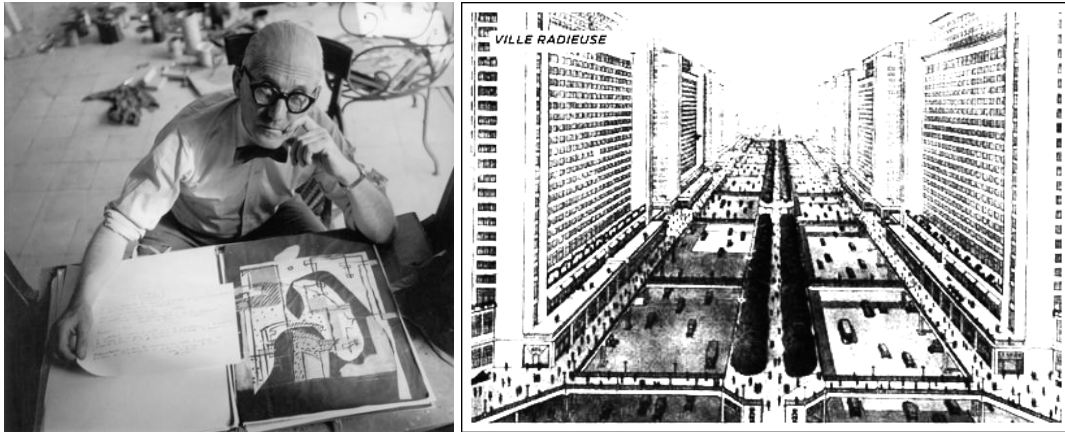


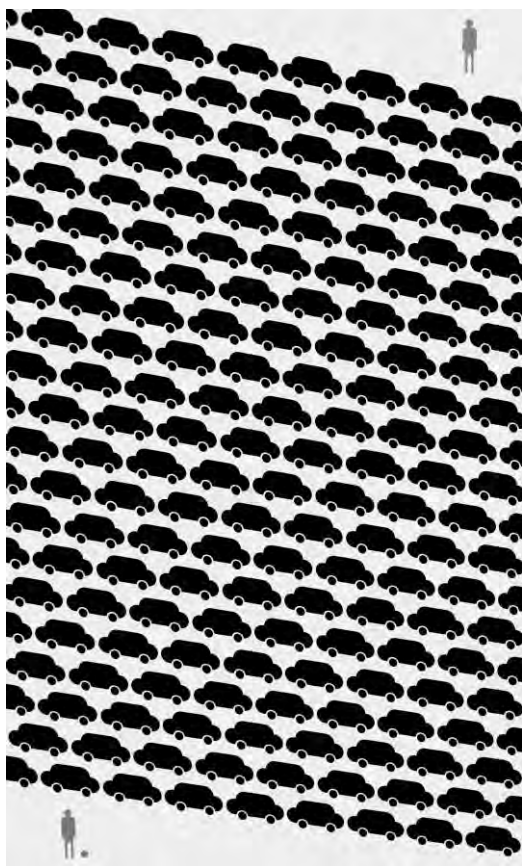
Figure 9, Figure 10 and Figure 11-(clockwise) The father of architectural Modernism, Le Corbusier and two conceptual sketches of an envisioned Utopian future. Wide boulevards flanked by tall towers of glass, concrete and steel have become the symbols of a modern civilisation. It is this imagery of top down, monoculturalism and decontextualisation which has lead the the alienation of citizens from the city.

“Thus the rising idea will overwhelm humanity, for men will one day discover that they have become the slaves of their surroundings, compelled as they were to adopt themselves to the new conditions of a metropolis which is itself dying a slow death under the impact of the machine”

-Doxiadis (1963, p. 67)

Doxiadis (1963) points out that the harsh reality of modern living is that we design for machines and not humans in Le Corbusiers “machine age”, and in this machine age cars have trumped the requirements of their fellow human citizens. This has broken up the scale of urban life and as a result man has lost his normal relationship to architecture and open space as it is given up to the vehicle-moving or parked. The truth is that our buildings are no longer related to man, rich or poor, have or have not-man and the built

environment are divorced (Doxiadis 1963 and Jacobs 2004) thus perpetuating this decontextualisation. This machine age, in service of the motor vehicle has resulted in the loss of walkable cities (Hou 2010 and Jacobs 2004), due to the distances that are now made possible by vehicular transport and thus the very scale of cities has changed, sprawling outward no longer bound by the “human scale” that determined city morphology of history. Therefore it can be assumed that the modernisation process, through decontextualisation and a planned divorce from the human scale through vehicular transport had set in motion a process of exclusion and alienation from urbanity.



Further to this, cities in service of the motor vehicle meant the abolishment of the traditional street system of public roads, which ultimately has the effect of eliminating urban crowds and outdoor social life. This unhinging of the structure of publicness has resulted in alienation from and toward street and public life, and thus urbanity. Public space has become “privatised” and as a result malls, clubs and casinos have become the new symbols of public life. This “interiorisation” encourages a privatising of social relations and the damaging result of this privatisation is that it allows for greater control over access to space and that control invariably stratifies the public that use it (Sandercock 1998).

Figure 12-This graphic representation expresses accurately the devastating affect cars have made to the socialism of our cities, as public space is given up to roads and vehicular transport.



Figure 13-The artist Banksy questions the inescapable control of public space through this graffiti artwork.

This is particularly devastating for the urban poor, who rely on public space as an arena for livelihood generation by informal means. Through these methods of privatisation and interiorisation, the result is the exclusion and controlled expulsion of these undesirables as cities begin to host the wealthy minority.



Figure 14-Even the use of explicitly public spaces such as plazas and parks is subject to rules and regulations as a means of control.

Malls, when compared to bazaars and markets, have become the destination and not a naturally occurring passage as a market would thus creating a vacuum and robbing the streets activity by privatising life and what it means to be truly public (Altman 1989). “[P]rivacy, private property and private space are intertwined, demarcated through a variety of objects and signs, from the subtle variations of colour and texture to fences and high walls” (Madanipour in LeGates & Stout 1998, p. 193) therefore “public” life in modern cities and suburbs is determined by private interests and control, and this control is the agent of exclusion and expulsion. The irony exists then that modern “public” space is defined by exclusionary practices, and that malls, casinos etc. are not really “public” after all (Murray, Shepherd & Hall 2007). Brown (2006) suggests that culture and power within urban design, based on the stewardship of modernism, more often than not involves the inclusion or exclusion of certain groups of people. This may be as Brown (2006) suggests due to the constant focus on the leisure of public space, which once again resonates with the imagined utopian futures pointed out by Sandercock (1998).



Figure 15 & Figure 16-Gateway, Durban, South Africa is an example of the interiorisation process of contemporary society. A vacuum of public life is created as large, privately owned shopping complexes rob the streets of their activity. Publicness, as determined by shopping centres and casinos focus on leisure, and thus those who can afford to frequent these institutions.

3.3 MODERNISM IN SERVICE OF THE APARTHEID STATE

“...the project of modernity was made material through the applications of modernist planning ideals in the service of the apartheid state as a means to implement segregationist legislation”

-Murray, Shepherd & Hall (2007, p. 44)

Murray, Shepherd & Hall (2007) suggest that Colonialism, Modernism and Globalisation are the result of the universalizing tendencies of the Western world, and therefore garden cities, green belts, new towns, waterfronts, mega malls and new urbanist villages to name a few, which are found in every city of the world, are based on false assumptions of the social and economic needs of the community for which it shall serve. Although these listed utopian concepts are based in Western ideology, their decontextualisation results in exclusionary practices by virtue of top down decision making. What of the South African construct, where this concept of Utopia and Modernity, was the vehicle for which Apartheid Planning was executed (Murray, Shepherd & Hall 2007)? Beall (1997) suggests that the arrangement of urban space has commonly been used by urban practitioners to put people in their place as a means of separation and exclusion through the morphology of urban space. In the Apartheid era of South African town planning, urban design and architecture the adherence to this practice of “*putting people in their place*” (Beall 1997) focussed on the morphology of segregation, and thus this dissertation postulates that modernism locally, may symbolise racial segregation, separation and control. As Shepherd & Murray in Murray, Shepherd & Hall (2007) point out; statutory apartheid had far reaching implications for the shaping of South African space.

Modern architecture arrived in South Africa as early as 1925, and has since then remained the precedent for architecture and urbanism, although contemporary urbanisms take on a less strict adherence to the principals of high modernism (Murray in Murray, Shepherd & Hall 2007). Murray in Murray, Shepherd & Hall (2007) points out that modernity was made material in the Apartheid era as a means to service the state to enforce segregationist laws and legislation such as the Group Areas act. Murray in Murray, Shepherd & Hall (2007) postulates an Afrikaner/Apartheid modernism as part of the “ten moments” of modernist architecture in the planning histories of South Africa, as it reflects the institutional implementation of separational planning policies adopted under the banner of modernity. It is suggested that within Afrikaner/Apartheid modernism, the modern movement became domesticated as the style of choice in the service of the Afrikaner Nationalists, and thus formed “*the crudest application of modernist design ideas and forms from the city scale down to individual buildings*” (Murray in Murray, Shepherd & Hall 2007, p. 51). Modernism served as the means by which Afrikaner advancement could stake its claim to the city,

distinguishing itself from the British imperial styles and using these “modern symbols” as a means to reinforce the new institutions of racialised power.

“Many apartheid modernist buildings distinguished themselves from their international counterparts in quirky ways: with separate entrances for ‘blacks’ and ‘whites’ in all municipal and state buildings; in the provision of ‘native living quarters’ in houses and blocks of flats in ‘white’ Group Areas; or on the urban scale in the creation of the space of the ‘township’ (dormitory ghettos near cities and towns) with special buildings such as migrant labour hostels, beer halls, pass offices and the like.”

-Murray in Murray, Shepherd & Hall (2007, p. 51)

The results of these planning principals and applications have had long lasting results and as pointed out by Murray in Murray, Shepherd & Hall (2007) South African space remains divided, contested and profoundly affected by these morphologies. One of the most notable features of Apartheid Modernity, in architectural and urban terms, was the appropriation of modernism as a means to signify the modernity of the Apartheid state (Shepherd & Murray in Murray, Shepherd & Hall 2007) and thus a justification of these exclusionary practices. Further to this, spatial planners used the international model of master plan, top down town intervention as a means to segregate space, and thus resulted in the division of national and city space. Based on these histories and memories, the understanding is that due to the very morphology of the built environment being exclusionary, the area boundaries that shaped the Apartheid city will continue to shape the future city (Hall in Murray, Shepherd & Hall 2007).

“It remains unclear whether South Africans are reflexively choosing to live with the past in the post-apartheid present, or whether such double temporalities are inescapable.”

-Murray, Shepherd & Hall (2007, p. 177)

To paraphrase Doxiadis (1963), we are caught in between the old and the new and cannot access what is appropriate anymore. This is pertinent to the cities of South Africa, currently in transition between the exclusionary processes of the past and the inclusive democracy of the present, endeavouring to modernise whilst paradoxically the modernising processes

exacerbate the principals established under the apartheid regime. Further to this complex social relationship is the reality that the physical, concrete and glass cities and city layouts stand as a physical reminder of the exclusionary processes of the Apartheid regime, and as much as policy seeks to address social exclusion, the morphology will continue to compound these issues. Murray, Shepherd & Hall (2007) suggest that although it has been more than eighteen years since the transition into democracy in the mid 1990's, the historical processes and power plays continue to underpin the concepts and methods by which spatial practices are achieved today, namely exclusionary, modern and Euro-urban. In the current climate of mass urban migration, the result is that South African cities have remained profoundly divided and segregated despite the democratic efforts to extend development opportunities to the urban poor and socially excluded (Charlton & Kihato in Pieterse 2009).

3.4 POST APARTHEID ECONOMIC SEGREGATION

As with most countries that are caught up in the global economic system, South African economic inequalities have grown dramatically over the last two decades and with it the rise of spatial and social inequality and segregation. Daniel et. al (2005) cited by Meskell in Murray, Shepherd & Hall (2007) proposes that the old fault lines of inequality have been replaced with new forms of social injustice and hierarchy, where exclusion was the realm of race, it has now become the weapon of economy as the proverbial gap between the rich and the poor grows ever greater.

Seekings & Nattrass have argued that *“In post-apartheid South Africa, inequality is driven by two income gaps: between an increasingly multi racial middle class and the rest; and between the African urban working class and the African unemployed and marginalised poor”* (Seekings & Nattrass in Beall 2002, p. 48) and thus Beall et. al (2002) postulates that inequality is not disappearing but rather changing its face.



Figure 17-The irony of this photograph represents the paradox that the contemporary South African city faces. Now perhaps more divided than during apartheid, the economic disparity between the haves and the have-not's is visible daily in scenes such as this. "A world class African city"-for some.

This is supported by Daniel in Murray, Shephard & Hall (2007) where he argues that racial exclusions have evolved into economic exclusions, and thus leaving those excluded previously, victims of further exclusion and expulsion under the democratic government. Beall (2002) points out Johannesburg as an example of a post apartheid city that remains highly unequal in a global context, where urban poverty and inequality are growing exponentially despite the efforts of local and national government to curb identity-based and spatially determined inequalities. As theorised by Beall (2002) the new socially excluded citizens of Johannesburg are “*superfluous to the requirements of the global economy and Johannesburg's place in it*” (Beall 2002, p. 49) and importantly Beall (2002) points out that much of these excluded citizens include the former mining and manufacturing workers on whose backs iGoli, the city of gold, was built. The result of these exclusions is the changing patterns of residential polarisation due to the shifting trajectories of economic development within the city, and therefore resulting in “*new geographies of exclusion*” (Beall 2002, p. 49). It is for these reasons that Beall (2002) suggest that the increasingly aggregated cities of South Africa are now perhaps more divided than they were at the height of apartheid

(Crankshaw & Parnell in Beall 2002) and thus social and economic exclusion are reinforced by neoliberal policy.

3.5 POST APARTHEID URBANISMS

The irony of the current socio-economic and socio-spatial dilemma is that these issues have been compounded by the most notable inclusive policies implemented by the democratic government, that of the rural development housing policies whereby all people have a right to housing and services (Pieterse 2009). These programmes have had profoundly negative results by *“intensifying urban sprawl and increasing the daily productive costs for the poor, instead of providing them with an appreciating asset that can bolster their livelihoods”* (Charlton & Kihato in Pieterse 2009, p. 2).

Pieterse (2009) notes that the current leadership remains deeply ambivalent to the profoundly urban reality of South African society, and this ambivalence has meant the continued support of rural development schemes as a means of inclusivity and service provision. *“[T]here has been a forceful return of a rural nostalgia snugly ensconced in a narrow strain of African nationalism”* (Pieterse 2009, p. 12) and thus as postulated, the ideologies of a deeply scarred Post Colonial and Post Apartheid urbanity has resulted in a Post Modern “looking back” as a means of resisting the Modern ideologies and symbolisms. The irony of this entrenchment is that South African cities, as with many post-colonial cities of the world, were constructed and rely on the cheap labour that has its home in illegal settlements on the outskirts of the city, out of site and excluded from any valuable participation in urban affairs (Hardoy & Satterthwate 1989). This pattern has not changed in the new urban landscape where the “workforce” generally live on the outskirts of the city excluded from the modern socio-economic functions of the city, where the governments answer to this participatory issue is to house them further from the city yet in so called RDP developments. The nationalist government provided housing, much like the promises of the young democratic government in the form of matchbox “bantu lands”, such as Soweto.



Figure 18-The notorious “bantu land” Soweto, established as a “homeland” in the Apartheid era as a means to regulate the majority black populations access to the city and thus resorted to rural development such as this. The irony is that the post apartheid geography of housing provision has followed very similar lines of rural and not urban development.

Not only is this ironic in terms of the current governments “response” in terms of RDP housing, it also shows the misconceptions by planning practitioners by assuming that the needs and aspirations of a community can be answered by housing alone (Lokko 2000). *“Marginalisation and long term exclusion from the labour market lead[s] to an absence of opportunity for production and consumption which can in turn lead to acute forms of social exclusion”* (Madanipour in LeGates & Stout 1998, p. 183) and therefore poverty and economic exclusion may form part of social exclusion.

“The elite see the slums but do not experience them and do not have an idea of life in these places”

-Dessai (1995, p. 21)

At the core of these denials is the reality of informality, squatting and slum living as an Autarkic means of survival in the ideologically inflated state that is simply unable to cope

with the multitude of social problems and thus, perhaps Pieterse (2009) is correct in theorising that until these ideologically driven “anti urban” biases are abolished and replaced, there is simply no way that the current government will come to grips with the complexities and enormity of the current socio-urban crisis.

“At a macro level, the post apartheid geography of the South African city has simply morphed into a neo-apartheid spatiality since both urban sprawl and intra-class divisions have worsened since 1994.”

-Pieterse (2009, p. 13)

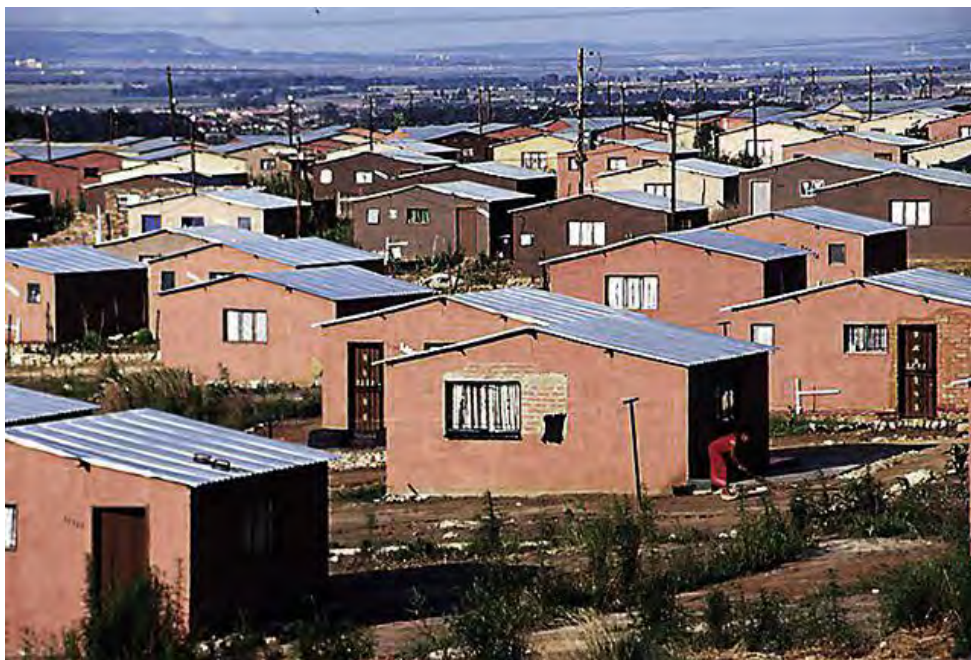


Figure 19-An example of so called RDP housing on the outskirts of Cape Town, South Africa.

3.6 CONCLUSION

The shifting trajectories of exclusion that have been discussed show the complex relationship that exists between the haves, the city and the have-nots. Exclusion exists and persists beyond the identified concepts explored in this chapter. The question of appropriate cityness, increased privatisation of public life, economic exclusion as well as the political control of cities through the Apartheid and Post Apartheid planning policies, is one that needs to be understood if inclusive policies are to be adopted. Planners, policy makers and politicians cannot remain ambivalent to the social crisis that is currently being played out in the streets, alleys and peripheries of our cities. What needs to be addressed is the perpetual exclusions of

these citizens, either socially, morphologically or both in order to develop more inclusive spatial dialogues that support, not control or prohibit these processes. As shall be expressed in the following chapter, the social majorities are challenging the control and exclusions of the urban minority and unless these demands are headed, the dualism between the haves and the have-nots, and the friction and violence that occurs as a result will not subside. In the coming urban age, these spatial and social rights will be further, as such it is up to all those involved in the shaping of the built environment to respond to these rights and create inclusive cities for the other 90%.

CHAPTER FOUR | RESISTANCE

4.1 INTRODUCTION

The previous chapter focussed on the various forms of exclusion that are manifested both socially and morphologically within the city. These exclusions under the guise of modernity and developmentalism are supported by policy and as shown in the South African example, politics. However in the new urban age, these marginalised majority groups are contesting the social exclusions of the contemporary city, by redefining their environments and questioning the persistent social bias that control their lives. This new citizenship, as shall be defined as an insurgent citizenship, is becoming an increasingly active agent in the definition of cities, and for whom they serve. The redefinition of public space as “life spaces” as a means to support livelihood strategies of the urban poor, is a trend that is growing in all of the cities of the contemporary world despite the privatising development policies. The following chapter will seek to identify this concept of insurgency, and its physical manifestation of insurgent urbanism, as a means to facilitate the urban poor and their chosen livelihood or life strategy.



Figure 20-People around the world are starting to claim their spatial rights within the city.

4.2 THE RIGHT TO THE CITY

Lefebvre’s (1991) “right to the city” provides a substantial framework for rethinking and establishing who the city is for, and who the global city belongs to. Borden, Rendell & Thomas in Sandercock (1998) suggest that it is Lefebvre who provides the most useful strategic overview of where to go, where to look and what to ask in terms of spatial rights in contemporary developing cities. Lefebvre, although heavily Marxist in his approach, allows an opportunity to explore the interaction between “*spatial arrangements and social organisation in contemporary Capitalism*” (Knudsen 2007, p. 7) and thus these spatial

theories allow a platform on which to assess “*the denial of individual and community’s rights to space*” (Shields in Knudsen 2007, p. 7) and therefore “*conceives of everyday life as the tracts and memories of spatial practices left untouched by modernity, a life of innocence that has nonetheless been impoverished and humiliated by 20th century capitalism*” (Borden, Rendell & Thomas in Sandercock 1998, p. 141).

To Lefebvre space is social and is produced in the dialectic span between perceived or mental space, and physical space; and as such space cannot be finite or static (Lefebvre 1991). Therefore, and perhaps most importantly in this dissertation Lefebvre may assist in supporting Brown’s (2006) theory that urban public space is a manifestation of social norms and political practice and therefore urban public space is a shifting resource. Lefebvre (1991) conceives of a triangular spatial dialectic consisting of Conceived space, Perceived space and Lived space (Lefebvre 1991) as described below:

Conceived space; can be narrowly defined as what space is and not what space could be. This concept is framed by the ideologies of scientists, planners, politicians etc.

Perceived space; is the spatial concept as laid out and prescribed by architects and planners. It is the spatial grid that society uses to navigate, and therefore can be assumed that it bridges the gap between ideology and daily practice.

Lived space; is the “*contestation of the prescribed appropriation of space*” (Knudsen 2007, p. 7), and therefore questions the physical appropriation of space by means of symbolic spatial appropriation. Knudsen (2007) offers an example of the graffiti artist Banksy, who writes on empty billboards, “The joy of not being sold anything”. This act creates a dialectic between conceptual and perceptual space to create spatial otherness that is otherwise undefined.

The most influential spatial dialectic that can be applied to the concept of contestation within this dissertation, is that of “Lived Space” (Lefebvre 1991) and these contestations could be explicit or implicit, however they are grounded in a daily practice. The importance of this lived space, when considering Robinson’s (2004) “African City-ness” within the construct of the contemporary developing cities of the world, is the reality of “spatial rights” as a means of survival, Brown (2006) suggests further that urban public life is a key element to the lives and survival of the urban poor.

There is a major difference between public space and social space (Brown 2006), physical entities are not meaningful until they are assigned functions that take them into the realm of “social reality”, Brown (2006) therefore assumes that social space locates individuals in the physical world enabling them to develop a sense of identity and to participate and engage in their ritual of communication and livelihood strategies as suggested in this dissertation (Madanipour in Brown 2006). Again the question of perception, control and power is directed at the dualism of the developing city, where survivalist and autarkic actions are met by prohibitive policies that make these livelihood strategies illegal. The street economy forms a significant component of many low income cities, and these activities rely on the innovative use of open public space to survive and flourish and as such urban public life is a key element to the lives and survival of the urban poor (Brown 2006), however as indicated by Hardoy & Satterthwate (1989) the laws and rules derived from legislative frameworks deem most aspect of the poor majorities lives and use of urban public space illegal. “*There must be something wrong with a law or code if it is broken daily by so many people as they go about their daily lives*” (Hardoy & Satterthwate 1989, p. 31).

Knudsen (2007) postulates that this “right to the city” can be viewed in terms of the following two concepts, that of Right to Appropriation and Right to participation., which challenges the notion of what public space is, and what it can be used for. The right to appropriation refers to how land and space parcels may be used for practices not defined by planning practitioners yet should be allowed as a means of capital gain, especially by those marginalised and previously excluded (Lefebvre in Kofman & Lebas as cited by Knudsen 2007). The second concept is that of the Right to Participation which is the right to determine and to play a part in the decision making processes of one’s urban environment, and therefore ones production of space. This concept therefore engages with those that are usually excluded from such processes such as the homeless, slum dwellers, street vendors and drug addicts (Lefebvre in Kofman & Lebas as cited by Knudsen 2007).

In conclusion, it must be speculated that whilst considering the dialectic of spatial and social rights, and therefore rights to the city, this “right to the city” (Lefebvre 1991) is as much about the right to urban life, and ones place in it as it is to the physical access to the city as has been postulated by the right to appropriation and participation. Where these “rights to the city” and thus ones right to life within the city are abused, neglected or prohibited; especially within the construct of a developing city where as it has been shown livelihood strategies of the urban

poor rely on spatial justice for survival, is where the condition of insurgency occurs, as an active contestation of these exclusions and expulsions.

4.3 INSURGENCY & FRACTURED URBANISM

“The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. [...] The freedom to make and remake our cities and ourselves is, I [sic] want to argue, one of the most precious yet most neglected of our human rights.”

-Harvey (2008, p. 23)

Holston (2008) states that most democracies experience conflict of some form amongst its citizens, as principal collides with prejudice over distribution, inclusivity and ultimately “rights to the city” and this trend of citizen conflict and xenophobia has increased during the democratisation and urbanisation of the 20th century.

Holston (2008) suggest that this entanglement in democracy with its members, in which new kinds of citizens arise to challenge their democratic right to citizenship, create new forms of violence and exclusion, so therefore Holston (2008) states that cities themselves have become the platform for volatile citizenship as the streets become crowded with marginalised citizens and “non-citizens” who contest their exclusions. As indicated by Holston in Miraftab & Wills (2005), cities under varying conditions create varied “citizen drama’s” and protagonists of these dramas created under neoliberal policies are generally speaking, the urban poor or excluded as proposed in this dissertation, mobilised through social movements to generate distinct new forms of citizenships (Miraftab & Wills 2005). These alternative states of citizenship are active, engaged and “*grounded in civil society*” (Friedmann in Miraftab & Wills 2005, p. 201).



Figure 21 & Figure 22-In extreme conditions of poverty, exclusion and displacement, the poor turn on one another in violent xenophobic attacks, as seen in South Africa, May 2008. This supports the theory that under conditions of exclusion a new citizenship emerges that challenges its democratic rights, rights to the city, and rights to inclusion.

As indicated, these insurgents move beyond normal states of citizenship as they contest their spatial rights, and as such their “right to the city” (Lefebvre 1991), which includes their social, political and economical rights as well as their rights to water, shelter, sewage, education and basic health in the construct of exclusion of those basic human rights. These Insurgent contestations of rights are not played out in the high court’s of justice but in the streets of the city, v squatter camps, favellas and the “*everyday life spaces of those excluded from the state’s citizenship project*” (Miraftab & Wills 2005, p. 201). These insurgent citizenships use cities as the primary host for this insurgency as they use “nonformalized channels” to improve, invent and improvise their urban environment (Isin in Miraftab & Wills 2005).

Miraftab & Wills et. al (2005) suggests that currently there is a reconceptualisation of the notion of citizenship, shifting from the state to the citizens creating a pluralist model, which has in turn created a variety of new definitions of citizenship that include participatory citizenship, active citizenship, citizenship from below and insurgent citizenship (Gaventa, Kabeer, Kearns, Lister and Holston in Miraftab & Wills 2005, p. 202). Holston in Sandercock (1998) suggest that the concept of citizenship changes as new participants emerge to stake their claims and expand their realm which supports Cornwall in Miraftab & Wills (2005) sentiment that with Insurgency, citizens are going beyond the “invitation to participate” as with inclusive citizenship, and are instead endeavouring to “*create their own opportunities and terms of engagement*” (Cornwall in Miraftab & Wills 2005, p. 202). Holston (2008)

challenges the notion of citizenship, and focuses on how these urban insurgencies are making the transition from needs based to rights based discourses in relation to exclusion and segregation in the construct of the contemporary city (Plyushteva 2009). *“As neoliberal practices privatize the city, its infrastructure, and its life spaces, and increasingly exclude urban citizens who are not deemed ‘good-paying customers,’ insurgent citizenship challenges the hypocrisy of neoliberalism”* (Miraftab & Wills 2005, p. 202) by questioning its bias of privatising public or “life” spaces and the criminalisation of the survivalist strategies employed by the urban poor. Holston in Sandercock (1998) states that this model of insurgency differs from the modernist objectives as it aims to truly understand society as a continuous reinvention of the social, and thus their modes of narrative and communication, therefore *“[w]hat planners need to look for are the emergent sources of citizenship-and their repression-that indicate this invention. They are not hard to find in the wake of this centuries important processes of change: massive migration to the world’s major cities, industrialisation and deindustrialisation, the sexual revolution, democratisation and so forth”* (Holston in Sandercock 1998, p. 49).

Within the context of continued exclusions and the persistence of inequality, insurgency is the contestation of these oppressions within the construct of post industrialisation, urban migration and city transformation (Holston 2008). These spaces of insurgent citizenship as described by Holston in Sandercock (1998) constitute new metropolitan forms of the social not yet understood or absorbed into by the old, thereby offering a plurality of socio-spatiality. In the cities of the modern world, public space usage is beginning to be used in contrast to that in which it was intended, and thus challenging how public space is defined and used as these socio spatial relationships within the built environment are becoming more complex (Hou 2010). Insurgency does not always allude to survivalism however, but rather to the re-questioning of spatial rights within public space, and thus “public space” has been redefined, no longer confided to the archetypal public spaces of parks, plazas and other such civic architecture (Hou 2010). Insurgency is the reality that people are not simply vectors of a larger socio-economic process, but are indeed active agents in their own lives, and thus through insurgency are reclaiming control and power over their homes, streets, neighbourhoods and “public space” infusing the city with their narratives, meanings and inscriptions (Bank 2011).

In Portland Oregon, insurgent activists from the group City Repair painted street intersections in bright colours and patterns, creating new meanings and functions, questioning the nature of this “public space” and for what it is used.



Figure 23 (Above) and Figure 24 (Below)-In Portland Oregon, the City Repair Group paints a traffic intersection, thus redefining spatial appropriation and use, and contesting the space lost to vehicular travel.



The Dutch artists Haas and Haan question the identities of the Favelas scattered on the hillsides of Rio De Janeiro, where many of their residents still experience a clash between the police and gangs that control the neighbourhoods (Smith 2011). Through the medium of art and colour the slum takes on a new identity, resistant to the stereotypes of degradation and squalor as a form of insurgency, creating new identities for the inhabitants of the Favellas.



Figure 25 & Figure 26-The vibrantly painted favelas by Haas and Haan in Rio De Janeiro redefine the image of the slum through the medium of art.



Figure 27-The artists Haas and Haan.

In Taipei, insurgents staged a “sleep-in” on the streets of the most affluent neighbourhood of the city as a means to contest the increasing housing costs. In London, Space Hijackers performed numerous acts of space redefinition such as Guerrilla Benching, where benches were placed in empty public spaces to contest the removal of the street furniture to “cleanse” the street life of undesirables.

The Urban Playground Movement (Berton in Plyushteva 2009) considers these rights to the city and public space as a socio-political agenda, and challenges the institutions of control by organising various spontaneous activities in urban “public space” such as the annual Global Pillow Fight Day. Although these activities may seem social, the true nature and purpose of these events, orchestrated by social network media are as follows: “[T]o make these unique happenings in public space become a significant part of popular culture, partially replacing passive, non-social, branded consumption experiences like watching television, and consciously rejecting the blight in our cities” (Urban Playground Movement in Plyushteva 2009, p. 91).

As suggested by Plyushteva (2009) & Hou (2010) in today’s world of hyper security, surveillance and control, there are very few things that citizens can do within these “public spaces” without “incurring disapproving looks, but often also formal warnings and fines” (Plyushteva 2009, p. 91) and thus these new forms of control in public space have curtailed freedom of expression and movement creating the paradox of “publicness” in public space.



Figure 28-An advert for a public design festival shows the value people are placing on quality public space, mainly due to the loss thereof under environments of hyper surveillance and modernity. Initiatives such as these promote the participation of citizens in the definition and redefinition of their built environment.

Therefore the afore mentioned instant urbanisms, and guerrilla spatialities reclaim “publicness” through temporary events, flash mobs as well as *“informal gathering places created by predominantly marginalized communities, have provided new expressions of the collective realms in the contemporary city”* (Hou 2010, p. 2). These contestations of spatial rights question the rhetoric of openness and inclusivity that “public space” represents, and furthermore reject Young in Hou’s (2010) sentiment that public space in a city is accessible to everyone and thus reflects the diversity and heterogeneity of the city. Public space, as postulated in this dissertation, is not accessible to everyone and on the contrary public space may; as it has been suggested, be used for control more than freedom and self expression.

4.4 INSURGENT SPACES IN THE HETEROGENOUS CITY

“In the city center or on the edges, at the heart of the nineteenth century tissue or in the great external zones, they compose an infinite catalogue of informal spaces with innumerable articulations . . . literally occupying the urban public space whose meaning and value they transfigure”

-La Varra in Hou (2010, p. 83)

High density urban settlements have until now been the rule and not the exception due to land within urban centres being a primary resource, and thus their intensive and efficient utilization has been an essential requirement of any appropriate planning framework (Payne 1977) furthermore Villagomez in Hou (2010) suggests that historically land was simply too valuable to be left unused. Despite this fact, current trends in urban design work against these histories creating meaningless tracts of low intensity land use and residual space (Villagomez in Hou 2010) and therefore it has been suggested that the legacies of spatial appropriation and utilisation have been forgotten. The Modernist master planning approach which has defined urbanisation of the last century has demonstrated itself to be unfit in supplying meaningful solutions to the complex issues facing contemporary urban development (Villagomez in Hou 2010) and therefore planning practitioners as it has been suggested need to develop a different socio-spatial imagination (Holston in Sandercock 1998) and furthermore Hou (2010) suggests that in the coming decades planning practitioners will need to acquire a *“deeper understanding of the complex social, economic and environmental systems that govern the world in which we live”* (Hou 2010, p. 82).

Jan Gehl (1987) has questioned the role that public spaces play in supporting “*life between buildings*” and as Villagomez in Hou (2010) postulates, these neglected and forgotten spaces, unplanned and left behind by the modernising process offer a great benefit to the daily “ordinary citizens” of the contemporary city as platforms for insurgent urbanism. Within the construct of developing cities the intense use of residual space has occurred as a result of Western patterns of settlement simply not being viable in the construct for which it is to serve (Villagomez in Hou 2010). For this reason, it is not unusual to find these sites of insurgency located in areas of high disamenity such as abandoned industrial sites or nestled between middle-class housing and commercial structures. While this tends to “*degrade the visual image of many Third World cities*” (Portes in Kasadra & Crenshaw 1991, p. 481), it also provides a platform for which diverse social groups can come into contact with one another for improved access to employment as asserted by Doxiadis (1963) and his theory of ekistics. Furthermore Kasadra & Crenshaw (1991) suggest that although contrary to popular belief, these sites of insurgency and informality are not “*defeated, socially disorganised neighbourhoods*” but rather vital options for the urban poor.

By insurgent urbanism Holston in Sandercock (1998) motions to “*emphasize the opposition of these spaces of citizenship to the modernist spaces that physically dominate so many cities today*” so thus in this sense, insurgency may allude to the contestation of the wasted peripheral space as a result of the modernist rhetoric of urban planning. This chapter identifies the various types of residual space common to the urban landscape, or as suggested by Holston in Sandercock (1998) modernist spaces, and thus postulates that residual space usage forms insurgent urbanism as a livelihood strategy of those socio and spatially excluded and therefore suggesting that “*We must relearn how to look more carefully at the existing urban environment and understanding [sic] its potential and limitations*” (Villagomez in Hou 2010, p. 82). Furthermore, Holston in Sandercock (1998) explains that these sites vary but may include the homeless, networks of mass migration as well as the peripheries of society where the urban poor build their shelters from precarious often salvaged materials in illegal land tenure conditions not to mention the ganglands and sweatshops. Holston motivates that these examples are insurgent as they introduce new identities and practices that disrupt established history, which is supported by Friedman & Douglas (in Sandercock 1998, p. 29) who suggests that “*[t]his rise of civil society has radically altered the political and cultural climate in which we [sic] work as planners*”.

Spaces Between:

This type of Residual Space often results from undeveloped land between buildings, or expansive side setbacks etc. The building line bylaws of urban municipalities have made this type of residual space the most abundant strategy of insurgent urbanism. The dimensions of these spaces between vary dramatically in length, width and height which further allows for a greater development of urban grain by this organic and adaptive urbanism.

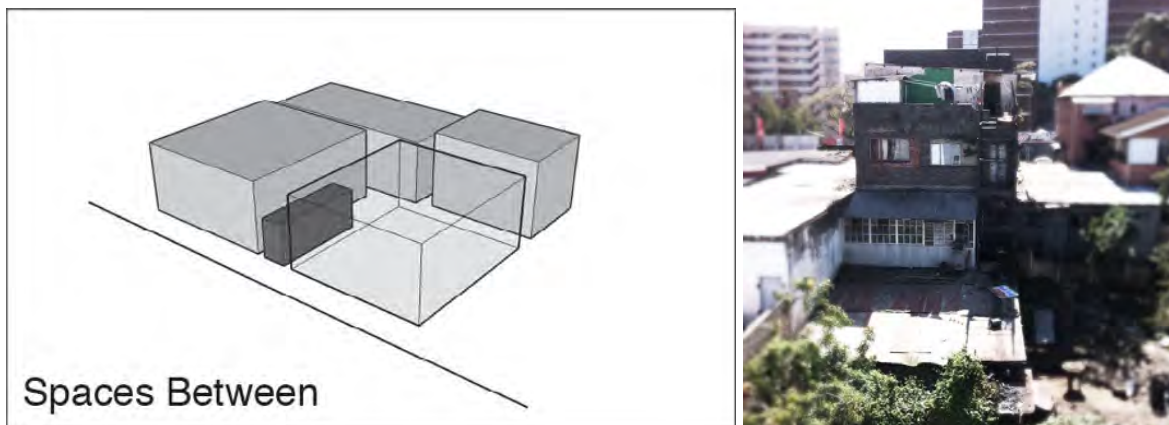


Figure 29 & Figure 30-Show how the interstitial residual spaces between buildings are animated by the urban poor. The figure on the right is a squatter resident nestled between formal housing in Sydenham, Durban.

Spaces Around:

During the last century, the guidelines of how buildings interact with the public realm have changed dramatically, and generally speaking have resulted in buildings that are stepped further back from the street creating intermediary zones between public and private. These spaces within the construct of insurgency and residual space usage offer opportunities for livelihood strategies by utilising this space, challenging the concept of the “buffer zone” and questioning the “semi private” and “semi public” notions of space.

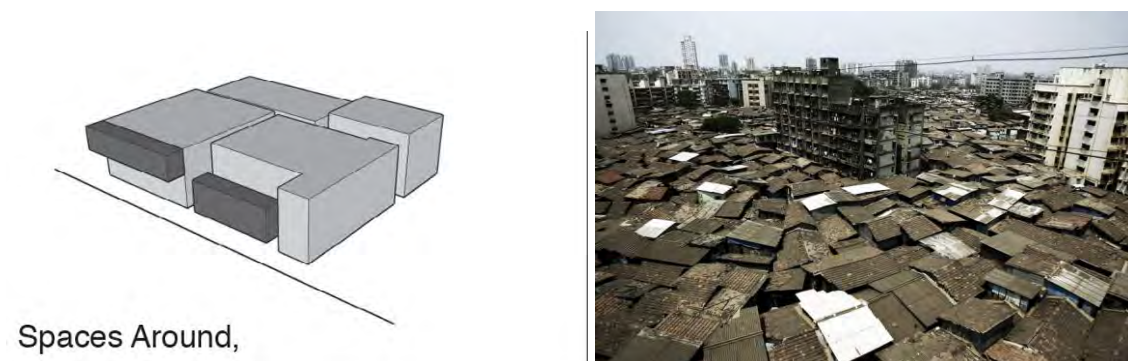


Figure 31 & Figure 32-Is an example of how the residual spaces around established morphologies may be claimed by the urban poor, such as the squatters shown in the image on the right.

Rooftops:

These are the least recognised of all the residual spaces. Only recently has interest been shown in developing these spaces for “urban agriculture” by creating rooftop gardens, so called “green roofs”. Unfortunately, as pointed out by Villagomez in Hou (2010), these spaces remain inaccessible to the public due to the bylaws and regulations regarding fire, safety and security.

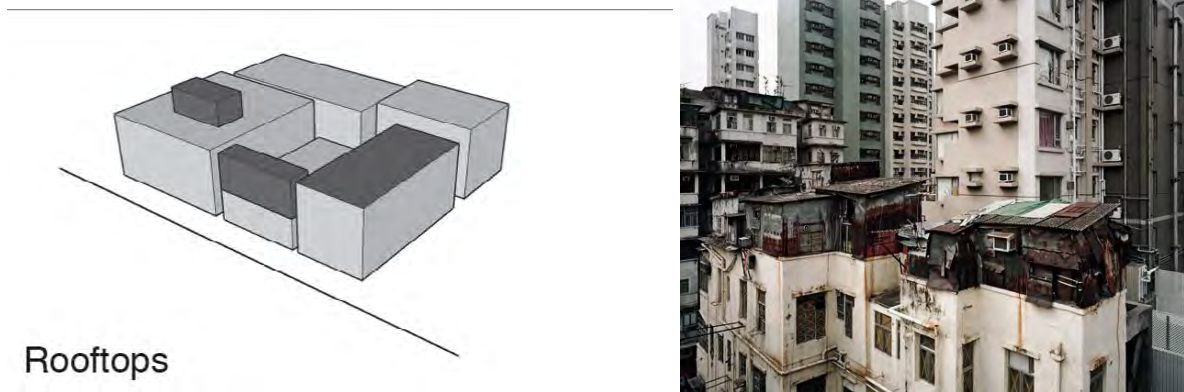


Figure 33 & Figure 34-Show how roof space, where space within the city is limited, is utilised by the urban poor.

Wedges:

“The urban environment consists of a layering of several different physical, social, and natural patterns. Wedges often occur as a result of the intersection of these different urban phenomena [...] that leave irregularly shaped urban conditions” (Villagomez in Hou 2010, p. 89). Due to the irregular shape and often small scale of these sites, they are often left as undeveloped neglected space.

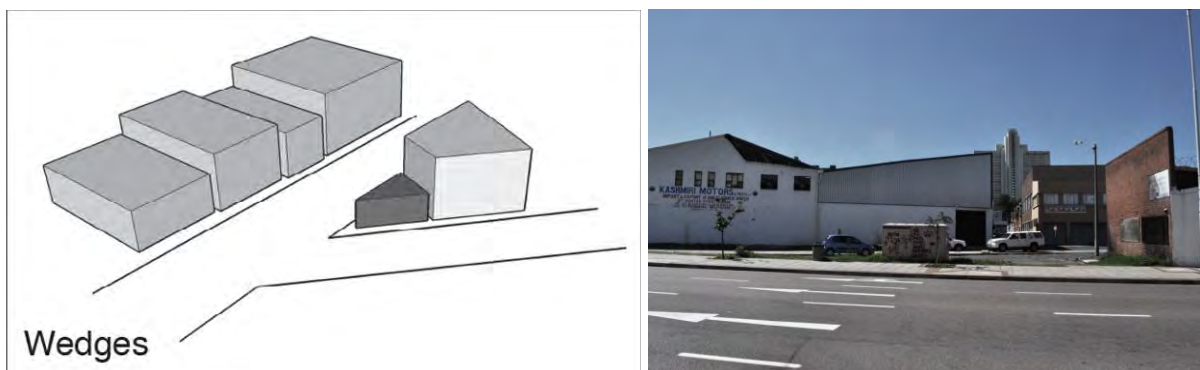


Figure 35 & Figure 36-Wedge spaces are often left uninhabited due to the arbitrary shapes that result for the intersection of the road networks. Milne Road, in Durban, South Africa as shown on the right is an example of this type of space, offering a great opportunity for development.

Redundant Infrastructure:

This type of residual space exists within urban infrastructure that has fallen out of use, generally found within the older parts of the city. The appropriation of this type of residual space offers the potential of well defined open spaces and zones and as with most residual spaces small simple solutions have a large impact.

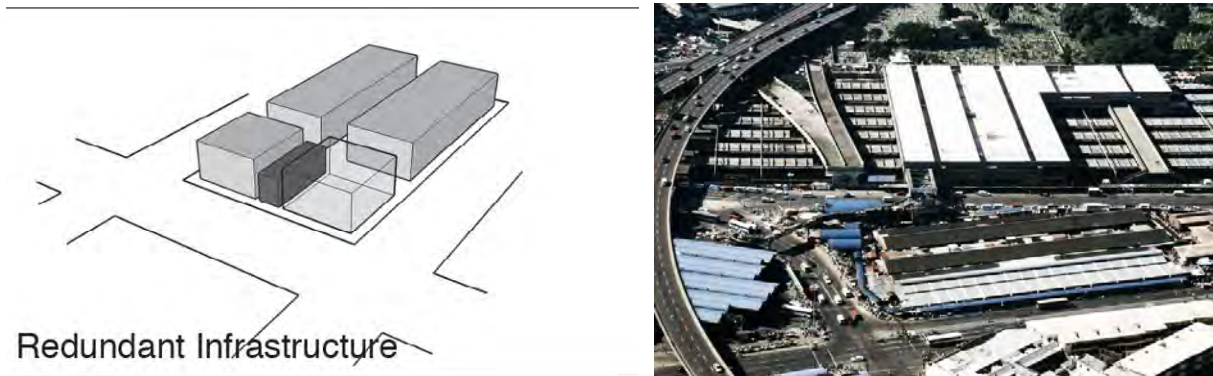


Figure 37 & Figure 38-Redundant infrastructure offers various possibilities for redevelopment depending on the scale of the infrastructure. Warwick Junction in Durban, South Africa is an example of an informal market that has developed around redundant infrastructure as shown in the image on the right.

Oversized Infrastructure:

These spaces occur in the wake of urban infrastructure that had anticipated future growth, and thus are defined by the traffic engineering practices of oversized and unused roads, arterials and rights of way. These vast linear spaces lining the highways of the modern city have great potential to be reinterpreted.

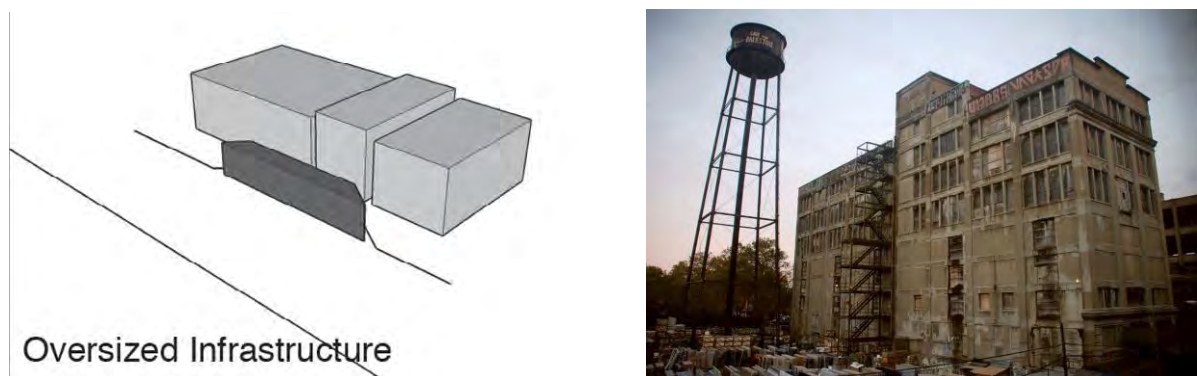
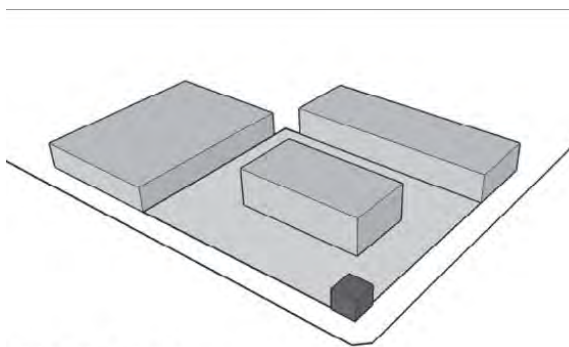


Figure 39 & Figure 40-Oversized and abandoned industrial sites are often utilised by squatters. They offer potential for redevelopment through adaptively reusing the structure.

Void Spaces:

Void spaces are described as the large underutilised spaces surrounding buildings, and although similar to “spaces around” the scale of these void spaces is significantly larger, offering greater potential for reinterpretation. Void spaces are directly related to lower densities and land values, such as parking lots and therefore these spaces may offer the opportunity to transform these underused sites into usable profit generating spaces that can support the livelihood strategies of the insurgent citizens.



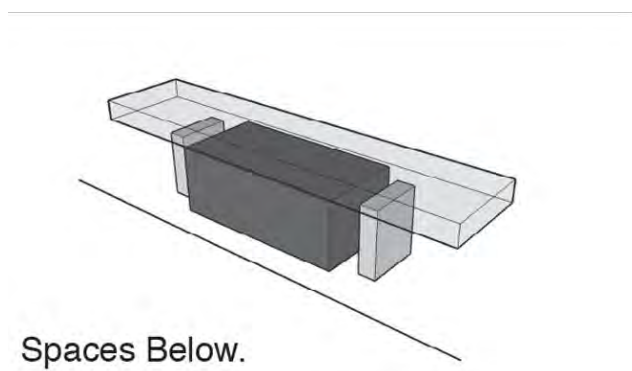
Void Spaces



Figure 41 & Figure 42-As posited, historically land was too valuable to be simply left undeveloped, however in today’s consumer society with its sprawling neighbourhoods, this type of residual space has become common and offers opportunity for densification.

Spaces Below:

Directly related to large infrastructural elements such as freeway underpasses, these spaces vary in shape and scale but are often left neglected and unused, however these spaces below offer great opportunity to insurgent urbanisms.



Spaces Below.



Figure 43 & Figure 44-These spaces are common in all cities of the world, found under bridges and underpasses, these spaces are often unused. The example on the right shows the female informal traders of the Lime Market in Warwick Junction, Durban, South Africa as they trade under the layers of freeways above.

4.5 CONCLUSION

In the context of insurgency as a means to contest spatial rights within the city, the claiming of these residual spaces lies in opposition to current planning practices as the citizens using these spaces are forcing authorities to consider the built environment at the intimate scale of the person (Villagomez in Hou 2010).

From a policy perspective, lessons learnt from these Insurgent Urbanisms as a means of exploiting neglected residual space are invaluable in creating frameworks for more equitable and dynamic urban environments, *“Moreover, the transformation of these everyday spaces can have larger social, economic, and ecological impacts on the livability and quality of our cities”* (Villagomez in Hou 2010, p. 95). Cities are dynamic entities, and are constantly transformed by the pressures applied to them and thus these strategies of insurgency through the reclaiming of residual space provide a platform for testing innovative unconventional urban ideas and thereby challenge the underutilisation of undervalued and underutilised urban spaces. The following chapter investigates the proposed insurgent citizenships that are present within the local context of the Durban CBD. The specific fields of study reflect succinctly the working and living strategies employed by the urban poor as a means to contest their exclusion within this precinct.

CHAPTER 5 | INSURGENCY IN THE DURBAN CBD

5.1 INTRODUCTION

“And thus the city is an oeuvre, closer to a work of art than to a simple material product. If there is production of the city, and social relations in the city, it is a production and reproduction of human beings by human beings, rather than a production of objects”

-Lefebvre in Kofman & Lebas cited by Knudsen (2007, p. 8)

The chapter opens with an investigation into Warwick Junction, an informal market at the heart of the Durban CBD, South Africa. It is theorised within this dissertation that this market serves as the platform for which these insurgencies occur. The chapter divides this concept of insurgency into living space and working space as a means of insurgency. The markets of Warwick serve to develop a working insurgency conceptual framework. The Thokoza hostel study investigates the living strategy of the female insurgents of the Durban CBD, many of them who adopt a livelihood strategy of informal trading within the markets of Warwick or the nearby Mansel Road market respectively. What links these three subjects is the informal market, proving the value that informality plays in supporting these livelihood strategies, and thus insurgency.

As suggested by Holston in Sandercock (1998) these new metropolitan forms of the social are not yet fully understood or absorbed into the fabric of the existing city. As such identifying the physical architectural forms of insurgency is a difficult task, particular due to the informal and survivalist means in which they support their life and livelihood strategies. It would be naive to expect to find examples of “insurgent architecture” as this is indeed an oxymoron, therefore what the following research endeavours to explore is the social and economic construct under which these insurgencies are framed. By understanding the construct, and thus the strategies adopted by these varying citizen groups, planning practitioners may be better informed to generate an architectural and urban strategy by means of grass roots up facilitation.

5.2 PRECEDENT STUDY: AN INVESTIGATION INTO WARWICK JUNCTION, DURBAN, SOUTH AFRICA

5.2.0 HISTORY

“Warwick Junction has provided exhilarating proof of how poor people, in sensitive collaboration with urban planners, can enliven a city centre, generate employment for themselves and expand services for the population at large”

-Hart in Skinner (2010, p. 1)

Skinner (2010) points out that within the vision of the “modern city” and thus perceived “city-ness” (Robinson 2004), informality and street trading do not form part of the urban language and as such, as has been postulated within this dissertation, there exists a contestation between those making and using “public space” and those controlling it (Sandercock 1998).

Warwick Junction in Durban, South Africa offers one such example of these continued contestations. In January 2009 the City Council announced its intentions to build a large shopping mall in Warwick Junction, threatening the livelihoods of up to 8000 informal traders where private property interests combined with a city facing the need to “modernise” ahead of the 2010 soccer world cup clashed with the livelihood strategies of the urban poor. The following precedent study explores how Warwick Junction as a site of insurgent urbanism was threatened by a typically top down planning intervention (Hou 2010), and as such the traders mobilised as Insurgent Citizens to contest their spatial, social and economic rights to trade in Warwick, and as such halted the cities development plans (Skinner 2010). The case of Warwick shows the power of insurgency and how the “in-between” have the power to control their urban and economic environment.

In 1997 a census was undertaken by the Economic Development Department of the street traders working within Durban. This census found that there were as many as 19 301 street traders within Durban, where up to 10 000 were operating in the inner city, further to this 4 065 were located around the Warwick Junction Area (Data Research Africa in Skinner 2010). These figures suggest the value of street trade through the distribution of cheaper goods in appropriate quantities to poorer South Africans (Skinner 2010). Given the confluence of various transport systems within the precinct, Warwick Junction has always served as a site for street vending as traders take advantage of the many commuters that pass through daily.

As with the current false assumptions of “city-ness” (Robinson 2004) within developing countries, informal trading in the height of the apartheid era was strictly controlled as the image of the city did not suite informality. It was only in the 1980’s that street vendors were given permission to operate, but no facilities were provided and by the mid 1990’s up to 4000 traders were working in the precinct; displaced by political violence many were forced to both live and work in the area (Skinner 2010). *“In 1995 the City Council established an urban renewal initiative to address the urban management concerns in the area”* (Skinner 2010, p. 4). Further to this, the city indicated a need to focus on the needs of the urban poor. This focus on the urban poor thus indicated a local authority grappling with the post apartheid urbanity of exclusion and segregation.

5.2.1 INSURGENT CITIZENSHIPS

It was in this political climate that the first signs of Insurgency started to emerge whereby the Self Employed Women’s Union was launched, modelled on the Self Employed Women’s Association of India. The key objectives that SEWU set out to fulfil was to *“build leadership among women in the lowest strata of the working class”* (SEWU Constitution in Skinner 2010, p. 4) and through its mobilisations and negotiation skills, SEWU leaders *“had secured an agreement from the Durban City Council to install water supplies and temporary toilet facilities for street traders”* (Skinner 2010, p. 4). Further to these insurgencies were the street or area committees who created the umbrella body of the Informal Traders Management Board (ITMB) in 1995 which had earned the support of the majority of informal traders in the precinct.

The following ten years saw the development of the Warwick Junction Project, whereby council officials and street traders through SEWU and ITMB spatially redesigned the area providing dramatically improved built environments for traders and commuters. Serious urban management concerns such as crime and cleaning were addressed, as well as many other interventions that lead to the positive redevelopment of the area through an active dialogue between the traders and the authorities (Skinner 2010).

5.2.2 CONTESTATION

In 2003 the Warwick Junction Project’s jurisdiction was extended from the Warwick precinct to the whole inner city (Skinner 2010). Struggling to cope with the substantially larger project

area officials were unable to dedicate the same degree of attention to the project, and thus by 2008 traders and officials noted how some of the infrastructure built in the 1990's was in need of serious upgrades. Even within this context however, the announcement in February 2009 that the city intended on building a shopping mall came as a surprise to many (Skinner 2010). The proposed site for the shopping mall was the Early Morning Market; the hub of the fresh produce trade within the precinct, whose history dates back to the 1880's where it was established by the Indian indentured labourers. There is an estimated population of 2000 people deriving their livelihoods from this market, many of whom are third and even fourth generation traders. As Skinner (2010) points out, it was not only the Early Morning Market traders whose livelihoods were at risk, the developer agreed to construct a 400 bay taxi rank on the third floor and the train station concourse would be connected to the second floor, whilst the current traders would remain on the ground floor. This spatial redesign would result in a situation where commuters would be directed toward the formal shops within the mall, yet would have to go out of their way to pass informal traders, thereby planning the traders out of the precinct which is in complete contrast to the previous approaches of inclusivity and incorporation into the urban fabric as was achieved with the Traditional Medicine Market (Skinner 2010).



Figure 45 & Figure 46-Traders actively contesting the cities decision to build a mall threatening their livelihoods, and a market deeply entrenched with history.

For the first half of 2009, the city attempted to fast track the project, contradicting their own rules and regulations. There was no call for expression of interest when the land was released as well as no evidence of public tendering process or environmental impact assessments etc.

“Despite the history of detailed involvement of stakeholders, the first consultation about the proposed new Mall was held on 18 February 2009, with construction meant to commence in early June” (Skinner 2010, p. 7). Insurgency came in the form of the Congress of South African Trade Unions and the South African Communist Party coming together with the trade organisations under the international alliance of StreetNets’ campaign, “World Class Cities for All”. Planning practitioners and academics joined the fight by calling on the city to cease its plans, and petitions that were circulated gained international support, however the city reacted strongly to these oppositions and traders contesting the plans were dealt with harshly (Skinner 2010). In May 2009, the insurgents staged a legal sit-in in the Early Morning Market as a contestation of their social rights; however were tear gassed by the city police. Further to this abuse, in June 2009 rubber bullets were fired at protesting traders injuring many, including elderly women contesting the threat to their livelihood strategies (Skinner 2010). Any further requests to protest were refused (Haysom in Skinner 2010). The question that these sites of insurgency bring to mind is why the City Councils approach had changed so rapidly, eager to displace not only historically important sites, but also a livelihood support for a large part of the previously excluded members of society within a country struggling to create jobs.

Skinner(2010) cites that one of the primary reasons for this, as discussed within this dissertation is that of the issue of Identity, and thus *“modernist vision of the city that is being fast tracked”* (Skinner 2010, p. 7) primarily due to the hosting of the 2010 Soccer World Cup. This is supported by Bromley (in Skinner 2010, p. 10) who states that *“aggressive policing (of street traders) is particularly notable just before major public and tourist events, on the assumption that orderly streets improve the image of the city to visitors”*, but as postulated, what is the image of the city (Correa 1989)? What defines appropriate cityness? To paraphrase Skinner (2010) although the city did not explicitly state that traders do not “fit” the image of the city, their actions imply that informality is not part of the future of Durban’s CBD.

Asiye eTafuleni, a local NPO working with the informal traders of Warwick became increasingly aware of the devastating effects the mall would have on the traders of the area,

such as the bovine head cooks who were to be relocated to an obscure and underserved location (Dobson 2011). The constant harassment of the bovine head cooks and the market barrow operators by the city officials were a strategy to render the early morning market dysfunctional, however these had counterinsurgent ramifications and as Dobson (2011) points out, this was the catalyst that united the community of informal workers. The Legal Resources Centre at this point agreed to represent the traders, and particularly the barrow operators in an urgent application to the High Court in what was to be known as “*Mbali and others vs. eThekweni Municipality and others*”, whereby the court order secured the rights of these barrow operators to operate without permits (Dobson 2011). This would be the defining moment in the struggle for the livelihood strategies of the barrow operators of Warwick Junction, where 150 of these insurgents crowded the gallery of the high court to await the award.

The following two years of legal struggles between the traders and Warwick Mall [Pty] Ltd. represented a significant achievement by means of the insurgency that was created through these resistances considering that “[d]uring this period the City officials and politicians employed all means to harass, threaten, confuse and alienate the community of informal workers and the Asiye eTafuleni staff” (Dobson 2011, p. 3). What is significant in the case of Warwick, is the ability of insurgent citizenships to contest exclusionary top down processes employed by the generally wealthy minority as a means to protect their livelihood strategies. These contestations have forced the Municipality to reconceptualise a development framework for Warwick that involves a more inclusive consultation process, furthermore during the recent local elections a respected informal trader was elected to Council, securing political prowess for the insurgents. This proves Cornwall (in Miraftab & Wills 2005) sentiment that insurgency goes beyond the right to participate, and can instead create the platform for change. To close, it must be agreed that “*undoubtedly informal workers have secured a victory; they have become common-place in the corridors of the High Court; secured short and long term rights whilst becoming empowered during, and as a result of, the struggle*” (Dobson 2011, p. 3).

5.3 CASE STUDY: THE TRADITIONAL HERB AND MEDICINE MARKET, WARWICK JUNCTION, DURBAN, SOUTH AFRICA

5.3.1 INTRODUCTION

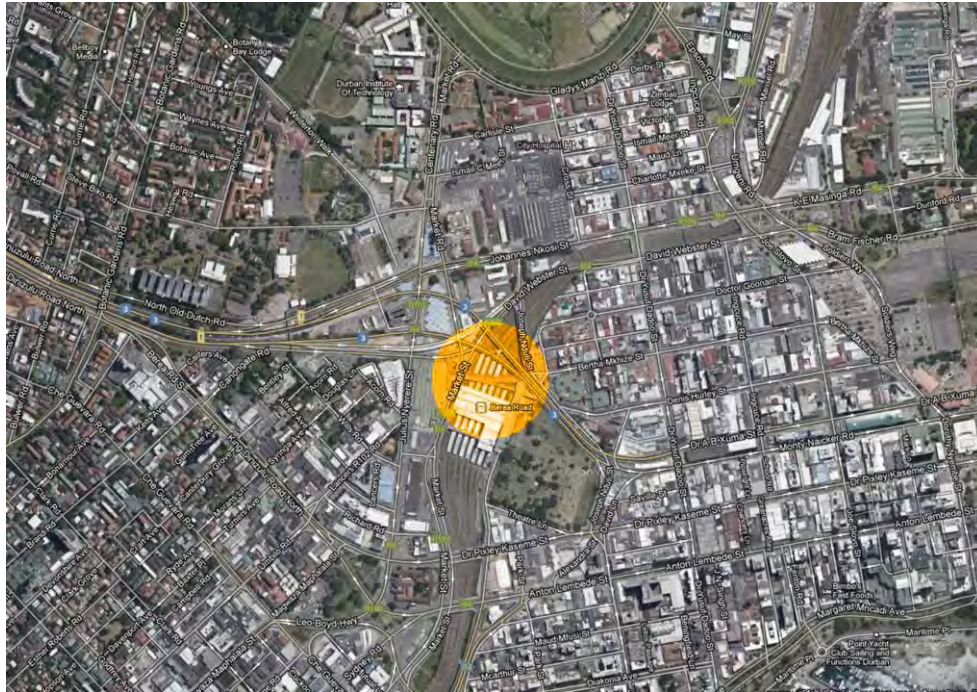


Figure 47- Locality plan of the Traditional Herb and Medicine Market, as part of the Warwick Junction Precinct in the Durban CBD, South Africa.

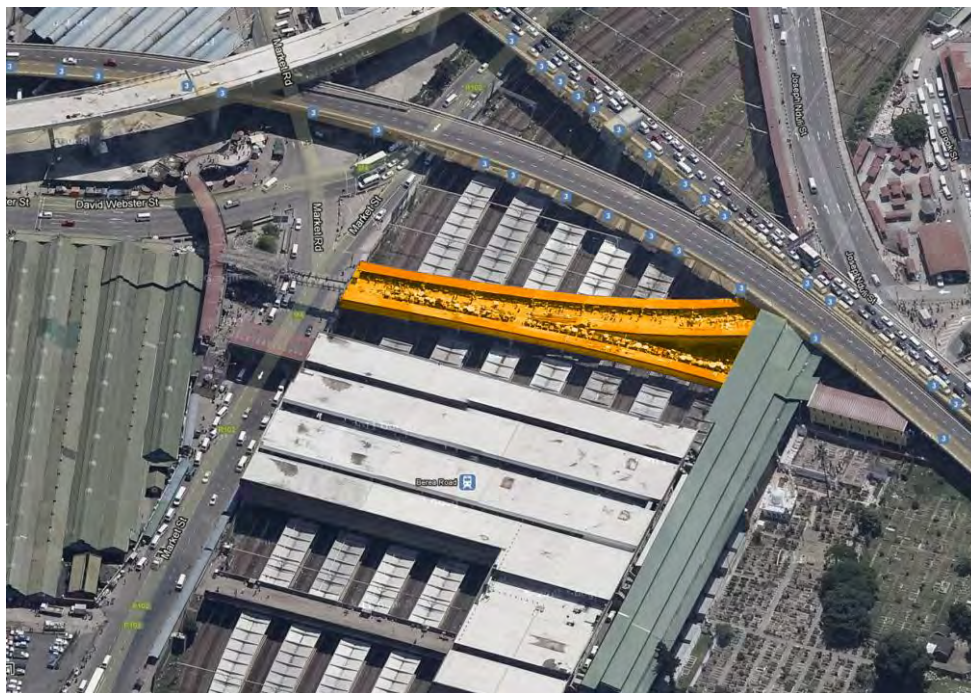


Figure 48- The unfinished, redundant freeway spur on which the market operates

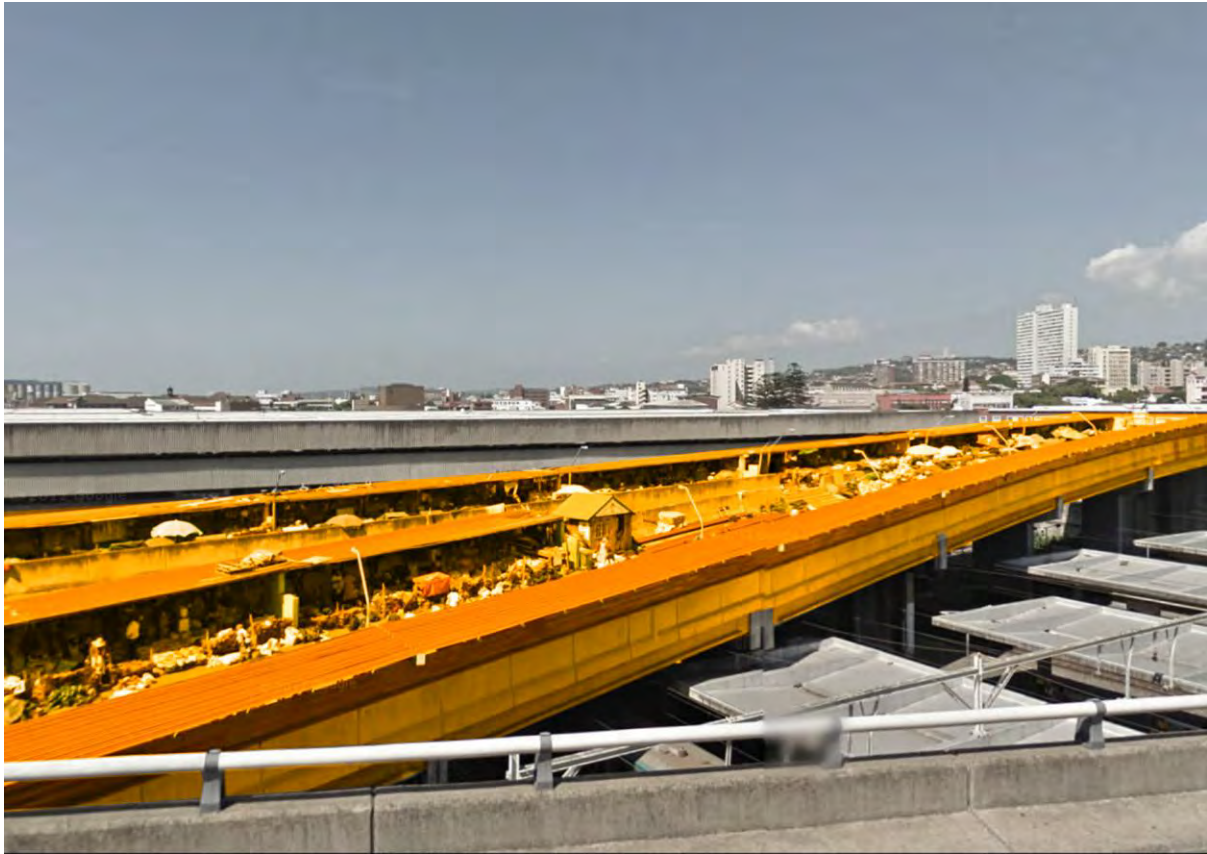


Figure 49-A view looking South-West up to the Berea from the N3 that passes over the market.

An example of Insurgent citizenships and insurgent urbanism within the Warwick Junction precinct is that of the traditional medicine traders, who during the 1990's lined the sidewalks of Russell and Leopold Street in the Durban CBD, with no trading facilities these traders could be found sleeping at their sites under plastic sheets (Skinner 2010). Prior to the urban renewal initiatives by SEWU, ITMB and iTRUMP, the council on two separate occasions threatened to remove the traditional medicine traders, however due to the active participation of these insurgents, by contesting their spatial rights, a dedicated traditional medicine market was proposed and negotiated with the traders and counsellors. The result of these active negotiations and contestations, was the Herb Traders Market which was officially opened in 1998, providing shelter, water and toilet facilities, and today approximately 700 traditional medicine traders now work in the area. *“Intergrating traditional medicine trade into the very fabric of the inner city was particularly significant given that these traders had been systematically harassed since the early 1900's”* (Skinner 2010, p. 6) and furthermore, the rights to trade in this traditional manner within the fabric of an exclusionary, post apartheid “modern” city proved once again the power of insurgency in contesting what is meant by “cityness” and thereby forging new citizenships reflecting true African cityness. The

following case study of this unique informal market within the heart of a morphologically exclusionary city demonstrates that *“inclusive urban planning that enhances the cityscape is possible so contributing to a broader alternative approach to city planning”* (Skinner 2010, p. 7). What can be gained in terms of planning policy is that insurgent user requirements are demonstrated and thrive under conditions of autarky and informality outside of formal design and architecture. As planners working within developing cities, a strategy toward inclusivity and facilitation of insurgent citizenships can be learned from these practices, and thus grassroots up planning is possible by identifying and working with insurgent urbanisms as has been achieved in the Herb Traders Market.

5.3.2 INTERVENTION

Although the presence of this insurgent urbanism was along the before mentioned streets of Russell and Leopold Streets respectively, Dobson (2011) points out that there were in fact pockets of traditional medicine traders scattered throughout the Warwick Junction precinct. These traders could be found on Victoria Street, Brook Street, Grey Street, The Ajmeri Arcade and some Izinyanga could also be found renting rooms within underutilized areas of Grey Street (Dobson 2011). This dispersal of traders was important in conceptualising a formalised traditional medicine market, as the sprawl of this insurgent urbanism would need to be contained within a singular market, and thus a dialogue needed to be engaged in order to provide acceptable facilitation for this group. This dialogue was opened in 1996, and after 2 years of consultation and facilitation, in 1998 the formalised market was commissioned.

This intervention was to be ground breaking, firstly due to the sheer scale of the proposed relocation project. At the time of commission there were approximately 700 tenants documented, however Dobson (2011) believes that there were in fact as many as 1000 informal traders operating within the precinct that needed to be catered for. Due to this unique case of insurgency, and sensitivity of the citizenship that was to be accommodated, there was no precedent that could be followed, either locally or internationally. As such, all proposals and decisions needed to rely on the internal and obscured dynamic presented by this user group, so as to not destroy the *“vital energy”* (Dobson 2011) that existed. This was to be a significant informal economy intervention, as it stood in defiance of the national, conservative policies that were still firmly exclusionary. This was further proven by the bold investment that this project would bolster, costing an estimated R4.0million. This was an unprecedented informal economy investment.

In 1996, the Warwick Junction Urban Renewal Project was spearheaded, with one of its primary focuses being on the insurgent urbanisms of Russell and Leopold Streets. Due to the pavements being “oversubscribed” it was agreed that developing the sidewalks was not an appropriate solution. Aligning with Villagomez’s (in Hou 2010) concept of residual space usage, was the identification of the unused infrastructure of the unutilized freeway spurs that crossed the railway lines adjacent to the Berea rail commuter station (Dobson 2011).



Figure 50-Before the intervention, squatter settlements were starting to be established on the unused freeway spurs, posing health and security risks.

These white elephants, standing as unused scars of the apartheid planning policies of past, had become platforms for opportunistic activities such as informal residential structures. Unsupervised, and under surveyed, these spurs were threatening to become an informal settlement in the heart of the CBD. It was therefore conceptualised that these freeway spurs become host to this proposed market, and thus “*the concept embodied its [The Warwick Junction Urban Renewal Project] emerging philosophy of regenerative effort matched with urban management [...] The Market required space and by occupying the unutilized freeway, the Market prevented the opportunistic invasions*” (Dobson 2011, p. 3). Having ascertained the urban analysis by the eThekweni Transport Authority, it was concluded that any future

transport plans would in fact not utilise these spurs, as such a ten year tenure was agreed upon for the implementation of the market.

The architectural services were commissioned by the private sector architects, OMM Design Workshop who had an understanding of the inclusive nature of this project, and thus realised the necessity for more intensive and inclusive stakeholder engagement. This resulted in what Dobson (2011) terms an “area based approach”. The commissioned market consisted of a series of 12 semi formal, enclosed Izinyana kiosks. Two blocks of toilets as well as individually metered water pointes were provided throughout the market, serving an estimated 10 traders each. The open stalls provided 6 square meters of space per trader, whilst smaller 2 meter squared open air stalls were provided alongside the unroofed thoroughfares. In total approximately 700 traders have been accommodated for within the market.



Figure 51-Looking east toward the CBD, with the traditional market in the foreground, the duality of this modern metropolis is expressed. The steel and glass of modernity is juxtaposed by the traditional market which is a truer representation of the Durban citizenship.



Figure 52-An aerial view showing the various markets of the Warwick Junction Precinct.

Dobson (2011) notes that a significant design consideration was that of the storm water management, due to the close proximity of the roofs to the high voltage railway lines. The solution therefore was that the roofs were to follow the gradient of the unused freeway on which they were constructed and thus reinforced the fluid lines of the unused spurs. Modest materials of treated timber poles and corrugated roof sheeting were used “*producing an architectural expression sympathetic to the products found in the Market*” (Dobson 2011, p. 5). A further consideration was the need to connect the Western end of the freeway to the existing pedestrian bridge. The answer lay in the Market Bridge, which was designed by OMM Design Workshop as a connection between these two nodes as a celebration and not merely a piece of infrastructure. This node more recently has earned the nickname, The Music Bridge, due to the loud music that is played by the informal traders that occupy it.

“This is one of the first South African structures which addresses and celebrates the informal traders who have come to dominate our city centres. The building, which is not much more than a pedestrian bridge with some shady pergolas, is located at the city’s commercial centre, where hawkers, shacks and shebeens cluster around a busy transport intersection. Lightweight structures with shading devices made of wattle branches announce the entrance to the market. The transient quality expresses the informal trading patterns of the hawkers who ply their wares on the bridge”

-South African Sunday Times in Dobson (2001, p. 5)



Figure 53-The Music Bridge, by OMM Design Workshop leading away from the Traditional Herb and Medicine Market.

5.3.3 ANALYSIS

A decade after the Warwick Junction Urban Renewal Project was spearheaded, The Traditional Herb and Medicine Market is as vibrant and dynamic as it was upon first inception. Standing in defiance of the modernisation processes that are sprawling throughout the peri-urban areas, this formalised site of insurgency is a reminder of African cityness contesting the homogeneity of modernity. Personal correspondence with Patrick Ndlovu from the NPO Asiye Etafuleni, and John Khomo from Traders Against Crime has revealed that this market alone supports as many as 14000 jobs within the informal sector. These jobs range from gatherers, to traditional doctors, stompers, assistants, informal sellers and choppers to name but a few.



Figure 54-A panorama of the Traditional Herb and Medicine market showing the city to the East in the background, and Berea Station to the right of the photograph.

This site, existing on unused and abandoned infrastructure represents the power of informality, and the important role it plays within the informal economy of a rapidly modernising African city. Ndlovu galvanises this analysis, by suggesting that the number of people working within the precinct has in fact increased, as a direct result of the identification and implementation of this market for this very specific insurgent citizenship, however exact figures could not be given.

The market, once formalised was only operational once a week on a Thursday, however Ndlovu points out that over the years the operation days have increased and currently the market is operational 7 days a week from 07H00 to 18H00 in the evening. Due to the security afforded by the formalised market, there is no need for the traders to sleep at their stalls and thus many of them rent rooms within the city and commute to work daily. This is evidence that these insurgents are stakeholders in the informal economy of the city, and the work they

do is not survivalist, but rather a complex, multi faceted and multi layered network that feeds this economy.

Further to this, the identities that have been forged are unique, and this uniqueness is celebrated and facilitated by a specialist architecture that identifies this citizenship within the cosmopolitan city of Durban. Although the roof of the market needed to be replaced in 2010, no further changes have been made to the physical architecture of the market. Ndlovu and Khomo do note however that when the market was implemented the “tenants” were offered tables to trade from, however many rejected this idea, and old photographs of the market show traders sitting on the floor as they did traditionally.



Figure 55-In the early years traders insisted they did not want tables, but preferred to sit and work on the floor as shown above. As the market has evolved, so to have the traders and now almost all the traders operate from custom made tables and benches.

However, if one visits the market today, all the traders now operate from custom made tables as they jostle for attention on the crowded bridge. As such the market, although architecturally formalised is only host to an insurgent and fluid citizenship that is operating within its own terms and identities.



Figure 56, Figure 57 and Figure 58-Showing the various traders stalls within the market, as well as the traditional herbs and medicine that is sold.



Figure 59-The variety of traditional medicine and herbs that can be found within the market.

5.3.4 CONCLUSION

The inability to formalise insurgency is why top down interventions, such as the proposed mall as discussed previously, can never succeed. It is only through insurgency that specific user requirement can be identified, and as such be provided for. Modernist planning procedures of “one size fits all” condemn these unique citizenships and identities into the interstitial niches of the city as is evident in almost all developing cities of the world, where planning policy is at odds with user requirements. Perhaps the case study of the Herb Traders Market provides an example of how planners might address the possibility of inclusion, by establishing a means of identifying the true user needs and not development “wants”. Further to this, it is important to understand the value of the informal economy within a developing country, especially one such as South Africa where poverty levels are on the rise and the government cannot create enough jobs. By understanding the power of informality and insurgency, planners can better provide for these communities within the existing, Euro Urban fabric of the Post Apartheid and Post Colonial city. Appropriate architectural responses can only be provided by active engagement with citizens that currently do so under conditions of Autarky, and thus professionals may provide more suitable and inclusive built environments after the establishment of these dialogues



Figure 60-A reminder of the harsh environment in which this market exists.

5.4.0 CASE STUDY: RURAL TO URBAN MIGRATION-TRANSITIONAL HOUSING IN THE DURBAN CBD

The previous sub chapters have identified various stakeholders within the informal economy as a type of insurgency within the developing cities of the modern world. The Warwick Junction analysis along with the Traditional Medicine Market establishes an example of infrastructure provision in order to facilitate these insurgent activities as a product of contestation and claiming rights to the city. The following sub chapter however will seek to explore the unique instances of hostel dwelling within South Africa, as a transitional place between the migratory patterns from the rural areas to the city, and the micro migratory patterns from the places of work to this “inbetween” residence. Where the previous studies focussed on an economic strategy of the insurgent citizens, the following study will focus on the housing strategy of these citizens, and thus will provide within the context of this research, an understanding of the migratory and economic strategies employed by these marginalised groups.

5.4.1 INTRODUCTION

As Hansmann (1993) suggests, hostels perhaps more than any other form of accommodation reflect the social relations within society and this is particularly true within the South African context where hostels are the symbol of the exclusionary planning processes adopted by the Apartheid government in an attempt to control “African” urbanisation. The Thokoza women’s hostel is a symbol of the migratory histories of those previously excluded citizens, as they were forced to live out an isolated existence in single sex hostels (Harber 2011). However, as is true within the previous studies, often these sites offer double temporality’s and dual meanings, and therefore as shall be explored, these hostels designed to separate and segregate, under insurgent citizenship have become sites of hope, independence and freedom from the patriarchal systems that are still experienced in the rural communities from where they migrate. Contesting strict and exclusionary control, the women that inhabit Thokoza have developed strategies to deal with their economic constraints as well as the reality that housing provision is historically and continues to be sexually biased (Hansmann 1993). It is under this context that Thokoza is a site of insurgent citizenship and insurgent urbanism as through the community of women, with varying backgrounds, ages and livelihood strategies, Thokoza has become a home and a symbol of solidarity.

5.4.2 THE URBANISATION OF DURBAN, SOUTH AFRICA

The curtailing of access to urban land on a large scale began as early as 1913 with the implementation of the Native Land Act and again in 1936 with the Native Trust & Land Act, both of which were engineered to control the urbanisation process, and specifically that of African urbanisation. Along with this control of the urbanisation process, came the paradox in the need for migrant workers within an urban framework that prohibited the permanent accommodation of these workers and thus the concern was to regulate labour “supply” under the assumption that urban areas were for whites only (Hansmann 1993). This led to the development of the Native Urban Areas Act of 1923, which made local authorities responsible for the provision of “African” migrant worker accommodation within segregated urban areas (Hansmann 1993), and this came in the form of hostels and dormitories, therefore the permanence of this accommodation was mostly undefined.

The 1940's and 1950's saw a rapid growth in the African population; however this growth was not met with housing opportunities for the majority citizenship. The implications of this increased citizenship was the implementation of the 1945 Native Urban Areas Act, which re-emphasised the need for segregation, as the informal settlements scattered around the peripheries and on private and public land, were growing exponentially “threatening” white urbanity. This was particularly evident in areas such as Cato Manor, on the edges of the city, where in 1949 there was a recorded 4000 shacks standing in defiance of the segregationist urbanisation policies (Hansmann 1993). These peripheral squatters were the result of a state of inbetween for the workforce of the developing city of Durban, whereby housing provision within the city did not exist formally, yet commuting from rural areas daily was impractical. The resulting social construct of these prohibitions resulted in a distinct insider and outsider socialism. The ‘urban insider’ socialism is the condition under which Hostels were built, as a means of “allowing” the labour force to live within the city proper, albeit on the CBD borders. These hostels represented a gateway to the city and to job security, even though the political construct under which they were imagined was segregationist and divorced from the socio-cultural needs of the inhabitants. Although the hostels may have represented a means to gain access to the “white” city, the policies engineered into their existence ensured that permanence was never assured, and thus all inhabitants lived in a perpetual state of transition.

5.4.3 THOKOZA WOMEN'S HOSTEL



Figure 61-Locality plan of the Thokoza Women's Hostel, Greyville, Durban, South Africa.

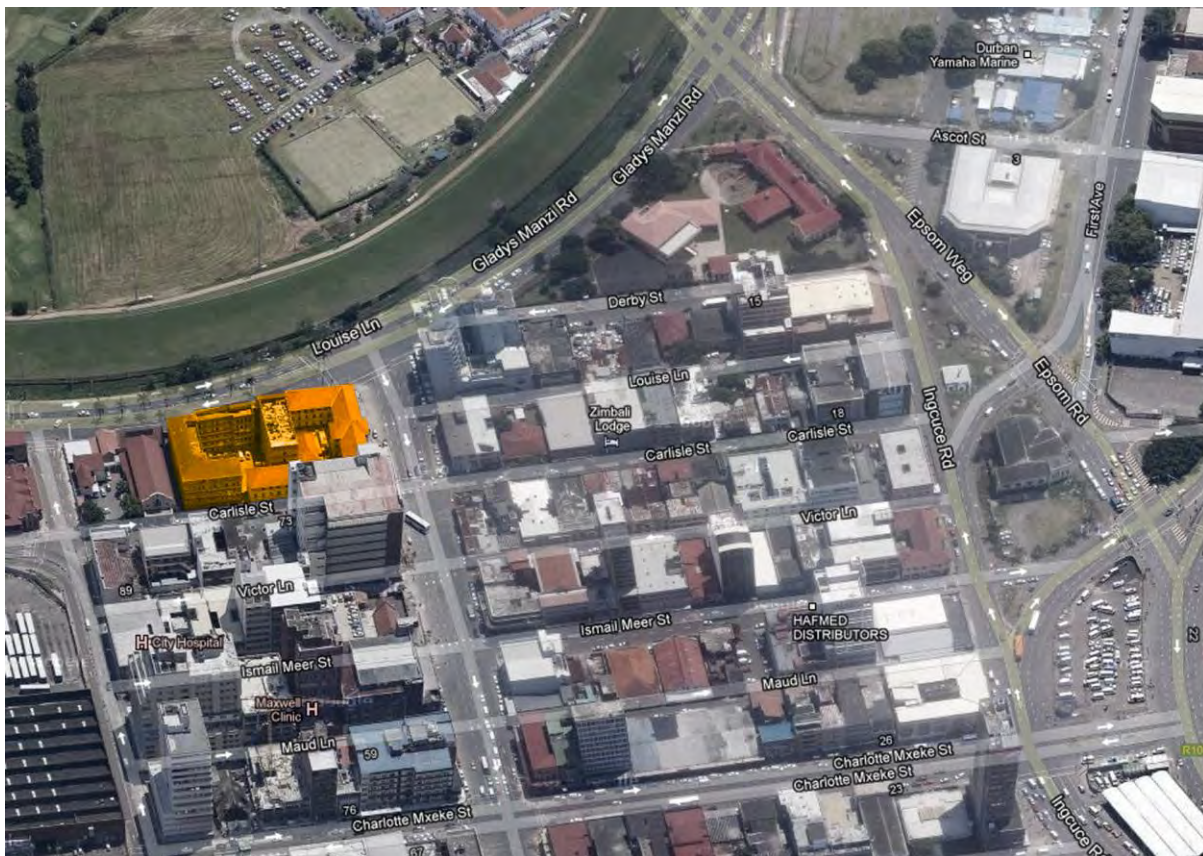


Figure 62-Position of the Thokoza Women's Hostel in its urban context.

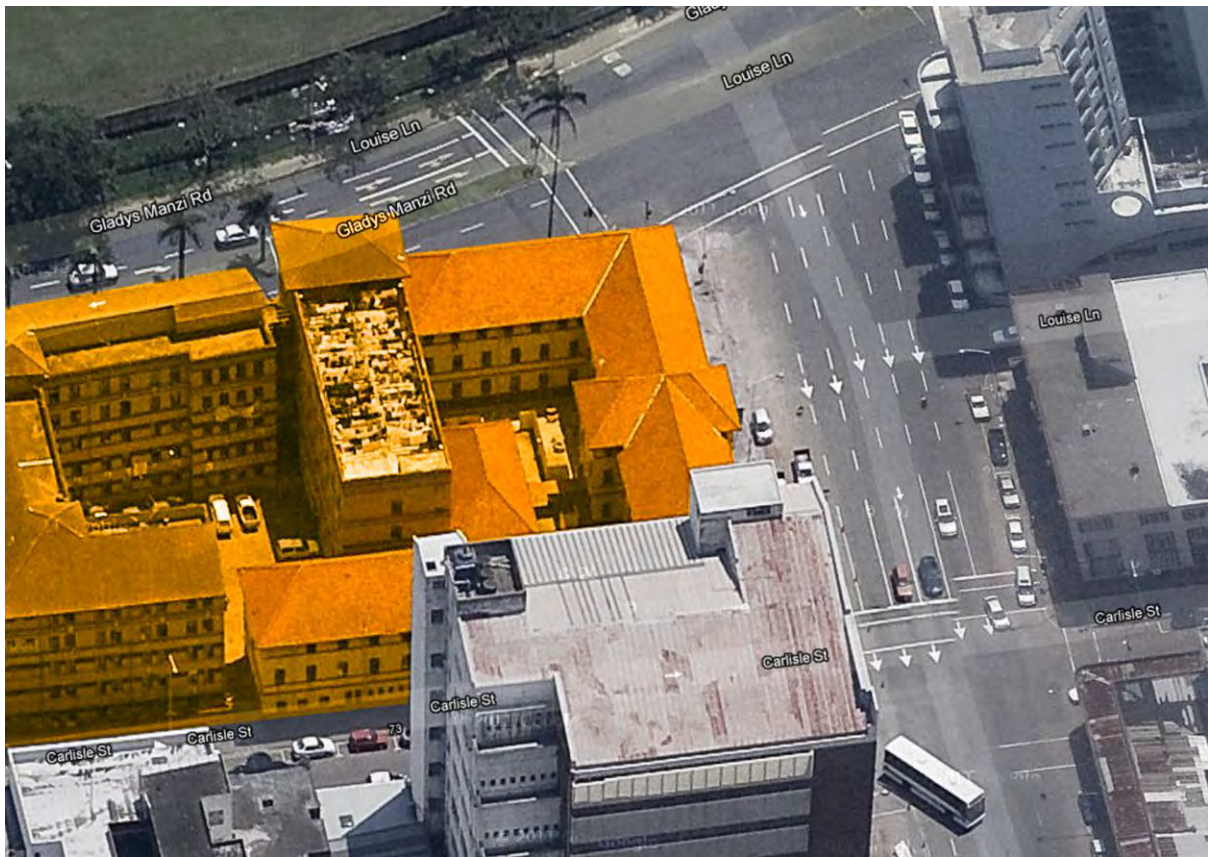


Figure 63-Aerial view of the Thokoza Women's Hostel.

As has been postulated within this research, the Post Apartheid era within South Africa has yielded new arena's of exclusion and segregation. As theorised, the racial exclusions of past have metamorphosed into the economic exclusions of present with an exceeding growth between the "haves" and "have-nots" within contemporary society. What needs to be recognised is the struggle of women within the construct of these exclusions because within these socio-political and socio-economic exclusions gender bias and discrimination pose further challenges for women than their male counterparts. This is especially true within the South African construct, where amongst these racial, social and economic exclusions, African women are still bound by a heavily patriarchal cultural system within the rural areas, as such hostels offer a way in which to achieve independence and break from these social systems

Thokoza, roughly translated as happiness (Harber 2012) is located on the peripheries of the old Indian CBD of Durban. Built in 1932, with the second phases being completed in the 1960's (Hansmann 1993), Thokoza was the first women's hostel in South Africa. *"With over 5 000 residents per hectare it is the most densely inhabited residential site in the city, crowded with women seeking independence and a safe haven from a male dominated*

society” (Harber 2011, p. 2). Thokoza, as with most single sex hostels within South Africa has taken on a changing symbolism in recent times, representing the eras of influx control but also a suitable option for accommodation within the limitations of their social reality (Hansmann 1993). The residents of Thokoza can be divided into two major groups, namely casual and permanent. The casual residents are those on the “waiting list” who do not have formal access to the rooms, as such sleep outside on the corridors or in the courtyard under the washing lines. “At night the whole site is packed with itinerant women sleeping on planks to seek refuge from the streets” (Harber 2011, p. 2), their belongings are stored in a dedicated shed which is locked at night, so although this may be extreme, the security offered is still better than a shelter or the streets.

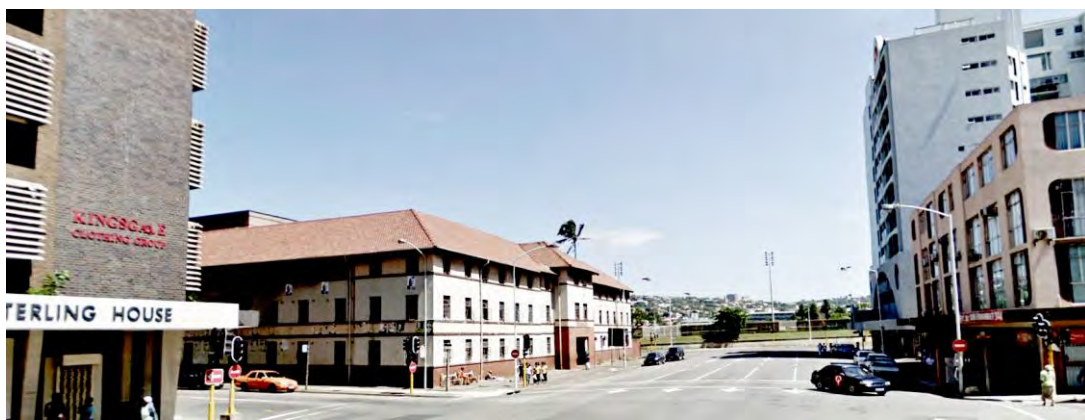


Figure 64-An external view of the hostel, looking North-West toward the Greyville Racetrack, Durban, South Africa.

The permanent residents live in either 3 bed rooms or in dormitories for up to 9 beds. At the time of Hansmann’s (1993) research, there were an estimated 400 casual tenants and 689 permanent tenants. The small rooms of Thokoza have three permanent beds within, however the floor space between these beds is reserved for a fourth person. This tenant is usually a family member of one of the women within the room waiting to inherit a bed (Harber 2012) however there is no physical trace of these women during the day.

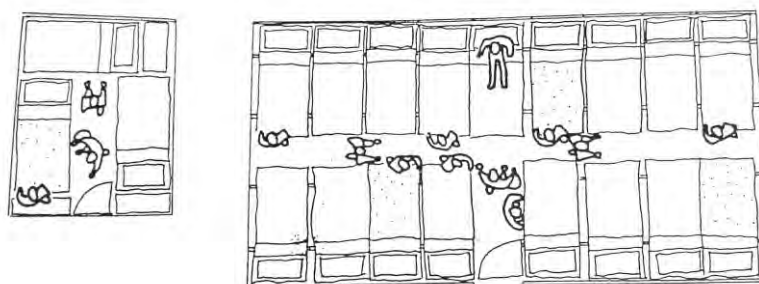


Figure 65-The two sketches show the different room layouts found within the hostel.

Therefore as expressed by Harber (2012) there is a strict social hierarchy, and bedrooms and even bed space within the room itself is based upon inheritance, and a long process of earning the right to a bed. Even within the room once you have earned a bed, the most sought after bed is the one at the window because of the access to natural light, which is in stark contrast to a men's hostel where the corners of the rooms are sought after because of the 2 walls that one may own, and thus decorate with posters and trinkets.

The rooms are compact and extremely well organised, housing beds, stoves, groceries, fridges, televisions, washing lines, lockers and clothing to name but a few. An interesting observation made by Buckland (2012) is that these spaces are living spaces, that are not just places to sleep as was experienced in the male hostels in her Jacobs hostel research, but are also sites to generate income. Many women can be found beading, sewing or even drying out peanuts under their beds as a means to sell, mostly within the nearby Warwick Junction and Mansel Road markets (Harber 2012).



NM Muthwa from Mfume, street trader
Resident 25 yrs



Fikelaphi Bhengu from Mphumulo, dressmaker
Resident 13 yrs

Figure 66-Shows how a women dries peanuts under her bed for sale at the market whilst Figure 67-Shows how the bed space is transformed into work space as Fikelaphi Bhengu, a dress maker trading at Warwick Junction, sits and sews her garments.

Beds are raised on paint tins, so that the space below the beds can be maximised for storage, which is in direct contrast to the men’s hostels where even the space under the beds is not owned by the bed owner, as such casual residents have a right to sleep under the permanent residents beds earning them the nickname, the mechanics (Harber 2012).



Mpontshami Phumzile from Ndwedwe, cleaner
Resident 6 yrs



Janet Mngoma from Groutville, cleaner
Resident 13 yrs

Figure 68 and Figure 69-Show the dynamic use of the bed space, and how through different activities within the same room, the spatiality is redefined; from work, to sleep to store, all within the area of a single bed.

Although hostels were designed as transitional places of residence, many of the women seek permanent refuge therein. According to Hansmann’s (1993) research, up to 82% of the women of have been residing in Thokoza for more than 15 years, as such Thokoza stands in defiance of its original purpose, as an in between place of non-permanent residence between the rural areas and the place of work in the city. These women have chosen to leave the rural areas, and have chosen to live at the Thokoza hostel, and thus this insurgency is based upon a choice to challenge the patriarchal systems of their “homelands” by not returning to their place of origin (Buckland 2012). Buckland (2012) points out how these decisions are met with sharp resistance by their families, further compounded by the fact that many of these women have abandoned their children and relatives for a life in the city. Thus Thokoza offers a place of refuge and security in the most literal sense. Being a single sex women’s hostel,

and adhering to the strict rules of no men, and no visiting family members other than in the entrance foyer (Hansmann 1993) means that these women can in a literal sense, cut themselves off from the contesting reality in their “homelands”.

Further proof to the postulated theory of insurgency within the Thokoza women’s hostel, is that of the historic symbolism and functional parameters of the hostel being challenged by the current inhabitants, which motions Hansmann (1993) to note that Thokoza is a “*historic accident*”. This “historic accident” is based on the premise that the hostel itself was created as strategy by the apartheid regime to control the influx of the “African” population into white areas, and to strengthen the division lines between races within the Durban CBD, and therefore was not as a result of a genuine need for housing provision. However within in today’s construct, within the same walls of division, Thokoza stands as a viable and affordable solution to housing provision for those in the most desperate socio-economic conditions, the informal working women of the Durban CBD. The strategy of placing hostels on the periphery, close to transport nodes, which were seen as “African” areas, as the migrant workers entered and exited the city daily, has also been reversed. The women of Thokoza hostel are domestic servants, street traders, bead artists, washer women, office workers and pensioners (Harber 2011) and therefore the closer proximity to the Mansel Road and Warwick Junction Markets is of great benefit to their livelihood strategies. This close relationship between the transport interchanges, work and home has strengthened the micro migratory patterns as a positive strategy for the women, and not for the convenience of white urbanisms of past. This relationship offers an opportunity for a true reflection of what constitutes African cityness.

Within this changing paradigm, and under extreme life situations insurgency is born and to paraphrase Harber (2011) lives are built, dignity is maintained and livelihood strategies are supported. Within the context of housing backlogs and unserviced informal settlements on the peripheries, these contentious historical artefacts are relatively cheap, well located, secure and well serviced and therefore offer dignified and viable solutions for housing these insurgents. “*Beyond planning policies, beyond cultural traditions of land tenure that emphatically restricted social and physical mobility of women, here is a new place of contemporary, female, urbanity*” (Harber 2011, p. 2).

5.4.4 ANALYSIS

Although it has been shown that hostels have been adaptively reused socially from their original purpose, therefore limiting the degree in which they can be spatially critiqued, there are still critical issues that need to be addressed in order to better facilitate these women.

Perhaps the most obvious observation is the critical role these facilities play in the lives of the informal working women of the city, and therefore the question of why there are not more facilities to cater for this very specific need arises. To draw upon the previous study of Warwick Junction and its various markets, infrastructure was provided due to the sheer scale of users drawing from this informal market, and thus a tangible need for intervention. The same must be assumed with Thokoza, having the highest residential population density in the CBD, there is a clear need to facilitate these women in secure, accessible and suitable residences.

More programmatically, what is lacking within the Thokoza hostel is any facility for community or religious events. As such, planning practitioners seeking to cater for this insurgent group of women, need to understand and thus provide for these spatialities in order to best support these life strategies. Due to the amount of women using the hostel, the services are over burdened and therefore access to showers and toilets is restricted, especially during peak hours. What can be learned from these women is the ingenious use of space within these tiny rooms. This spatial utilisation reflects the social relations in society, where resources are scarce the use of space and the allocation of these minimal resources becomes highly strategic.



Mbatha Alice from Mtshezi, pensioner
Resident 34 yrs



Manxumalo from Johannesburg, beader
Resident 36 yrs

Figure 70 and Figure 71-Residence for 34 and 36 years respectively, these ladies have established new urban lives and identities despite the social context under which they live. Being patriarchal refugees, Thokoza has become more than a transitional place of accommodation, but has become home and a place of safety and security.

This is true for all instances of insurgency explored within this research, whether it be for a livelihood strategy or a housing strategy, these citizens within extreme life situations are able to survive with little to nothing. As planning practitioners working within rapidly developing cities, understanding these spatialities is pertinent in providing adequate and suitable options for those seeking to live and work within the city. Although the political construct under which hostels were envisioned is one of exclusion and control, perhaps as has been achieved by the insurgent women of Thokoza, hostels can play a role in developing more inclusive cities, by providing secure housing options for the vulnerable informal working women of the Durban CBD.

CHAPTER 6 | WASTE PICKING AS A MODEL OF INSURGENCY

6.1 INTRODUCTION



Figure 72-Rag Pickers at the 70 acre Ghazipur Landfill Site, East Delhi, India.

For the urban poor, seeking to contest their exclusions from the developing cities of the modern world, informal waste recycling or *waste picking* as it is commonly known, offers a means to escape their conditions of poverty by adopting this invaluable livelihood strategy that is mutually beneficial to the recyclers and the cities for which this activity serves. The following chapter will explore the concept of insurgency, using this model of waste picking as a means to mobilise the urban poor in an international phenomenon. These previously excluded and marginalised members of society now make up a considerable percentage of the population in developing countries, and are staking their claims and rights to the city, and their rights to participation and thus creating unique citizenships. These citizenships are no longer classed as merely survivalist or informal, but are forming part of the metabolism of the modern city, and with it are gaining socio-political muscle in which to contest their socio-spatial identities, no longer being classed as the in between or exiles of society as social biases of past may suggest, by means insurgency these new identities of the urban working poor have been framed.

6.1.2 WASTE PICKING AS A LIVELIHOOD STRATEGY

Nas & Jaffe (2003) suggest that refuse workers can be categorised as those who contribute to the cleaning of the environment by formal processes through collection, transport and disposal of waste and those who use waste as a means of financial gain where the collection of waste items may be sold for profit. Sigular (in Nas & Jaffe 2003) describes this further by means of the use of refuse, as such “waste-as-waste” by refuse officials and thus “waste-as-ore” by the waste pickers, postulating the value that waste has to those who derive livelihood strategies from it. The term waste picker then, may be described as a person responsible for the reclamation of reusable and recyclable materials from what others have cast away as waste (Samson in WIEGO 2011), and these waste pickers can range from the poor rummaging through refuse in search of necessities such as food to organised pickers linked to unions, co-operatives or associations that sell to middlemen (WIEGO 2011). At the first World Conference of Waste Pickers in 2008, the term “waste picker” was adopted to facilitate global networking and to alleviate the derogatory terms such as “scavengers”, or some of the international labels such as Catadores in Portugal, Recicladores in Spain, the Zabaleen in Cairo and the Karung Guni in Singapore to name a few (WIEGO 2011). Although the pretext under which these waste pickers exist may differ from region to region and country to country, it can be agreed that there are some common aspects that all waste pickers share as stipulated by Medina (in Nas & Jaffe 2003 and WIEGO 2011) and these common characteristics include:

- Waste pickers are subject to social stigma and cultural bias, poor working conditions, and are frequently harassed
- Waste pickers are relatively poor, as such waste picking provides an adaptive response to chronic poverty in developing countries
- Waste picking is highly responsive to market-driven conditions for recyclables and therefore this livelihood strategy is vulnerable to market fluctuations such as the recent recession
- Waste picker populations are often made up of rural to urban migrants such as Delhi where waste pickers are often Bangladeshis. In other places, they are likely to be from marginalized groups or rejected from global economic processes
- Although the work done seems unorganised, the processes of waste picking and selling to middle men is a highly organised process

- Numbers of waste pickers fluctuate due to economic conditions and urban processes
- Waste pickers are often not part of public solid waste management systems; they are socially invisible and are seldom reported in official statistics
- Waste picking is easily learned and usually does not require literacy



Figure 73-A waste picker from the Hulene landfill site, Maputo, Mozambique shows the dystopic existence these waste pickers live in.

A 1988 World Bank study estimated that waste pickers made up as much as 2% of the world's population (Bartone in WIEGO 2011). These statistics would imply that literally millions of people around the world are involved in waste picking of some sort however, little socio-economic or statistical information exists, and most studies for this sector are qualitative and are frequently based on small samples making generalisations difficult (Wiego 2011 and Nas & Jaffe 2003). Despite the significant benefits informal recycling offers, socially, ecologically and economically, waste pickers continue to suffer dire working conditions, with no recognition and in addition many of these waste pickers do not have access to any form of state sponsorship or social protection. However, through insurgency, change is beginning to be evident, and membership based organisations and other progressive

entities are assisting to create awareness to the vital roles these insurgents play and are thus encouraging authorities to develop more progressive and inclusive policies.

6.1.3 SOCIO-CULTURAL ASPECTS

In most developing countries waste pickers have differing socio-cultural backgrounds to that of the majority of the population, as such Nas & Jaffe (2003) suggest that their socio economic status is generally low when compared to the authorities and general public, going so far as to suggest that the higher socio-economic groups consider and treat waste pickers as “*part of the rubbish they work with*” (ASMARE in Nas & Jaffe 2003, p. 345).

“*Comparative research and experiences have shown that the scavengers consider themselves as a sort of social category associated with sub-human characteristics*” (UNESCO in Nas & Jaffe 2003, p. 345) furthermore, due to low levels of education and unhealthy working conditions, combined with the before mentioned low socio-economic status means that this population of the in between and insurgents create very negative self perceptions and social identities for themselves. There is further evidence of this in the Johannesburg informal recyclers who refer to themselves as “*amabhoshi*”, loosely translated as a ‘toilet’ (Authors personal correspondence).



Figure 74-A waste picker from the Hulene landfill site, Maputo, Mozambique bails the recyclable materials into a salvaged bag to be taken elsewhere for further sorting and sale to “middlemen”.

Medina (in Nas & Jaffe 2003) states that although waste pickers aren't the poorest of the poor, when compared to some of the other lower socio economic groups found within the urban context, their occupation is ascribed as the lowest in society, as such they have historically been outcasts and marginal groups, socio-spatial in-betweeners. In India, the waste pickers are referred to as the Dalits, or untouchables, being so low in the caste system that they are essentially outside of it (Nas & Jaffe 2003). *"Because of their caste, they are seen as being the lowest of the low, relegated to dirty work such as scavenging. The daily contact with garbage and sometimes even human excreta reinforces their 'untouchable' status"* (Nas & Jaffe 2003, p. 345). These negative perceptions by officials, the general public and themselves prevents these in-betweeners from contesting their social rights, however through NGO's, co-operatives and sometimes progressive government strategies, the waste pickers elevate themselves to the status of insurgent citizens as they strive for recognition, humanity and value. By forming co-operatives, and contesting their socio-cultural status within society, waste pickers become recognised as an accepted part of the waste management system, as such their self esteem grows with self reliance and social identity. To paraphrase Nas & Jaffe (2003), small businessmen and micro-entrepreneurs sound more positive, modern and engaging than "rag pickers" or "vultures".

6.1.4 INTERVENTION

Nas & Jaffe (2003) highlight that the most common form of intervention is played on the part of the waste pickers themselves, where through mobilisation, action and insurgency they are able to contest their rights to improved living conditions as well as improved working conditions by forming co-operatives with the formal waste management systems. Medina (2008) suggests that through organisation, waste pickers can strengthen their bargaining position with industry and government and therefore become principal players in the development process, offering the opportunity to escape their conditions of poverty by means of grassroots development, furthermore by organising themselves into co-operatives they can enter into contracts with industry. Nas & Jaffe (2003) cite an example of this in Colombia, which like most other South American countries has a high level of urbanisation and thus high levels of urban poverty. In this case study, it was shown that up to 50 000 families made a living from waste picking, many of which from landfills. Through NGO's and governmental agencies, these co-ops were offered start up funding, loans, technical as well as managerial, legal and economic consultancy services, and thus allowed the waste pickers an

independence from the middlemen, resulting in higher proceeds and better living conditions (Svadlenak-Gomez in Nas & Jaffe 2003).

A similar parallel can be drawn from Belo Horizonte, one of Brazil's larger cities where similar objectives were realised due to the engagement from the local Roman Catholic Church, the *Street Pastoral* (Nas & Jaffe 2003). A waste pickers association was established, and thus was included in the governments "*sustainable development waste management model*" (Nas & Jaffe 2003, p. 342). This was a landmark movement by the authorities as the insurgent waste pickers were transformed into the "preferential agents" in the recyclable waste management systems of the city, receiving operational support as well as educational opportunities. As a result, the working and living conditions of this marginalised group were dramatically improved, whilst the image of the city was uplifted through general cleanliness. "*This relatively small project is an example of win-win strategies within solid waste management, but the success of such projects relies on an open-minded approach and a productive relationship between municipality, CBO or NGO, and scavengers*" (ASMARE in Nas & Jaffe 2003, p. 342). In Brazil, due to the efforts of co-ops, waste picking has now been recognised and supported by the government; as such waste pickers are seen as legitimate stakeholders who are able to voice their opinions at local, state and national levels (Medina 2008). One of the other benefits that has been noted by Medina (2008) is that by working in a co-op and wearing a uniform boosts waste pickers pride and self esteem, as well as raises public awareness, further to this Medina (2008) cites a recent survey in which "*six Latin American countries more than 90 percent of waste pickers reported that they liked what they did and considered it decent work*" (Medina 2008, p. 2). This move of insurgency is a global phenomenon, where across the world waste pickers are mobilising through various institutions for inclusivity and rights to participation within the city. In India the AIW (Alliance of Indian Wastepickers) is a national network of 35 organisations, with a presence in 22 cities. In Asia a mapping exercise carried out by *KKPKP* found that there were various NGO's working with waste pickers in Cambodia, Indonesia, Phillipines and Thailand. In South Africa waste pickers are beginning to organise and mobilise, and in addition to the formation of these co-ops, unions and other such organisations, national association is starting to take shape and as a result *The South African Waste Picker Association* held its first meeting in July 2009 (WIEGO 2011).

6.1.5 EXCLUSION

Although these examples show the success of authorities and waste pickers working inclusively, this is not the norm and as Nas & Jaffe (2003) suggest, many governments are reluctant to get involved with such projects that include waste pickers due to the lack of “modernity” that is associated with them. Municipalities generally consider waste pickers as a problem and authorities often ban their activities, denying them their livelihood strategy and this often forces the autarkic strategies of the waste pickers underground having no other choice but to salvage materials at odd hours, or bribe the authorities (Medina 2008). The reality is that in most instances of waste picking around the world, these citizens are still subject to harassment, disrespect and violence, treated as a nuisance by the authorities and disdain from the general public (WIEGO 2011). These autarkic citizens are susceptible to violence by the police, as well as exploitation and intimidation by middlemen which affects their meagre earnings, furthermore “[r]ecent trends – such as privatization of municipal solid waste management services, global approaches to climate change mitigation, and the global recession – have exacerbated the situation for some waste pickers” (WIEGO 2011). The relationship between waste pickers and authorities varies between countries and even cities; however Medina (in Nas & Jaffe 2003) categorizes the relationships between waste pickers and the authorities in the following four ways, namely repression, neglect, collusion and stimulation. As indicated previously, the image of waste pickers on the streets or on dumpsites and landfill sites, for developing countries, are judged by these countries as a failure to modernise, and as such view these activities as undesirable. This attitude leads to repression, where authorities in an attempt to preserve the city image, use methods of aggression and harassment toward these marginalised communities, however this does not address the issue. Nas & Jaffe (2003) indicate that neglect occurs by governments and authorities “turning a blind eye” to both the benefits and ills of waste picking in a form “nimbyism”. Further to this, collusion occurs in situations that resemble clientist relationships whereby the lower socio economic group; the waste pickers are hierarchically tied to a formal higher level, generally governmental institution (Medina in Nas & Jaffe 2003). Nas & Jaffe (2003) cite Kingston in Jamaica as the final type of relationship that can exist, that of stimulation where the authorities promote more progressive and inclusive policies that provide safer and more equitable situations that are neither exploitative nor suppressive.

One of the major challenges of waste management in Kingston, Jamaica is that the amount of waste being produced exceeds the local municipalities’ ability to process it, as such the

government is actively engaged in restructuring the entire waste management system, and this restructuring promotes the inclusion of waste pickers. As with many waste pickers around the globe, the Kingston waste picking generally happens at the city's main waste disposal site Riverton City, which is a 12 hectare site on the peripheries of Kingston proper. The refuse in this landfill, which amounts to 500tons of new waste a day, provides a livelihood to hundreds of waste pickers, many of which live around the dump, although some do travel by means of bus to their established place of work (Nas & Jaffe 2003). *“Besides being exposed to health risks, the socio-economic status of scavengers is very low. They feel that they are seen as animals; because they work amidst trash, people regard them as trash themselves”* (Nas & Jaffe 2003, p. 348) however many waste picking systems, including the Kingston example prove waste pickers have highly developed social systems, which effect resource recovery practices that are flexible, efficient and thorough, and although informal they constitute reliable, beneficial and organised work. Where the case of Kingston is important, is that the Jamaican government has accepted the reality of waste picking as a means of income, and waste management strategy for the betterment of the city in general, and thus seeks to integrate them into the formal waste management schemes as opposed to harassment and neglect. *“The Riverton City scavengers are included in the national solid waste management reorganization scheme, as the government tries to pursue economic and health security for those working in ‘community-based recycling activities’, while promoting a certain level of environmentalism at the same time”* (Nas & Jaffe 2003, p. 340).

What is evident in all the provided examples is that the role of NGO's and CBO's is crucial in the facilitation of these insurgent citizens by creating bridges between government, the private waste management sector and the informal recycling sector to establish sustainable urban management systems (Nas & Jaffe 2003) and a means to replace these repressive policies with inclusive strategies that focus on legal backing, redistributive measures, social recognition and the strengthening of waste picker organisations (WIEGO 2011).

6.1.6 CONCLUSION

The spatiality of these exclusions and insurgencies is important in opening a dialogue between formal and informal waste management within developing cities. If one considers the image of the city, the presence of informal recyclers sorting recyclables on the pavements of the metropolis does not fit the picture, however as the research suggests, this form of livelihood strategy is on the increase. The population is growing at exponential rates forcing municipalities to take cognisance of the reality of this flood of rural to urban immigrants and the work that they choose to perform as a strategy to secure income outside of the formal economy. If the image of the city is the symbol of “a better life” then informal recycling, as postulated in this dissertation is the means in which to gain access to this “better life” for some. Therefore it must be agreed that informal recycling and the image and spatiality of the “inclusive city” are inextricably linked, and therefore cannot be considered independently of one another.



Figure 75-The sun sets on the Hulene landfill site, Maptuo, Mozambique. Strewn across the site are recyclable materials that support the livelihood of these citizens. Not only do they work in such hazardous and dystopic environments, but they are also victims of discrimination, abuse and social bias. It is a hard life, but it is the only means of financial sustenance in a country riddled with poverty.

6.2.0 PRECEDENT STUDY: ASMARE, BELO HORIZONTE, BRAZIL

Having identified informal recycling as a global example of insurgent citizenship, the following chapter will seek to explore the manner in which this act of insurgency has resulted in the reconceptualisation of the waste management sector within Brazil by means of incorporated waste picker associations. Through insurgency these marginalised, low socio-economic groups within society have claimed their rights to the city, and through co-operative representation and facilitation, have created new citizenships within society. By investigating the positive relationships that have been forged in Belo Horizonte between the informal urban recyclers and the state as facilitated by ASMARE, the research may suggest dynamic ways in which to accommodate this expanding citizenship to create more inclusive cities.



Figure 76-Map of Brazil showing the geographic position of Belo Horizonte.

6.2.1 INTRODUCTION

Dias (2011) notes that Brazil is one of the world’s most progressive countries when it comes to the integration of waste pickers into solid waste management systems, and further to this suggests that Belo Horizonte has provided the most notable case study of this integration. Belo Horizonte has pioneered solid waste management in Brazil, by tackling issues of socio-environmental concern by improving existing waste management systems, generating income for the poor as well as the encouraged improvements of the Solid Waste Management (SWM) within the city. In 1993 an integrated waste management model was adopted that promoted the separation of waste at the source as a means to minimise the environmental impact caused by the waste itself as well as to streamline the recycling process.

6.2.2 ASMARE

The Waste Picker Association ASMARE is a managerial and administrative organisation consisting of associates that pursue a self supporting business in the field of informal recycling and “*although its legal status is not of a cooperative its internal organization and income distribution is done according to the principles guiding cooperativism*” (Dias 2008, p. 26).



Figure 77 and Figure 78-The make shift ASMARE informal recycling facility that supports the processes of informal recycling in Belo Horizonte.

The integration of informal recycling into the formal sector was done through a consultation process with ASMARE and the Pastoral de Rua, whereby the SLU opted for the implementation of a separation at source scheme. This scheme would include a simple drop off system, whereby recycling containers were placed in public areas for the disposal of recyclables by the citizens. Plastic, tin cans, paper and cardboard were then collected by SLU

trucks and taken to the waste picker's warehouses or recycling facilities for further sorting and selling as described previously. The SLU's main responsibility is that of infrastructural provision, such as the provision of the before mentioned recycling containers, trucks for the collection of waste as well as the warehouses which act as the recycling centres for the waste pickers. ASMARE's role is the management of these recycling centres, and thus the recyclers themselves, by managing the sorting and commercialisation of the recyclable materials (Dias 2008).

The various recyclable materials are collected by the SLU trucks and delivered to the waste picker's warehouses where they are sorted for selling; however the informal recyclers are encouraged to pursue their own means of collection informally from commercial establishments and offices, using their traditional and informal push carts. Part of this initiative includes the door-to-door collection method within the central and southern regions of Belo Horizonte, serving 80 000 people and collecting over 2 tons per month of recyclable materials. The materials that are collected and sorted at the waste pickers' warehouses are then sold back to industry and the revenue of which is split amongst the pickers and ASMARE's associates respectively. This shows how the system is one of symbiosis and integration of the informal recyclers, whereby the municipality and various agents have not "taken over" the recyclers role, but have promoted the work they do, and have provided formal assistance without prohibiting the traditional informal methods (Dias, 2008).



Figure 79-A group of women sorting through the recyclable materials at the ASMARE waste pickers' warehouse. Material is delivered by the SLU's and the informal recyclers respectively.



Figure 80-Compacting of the recyclable materials is done at the ASMARE facility before sale to formal recycling companies.

The value in the ASMARE facility lies beyond the facilitation of informal recycling alone. Literacy and skills based training are also provided for in a joint effort with the supporting NGO's. Further to this, jobs have been created within the recycling facilities themselves, integrating the homeless from various government social programs. Through the Pastoral de Rua, the association receives financial resources from the government on a monthly basis for administrative expenses as well support from the City Government (SLU's) for the rental of the recycling facility and the co-ordination of the planning, collection and maintenance of the recycling containers and equipment respectively. Further to this, that which cannot be contained architecturally is the SLU's commitment to addressing the biased and false perceptions of the informal recyclers by the general public. Dias (2008) cites that as a Social Mobilisation Department, the SLU's hire professionals to carry out environmental education and mobilisation campaigns, whose mandate is to focus on the positive contributions that waste pickers make to the environment.

6.2.3 IMPACT OF ASMARE

Waste Pickers

The most measurable impact that ASMARE has made, has been on the informal recyclers themselves. The improved working conditions can be attributed to the fact that the recyclers no longer need to pick and sort through the waste in the streets and may now use informal recycling specific warehouses. Due to the formal support of an association such as ASMARE, the income of these waste pickers has increased mainly due to there being no dubious middle men. Before the partnering with ASMARE, the informal recycler's wages were equal to that of the minimum wage in Brazil; however since the inception of formal representation and assistance, 54% of these workers earn double that of Brazil's minimum wage (Kim 2004). All of the above mentioned impacts have had a further role to play in the social status of these insurgent citizens. Kim (2004) notes that there has been a significant reduction in alcoholism, robbery and aggressive behaviour, as the members are now motivated to improve their personal lives. A further social improvement that Kim (2004) notes, is that of the general public's perception of these once marginalised and excluded citizens. Awareness has been created through various initiatives, as to the social and environmental importance that these citizens play in the running of the city. This too empowers the recyclers as their consciousness shifts from survivalist, in between citizens, to members of society and a shared and empowered community, something which was not possible before the ASMARE partnership.

City Municipality

Since the implementation of the SLU, the waste management sector of Belo Horizonte has improved markedly as pointed out by Kim (2004). With the improvements of waste collection, street sweeping, drainage and others as well as the reduction of informal recyclers operating on the streets of the city, the overall cleanliness and city image has improved.

National Government

The success of the integration of informal recyclers into the formal waste management systems of the city was proven in September 1999 where the city of Belo Horizonte established the "Fist National Meeting" of waste pickers, Ngo's, Public and Private sectors. This was the beginning of a dialogue which was established to facilitate the organisation of waste pickers throughout the country.

6.2.4 CONCLUSION

The case of ASMARE in Belo Horizonte demonstrates the potential for inclusion of these insurgent citizens, by offering sustainable livelihood strategies. Through the facilitation of their activities, there exists the possibility of increased income generation by providing improved recycling and waste management schemes. In most developing countries such as Africa and Asia, these citizens are still heavily discriminated against and are victims of extreme social bias. The irony exists in that these same countries rely heavily on the uncontrolled and seemingly survivalist activities that these informal recyclers perform. *“The complexity and intensity of scavenging activities may vary from place to place, but the inhumane working conditions, the strong bias from other local populations, and a lack of support from public administrations are common elements”* (Kim 2004, p. 6) and thus it can be agreed that in the situation of Belo Horizonte, this type of unique partnership afforded by ASMARE is unique and provides many important lessons worth noting for other developing countries. Most notably, the wide array of partnerships afforded by ASMARE has established networks with other socially excluded groups such as street dwellers and the unemployed from the slums and inner city squatters, creating larger solidarity ties and thus creating opportunities for challenging issues of urban poverty, furthermore Kim (2004) notes that *“[i]t is necessary to acknowledge the possibility of reproducing social equality as well as regenerating the economic and environmental values in society”* (Kim 2004, p. 6).

6.3.0 INFORMAL WASTE COLLECTION AND RECYCLING IN JOHANNESBURG, SOUTH AFRICA

6.3.1 INTRODUCTION

Although South Africa can be regarded generally as a model for economic development within Africa, it too struggles with issues similar to that of other developing countries across the world. High levels of unemployment and poverty as well as one of the highest reported Gini co-efficients in the world define the economic landscape of a country still undoing the shackles of the apartheid era. As a means of survival, these new immigrants in South Africa have developed survivalist livelihood strategies in order to gain some form of economic freedom from their condition of poverty. As with many developing countries, this strategy often involves urban informal recycling, however these marginalised and discriminated groups are subject to social bias and harassment and as Samson (2008, p. 3) points out “*most people [in South Africa] prefer not to see the [informal recyclers] and look down on them for doing such dirty work; many municipalities consider them to be a nuisance and are trying to get rid of them*”. As has been discussed, in some developing countries of the world, the benefits of incorporating informal recyclers into the formal waste management system have been realised, and more socially inclusive attitudes have been adopted. However in the cities of South Africa, these livelihood strategies are still in a state of Insurgency, as they exist in between the fabric of the city, in between lines of social acceptance and bias, and in between formal and informal means of livelihood generation. The following precedent study will endeavour to explore the insurgent citizens of House 38, in Doornfontein Johannesburg, and analyse data collected by the artist Jacki McInnes and her late associate John Hodgkiss in an attempt to best understand how these insurgents create working and living environments within scenes of urban decay and neglect.

6.3.2 INFORMAL RECYCLING WITHIN JOHANNESBURG, SOUTH AFRICA

As eluded to within this dissertation, there exists a paradox in Johannesburg, South Africa which is shared by most developing cities of the modern world, that of a disagreeable relationship between the local authorities and the informal recyclers within formal waste management strategies. As Rogerson (2001) points out, informal urban recyclers can play a fundamental role in waste management, job creation as well as the steady supply of materials to formal recycling companies, and thus support the growth of the informal economy. Although the efforts of informal recycling within South Africa currently do not contribute substantially to the reduction of waste itself in environmental terms, the value lies in the

ability to generate a sustainable means of income and thus the opportunity to develop job opportunities for the urban poor. The biggest failure of the current situation within South African cities, in terms of informal recycling, is the inability to recognise informal recyclers as legal stake holders in the waste management strategy of the city.

However, even within this exclusionary context, these insurgent citizens continue to develop sustainable livelihood strategies, by creating formal relationships with middle men and formal recycling enterprises. Understanding the economic value that recycling offers to escaping conditions of poverty, informal recyclers around the country are mobilising as unique insurgent citizens in order to claim their rights to participate in the informal economy of the city, whether supported by the local government or not. Dysell and Langenhovens'(2007) research of the informal recyclers in Mitchells Plain in the Western Cape proves this point succinctly, where it was shown that positive and strong relationships between formal and informal recyclers have been established. The informal recyclers assist in the collection and collation of recyclable materials and are able to sell their collected materials to the recycling industries to generate profit. This creates a closed loop system of recycling between the formal and informal stakeholders, offering a secure, and not survivalist means of income generation. This reciprocal relationship ensures a positive and symbiotic relationship within the recycling industry in general, although not formally supported by the local authorities or government. Unfortunately, due to the lack of control and formalisation of this process, many of these relationships, both locally and worldwide, tend to become exploitative as these marginalised and desperate citizens are vulnerable to manipulation and harassment.

6.4 CASE STUDY: HOUSE 38, DOORNFONTEIN, JOHANNESBURG

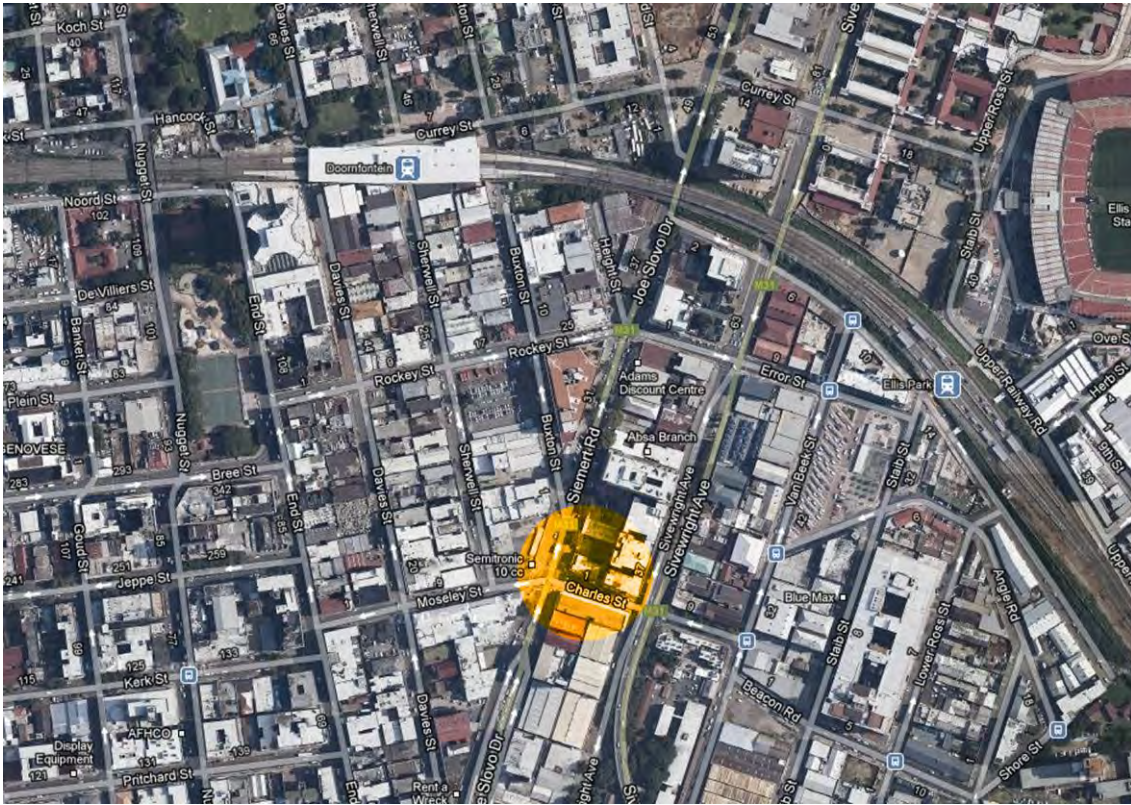


Figure 81-Locality plan showing the position of House 38, Doornfontein, Johannesburg, South Africa.

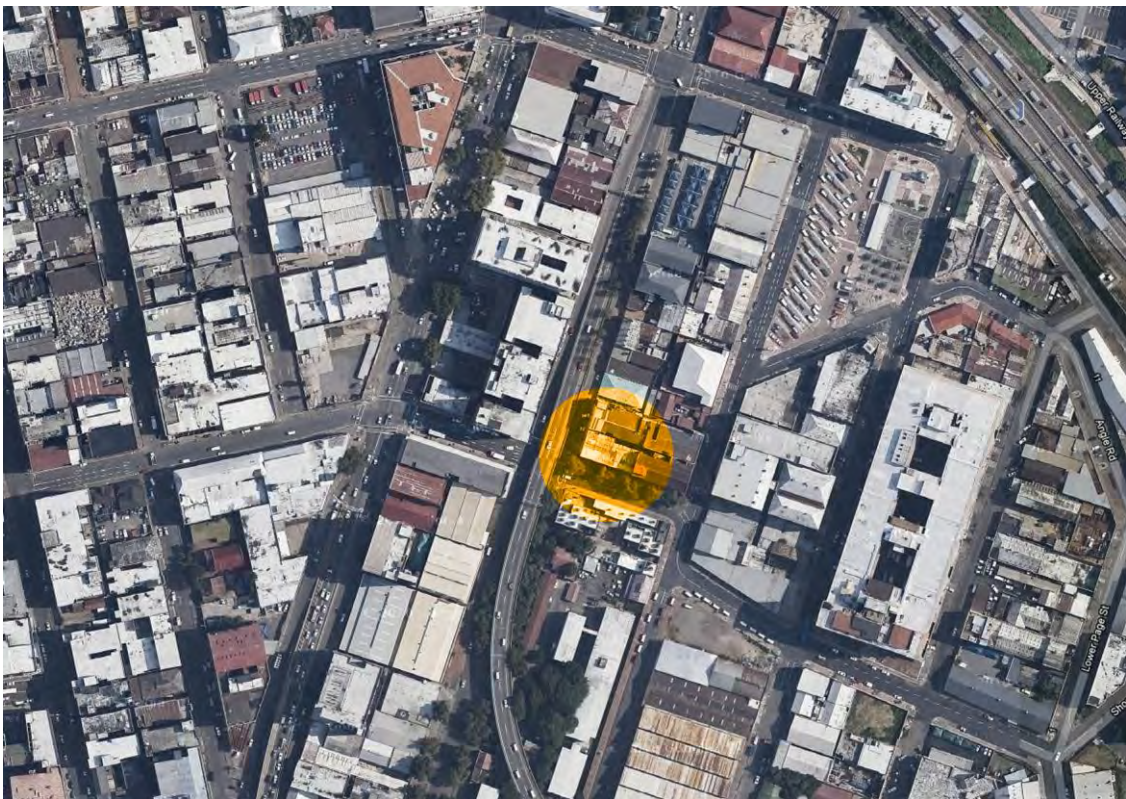


Figure 82-Aerial view of the abandoned building, known by the recyclers as House 38.

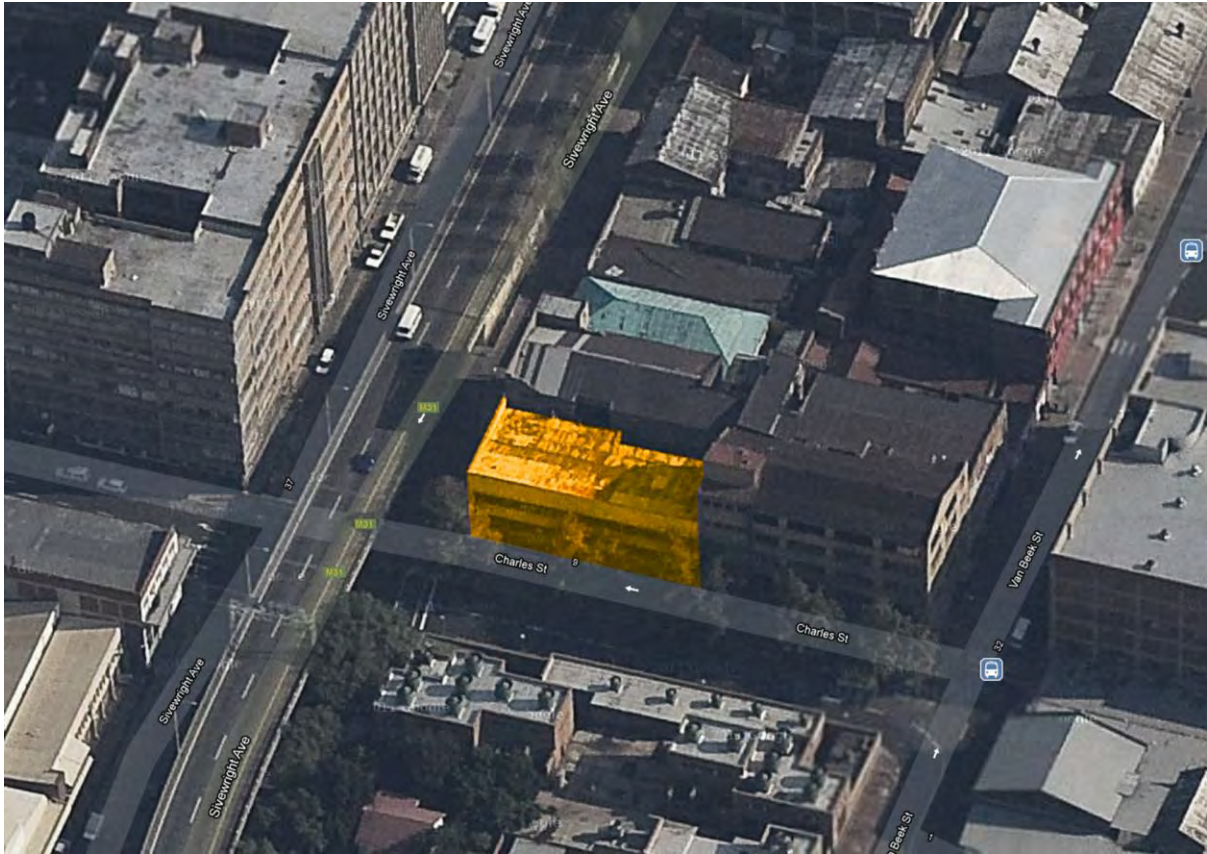


Figure 83-House 38 in its urban context.

In the case of “House 38” in Doornfontein, Johannesburg a similar story has been played out as that of the Mitchells Plain recyclers. Sustainable formal relationships have been established between the formal recyclers, Remade Recycling and the group of 200 informal recyclers that generate an income from this relationship. What makes this relationship unique is that the duality of the city can be expressed by an economic strategy that binds the formal to the informal. The items that are discarded by the “included” members of the city, are the very tools that connect the “modernising city” that we know, to the diasporic city of the in between.

“We bring the rich people’s dustbins back here and we do their dirty work.”

Portia Gcobisa Zungula, informal recycler, House 38

House 38 as described by McInnes is a bleak somewhat dystopic place. It is an abandoned two story structure, with the ground floor being occupied by a panel beating business, whilst the upper floors are home to an estimated 200 immigrants, many of whom participate in informal recycling as a means of income generation. Many of the windows are broken,

“there’s no running water, no electricity and the stairwell and inter-leading passages double as storage space for reeking, recyclable trash” (McInnes, Hazardous Objects 2009-2010). As dire as the situation may be, House 38 is a home, it is a business and it is a site of endeavouring ingenuity by the urban poor to develop ways of surviving with little to nothing and to paraphrase McInnes, House 38 is a site of initiative, hard work and hard won self determination. It is this self organisation and determinism that establishes this group as insurgent citizens, and the informal invasion of the structure that determines the insurgent urbanism. By creating spaces of the in between, and inhabiting the unplanned this new citizenship has afforded the ability to survive within one of the fastest developing cities in the country.



Figure 84-The abandoned House 38 is reanimated as a recyclers warehouse such as the ASMARE facility. There is no formal representation, and the building itself has been hijacked. All recyclable materials is collected from the streets and delivered to House 38, where it is sorted and stored.

The decaying building acts as a recyclers’ warehouse, as seen in Belo Horizonte, however there is no formal representation or co-operative involved, thus making their occupation and use of the building illegal, and furthermore the design of which is inadequate to serve this unique function. With no formalisation or co-operatives, the activities are still autarkic and

function less as a business than the international precedents already discussed, and acts more as a squatter settlement with the sole purpose of income generation through informal recycling. Collection, sorting and selling of the recyclable materials is the sole responsibility of these insurgent citizens, therefore the materials and pragmatics of how the “facility” functions is based on practical parameters, such as maximum distance one can travel. The amount of material that can be collected, as well as the type of material collected is all determined by the ability to move these items, as such glass is not considered for recycling. The collection and sorting at source happens within a 30km radius of House 38, around the city of Johannesburg and includes the collection of most materials except. All material is brought back to the house with make shift trolleys, where it is further sorted before being delivered to the relevant formal recycling facilities for payment and processing.



Figure 85-The unassuming, dilapidated House 38 does not suggest the activity that happens within. The mechanic workshop is operational despite the condition of the building and the illegal occupation by the recyclers.

The act of building hijacking that House 38 presents is not uncommon within the construct of the developing cities of the world, especially within the context of a government struggling to house the nation and where the ability of the lower socio-economic groups to afford adequate

and suitable shelter is questionable. This dilemma is further compounded by the fact that many of the informal urban poor are economic refugees from neighbouring countries, migrating to the metropolitan areas of South Africa in search of economic emancipation. This fact is evident within House 38, where many of the residents are illegal Basotho migrants, and thus do not have official documentation or legal rights to live or work within the city. For this reason, the insurgent act of informal recycling has become the only means of access to some form of income, whilst urban decay and derelict buildings offer accessible means of shelter and storage for their humble belongings.



Figure 86 and Figure 87-Similar to the women of the Thokoza Hostel, the recyclers of House 38 turn these neglected, decaying spaces into home spaces, decorating them and personalising them, thus claiming personal rights to their environment, regardless of how poor that may be.

This unique citizenship born out of autarky and survivalism; albeit informal, is a highly organised, mobilised and controlled state of socio-spatial existence. The informal recyclers, consisting of various ethnic groups, ages and sexes work together in a micro-insurgent community with a distinctive hierarchy. Although there are as many as 200 occupants of House 38, not all partake in the recycling process. Some of the inhabitants do the washing, some do the cooking, whilst some are wives to the recyclers and take care of the children within this dangerous environment, and thus various activities are undertaken in supporting the recycling community as a whole. McInnes notes that they are a “close-knit” community, and although in dire life situations, are not hostile or aggressive. Heavy lifting and moving of bails is done together, and a sense of community and family is created under this unassuming facade of urban decay.



Figure 88 and Figure 89-Show how the primary focus of these insurgents is the recycling of materials. Although unmanaged and autarkic, the informal process of recycling within House 38 is a well organised process.

Unfortunately for this particular group, the illegal occupation of the building as well as the neglect and disuse thereof has resulted in swift action by the owners, and all of the recyclers have been forcibly removed. McInness suggests that this eviction was a symbolic ending to this autarkic activity, and as this group of insurgents dispersed into the city of Johannesburg, they all at once lost their insurgency, no longer a community but once again individuals in search of a means of survival. The drama that played out within the hijacked walls of House 38 represented the insurgent struggle that these citizens of the in between face every single day in a desperate attempt to survive within an increasingly modernising and alien city. Unseen by the “haves” and therefore un-accommodated for by planning practitioners and policy makers, these citizens have defined their lives by surviving on what has been discarded or forgotten. Building hijacking is in itself a means of recycling, and thus the selection of this work is to represent the symbolism between a structural piece of recycling that houses the members and materials of the in-between world of informal recycling. By invading and occupying that which is in the process of urban decay, these insurgents have reanimated space, much the same way that their livelihood strategy reanimates that which is discarded as waste.



Figure 90 and Figure 91- Informal urban recyclers need to travel vast distances, carrying heavy loads in order to secure enough recyclable material to earn a meagre return. The image on the left shows how; with no alternative option, children need to be taken on these salvaging trips.

The important lessons gained from House 38; if methods are to be employed to facilitate this particular form of insurgency architecturally, are primarily linked to proximity to materials, and thus livelihood. These 200 inhabitants were migratory and urban, therefore relied on living within the city to secure their livelihood strategy. Furthermore, what can be established is that these activities are defined by communities and are therefore not sporadic singular identities. These recyclers, locally and internationally are defined by a substantial community or insurgent citizenship, relying on various participants to support the processes. Much in the same way that the Traditional Medicine Market as discussed previously relied on an entire metabolism of activity beyond the 700 traders that are visible, the same can be assumed with the informal recyclers. It is therefore pertinent to understand the value in supporting and facilitating communities of recyclers, and allowing growth within the proposed facility. House 38 was a success, although illegal, due to the space it afforded to engage in recycling and sorting processes. It allowed for security of materials, as well as shelter for the inhabitants. Although illegal, they could personalise and reside in a home space which would bolster their self confidence and sense of place. Perhaps the final lesson that could be learnt from House 38, is that of the value of formalisation in terms of representation for such a group. As has been discussed previously, cities such as Belo Horizonte have established positive working relationships with these insurgent citizens by means of representation and co-operatives, however due to the lack of NPO and NGO support with the recyclers of House

38, their activities were mostly illegal and thus antagonistic with the formal structures of the city, which ultimately lead to their eviction and the denial of their livelihood strategy.



Figure 92-Gives an idea of the living and working conditions under which these informal recyclers operate.

The entire hijacked building is engulfed by potentially hazardous materials, waiting to be sold to "middlemen".

CHAPTER 7 | CONCLUSIONS AND RECOMENDATIONS

7.1 INTRODUCTION

The research and analysis carried out in the literature review, precedent studies and case studies makes an effort to address the problem statement of this dissertation that:

In an age of mass rural to urban migration, a paradox exists within the developing cities of the world, whereby the livelihood strategies of the urban poor actively contest their rights to the city within perpetually exclusionary environments.

This has been done with the intention of drawing conclusions and recommendations that are relevant to the research problem thus testing the hypothesis that: *Architects, Planning Practitioners and Policy makers working with an understanding of the construct and social conditions under which these survivalist activities and urbanities occur, can play a significant role in the positive redevelopment of these insurgent environments, creating more inclusive and participatory landscapes.* The following conclusions and recommendations seek to address the findings within the preceding research in an effort to generate sound design principals and strategies for the proposed architectural intervention of an informal recycling facility for the informal cardboard recyclers of the Durban CBD, South Africa.

7.2 CONCLUSIONS

In order for grassroots up development to be effected within the existing urban construct, as recommended by this dissertation document, a succinct understanding of the conditions under which this insurgent citizenship exists is required. As it has been postulated, cities continue to be primary economic drivers within society, however a dual reality of cities exists in that they too represent high levels of poverty and inequality. Therefore the research undertaken in *The Myth of the City* is a means of exploring this concept of what a city is, what it represents and thus what is meant by cityness. The increasing levels of rural to urban migration and the resulting shrinking of the hinterlands provides a construct under which the idea of cityness may be tested. The nostalgic imageries of the post industrial, modernist city are being questioned in light of the current levels of migration and the cities inability to host these new urbanites under the existing generally exclusionary urban frameworks. Only once a framework of the current and historical construct of cityness has been postulated, can the research undertaken in the case and precedent studies offer strategies for inclusive urban development's to facilitate this citizenship. Although our urban future cannot be known, the

question is posed within this chapter as it is the purpose of this dissertation to provide a strategy toward an inclusive urban future. As such the dystopic and developmental theories are posited against one another, with the purpose of the broader focus of this investigation being to offer possible strategies to avoid these current negative future city projections.

Understanding that insurgency is a contestation of exclusionary practices, policies or built environments, *Social Exclusion in the City* is established as a means to explore these exclusions. Due to the many forms of exclusion that may be present within the cities of the developing world, the chapter disseminates these exclusions into conditions apparent within the South African construct so to better inform the selected sample of informal recyclers within the post apartheid city of Durban, South Africa. Modernism, Apartheid and Post Apartheid social and spatial constructs have been investigated, relating directly to the construct under which the field of study is undertaken. What is important to note from this chapter is the perpetual shifting of exclusive trajectories within current urban constructs. Most notable is how spatial exclusion may be further perpetuated by economic exclusion; or as shown in the Thokoza hostel case study, gender based exclusions. Therefore in building an argument in support of facilitating insurgent practices, the first two chapters provide the physical and social construct required in order to better conceptualise the resulting insurgent citizenships.

Resistance focuses directly on the insurgent citizens and their resulting insurgent urbanisms. Within environments of exclusion and control these citizens through autarkic and survivalist methods, find ways in which to contest these exclusions and thus claim their rights to the city. As has been shown, these spatial and social rights go beyond acceptance or inclusion, but are rights to participation and rights to be acknowledged as legitimate stakeholders within the economic and social functions of the existing city. The resulting insurgent urbanisms, provide clues on how to maximise wasted city space by reanimating residual space within the existing city fabric. These survivalist methods have provided clues into how the city functions, and thus from a developmental and planning perspective, by acknowledging these sites of insurgency perhaps more inclusive environments may be imagined. By learning from these survivalist strategies, this research proves the value of grassroots up development by looking for these sites of insurgency and thus providing viable interventions that can genuinely add value to these citizens lives and livelihoods.

The selection of the following primary research was undertaken as a means to test the findings in the previous chapters and thus exhibited qualities that tested this dissertation's hypothesis of inclusive developmentalism. The investigation into the *Traditional Herb Market* and the preceding study of the *Warwick Junction Markets* as a whole is a means to gain an understanding of the contestations that occur between the informal traders and the authorities to secure spatial rights to trade within the city. The adaptive reuse of unused urban infrastructure supports Villagomez's spatial theories of residual space usage by insurgent citizens. The spatial adaptations have been galvanised through social mobilisations as a strategy to secure the traders' rights to participation and thus rights to the city. All infrastructure provision thereafter has been implemented as a result of these contestations, and thus providing a framework for development strategies when considering other forms of insurgency within the city. The various markets of the Warwick Junction precinct provide a sound study of inclusive planning strategies through participatory dialogues.

Many of the female traders found within the markets of Warwick Junction, have developed housing strategies to support their life and livelihoods by means of transitional housing. The context under which these strategies occur are based within the exclusionary practices and cityscapes as instigated during the apartheid regime, which this case study shares with the market. However, what defines the purpose of the *Thokoza Hostel* case study is the shifting trajectory of exclusion and inclusion within the city. Although the hostel was established as a means of spatial and racial control in the height of apartheid, today it represents a place of refuge and independence. Therefore what can be learned is that beyond the residual, discarded space adaptation's posited by Villagomez, is the opportunity to redefine through social action the symbolisms found within exclusionary environments.

Due to the selected user group for the proposed architectural intervention being the informal recyclers of the Durban CBD, the closing studies of this dissertation focuses primarily on informal recycling as a form of insurgency, both locally and internationally. As the research suggests, this informal citizenship makes up as much as 2% of the planet's population, therefore proving the sustainability of this livelihood strategy and conversely the need to develop inclusive development strategies for this citizenship. Belo Horizonte, Brazil provides a succinct study of inclusive development strategies for the informal recyclers, with various means of representation and infrastructure provision to facilitate the processes of recycling. By bridging the gap between the recyclers and the general public, organisations such as

ASMARE provide inclusive strategies to protect and promote this mutually beneficial livelihood strategy by absorbing these practices into the formal waste management systems of the city.

This study is paradoxically juxtaposed with the informal recyclers of Doornfontein, Johannesburg where the inhabitants of *House 38*, live excluded, marginalised and highly survivalist lives. Although these 200 informal recyclers have mobilised into a micro community of sorts, there is no formal representation or structures in place to facilitate their activities. More than proving the existence of insurgency, the House 38 case study is the antithesis of this dissertation, exposing the desperate situations that exist where interventions are not imagined and realised, resulting in exclusion for a citizenship of the peripheries.

The research undertaken within this dissertation has been selected as a means to suggest an appropriate response to the problem statement and thus the current urban situation faced by the working urban poor. As such, lessons gained from the analysis of the research collected by means of primary and secondary data, will be suggested in informing the design of an inclusive and participatory, grassroots level up architectural solution for the informal cardboard recyclers of the Durban CBD, South Africa.

7.3 SUGGESTED DESIGN GUIDELINES

The following design guidelines will aid in providing valuable and insightful starting points for the design of the proposed *Informal Recycling Facility for the Informal Cardboard Recyclers of the Durban CBD, South Africa*. It is important to note that a full analysis of the selected user group would need to be undertaken both socially and spatially in order to adequately answer their specific requirements. Therefore the following guidelines are drawn from the preceding theoretical frameworks as a contextual basis for designing a facility of this nature.

- The location of a facility of this nature is vitally important. Insurgent urbanism is the physical manifestation of a site that offers a strategic benefit to its users. Therefore site selection must be undertaken after an analysis of the current insurgents locational strategies, and therefore facilitate their practice and not redefine it.

- Insurgency, as a strategy by the urban poor and new urbanites resulting from migration, is a highly urban condition. As such the facility would need to be located within an urban context.
- The facility, although not dependant on passing trade, should be located close to public transport routes, unless a live-work approach is adopted. This cannot be determined until interviews with the selected subject are undertaken in the following part of this research.
- Transitional housing should be provided within the facility as a response to the micro migratory patterns observed by this user group. Many of the recyclers live in rural areas, and commute to the city weekly to salvage recyclables. Due to their low socio economic status, these users cannot afford to rent rooms in the city, as such dwell on the streets. Adequate transitional housing would allow for the accommodation of these citizens during the week as a means of non-permanent residence.
- Childcare facilities may need to be provided. As shown in the study of Thokoza hostel, many of these insurgents are indeed women. Therefore consideration needs to be made for those recyclers who may require child minding facilities.
- Learning from House 38, there are pragmatic restrictions that need to be understood, such as maximum distances that can be travelled on foot per day to secure recyclable material. As such, the mapping processes will provide a framework within which to place the facility which is located in close proximity to the most sought after points of collection.
- Representation by means of an NGO, NPO or Co-Operative is recommended. Due to the highly informal nature of the work they do, these insurgents are often victims of social bias and discrimination. Through representation, as seen in ASMARE, social rights can be defended and rates of manipulation reduced. Therefore an intrinsic part of the proposed facility would be the incorporation of a dedicated NGO's offices, where meetings and facilitation could be carried out, as well as where awareness campaigns can be realised.
- Urban management solutions should encompass design interventions as a critical part of a multifaceted, partnership based approach.
- An understanding of how the recyclers collect their materials would need to be established in order to determine the amount of storage and sorting space required. As seen in ASMARE and House 38, large spaces are required for this process. If the

facility allowed, the current cardboard recyclers could extend the recycling process to other materials. Therefore the facility should not just answer the current user requirements, but should foresee sustainable strategies for the future.

- The facility should fit into the current urban framework of the city and allow for projected growth as the number of informal recyclers is set to increase given the current migratory and urban poverty statistics. As such, residual space within the Durban CBD should be investigated, following on from the precedent established by the Warwick Junction Markets.
- Formalised recycling equipment should be provided, such as bailers to facilitate the recycling process.
- The facility should be designed as an advertisement for the inclusion of the informal recyclers within the city. Although it need not be iconic, it should establish itself as an asset to the city of Durban, both architecturally and for the function that the facility plays. As such, the proposed facility should symbolise the inclusive policies adopted by the Durban municipality toward the informal recyclers.

The guidelines specified above may provide architectural strategies in the design process of a recycling facility for the informal recyclers of the Durban CBD. By considering the above suggestions as drawn from the research, a suitable architectural response could transpire that adequately and sustainably facilitates the selected insurgent citizenship. These principals will establish design guidelines that will be expressed in the design report and final architectural design respectively.

LIST OF FIGURES

- Fig. 1 New York** (Source: <http://www.volatour.com>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 2 New York** (Source: <http://www.klove.com/blog/post/2011/05/31/K-LOVE-is-now-on-the-air-in-New-York-City!-967-FM.aspx>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 3 Dharavi** (Source: <http://theperfectslum.blogspot.com/2009/11/slum.html>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 4 Kibera** (Source: <http://formaementis.wordpress.com/2009/09/17/kenya-begins-huge-kibera-clearance/>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 5 Makoko** (Source: <http://www.roadto2010.com/2010/09/slum-aspirations/>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 6 Makoko** (Source: <http://www.roadto2010.com/2010/09/slum-aspirations/>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 7 Barrios** (Source: <http://www.eikongraphia.com/?p=1345>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 8 Riot Police** (Source: <http://theconspiracyfiles.blogspot.com/2011/06/stage-vancouver-riots.html>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 9 Le Corbusier** (Source: <http://www.themodernist.co.uk/2012/03/le-corbusier-modernist-of-the-month>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 10 Villa Radieuse** (Source: http://www.cityofsound.com/blog/2006/08/movements_in_mo.html, Online (Accessed 19 May 2012) (Sketch))
- Fig. 11 The Contemporary City** (Source: <http://www.themodernist.co.uk/2012/03/le-corbusier-modernist-of-the-month>, Online (Accessed 19 May 2012) (Sketch))
- Fig. 12 Car Diagram** (Source: http://www.thepolisblog.org/2011_08_01_archive.html, Online (Accessed 19 May 2012) (Graphic))
- Fig. 13 Banksy Graffiti** (Source: http://www.thepolisblog.org/2011_08_01_archive.html, Online (Accessed 19 May 2012) (Photograph))
- Fig. 14 Prohibited Sign** (Source: <http://playgroundology.wordpress.com/category/flickr-galleries>, Online (Accessed 19 May 2012) (Graphic))
- Fig. 15 Gateway Shopping Complex** (Source: <http://joetourist.ca/southafrica/2008-durban.htm>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 16 Gateway Shopping Complex** (Source: <http://joetourist.ca/southafrica/2008-durban.htm>, Online (Accessed 19 May 2012) (Photograph))
- Fig. 17 Jo'Burg** (Source: <http://www.regionalgeography.org/southafrica2011/johannesburg-world-class-african-city>, Online (Accessed 19 May 2012) (Photograph))

Fig. 18 Soweto (Source: <http://1000fights.com/soweto>, Online (Accessed 19 May 2012) (Photograph))

Fig. 19 RDP Housing (Source: <http://affordablehousinginstitute.org/blogs/us/2010/11/the-sound-of-a-popping-bubble-part-1-payment-boycott.html>, Online (Accessed 19 May 2012) (Photograph))

Fig. 20 We are the 99% (Source: <http://www.thepunch.com.au/articles/freedoms-just-another-word/>, Online (Accessed 19 May 2012) (Photograph))

Fig. 21 Burning Man (Source: http://www.boston.com/bigpicture/2008/06/xenophobia_in_south_africa.html, Online (Accessed 19 May 2012) (Photograph))

Fig. 22 Angry Mob (Source: http://www.boston.com/bigpicture/2008/06/xenophobia_in_south_africa.html, Online (Accessed 19 May 2012) (Photograph))

Fig. 23 City Repair (Source: <http://patterncities.com/archives/501>, Online (Accessed 19 May 2012) (Photograph))

Fig. 24 City Repair (Source: <http://patterncities.com/archives/501>, Online (Accessed 19 May 2012) (Photograph))

Fig. 25 Favella Painting (Source: <http://www.madeinslant.com/2010/12/an-art-intervention-in-the-slums-of-rio-de-janeiro>, Online (Accessed 19 May 2012) (Photograph))

Fig. 26 Favella Painting (Source: <http://www.madeinslant.com/2010/12/an-art-intervention-in-the-slums-of-rio-de-janeiro>, Online (Accessed 19 May 2012) (Photograph))

Fig. 27 Haas & Haan (Source: <http://www.madeinslant.com/2010/12/an-art-intervention-in-the-slums-of-rio-de-janeiro>, Online (Accessed 19 May 2012) (Photograph))

Fig. 28 In Public Space we Trust (Source: <http://www.thepunch.com.au/articles/freedoms-just-another-word/>, Online (Accessed 19 May 2012) (Photograph))

Fig. 29 Spaces Between (Source: Hou, J 2010, *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*, Routledge Publishers, London & New York, page.84)

Fig. 30 Squatter Settlement (Source: Author, July 2011 (Photograph))

Fig. 31 Spaces Around (Source: Hou, J 2010, *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*, Routledge Publishers, London & New York, page.84)

Fig. 32 Spaces Around (Source: <http://patterncities.com/archives/501>, Online (Accessed 19 May 2012) (Photograph))

Fig. 33 Rooftops (Source: Hou, J 2010, *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*, Routledge Publishers, London & New York, page.84)

Fig. 34 Rooftop Slum (Source: <http://www.dailytonic.com/the-level-above>, Online (Accessed 19 May 2012) (Photograph))

Fig.35 Wedges (Source: Hou, J 2010, *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*, Routledge Publishers, London & New York, page.84)

Fig.36 Wedge Space (Source: Author, November 2011 (Photograph))

Fig.37 Redundant Infrastructure (Source: Hou, J 2010, *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*, Routledge Publishers, London & New York, page.84)

Fig.38 Warwick Junction (Source: Asiye eTafuleni, April 2012 (Photograph used with permission))

Fig.39 Oversized Infrastructure (Source: Hou, J 2010, *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*, Routledge Publishers, London & New York, page.84)

Fig.40 Abandoned Warehouse (Source: <http://kensinger.blogspot.com/2010/11/greenpoint-terminal-market-revisited.html>, Online (Accessed 19 May 2012) (Photograph))

Fig.41 Void Spaces (Source: Hou, J 2010, *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*, Routledge Publishers, London & New York, page.84)

Fig.42 Sprawl (Source: http://landscape.blogspot.com/2005_12_01_archive.html, Online (Accessed 19 May 2012) (Photograph))

Fig.43 Spaces Below (Source: Hou, J 2010, *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*, Routledge Publishers, London & New York, page.84)

Fig.44 Lime Market (Source: Author, February 2012 (Photograph))

Fig.45 Protesting Markets of Warwick Trader (Source: <http://ipsnews.net/africa/nota.asp?idnews=46567>, Online (Accessed 19 May 2012) (Photograph))

Fig.46 Markets of Warwick Trader (Source: <http://www.inclusivecities.net/?p=1804>, Online (Accessed 19 May 2012) (Photograph))

Fig.47 Locality Map of the Traditional Herb and Medicine Market (Source: Google Maps, April 2012 (Screenshot))

Fig.48 Aerial View of the Traditional Herb and Medicine Market (Source: Google Maps, April 2012 (Screenshot))

Fig.49 Street View of the Traditional Herb and Medicine Market (Source: Google Street View, April 2012 (Screenshot))

Fig.50 Abandoned Freeway Spur (Source: Asiye eTafuleni, April 2012 (Photograph used with permission))

Fig.51 Traditional Herb and Medicine Market (Source: Author, March 2012 (Photograph))

Fig.52 Warwick Junction Precinct (Source: Asiye eTafuleni, April 2012 (Photograph used with permission))

Fig.53 The Music Bridge (Source: Author, March 2012 (Photograph))

Fig.54 Panorama of the Traditional Herb and Medicine Market (Source: Author, March 2012 (Photograph))

Fig.55 Herb Traders Stalls (Photographer: unknown. Source: Peters, W. 2001. “Warwick Junction Urban Renewal Project”, *KZNIA Journal*, Issue 3/2001, p.9 (Photograph))

Fig.56 Herb Traders Stall (Source: Author, March 2012 (Photograph))

Fig.57 Herb Traders Stall (Source: Author, March 2012 (Photograph))

Fig.58 Herb Trader (Source: <http://informalcity.co.za/warwick-bridge-2>, Online (Accessed 19 May 2012) (Photograph))

Fig.59 Traditional Herbs & Medicine (Source: Author, March 2012 (Photograph))

Fig.60 Traditional Herb and Medicine Market (Source: Author, March 2012 (Photograph))

Fig.61 Locality Map of the Thokoza Women’s Hostel (Source: Google Maps, April 2012 (Screenshot))

Fig.62 Aerial View of the Thokoza Women’s Hostel (Source: Google Maps, April 2012 (Screenshot))

Fig.63 Aerial View of the Thokoza Women’s Hostel (Source: Google Maps, April 2012 (Screenshot))

Fig.64 Street View of the Thokoza Women’s Hostel (Source: Google Street View, April 2012 (Screenshot))

Fig.65 Dormitory Layout (Source: Hansmann, R 1993, Women and Inner City Housing: A Case Study of Thokoza Hostel, B.Soc.Sci (Bachelor of Social Sciences) Thesis, University of Natal, p.63 (Sketch))

Fig.66 Peanuts Drying Under Bed (Source: Angela Buckland, “Block A”, Exhibition (Photograph used with permission))

Fig.67 Seamstress (Source: Angela Buckland, “Block A”, Exhibition (Photograph used with permission))

Fig.68 Food Storage under Bed (Source: Angela Buckland, “Block A”, Exhibition (Photograph used with permission))

Fig.69 Eating in Bed (Source: Angela Buckland, “Block A”, Exhibition (Photograph used with permission))

Fig.70 Resident Sitting on Bed (Source: Angela Buckland, “Block A”, Exhibition (Photograph used with permission))

Fig.71 Resident Doing Beadwork (Source: Angela Buckland, “Block A”, Exhibition (Photograph used with permission))

Fig.72 Ghazipur Landfill (Source: http://www.zimbio.com/pictures/4PIG931RI9c/Indian+Rag+Pickers+Forage+Recyclables+Delhi/2YQgxBhJ_Xg, Online (Accessed 19 May 2012) (Photograph))

- Fig.73 Hulene Lanfill Site** (Source: <http://www.behance.net/gallery/Trash-Land/1820899>, Online (Accessed 19 May 2012) (Photograph))
- Fig.74 Hulene Lanfill Bailing** (Source: <http://www.behance.net/gallery/Trash-Land/1820899>, Online (Accessed 19 May 2012) (Photograph))
- Fig.75 Hulene Lanfill Site Sunset** (Source: <http://www.behance.net/gallery/Trash-Land/1820899>, Online (Accessed 19 May 2012) (Photograph))
- Fig.76 Map of Brazil** (Source: <http://www.uofaweb.ualberta.ca/crsc/news.cfm?story=77338>, Online (Accessed 19 May 2012) (Map))
- Fig.77 ASMARE** (Source: Dias, S & Alves, F 2008. “Intergration of the Informal Recycling Sector in Solid Waste Management in Brazil”, Federal Ministry for Economic Cooperation and Development, March 2008, p.3 (Photograph))
- Fig.78 ASMARE** (Source: Dias, S & Alves, F 2008. “Intergration of the Informal Recycling Sector in Solid Waste Management in Brazil”, Federal Ministry for Economic Cooperation and Development, March 2008, p.3 (Photograph))
- Fig.79 Recyclers Warehouse** (Source: Dias, S & Alves, F 2008. “Intergration of the Informal Recycling Sector in Solid Waste Management in Brazil”, Federal Ministry for Economic Cooperation and Development, March 2008, p.1 (Photograph))
- Fig.80 Recyclers Warehouse** (Source: Dias, S & Alves, F 2008. “Intergration of the Informal Recycling Sector in Solid Waste Management in Brazil”, Federal Ministry for Economic Cooperation and Development, March 2008, p.28 (Photograph))
- Fig.81 Locality Map of House 38** (Source: Google Maps, April 2012 (Screenshot))
- Fig.82 Aerial View of House 38** (Source: Google Maps, April 2012 (Screenshot))
- Fig.83 Aerial View of House 38** (Source: Google Maps, April 2012 (Screenshot))
- Fig.84 Internal View of House 38** (Source: Hodgkiss & McInnes, Hazardous Objects: House 38, Exhibition (Photograph used with permission))
- Fig.85 Street View of House 38** (Source: Google Street View, April 2012 (Screenshot))
- Fig.86 Living Space of Informal Recycler** (Source: Hodgkiss & McInnes, Hazardous Objects: House 38, Exhibition (Photograph used with permission))
- Fig.87 Informal Recycler** (Source: Hodgkiss & McInnes, Hazardous Objects: House 38, Exhibition (Photograph used with permission))
- Fig.88 Informal Recycling** (Source: Hodgkiss & McInnes, Hazardous Objects: House 38, Exhibition (Photograph used with permission))
- Fig.89 Recyclable Materials** (Source: Hodgkiss & McInnes, Hazardous Objects: House 38, Exhibition (Photograph used with permission))

Fig.90 The Recycling Process (Source: Hodgkiss & McInnes, Hazardous Objects: House 38, Exhibition (Photograph used with permission))

Fig.91 Recycler Bailing Cardboard (Source: Hodgkiss & McInnes, Hazardous Objects: House 38, Exhibition (Photograph used with permission))

Fig.92 Stairwell of Litter (Source: Hodgkiss & McInnes, Hazardous Objects: House 38, Exhibition (Photograph used with permission))

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APPENDICES

Appendix A

Interview conducted by researcher with the listed participants hosted at the Asiye eTafuleni offices, in the Warwick Junction Precinct, Durban, South Africa.

Patrick Ndlovu: A partner in the local NPO Asiye eTafuleni, who manage the markets of the Warwick Junction Precinct.

John Khomo: An informal trader operation within the Markets of Warwick, who is also a member of Trader Against Crime (TAC)

The following is a list of questions posed in order to gain an understanding of the Traditional Medicine and Herb Market due to there being minimal published research thereon. Information derived from this semi structured interview has assisted in formulating the case study of this market.

The Traditional Medicine and Herb Market, Durban, South Africa
--

1. How many traders operate within the Traditional Medicine and Herb Market?
.....
2. What is sold there?
.....
3. Are all the traders local? If not where do these traders originate from?
.....
4. What are the various types of trade that take place in the market?
.....
5. What was on the site before the relocation of these traders?
.....
6. How did you go about the relocation process, and thus identify the site as a possible solution?
.....
7. Did the process promote inclusive planning procedures?
.....

8. Has the relocation facilitated growth in this sector?
.....
9. What was provided for in the intervention?
.....
10. Are the traders happier now?
.....
11. Where do the traders stay?
.....
12. How many days a week is the market operational?
.....
13. Has the placement of the traders in this new market node reduced the levels of crime?
.....
14. Has the placement of the traders in this new market node reduced the levels of harassment and intimidation from the police?
.....
15. Has the intervention improved the way in which these traders operate?
.....
16. Do these traders belong to a union, or is there any other form representation?
.....
17. Is there any further information you could add to give value to this research?
.....
.....
.....
.....
.....
.....
.....

NB: Participation in this interview 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 do so.

Appendix B

Interview conducted by researcher with the listed participant by means of email correspondence.

Jacki McInnes: An artist who, with her partner John Hodgkiss, documented the informal urban recyclers of House 38.

The following is a list of questions posed in order to gain an understanding of the informal recycling processes that are undertaken within House 38 due to there being minimal published research thereon. Information derived from this email correspondence has assisted in formulating the case study of this insurgent activity.

House 38, Doornfontein, Johannesburg, South Africa
--

1. How many squatters live in the house?
.....
2. Are they all recyclers?
.....
3. Where is the house located?
.....
4. Has there been any formal analysis of these recyclers beyond your photographic investigation?
.....
5. What materials do they recycle? Is there a preference for particular recyclables?
.....
6. Is there a relationship established between the informal recyclers and the formal recycling sector to your knowledge?
.....
7. Please elaborate on the above if answered yes.
.....
8. Are the recyclers locals, or international migrants? Are they legal?
.....
9. Do they live at House 38 permanently or is this merely a transitional dwelling?

.....
10. Do you have any indication as to their earnings from this informal activity?
.....

11. Do these citizens have dependants? Do they also live within the house?
.....

12. Do they partake in any other forms of work, or are they all primarily informal recyclers?
.....

13. Is there any means of formal representation such as an NPO, NGO or Co-Operative?
.....

14. Could you elaborate on the recycling processes undertaken by these citizens?
.....

15. What are the collection routes undertaken, and what determines these routes?
.....

16. Why have they chosen this specific site to inhabit? Is it close to recyclable material or is it merely opportunistic?
.....

17. Are they a hostile group, or is there some form of hierarchy and cohesion between them?
.....

18. How did you find out about this group and conversely how did you gain access to them?
.....

19. Is there any further information you could add to give value to this research?
.....
.....
.....

NB: Participation in this interview 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 do so.

Appendix C

Interview conducted by researcher with the listed participant by means of email correspondence.

Stephen Townsen: A manager at Remade Recycling within Johannesburg who has established a working relationship with the informal recyclers of House 38.

The following is a list of questions posed in order to gain an understanding of the relationship between the informal recyclers of House 38 and Remade Recycling. Information derived from this email correspondence has assisted in formulating the case study of this insurgent activity.

House 38, Doornfontein, Johannesburg, South Africa
--

1. What is the name of your business?
.....
2. Where are you based?
.....
3. How long have you been operating for?
.....
4. What materials do you recycle?
.....
5. What is your formal process of recycling? I.e. Are you a private company? Are you contracted out by the municipality?
.....
6. How many facilities do you have, and how big are they?
.....
7. How many staff do you employ at these facilities on average (this will assist in understanding the scale of operations, no need for exact figures for this)?
.....
8. What is your relationship with the informal recyclers if any at all?

.....
9. Is there this relationship as mentioned above at all your recycling facilities or is it unique to this particular one?
.....

10. How have you "incorporated" the recyclers into your business? I.e. is there a formal agreement?
.....

11. Explain the process of your business and how it interacts with the informal recyclers?
.....

12. How much material do they recycle on average each?
.....

13. How many recyclers use your facility?
.....

14. Are they a well organised group? Is there any formal representation, like a "leader" if you will, or is it every man for himself?
.....

15. Do you believe the work they do is beneficial to the city?
.....

16. Do you believe this is a sustainable (economic) means of employment, and one that should be celebrated/promoted rather than shunned as most people do thinking that these recyclers are vagrants?
.....

17. Would you recommend incorporating informal recycling into the formal systems of waste management?
.....

18. Is there any further information you could add to give value to this research?
.....

NB: Participation in this interview 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 do so.

PART TWO
DESIGN REPORT

CHAPTER SEVEN | INTRODUCTION

7.1 Introduction	146
7.2 Urban Solid Waste Management.....	146
7.3 Informal Recyclers Worldwide Struggle.....	146
7.4 The South African Context.....	149
7.5 Imagine Durban.....	150
7.6 iTrump.....	151
7.7 Asiye eTafuleni.....	152
7.8 Durban Recycling.....	154
7.9 Conclusion.....	156

CHAPTER EIGHT | SOCIAL PRECEDENT STUDIES

8.1 Introduction.....	157
8.2 Dharavi, India.....	158
8.3 Tower of David.....	163

CHAPTER NINE | ARCHITECTURAL CONCEPTS

9.1 Introduction.....	167
9.2 Adaptive Re-Use.....	167
9.3 Parasitic Architecture.....	170
9.4 High Tech Architecture.....	172

CHAPTER TEN | RECYCLING PRECEDENT STUDIES

10.1 Introduction.....	174
10.2 Analysis.....	174

CHAPTER ELEVEN | PROJECT DESCRIPTION

11.1 Introduction.....	180
11.2 Concept.....	180
11.3 Notional Client.....	181

11.3.1 Clients Organisation.....	181
11.3.2 Clients Requirements.....	182
11.4 Detailed Clients Brief.....	182
11.5 Site Selection Criteria.....	184
11.6 Conclusion.....	185

CHAPTER TWELVE| SITE SELECTION, SURVEY AND ANALYSIS

12.1 Analysis.....	186
12.2 Recyclers Diaries.....	194
12.3 Accommodation Schedule.....	196

CHAPTER THIRTEEN | MATERIALS AND FAILURES

13.1 Introduction.....	200
13.2 Selection of Materials.....	200
13.2.1 Roofs.....	201
13.2.2 Walls.....	203
13.2.3 Floors.....	207
13.2.4 Windows and Doors.....	208
13.2.5 Sanware.....	209
13.2.6 Special.....	210
13.3 Structure.....	213
13.4 Conclusion.....	215

CHAPTER FOURTEEN | ARCHITECTURAL DESIGN DRAWINGS

7.1 Annex.....	216
----------------	-----

PART 2 LIST OF FIGURES.....	226
------------------------------------	------------



CHAPTER SEVEN | SOCIAL CONTEXT OF THE ARCHITECTURAL PROPOSAL

7.1 INTRODUCTION

In understanding the important aspects of informal recycling and the value it holds in the informal and green economy respectively, the following chapter seeks to establish the context under which these recyclers operate. The chapter opens with an investigation into urban solid waste management and then continues to explore waste management in a local context, thus establishing what systems have been put in place through formal systems to manage solid waste within the cities of South Africa. This chapter will also seek to explore the various governmental frameworks that have been established to raise awareness around creating “more liveable cities”, such as Imagine Durban and iTrump respectively.

7.2 URBAN SOLID WASTE MANAGEMENT

One of the challenges facing the urban areas of the world today is that of adequate and suitable solid waste management. Any aggregation of human settlement has the potential to produce vast quantities of both organic and inorganic waste, known collectively as solid waste. The collection, transfer and disposal of such waste has generally been assumed by municipal governments in the developed world.

Although the strategy varies, most waste is collected either by a government agency or a private contractor (Zerbock 2003) and this constitutes a basic and expected government function in the developed world. This being said, Municipal Solid Waste (MSW) management has become a major issue of concern for many under developed or so-called developing nations, especially under the condition of a rapidly increasing population.

“Although developing nations do spend between 20% and 40% of municipal revenues on waste management, this is often unable to keep pace with the scope of the problem”

-Thomas-Hop, Schubeler and Bartone in Zerbock (2003, p. 2)

7.3 INFORMAL RECYCLERS WORLDWIDE STRUGGLE

As has been presented in previous chapters, there exists a clear global trend towards the privatisation of municipal waste management systems, which threatens the livelihood of established informal recyclers and their survivalist activities. *“Privatisation is traditionally understood as the transfer of state resources and activities to the private sector”* explains

Samson (2009, p. 75), and this trend toward privatisation is further exacerbated in developing or so-called third world countries by the formal systems extending their reach into activities that were formally the sole responsibility of the informal recyclers. An example of this is the waste pickers of India who perform door-to-door collection, who are now threatened by formal municipal contracts to private companies to perform the task (Samson 2009). These instances of privatisation which are occurring the world over displaces the informal recyclers and undermines the work that they do, thereby threatening their livelihoods. *“Even if the activities of waste pickers are not explicitly included in the privatisation contract, shifts in the formal municipal waste management system change the context within which waste pickers function and the terms on which they relate to the broader waste management system”* (Samson 2009, p. 75) and this can in turn change the legal status of waste itself. What is meant by this, explains Samson (2009) is that prior to privatisation waste is seen as a common property resource, as such informal recyclers may generate income through the collection and resale thereof. However once a municipality contracts this responsibility to a private company, the “rights” to that common property becomes that of the private company, and therefore ceases to be common property (ILO in Samson 2009). Essentially, the privatisation of waste and waste collection not only excludes informal recyclers and displaces the work that they do, it also has the effect of criminalising the work they do by staking claims and formal ownership over once common property.

There exists a need however for a common middle ground to be found, where inclusive policies and waste management practices may be adopted for a more sustainable growth in this sector. It is the aim of this architectural intervention within the Durban CBD, to broker such an agreement that can accommodate both formal and informal means of waste management. Samson (2009) points out how Cairo, Egypt has had a well established informal waste management sector for many years, known as the Zabaleen. However in 2003 there were attempts to privatise the waste management sector, initially by bypassing the informal system. The strength of the informal sector, which had been underestimated, resulted in a failed system that had to be modified to include the traditional, informal service providers. *“The case in Cairo shows that privatisation processes that ignore the role of the informal sector can encounter serious problems. In order to function, the formal sector companies that one the contracts needed to acknowledge and accommodate the role of the Zabbaleen”* (Samson 2009, p. 79).

What the above example highlights, with examples analysed in part one of this dissertation, is that waste pickers around the world share the need to struggle for their rights. This is perhaps more pertinent to developing nations such as Southern Africa, where conceptions of “modern” waste management that excludes waste picking as its strategy, have been developed in advanced capitalist countries divorced from the reality of developing nations. Samson (2009) postulates that there is much to be gained through co-operations and uniting, especially across borders to combat this misinformed and often exclusionary practices and strategies. There is currently evidence that in South Africa, waste pickers are starting to follow the precedent set by international waste picking associations, and are actively mobilising, networking and claiming their rights to participate in the waste management strategies of the country.

South Africa’s First National Waste Picker Meeting

On the 2nd July 2009 100 waste pickers from across South Africa gathered for South Africa’s First National Waste Picker Meeting, organised by the environmental justice NGO Groundwork. The meeting played host to waste pickers from 26 landfills from 7 of South Africa’s 9 provinces. The purpose of the meeting was to address the concern that new waste management legislation that was being drafted did not recognise the role of waste pickers within the sector, and thus threatened to undermine the livelihood of these informal stakeholders.

Samson (2009) points out that many of the attendees had made great sacrifices to attend the meeting, forfeiting up to two days of work that could have been used to generate income. This act perhaps shows succinctly the severity of the problem at hand, and the desperate need by the waste pickers to organise and fight against exclusionary legislation and privatisation. *“They also hoped that collectively they would be able to address the discrimination that they face and lobby government for recognition”* (Samson 2009, p. 35). It is only through uniting as a collective body that these sometimes individualistic informal recyclers can challenge privatisation, *“the municipality will not listen to an individual, but will listen to a collective”* (Samson 2009, p. 36).

The national meeting was an important first step in brokering a sustainable relationship and collective identity for the informal recyclers in South Africa, and as Samson (2009) suggests, it has altered the landscape in South African waste management. Samson (2009) does caution

though that much work is still to be done, and that full private-informal dialogues are not apparent. What is evident however is that in the ever changing, environmentally challenged landscape that the urban poor are faced with, solutions need to be found to facilitate those who have been excluded from the formal cities functions and who have found a way to survive never the less. In a country where job creation is a primary agenda in the presidency, the practices implemented within the waste management sector cannot contradict these intentions by criminalising and marginalising these survivalist livelihood strategies.

In considering the architectural intervention proposed in this dissertation, it is pertinent that it responds to this apparent divide between formal and informal waste management in the city of Durban, South Africa. What is required is a new conceptualisation of the waste management strategies and legislation within the Durban CBD, and perhaps South Africa as a whole. The architectural intervention should act as a catalyst by brokering a common recycling facility to be shared between the formal and informal sector, as a symbol for tolerance and partnership between the two, as well as engaging the general public with the important of recycling and material recovery.

7.4 THE SOUTH AFRICAN CONTEXT

Since 1994 the transition into democracy has required many areas of focus, and many promises that need to be honoured. Areas of attention include land reform, housing provision, labour market issues such as unemployment and informal economy, lack of infrastructure and basic services such as the provision of water, electricity, communications and waste management, health care, education, and the relatively recent crisis of HIV/AIDS are all examples of development challenges that require urgent attention.

It is on this stage that the informal economy has flourished. It is in this political environment that the livelihood strategies of the urban poor have become something of an asset to the city as a whole, as discussed in Part 1. The key in the successful protection and mobilisation of these marginalised informal workers is that of identity, and institutionalism in the form of a safe house, or identifiable hub to which they can report and trade safely, and securely without the threat of expulsion, exclusion or intimidation.

Mueller (2005) notes that nongovernmental organisations (NGOs) also play a role in the waste management and cardboard collection sector through their focused interventions. In

many cases, they have helped to assess needs and problems as well as address them through their skills at organising and brokering relationships between businesses, the community and informal workers. Sometimes NGOs also play a role as negotiator or as a third party in conflicts that require a mediator. At other times they have offered or arranged training opportunities for informal workers. While working at the grassroots level, the presence of NGOs in communities is particularly significant in the development of policies that answer to informal workers and traders who often do not have a voice. In developing a suitable architectural response to these needs, it is imperative that these issues be understood and catered for to ensure a truly sustainable and viable business model. NGO's, local government, the general public as well as the informal traders need to be involved from the planning stages of the project to ensure a cohesive and respected end product that will be not only an tool for the city, but an asset for its people.

7.5 IMAGINE DURBAN

Imagine Durban is a council-led project focussing on integrated long term planning. It has been implemented in conjunction with the Canadian NGO, Sustainable Cities as well as PLUS Network which is a network of 35 cities sharing experiences and strategies on sustainable planning and practices. The primary aim of Imagine Durban is to *“develop a visionary plan that can inspire citizens, non-governmental; organisations, business and government to work together to make Durban the most caring and liveable city”* (eThekweni Municipality Long Term Plan 2010, p. 1). Imagine Durban's mandate is to create a SAFE city, promote an ACCESSIBLE city, generate SUSTAINABLE LIVELIHOODS, celebrate CULTURAL DIVERSITY, ARTS & HERITAGE, foster a CARING AND EMPOWRING CITY, and most importantly for this architectural proposal, ensuring an ENVIRONMENTALLY SUSTAINABLE CITY.

Imagine Durban's ENVIRONMENTALLY SUSTAINABLE CITY relies on the following strategies as listed below:

- Incentives and disincentives to ensure sustainable practice
- Information and education
- Integrated Waste Management Systems
- Pollution prevention
- Water Conservation

- Energy Efficiency
- Alternative energy production
- Climate change prevention and preparedness
- Productive Ecosystems

Integrated Waste Management Systems

“Waste is an environmental hazard that costs cities considerable amounts to collect and dispose of in landfills. Cities around the world are looking at ways to reduce the amount of waste in order to reduce negative environmental impacts and to reduce waste disposal costs to their citizens”

-eThekweni Municipality Long Term Plan (2010, p. 24)

7.6 I-TRUMP

Prior to the implementation of Imagine Durban, an urban management plan was implemented that sought to uplift Durban, with particular focus on the inner city. The scope of this management plan was aimed at the Warwick Junction precinct, with particular focus on taxi ranking and informal traders. However as part of this programme, informal recyclers of the Warwick Junction precinct were indentified and a small buy back centre was established as a pilot project as a response. Although the project ceased, the incorporation of iTRUMP into this dissertation is that it served as the precursor to the current work undertaken by AeT (Asiye eTafuleni) and Imagine Durban respectively.

The Inner City Thekwini Regeneration and Urban Management Programme (iTrump) area extends from the Umngeni River in the north, the Beachfront and Point to the East, Victoria Embarkment to the South and Warwick Avenue, Umngeni Road to the west.

The ITRUMP ABM was established as a response to the urgent need to prioritise the regeneration of the inner city. ITRUMP places the strategic value of the inner city at the core of its business and seeks to maximise its multiple opportunities. It focuses on six key outcomes, namely:

- increasing economic activity;
- reducing poverty and social isolation;
- making the inner city more viable;

- effective and sustainable urban management;
- improving safety and security and
- developing institutional capacity.

ITRUMP is the quest to create a sustainable city in the New South Africa. The initiative strives to be proactive rather than reactive, working to stimulate private sector interest while fulfilling the needs of individuals that use public spaces.

Part of the mandate of iTRUMP was to investigate and facilitate the processes of the informal cardboard recyclers operating within the Warwick Junction precinct. Dobson (2003) points out that during 1999/2000 cardboard salvagers were operating throughout the inner city, although the “community” of recyclers themselves were based in the Brook, Russel and Victoria street vicinity of the Durban, CBD. The challenge presented to iTRUMP was that of urban management and social deprivation within these marginalised and survivalist groups in an effort to formalise and protect these vulnerable members of the CBD.

7.7 ASIYE eTAFULENI

“The 50kg bundle of cardboard boxes sways from the scale-hook while Maria Vilikazi looks on. Maria is part of a pilot project for an all-mew public-private partnership in Durban run together with eThekweni Municipality by NGO Asiye eTafuleni”

-McCracken (2012, p. 38)

The NPO Asiye eTafuleni was commissioned by the eThekweni Municipality, through the Imagine Durban Demonstration Fund to implement the inner city cardboard recycling project. The project aims to improve the livelihoods of the informal cardboard recyclers operating within the Durban CBD, by better managing the cardboard collection process and improving visibility within the public realm. *“Asiye eTafuleni has been piloting the project since November 2009 with the distribution of custom-made aprons, custom-made trolleys and other equipments to a group of Cardboard Recyclers in response to their needs for the enhancement of their working environments”* (www.aet.org.za) .

The NPO has embarked on a series of processes aimed at facilitating the work that this group of recyclers do. The first process is that of research; which is both academic as well as practical through fieldwork, observations and work experience. Secondly there has been a process of ongoing research and development in the equipment that these recyclers use, such as aprons, gloves and the custom made trolleys. The third phase is the distribution of custom designed products and equipment to an identified group of beneficiaries. The final phase is the assessment of the proposed systems by means of feedback by the recyclers themselves so as to fundamentally integrate them into the facilitation and design process. This is grass roots development galvanised.

McCracken (2012) notes how the group of nearly 50 “mico-entrepreneurs” is cleaning up both literally, as well as financially by recycling up to 200 tons of cardboard a month. Informal recycling; as had been shown in part one of this dissertation, offers a means of financial resource to the disadvantaged members of society, looking for a strategy to escape their condition of poverty. The 500 informal recyclers that were recorded in the mid 1990’s is proof of this. Maria, an informal recycler and member of the pilot project, recounts how in her household of four adult unemployed children and three grandchildren, she was able to put her youngest, now 20, through high school and keeps her two granddaughters at crèche (McCracken 2012).

Asiye eTafuleni’s main goal through the implementation of this project is the ability to organise the group of recyclers, so as to follow the precedent set by the co-operatives discussed in part one of this dissertation, as a means to contest and defend their livelihood strategy. Asiye eTafuleni points out that beyond the benefits of organising, is the programmatic benefits of allowing greater access to materials through the use of better suited equipment as well as through greater social awareness by means of identity. Through the trolleys, uniforms and name badges, these insurgent citizens develop greater dignity and ownership by means of progressive engagement with the NPO. The improved perception of the informal recyclers as a whole further promotes a more inclusive understanding of the integrated urban management challenges in the informal recycling sector of the Durban, CBD.

Asiye eTafuleni points out that current local limitations do exist, which threatens the sustainability of the project. First of which is the absence of a common vision for the informal recycling sector by the local government. As such there are no formal frameworks

in place to facilitate informal recycling within the current MSW strategies, thereby not taking cognisance of the value they play in the sustainable development of the Durban CBD.

Secondly formal waste collection systems still dominate the MSW framework, which is deepening the unresponsiveness of the various recycling programmes as it undermines the sustainability benefits. Further to the above two limitations, is the fact that the informal recycling sector within South Africa remains highly individualistic, and thus survivalist. Without mobilisation and organisations through co-operatives or NGO's, these individual, survivalist informal recyclers cannot lobby for protection, identity and facilitation. It is only through mobilisation that insurgency may be manifest.

Although these issues exist, there are signs of change with a unique relationship that has been forged with the inner cities Priority Zone offices, which has become the so-called HQ for the recyclers. The priority zone, whose role it is to green and preserve the ICC and Centrum precinct respectively, has allowed a mutual relationship to occur, linking the informal and the formal. Minorah Mthetwa explains how warm drinks are offered to the recyclers on cold days and how the premises offer ablution and meeting facilities for the recyclers. Further to this, Tasmi Quazi, a researcher for AeT hopes that the municipality would grant an off-street depot to further facilitate this groups needs and galvanise their position in the MSW processes of the city as sustainable partners with local government. The visibility of these recyclers, coupled with COP 17 initiatives such as The Friends of the Recycler Campaign has allowed for a better understanding and tolerance between formal businesses and the informal recyclers. Quazi (2012) notes how formal relationships have been formed between the recyclers and franchises such as KFC, PG Glass and Jet just to name a few, who now actively choose to support informal recycling over private companies.

It is hoped that through initiatives such as the inner city cardboard recycling project, that local government will start to take note of the work informal recyclers do, as well as the social and environmental benefits that their work can offer, and therefore offer more formalised and responsive approaches to this worldwide phenomenon that is, informal recycling.

7.8 DURBAN RECYCLING

It has been shown that low income groups practice recycling, not as an environmental concern but as a livelihood strategy, however middle to upper income groups are divided

between those who show complacency toward recycling and those who do so out of concern for the environment. In an effort to promote sustainable practices within the Durban Metropolitan Area (DMA), various initiatives have been instigated which include amongst other things, additional accessible collection centres as well as information and education programmes to help promote the act of recycling, however it is motivated. Listed below are the strategies tabled by Durban Metro as part of their Durban Local Agenda 21 campaign of 1999.

Buy Back Centres: There are various, multi material buy-back centres in operation within the DMA (Durban Metropolitan Area) run by various recycling companies such as SAPPI and MONDI, with the support of Durban Solid Waste (DSW). It has been shown that such centres attract informal recyclers as a means of income generation through the collection and exchange of recyclable goods. Studies conducted by the eThekweni Municipality, (formerly Durban Metro) have suggested that through buy back centres informal recyclers can earn up to R50 per day (figure based on report date of 1999). Other initiatives incorporated by the municipality to promote sustainable waste management practices include:

- Recycling in Schools and with Fundraising Organisations
- Bottle and Paper Banks
- Recycling at Durban Solid Waste Garden Refuse Sites
- Recycling in Business Industries
- Large Scale Composting

Further to this, the Cleansing and Solid Waste Unit of eThekweni Municipality has been established as the provider of comprehensive waste management services within the DMA. The department's operations network currently includes:

- 23 Operational Centres
- 6 Transfer Stations
- 3 Active Landfill Sites
- 23 Recycling Plants
- 3 Landfill Gas Projects
- 2 Leachate Plants

By offering the above assets, DSW is able to offer a full range of services to over 3.1 million residential, commercial and industrial customers respectively. Further to the above mentioned assets is the following range of services:

- Collection and transportation of domestic, commercial and industrial waste.
- Provision and management of wheelie bins and skips.
- Managing of landfill sites.
- Street cleaning and litter removal services.
- Recycling and minimisation of waste.
- Management of illegal dumping.
- Community waste management awareness and education programmes.
- Research and development of new waste management processes.
- Recovery from landfills of naturally produced methane gas as an energy source for generating electricity

7.9 CONCLUSION

By understanding the various formal systems that are in place to manage urban solid waste, lessons may be derived in how best to accommodate the informal sector. It has been succinctly shown that waste management and environmental sustainability is high on the governments agenda, however very little provision has been made toward supporting informal recyclers in a way that celebrates them as active participants in the so called green economy of the country. It is for this reason that the architectural proposal seeks to forge formal relationships between the informal and formal sector, generating a mutually beneficial platform for waste mitigation and poverty alleviation for those who choose this form of work as a livelihood strategy.

CHAPTER EIGHT | SOCIAL PRECEDENT STUDIES

8.1 INTRODUCTION

The following precedent studies explore the condition of insurgency within two contrasting demographics. Dharavi, a “recycling slum” within Mumbai, India explores the dynamism of a slum, not merely as housing precinct but rather an extreme mixed use guerrilla urbanism. The slum cannot be viewed as a squatter camp, but rather as a dense network of micro-entrepreneurs and factories that serve an industrial/production function as well as housing for the urban poor. The Tower of David however explores the condition of building hijacking as a means to live in the city where suitable and affordable low cost housing isn’t provided. The concept of recycling architecture and infrastructure comes into question, and therefore the suitability thereof. The Tower of David represents the antithesis to adaptive reuse which shall be explored in the following chapter. Where adaptive reuse is a controlled reuse of infrastructure and architecture through formal means, building hijacking and squatting as seen in the Tower of David may represent the informal version of this act of recycling.

The primary objective of this research is not to romanticize poverty, or to suggest that these living conditions are acceptable, however under such extreme life conditions, insurgency is manifest. It is this insurgency that provides succinct evidence into the lives of the urban working poor, and learning how best to accommodate them by understanding how they have made accommodation and livelihood choices for themselves.

8.2 DHARAVI, INDIA: MICRO RECYCLING FACTORIES THAT MAKE UP AN INFORMAL RECYCLING PRECINCT



Figure 1: Montage showing the various recycling activities that happen within Dharavi, most notable is the “micro factories” where the recycling processes take place.

“Wiping beads of sweat from his forehead, Mr Aziz stubs out a grubby cheroot on his counter and unwraps a glossy paan leaf the size of his palm. Holding it to his pockmarked face he inhales the aromatic betel nut paste inside. ‘I sell these as a stimulant to the local nightshift workers,’ he says. ‘I use them to escape the smell of this place.’ Around his tiny stall the unmistakable stench of ammonia and sewage hangs heavy over Apna Street, a packed industrial lane that dissects Mumbai’s labyrinthine Dharavi slum. The paan vendor looks out towards the Arabian Sea, as if wishing an ocean breeze would somehow blow the foul air west, out over Asia’s largest shantytown towards the desolate salt-pans and low-lying marshes encircling India’s most chaotic city. A 175-hectare maze of impenetrable dark alleys and corrugated shacks, Dharavi swarms with more than a million residents. There is only one easy way into its true heart, according to local folklore - you follow the splotches of blood red betel juice, spat on to the muddy ground by Mr Aziz’s satisfied customers”

-McDougall (2007)

Spanning 223 hectares, Dharavi has been dubbed as “Asia’s largest slum”. Situated in Mumbai, India and bordered by the Sion, Mahim and Matunga railway stations, Dharavi is home to approximately one million residents. Not only is Dharavi vast in terms of its area, but it is also one of the most densely populated areas in the world, with a population density of 336,463 people per square kilometre (Kamla Raheja Vidyaniidhi Institute of Architecture in Savchuk, Echanove & Srivastava 2009) which is roughly 6 times as dense as Manhattan, New York.

What makes Dharavi unique, and why it has been selected as a precedent study for this, part two of the dissertation, is that it is not merely a slum and a residential sprawl of informal housing, but a major economic hub representing the city’s vast informal sector. Composed of over 15 000 single room “micro-factories” (Deshmukh 2007) there is a vast array of economic activities such as recycling industries, leather tanneries, heavy metal work, woodwork, and manufactured goods like garments, shoes, luggage and jewellery. These micro enterprises generally serve all of Mumbai, and many products are even distributed in global markets (Deshmukh 2007). What is most intriguing about Dharavi is that recycling makes up a large percentage of this informal industry, most of which is plastic, with as many as 10 000 plastic recyclers operating within the slum. That being said paper, cardboard, wax, soap, oil and most other items are recycled too. It is difficult to find anything that cannot be recycled in Dharavi, as such the recycling “industry” employs up to 200 000 people alone (Dhillon 2008) although exact figures cannot be determined as a census has not been conducted.

“In every shack, dark figures sit waist-deep in piles of car batteries, computer parts, fluorescent lights, ballpoint pens, plastic bags, paper and cardboard boxes and wire hangers, sorting each item for recycling. Workshops reveal everything from aluminium smelters recycling drink cans to perspiring bare-chested men stirring huge vats of waste soap retrieved from rubbish tips and local hotels. Walking through Dharavi, home to an estimated 15,000 single-room factories, it becomes difficult to conceive of anything that is not made or recycled here.”

-McDougall (2007)

Savchuk, Echanove & Srivastava (2009) explain how those who have never entered Dharavi view it as an industrial wasteland and a place of great misery, chaos and shame; “*an immense*

junkyard crowded with undernourished people disconnected from the rest of the world” (Savchuk, Echanove & Srivastava 2009) however beneath the dystopic, disorderly facade lies an intriguing glimpse into the “*city of the future*” (Neuwirth in Gregory 2010) perhaps even a city within a city. That being said, Cruickshank (in Gregory, 2010) postulates that Dharavi more represents the city of the past than the city of the future, arguing that Dharavi may give us the sense of how most European cities were born, and thus evolved into the great cities they are now. Whatever the case may be Dharavi stands as a testament to the ingenuity of the poorest, most marginalised members of society as they have forged a livelihood in the interstitial niches of society, and thriving on the waste of the “haves”.

A further reason why this community was chosen as a precedent study, beyond informal recycling, is the further plight these community members face at the hands of modernity and developmentalism. Dharavi grew on the peripheries of Mumbai and was still a peripheral site in 1956 existing on brownfield land. Yet as Mumbai has expanded Northwards it has engulfed Dharavi, placing the slum at the centre of the dense conurbation by the 1970’s. As a result Dharavi has become so-called “hot property” (Gregory 2010) and plans are in motion to demolish the slum, along with its micro enterprises and industries to make way for modern, multimillion dollar high rise housing estates in a project dubbed “Vision Mumbai”. As has been described within this dissertation, insurgency occurs as a form of resistance to the oppressive forces of developmentalism and control over marginalised groups within society. This has also been experienced within Dharavi as a resistance to “Vision Mumbai” when on the 18th June 2007, 15 000 residents went on strike, abandoning the essential services that Dharavi offers and marched to Maharashtra Housing and Area Development Authority office (Gregory 2010). This demonstration was to be remembered as Black Day, due to the black flags the protestors carried in solidarity to oppose the governments development plans. “*Black Day served as a reminder to Mumbai’s broader residents how crucial the Dharavi residents were as a population*” (Gregory 2010). Most importantly to note however, is that the residents do not want to stop development, but want to be integrated as part of the development process, and not merely “relocated”. It is the destruction of livelihoods, with no plans to relocate the businesses that has angered residence of Dharavi, who have been offered nothing more than 21sqm tenements in multi storey buildings, thereby unhinging the fabric within which they earn a livelihood.

“Colour and vibrancy prevail and it is all too easy to be seduced by the romance of basic human ingenuity and resilient creativity. Yet the fact remains, Dharavi is unsanitary and this has to be addressed”

- Gregory (2010)

It is on this key concept that this precedent study hinges. The author, in investigating Dharavi as an example of a recycling community and insurgency, is by no means romanticizing poverty, or suggesting that there is no room for development within the third world, or slums such as these. The greatest hardship does, in most cases result in ingenious grass roots strategies for survival, however these cannot remain the spectacle of the developed world, to wonder at the “ingenious poor”. Instead lessons on developmentalism, inclusion and facilitation may be learned to create more sustainable cities of the future. If we are reminded of the sentiments that Dharavi may indeed be a city of the future, it must be assumed that this is not a negative realization, it is a simple truth. As such blind demolition and removal in the name of modernity and out of fear and loathing of such unsightly places of human habitation cannot be a solution for the organic growth that is experienced in these future cities. City planners, architects and the urban working poor need to work together in order to create true cities of the future that respond to all of its residents needs, not only those who can afford to be counted.



Figure 2: A figure ground of Dharavi, Mumbai, India showing the intense population densities as well as the various trades that happen within the slum.

8.3 THE TOWER OF DAVID: PARASITIC HOUSING IN ABANDONED COMMERCIAL SITES



Figure 3: Various views within the so-called Tower of David showing how the insurgent citizens have modified the carcass to create habitable spaces that many call home.

“Architects still call the 45-story skyscraper the Tower of David, after David Brillembourg, the brash financier who built it in the 1990s. The helicopter landing pad on its roof remains intact, a reminder of the airborne limousines that were once supposed to drop bankers off for work”

-Romero & Diaz (2011)

Situated in the heart of Caracas, Venezuela, the so-called “Tower of David” stands as one of the tallest skyscrapers in Latin America; an ode to the Latin American financial heyday of the 90’s. Built by the billionaire David Brillembourg, who was behind such economical landmarks as the National Brewery, The Union Bank, Mantex, Atlantica Industry, and finally the ‘*Confinanzas*’ (Bonadies 2011) which is described herein as *The Tower of David*. The complex was designed with six buildings in total namely; The Atrium, Tower A which is 190 meters complete with helipad, Tower B, Building K, Building Z and a parking lot with twelve levels, occupying 12 hectares of land. Apart from being the head offices of Confinanzas, there was a plan to build a hotel and luxury apartments too (Bonadies 2011).

However twenty years on, standing incomplete; the tower no longer represents the financial clout of past but rather a symbol of hope and refuge for the urban poor, as an opportunity to escape homelessness in a country facing a desperate housing crisis (Romero & Diaz 2011). The Tower of David, once a vision of financial prowess, has become home to over 2500 squatters.

The Tower of David, so nicknamed by the squatters who started invading the premises in 2006, was only 60% complete when the project was abandoned due to a crippling financial crisis in 1994. A situation such as this raises the debate regarding the use of abandoned, derelict or unfinished pieces of infrastructure or architecture, and the opportunity that such projects may possess for the marginalised urban poor. This has been explored in part one of this dissertation where the abandoned spurs of the freeway in Durban, South Africa were utilised effectively as a traditional medicine market within the Warwick Junction Precinct. In as much the same way that waste becomes common property as explored in the waste management chapter previously, the ownership of abandoned or unused infrastructure and architecture comes into question and thus the rights of squatters to stake claim to otherwise redundant pieces of urban/architectural “waste”. It is this quandary that qualified this study as a precedent to inform an architectural intervention for the informal urban poor of Durban South Africa, as it questions the right to the city, the appropriation of space and the rights to recycle, even if this is construed as “squatting” by the urban poor. Another point of view, when juxtaposed with Dharavi prior, is the concept of the vertical slum and how this affects the liveability and productivity of the slum when compared to the sprawl and linkages present in the exponentially growing Dharavi slum. Could containing a slum within a vertical condition such as The Tower of David provide some answers into housing the urban poor sustainably within the city itself instead of sprawling slums and squatter camps on the peripheries as is witnessed with many of the Southern African squatter camps.

More than 500 families have found refuge and made a home in the skyscraper. These families live in the incomplete tower which lacks several basic amenities such elevators and the smell of untreated sewage is said to permeate the unlit corridors, where children play by the glow of their cellphones (Romero & Diaz 2011). *“Few of the building’s terraces have guardrails. Even walls and windows are absent on many floors...The tower commands some of the most stunning views of Caracas. It contains some of its worst squalor”* (Romero & Diaz 2011). As bleak as these imageries sound, The Tower of David is more than another “slum story”, but

rather evidence of a strong community who have self organised and created a governing co-operative, known as "Casiques of Venezuela" which was founded in 2010. The complex has been described by the founders of the co-operative as a *“self-organizing system that allows the families to live here. Besides the board members, there are also 16 coordinators, several clean-up crews and more than 20 employees responsible for ensuring the good operation of this vertical citadel”* (Bonadies 2011). Bonadies (2011) explains that all decisions made are done so democratically through a vote, as long as those decisions don't prejudice anyone providing for sound self governance. *“The community has organized their own system of rent payments, social activities for every age and even a building system to help each other construct their walls and spaces”* (Bonadies 2011).

This provides evidence that the urban poor, when formalised through “formal” structures such as co-operatives, may elevate themselves to a form of insurgent citizen by contesting their rights to spatial and social appropriation. The Tower of David, as with the Dharavi analysis prior, is not a bleak place, reminiscent of the dystopic images one may imagine when considering a slum. Instead it is a democratic, self governed social structure that exists in the “inbetween”, outside of the social and political realm of the “haves”.

“Contradictions are permanent within this socialist commune, living in the heart a superstructure of capitalism”

-Bonadies (2011)

Although The Tower of David, Venezuela presents different social conditions to Dharavi in Mumbai India and the Informal Urban Recyclers of Durban, South Africa respectively, the commonality is in the social structure inherent in the citizens of the inbetween, as has been dubbed within this dissertation, the “insurgent citizens”. In the Tower of David, evidence is given of the self organising potential that these insurgents possess in contesting social and spatial exclusion within the city. Although building hijacking and squatting may be viewed as survivalist, opportunist and in most cases illegal, it is a conscious strategy undertaken by those members of society who are most vulnerable in order to contest their condition of poverty, especially where the government has failed, perhaps in their opinion, to respond to their plight. In the same way that Dobson (2011) dubs the pavements of street dwellers “hope space”, the Tower of David represents an example of such hope spaces, and perhaps may give clues into

how to respond to these citizens needs by learning from their strategies, rather than criminalising their activity, and in most cases their only means of livelihood generation.

CHAPTER NINE | ARCHITECTURAL CONCEPTS

9.1 INTRODUCTION

The preceding precedent studies sought to investigate the theoretical and social premise that will support the proposal, that of Insurgency, Informal Recycling and African Cityness respectively. The following chapter shall look at architectural movements that will be incorporated into the design component of the proposal. It is important to note that these seek to support the social precedents as well as the theoretical background established and explored within Part 1 of the dissertation. Furthermore, it must be noted that the following architectural concepts do not necessarily reflect the same accommodation of the proposal, but are merely cosmetic tools for the design of thereof.

9.2 ADAPTIVE RE-USE



Figure 4: Various successful adaptive re-use projects.

“Humankind has spent many hours and resources to create the built environment around us. These built environments define and symbolise our communities. They become part of the community. When a structure is vacated, it impacts the community as a whole. It is important for the community to see these spaces as

opportunities rather than blight or problems. They can be the breeding ground for new and exciting developments, rather than social ills”

<http://adaptivereuse.info/about-ar-info/>

Within the construct of insurgency, upon which this dissertation is based, adaptive reuse provides a means of recycling unused, derelict or abandoned infrastructure to create new functions at a considerably lower expense. The case studies examined in the previous chapters of House 38, in Doorfontein Johannesburg as well as the study of The Tower of David, in Caracas Venezuela provide glimpses of the urban poor adaptively reusing abandoned building stock for their own purposes. Although in these extreme cases, the “*adaptive reuse*” witnessed is in fact building hijacking and urban squatting, it does question the role that redundant building stock can play in supporting and facilitating insurgency.

The concept of identity is a further parameter upon which adaptive reuse may support, by preserving the urban fabric and memory of place. Within dense urban environments such as the Durban, CBD architecture and symbolism become methods of navigation and identification. By adopting adaptively reused architecture there is a preservation of these identities that would otherwise be lost. Powell (1999) explains that the main reason for adaptive reuse historically has been due to economics, often done without regard for history or character. However in the late 20th century this concept shifted when adaptive reuse became a means of historical preservation. Further to this, Powell (1999) believes that the current architectural reuse movement is more of a symbiosis between preservation and economics and suggests that it is not just a sentimental, economic or historic approach but rather a desire to create new forms out of the old building fabric. Powell (1999) posits that the rediscovery and reuse of old building stock, infrastructure and areas is significant for the twenty-first century urban life. As such, the concept of adaptive reuse is relevant to provision of new function within the existing urban framework of the Durban CBD, South Africa. Preserving heritage, identity and nostalgia whilst responding to the current needs of the city, adaptive reuse provides a sustainable development strategy as such is suited to this proposed intervention.

Listed below are two selected adaptive reuse projects chosen to explore this concept in order to understand the principals and outcomes thereof. The selected works do not reflect the

architectural intervention proposed within this dissertation, but are instead chosen for their architectural character and thus aiding in defining adaptive reuse.

The Kolstrand Building

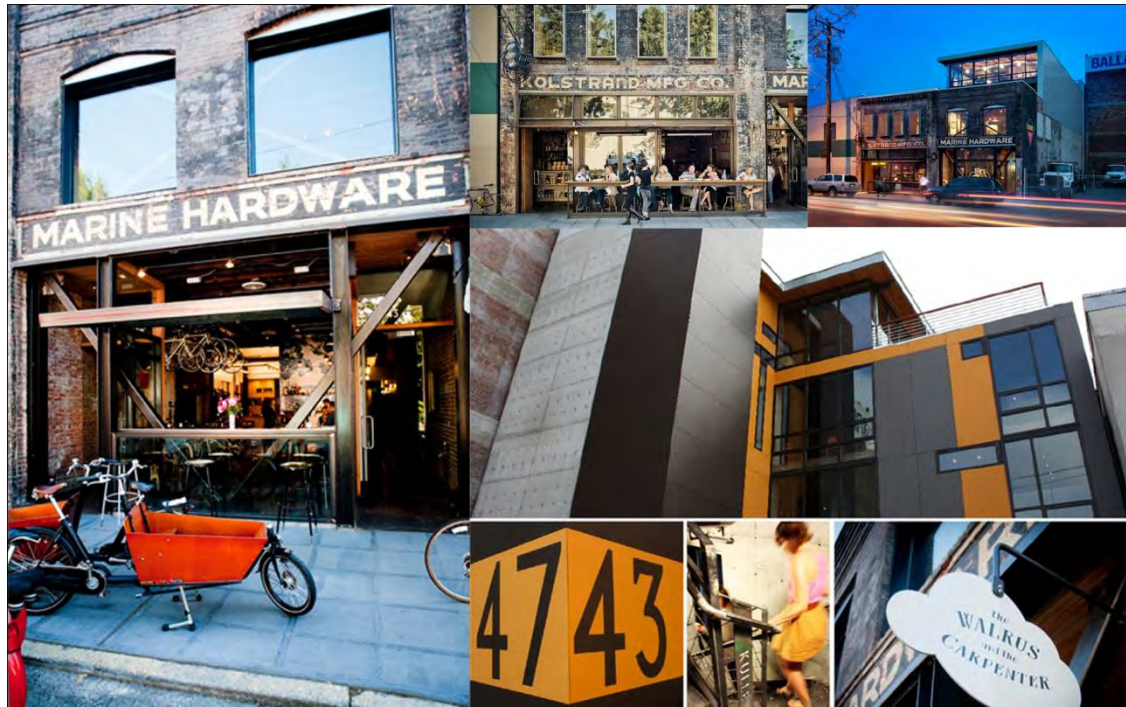


Figure 5: Views of the project completed, maintaining the integrity of the original structure.

Date: 2010

Location: Seattle, Washington, USA

Project: Mixed-Use office and retail, within an adaptively reused marine supply building.

9.3 PARASITIC ARCHITECTURE

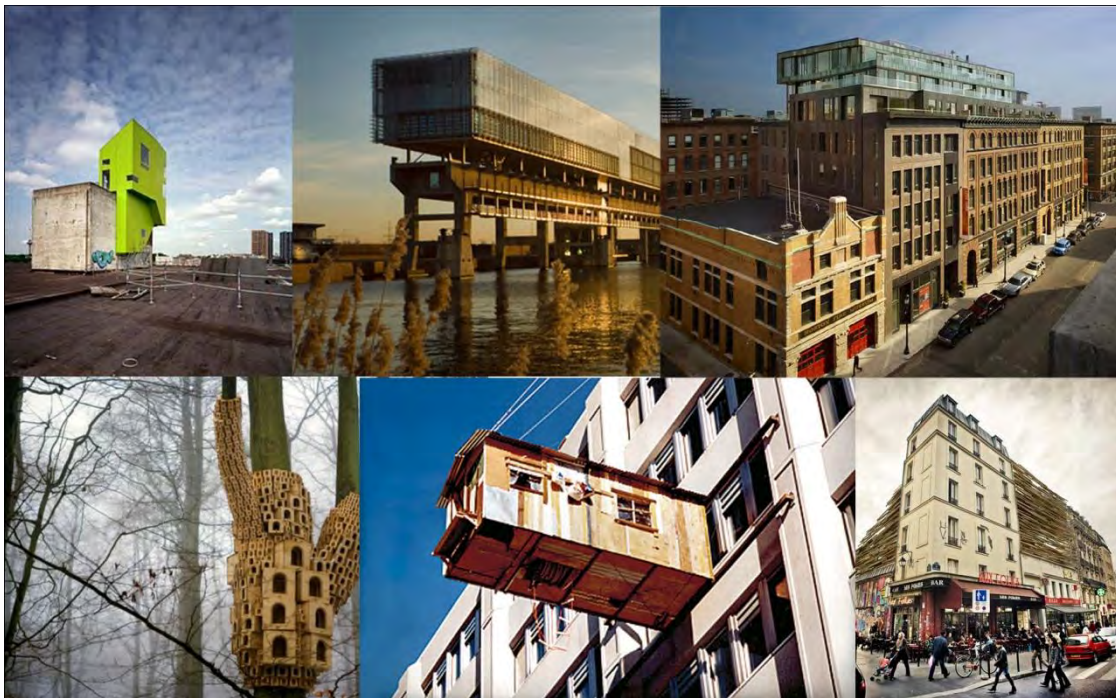


Figure 6: Various parasitic architectural projects that rely on the “host” building for their structural integrity.

“Parasitic architecture can be defined as an adaptable, transient and exploitive form of architecture that forces relationships with host buildings in order to complete themselves. Parasites cannot sustain their own existence without siphoning energy from the surplus supply demonstrated in host buildings”

[-http://parasitic-architecture.webs.com/](http://parasitic-architecture.webs.com/)

Although there is no definite explanation on what constitutes true architectural parasitism, the theoretical framework behind the concept supports that seen within biology, namely *“an organism which lives in or on another organism (its host) and benefits by deriving nutrients at the other’s expense”* (Oxford Dictionary). Therefore if adaptive reuse is the altering of an existing structure for a use other than for which it was designed, then parasitic architecture in this dissertation is the inhabitation and use of an existing structure whilst it continues to perform its intended purpose. Building hijacking, squatting and parasitism may be used interchangeably within this concept as each are “alien” and rely on the “host structure” to thrive.

Architectural parasitics may be flexible, temporary or transient, feeding off the host structure to support its own growth. As with adaptive reuse, parasitics may reconfigure and redefine the built structure on which it relies, creating new identities and perhaps even function. Although parasitics may be a “relabeling” of social ills such as squatting, it is the purpose of this dissertation to rather explore the positive possibilities that exist through a strategy such as parasitic architecture. In as much as adaptive reuse redefines how redundant infrastructure may be used to support insurgency, parasitic architecture may further facilitate this process due to its highly adaptive nature which may be more aligned to the life strategies of these insurgent citizens.

Listed below is an example of parasitic architecture, chosen to explore this concept in order to understand the principals and outcomes thereof. The selected work does not reflect the architectural intervention proposed within this dissertation, but instead has been chosen for its architectural character and thus aiding in defining architectural parasiticism.

<http://citymovement.wordpress.com/tag/parasitic-architecture/>

Auto Defense



Figure 7

Date: 2009

Location: France

Project: *An unrealized guerilla housing scheme that questions the use of public space and for whom it shall serve.*

9.4 HIGH-TECH

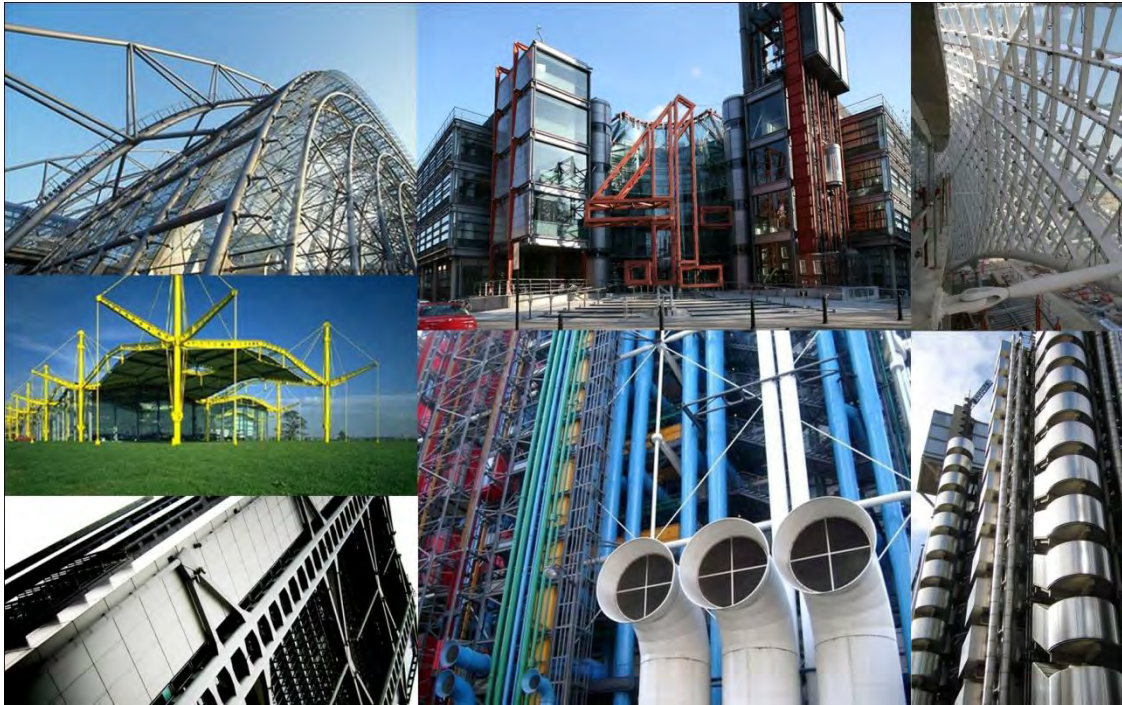


Figure 8

High-tech architecture, also known as Late Modernism or Structural Expressionism is an architectural style which incorporates the tectonics of architecture as its key stylistic feature. Architects achieve a language of technological construction through expression of the components that make up the structure, as such the form of the building is less important than the assembly thereof and how this is expressed and celebrated. Although pioneered in the 1970's *“high-tech remains a useful and apt label to characterise a particular approach to architecture in which high-technology inspires the imagery of the building as much as being used in its production and assembly process”* (Buchanan, 2010).

Compared to the symbolism of Parasitic architecture and the preservation of Adaptive Reuse, High-Tech architecture is a stylistic and aesthetic architectural choice for the proposed architectural intervention. Due to the highly productive and mechanical process of recycling, high-tech has been chosen as a reference to this mechanical,

machined process. Further to this, the idea of an “adaptable” or deconstructable archi-
type should support the parasitic and transient concepts mentioned prior. The built form
must appear to be “constructed” and thus hint at the ability to be deconstructed or
recycled. There exists a romantic notion that the building should appear as if it were
built by hand, by the insurgent citizens as a kit of parts as the materials required became
available or salvaged. As such the building should appear as if it is constantly being
added to, never completed and forever adaptable as the program may grow, thus the
only way this may be achieved is through the “kit of parts” processes expressed through
high-tech architecture.

Listed below is an example of high-tech architecture, chosen to explore this concept in order
to understand the principals and outcomes thereof. The selected work does not reflect the
architectural intervention proposed within this dissertation, but instead has been chosen for its
architectural character and thus aiding in defining architectural high-tech architecture.

The Pompidou Centre

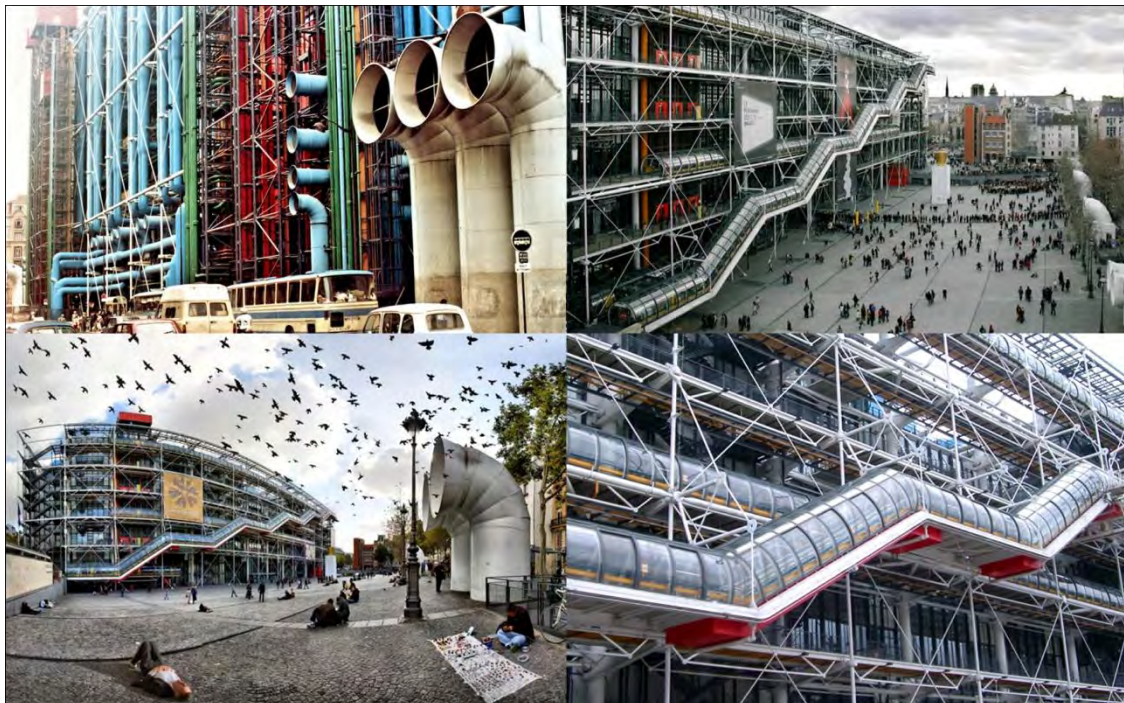


Figure 9

Date: 1977

Location: Beaubourg, France

Project: Public Library and Museum of Modern Art

CHAPTER TEN | RECYCLING FACILITIES PRECEDENT STUDIES

10.1 INTRODUCTION

The following precedent studies were selected not only for their similar accommodation, but for the innovative use of form, structure and materials so that the service building could be as proudly celebrated as any other civic or public building, especially considering the nature of this unique architecture being within the public realm. The paradigm that is placing these buildings as true public property has resulted in a range of design solutions that are both interesting, and architecturally pleasing as they are no longer banished to the outskirts of the city. By using the international precedents it is hoped that both the social and aesthetic barriers associated with this building type can be broken to create a truly inspiring piece of public architecture, a building that celebrates its function as one of the organs the city relies on. It must be noted however that the following precedents are recycling facilities, out of context to the proposed client. What is being explored in these examples is the architectural aesthetics of pragmatic and severely industrial buildings and how these aesthetics are being defined as the value of recycling has become more evident. As such the exact accommodation per project has not been explored as it is of no value to the proposed informal recycling facility for which this dissertation is to serve.

10.2 ANALYSIS



Figure 10: The vast recycling facility at Valdemingomez which was designed to be dismantled.

Date: 2000

Location: Valdemingomez, Madrid, Spain

Project: Recycling plant for urban waste

Situated in the Valdemingómez area of Madrid, Spain, this Recycling Plant for urban waste is part of a larger plan to improve both the social and environmental aspects of the Southeast Region. It houses the usual components found in a recycling plant, namely selection, processing and treatment facilities as well as offices, workshops and storage space. The most notable feature of the structure is the massive “green” sloping roof which is met by sheer, recycled polycarbonate wall panels. These panels which are translucent lower the solar loading on the building, but allow enough light into the factory to lower the artificial lighting requirements.

What makes this selected work unique, and the reason for using it as reference is the incorporation of a museum and a route for visitors to watch the recycling process, so therefore, whilst being a working factory it also educates the public by putting all of its processes on display.



Figure 11: UN_Studio's architecturally innovative recycling depot at Delft.

Date: 2000

Location: Delft, The Netherlands

Project: Recycling Depot

Situated in Delft, Netherlands this waste treatment facility was designed to handle 25,000 tons of organic waste, whilst the recyclable goods are compressed on site.

The compound consists of a service building, transfer building, a weighing area and a recycling depot. The drop off and collection area is sunken so as not to be seen from outside the compound, which alleviates views of the waste waiting to be processed. The work was chosen for its unique forms and curves, for a building typology that is usually condemned to a warehouse typology. It is refreshing to see the sensitivity in the design, considering the work that happens behind the walls. It is one of the oldest selected projects, and therefore a good measure to see how attitudes toward service building design have changed. The architects express the design as follows, *“For much of human civilization, waste has been something forgotten or ignored by the masses until a cause for concern such as an epidemic. With dwindling landfills and modern standards of hygiene, waste is no longer simply hidden or buried, instead much of it is processed for re-entry as recycled goods”*



Figure 12: Views of the facility

Date: 2010

Location: Huarte, Spain

Project: Garbage collection and incineration plant

Although not a recycling depot this waste treatment facility located in Huarte, Spain, near the French border epitomizes the paradigm shift in how we view and design service buildings. The innovative use of forms, materials and colors are reminiscent of a modern art gallery or museum. The structure becomes a form of urban sculpture, and earns its right in the city, as opposed to be pushed into the industrial hinterlands. The use of thick walls clad in recycled aluminum assists in noise reduction. It is very successful as a piece of architecture, and a waste disposal centre that creates identity and place through its unique presence.



Figure 13: Artists impression of the proposed facility.

Date: *In Progress*

Location: *Barcelona, Spain*

Project: *Cultural centre and recycling park*

This unique design served as inspiration for the project, not in its innovative use, but rather for how the circulation and the recycling process was expressed as a journey in the form of the building. Proposed for Barcelona, Spain the courtyarded corridor building snakes its way around various public buildings and amenity, almost to show off its function rather than hide it behind the walls of a factory. The lifting of the building in parts also allows for public access to the site making it less imposing than a solid piece of recycling machinery. The architects describe the building as a ring building which generates didactic paths, whilst the skin is based on the deformation pattern of plastic during its process of recycling.



Figure 14: Views and plans of the facility.

Date: 2007

Location: Pivka, Slovenia

Project: Metal collection and recycling plant

Located in Pivka, Slovenia, the restrained and simple design of this micro recycling plant shows that these depots need not be huge industrial scars settled out of sight and out of mind. The smallest of the selected works, it serves as proof that satellite depots are a reality and can function within an already dense city fabric. Although not as bold as some of the other designs, it is interesting to note that the materiality of the two buildings reflects their function. The concrete block deals with general waste and plastic etc, whereas the steel building is responsible for the weighing and separation of metal goods, therefore as seen in previous examples, identity and symbolism can be abstract or informative.

CHAPTER ELEVEN | PROJECT DESCRIPTION

11.1 INTRODUCTION

This chapter briefly describes the client, their requirements and subsequently a brief is developed for the proposed architectural project, whilst abiding by the theoretical and conceptual framework set up in Part One of this dissertation document. The Durban CBD has been highlighted as the geographic area of choice for the execution of the proposal, due to the high prevalence of informal urban recycling therein. The site selected provides the greatest opportunity for a development of this nature, the benefits of which shall be discussed later in this chapter.

11.2 CONCEPT

Realising the urgent need to develop new waste management strategies for the city of Durban, South Africa; given the future development and solid waste generation projections, the eThekweni Municipality in conjunction with DSW (Durban Solid Waste) have proposed a central waste management facility within the city proper. Through the existing pilot project of the Priority Zone in the Durban CBD, a green corridor is proposed that not only seeks to celebrate and improve the lives of the informal recyclers, but also continues the work they are currently doing in terms of urban upliftment and the edible garden movement.

Further to this, in light of the current unemployment rates within South Africa, waste picking or informal recycling has become a viable and sustainable means of livelihood generation for the urban poor. This activity, which has become a worldwide phenomenon is prevalent within the Durban CBD, as such strategies for integration and formalisation have been tested through iTRUMP and the NGO, AeT (Asiye eTafuleni) respectively. It is the aim of the eThekweni Municipality to broker a relationship between the informal recyclers and the formal waste management contractors of DSW through a waste management co-operative, as per precedents followed in Belo Horizonte and India respectively. Thus the proposed architecture will symbolise a new paradigm in Durban's waste management system, that seeks to offer a sustainable income for the informal urban recyclers of Durban, whilst eradicating NIMBY-isms (Not In My Back Yard) by providing an industrial archetype within the CBD. The symbolism thereof speaks of a new attitude toward waste management and recycling respectively, where the emergent economy is a so called "green-economy" whose success relies on the formal/informal waste management dialogues that this proposals seeks to broker.

As such the facility will provide a platform for the insurgent citizens of Durban, South Africa to undertake their livelihood strategy. The above strategy encompasses Phase 1 of the development; however Phase 2 of the proposal involves the exponential growth catalysed through the formal system by the insurgent citizens. As the potential for livelihood generation is realised and exploited, so the numbers of recyclers and micro entrepreneurs increases. In a world where “recycling” and “greening” have become the buzzwords for a generation, these insurgent citizens are able to capitalise on one of the most important commodities, freely available within the city-waste. As the population of recyclers increases, so too does their requirements, quickly exceeding the capacity offered by the formal proposal. Through survivalist, insurgent means an urban slum starts to develop, enveloping the formal structure and growing exponentially engulfing redundant infrastructure in its wake. The result in Phase 2, is an unplanned, sprawling urban slum, likened to Dharavi, India; not merely housing, but a thriving, working, economic driven network of mixed use micro recycling factories. Phase 2 is neither planned nor controlled, it is the parasitic invasion of the CBD by a swarm of micro entrepreneurs, constructing and providing for themselves where the formal strategies of the city could not. The fulcrum of their activity is neither determinable nor predictable; as such the proposed scheme for Phase 2 remains a hypothetical realisation of this parasitic, insurgent sprawl.

The eThekweni Municipalities objective of forging a new economic identity through the construction of a formal waste management facility at the gateway to the CBD, is ironically achieved albeit by means of an insurgent strategy. Where the formal structure was earmarked to be the new symbol of Durban’s green economy, the insurgent, informal sprawl that emerges as a result takes on this role instead. As with Dharavi, India this informal development is not a dystopic scene of a failed economy, but rather a site of hope and entrepreneurship by the urban poor to not only house themselves, but to be part of the “green economy” as a livelihood strategy too.

11.3 THE NOTIONAL CLIENT

11.3.1 THE CLIENTS ORGANISATION

The proposal is a multi faceted municipal owned facility. As such, the client is Durban Solid Waste in partnership with The Priority Zone in the service and celebration of the informal cardboard recyclers of the Durban CBD. The initiative is in line with the mandates

established in iTRUMP and Imagine Durban respectively. Initial funding shall be provided by the eThekweni Municipality for Phase 1 of the development. Future funding for the sustainability of the project will rely on municipal funding, as well as revenue earned through the various public facilities offered on the site. The goal is to achieve revenue through renting of workshops and informal trader stalls as the project becomes more firmly established and thus becoming self supportive and sufficient.

11.3.2 THE CLIENTS REQUIREMENTS:

As part of the LTDF (Long Term Development Framework) in abiding by the principals and projections established by the Imagine Durban Project as well as the Sustainable Cities NGO, the eThekweni Municipality in recognition of the need for more facilities of this nature to exist, has spear headed this project within the CBD, building on the successes of iTRUMP and learning from the AeT Informal Cardboard Recycling pilot project. The client intends to establish an MRF (Materials Recovery Facility) within the Durban CBD to derive succinct recycling strategies, which in this case shall include the already established informal urban recyclers of the Durban CBD and surrounds. As such a suitable site has been earmarked for development that shall include a drop off centre, a sorting and bailing factory as well as offices for the various businesses that will occupy and manage the facility. The success of this intervention would result in many CBD's within South Africa adopting a more inclusive development strategy for waste management and material recovery, as such preventing valuable recyclables from entering the already stretched landfill sites around the country.

11.4 DETAILED CLIENTS BRIEF



Figure 15: Logos of the various stake holders.

The pilot project established by the NPO, Asiye eTafuleni has sought to better understand the unique requirements of informal recyclers within the Durban CBD. In consultation with Richard Dobson (2012) the co-founder of AeT, it was established that lessons learnt from one part of the world cannot be transplanted into another in this type of grass roots up intervention, further noting that lessons learnt from one precinct in the city may not apply to another precinct. As such, the brief has been determined by the lessons learnt through the invaluable grass roots up, primary research undertaken by AeT over the 4 year course of the Informal Cardboard Recyclers pilot project. The author has undertaken to investigate succinctly the lives of these micro entrepreneurs in order to better understand their specific and unique requirements so as to allow for an adequate and suitable architectural intervention that does not hinder, but rather supports their current livelihood strategies.

Due to the project being a joint venture between the various stake holders, provision must be made for those said partners to be accommodated for within the site. As such offices are required for The Priority Zone, AeT as well as DSW. Further to this, the successful roof gardens at the current priority zone need to be re-accomodated within the site, which will further educate the public on “greener” lifestyle choices for a more sustainable city. It is important to note that the success of the proposal shall rely on the educational parameters that shall be established. The concept of a “green corridor” within the CBD shall serve as a working museum of sustainable practices that should be adopted, such as recycling and urban farming. The placement of the proposal, within the ICC precinct is a testament to the eThekweni Municipalities mandate of a “greener Durban”, celebrating these practices on a public platform.

The site is envisaged as an inverted Materials Recovery Facility (MRF), by taking the processes that happen within an MRF and putting them on the pavements for all to experience. This concept draws on how the recyclers work currently, using “free public space” as work space, where pavements are reinterpreted as places of income generation. (This is a reality of an African Urbanism, where public space is redefined by informal means, such as informal trading on street corners or vendors at traffic intersection.) Most importantly for the success of the scheme, in terms of responding to the client’s needs is that the facility may not altar the current working strategies of the informal recyclers. The process is what Dobson (2012) refers to as a “clean process”. What is meant by this is that the current recyclers are not rag pickers, the material they collect is clean as it is separated at source and

freely available which is in stark contrast to rag picking on rubbish dump sites. As such, the proposal does not seek to redefine how they work and ultimately how they identify themselves within the economy. Therefore there will be no drop off facility provided and the site will remain a clean site for the sorting, bailing and sale of recyclable cardboard. This response allows a recycling facility to operate within the CBD as there will be no odour or industrial noise to contemplate.

Although Dobson (2012) made it clear that housing was not a requirement of the informal recyclers, the Client seeks for a small component of accommodation to be considered, which could be used by the recyclers but is not for the exclusive use by them. This would allow for security by surveillance as well as provide further means of income generation through tenure.

11.5 SITE SELECTION CRITERIA

The site has been selected based on various criteria derived from the preceding literature review as well as the primary research undertaken by the author and AeT respectively.

- The site needs to cater for the safety, security and sustainability of the current informal cardboard recyclers of the Durban CBD.
- The siting of the proposal shall not hinder the current livelihood strategies they have adopted, but should rather promote and celebrate it. Furthermore the site should be central to the current collection and sorting routes which is aligned with the formal collection points by the various formal recycling companies that support the proposal.
- Due to the facility operating as an educational platform as well as a place of work for the informal recyclers and formal businesses respectively, it needs to be sited in the public realm, with a prominent street exposure.
- The site needs to be allocated close to public transport and amenities, however should avoid potential clashes with other informal sectors which may dilute the activities on the site.

- Transparency and surveillance are key to the success of the proposal, as such the site shall be located where this may be best achieved. The site needs to be permeable, yet secure, allowing for an element of passive surveillance.
- Because the proposal is part of the Priority Zone, it would need to be sited within the precinct which is managed by them. As such the site will fall within the ICC precinct, which would cater for many of the parameters already established above.
- The site must allow the possibility of growth, especially within the informal recycling community. As such the scale of the site and the proposal at Phase 1 shall be greater than the current needs. However as the success of the proposal increases in Phase 2 the informal and undeterminable infill will fill in the interstitial gaps.
- The site must allow for the upliftment and celebration of the informal recyclers. Although the proposal does not seek to make a spectacle of the work they do, it does however aim to celebrate the value in what they do. The site shall therefore assist in creating a positive social identity, proving the value that the city and general public see in these insurgent citizens, and ceasing the “inbetween” stigma they currently possess.

11.6 CONCLUSION

The previous section has illustrated the importance of selecting a suitable site, if this unique facility is to be appropriately designed in accordance with the stipulated brief and functions it intends to serve. The following chapter will explore the proposed site by means of a site analysis, thus identifying the various site specific parameters under which the design is to be effected. It is hoped that this section has provided the tools for the adequate choice of site.

CHAPTER TWELVE | SITE SELECTION, SURVEY AND ANALYSIS

12.1 ANALYSIS



Figure 16: South Africa



Figure 17: Kwa Zulu Natal

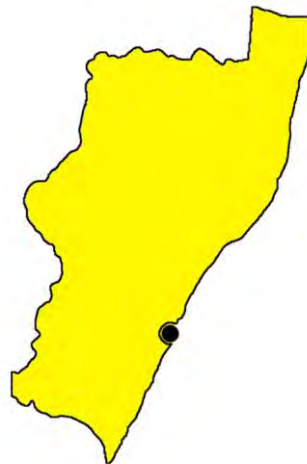


Figure 18: Durban



Figure 19: Location of the proposed site highlighted in yellow within the figure ground of the Durban CBD, South Africa



Figure 20: Zoning diagram of the Durban CBD.

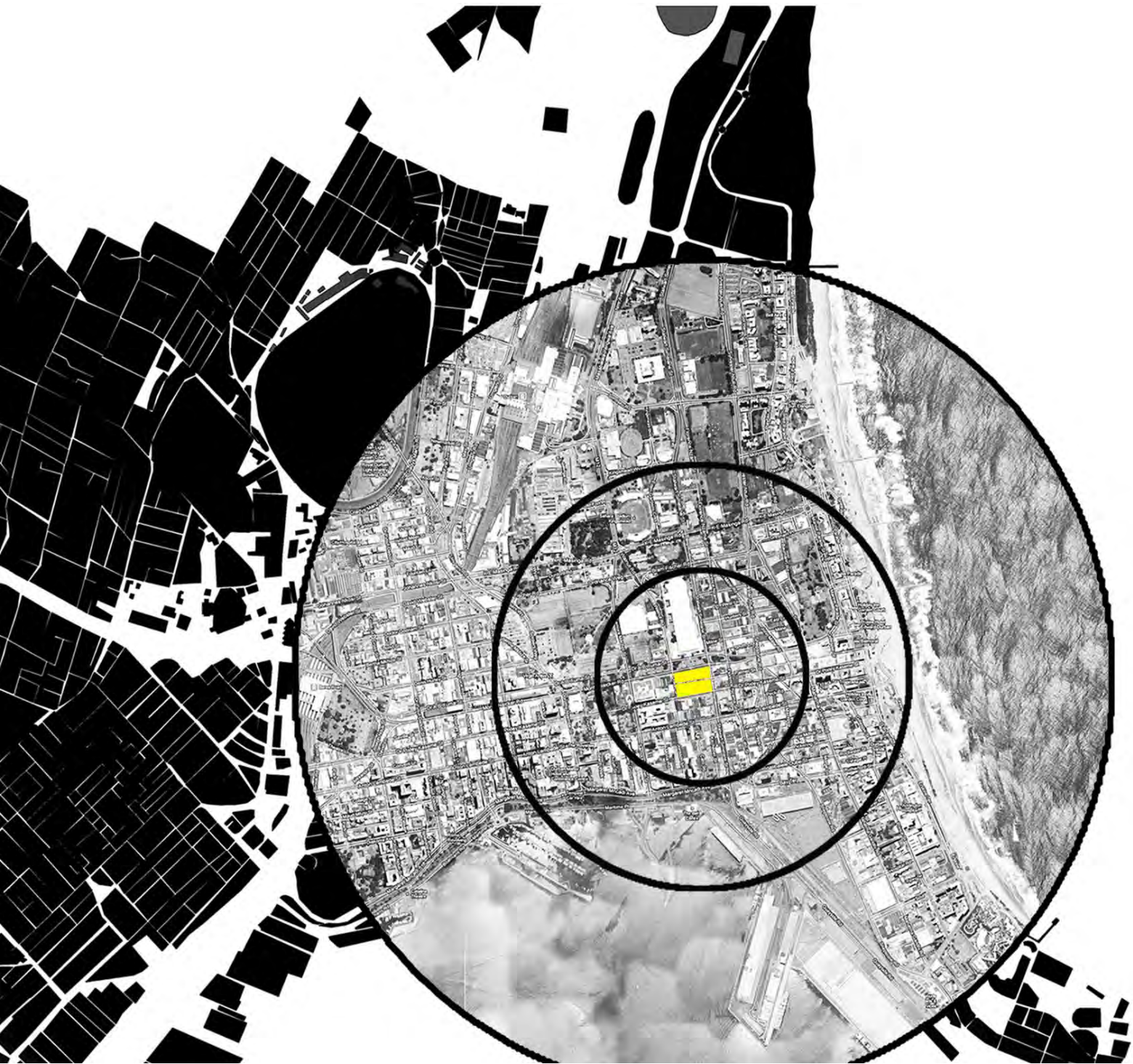


Figure 21: Shows the distance radii from the site at 500meter intervals.

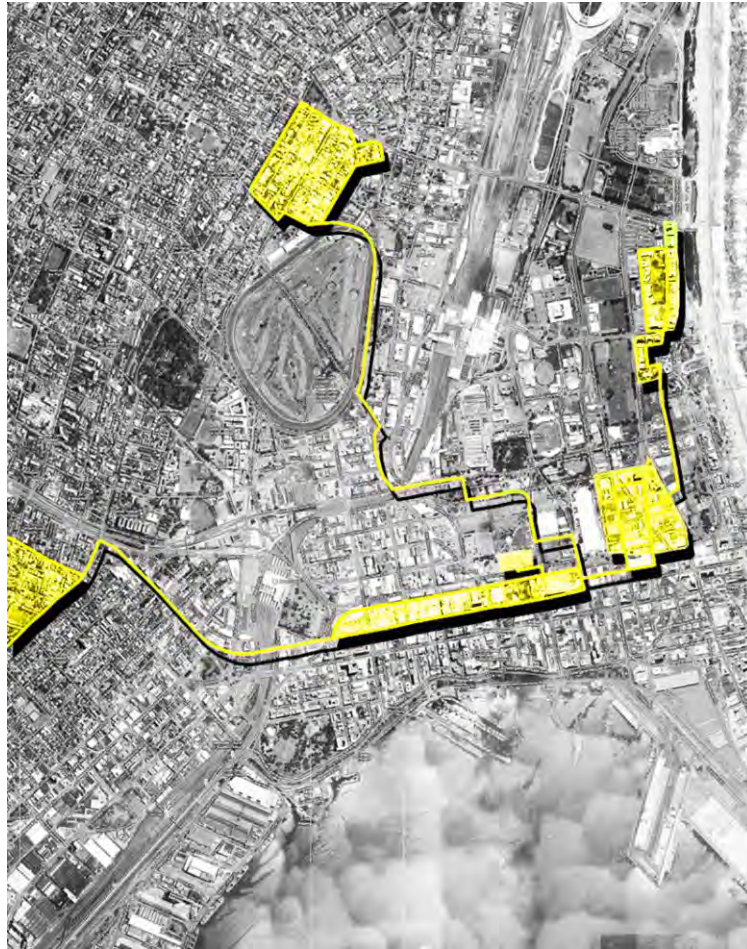


Figure 22: Shows the various routes taken by the informal traders highlighted in yellow, as they walk throughout the CBD and surrounds in search of suitable recyclable cardboard. Some may travel up to as much as 14km a day looking for material.

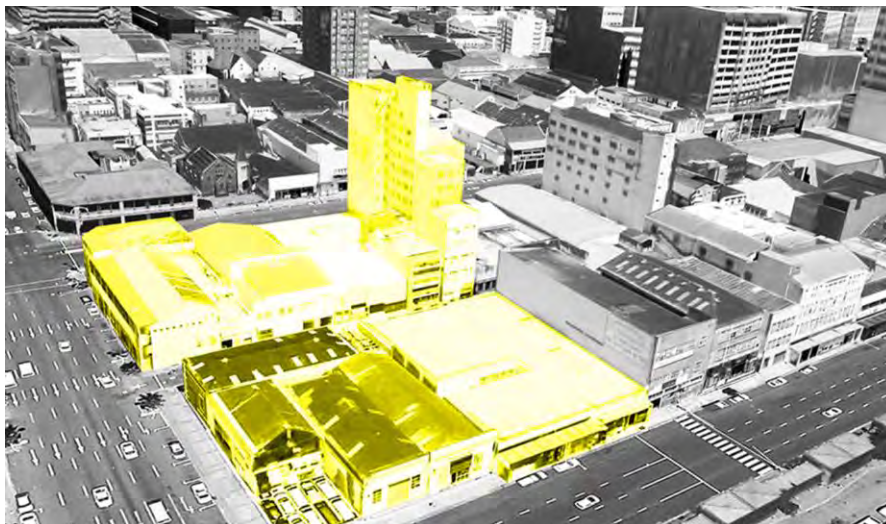


Figure 23: The existing site as highlighted in yellow. Many of the buildings shown here have been marked to keep in maintaining the Adaptive Reuse concepts highlighted prior.



Figure 24: Various views of the existing site conditions and buildings.

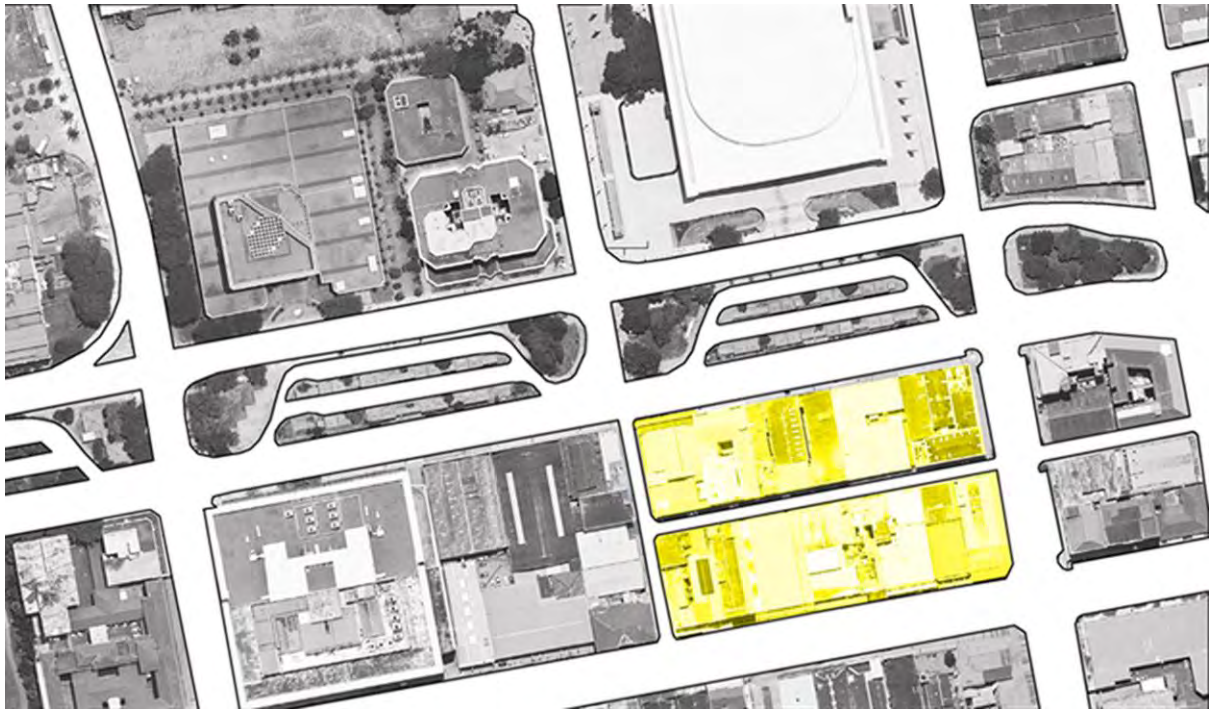


Figure 25: Site highlighted in yellow

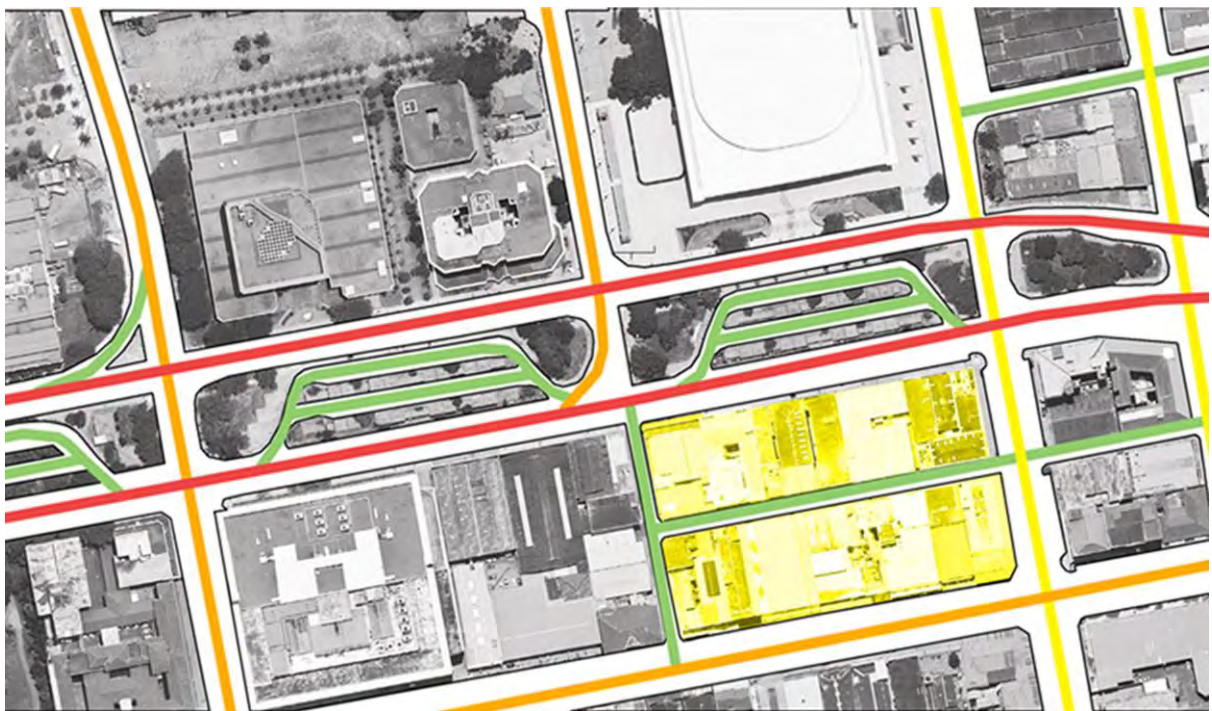


Figure 26: Vehicular traffic routes and intensity of usage ranging from low in green to high in red.

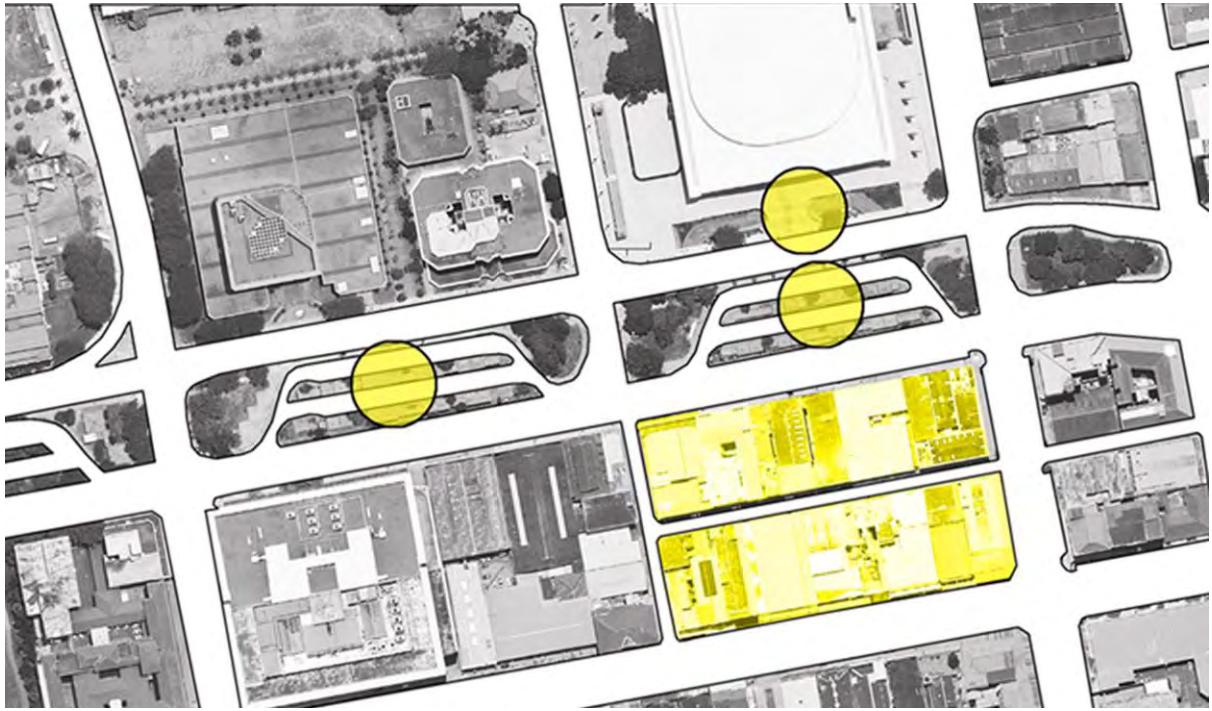


Figure 27: Pedestrian convergence points highlighted in yellow within the precinct.



Figure 28: Possible conflict points where pedestrians are exposed to heavy traffic movement.



Figure 29: Infographic showing the average income earned by an informal recycler.

12.2 RECYCLERS DIARIES



MARIA_VILAKAZI

Maria Vilakazi operates from within the Workshop Shopping complex in the Durban CBD. Despite having lost 3 children over the last 2 years, Maria remains extremely positive. Maria enjoys the work she does, and through the brokering of a relationship with the Workshop management, Maria is a permanent agent ensuring sustainable work and income. Pralini, a local reporter noted this of the work that Maria does "Her territory is a labyrinth of hidden refuse rooms bathed in charcoal light. Masterfully she flattens a mountain of discarded cardboard boxes into an efficient bundle. Later she will haul her treasure to a buyer a few roads away and earn her income for the day." Through cardboard recycling Maria is able to support her family who live in Inanda, KZN where she commutes weekly.



R 65 100 kgs 4 kms



MATHEMBO

Mathembo, who is also part of the Pine Street group operates in the alley way behind a Jet store. As with Mamsomi, she has forged a relationship with the store management who donate all their cardboard to her, and in return she maintains the refuse area. Mathembo weaves in the heavy pedestrian traffic with her over loaded tip trolley to a selected site in front of the Hungry Lion supermarket on Pine Street, where the material is stored before being weighed at the end of the day. The irony with most of the Pine Street ladies, is that although they weave their way through the CBD, they are very rural, and many have not even been to the ocean. All that they know of the city is the routes that they work every day of their life.



R 78 120 kgs 1,5 kms



MENZI_DLAMINI

Menzi Dlamini, who too has a cellular network provider as a nickname, Vodacom, is also a younger member of the group. Menzi's routes take him the greatest distances in search of material. Travelling from the ICC precinct, Menzi collects from the Morningside area, from mainly residential scavenging. His working environment is somewhat unique as his tends to be more survivalist than the others, relying on opportunistic collection i.e. there are no formal relationships with business that is apparent. Because of the "upper class" area in which he works, there tends to be more judgement and less acceptance for the great work he does. It is on this route, going into the affluent areas, that the true divide between the haves and the have nots is experienced. It is a pity that these residents are not as accepting and supportive, as Menzi too uses his money to support his family.



R 100 120 kgs 14 kms





MUSA KHOZA

Musa Khoza, affectionately known as MTN, a cellular service provider is one of the younger recyclers in the group. It is for this reason that he and Musa travel the greatest distances in search of their material, leaving the closer areas for the ladies and older members of the group. His excellent manners and warm smile have earned him various formal relationships within the North Beach residential precinct. Servicing shopping stores, hotels and residential apartments, Musa has galvanised a sustainable supply of recyclable materials, the income of which he uses to support his family, and has even put his siblings through school.



R 100 120 kgs 10 kms



MAMSOMI BALISILE

Mamsomi Balisile is part of the Pine Street group of informal recycling ladies. Operating within the CBD of Durban, she works in the alleyways of Pine Street primarily, and has a relationship with a private recycling agent not Reclam as with the Priority Zone group. Her workplace is nestled in the shade of towering buildings in the service yard of a Boxer store. She has a formal relationship with them, and even has her own key to the refuse area so she can have unlimited access. In return she tidies the refuse area, and removes all recyclable waste. She sees the whole alley as her workplace, and works tirelessly at keeping it tidy, despite the stench, damp and vermin present. Mamsomi is a head loader, so the amount that she can recycle a day depends on how much she can physically carry



R 78 120 kgs 2 kms



12.3 ACCOMMODATION SCHEDULE

TOWN PLANNING REGULATIONS:

- 77 Monty Naicker Street (Formerly Pine Street), Durban, South Africa
- ERF 12137 of Durban
- Land Size 6100m²
- F.A.R and P.A.R 8.0
- No Minimum Parking Stipulated
- Height 59° from opposite side of the road (using 30m width where road is wider)
- Max height of 110m or setback as stipulate above
- Building line 4.5m from centreline of the road
- Classification: A1 Entertainment
 G1 Offices
 D2 Moderate Risk Industrial
- Owner: eThekweni Municipality
- Client: The informal cardboard recyclers of the inner city CBD of Durban, South Africa.
- Tenants: The Priority Zone Offoces and Roof Garden
 Asiye eTafuleni NPO
 Informal Recyclers
 The Green House Recyclers Gallery
 Formal Recycling and Bailing Station

GROUND FLOOR	
PUBLIC BUILDING	
ROOM	AREA
Reception	32 m ²
Entrance Foyer	35 m ²
Store Room	8 m ²
Dry Store	8 m ²
Cold Store	2 m ²
Kitchen	48 m ²

Dining Hall	125 m ²
Outside Dining	65 m ²
Bin Area	10 m ²
Resource Centre (3off)	45 m ²
Gallery	115 m ²
Lecture Hall	70 m ²
Cleaning Store	6 m ²
Toilets Male	10 m ²
Toilets Female	10 m ²
Toilets Handicapped	4 m ²
NPO-ASIYE ETAFULENI	
Reception	15 m ²
Offices	68 m ²
Store	5 m ²
Toilets (Unisex)	8 m ²
RECYCLERS WAREHOUSE	
Trolley Store	18 m ²
Skip Area	260 m ²
Ablution Facilities	105 m ²
CONFERENCE FACILITY	
Lobby	30 m ²
Toilets (Unisex)	14 m ²
Events Venue	45 m ²
FORMAL RECYCLING OFFICES	
Bailing Stations	12 m ²
Material Store	55 m ²
Security	8 m ²
Administration	30 m ²
Accounts	16 m ²
Sick Bay (incl. WC)	18 m ²
Toilets (Unisex)	11 m ²
TRANSIENT ACCOMMODATION	

Lobby	20 m ²
Bin Area	15 m ²
MISCELLANEOUS	
Recycler Micro Factories	1000 m ²
Informal Trader Stalls	140 m ²
Safe Pavement (Sorting and Weighing Station)	300 m ²

FIRST FLOOR	
PRIORITY ZONE OFFICES	
ROOM	AREA
Reception Lobby	25 m ²
Boardroom	24 m ²
Toilets (Unisex)	12 m ²
Training Facility	22 m ²
Meeting Pod	25 m ²
Store	6 m ²
Kitchenette	20 m ²
Open Plan Offices	110 m ²
Offices	60 m ²
Archives/Admin	15 m ²
Toilets Male	9 m ²
Toilets Female	9 m ²
Toilets Handicapped	4 m ²
MISCELLANEOUS	
Priority Zone Roof Garden	345 m ²
TRANSIENT ACCOMODATION	
Lobby	14 m ²
Transient Accommodation	172 m ²

SECOND to SEVENTH FLOOR	
MISCELLANEOUS	

ROOM	AREA
MISCELLANEOUS	
Priority Zone Sky-Bridge Vertical Farms	110 m ²
TRANSIENT ACCOMODATION	
Lobby	14 m ²
Transient Accommodation	172 m ²

TOTAL AREAS	
DESCRIPTION	AREA
Total Bulk	5620 m² (incl. circulation)
Site Area	6100 m²
Total Coverage	92%

Current Land Use

The proposed site is currently zoned as mixed use. There are various car show rooms, auto-mechanic workshops as well as lodging in a single high rise apartment block. Most importantly for this proposal, is the current Priority Zone offices which will need to be re-accommodated in the new scheme. Currently the informal recyclers use the pavements and alleyways of the site to sort, bail and sell their material. The recyclers previously undertook their activities on the main street pavements on Monty Naicker Street, but were considered an “eye sore”, as such were moved to the Palmer Street alley where they are merely tolerated. It is for this reason that this site was selected, not only because the recyclers operate there currently, but also to un-do the injustice of a “euro urban” conceptualisation of the African urban landscape. The proposal will serve as an appropriate African urban intervention supporting informality.

Urban Context

The site is within the Durban ICC precinct within the CBD. It is within the recyclers current collection routes as well as closely situated to new potential recycling precincts. The Warwick Junction precinct, a major arterial traffic node and informal market is within 5kms of the site. Other points of interest within a 5km Radius is the Workshop Shopping complex, City Hall, the Durban Beachfront as well as the CBD.

CHAPTER THIRTEEN | MATERIALS AND FAILURES

13.1 INTRODUCTION

When considering the material choices for the proposed materials recovery facility or MRF, various considerations needed to be contemplated. First and foremost is the reality that much of the existing site and infrastructure is to be maintained and upcycled in an adaptive re-use intervention. This was the intention to play on the conceptual notion of a recycling facility to be housed within a recycled building. As such much of the materials had been predetermined by the fact that they were existing. This notion of Adaptive Reuse is one of the key architectural concepts to be adopted in the realization of this proposal, the second of which is known as Parasitic architecture. Parasitic architecture as shall be described further below, should show a complete change or contrast to the “host” or existing architecture. As such in considering the materials to be used for the “new” architecture, materials were chose to reflect this juxtaposition, therefore where the existing buildings made use of brick, timbers and roof sheeting; essentially traditional materials and building techniques, the new architecture would make use of steel, glass and core-ten steel as such, new building techniques and materials.

13.2 SELECTION OF MATERIALS

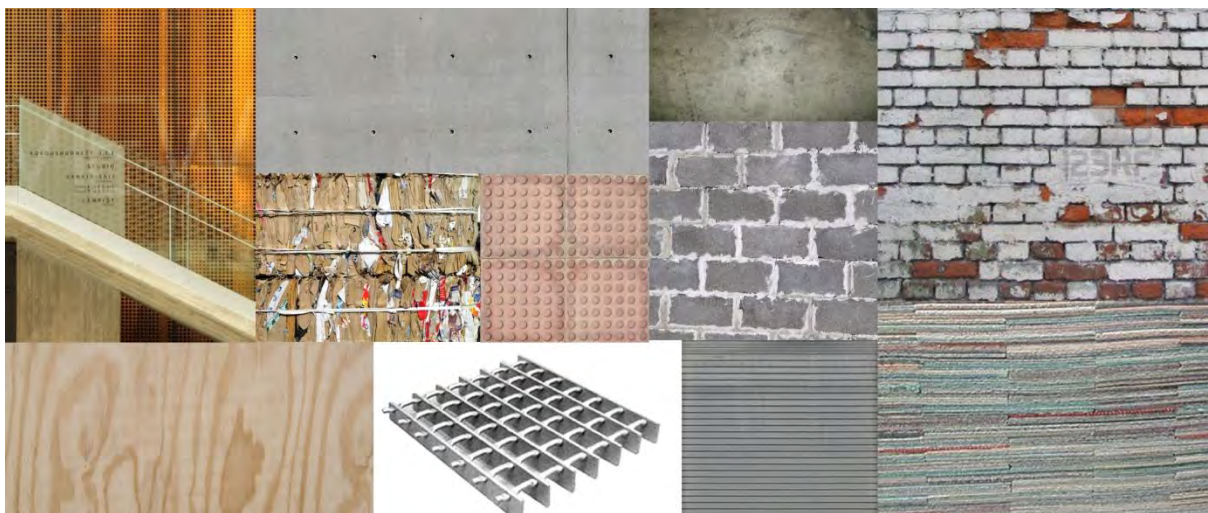


Figure 30: Material palette

Due to the nature of the activities that take place within the facility, such as recycling and bulk storage of recyclable materials, the building materials chosen had to be hard wearing

and durable requiring little to no maintenance. This is often referred to as raw materials, i.e. the materials chosen do not require further finishing or protection as such they appear in their natural state, such as formwork concrete which is merely rubbed down but need not be painted or sealed.

In the following section the building will be stripped down to **ROOFS, WALLS, FLOORS, WINDOWS & DOORS, SANWARE, SPECIAL** and **STRUCTURE** to adequately analyze and describe the materials chosen. Further to this where selected products have been utilized, the product brochures thereof will be provided at the back of the document as a appendix.

13.2.1 ROOFS

ROOF 1: One of the distinguishing features of the proposal is what Dobson (2012) refers to as the “Urban Umbrella” which is essentially an over sailing soft roof superstructure that covers the entire site. These urban umbrellas can be seen in the markets of Warwick and elsewhere, where they provide nothing more than solar protection and some degree of precipitation protection, yet do not dictate the functions that happen below. In this design the urban umbrella has taken on an industrial saw tooth roof character. This was done for two reasons, the primary reason was that of north light which the saw tooth is oriented toward, providing adequate natural light within the space. The second more romantic concept was that of reminiscing toward an industrial, factory type architecture, due to the somewhat factory oriented work that happens within. Materials chosen for this roof were a fairly standard due to the scale and height of the ridges, people would not experience this roof at close distances, negating the need for “special” materials such as those seen elsewhere in the project. As such a KLIP LOK roof sheeting system was employed. KLIP LOK is a roof sheet with an interlocking profile and clip fixing system that eliminates the need for holes in the sheets. The clips allow expansion and contraction of the sheets without straining the securing points. The design provides the sheets with an excellent water-carrying capacity, as well as structural strength, ease of erection, dust and water tightness, and the versatility to be cranked.

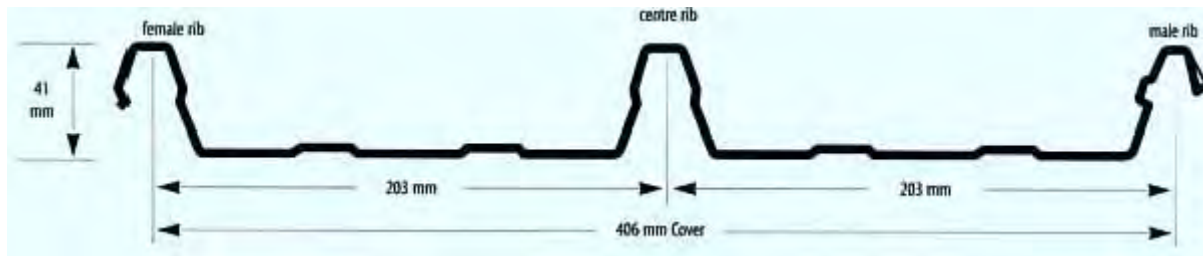


Figure 31: Roof sheeting profile

Profile of the KLIP LOK roof sheets

The roof sheeting is to be suitably galvanized and painted for adequate protection of the material. Due to the proximity, maintenance will be difficult; therefore the sheets need to be robust and weather resistant, especially due to their proximity to the sea. Rust would be the primary threat to this material, which is why a KLIP LOK was used, negating the amount of fixing points required and thus possible rust sites.

ROOF 2: The second most notable roof typology is that of the rusted Core-Ten™ composite panels that are used on the new structures. This has been used not only as a roof feature but as an external wall cladding too, allowing the new interventions to take on an old, time aged character fitting with the concept of a recycled building, seeming as though the building was literally constructed from reclaimed sheets of steel. A more detailed specification of this material is contained within the “WALLS” section of this study.

ROOF 3: The 4 existing buildings on the site all have deteriorating fibre cement (asbestos) S-PROFILE roof sheeting fixed to timber trusses and purlins. Due to the toxicity of this material, the design seeks to preserve the character of the architecture, yet replace the materials with something more modern and appropriate. As such aluminum S-PROFILE roof sheeting has been selected. This roof sheeting, as with the KLIP LOK system is to be suitably painted as per the finishing schedule. Pop rivets with rubber washers at the drill and tek screw site ensure adequate waterproofing, yet exposure to the high saline environment near the beach would require regular maintenance, and perhaps a bituminous coat of paint should be applied to these sites for further environmental protection. Suitable colour matched flashings and ridge caps are to be used in positions determined by the architectural drawings and in accordance with the manufacturer’s guidelines and specifications.

Insulation: Roof 1 does not require water proofing or insulation, however Roof 2 and Roof 3 requires a suitable plastic membrane, 375 MICRON DPM to be used as waterproofing under which is applied the selected insulation. Insulation shall be a 100mm thick ISOTHERM blanket allowing for a 1.81 R-Value. The use of this material was considered due to Isotherm not only being a local product, but it also makes use of recycled PET plastic bottles, as such is in itself a recycled material.



Figure 32: Iso-Therm blanket to be used for insulation.

13.2.2 WALLS

WALL 1: The most notable wall typology is that of the concrete block construction used for most of the ground floor new installations up to first floor level. This was done due to budgetary allowances, and also for the suitable identity of place. In considering the “self build” concept that was adopted, where it would appear that the users of the site would build as they required in a parasitic invasion of the urban space, concrete block would be the most appropriate material choice. As described in the opening statement of this analysis, materials need to be raw, almost unfinished and seemingly in a constant state of growing or addition, the site, barring the urban umbrella and offices, should constantly seem like it is growing much like an informal settlement. As such, using perfectly plastered walls or face brick would undermine this aesthetic concept, whereas the use of concrete block, hastily built and un-plastered would support this notion. Although there may be a threat of water damage, the walls are constructed on top of suitable concrete plinths, and there is rain protection afforded by the urban umbrella. Further to the raw aesthetic, is the application of the cement at the joints, which should be allowed to squeeze out under the load of the wall. The finished product should have chunks of plaster clinging to the wall with the odd wire from the BRICKFORCE reinforcing strips protruding there from. The internal walls may be treated as

the tenants so wish, either with a coat of paint, a 9mm thick cement plaster, or even just some posters, the spaces and walls are left to the interpretation of the users.



Figure 33: Blockwork walls

WALL 2: In keeping with the above concept within the adaptive reuse parts of the site, all the external walls of the public buildings are to have their plaster chipped so to reveal the imperial clay bricks behind. This idea of a decaying building will further enhance the nature of the reused buildings. The external plaster of these walls is to remain plastered and shall be painted white.



Figure 34: Chipped plaster walls in the existing buildings.

WALL 3: All new walls constructed within the proposal are to make use of recycled bricks which will be generated from the demolishing of the buildings on the existing site which have not been considered or are not suited to reuse.

WALL 4: For much of the street frontage, what is commonly referred to as the “urban furniture” has been designed as formal shelters for use by the informal traders of Durban. As the research has suggested, in African urbanism, public space is seen as workspace in an African city. As such this has been acknowledged in this proposal, allowing all “public” spaces to be redefined as work spaces. Due to the harsh climate, and the potential misuse and

under maintained that items such as these face, a robust material was chosen. Off shutter concrete has been selected, and is to be finished in a way that exposes the form work plugs and the surface texture of the formwork chosen. All concrete is to be suitably rubbed down and polished to high, impervious finish that shall allow a degree of vandal proofing and ensure suitable longevity of the material itself. This material and finish is to be applied to the lift core as well.

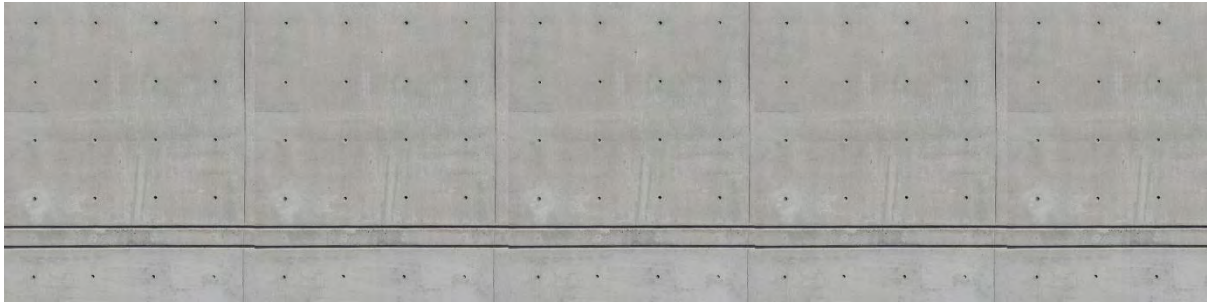


Figure 35: Highly polished off-shutter concrete.

CLADDING: The offices suspended on the first floor above the traders stalls have a feature cladding technology applied as a roofing material and as a wall cladding solution. This is to be the Australian based, KING SPAN BENCHMARK HOOK ON CASSETTE Core-Ten™ composite panel cladding system. The Core-Ten™ material is a steel that naturally oxidizes to provide a weathered and rusted look. This oxidization, according to KING SPAN aids in the protection from further deterioration of the material. The composite panels are fixed directly to the wall surface by a series of aluminium carrier channels and cleats which can be seen in the image below. The selection of this material, as described prior, is to aid in the “recycled” and weathered aesthetics on which this proposal relies. By fast tracking the deterioration of the new structures the line between old and new is blurred, and thus the entire site seems to be adaptively reused where in fact 60% of it is a new build.

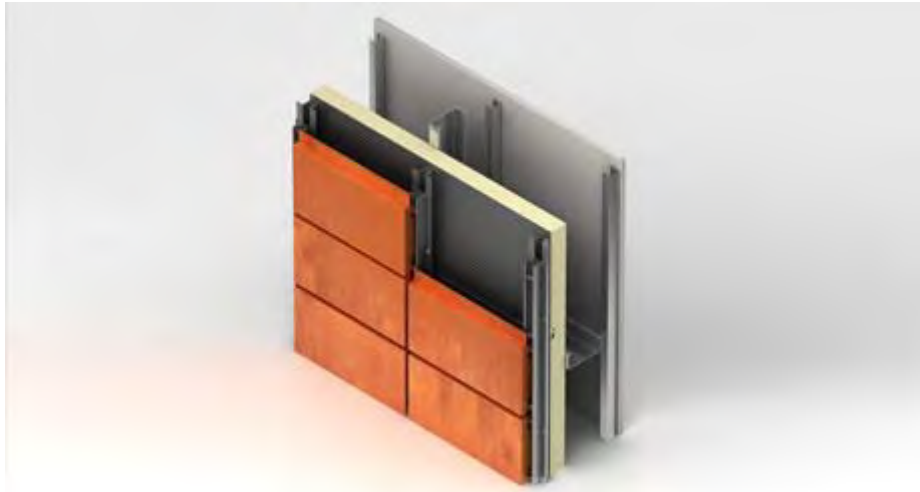


Figure 37: Corten composite cladding panels used.

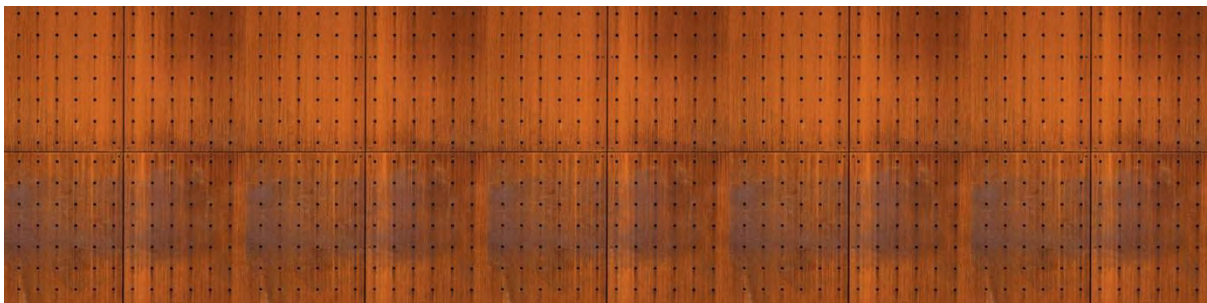


Figure 38: Perforations applied to cladding for ventilation and light.

Although the oxidized Core-Ten™ material is used for the office component, within this proposal a further rusted material has been adopted. This shall clad the recycling facility proper, however a product of this description does not exist. It is hoped therefore that a similar carrier panel may be used, however the material to be applied will be as per the image below. This metal will have more erratic oxidization and failing when compared to the relatively well controlled oxidization of the Core-ten™ product.

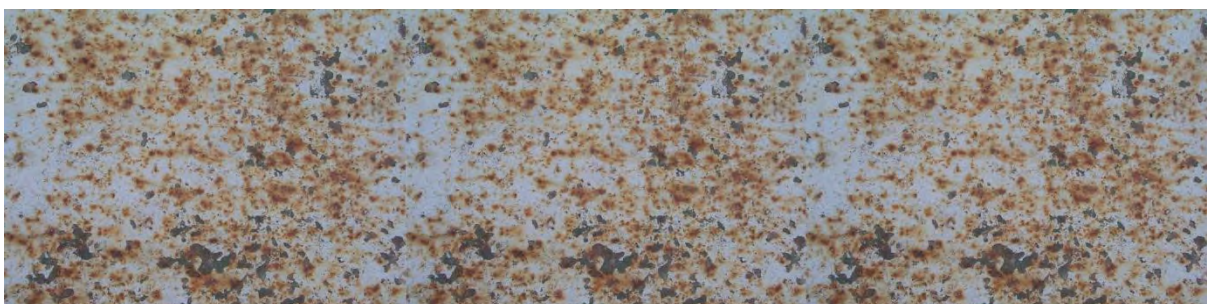


Figure 25: Rusted recycled steel to be applied as a cladding to the existing structures.

13.2.3 FLOORS

Floor 1: The pavements around the site are to match that of the ICC precinct, as such a brick inlay in a chevron/herringbone pattern shall be used. As with the construction of the new buildings, the brick that shall be used will be salvaged from the demolished buildings from the existing site which are not being adaptively reused.



Figure 41: Pavements of brick inlay.

Floor 2: In all the existing buildings, the screed is to be lifted and a new highly polished screed is to be applied for the application of suitable epoxy coating. The substrate should be a minimum of 20N/mm², free from laitance, dust and other contamination. Furthermore the screed should be free from rising damp and ground water pressure. The substrate should be dry to 75% RH as per B58204 or less than 4%.

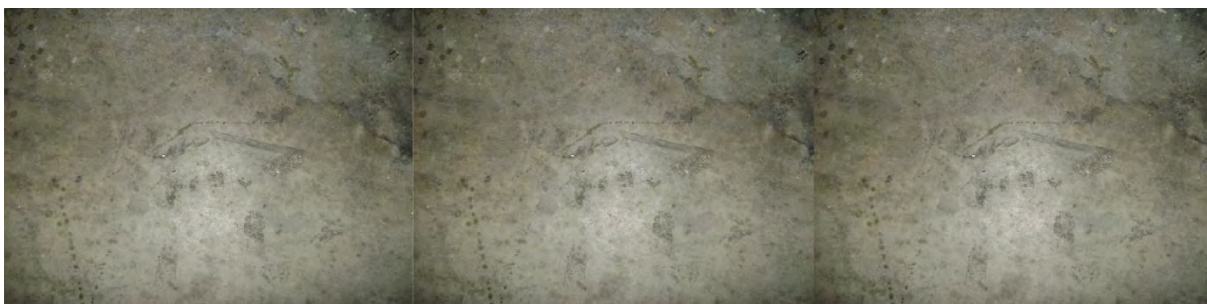


Figure 42: Highly polished concrete floors used throughout.

FLOOR 3: In the material recovery and recycling facility, where suitable protection of the floor slab is required, a polyurethane screed shall be applied. This shall be a Flowcrete product, and the specification of which is described below.



Figure 44: Epoxy flooring to be applied to the recycling factory floor.

FLOOR 4: Due to the fact that the office roofs are a saw tooth roof, and therefore not providing a dropped plasterboard ceiling for the installation of services, the flooring therein needs to be a raised access floor. The access floor will allow a suitable plenum for the provision of electrical, water and HVAC reticulation. The access floor panels are structurally rigid linear cell assemblies fabricated entirely from non-combustible components and shall consist of a flat steel top sheet, resistance welded to steel bottom section. The exterior and interior surface of the access floor panel is protected from corrosion by a process of cleaning, phosphating and coating with conductive paint. The interior of the panel may be filled with non-combustible cementations compound, to support no less than 95% of the top skin or surface of the panel. The raised access flooring is to have a suitable carpet tile laminated to the access plate. Carpet tiles as specified in the finishing schedule can be factory bonded or 600mm x 600mm / 500mm x 500mm loose lay on the access floor panel. A guaranteed precise modularity between the carpet tile and the access floor panel can only be achieved with bonded carpet tiles.

13.2.4 WINDOWS & DOORS

Although much of the existing buildings windows are timber framed with putty and timber quadrants, the proposed intervention will make use of aluminium frames and mullions. For all the domestic windows and the bottom hung clerestory windows in the offices, the window frames shall be anodized aluminium and powder coated charcoal grey as per the finishing schedule. The powder coated finish applied to the framework is most suited to this corrosive environment in protecting the GMS substrate. All glazing to be laminated safety glass to satisfy Part O of the SABS 0400 and suitable rubber sealants are to be used as per manufacturers design and specification. This rubber is to be regularly oiled and maintained to

provide a weather proof joint between the aluminium frame and the safety glass pane. All feature glazing, such as the sliding folding doors in the public buildings and the pressure mounted glazing on the South Façade are to be full height and frameless. The full height frameless pivot doors at the office entrance and entrances to the various conference and training facilities shall incorporate DORMA™ floor and soffit mounted concealed stainless steel pivot hinges as per specification. All feature glazing to be laminated safety glass to satisfy the requirements of Part O of the SABS 0400. Within the offices and at the conferencing facility, safety glazing is to be used for the full height office partitions within ceiling concealed aluminium frames. A graphic, to later design and specification is to be surface mounted for safety and aesthetic reasons.

All bathroom and store room doors to be hollow core on stainless steel projection hinges by DORMA™. The door surface is to be suitably primed with a water based environmentally friendly primer, on top of which 3 coats of architect approved high gloss enamel paint is to be applied to a high gloss finish. Colour to later specification. All lock sets, escutcheons, kick plates and handles are to be stainless steel as per later specification, the selection of which is due to its high durability and fairly minimal maintenance requirements within the public realm under regular use.

Please note that all doors and windows are as per the architects provided schedules, please refer for exact specification, dimensions and position as this serves as a guide only.

13.2.5 SANWARE

All sanware, including toilets, urinals and wash hand basins in the public areas are to be stainless steel, product as per FRANKE. The reason for this selection is based less on material performance and more on design concept. The raw robust nature of the structure, reminiscent of a working factory needs to be translated into the smaller details, such as the handrails used which shall be discussed and items such as the sanware specification. As such stainless steel was an effective choice in conveying this imagery; however it does possess great material performance opportunities too by being more robust than the commonly used ceramic types.



Figure 45: Sanware selection.

13.2.6 SPECIAL

HANDRAILS: In keeping with the notion of a “factory” the selection of various items such as handrails was undertaken with careful consideration as to support this concept. As such an industrial “BALL and TUBE” modular handrail and stanchion system was selected from WELDLOK, who’s details are supplied in the appendix. All material used in the ball and tube system is GMS, which is suitably painted with an industrial, silicone based paint which is resistant to scratching all whilst providing a suitable protection for the steel substrate. This system is known for its application in factories and corrosive environments such as ships, which provided the motivation and justification for it s selection.



Figure 46: Ball and tube hand rails and stanchions.

MENTIS GRID: Throughout the site there is various applications of the MENTIS GRID product. It is used as a screening device in the traders stalls as well as the various sky bridges, as well as tread plates for the various escape stairs within the site. This material is known for its industrial application, therefore is hard wearing and will be suited to the applications for which it is to serve. The mentis grid as a product is supplied in 30mm thick premade cassettes which can then be fixed to any surface. These cassettes are hot dipped galvanized by the supplier prior to delivery, as such there is no need for any further

protection of the material. This application has been successfully used at the Markets of Warwick thereby proving its success as an urban material if correctly treated. This material requires no maintenance, and failure may only be present if the galvanizing process was not correctly applied, or if the galvanizing is damaged, thereby exposing the mild steel to the environment.



Figure 47: Mentis grid in various applications.

PLY WOOD: Ply wood within the project has been used as a versatile material. It has been utilized as a material for the construction of the various reception desks and feature areas in the public spaces, as well as for the shelving within the various recyclers workshops and traders stalls. Plywood has also been utilized as an internal wall cladding solution, literally bolted to the walls to provide an aesthetically pleasing wall finish. Although plywood is expensive, it is hoped that all the shutter ply used during the construction of the building may be upcycled as furniture and cladding, thereby enforcing the concept of recycling. Although there is a threat of water penetration and thus warping and deforming, the application of plywood will be reserved for internal applications negating the threat of failure.

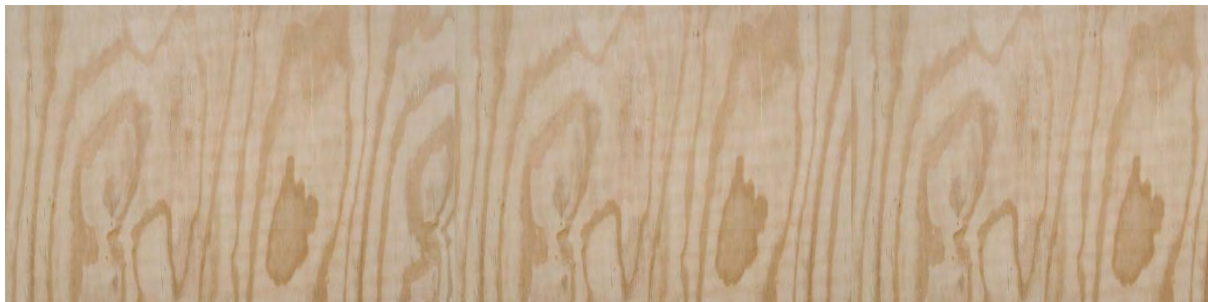


Figure 48: Plywood texture.

COMPRESSED CARDBOARD: Although not technically a building material, the use of compacted cardboard as an architectural element has been explored within this proposal. Taking precedent from Samuel Mockbee and Rural Studio, cardboard equating to the amount

collected by the recyclers daily would be compressed to form walls as a piece of art and as walls within the recyclers gallery. To help keep their form a chicken wire mesh will be wrapped to the surface of the material ensuring its structural integrity. There are various threats that this type of material faces, the most prominent one of which is water. Being inside however, should negate any threat of moisture causing the material to fail.



Figure 49: Stacked and bailed cardboard.

LOUVRES: As part of the saw tooth roof construction, the northern faces of the roof are to have a perforated louvre cassette system applied, to allow for maximum light penetration, but affording a degree of precipitation protection too. These louvers are a HULAMIN product known as a CELOSCREEN©, which is composed of round shaped aerofoil panels that are installed by means of clip systems on a carrier panel as designed and installed by a certified HULAMIN installer. The finish is a white powder coated aluminium, with 40-60% visibility afforded by 3mm diameter holes. Holes are cut prior to powder coating ensuring adequate protection. Louvres are installed at a maximum of 46° pitch to ensure adequate light and ventilation. Due to the size of the elements, and the fact that powder coating happens off site, a high quality finish is afforded and guaranteed by the supplier. As such minimal maintenance is required, thus making this material and product suitable for its application. For further details please refer to appendix.

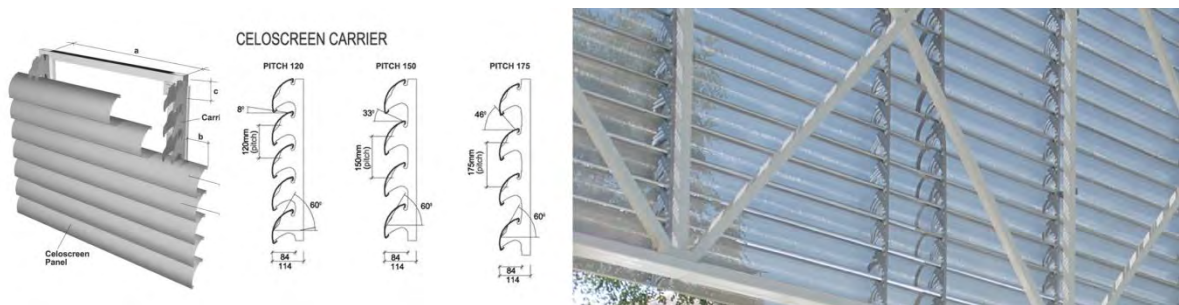


Figure 50: Perforated louvres used

ROLLER SHUTTER DOORS: What can be noted within this design is the various stalls that have been provided for use by the recyclers or informal traders. These stalls, as described earlier are of simple concrete block and mortar construction, and the interior is left to the interpretation of the end user. What is common in these stalls is the method of securing them, as this is not a 24 hour site. As such the use of surface mounted, roller shutter garage doors is used. These are to be galvanized mild steel as supplied by manufacturer with cold rolled aluminium C-CHANNELS surface fixed on the door opening styles for the operation of the door to occur. For security reasons, the garage door is to have a 20% visibility perforation applied for surveillance even when the door is closed and locked. The garage door is to be galvanized mild steel and left as such due to its ease of maintenance and replacement. Below are some photos taken by the author of traders stalls at Warwick Junction from which the precedent was observed.



Figure 51: Roller shutter garage doors.

13.3 STRUCTURE

CONCRETE: The most notable feature of the proposal is the soaring colonnade of precast concrete columns that support the so called “urban umbrella”. The finish of these columns is to be highly polished by rubbing with polishing stones. These concrete columns support the precast concrete beams by means of support nubs, which too are highly polished concrete. The saw tooth soft structure steel roof sits within the gridwork created by the concrete colonnade as shown in the architectural drawings. The smooth polished surface is not only selected for aesthetic purposes, but it also allows a fair degree of vandal proofing and ease of cleaning when such defacing occurs which is a common threat in the public realm.

STEEL: The second most common building material used within the scheme is that of steel. A range of steel has been used for the feature stair cases, the interconnecting sky bridges, the steel saw tooth roof as well as various smaller elements such as the sliding mentis grid screens on the informal traders stalls. A range of steel profiles has been adopted, from L-ANGLES to RECTANGULAR HOLLOW CORE sections to H and I-BEAMS. All steel sizes are as per the guidance of the structural engineer and precedent. The finish of the steel shall be hot dip galvansised as is required for the environment in which it is to be installed. Further to this all steel work is to be painted with a suitable silicone based paint and primer to a semi gloss finish, similar to that of the handrails discussed prior. This painting is to include all nuts, bolts and washers once the assebmly of these items has taken place to provide adequate protection from oxidization and rusting.

SLABS: All of the existing buildings' floor slabs have been discussed prior. In the proposal, there is the implementation of waffle slab systems at first floor level. These have been selected due to their architectural expression as well as their ability as a two way slab to span a fair distance whilst remaining lightweight when compared to a flat slab. Due to the high aesthetic value within a waffle slab system, especially at soffit level, there are no ceilings provided. This being said the soffit of the slab is to be painted in an architect selected charcoal grey enamel paint as per finishing schedule. This is to hide the imperfections that may be present, aswell as to help seal the slab and protect it from any corrosive attack. Where in certain instances a ceiling is required for sound and thermal insulation, such as the conference facility, a dropped plasterboard ceiling will be provided. This shall be a 9mm thick gypsum plasterboard suspended ceiling on an aluminium hanger system fixed directly to the soffit. Details of which, including spans are as per selected manufacturers specification and details.

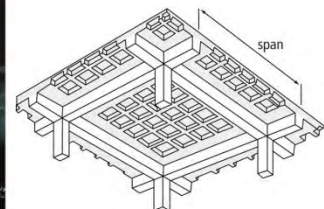
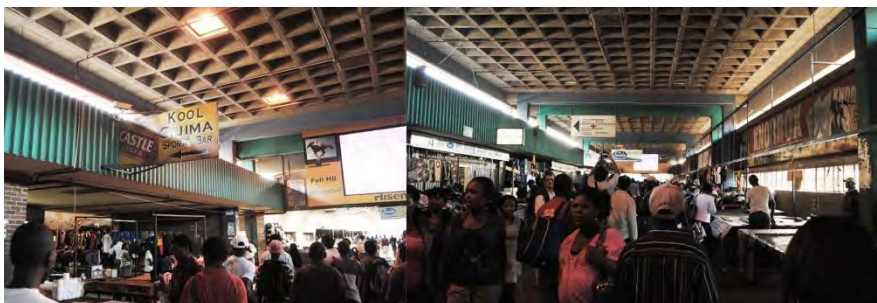


Figure 52: Coffered slab application at Bera Station similar to system proposed.

13.4 CONCLUSION

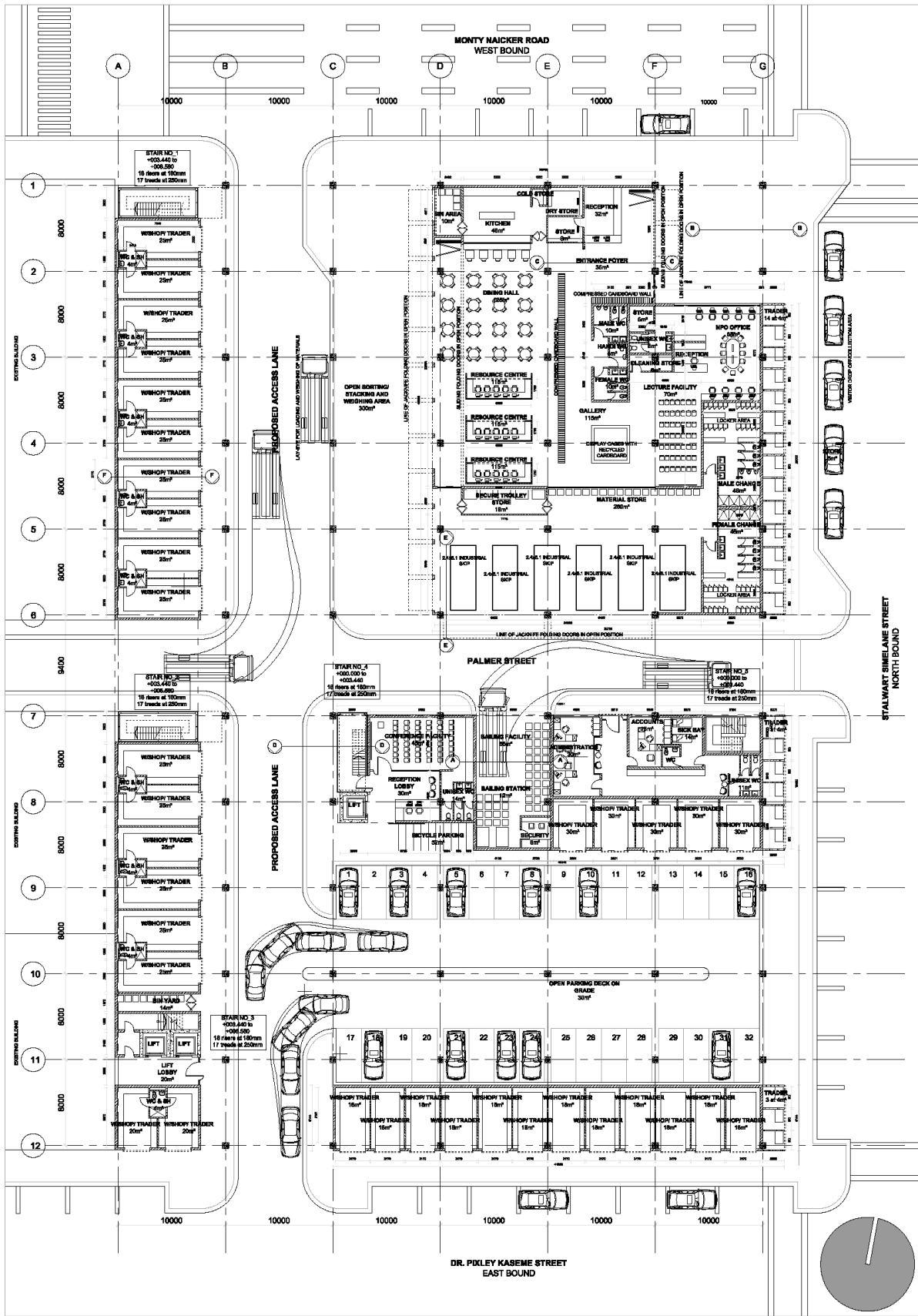
The selection of materials was a conscious exercise in which the materials and products that make up the architectural composition play a pivotal role in the conveyance of the architectural concept. It is through the careful selection of appropriate materials that suite not only the concept and architectural nature of the design, but the local environment as well, that has embodied a sound architectural proposal. The materials selected shall perform well in their intended uses, by being austere and robust, and thus mitigating any potential environmental and physical threats. This is not a delicate building, as such the materials and finishes themselves are not delicate, lending to a sustainable, permanent piece of socio-civic architecture.

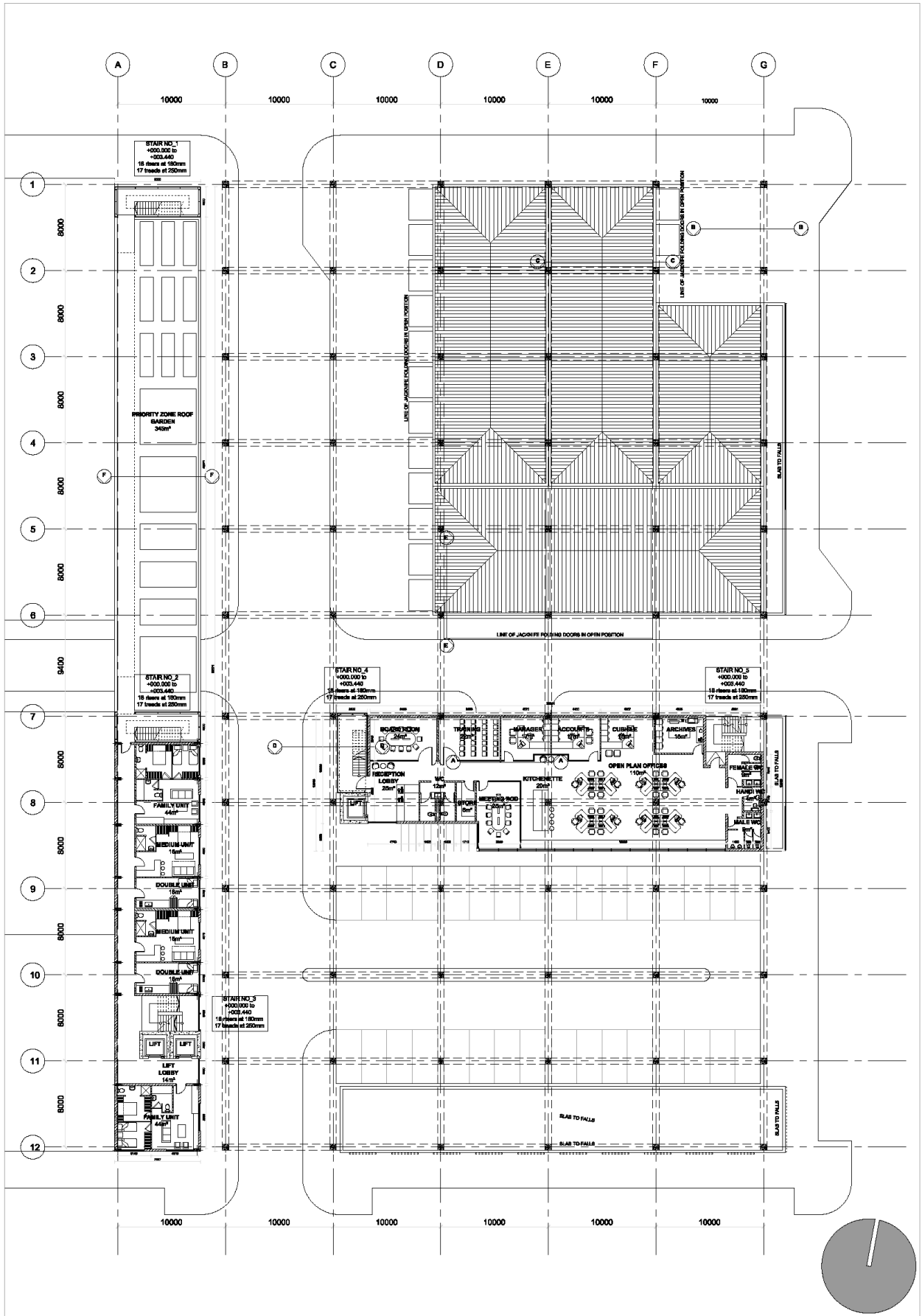
CHAPTER FOURTEEN | ARCHITECTURAL DESIGN DRAWINGS

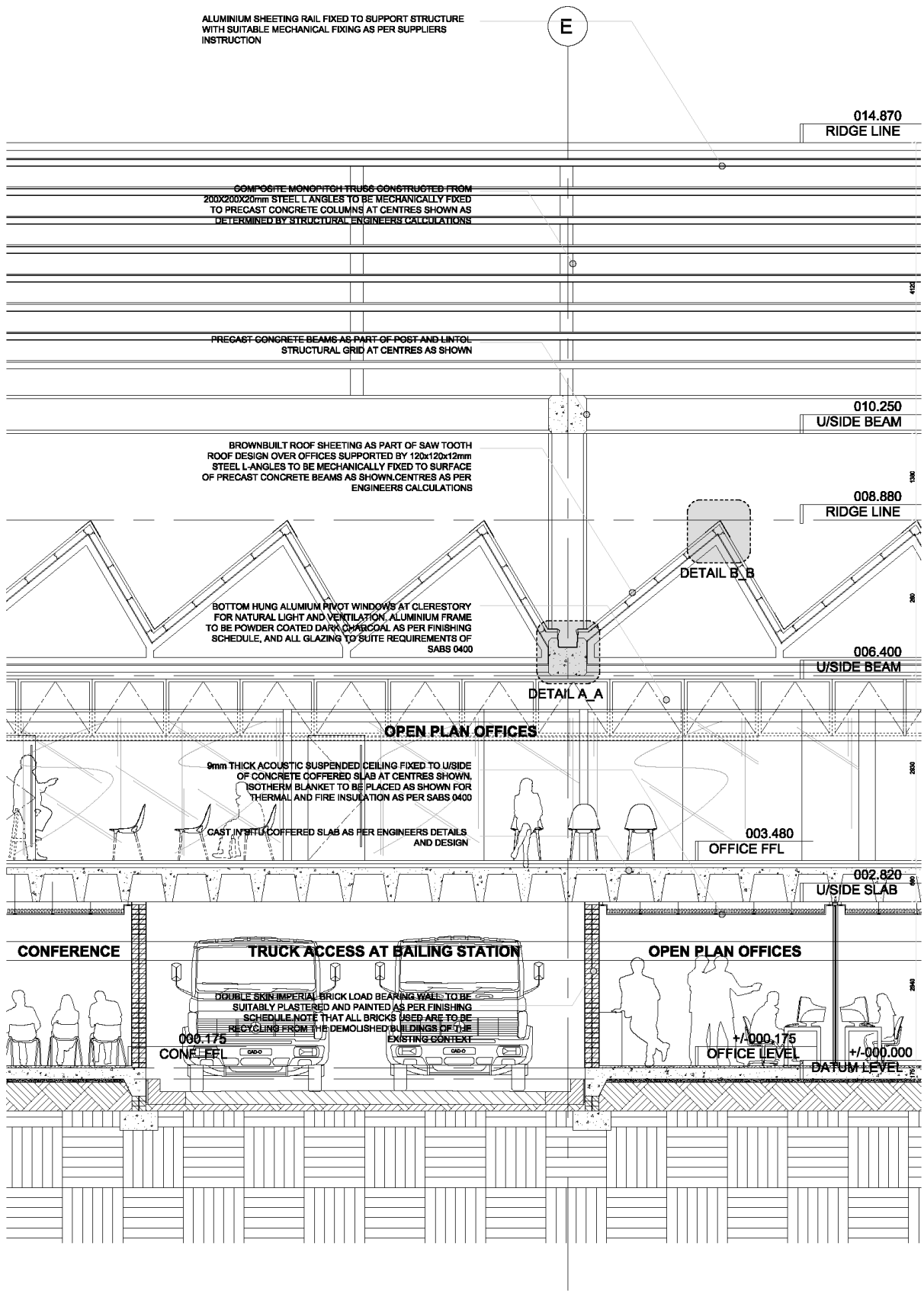
The following pages document the architectural design drawings of the proposed recycling facility as well as the technical resolution thereof. It must be noted that the following pages have been scaled to fit the document, as such scale has not been preserved. For accurate representation please refer to the printed architectural design drawings.

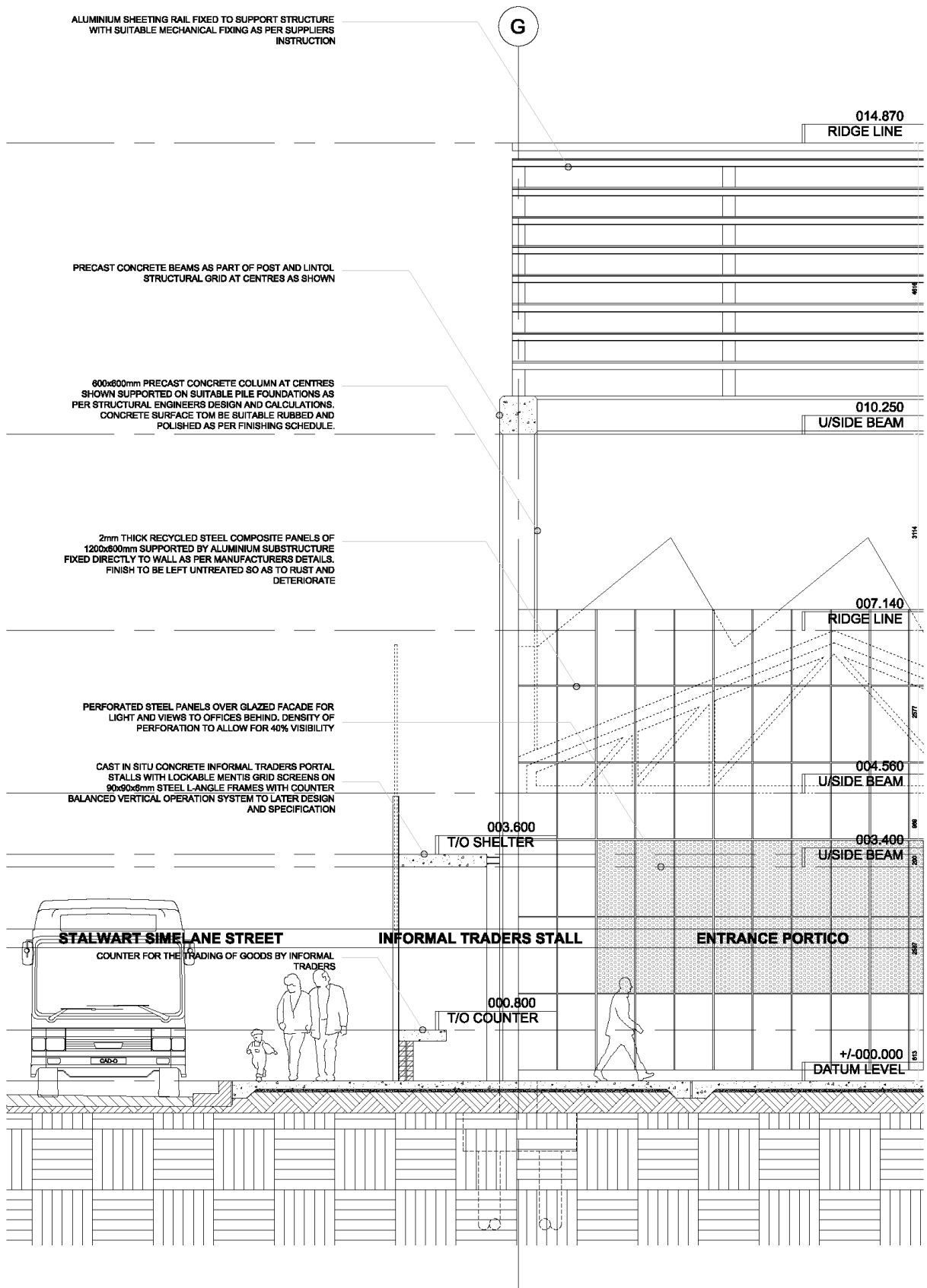


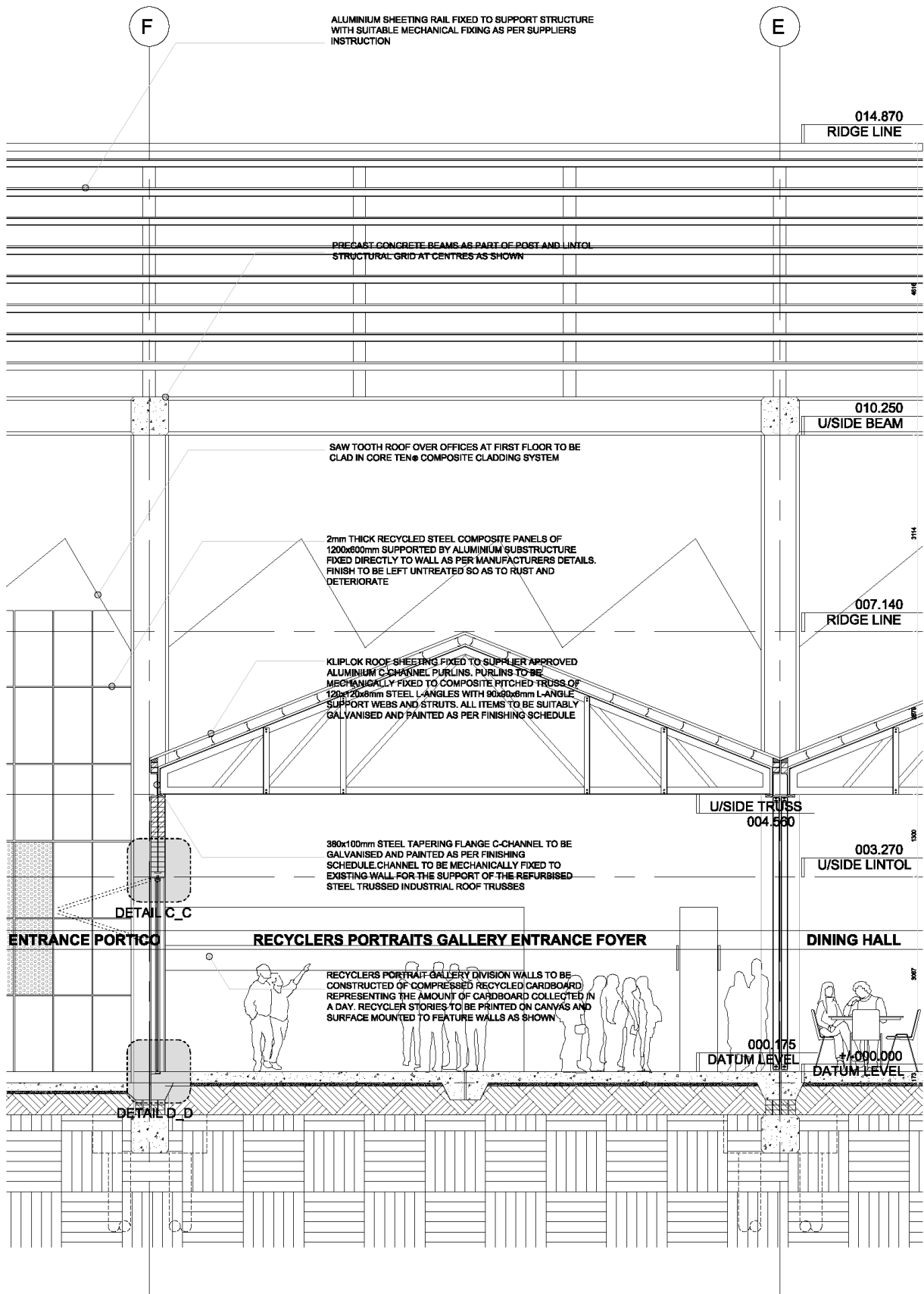
Figure 53: Architects impression of the proposal.











F

ALUMINIUM SHEETING RAIL FIXED TO SUPPORT STRUCTURE WITH SUITABLE MECHANICAL FIXING AS PER SUPPLIERS INSTRUCTION

E

014.870
RIDGE LINE

PRECAST CONCRETE BEAMS AS PART OF POST AND LINTOL STRUCTURAL GRID AT CENTRES AS SHOWN

010.250
U/SIDE BEAM

SAW TOOTH ROOF OVER OFFICES AT FIRST FLOOR TO BE CLAD IN CORE TEN® COMPOSITE CLADDING SYSTEM

2mm THICK RECYCLED STEEL COMPOSITE PANELS OF 1200x600mm SUPPORTED BY ALUMINIUM SUBSTRUCTURE FIXED DIRECTLY TO WALL AS PER MANUFACTURERS DETAILS. FINISH TO BE LEFT UNTREATED SO AS TO RUST AND DETERIORATE

007.140
RIDGE LINE

KLIPOK ROOF SHEETING FIXED TO SUPPLIER APPROVED ALUMINIUM C-CHANNEL PURLINS. PURLINS TO BE MECHANICALLY FIXED TO COMPOSITE PITCHED TRUSS OF 120x200x6mm STEEL L-ANGLES WITH 80x80x6mm L-ANGLE SUPPORT WEBS AND STRUTS. ALL ITEMS TO BE SUITABLY GALVANISED AND PAINTED AS PER FINISHING SCHEDULE

U/SIDE TRUSS
004.580

380x100mm STEEL TAPERING FLANGE C-CHANNEL TO BE GALVANISED AND PAINTED AS PER FINISHING SCHEDULE CHANNEL TO BE MECHANICALLY FIXED TO EXISTING WALL FOR THE SUPPORT OF THE REFURBISHED STEEL TRUSSED INDUSTRIAL ROOF TRUSSES

003.270
U/SIDE LINTOL

DETAIL C-C

ENTRANCE PORTICO

RECYCLERS PORTRAITS GALLERY ENTRANCE FOYER

DINING HALL

RECYCLERS PORTRAIT GALLERY DIVISION WALLS TO BE CONSTRUCTED OF COMPRESSED RECYCLED CARDBOARD REPRESENTING THE AMOUNT OF CARDBOARD COLLECTED IN A DAY. RECYCLER STORIES TO BE PRINTED ON CANVAS AND SURFACE MOUNTED TO FEATURE WALLS AS SHOWN

000.175
DATUM LEVEL

+1.000.000
DATUM LEVEL

DETAIL D-D

C

ALUMINIUM SHEETING RAIL FIXED TO SUPPORT STRUCTURE WITH SUITABLE MECHANICAL FIXING AS PER SUPPLIERS INSTRUCTION

014.870
RIDGE LINE

BROWN BUILT ROOF SHEETING AS PART OF SAW TOOTH ROOF DESIGN OVER OFFICES SUPPORTED BY 120x120x12mm STEEL L-ANGLES TO BE MECHANICALLY FIXED TO SURFACE OF PRECAST CONCRETE BEAMS AS SHOWN, CENTRES AS PER ENGINEERS CALCULATIONS

010.250
U/SIDE BEAM

50mm Ø GMS WELDLACK BALL AND TUBE HAND RAIL AND STANCHIONS FOR FIRE ESCAPE STAIR. DETAILS AS PER SELECTED SUPPLIERS BALUSTRADE SCHEDULE. COLOUR AS PER FINISHING SCHEDULE.

008.880
U/SIDE BEAM

STAIRS TO SAW TOOTH ROOF FOR SERVICING

280x90mm TAPERED FLANGE STEEL C-CHANNEL FRAMEWORK OF SUPPORT CAGE OF FEATURE STEEL STAIR TO HAVE 30mm THICK MENTIS GRID SCREENING SURFACE FIXED TO 120x70mm TAPERED FLANGE STEEL C-CHANNEL CARRIER STRUTS. ENTIRE STRUCTURE TO BE SUITABLY GALVANISED AS PER ENGINEERS REQUIREMENTS. FIXING DETAILS AS PER STRUCTURAL ENGINEERS DESIGN AND CALCULATION. REFER TO ENG.DWG 0100/2012

U/SIDE TRUSS
006.580

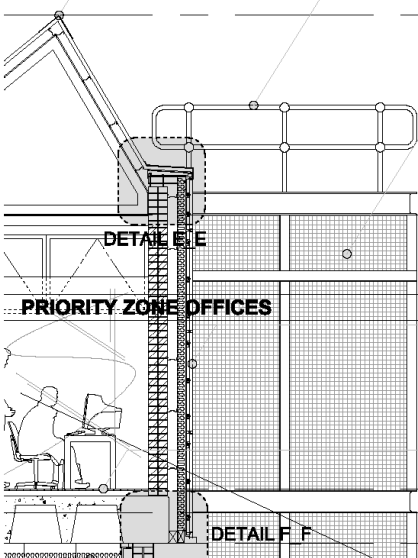
1250x3200 GORE-TEN METALLIC HOOK ON CASSETTE PREFABRICATED PANELS FIXED TO CARRIER PANELS WITH SUPPLIER DESIGNED AND PROVIDED HOOK ON CASSETTE AND PIN CLIP SYSTEMS

RECYCLED TIMBER FOR SPRUNG FLOORING IN PRIORITY ZONE OFFICES TO BE SUITABLE TREATED, SANDED AND SEALED. FINISH AS PER FINISHING SCHEDULE

003.440
OFFICE FFL

U/SIDE BEAM
003.160

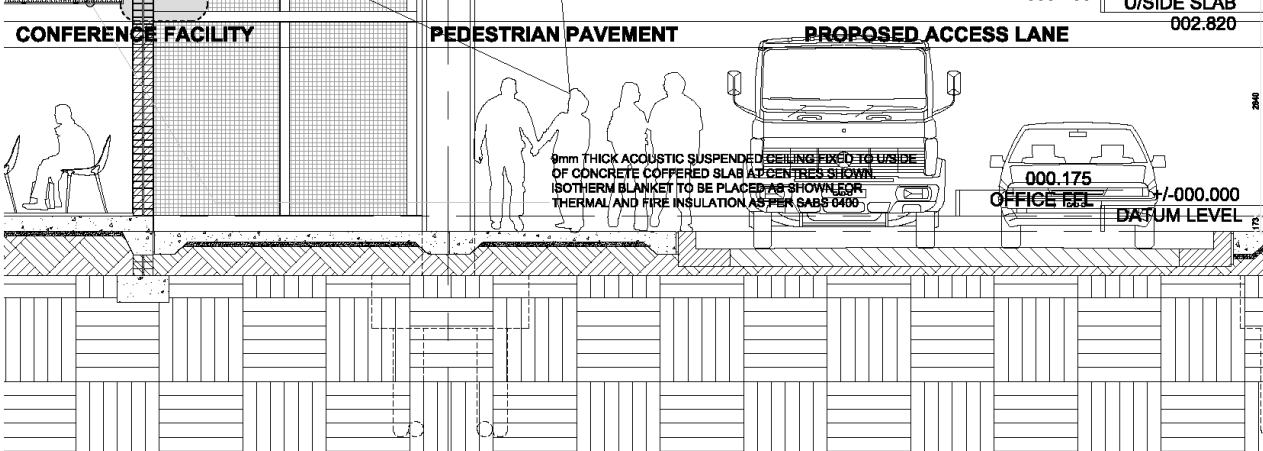
U/SIDE SLAB
002.820



CONFERENCE FACILITY

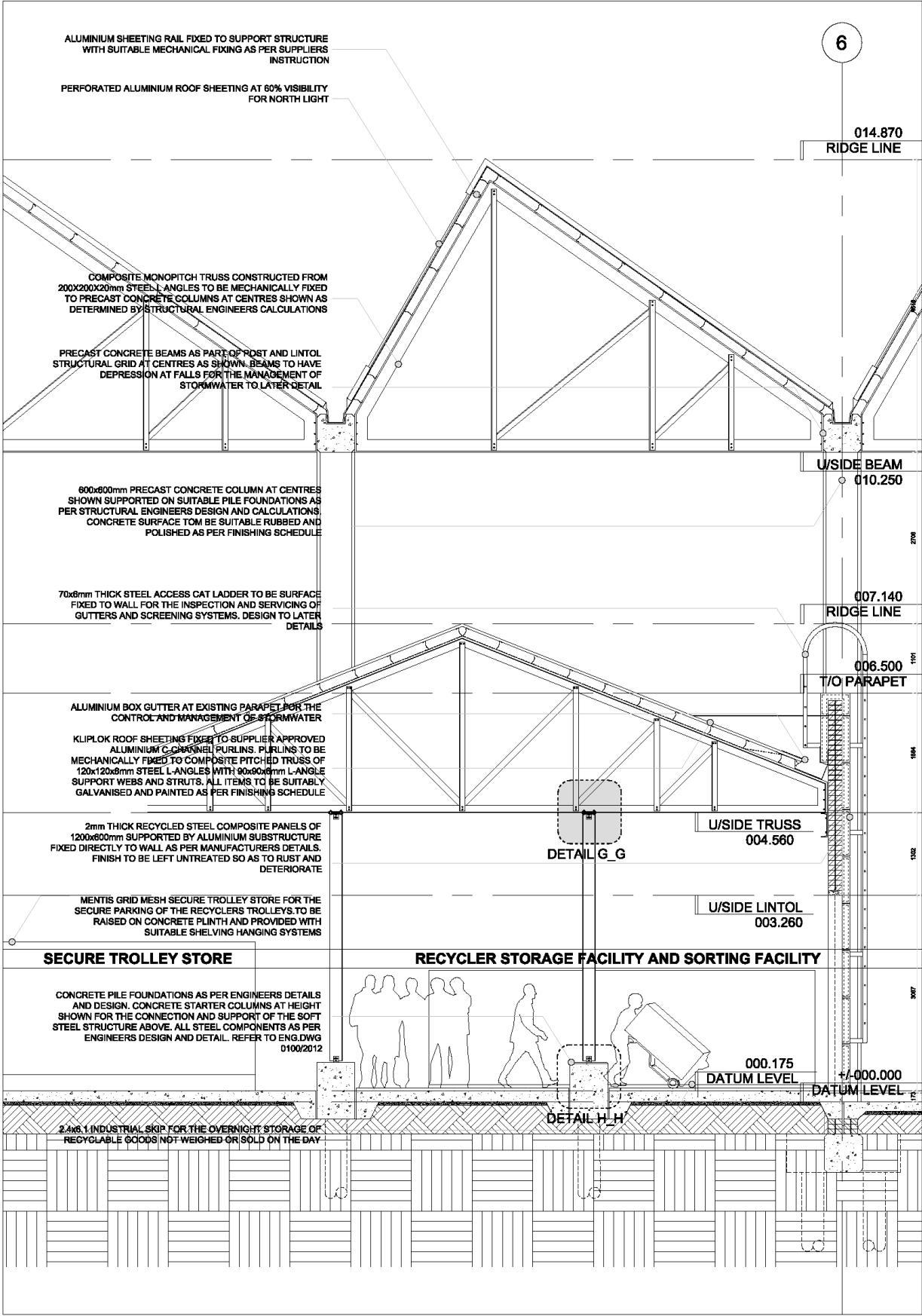
PEDESTRIAN PAVEMENT

PROPOSED ACCESS LANE



9mm THICK ACOUSTIC SUSPENDED CEILING FIXED TO U/SIDE OF CONCRETE COVERED SLAB AT CENTRES SHOWN. ISOTHERM BLANKET TO BE PLACED AS SHOWN FOR THERMAL AND FIRE INSULATION AS PER SABS 0400

000.175
OFFICE FFL
7/-000.000
DATUM LEVEL



ALUMINIUM SHEETING RAIL FIXED TO SUPPORT STRUCTURE WITH SUITABLE MECHANICAL FIXING AS PER SUPPLIERS INSTRUCTION

PERFORATED ALUMINIUM ROOF SHEETING AT 60% VISIBILITY FOR NORTH LIGHT

6

014.870
RIDGE LINE

COMPOSITE MONOPITCH TRUSS CONSTRUCTED FROM 200x200x20mm STEEL L ANGLES TO BE MECHANICALLY FIXED TO PRECAST CONCRETE COLUMNS AT CENTRES SHOWN AS DETERMINED BY STRUCTURAL ENGINEERS CALCULATIONS

PRECAST CONCRETE BEAMS AS PART OF ROOF AND LINTOL STRUCTURAL GRID AT CENTRES AS SHOWN. BEAMS TO HAVE DEPRESSION AT FALLS FOR THE MANAGEMENT OF STORMWATER TO LATER DETAIL

600x600mm PRECAST CONCRETE COLUMN AT CENTRES SHOWN SUPPORTED ON SUITABLE PILE FOUNDATIONS AS PER STRUCTURAL ENGINEERS DESIGN AND CALCULATIONS. CONCRETE SURFACE TO BE SUITABLE RUBBED AND POLISHED AS PER FINISHING SCHEDULE

70x60mm THICK STEEL ACCESS CAT LADDER TO BE SURFACE FIXED TO WALL FOR THE INSPECTION AND SERVICING OF GUTTERS AND SCREENING SYSTEMS. DESIGN TO LATER DETAILS

U/SIDE BEAM
010.250

007.140
RIDGE LINE

006.500
T/O PARAPET

ALUMINIUM BOX GUTTER AT EXISTING PARAPET FOR THE CONTROL AND MANAGEMENT OF STORMWATER

KLIPOK ROOF SHEETING FIXED TO SUPPLIER APPROVED ALUMINIUM C CHANNEL PURLINS. PURLINS TO BE MECHANICALLY FIXED TO COMPOSITE PITCHED TRUSS OF 120x120x6mm STEEL L ANGLES WITH 90x90x6mm L ANGLE SUPPORT WEBS AND STRUTS. ALL ITEMS TO BE SUITABLY GALVANISED AND PAINTED AS PER FINISHING SCHEDULE

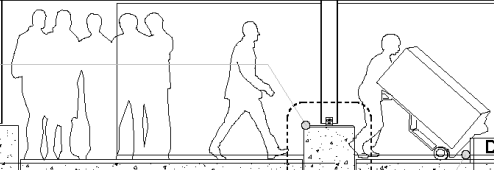
2mm THICK RECYCLED STEEL COMPOSITE PANELS OF 1200x600mm SUPPORTED BY ALUMINIUM SUBSTRUCTURE FIXED DIRECTLY TO WALL AS PER MANUFACTURERS DETAILS. FINISH TO BE LEFT UNTREATED SO AS TO RUST AND DETERIORATE

MENTIS GRID MESH SECURE TROLLEY STORE FOR THE SECURE PARKING OF THE RECYCLERS TROLLEYS TO BE RAISED ON CONCRETE PLINTH AND PROVIDED WITH SUITABLE SHELVING HANGING SYSTEMS

SECURE TROLLEY STORE

RECYCLER STORAGE FACILITY AND SORTING FACILITY

CONCRETE PILE FOUNDATIONS AS PER ENGINEERS DETAILS AND DESIGN. CONCRETE STARTER COLUMNS AT HEIGHT SHOWN FOR THE CONNECTION AND SUPPORT OF THE SOFT STEEL STRUCTURE ABOVE. ALL STEEL COMPONENTS AS PER ENGINEERS DESIGN AND DETAIL. REFER TO ENG.DWG 0100/2012

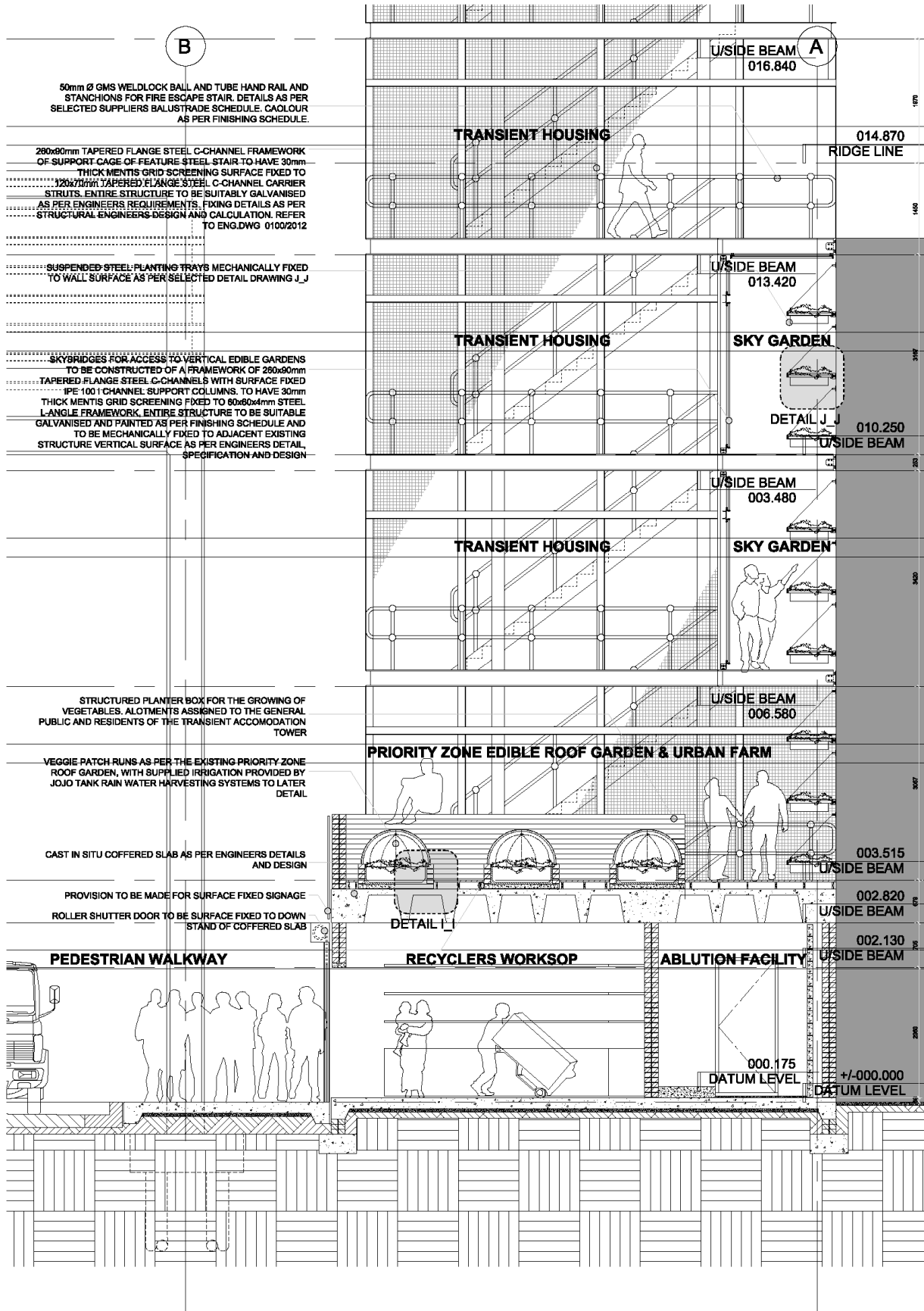


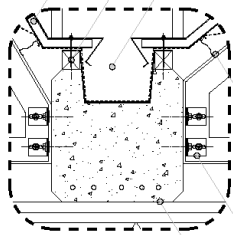
000.175
DATUM LEVEL

+1.000.000
DATUM LEVEL

2.4x6.1 INDUSTRIAL SKIP FOR THE OVERNIGHT STORAGE OF RECYCLABLE GOODS NOT WEIGHED OR SOLD ON THE DAY

DETAIL H_H





DETAIL A_A

BROWN BUILT ALUMINIUM ROOF SHEETING LAID AT FALLS FIXED TO SUBSTRATE WITH 10-24 X 16MM LONG WAFFER HEAD SELF TAPPING AND DRILLING TEK SCREWS INTO 4.3MM PREDRILLED HOLES WITH GRAPHITE GREASE. ROOF SHEETING COLOUR AND FLASHING AS PER FINISHING SCHEDULE

RUBBER STOPPED

PRECAST STORMWATER CHANNEL

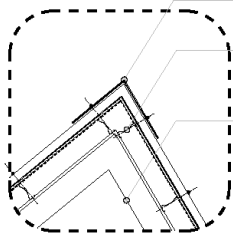
ALUMINIUM SHEETING RAIL FIXED TO SUPPORT STRUCTURE WITH SUITABLE MECHANICAL FIXINGS AS PER SUPPLIERS INSTRUCTION

PREFORMED CUSTOM FLASHING

375MICRON DPM TO U/SIDE OF SHEETING

STEEL FLANGES FOR MECHANICAL FIXING AS PER ENGINEERS RECOMMENDATION

PRECAST CONCRETE BEAM



DETAIL B_B

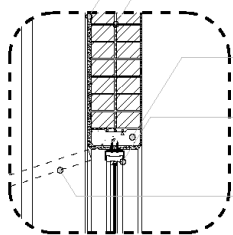
PREFORMED CUSTOM FLASHING

ALUMINIUM SHEETING RAIL FIXED TO SUPPORT STRUCTURE WITH SUITABLE MECHANICAL FIXINGS AS PER SUPPLIERS INSTRUCTION

COMPOSITE MONOPITCH TRUSS CONSTRUCTED FROM 200X200X20mm STEEL L-ANGLES TO BE MECHANICALLY FIXED TO PRECAST CONCRETE COLUMNS AT CENTRES SHOWN AS DETERMINED BY STRUCTURAL ENGINEERS CALCULATIONS

12mm EXTERNAL PLASTER ON EXISTING DOUBLE SKIN BRICK WALL

DPC AS SHOWN

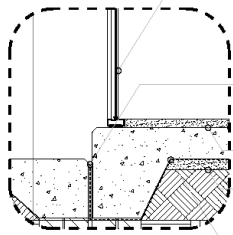


DETAIL C_C

PRECAST CONCRETE LINTOL

SUPPLIER INSTALLED ALUMINIUM SLIDING FOLDING DOOR TO BE POWDER COATED CHARCOAL GREY AS ER FINISHING SCHEDULE. GLAZING TO SABS 0400

PNEUMATICALLY CONTROLLED JACKNIFE FOLDING DOORS OF CORE-TEN COMPOSITE PANELS TO SPECIALISTS DETAILS AND INSTRUCTION. TO BE SURFACE FIXED TO PARAPET WALL. REFER TO LATER DETAILS



DETAIL D_D

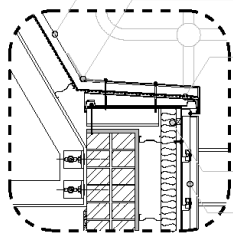
SUPPLIER INSTALLED ALUMINIUM SLIDING FOLDING DOOR TO BE POWDER COATED CHARCOAL GREY AS ER FINISHING SCHEDULE. GLAZING TO SABS 0400

MASTIC AT MOVEMENT JOINT

30mm POLISHED SCREED ON SUITABLY PREPARED CONCRETE SURFACE BED

50mm BLINDING LAYER OF HIGH DENSITY AGGREGATE

175 MICRON DPM



DETAIL E_E

BROWN BUILT ALUMINIUM ROOF SHEETING LAID AT FALLS FIXED TO SUBSTRATE WITH 10-24 X 16MM LONG WAFFER HEAD SELF TAPPING AND DRILLING TEK SCREWS INTO 4.3MM PREDRILLED HOLES WITH GRAPHITE GREASE. ROOF SHEETING COLOUR AND FLASHING AS PER FINISHING SCHEDULE

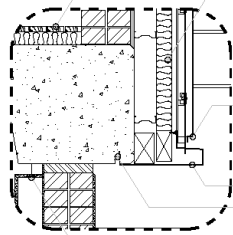
PREFORMED CUSTOM FLASHING

375MICRON DPM TO U/SIDE OF SHEETING

80MM THICK GREENSULATE® ENVIRONMENTALLY FRIENDLY HIGH DENSITY INSULATION

1250 X3200MM COR-TEN® METALLIC HOOK ON CASSETTE

PREFABRICATED PANELS FIXED TO CARRIER PANELS WITH SUPPLIER DESIGNED AND PROVIDED HOOK ON CASSETTE PIN AND PIN CLIP SYSTEMS



DETAIL F_F

RECYCLED TIMBER FLOORING SPRUNG ON ex. 80x20mm CARRIER BEAMS, TO HAVE GREENSULATE® ENVIRONMENTALLY FRIENDLY HIGH DENSITY INSULATION BELOW

80MM THICK GREENSULATE® ENVIRONMENTALLY FRIENDLY HIGH DENSITY INSULATION

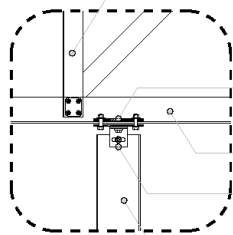
1250 X3200MM COR-TEN® METALLIC HOOK ON CASSETTE

PREFABRICATED PANELS FIXED TO CARRIER PANELS WITH SUPPLIER DESIGNED AND PROVIDED HOOK ON CASSETTE PIN AND PIN CLIP SYSTEMS

3mm THICK COR-TEN CUSTOM BULL NOSE COPING TO SEAL U/SIDE OF CASSETTE

PRECAST DRIP IN SOFFIT

SHADOWLINE OF 9mm THICK SUSPENDED PLASTERBOARD CEILING



DETAIL G_G

90x80x6mm STEEL L-ANGLE SUPPORT WEBS TO BE MECHANICALLY FIXED TO MAIN TRUSS. TO BE SUITABLY GALVANISED AND PAINTED AS PER FINISHING SCHEDULE

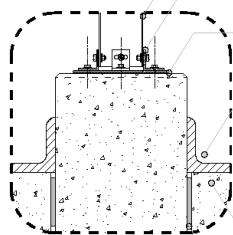
10mm THICK STEEL FIXING PLATES FOR THE MECHANICAL CONNECTION OF HORIZONTAL AND VERTICAL SUPPORT STRUCTURES

120x120x6mm STEEL L-ANGLE BOTTOM CHORD. TO BE SUITABLY GALVANISED AND PAINTED AS PER FINISHING SCHEDULE

MECHANICAL FIXING CLEAT OF 10mm STEEL WITH PREDRILLED HOLES

120x120x6mm STEEL L-ANGLE BOTTOM CHORD. TO BE SUITABLY GALVANISED AND PAINTED AS PER FINISHING SCHEDULE

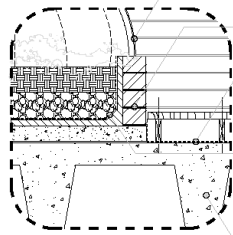
MECHANICAL FIXING CLEAT OF 10mm STEEL WITH PREDRILLED HOLES



DETAIL H_H

12mm THICK STEEL BASEPLATE FIXED TO STUB COLUMN

POLYURETHANE EPOXY FLOOR COATING TO BE APPLIED TO FLOOR. THICKNESS AS PER SUPPLIERS DETAILS AND SPECIFICATION



DETAIL I_I

CONCRETE SURFACE BED AS PER ENGINEERS DETAILS AND DESIGN TO BE SUITABLY LEVELED FOR APPLICATION OF EPOXY FLOORING

MASTIC AT MOVEMENT JOINT

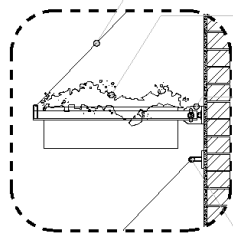
SHADECLOTH FIXED TO CUSTOM BENT ALUMINIUM FRAMEWORK FIXED TO TOP OF STUB WALL PLANTER BOX

PLANTER BOX ON CONCRETE PLINTH. SCREED TO FALLS FOR SUITABLE DRAINAGE OF SOIL

DERBIGUM WATERPROOFING HEAT APPLIED TO SURFACE OF CONCRETE. FLAT ROOF AS PER MANUFACTURERS SPECIFICATION

SUITABLE WATERPROOFING TO INSIDE OF PLANTER BOXES

CAST IN SITU COFFERED SLAB TO ENGINEERS DETAILS AND DESIGN



DETAIL J_J

STEEL CABLE FOR THE SUSPENSION OF THE FABRICATED STEEL SUPPORT TRAY

VEGETABLES TO BE PLANTED IN PLANTER TRAYS SUPPORTED BY PREFABRICATED 40x40x3mm L-ANGLE SUPPORTS FIXED TO EXTENSION HINGE AT WALL PIVOT HINGE AND STEEL PLATE MECHANICALLY FIXED TO ADJACENT WALL. ALL STEEL TO BE SUITABLY GALVANISED AND PAINTED AS PER FINISHING SCHEDULE

PREFABRICATED STEEL HOOP TIE FOR CONNECTION OF STEEL SUSPENSION CABLE. TO BE MECHANICALLY FIXED TO ADJACENT WALL

PART 2 LIST OF FIGURES

- Fig. 1 Dharavi** (Source: Various, www.google.com; (Accessed 19 April 2012)
(Photographs))
- Fig. 2 Dharavi** (Source: <http://www.architectural-review.com/essays/urbanism/investigating-the-redevelopment-of-indias-most-famous-informal-settlement-dharavi/8604818.article> ; (Accessed 19 April 2012) (Map))
- Fig. 3 Tower of David** (Source: <http://towerofdavid.wordpress.com/home/> ; (Accessed 19 April 2012) (Photographs))
- Fig. 4 Adaptive Reuse** (Source: <http://adaptivereuse.info/> ; (Accessed 19 April 2012)
(Photographs))
- Fig. 5 The Kolstrand Building** (Source: <http://www.archdaily.com/94592/kolstrand-building-graham-baba-architects/> ; (Accessed 19 April 2012) (Photograph))
- Fig. 6 Parasitic Architecture** (Source: <http://parasite.usc.edu/> ; (Accessed 19 April 2012)
(Photos))
- Fig. 7 Auto Defense** (Source: <http://inhabitat.com/parasitic-guerrilla-architecture-hijacks-the-arche-de-la-defense/> ; (Accessed 19 April 2012) (Renders))
- Fig. 8 High Tech** (Source: Various, www.google.com; (Accessed 19 April 2012)
(Photographs))
- Fig. 9 Pompidou Centre** (Source: Various, www.google.com; (Accessed 19 April 2012)
(Photographs))
- Fig. 10 Recycling Facility** (Source: <http://www.metropolismag.com/story/20030701/waste-not> ; (Accessed 19 April 2012)
(Photographs))
- Fig. 11 Recycling Facility** (Source: <http://www.unstudio.com/projects/waste-disposal-installation#> ; (Accessed 19 April 2012) (Photographs))
- Fig. 12 Recycling Facility** (Source: <http://www.vailloirigaray.com/> ; (Accessed 19 April 2012) (Photographs))
- Fig. 13 Recycling Facility** (Source: Various, <http://www.externalreference.com/> ; (Accessed 19 April 2012) (Photographs))
- Fig. 14 Recycling Facility** (Source: <http://www.archdaily.com/104797/metal-recycling-plant-dekleva-gregoric-arhitekti/06-84/> ; (Accessed 19 April 2012) (Photographs))
- Fig. 15 Logos** (Source: Various, www.google.com; (Accessed 19 April 2012) (Photographs))

Fig. 16 Maps (Source: Underlay www.googleearth.com; Overlay: Author (Accessed 19 April 2012) (Graphic))

Fig. 17 Maps (Source: Underlay www.googleearth.com; Overlay: Author (Accessed 19 April 2012) (Graphic))

Fig. 18 Maps (Source: Underlay www.googleearth.com; Overlay: Author (Accessed 19 April 2012) (Graphic))