



**The role of corridor development in urban reconstruction:**  
The case study of Edendale-Northdale Corridor in Msunduzi Municipality

By

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This Dissertation is submitted to the **School of the Built Environment** and Development Studies, University of KwaZulu-Natal, in partial fulfillment of the requirements for the degree of Master of Science in Urban and Regional Planning

## **DECLARATION**

This research study was carried out in Msunduzi Municipality area of KwaZulu-Natal province in South Africa and was duly carried out by the author of this dissertation **IKENNA NWAGBO OKEKE**. I thus declare that this dissertation is my own original work and has not been submitted to another University in South Africa or elsewhere outside the country. However, this study has drawn on similar local and international academic, scholarly and municipal studies. All citations, references and ideas that were borrowed from these studies have been duly acknowledged as required by the international standard of academic studies.

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## **DEDICATION**

In loving memory of my Grandma, who passed away few months prior to the completion of my dissertation. I wish you were still alive to see this perfect end, Thank you for all your prayers for my success and blessings; I know God loves you more and has since called you home.

**May her soul rest in peace**

## ABSTRACT

In common with other South African cities, the greater Pietermaritzburg region, which is in the Msunduzi Municipality, has faced many challenges, but has made concerted efforts to tackle the legacy of apartheid imbalances. Since 1994, the pattern of planning in Msunduzi Municipality has shifted to a more neoliberal economy. In many instances, this has focused on improving and promoting economic development in townships situated on the urban periphery. This form of development is driven by the need to integrate the overcrowded central business district (CBD) of Pietermaritzburg and the Edendale-Northdale Corridor (ENC). Edendale, Northdale and the Central Area developed individually in isolation; some segments were well-planned, while others were underdeveloped.

This research study investigated the effectiveness of the ENC in fostering economic development and the extent to which the corridor helped to attract investment adjacent to this corridor to create job opportunities for the high numbers of unemployed people in the city. It is argued that the structure of the city has created a high poverty rate within the suburbs or townships and has encouraged unnecessary mobility in search of economic opportunities. The study found that areas that struggled to attract economic development in the past showed some signs of improvement, with increased investor confidence. However, investment was hampered by the perception that doing business in Msunduzi Municipality is expensive.

This study employed a multi-pronged approach to generate data; this includes qualitative data in the form of interviews with municipal officials, two groups of beneficiaries comprising of businesses and local inhabitants, and other stakeholders. Local inhabitants of the three nodes along the ENC were engaged in group discussions. Field observations/ground-truth checks were also carried out to compare the data collected and to gain an understanding of development along the ENC. Finally, GIS was applied to demonstrate the trend of development that has taken place in this corridor.

One of the major findings of this study was the need for an efficient transport system. Furthermore, some respondents argued that the Edendale section of this corridor will need further highway access to foster industrial development that can create a large number of jobs. The land ownership challenges confronting the Greater Edendale area were also seen as a barrier to the development of this corridor, especially with regard to economic investment.

**Keywords:** *Development corridor; Economic growth; urban reconstruction*

## **END-NOTE REFERENCING**

For the purpose of clarity, this dissertation has made use of the EndNote X5 software for the referencing system. The researcher used the Harvard style system which is provided by the EndNote program for the in-text referencing and the bibliography.

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## **LIST OF ACRONYMS**

ABM	Area Based Management
ANC	African National Congress
APA	American Planning Association
BRT	Bus Rapid Transit
CBD	Central Business District
COGTA	Cooperative Government and Traditional Affairs
CMDA	Cato Manor Development Association
CTOD	Centre for Transit Oriented Development
DUT	Durban University of Technology
EC	European Commission
ENC	Edendale-Northdale Corridor
ESDP	European Spatial Development Perspective
EU	European Union
FET	Further Education and Training
GEA	Greater Edendale Area
GEDI	Greater Edendale Development Initiative
GDP	Gross Domestic Product
GIS	Geographic Information System
IDP	Integrated Development Plan
IRC	Iyer Rothaug Collaborative
ISIP	Infrastructure Strategy and Investment Plan
KZNEC	KwaZulu-Natal Economic Council
KZN	KwaZulu-Natal
LED	Local Economic Development
LRAD	Land Reform for Agricultural Development
MCDC	Mabopane-Centurion Development Corridor

MDC	Maputo Development Corridor
MSDF	Metropolitan Spatial Development Framework
NC	Neighbourhood Centre
NER	National Electricity Regulator
NSDP	National Spatial Development Perspective
OWC	Outer West Corridor
PTC	Provincial Technical Committee
PSEDS	Provincial Spatial Economic Development Strategy
RDP	Reconstruction and Development Programme
RIDP	Regional Industrial Development Programme Policy
SDF	Spatial Development Framework
SDI	Spatial Development Initiative
SMME	Small, Medium and Micro Enterprises
TOD	Transit Oriented Development
UKZN	University of KwaZulu-Natal
UN	United Nations
USA	United States of America
WCED	World Commission on Environment and Development

# CHAPTER ONE

## 1.0 INTRODUCTION

In the past, urban land use and its associated human activities were determined by distance from the Central Business District (CBD). Residential density, transportation networks and the spatial distribution of the manufacturing and retail sectors have often taken the city centre as their point of reference (Johnson, 1974). The rapid growth and overpopulation facing major cities globally has led to the expansion of many cities taking place outside the city centre and along transportation routes. These changes have been stimulated by the high cost of land in the central area (Johnson, 1974). Thomas (1974) argues that such developments have often been linked with development corridors and mixed land-use zones.

## 1.1 Background to the Study

Like many cities in South Africa, the greater Pietermaritzburg region known as Msunduzi Municipality, has been confronted by numerous challenges in the post-apartheid era. These include a distorted urban landscape; unequal access to economic resources; the need for an efficient public transportation system, especially for those areas located far from socio-economic facilities; and multiple pockets of traffic congestion (Msunduzi Municipality, 2009). The concepts of 'Corridors' and 'Nodes', are some of the solutions adopted to address these issues. The concept of development corridors is not unique to Msunduzi Municipality, it has also been pursued by many municipalities and cities in present-day South Africa in different forms and on diverse scales to address the fragmented landscape that was created by apartheid segregation. Since 1994, the pattern of urban planning in the country has shifted to a more neoliberal economy. Private-Public Partnerships (PPPs) have focused on improving and promoting economic potential in townships located on the urban peripheries, through development corridors.

Post-1994, South African cities have experienced unique and complex development challenges (Goebel, 2007, Mabin, 1992, Smith, 1992, Turok, 1994). The "...creation of 'homelands' or 'bantustans' for the African majority of the population, was largely an attempt to constrain urbanization" (Smith, 1992:2). This form of development sought to restrict African settlement in the country's cities to single, mainly male, migrant workers

(Smith, 1992). This trend is still evident today, with the majority of African people living in townships and travelling daily to work, to the cities or the industrial areas surrounding the cities. Apartheid policies led to stark differences between the cities and the peripheral areas or townships in South Africa; and Pietermaritzburg was no exception (Goebel, 2007, Smith, 1992, Turok, 1994). According to Dewar and Todeschini (2004:13), “the apartheid approach to urban planning in South Africa facilitated the pattern of urbanization which still exists today”. This, in turn, has shaped post-apartheid South Africa. Dewar and Todeschini (2004) note that the poorest of the poor continue to be marginalized due to the distance between the townships and the industrial areas where jobs could be accessed (see also RDP in the African National Congress, 1994). Similarly, Turok (1994:243) affirms that “apartheid separate development created a fragmented economy, with separate public amenities, administrations and infrastructure”.

The election of a democratic government in 1994 opened possibilities for spatial reconstruction throughout the country. Government adopted several new policies to address the imbalances of the past. Among these were the Reconstruction and Development Programme (RDP), the Spatial Development Initiative (SDI) and the National Spatial Development Perspective (NSDP). These policies aimed to bridge the inequality gap, improve economic growth, increase employment opportunities, and alleviate poverty. The RDP states that: “poverty is the single biggest burden of the South African people and the direct result of the apartheid system and the skewed nature of business and industrial development which accompanied it” (African National Congress, 1994:14). According to the RDP document (1994), the key to poverty alleviation is infrastructural redevelopment that will provide access to modern and effective services which will open up previously suppressed economic and human potentials in urban and rural areas. Dewar and Uytendogaard (1991) note that initiatives to restructure former apartheid cities by reversing the effects of racial planning have therefore received much attention in South Africa. Reconstruction has focused principally on desegregation and the integration of affected areas.

The Msunduzi Municipality is home to Pietermaritzburg, which is the capital city of KwaZulu-Natal province. Today the city still suffers from the legacy of apartheid and is a “...fragmented city of suburbs and townships (formal and informal), struggling with...social engineering and strongly marked with enduring social and environmental, infrastructure and service inequalities along race and class lines” (Goebel, 2007:293). Under current economic

conditions, the number of jobs being created is not sufficient to significantly address unemployment in the Municipality (Msunduzi Municipality, 2009). Unemployment is concentrated in the townships surrounding the city, especially the Greater Edendale Area (GEA), and some parts of Northdale, whose inhabitants were forcibly moved to the western and northern parts of the city (Msunduzi Municipality, 2011). This form of planning where activities are focused on the central area has also led to infrastructural dilapidation, prompting the need for regeneration. According to Beall et al. (2002:13-14) these patterns of development resulted in a high unemployment rate and a growing wage gap between high and low income groups in the labour market. They have also contributed to the growing demand, often in the form of public protests, for better quality services by thousands of people in Msunduzi and many other South African cities since 2009, which have continued to the present day (Stanton, 2009, Baumann et al., 2004).

The integration of various areas in the city through the adoption of the corridor concept is regarded as an effective reconstruction tool. According to Donaldson (2001:3) the reconstruction of South African cities can be achieved through integration, which is “a combination of compaction and integration with development corridors and transport routes, with mixed-land use along these routes”. Many South American countries have used development corridors to shape a new urban form (Rabinovitch, 1992). For example, development corridors in Brazil have addressed land use and transportation problems in Curitiba, and have received global recognition as a model for urban reconstruction (Friberg, 2000, Goh Ban, 2010). The ENC project shares similar characteristics with Curitiba and it is believed that this model of land use can address existing imbalances.

The ENC is an initiative of Msunduzi Municipality to address imbalances in land use in the city, and improve public transport system. A core rationale for this corridor, as understood from the views of Goebel, is the expansion of the city caused by the increase in vehicular traffic. Another reason is the rapid increase in Pietermaritzburg’s population due to its being the seat of the provincial government. In October 2002, the Municipality began its quest for solutions to the population influx and increased congestion as a result of the many private cars on the city’s roads (Msunduzi Municipality, 2009 - 2010). The development of the township areas of the city through the ENC in order to alleviate socio-economic challenges through investment that will lead to job creation, was seen as an appropriate solution (Msunduzi Municipality, 2009 - 2010).

This research study focused on the ENC in order to understand how this corridor could help to foster economic development, reduce poverty, and curtail unemployment. The concept of a corridor aims to promote economic growth and reduce commuting distance, providing opportunities for people to engage in economic activities, and thus improve their standard of living. It should be noted, however, that the ENC is a corridor in the making that could assist the development of nodes outside the Pietermaritzburg CBD. The *Mirror* newspaper (9th March 2011) noted that work had begun on the Edendale mega-city, believed to be one of the anchor projects for the Stadium node in Edendale (Mtolo, 2011). “The project seems to have been delayed as a result of the global recession” (Mtolo, 2011:3). It was also noted that the section of the corridor in Northdale was almost complete, with the improvement of the Chota Motala Interchange.

## **1.2 Significance and Justification of the Study**

The study is significant because it seeks to understand how this corridor can help to foster speedy development along the length of the ENC. Although the Spatial Framework Review Draft for Edendale-Imbali ABM (2007) noted efforts to integrate central Pietermaritzburg without providing details, these efforts have not spread to Edendale, which has high poverty levels. It is believed that the successful implementation of this corridor will help reduce the distances travelled by Edendale’s inhabitants and create employment along its length and breadth, as well as establish a metropolitan region. The researcher considers the corridor development initiative in Msunduzi Municipality as to be a tool to reduce the dependence of communities on the city centre. However, “this has been a growing debate in the field of spatial planning on the linkages between land use and transportation” (Williams, 2005:3). This relationship has often been seen as a tool to drive economic growth in areas with low economic returns or that were isolated in the past. According to Walljasper (2008), the concepts of corridor development, transit-oriented development, and spatial planning initiatives have been applied to achieve economic growth, and have been successfully employed in urban reconstruction in both developed and developing nations. They could also be successfully implemented in Msunduzi Municipality. Loukaitou-Sideris notes that the corridor concept was used in California, in the United States, to address issues of economic growth and transportation (Loukaitou-Sideris, 1993). This study therefore seeks to explore how this concept will influence economic growth to reduce the dependence on the central area.

## **1.3 Objectives and Research Questions**

### **1.3.1 Problem Statement**

Pockets of traffic congestion occur along the Edendale-Northdale road due to the high volume of people commuting daily to Pietermaritzburg for work. Msunduzi Municipality's Spatial Development Framework (SDF) has identified Edendale-Northdale road as a priority corridor project to foster economic growth, incorporate other disadvantaged areas in the municipality, and to create employment. Against this background, this study seeks to assess the effectiveness of the concept of a development corridor as a tool for urban reconstruction in Msunduzi Municipality, and its capability to generate speedy economic growth among communities outside the central area.

### **1.3.2 Main Aim**

This study aims to assess how the concept of a development corridor could be implemented to influence economic growth along the proposed Edendale-Northdale Corridor.

### **1.3.3 Research Objectives**

1. To examine the corridor concept and its application in the reconstruction of greater Pietermaritzburg (Msunduzi Municipality) along the Edendale-Northdale Road.
2. To determine how the proposed Edendale-Northdale Corridor could be used to restructure and promote economic development in those areas marginalized during the apartheid era.
3. To explore the potential impact of the corridor on the standard of living of local communities.
4. To identify the implementation problems existing along this corridor.
5. To provide recommendations on how economic development can be adapted along this corridor in order to ensure integrated development.

### 1.3.4 Research Question

How can the proposed Edendale-Northdale Corridor spread economic development to the disadvantaged parts of the Msunduzi Municipality? To answer the main research question, the following sub-questions have been identified:

### 1.3.5 Subsidiary Questions

1. What is the current economic and transportation *status quo* along this corridor? Has there been a change in economic and transportation infrastructure along the ENC to enable economic development?
2. How would the implementation of the corridor lead to economic decentralization and community development?
3. How can the proposed corridor influence the living standards of the people through economic development?
4. What are the employment and income generation prospects of the corridor after successful implementation within Msunduzi Municipality?
5. What interventions could be undertaken in order to ensure that the project does not become a ‘white elephant’?

## 1.4 Definition of Concepts

### **Development Corridor:**

refers to “...an area of land, typically along a linear route, containing land uses and transportation systems influenced by the existence of that route” (American Planning Association, 2006:23). This concept is used in South Africa to influence development in previously disadvantaged areas (Harrison et al., 2008).

### **Node:**

refers to an area along a linear strip or corridor where economic activities are exposed or clustered in a greater number to strengthen the townships economically, reduce transportation

costs, and encourage walking for sustainability (Harrison et al., 2008).

**Apartheid city:**

is concerned with the pattern and form of city planning that was instituted by the apartheid government through the Group Areas Act from the 1950s to enforce residential racial segregation. This resulted in the forced removal of Black people from the core of cities and job locations, using buffer strips, and major highways (Harrison et al., 2008).

**Urban reconstruction, restructuring and rebuilding of city:**

refers to the processes adopted by the democratic government to address separate development, and ensure that employment opportunities are available where the majority of people live; that cities function efficiently and that equal opportunities are extended to all citizens (Khan and Maharaj, 1998).

**Integration of city:**

refers to the linking of previously disadvantaged areas - townships or homelands - to the main cities through the use of corridor development and efficient public transport systems to reduce commuting distance and time.

**Race groups:**

refers to the classification system used in South Africa to categorize human populations under apartheid, separating them into African, White, Indian, and Coloured.

**Decentralization:**

In the context of this study, decentralization refers to development and investment in low-

wage, peripheral locations. Under apartheid, major economic development was concentrated in the metropolitan areas (Harrison et al., 2008).

**Township:**

refers to the concept of ‘orderly urbanization’ which was used by apartheid planners in South Africa from the 1950s to design separate settlements mainly for Black Africans using natural or man-made buffers like Greenfields or major freeways to prevent Africans from moving into the city and forcing them to live in a separate environment (Harrison et al., 2008, Makhathini, 1999).

### **1.5 Theoretical Framework**

Many theories are proposed to explain city development, especially with regard to economic regeneration. Von Thunen’s *location theory* which gave rise to the *monocentric city model* emerged from the work of Alonso (1964) and finds its clearest expression in the works of Anderson and Bogart (2001) (Coffey and Shearmur, 2002). These scholars explored the concentration of employment opportunities in central business districts (CBDs), with areas outside the city core serving as residential areas. Lal and Pathak (2011) argue that although these scholars regarded the areas outside the city core as residential areas, this does not mean that they cannot accommodate market development. Furthermore, as explained by Lal and Pathak, the most important consideration in establishing a location for a market economy is usually not population, but distribution channels. Gilbert (2009) explains that there are similarities between Christaller’s central place theory, Reilly’s law of retail gravitation and Huff’s law of shopper attraction which all seek to explain the trade performance of retail centres based on consumer behavior. Successful performance depends on reasonable access to shopping areas. Location theory is not appropriate for the present study due to the apartheid approach to planning and development of settlements that separated and isolated people.

Dewar and Todeschini (2004) maintain that the development approach in South Africa should take the apartheid legacy into account. In the democratic era, development practitioners should consider how to integrate metropolitan areas. If a large part of a metropolitan area is cut off from economic activities, residents will be obliged to travel to the CBD or opportunity areas. This pattern of urban form leads to isolation in cities and could motivate agitation for improved service delivery by inhabitants living in peripheral areas. Gabszewicz and Thisse (1986) note that in terms of location theory; consumers do not pay the same prices for commodities. They distinguish between delivered pricing and mill pricing. A delivered price could take one of two forms: the company charges the same price in all locations, or it bases its price on the distance that it has to travel to deliver the goods. In mill pricing, the customer bears the transportation cost by going to the firm to purchase the goods. People living in South African townships travel long distance to work and shop. Goods cost less in the city than in the townships due to the added cost of transportation incurred by the vendor. Harvey (1973) calls for a critical examination of geographical theories with respect to distributional equity in order to address this issue.

Another early theory of urban planning is *Central Place Theory*, postulated by Christaller in 1933. Christaller used the central place to explain the spatial arrangement, size and number of settlements in a particular geographical area. He observed that towns of a certain size were roughly equidistant. By examining and defining the functions of the settlement structure of certain cities and the size of their hinterland, he modelled the pattern of the settlement locations of different sized cities using geometric shapes, such as circles or hexagons (Christaller, 1966). Central Place Theory was modified by August Losch (1954), who built on the values of Christaller's K value system. Losch's consumer model focused on administrative and manufacturing functions as opposed to Christaller's service centre. He proposed that cities be laid out projecting from the main city, which will be the biggest market, serving smaller markets. However, this model produced an uneven pattern of rich and poor settlements around each central place, similar to South African cities.

While central place theory is known for its preference for the urban areas, "by replacing rural settlements for urban centers, service areas for hexagonal market areas, and movement patterns for transport networks, the theory can be made applicable to a nonurban hierarchy" (Wanmali, 1992:30). If this was the case, there would be no imbalanced settlements in most developing countries. In South Africa and in the study area, the richer settlements are closer

to the central areas with concentrated economic activity. Reilly's law of retail gravitation and Huff's law of shopper attraction note that the centrality of market enables the development and growth of a particular location. Given Msunduzi Municipality's fragmentation urban reconstruction informed by central place theory would create further problems.

The *multiple nuclei city development* theory offered by Chauncy Harris and Edward Ullman (1945) perceives city development as taking place in a number of nuclei, with some more important than others. According to Harvey (1992), some of these nuclei existed as settlements before the city grew. However, classifying some of the nuclei as more important than others creates room for unbalanced development. "Thus, in relation to urban development in South Africa, a more robust approach that can integrate the pockets of settlement and bring about economic growth is essential" (Dewar and Todeschini, 2004).

A brief examination of the earlier theories reveals some inadequacies. The Location Theory creates the problem of the different pricing of goods in a given region. Central Place Theory focuses on concentrated development in the CBD, which compels migration into the central core from peripheral and rural areas. This puts pressure on infrastructure, burdening the peripheries with low levels of economic growth and their inhabitants with constant travel. Another problem with this approach to city development is that it fails to control urban sprawl in its quest to promote a better living environment. The majority of South African cities adopted this approach under the apartheid regime.

Following a careful review of the theoretical literature on city development, the researcher selected the *polycentric theory* postulated by Palmiro Togliatti (1959), as the framework for this study. This theory was chosen due to its ability to explain the ideas behind the corridor and nodes concepts. According to Meijers (2007:3-4), a polycentric city in an urban setting can be described as the development of different "centres alongside the central business district within a city region consisting of a city and its smaller suburban satellites." This approach to city development has led to a more specialized metropolitan layout, incorporating many different centres. Priemus (1994) argues that linking a set of small or medium-sized cities together in this pattern opens up possibilities for regional economic growth.

In the analysis carried out by the POLYNET research project, where they combined two research strategies to study global mega-city regions, it was found that polycentric theory informs development and economic growth in a multiple node. Evidence through the case of Dublin-Belfast Corridor where polycentricity had been adopted shows a good case study. In the analysis of this corridor, it revealed that development and employment were concentrated in the east region mainly in Dublin mega-city region with over 47.2 per cent of the employment opportunities in the city. Further, out of this percentage of job opportunities, 88 per cent of the jobs were concentrated in Dublin (Mclaran and O'Connell, 2001). However, following the unprecedented economic growth in Ireland between 1991 and 2002, development began to move into the suburbs to south and western part of the city (Bannon, 2004). The development of these suburbs, as noted above, informed by the idea of polycentric development clearly proves that this concept drives economic development and reconstruction of cities. On the other hand, Meijers and Romein (2003) believe that the potentialities embedded in the polycentric city model, if applied adequately will lead to a more competitive economic region. This evidence is seen in Argentina where the Greater Buenos Aires reconstruction recorded success after the decline of the inner city took the form of polycentricity. By 1980s Buenos Aires began to change with the densely populated city declining which enabled development moving into the suburbs of the Capital city and spilling over 200-square-kilometre area. Today the metropolitan city of Buenos Aires “reflect impact of industrial deconcentration” showing prove of the success achieved in adopting polycentric city (Ainstein, 1996:136).

The fact that the polycentric approach to city development has been successful in many cities around the world, including Brazil and Colombia and in Europe further attests to its appropriateness in informing the current study. Meijers (2007) affirms that human settlement is connected to other settlements in many different ways: “These connections include flows of information, capital, goods, and persons, which travel along such infrastructures as roads, railways and waterways” (Meijers, 2007:3). Schneider (1986) commends the polycentric approach for its focus on the distributional aspects of service units and the efficient provision of services that promote redevelopment or redressing the issues of central areas and suburban growth. Finally, the polycentric approach avoids further excessive economic and demographic concentration within the core of cities (Faludi, 2005). This approach will allow

an examination of the transformation of Pietermaritzburg from an *apartheid city to a consolidated, new municipality* (Msunduzi Municipality, 2009).

### **1.6 The Study Area - Edendale-Northdale Corridor**

The Msunduzi Municipality is home to Pietermaritzburg, KwaZulu-Natal's capital city and the second largest city in the province after Durban (Msunduzi Municipality, 2006b:11). Map 1.1 below shows the Msunduzi Municipality and the Edendale-Northdale Corridor study area with the three nodes that are the focus of this research.

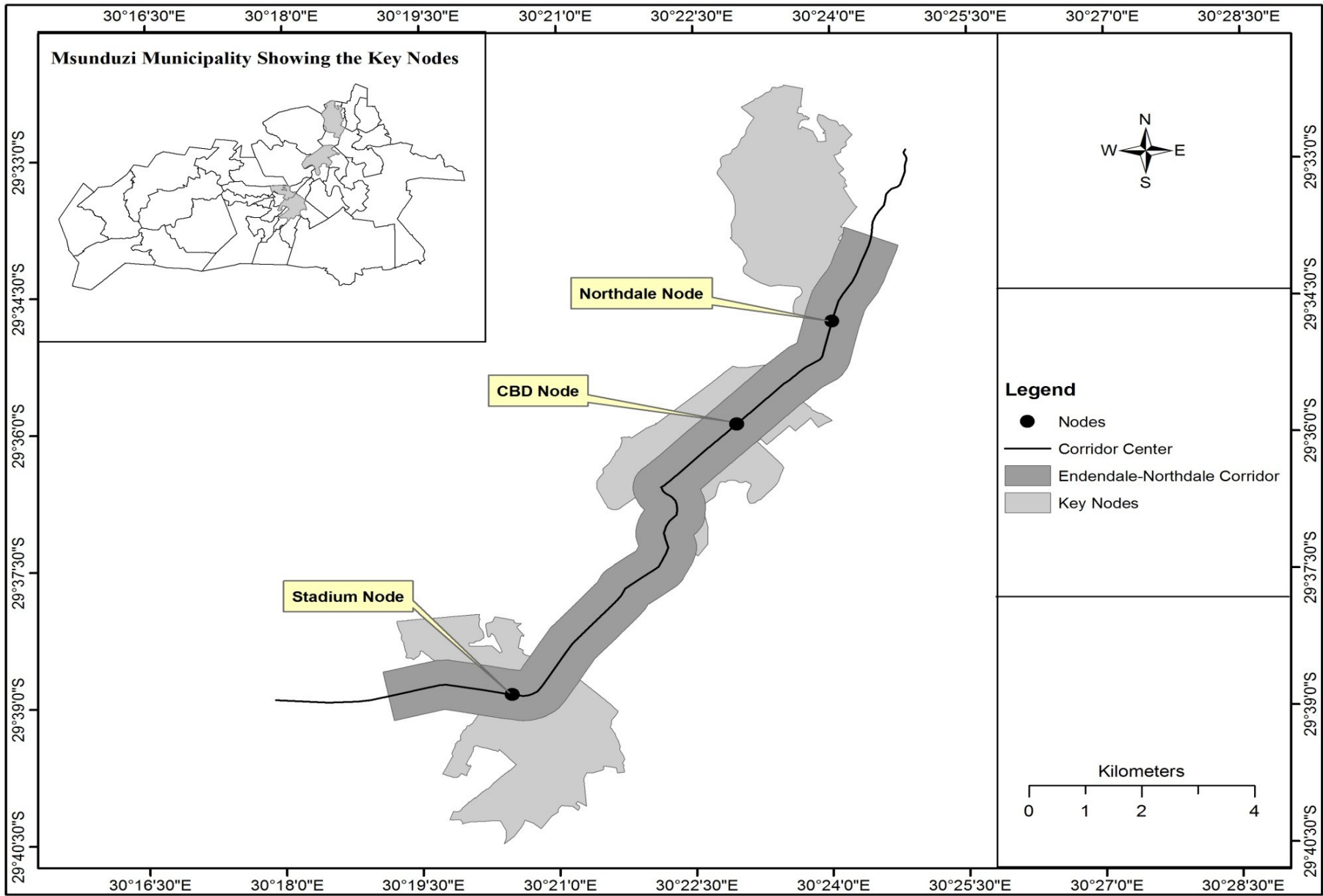


Figure 1.1 Map of Msunduzi Municipality showing the ENC with the three key nodes.

Source: Researcher (2012).

The present day Msunduzi Municipality was formed following the 2000 Local Government elections, and the amalgamation of the Pietermaritzburg Municipality and the Msunduzi Transitional Local Council. This includes the Ashburton Transitional Local Council; Vulindlela; Claridge, and Bishopstowe (Msunduzi Municipality, 2002).

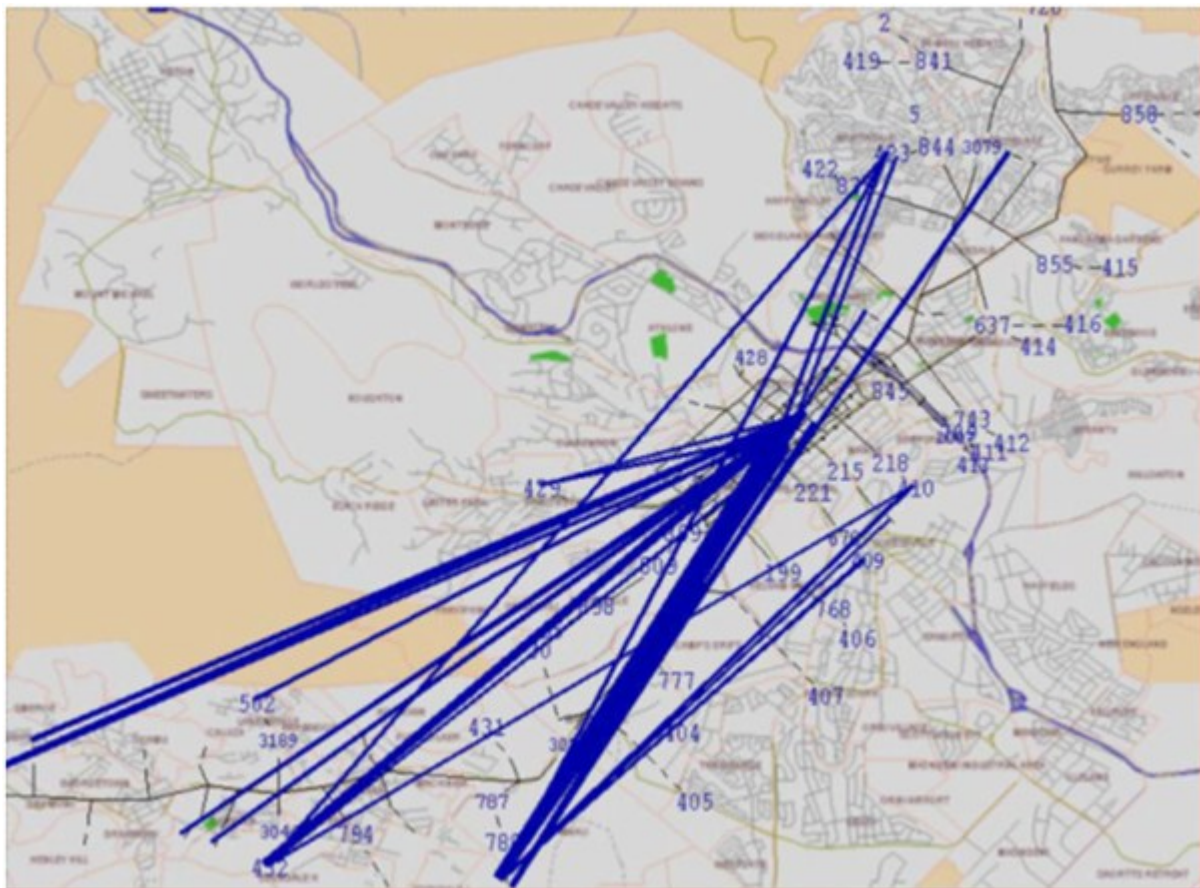
### **1.7 Current Transportation Challenges in Msunduzi Municipality**

During the apartheid era, the current Municipality consisted of four different authorities; Pietermaritzburg Municipality, the KwaZulu Government (Vulindlela), the Department of Co-Operation and Development (Greater Edendale), and the Development and Services Board (Ashburton and Fox Hill). These areas were planned and developed in isolation from one another. Development in the city was mainly concentrated in the central grid of Pietermaritzburg city together with its surrounding suburbs such as Scottsville, Pelham, Hayfields and Chaseville (Msunduzi Municipality, 2011). In 1970s, the Edendale area was established as a separate administrative entity as part of apartheid planning (Msunduzi Municipality, 2011). At this time, some groups were evicted from the city centre and forcibly removed to townships outside the CBD. Very limited investment was made in areas like Edendale and Sobantu, leading to land degradation. Standards of living were significantly lower than those enjoyed by Whites (Msunduzi Municipality, 2011). In recent years, people from these rural villages have left their homes and settled in areas closer to the CBD and industrial areas, leading to the creation of informal settlements. The city of Pietermaritzburg was then named the capital of KwaZulu-Natal, leading to more people moving to the city. Today, Msunduzi Municipality is faced with the challenges of integrating formerly isolated individuals and townships with the city centre, and other urban nodes for employment and services, to create a more liveable community.

The public transport system in Msunduzi Municipality is dominated by mini-bus taxis; this poses a problem for the integration of isolated areas into the economic areas of the city. For example, the majority of taxi routes in the Greater Edendale Area (GEA) which incorporates the Greater Imbali Area, run to the city centre (Msunduzi Municipality, 2006a). This exacerbates traffic congestion because of the use of private cars that causes large number of vehicles on the roads and travelling to the CBD through the Edendale-Northdale Corridor (ENC). An assessment of the origin and destination of public transport in the municipality shows that the overwhelming majority of socio-economic activities is taking place in the

CBD, due to past apartheid policies. Figure 1.1 below shows a study carried out for the municipality that demonstrates trip origin and destination flow in the city, and confirms that the majority of activities take place in the CBD. The diagram below illustrates that the flow of trips from various areas is largely directed at the city centre.

**Figure 1.2** Trip origin and destination flow in Msunduzi Municipality



**Source:** Msunduzi Municipality (2006a:22).

## 1.8 Chapter Outline

### Chapter One: Introduction

The chapter provides introduction and background of this research study, research problem, aim, research questions, and objectives. The chapter also provides the significance of this study and the theory that informs the study. Finally, this chapter briefly discusses the location of the study area, the Edendale-Northdale Corridor Initiative, and the historical planning system in Msunduzi Municipality.

## **Chapter Two: Clarification of Concepts**

This chapter provides clarification of the concepts and terms used in corridor development. It discusses issues around development corridors, transit-oriented development, and the conceptualization of corridors. The last part of the chapter draws lessons from three case studies of corridors.

## **Chapter Three: Literature review on Development Corridors and Urban Reconstruction**

Chapter three reviews the relevant literature on corridors and urban reconstruction. It identifies gaps that exist in this field and draws on the findings of these studies to reinforce the analysis of the current study.

## **Chapter Four: Research Methodology and the Case Study Area**

This chapter discusses the approach and methodology utilized to fulfil the objectives of this study, as well as answers to the research questions. It begins with a description of the study area to provide the context for the study. The essential steps taken in conducting the study are outlined. Finally, the limitations of the study are discussed.

## **Chapter Five: Data Analysis and Findings**

This chapter discusses and analyzes the information collected in the field.

## **Chapter Six: Summary, Conclusion and Recommendations**

This chapter provides a summary of the dissertation. It focuses on the findings of the study, and concludes by highlighting the success of the study in achieving its objectives. Recommendations to policy-makers and other stakeholders are also presented.

## CHAPTER TWO

### 2.0 CLARIFICATION OF CONCEPTS

#### 2.1 Introduction

This chapter clarifies the concept of corridor development, and nodes. It begins with a definition of key terms and issues pertaining to corridors that will inform the study. Since the study is concerned with how development corridors can be used for urban reconstruction, it was necessary to also explore the views of scholars on urban reconstruction, particularly in the South African context. In order to understand how the Edendale-Northdale Corridor (ENC) will help foster economic growth, three cases from developing countries are presented.

#### 2.2 What is a Corridor?

The term ‘corridor’, cuts across many disciplines including urban planning, geography, economic development, transportation planning, urban design, and even wildlife conservation. Within each of these disciplines, the term ‘corridor’ is specifically defined, depending on the field of study and the purpose for which the corridor is planned. In this study, the term ‘development corridor’, also referred to as ‘transit-oriented development’, will be used. This is because the proposed Edendale-Northdale Corridor is viewed as both a transit-oriented and a development corridor.

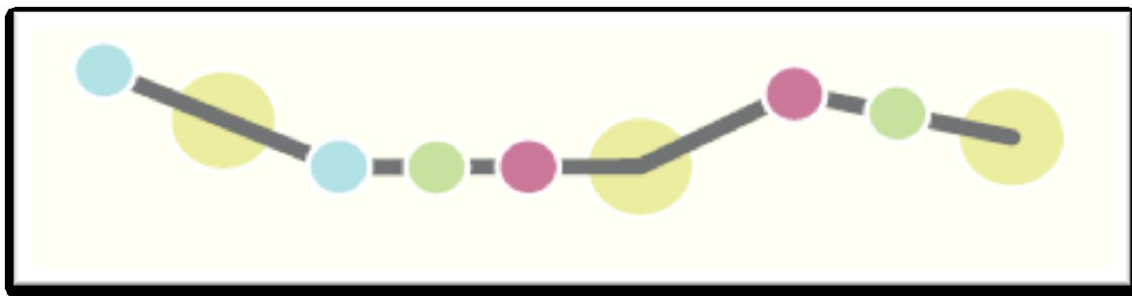
##### 2.2.1 Three basic types of Corridor

The concept of a corridor is very broad and requires careful definition. The Centre for Transit Oriented Development (CTOD) in the United States of America categorizes the term ‘corridor’ in three different ways: destination connector, commuter, and district circulator corridor. Each of these is defined by what it connects and how these connections influence the overall potential for development and demand for travel. Depending on the type of corridor, each creates different opportunities and this categorization helps in the analysis and planning of both new and existing settlements (CTOD 2010). These three types of corridor are briefly discussed below:

##### (i) Destination Connector Corridor

Destination connectors are corridors running through residential neighbourhoods to multiple activity centres, including employment, medical and commercial centres and academic campuses. Because of this mixture of land-uses, transit along these corridors consistently result in usage that is higher than what was planned (Centre for Transit-Oriented Development, 2010). Destination connectors encourage use in both directions throughout the day because they connect five to nine employment centres with other destinations (Centre for Transit-Oriented Development, 2010).

**Figure 2.1** Destination connector

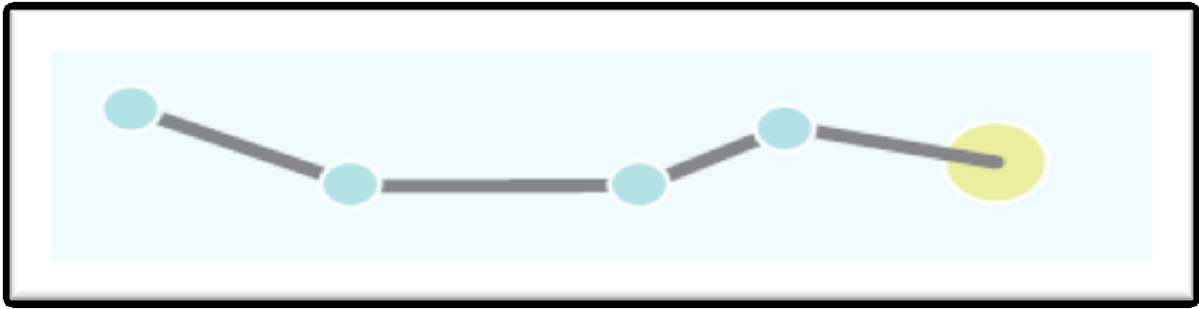


**Source:** Centre for Transit-Oriented Development (2010:5).

### **(ii) Commuter Corridor**

The commuter corridor, unlike the destination corridor, serves one major activity centre. This type of corridor typically serves the CBD, with commuters travelling into the CBD in the morning and out again at the end of the day. Commuter corridors are mostly accessed by heavy rail, light rail, and high-quality bus services. In South Africa and other developing countries, high-quality bus services and heavy rail are the most frequently used modes of transport along this type of corridor. However the recent introduction of the Gautrain, connecting Johannesburg and Pretoria, has seen an improvement in rail transit and centre-to-centre connectivity in South Africa. The problem with the commuter type of corridor is that movement along the route is affected after peak commuting hours, making it difficult to achieve the land benefits associated with high-frequency services (Centre for Transit-Oriented Development, 2010). A graphic image of the commuter corridor is shown below.

**Figure 2.2** Commuter corridor

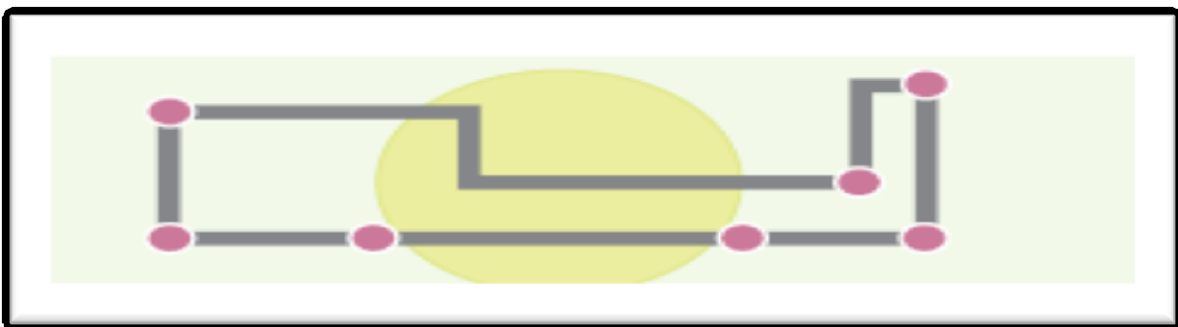


**Source:** Centre for Transit-Oriented Development (2010:5).

### **(iii) District Circulator Corridor**

District circulator corridors facilitate movement within an activity node; this could be the CBD, or commercial, medical or educational centres. The circulator corridor extends walkability and even connects other neighbouring activity nodes. The effects of Transit-Oriented Development (TOD) are visible in this type of corridor because of its promotion of biking, walking and park-once strategies (Centre for Transit-Oriented Development, 2010). Below is a graphic image of the district circulator corridor.

**Figure 2.3** District circulator



**Source:** Centre for Transit-Oriented Development (2010:5).

### **2.2.2 What is a Development Corridor?**

The concept of development corridors, as (Yarwood, 2006:3) indicates, “involves linking several towns or cities”. This is best achieved through a linear form of road network with various modes of movement that link cities or nodes together. Normally, these linked cities could be expanding, or they could be entirely new settlements, with the aim of creating a larger market at a lower movement time than is the case where these settlements are autonomous. In a development corridor, the individuality of the constituent towns could be

maintained while journey-to-work distances could be cut if the spatial pattern of jobs were brought closer to residences. Furthermore, several scholars like (Dewar and Todeschini, 2004, Kelly, 2010, Loukaitou-Sideris, 1993, Todes et al., 2000, Yarwood, 2006, Zaborowski, 2007, Turok, 2001, Uytendogaardt and Dewar, 1992b) have shown that the introduction of development corridor initiatives attracts investment to the various nodes of the region. Thus, this region is likely to become more competitive when jobs are created closer to residential areas; this would also reduce the number of commuters. The use of development corridors enable access to a great number of locations along the corridor, and a variety of jobs; commercial facilities and businesses will likewise have access to larger number of employees (Yarwood, 2006).

While Yarwood sees development corridor initiatives as favouring social and economic activities, Walljasper (2008) understands development corridors to be one of several planning models used to address contemporary land use and transportation problems: "...multi-modal transportation network, knit together around a major transportation facility, such as road or rail line. It encompasses all the surrounding land uses" (Walljasper, 2008:6).

Furthermore, Walljasper observes that development corridors are the type of model that fit into the context of communities and are accessible to different modes of transportation. A development corridor usually incorporates mixed land uses with the purpose of encouraging walking, and of easing regional access by public transport for journeys that cannot be made on foot (Walljasper, 2008:6). In the United States, development and transit corridors are seen as an appropriate way to deal with the reconstruction of declining central areas and to address public transport problems. Development corridors strive to enhance economic growth within their vicinity, and to improve the quality of life and that of the environment (Walljasper, 2008:3).

A good corridor serves the purpose for which it was established and provides safe and efficient travel for its inhabitants within a conducive environment. While Kelly's (2010) research was not directly linked to development corridors, his ideas about corridors can be applied to development corridors. He sees "corridor as links between neighbourhood's pathways for community-level services, and connections between suburbs and city" (Kelly, 2010:273). These corridors are seen as gateways to city development. Kelly further suggests that first impressions are important in attracting residents and investors that are willing to

bring future jobs to a corridor. Investors will judge the area in part by their own first impressions and entry to a community usually informs that first impression (Kelly, 2010:273). This means that there is the need for a harmonized environment that can provide investors with an enabling environment for business development.

However, attracting investors requires government to provide basic infrastructure. Established volumes of passenger and freight transport travelling through an area makes it an attractive location for companies. In this light, Priemus and Zonneveld (2003) relate development corridors to the following:

...Bundles of infrastructure that link two or more urban areas. These can be highways with different routes or rail links. The development of corridors is basically concerned with the connections that use different transport modes (e.g. car, train, tram, ship, and aeroplane), and carry both passenger and freight movement (2003:167).

According to (Loukaitou-Sideris, 1993:2), “development corridors can also be referred to as urban commercial corridors that include many of the major roadways passing through urban areas”. They range from the ubiquitous commercial strip areas to newer arterial roads which are lined up with a mixture of retail establishments, office buildings, automobile dealerships, parking lots, residential buildings, and often open spaces. In the past decade, development corridors have been used to facilitate the emergence of suburban employment centres. It is argued that “accommodating new growth in the areas in between centres and sub-centres is more desirable than the sprawl that accompanies the emergence of edge cities. This concept encourages intensification and concentration of development along transit corridors which can reduce automobile distance, and improve air quality” (Loukaitou-Sideris, 1993:2).

From a regional perspective:

...development corridors are areas generally comprising of densest concentration of infrastructure development, high-tech industry districts, and high-income market within a macro-region like East Asia. Thus, these zones represent the main spine or growth axis of a region’s economic development, and generally where regionalised linkages are also the strongest (Dent, 2008:79).

The Organisation for Economic Co-operation and Development (OECD) (2002) stresses the need to develop centrally-located work sites to facilitate the use of public transport systems. According to the OECD, studies have shown that economic growth is achievable within suburbs through the implementation of development corridors. The OECD therefore states that corridors, as a concept, are taken to be:

...a type of development that aims to increase densities near public transport corridors and stations. ...this term in the American context as “transit-oriented development” (TOD) is often used to connote residential areas that are located within walking distance of public transport services (Organisation for Economic Co-operation and Development (OECD), 2002:27).

It is believed that the improvement of the public transport system along the corridor, will lead to the emergence of a cluster of social and economic activities.

According to UN-Habitat’s State of the World Cities (2010/2011), corridors connect points of various city centres along transport routes in linear development axes that are often linked to a number of mega-cities, encompassing their hinterlands. Today, many new city developments as well as urban reconstruction projects are using this approach, which drives faster economic growth rates. According to the State of the World Cities Report (2010/2011), the advantage of these corridor developments is that they stimulate business, real estate development, and land values along the linear strip. The corridors also improve connectivity amongst communities and create new forms of interdependence among them, which lead to regional economic growth (UN-HABITAT, 2010/2011). The American Planning Association also provides an alternative view of the concept of corridors:

...an area of land, typically along a linear route, containing land uses and transportation systems influenced by the existence of that route (American Planning Association, 2006:23).

Friedmann’s (1966) definition stresses the importance of using development corridors to facilitate economic growth. He also argues that economic activities will cluster faster within the various nodes along a corridor if these nodes are not too far apart. Friedmann further confirms that development corridors reduce travelling distance between each of the economic

activity nodes, due to the efficient public transport system that is provided along the corridor. However, Friedmann sees development corridors as a:

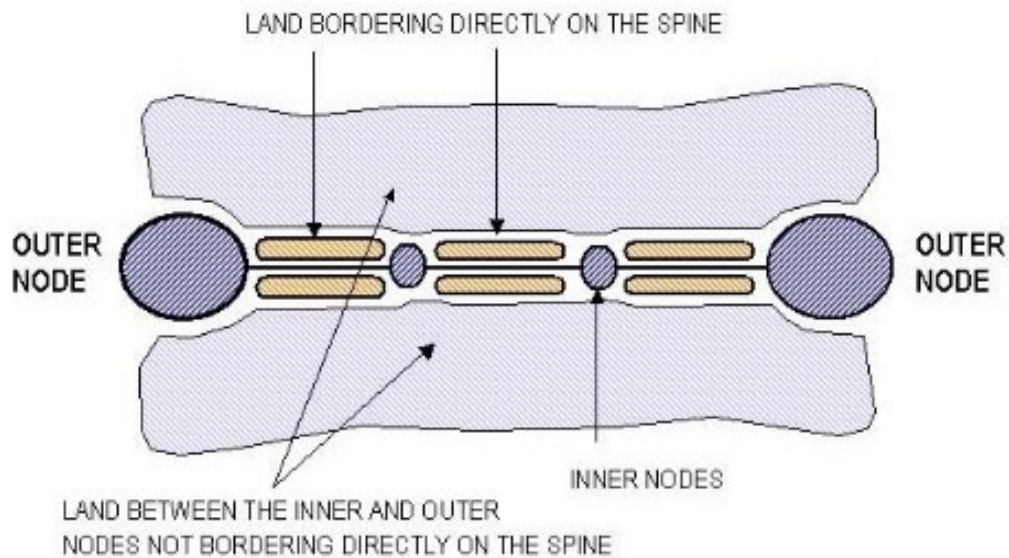
...type of upward transitional area connecting two or more core regions. The intensity of corridor development tends to be directly proportional to the product of the core region economies and inversely proportional to the distance separating them (Friedmann, 1966:42).

In another view, Friedmann also observes that development corridors are not so easy to define but argues that,

A development corridor consists of a narrow zone along important routes connecting between different cores. Economic activities within such regions are less concentrated, but have the capacity to expand. The main point of such a corridor must be developed to such an extent that can propel the development, but must not be situated far apart (Friedmann, 1966:42).

This suggests that economic activities in any disintegrated settlement will necessitate travel as a result of socio-economic disintegration within the landscape. This implies a need to fulfil the daily needs of humans, which usually involve a trip from origin to destination along the transportation link (Friedmann, 1966). If these nodes are not too far apart, as indicated by Friedmann, this will reduce the number of journeys made in a day and will encourage competition among various sectors of investments and between the nodes.

**Figure 2.4** Generic components of a development corridor

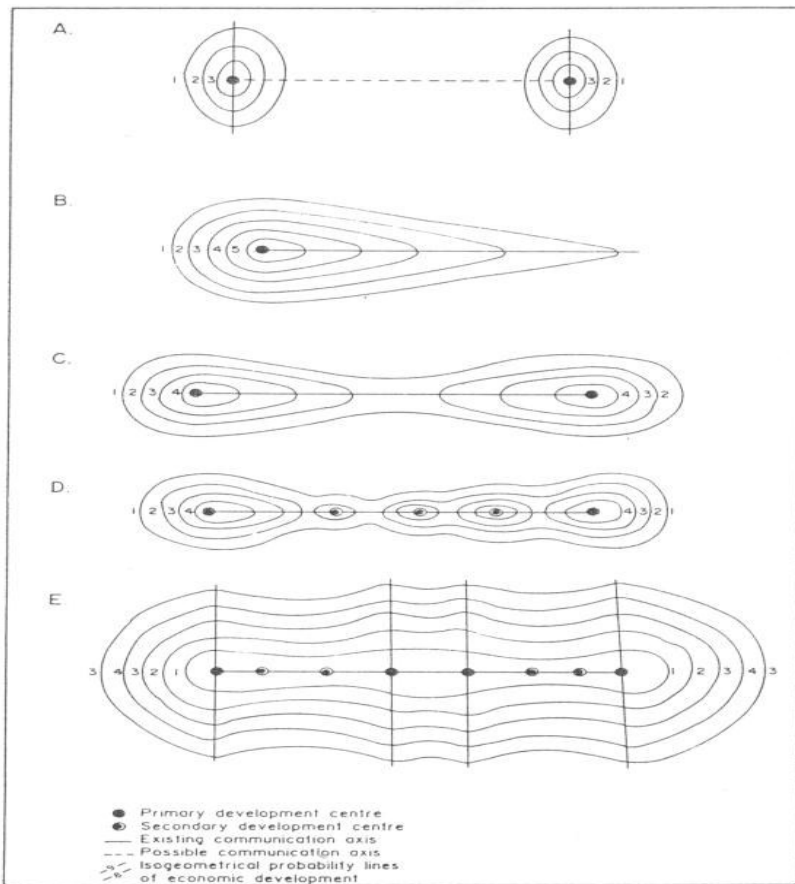


**Source:** Marrian (2001:13).

Geyer (1988:123) describes development corridors or axes as a dynamic phenomenon that evolves in different stages over time, and as a concept that enables progression to a certain level of development. Thus, stated, that there are four stages involved in elevating an area's economic growth; these stages are namely:

- a. The potential axis (A) or the development finger with the potential for the establishment of a development centre at the other end (B);
- b. The axis in an infant stage with a well-established communication axis between two primary centres (C);
- c. The mature stage, with the corridor or axis having one or more secondary centres in between (D) and;
- d. The axis in its old age or dormant stage where an over-concentration on the axis may lead to the development of agglomeration, diseconomies or polarization reversal (E).

**Figure 2.5** The evolution of the development corridor



**Source:** Geyer (1988:123).

The Technical Team of the Interim Co-ordinating Committee for the Maputo Development Corridor refers to a development corridor as:

...geographical linkages created through policy for the expressed purpose of economic development within certain areas (Interim Co-ordinating Committee, 1996).

### 2.2.3 Transit- Oriented Development (TOD)

Transit-Oriented Development (TOD) is the term used for development corridors in Canada and the United States of America (USA) to address land use and transit problems. As argued by (Marrian, 2001:6), development corridor planning and implementation in North America and Europe is based on the same principles and dynamics. According to Brooks (2010), TOD, also referred to as ‘Transit Settlement’, is a community development initiative focused on locating people along the transit corridor to encourage the use of public transport. TOD

has been seen as a model for addressing the problems of disintegrated settlement. However Brooks (2010) notes the importance of TOD and its usefulness in reconnecting various races, groups, and places *via* multi-modal transportation networks, to form a vibrant and cohesive region. Thus planning for TOD requires collaboration among different stakeholders, and given the wide range of teams involved in implementation, TOD becomes a complex community development model to implement. At the same time, TOD is a worthwhile model which has proven to be a success in the United States and Canada. The benefits of TOD, according to (Brooks, 2010:8), include:

- i. Improved access to job centres and economic opportunities;
- ii. Expanded mobility choices that reduce dependence on the automobile, reduce transportation costs and free up income for other purposes;
- iii. Reduction in both neighbourhood isolation and concentrated poverty across a region;
- iv. Reduced vehicle miles travelled (VMT) and thereby lower greenhouse gas emissions (Brooks, 2010:8).

In light of the aforementioned benefits embedded in TOD, Brooks (2010) argues that most TODs have not fully transmitted all the potential benefits. Often these TODs merely convey images of transportation infrastructure and pedestrian shopping malls. Furthermore, Brooks emphasizes that the benefits of TOD, are not just to facilitate movement of freight. TOD is also about achieving social equity and economic opportunities, cost savings and environmental benefits. Specifically, TOD refers to a model that incorporates mixed-use development and integrated neighbourhoods with quality public transportation operations (Brooks, 2010). According to Brooks (2010:8), “implementing TOD requires an evaluation of the current community’s *status quo* in order to determine how the project will enhance its environment. It also requires an understanding of community linkages with the areas of opportunities along the corridor”.

According to the United States Danbury Branch Corridor final report, TOD is defined as:

...a mixed-use community within an average 2,000-foot walking distance of a transit stop and core commercial area. Further, TODs mix residential, retail, office, open space, and public uses in a walkable environment, making it convenient for residents and employees

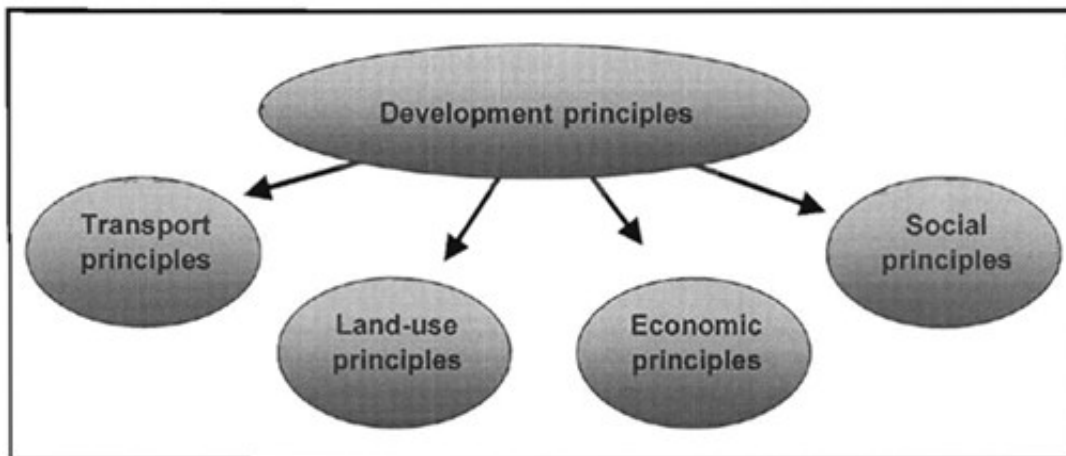
to travel by transit, bicycle, foot, or car (Transit Oriented Development, 2010:4).

This description portrays TOD as the machinery for revolutionizing the transportation industry by reconnecting land use and transportation in an integrated development approach (Transit Oriented Development, 2010).

### 2.3 Principles incorporated in planning and establishing Development Corridors

Many principles are incorporated in the planning of a development corridor and these differ in different corridor studies. Jordaan (2003) argues that the success of any corridor and transport planning depends on the inclusion of the urban components and disciplines. Furthermore, he stresses the need for corridor-based linear development as the ideal urban form which can enable major activities to concentrate along a linear configuration; usually this centres on major transportation access. According to Kleynhans (2001:83), several principles are linked to the establishment of a corridor. He identified these principles and grouped them into four broad-based areas (as illustrated in Figure 2.6 below).

**Figure 2.6** The four broad-based development corridor principle-groups



**Source:** Kleynhans (2001).

#### 2.3.1 Transport-related Development Corridor Principles

The definition of development corridors, as spelt out above, clearly shows that transportation is a driving force for this initiative. This means that development corridors have strong transport-related principles. These are:

### **i. Promoting efficient and affordable use of the public transport system**

Goh Ban (2010:37) observes that Curitiba has implemented a successful development corridor which serves as a success story from which developing countries can learn. The Curitiba corridor shows that transportation development is one of the essential principles that can be adopted by cities to foster economic growth. In order to achieve a required population threshold in Curitiba, provision was made for the intensification of the density and as well as the alignment of economic activities along the corridor length. What is notable in the Curitiba corridor is that further development of mixed residential densities was encouraged along the corridor routes, to ensure that residents do not have to travel far to access public transportation (Fox, 2008:60).

### **ii. Reduction of transit time**

Essentially, long distance travel reduces productivity and increases the cost of transport. This means that integration of land-uses in close proximity with public transport routes is necessary (Johnson, 1974). This is clearly seen in the case of Curitiba, as there is proper integration between land use and transportation, incorporating mixed land-use to reduce the distance which people need to travel. This was made possible through a well-articulated design and implementation strategy.

### **iii. Pedestrianization of development**

Parallel to the efficient development of the Curitiba corridor, which incorporates a comprehensive bus transit system, the Curitiba development corridor demonstrates that a pedestrian-friendly environment is one of the key principles of a successful corridor. However, as noted by Goh Ban (2010) in his study of Curitiba, the development of public facilities was undertaken in tandem with other land uses to encourage walking, the most sustainable and healthy means of mobility (Goh Ban, 2010:37). In support of this argument, Dewar and Todeschini (2004:92) argue that socialization happens on foot; therefore the social role of the street is particularly important in development corridors.

### **iv. Integration and well-developed accessible routes**

Accessibility is one of the key principles embedded in a development corridor; this means that efficient improvement of local access will enhance route choices and also reduce traffic. Furthermore, the improvement of intersections and various nodes along the corridor where

major exposure of mixed-use development occurs is a key element that can help reintegrate diverse groups and create opportunities for employment (Donaldson, 2001).

### **2.3.2 The land-use-related Principle in Development Corridors**

Early successes have emerged that show that the integration of land use with transportation is one of the important principles of development corridors. The Curitiba development corridor is clear evidence of this principle. Land use and transport integration requires that a comprehensive urban planning process occurs simultaneously with transport and urban development. This development usually takes the form of mixed-use activities, informed by the notion that people will live and work locally in self-contained communities. The main benefit of promoting mixed use activities along corridors and nodes is the increased use of an efficient public transport system. The other benefit lies in achieving sustainable development where people are served in their local areas. This will help to reduce the distance which people travel (Curtis, 2006:9). Kleyhans (2001:84) is of the opinion that mixed use development also requires the need for special zoning rights. This can be used as a preferred approach for locating development along the corridor; it could also be used to discourage certain activities from locating along the corridor, especially those that are hazardous.

### **2.3.3 Economic-related Development Corridor Principles**

The planning and establishment of development corridors is strongly rooted in private-public sector investment. This often leads to employment opportunities adjacent to the corridor, creating jobs within walking distance of the residential areas. According to Lin et al. (2006), empirical findings indicate that development corridors have been an urban reconstruction tool in many countries and have been used to attract employment and recreational opportunities. In most cases, development corridors have militated against sprawling communities and fostered economic growth in newly-created settlements. As Van Egeraat and Sokol (2006) observe, many European countries believe that the reconstruction of the European community through development corridors will help to promote economic growth in regions or countries that are underdeveloped. However, the connectivity of various centres will increase economic agglomeration and general competitiveness amongst these centres. The views held by the above-mentioned scholars suggest that development corridors have a place in the reconstruction of South Africa's settlements. Thus the potential of different localities in the

corridor, and how well the corridor is implemented, will determine the employment opportunities that are created in the area.

#### **2.3.4. Social-related Development Corridor Principles**

From a social perspective, fragmentation is considered to have negative impacts on the spatial functioning of cities. For example, if the relationship between the city and the countryside is fragmented, it may jeopardize economic growth within the countryside (Hidding and Teunissen, 2002:298). Since development corridors integrate various nodes or cities with the surrounding countryside, as well as socio-economic activities adjacent to the corridor, the problem of job and residential separation can be controlled. Kleynhans is of the view that this enhances integration amongst various communities. The aim is to improve isolated communities, alleviate poverty, improve access to urban functions, and create employment opportunities (Kleynhans, 2001:85).

#### **2.4. Components and Design Elements of Development Corridors**

A common definition of planning is that it entails the arrangement of buildings, open spaces and the different functions of urban land-uses to achieve harmony and continuity. If this is true, then a comprehensive design, which integrates these elements in conceptualizing corridors, is needed to attain this harmony and to encourage economic growth in each corridor. (Kelly, 2010) emphasizes the importance of having a well-harmonized environment along a corridor. This will attract residents and investors, who will create jobs in the corridor. Kleynhans (2001) also argues that corridors exhibit different design elements. During the planning process, the different concepts are evaluated in order to understand the possibilities offered by different elements and how best they fit the new locality. The discussion here will focus on Kleynhans's study of the Mabopane-Centurion Development Corridor that fits with the current study. The design elements, as noted by (Kleynhans, 2001:85), are summarized below:

**i. Economic activity nodes:** Economic activity nodes are urban elements that include Central Business Districts (CBDs), Neighbourhood Centres (NCs), industrial parks, and office parks. In order to enable a vibrant economy in the area, the design stages of development corridors integrate anchor-institutions, especially in growth regions. Some examples of prominent

economic anchors are: government institutions; universities; hospitals; and other institutions which can easily attract a population to feed the market that is established to stimulate economic growth in the area.

**ii. Direct public transport link between activity nodes:** In explaining this link, (Kleynhans, 2001) argues that development corridors, especially urban development corridors, are characterized by the design of a supportive integrated public transport system. He further stresses the importance of integrated public transport links between the various economic activity nodes along the corridors. Kleynhans also notes that connecting feeder roads are important to support movement along the corridor towards the direct public transport link between economic activity nodes.

**iii. Accessibility linkages:** when a well-established access link is incorporated in the design stage, economic activities are more likely to be attracted adjacent to the main public transport link. This accessibility will enhance opportunities and job creation along the corridor strip and within the economic activities nodes.

**iv. Mixed use development:** amongst the components for the establishment of development corridors, mixed land use plays a key role in promoting activity links and in reducing distances travelled. Vertical mixing of uses at specific segments is encouraged. Within these corridors, zoning should allow and encourage integration of residential development, with commercial activities in close proximity (Loukaitou-Sideris, 1993:16).

**v. Higher density residential development:** another element incorporated in the design of corridors is density. Dewar and Todeschini (2004:49) indicate that high density is a fundamental pre-condition for environments that support public transportation and high concentrations of homes, jobs, and social and economic services within walking distance of one another.

**vi. Mobility link:** Higher density development supports various systems of movement, such as pedestrian-friendly environments, especially in areas of scarce resources and high poverty.

**vii. Open spaces:** This design element is also considered important for development corridor establishment. It constitutes the public spaces and joints of connectivity within settlements. Open spaces are regarded as a primary factor for promoting environmental sustainability. They also serve as social spaces where people gather for formal and informal public life (Dewar and Todeschini, 2004, Kleynhans, 2001). The research document by the KwaZulu-Natal Provincial Government (2008) stresses the importance of public spaces in improving the quality of the environment. The Commission identifies five characteristics of such open spaces:

- a. A comfortable relationship between the length, width and height of buildings on their edges;
- b. They are defined and enclosed to provide protection from both sun and shade;
- c. They allow for surveillance and have active edges;
- d. They are multi-purpose which accommodate a variety of activities, both formal and informal, as noted by the above mentioned scholars;
- e. They are frequently landscaped and furnished to look attractive, (2008:41).

**Viii. Infill Development:** This is the accommodation of new growth, such as population, housing densities, and employment opportunities in those areas ‘in-between’ centres and sub-centres. This concept is used to consolidate investment on the edges of traditional centres or nodes, in order to curb sprawl, to increase transit use, and to reduce the distance travelled by individuals (Loukaitou-Sideris, 1993). Donaldson states that increased investment at the edges of nodes or centres will reduce the sprawl of communities (2001).

## **2.5 The Pre-conditions for Corridor Development**

A number of pre-conditions need to be met before development corridors can be conceptualized and implemented. The most important pre-conditions are grouped below under broad headings.

### **2.5.1 Economic pre-conditions for Development Corridors**

In general, one of the most important preconditions for establishing development corridors is to harness the unutilized economic potential of the area. The economic pre-conditions for the establishment of development corridors are as follows:

**i. Existence of economic viability:** research in the USA, Canada, France, and South Africa has revealed that the local areas in which corridors are to be established or implemented already exhibit strong economic growth, and, to a certain extent, an element of existing mixed-use development (Marrian, 2001).

**ii. Establishing diversified economies:** “As a result of the opportunity created through the development of mixed land-use, it is also necessary to promote the development of diversified economies. This includes the promotion of industrial and even agricultural activities” (Kleynhans, 2001:90).

**iii. The establishment of incentive and disincentive programmes:** According to MLH Architects and Planners, cited in Kleynhans (2001:90), incentives are usually granted to encourage investors to create job opportunities in development corridors. Disincentives are also provided to prevent the location of land-uses which may not be suitable along the corridor. Thus, incentives are granted to encourage economic growth adjacent to the development corridor, whilst controlling the urban edges (Kleynhans, 2001:90).

**iv. Business facilitation:** Facilitation of businesses along the corridor will promote further development and the sustainability of established business. The experience of the Curitiba Development Corridor also suggests that a business support centre should be established. These centres provide information on investment opportunities along the corridor (Kleynhans, 2001).

**v. Marketing:** There is a need for continuous marketing of development and business opportunities along the corridor to promote growth and further investment in the corridor. Kleynhans (2001) argues that this will foster active business sector involvement.

### **2.5.2 Transport and physical pre-conditions for Development Corridors**

Transportation is generally acknowledged as the livewire of economic development; again, it is believed that transportation plays a key role in structuring land use interaction. For this reason, transportation is an important precondition for development corridors. Transportation related preconditions include the following:

**i. Connectivity between various nodes along the corridor:** strong linkages between the various nodes along the corridor must exist to help strengthen levels of competitiveness amongst businesses.

**ii. Existence of an inter-modal system of transportation:** one of the main preconditions for corridor initiatives is to solve traffic problems. The existence of an intermodal system of movement can improve traffic flow and aid in promoting healthy lifestyles because many activities will be within walking distance.

**iii. Efficient feeder system:** (Marrian, 2001) emphasizes the need for an integrated feeder system of buses, taxi lines, and pedestrians which in turn will enable commuters to reach their destinations safely and quickly.

**iv. Regional focus and accessibility:** Development corridors need to be accessible in order to draw populations from the wider metropolitan area, and to be interconnected with an efficient public transport system. This will reinforce the market and attract further investment (Marrian, 2001).

**v. Land for low cost housing:** Marrian also stresses the need to engage local people in a corridor-designated areas early enough to acquire publicly owned land. This would further enable housing provision, mainly for the low-income group. “This should be undertaken before the proclamation of the corridor, and will improve the affordability of land along the corridor” (Marrian, 2001:8)

### **2.5.3 Social pre-conditions for Development Corridors**

There are numerous social preconditions for development corridors; this study focuses on those that are most important for the current analysis. Once again, it is important to note that development corridors can go a long way in reconciling disintegrated settlements. For this reason, the following are the social preconditions for the establishment of development corridors:

**i. Alleviation of poverty and reduction in inequality and social exclusion:** According to the research document of KwaZulu-Natal Provincial Government (2008) the creation of an

enabling environment for economic development along the corridor will help reduce racial inequalities and create opportunities for investors to gain entry to the economy, which will in turn create more job opportunities. This could facilitate poverty alleviation and integration between high-income and low-income employees.

**ii. Improved access to social services:** “Providing public utility services along the corridor will enable the poor to gain access to health care and education facilities. Levels of crime and violence will be reduced” (KwaZulu-Natal Provincial Government, 2008:44).

**iii. Provision for special groups (disabled and the elderly):** The Curitiba development corridor is a practical case where special groups were taken into consideration. Curitiba encourages pathways for disabled and elderly persons. “The BRT system in the Curitiba development corridor makes provision for wheelchair-bound passengers, enabling rapid embarkation and disembarkation from the bus” (Goh Ban, 2010:37).

**iv. Street lighting:** Street lighting makes people feel safe while walking along the street. Since one of the major objectives of corridors is to create an inter-modal system of movement where people can walk, street lighting becomes a precondition for development corridors.

**v. Improved security:** According to the KwaZulu-Natal Provincial Government (2008), urban designers and environmental criminologists argue that clusters of people will reduce the crime rate. One of the objectives of corridor development is to intensify residential density. This will theoretically lead to improvements in security; however, crime might move to another area.

#### **2.5.4 Participants’ pre-conditions**

**i. Community involvement:** As noted by Walljasper (2008), communities should be involved in the early stages of the planning of corridor projects. Community consultation enables planners to understand the community’s perception of the project and their needs. Walljasper confirms that it is easy to convince the community of the need for their co-operation in order to enable the success of the project. Such consultation played a key role in the success of the Arlington County Transit-Oriented Development Corridor in Virginia

United States. Walljasper quotes the views of Christopher Zimmerman, a member of the Arlington County Development Corridor Board:

“Community members are heavily involved in both comprehensive planning and the site plans of particular developments, through civic associations and citizen advisory commissions that meet on a regular basis and have a formalized role in the approval process. This promotes a high degree of awareness and support for the overall County vision” (Walljasper, 2008:23).

### **2.5.5 Institutional pre-conditions for a Development Corridor**

As argued by Kleynhans (2001), there is a need for a committed institutional structure that takes responsibility for the commencement, implementation, monitoring, and evaluation of the corridor plan formulated for every corridor project. He notes that, according to MLH Architects and Planners, institutional structures of all development corridor types should have a vision that is focused on achieving the goals set in the development plan for the corridor. Another important factor is government involvement, especially in relation to project management, direction, and enabling adequate funding of the project. “Government needs to create an enabling environment along the corridor and to provide the infrastructure necessary to attract investors and to grow the economy” (Kleynhans, 2001:93).

### **2.6 Why the use of Development Corridors for Urban Reconstruction in South Africa?**

The concept of corridors has become the norm in South Africa, especially in the new democratic era. Development corridors or corridors are being pursued on different scales in terms of diverse policies in a quest to overcome apartheid legacies. The peripheral landscape of South Africa is characterized by three spatial patterns. According to Dewar (1994), “the first is explosive low-density sprawl, the direction of which is largely uncontrolled”. The second is fragmentation; here development tends to occur more or less in pockets of settlement patterns, with residents having to travel long distances to work. The third pattern is linked to the second, as fragmentation leads to the separation of races, income groups and land uses. These urban characteristics have had a negative impact on the lives of the urban poor (Dewar, 1994). Dewar further observes that the movement generated by the fragmented urban system fails to create the preconditions for the emergence of a viable, efficient and widely accessible public transportation system. Such movement is economically inefficient, affecting business establishment within low density neighbourhoods (Dewar, 1994).

It can be argued that when vendors have easy and close access to a wholesale outlet, the cost of buying produce, as well as transporting it back to the point of sale, is relatively lower. Where there is no easy access, flexibility is reduced, supply costs increase, profits decrease, and costs to the consumer rise (Dewar, 1994). In the Edendale-Northdale Corridor (ENC), buying daily necessities from local spaza shops along the Edendale section of the corridor is expensive due to the costs the vendors incur in purchasing supplies. There is a need to decentralise wholesaling outlets, and to integrate the location of these businesses with the public transportation system in order to provide for businesses that cannot afford their own transport (Dewar, 1994).

According to Dewar (1994:238), decentralization is achievable through the network flow of people, since urban energy is expressed largely in terms of the flow of people, goods and investment. The energy driving the flow determines the distribution of the most intensive activities such as economic enterprises, commercial facilities, social and cultural events and so on, which are dependent on a high level of public support for their existence. Significantly, these potentials could be enhanced through the process of flow; when this flow is broken into various points, shopping and gathering are generated. In turn, the cluster will strengthen local economic establishments and the expansion of development beyond the local areas.

Referring to the use of development corridors in the reconstruction of the apartheid city form, Dewar (1995) identified the pattern of separation that still exists, observing that, “land uses, urban elements, races and income groups are all separated to the greatest degree possible” (1995:408). The separation of workplace and residence, which is of particular concern to Dewar, is evident in contemporary South African society (Makhathini, 1999:32). This is also the case in Msunduzi Municipality, especially in areas outside the Pietermaritzburg CBD.

Martins’s (1999) study revealed that the average income of the poorest Black household in South Africa was R8 500 per annum (cited in Makhathini). This translates to about R700 per month. The study also revealed that an average Black household spends about 35% of their income on transport alone. Since Black working class households are bigger than middle or upper-class households, this suggests that very little residual income is available per member of the household. The workforce will be motivated to demand higher wages, thus increasing the cost of goods and services (Makhathini, 1999).

The nature of the post-apartheid city form limits the range of opportunities available to people in the townships. According to Dewar (1994), the opportunities that do exist tend to be monopolized by larger activities. “The system is dominated by car-owners; over-specialization occurs at particular points or centres like CBDs, thereby increasing their vulnerability; these connectors do not serve to integrate the city but distort the movement patterns and generate enormous amounts of movement” (Dewar, 1994:238). Dewar argues that the resolution of these problems lies in breaking the pattern of the fragmented society, the key to this being:

Promoting a hierarchy of interconnecting continuous routes or, preferably, systems of movement modes, to carry both public and private transportation; in orienting development to these interconnecting systems and using housing policy to reinforce them through higher-density housing; and in allowing more intensive activities to respond to the flows along them, resulting in linear corridors of activities or activity spines (Dewar, 1994:238).

In addition, Dewar maintains that there are several advantages to restructuring post-apartheid South Africa through the use of the development corridor concept. Given the fact that flows are channelled along defined routes, different sized enterprises and activities with different generative capacities tend to find viable places to locate. Development corridors will help to foster economic activities in areas that were affected by apartheid policies. Dewar further affirms that large enterprises tend to dominate the most desirable points along this flow, citing as an example the intersections with different modes of movement. Similarly, smaller businesses tend to benefit from this structural flow along the link (Dewar, 1994:239).

The second advantage of using development corridors in restructuring a fragmented landscape is the fact that the system promotes equity. Dewar advocates this approach to rebuilding and creating new settlements in South Africa because it has the potential to reach greater numbers of people than the nodal concentration, which obstructed development in many townships during apartheid. He further adds that “the more the system is integrated, the more it enables the poor to benefit from the purchasing power of the wealthy, and these activities grow in higher order and faster within the local area” (Dewar, 1994:240). Morojele (2005:18) confirms “the corridor and node concept as the appropriate approach in resolving land use and transportation problems in South Africa” in his thesis on, “Nodal Intensification

Strategy: evaluation of an analytical model in metropolitan Cape Town”. This approach encourages high-density, mixed-use development focussed around strategic public transport-orientated corridors and nodes. Development corridors and nodes are appropriate urban restructuring tools for the post-apartheid landscape. Travelling distances can be reduced, while high-density mixed-use concentrations will lead to the desired threshold for public transport and subsequent lower housing density and improved accessibility of urban functions.

## **2.7 Post-apartheid Development Trends**

In the post-apartheid era, the development corridor concept has been adopted to alleviate the socio-economic problems associated with many of South Africa’s townships. Young and Froneman (2000) argue that CBDs are no longer the major employment nodes. “Employment has moved beyond the city centre and can now be found in office parks and retail complexes located along development corridors with a cluster of mixed-use development at the intersections of high accessibility areas” (Morojele, 2005:3). Due to the many benefits credited to development corridors, Devas (2004) sees the concept as key to unlocking the economic potential of isolated Black townships. Furthermore, Jenkins and Wilkinson (2002) argue that development corridors will enable South African cities to compete with global cities.

Turok (2001:2359) notes that basic services are gradually being extended to the historically neglected townships, accelerating national economic development, which can enable cities to compete globally in terms of Gross Domestic Product (GDP). Turok groups contemporary development trends in Cape Town into four categories, noting that these are applicable to most of South Africa’s cities:

- ii. Decentralization – this involves a net shift in economic activity from the CBD towards suburban centres. In principle, decentralization may support the goal of urban integration and resolve the congestion problems of overburdened CBDs. It helps to rebalance the structure of the city, shifting employment opportunities and social activities towards the suburbs or townships.

- iii. Deconcentration – this involves a net shift in economic activity away from the established centres towards a more dispersed pattern of development. This phenomenon is generally inconsistent with the principle of urban integration. Spatially, it is a fragmented pattern of lower-density, car-oriented development, and will favour the more affluent rather than the poor.
- iv. Northern drift – this involves a steady shift of property development from the centre to the north. This type of economic drift is clearly contrary to the goal of breaking down the spatial inequities and imbalances of the apartheid city and achieving an integrated society.
- v. Differentiation – this involves the growing specialization of economic centres in different market segments. Differentiation, however, contradicts the objectives of urban integration since it involves further spatial separation.

Donaldson and Kotze (2006:570) argue that desegregated suburbs to buffer zone development are the foundation of twenty-first century South African cities and will replace the Davies' apartheid city model. However, the decentralized nodes in the former African, Coloured, and Indian townships are developing differently from those in the former White areas. These areas should be perceived as areas of opportunity for employment creation because of the lack of any typical urban development during the apartheid era. Furthermore, Donaldson (2001) is of the opinion that “public-private investment, especially within the Black areas, will determine the availability of employment opportunities and development growth to alleviate poverty”. Despite post-apartheid policies and efforts at reconstruction, a lot remains to be done; the former Black townships remain segregated and lack socio-economic development.

## **2.8 Policies in pursuit of Development Corridor Initiatives in South Africa**

In the post-apartheid era, a number of policies have been crafted in pursuit of the integration of settlements. Integration is primarily intended to close the socio-economic gap between rural townships and cities. Many apartheid cities are undergoing a process of reconstruction, including the major city centres, to accommodate the increasing number of people moving into cities since the end of apartheid. This requires economic development and employment creation. The reconstruction of these areas has been informed by the concept of development

corridors, established or supported by various policies which will be discussed briefly in the following sub-themes.

### **2.8.1 *Development Facilitation Act of 1995***

The *Development Facilitation Act (DFA)* was introduced to facilitate and speed up the implementation of reconstruction and development programmes in relation to land. In so doing, this Act laid out general principles governing land development throughout South Africa, and provided for the establishment of a Development and Planning Commission. The Commission will advise the government on policies and laws concerning land development at national and provincial levels.

In terms of rural-urban growth with regards to spatial planning, the Act emphasizes restructuring the country in a sustainable manner to protect the environment. These objectives are as follows:

- i.** “The integration of areas settled by low-income communities into the relevant area as a whole;
- ii.** The sustained utilisation of the environment;
- iii.** The provision of bulk infrastructure for the purpose of land development;
- iv.** The overall density of settlements, with due regard to the interests of beneficial occupiers;
- v.** The co-ordination of land development in consultation with other authorities;
- vi.** Land-use control;
- vii.** The optimum utilisation of natural resources” (Republic of South Africa, 1995).

However, several loopholes have been identified in the DFA. For example a Constitutional Court ruling on *Johannesburg Metropolitan Municipality vs Gauteng Development Tribunal* found that the Act was invalid. This implies that the DFA is not capable of addressing the spatial problems confronting the current South African landscape. The Spatial Planning and Land Use Management Bill (SPLUMB) has been enacted to replace the DFA. In 2013, several provincial municipalities approved the SPLUMB to guide spatial development within their province; however some were not in agreement with this new policy (Republic of South Africa, 2012).

### **2.8.2 Moving South Africa (1998)**

The “Moving South Africa” policy document, which is the National Department of Transport’s policy strategy to respond to passenger customer challenges, identifies public transport as one of the urban-rural challenges facing South Africa. The effectiveness of public transport, according to the document, is challenged by the configuration of spatial planning which shapes the cost and distance to opportunity areas. The document further stresses that the current operation of the commuter rail system can only be more effective in corridors with more than 30 000 passengers per direction per day. In corridors with passenger numbers between 10 000 and 30 000 per day, there should be an ideal route for road-based transport with suitable infrastructure. The “Moving South Africa” document challenges the apartheid long-distance travel system and argues the need for high-density corridors and nodes which will enable effective public transport operations through increased use (National Department of Transport, 1998).

### **2.8.3 National Land Transport Strategic Framework (2006-2011)**

This document explicitly states the need for land use restructuring due to the problems associated with the legacy of apartheid planning. The policy stresses:

“Land transport functions must be integrated with related functions such as land use and economic planning and development, through, among others, the development of corridors, densification and infilling, and transport planning...” (National Department of Transport, 2006:6). The National Land Transport Strategic Framework further confirms that, “among other problems associated with apartheid planning, rural communities in South Africa are isolated and usually inaccessible and immobile, all of which contribute to poverty and a lack of opportunities” (National Department of Transport, 2006:25). Thus, the main focus in reshaping the socio-economic landscape of South Africa’s rural townships should be:

- i.** “direct employment opportunities and activities, mixed land uses and high-density residential development into high-utilisation public transport corridors, interconnected through development nodes within the corridors”;
- ii.** To “give priority to infilling and densification along public transport corridors” (National Department of Transport, 2006:4).

#### **2.8.4 National Framework for Local Economic Development (LED) (2006– 2011)**

Local Economic Development (LED) is an international policy to encourage the growth of local economies and poverty reduction. It is particularly important in South Africa, where previously disadvantaged areas were significantly affected by the apartheid policy of segregation. The purpose of LED is not to make policy statements but to understand ways in which local economies can be grown within local communities. The major focus of LED is to strengthen Small and Medium Enterprises (SMEs). Some of the guiding objectives of the LED framework are:

- i.** “To support local economies in realising their optimal potentials and making local communities active participants in the economy of the county;
- ii.** To elevate the importance and centrality of effectively functioning local economies in growing the national economy;
- iii.** To improve community access to economic initiatives, support programmes and information;
- iv.** To build greater awareness about the importance and role of localities’ significant role as points of investment facilitated by supportive national policies” (Department of Provincial and Local Government, 2006:7).

#### **2.8.5 Provincial Spatial Economic Development Strategy (PSEDS) (2006)**

The overall objective of the Provincial Spatial Economic Development Strategy (PSEDS) is to eradicate high poverty rates within KwaZulu-Natal by tackling the spatial legacy of apartheid as well as service backlogs. As noted by the document, underdevelopment and deprivation affect most provinces in the country, including KwaZulu-Natal. This calls for an intensive approach to promote growth and development. Among the programmes aimed at fostering economic growth within the province are Small, Medium and Micro Enterprises (SMMEs) and Black Economic Empowerment. The PSEDS document further links the economic reconstruction of the province to the principles embedded in the NSDP, and notes that there is a need to channel new developments into activity corridors and nodes as a stimulus to growth in the province (KwaZulu-Natal Government, 2006:19).

### **2.8.6 The Msunduzi Municipality Integrated Development Plan (IDP) (2009-2010)**

The Local Government Transitional Act, Second Amendment Act (1996), provides that all municipalities should prepare a guiding document for economic development within their areas in the form of an Integrated Development Plan (IDP). This policy document must conform to provincial land development objectives. The Act defines an IDP as a plan aimed at integrated development and management in any municipality's jurisdiction within South Africa in terms of its powers and duties. The IDP represents a practical effort to implement the Reconstruction and Development Programme (RDP). It aims to integrate the urban-rural landscape to achieve development at the grassroots level (Republic of South Africa, 1996).

The Msunduzi Municipality has enacted an IDP which clearly sets out the process for redirecting development within the municipality. The IDP contains the procedures for spatial restructuring, including the use of the corridor concept. The Municipality's amended Spatial Development Framework (SDF) identifies the Edendale-Northdale Corridor (ENC) as a priority corridor project in the reconstruction of the municipality (Msunduzi Municipality, 2006b).

## **2.9 Case Studies of Development Corridors**

There are a number of development corridors in the developed world from which lessons can be drawn. A good example of a development corridor is also found in the Canadian city of Ottawa. However, to understand how economic development and growth can be fostered along the Edendale-Northdale Corridor (ENC), three case studies - two international and one local – are presented to draw lessons that will assist in the analysis of the Edendale-Northdale case study. The criteria for the cases evaluated are based on similarities with the subject corridor for this study. Because South Africa is a developing country, cases have been chosen from other developing countries. Other criteria for the chosen corridors were the availability of information and issues pertaining to growth of the core areas, to reconstruction, and to economic development. The first international case study is the Curitiba development corridor in Brazil, and the second is the Transmilenio corridor in Bogota, Columbia. In terms of local corridors, the Maputo development corridor is regarded as a good example, with the focus on the Nelspruit section of the corridor.

### **2.9.1 Curitiba Development Corridor**

In the mid-1960s, the majority of cities in Brazil experienced dramatic change as a result of efforts to overturn the modernist paradigm (del Rio, 2004:34). Curitiba in particular experienced a turnaround due to the new approach to urban design; the city boasts among its many successes, land use and transport integration along its five structural corridors. By the 1990s, Curitiba had achieved a reduction in the unemployment rate to 8%, which was credited to the implementation of the Curitiba development corridor (del Rio, 2004, Minter, 1997). Curitiba experienced rapid population growth since 1964, owing to the influx of residents from the countryside to the city in search of ‘greener pastures’. This has put the city under pressure to provide basic services (Fox, 2008, Minter, 1997). “Until the second half of the twentieth century, physical, economic and demographic growth was relatively slow” (Rabinovitch, 1992:62). As a result, the city envisioned a new road map for development which was approved in 1966 (Fox, 2008). Today, Curitiba has become internationally recognized as a model city for urban reconstruction (Goh Ban, 2010). Goh Ban notes that Curitiba has received numerous international awards for successfully implementing an integrated development corridor (Goh Ban, 2010). Curitiba’s success was achieved through an innovative approach in the form of an integrated public transport system along the development corridor. The preservation of the city’s cultural heritage, the incorporation of public spaces, and an innovative land use approach that has met human needs, explains the level of sustainable development in Curitiba (Rabinovitch, 1992).

The key achievements of the Curitiba development corridor are built on its master plan which addressed both transportation and land use integration. These were combined to direct growth out of the central city and into arterial growth corridors. Curitiba land-use control targets two basic land use categories: the kind of use; and the density of development. Land-use control encouraged the shift of economic activities from the central area along the structural axes (Rabinovitch, 1996:55). Along these corridors, the city subsidized low-income housing built on land that was strategically acquired by the city before the corridors were developed. Another important aspect of the Curitiba corridor was the implementation of high-density mixed-use development. Such development, aligned along the corridors, enables the efficient operation of the Curitiba public transport system (Rabinovitch, 1996). Curitiba’s separation of bus lanes and roads is another reason for its success. Each of the five growth corridors was separated and assigned a function in relation to their location and importance (Rabinovitch,

1996). High priority was given to linkages between and connecting the structural roads; this allows the Bus Rapid Transit System (BRT) to operate freely in its own lane. On the other hand, this reduces the distance which people have to travel and promotes increased productivity. The collector streets are lined with commercial activity and allow all forms of traffic. “Within the central area, a decline in the level of traffic allowed for central avenues to be widened and converted to open-air pedestrian malls and walkways” (Rabinovitch, 1996:55). “Based on 1991 traveller survey results, it was estimated that the development of the corridor had led to a reduction of about 27 million auto trips per year and that employees spend about 10 per cent of their income on travel” (Goodman et al., 2006:2).

The provision of social services was not neglected and the city implemented a rehabilitation programme and provided health care, child care and adult education. An interesting part of the rehabilitation programme was the development of mobile classrooms which rotate between various low-income districts to teach new skills. The city’s recycling programme was another huge success; not only did it benefit the environment, it also created many job opportunities (Rabinovitch, 1996). Fragomeni’s presentation on “Transit Oriented Development: Curitiba’s Experience”, clearly demonstrates the rapid growth of the Curitiba corridor. The period between 1966 and 1974 saw rapid development along the Curitiba corridor and beyond its borders (2008).

### **2.9.2 Bogota Development Corridor**

Like Curitiba, Bogota, the national capital of Colombia, has received international recognition for its advanced urban management and transportation system which aimed to address the challenges of informal growth, economic hardship, and unprecedented population inflows (Acosta, 2010). Many scholars like (Acosta, 2010, Montezuma, 2005, Shastri, 2010) in the field of spatial planning have written about Bogota’s success. While Bogota is similar to Curitiba, it differs in terms of integration of land use planning and transport. The Trasmilenio Corridor was planned as a transportation corridor to address the transport challenges facing Bogota. However, Cervero et al. (2009) noted that the Trasmilenio Corridor has gone beyond transportation and empirical evidence shows that the implementation of this corridor has prompted investment in real estate and development along the corridor. It is also acknowledged by Munoz-Raskin (2010) that the implementation of the Bogota Corridor has created job opportunities for the poor and reduced crime; furthermore, inhabitants living on

the periphery spend less on transportation. However, critics like (Acosta, 2010) argue that as a landlocked area, Bogota should have focused on addressing mixed land use development along the Trasmilenio Corridor as in Curitiba (Acosta, 2010). The Trasmilenio Corridor in Bogota was constructed to allow for dedicated lanes for the BRT buses, like the ones in Curitiba. Unlike Curitiba, however, there are problems relating to existing land use patterns in Bogota. Nevertheless, Bogota has addressed mobility issues within the municipality and its surroundings. The Trasmilenio Corridor is known to be the world's premier model for BRT implementation (Shastry, 2010, Montezuma, 2005).

Montezuma (2005:1) observes that “the Trasmilenio Corridor has changed the physical landscape of Bogota. Pedestrian sidewalks and bicycle paths have been provided, road infrastructure has improved and parks have been revitalized”. Montezuma adds that the implementation of the BRT has led to the integration of the poorest neighbourhoods into the city, reducing transit times by 32 per cent (2005). In contrast, (Acosta, 2010) is of the opinion that not much has been achieved in Bogota compared with Curitiba, where clear integration has taken place. She further emphasizes the need for clear institutional integration between the various municipalities which will lay down a road map to reinforce the use of corridors to promote economic growth in Colombia, and to foster development in isolated areas (Acosta, 2010).

### **2.9.3 Maputo Development Corridor**

The Maputo Development Corridor (MDC) initiative offers unique insight into a local corridor. The corridor was chosen due to its global recognition and the abundance of literature, both local and international, relating to it. The MDC has achieved enormous success since its inception.

The MDC was initiated in 1995, by the then Ministers of Transport of Mozambique and South Africa. It was created to improve the trade corridor from Gauteng, South Africa, to Maputo, Mozambique. In the South African context, the Spatial Development Initiative (SDI) views this initiative as a project that can improve the infrastructure development of municipalities situated along the corridor (Soderbaum, 2001). The project team first investigated potential growth areas which were previously underdeveloped but had the potential to grow a sustainable economy (Brundige et al., 2011:20).

While the MDC is classified as a regional corridor, it could well be regarded as a local or district corridor. As Mitchell (1998:757) observes, “the Mpumalanga provincial government is focused on the 50 km side of the corridor in the N4 section”. This is perhaps the reason why the three sub-sections of the corridor could be considered urban or district corridors: the north-south links in Mpumalanga; the northern sub-corridor which runs from Nelspruit to Hazyview and into Limpopo Province; and the southern feeder link which integrates the petrochemical complex at Secunda *via* Bethal. The institutional structure of the MDC empowers various provincial initiatives along the corridor, which makes it possible to understand Nelspruit’s development success along this corridor. Mitchell, cited in (Soderbaum, 2001:6), confirms the institutionalization of the MDC, with the Maputo Development Corridor Provincial Technical Committee (PTC) responsible for MDC provincial developments.

The city of Nelspruit in South Africa is one of the many areas along the MDC that has benefited immensely from the improvement of this corridor. The city has seized the opportunities offered by the corridor to engage in various programmes and initiatives. These are aimed at restructuring apartheid affected areas to improve infrastructure. According to Brundige et al. (2011), two key initiatives are prominent: the Land Reform for Agricultural Development (LRAD); and the LED initiative. The LRAD offers a wide range of opportunity to individuals, creating jobs through grants to prospective farmers to purchase established farms, or land for new farms. The establishment of these farms has created a steady cash flow into the community” (Brundige et al., 2011:21).

As noted earlier, LED initiatives have been pursued on a national scale by the three spheres of government since the end of apartheid, with the aim of creating employment opportunities for unemployed South Africans. Along the Nelspruit section of the MDC, the LED has recorded a huge success in establishing the Shabalala Multi-purpose Centre. Adams and Moila state that this centre houses various social and economic opportunities, among which are: a furniture workshop; arts and craft vendors; and a bakery (Brundige et al., 2011:21). Another success documented due to the MDC is a reduction in unemployment in Nelspruit. Adams and Moila (N.D.) further identified the city as one of the best examples of economic development in sub-Saharan Africa (Brundige et al., 2011:21).

#### **2.9.4 Reflection on the Three Case Studies**

The Curitiba, Bogota and Maputo corridors clearly reflect sustainable development. The Curitiba corridor was successfully implemented in order to address the growth problems of the central area and underdevelopment in its periphery. It is clear that the BRT system, the pedestrian-friendly environment, and the high concentration of densities along the Curitiba corridor have been some of the driving factors for the huge success recorded. Bogota, the world's premier example of BRT as stated by Montezuma, has also been a clear success. The Trasmilenio corridor in Bogota was focused more on facilitating human movement between the various nodes, unlike Curitiba, where high-density mixed-use was aligned along the corridor to increase transit ridership and in turn to enable economic growth.

The Bogota case has been a success, but judged in terms of the principles of corridor development, the failure to implement vibrant integration of land use and transport may contribute to sprawling communities. Moreover, the underdeveloped nature of municipalities outside Bogota should have led to priority being given to outward alignment of development along the corridor rather than inward concentration. This was noted by Acosta, who advocates clear integration to grow the economy. The MDC, unlike Curitiba and Bogota, strives to achieve sustainable development, and has been a huge success. Being a regional corridor, the MDC, does not have a BRT system. Along the MDC there are clear concentrations of mixed use development in some sections; clusters exist to an extent, with some sections functioning as mobility routes, but these cannot match the successes achieved in Curitiba. The MDC has, however, proven to be a success, with the development of Nelspruit and trade facilitation between Maputo and South Africa.

#### **2.10 Conclusion**

Various concepts of corridor development were explored in this chapter. Three case studies were analyzed. The Curitiba and Bogota Corridors centered on a sustainable and efficient transportation system along the corridors. However, these corridors have gone beyond transportation and have served as a catalyst for land use development and economic growth. The Maputo Corridor focused on the facilitation of regional trade between South Africa and Mozambique. The following chapter will review the literature on corridor development and urban reconstruction.

## **CHAPTER THREE**

### **3.0 LITERATURE REVIEW ON DEVELOPMENT CORRIDOR AND URBAN RECONSTRUCTION**

#### **3.1 Introduction**

This chapter reviews international and local research in order to determine how corridors can foster economic development through urban reconstruction. As discussed in chapter two, development corridors have emerged as one of the most appropriate concepts for the reconstruction and spatial re-arrangement of cities (Fainstein et al., 1986; Leinbach, 1975; Loukaitou-Sideris, 1993; Priemus and Zonneveld, 2003). Major European cities have adopted the corridor concept as a new spatial arrangement to promote economic growth and competitiveness, as well as integration, amongst European Union (EU) member states (Bailey and Turok, 2001). The corridor concept has received increased attention in South Africa and other African countries, either with a view to unlocking economic potential or to respond to demands for transportation to link major cities. This literature review will inform this study's analysis and investigation of how economic development can be fostered along the Edendale-Northdale Corridor.

#### **3.2 The effect of Development Corridors on urban peripheral growth**

A number of studies have shown that, in contemporary society, the concept of development corridors has been a viable tool in stimulating economic growth on a global level (Godfrey, 1995; Leinbach, 1975; Loukaitou-Sideris, 1993; Phillips et al., 2008; Priemus and Zonneveld, 2003; Soderbaum, 2001). In this respect, Leinbach (1975:270-282) reveals that perhaps the most outstanding development in Malaysia is that of corridor applications in restructuring the economic growth of cities. In his study, "Transportation and the Development of Malaya", Leinbach noted that Malaya experienced rapid economic growth in the period between 1911 and 1939. His study showed how the development corridor concept was applied in opening new land opportunities and in filling the interstices in the main road system in the west coast zone of Malaya. This approach redressed economic imbalances and created new investment opportunities in peripheral areas, utilizing the transportation system as a mechanism for restructuring efficient economic development. The findings of his study showed that the

retrofit of corridor links from cities stretching through rural areas had facilitated the spread of social services and the expansion of development to peripheral areas.

Godfrey (1995:436-457) examined the problems facing cities around the world from two major perspectives: the first being metropolitan socio-economic restructuring; and the second being spatial decentralization. He further examined the financial and managerial role of New York during a period of socio-economic change between 1970 and 1990. During this period, the city of New York was characterized by the ills associated with the centralization of economic activities, such as, “demographic and employment shifts, social and ethnic divisions, concentration of wealth and poverty, and exurban growth pressures” (1995:437). These problems led to changes in spatial form, as industries began to move into the suburbs in pursuit of cheaper land. A change from the mono-centric form was necessary to curb the spread of sprawl and to develop other growth centres. The reconstruction phase of economic centralization saw the emergence of polycentric city development as a tool that was applied to achieve the balanced distribution of social and economic services in greater New York. While this balanced distribution of services does not equate with equality, to a greater extent, access to basic services has been attained (Harrison et al., 1997). Godfrey further suggests a polycentric approach to the restructuring of world cities with similar problems to those seen in greater New York. Again, Godfrey (1995) viewed contemporary political-economy interpretations of global city restructuring as resting on the balancing of city core and periphery. He noted that this will lead to the growth of urban and regional development.

Godfrey observes that various ideas have been put forward for restructuring the economic growth of city core and peripheral areas. The new international division of labour advocates a reduction of establishments within the core and encourages new investment in areas with potential for high growth (Godfrey, 1995). An evaluation of linear concepts such as corridors by Priemus and Zonneveld (2003:167-177), “shows that corridors have a long history and can be likened to a bulk of infrastructure travelling the same route, but with more concern for passenger and freight movement links”. However, their study presents corridors as a tool for depopulating densely populated concentric industrial cities. They examined cases in Europe, especially that of Randstad in the Netherlands, and proposed development corridors as a viable tool for private and public sector investment to foster economic growth in areas with low infrastructural development. “This idea was accepted by chambers of commerce and

companies because it fits with the need to create employment” (Priemus and Zonneveld, 2003:170).

A study by Loukaitou-Sideris (1993) on the, “Retrofit of Urban Corridors”, revealed that retrofit, reinvestment and intensification could enhance the economic potential of underdeveloped areas. This study examined three case studies in the US city of Los Angeles and investigates land use and policy frameworks which can support efficient transit, which in turn will enable economic growth. ‘The study found that linear concepts other than corridors were geared towards the needs of the surrounding population of the corridor’. Phillips (1992:389) presents a vivid case study of the economic integration of a less-developed area into a more-developed region. In his view, this integration leads to mutually advantageous services according to the principle of comparative development.

The case of the economic integration of the American Northeast with the Midwest has been seen as a successful intervention by (Phillips, 1992). According to Phillips (1992), where economic integration is invisible, there is usually a need for economic regeneration to incorporate the isolated regions. Phillips highlights two dynamic effects that can occur during the merger of previously isolated regions:

First, the presence of strong increasing returns to scale can, once transportation costs begin to fall, lead to the growing concentration of manufacturing activity. An advanced region can develop at the expense of a rural “backwater.” The second effect, however, can offset this. A positive learning externality can be generated when those engaged in the production of new technologies are able to transfer knowledge from the more advanced regions (Phillips, 1992:389).

In the field of spatial planning, recent developments have witnessed the use of development corridors in the reconstruction of less-developed regions. According to Altomonte (2007:277), “international economic development in the past decade has been characterized by regional integration”. This integration has been driven by reconstruction and investment flow through the idea of development corridors. In this arrangement, the use of corridors reduces trade barriers and increases foreign direct investment between two local communities and regions (Altomonte, 2007). The fundamental effect of this, according to Altomonte (2007), is that production shifts to those incorporated regions as a consequence of linear flow.

For example, it was also noted that linear road networks, or development corridors, have enabled the development of low-cost peripheral areas in the US and EU (Dabinett, 2006, Fainstein et al., 1986). In the case of the US, while some development moved to the peripheries from the main cities, there was a decline in the city centre which led to adoption of a development corridor to regenerate the declining urban environments (Fainstein et al., 1986). The five cases of the US cities of New Haven, Detroit, Denver, New Orleans, and San Francisco, studied by the above-mentioned scholars, show how reconstruction of these inner cities was approached in terms of the corridor and Riverfront development concepts, which restored the cities to liveable environments (Fainstein and Fainstein, 1986; Fainstein et al., 1986; Hill, 1986; Judd, 1986; Smith and Keller, 1986).

### **3.3 Land Use and Transport Integration**

Although development corridors are portrayed as one of the best ways to aid both economic development and efficient public transport systems, it is clear that there is a need to integrate both land use and transport infrastructure. Atash (1996:37) has argued that development and reconstruction of a city based on automobile transportation leaves little or no room for the integration of land use and transportation infrastructure, as linkages can be assumed in any development. In support of this claim, Atash (1996), points to the fact that city development that promotes automobile use has stimulated low-density and sprawl patterns of settlements in US metropolitan areas. Furthermore, this approach has caused numerous problems, such as job and housing imbalances, and rising land and housing costs. The automobile-use approach has hindered the development of other modes of transportation, including walking, bicycling and public transit systems. In order to balance the link between jobs and housing and to achieve healthy economic growth, integrated systems of land use and transportation are needed. Atash (1996) confirms that integration will promote different modes of transportation and link future development through mixed-use development along corridors, which will enable a reduction in car use. This will encourage the development of public transport systems where development is directed towards growing nodes outside the traditional centres. Such developments are usually directed at areas where the desired densities have been established (Atash, 1996).

Sim et al. (2001) present the case of Singapore, one of the world's most well-known cases of land use and transport integration. Integration in Singapore has been successful in alleviating

pockets of traffic congestion due to the comprehensive and highly integrated land use and transport policy. Singapore is known for its clear integration which has enabled employment creation in its regional centres. The previous master plan failed to incorporate land use and transport. In 1991, the comprehensive master plan was reviewed, addressing the issues of land use and transportation linkages which then incorporated new regional centres to achieve a greater degree of employment decentralization (Sim et al., 2001:401). The findings of a survey on employment and employees' work-travel patterns in the East region, the Tampines region, provides empirical evidence of the potential to reduce work-travel distances and decentralize commercial activity from the original CBD to other centres (Sim et al., 2001).

Zaborowski (2007) compared the approach to integration in Bristol in the United Kingdom with Hannover in Germany. The study aimed to understand the relationship between land use and transport policy objectives. It was understood that integration would help to achieve sustainable development which should not be undermined by any social activity. Zaborowski (2007:236) noted that "the functional cohesion of land use and transport infrastructure implies a basic link between these spatial institutions". This implies that transport accessibility must be in close proximity to land uses, with efficient linkages. To achieve this, there needs to be a high-density concentration, with mixed land use development to reduce the number of cars and the need to travel. Zaborowski (2007) confirmed the existence of this concept in both Bristol and Hannover. Hannover advocates a regional settlement pattern based on a transport network linking various land uses with transport infrastructure. In Bristol, new development was concentrated along the transport network to enable economic development. "This reduced the number of cars on the road and increased the use of public transport. In both cases, railway networks were integrated into a national transport system to promote economic growth and achieve sustainability" (Zaborowski, 2007:238).

Integration of land use and transport has been a key policy in the European nation-states. The EU set its spatial planning and redevelopment goals using transnational transport links or euro-corridors (Dabinett, 2006:283). The European Spatial Development Perspective (ESDP), approved in 1999, set out a vision for spatial development amongst its 15 member states. With membership having grown to 27 member states, there is even more need to integrate the underdeveloped regions through the concept of development corridors. The aim of the ESDP is to balance the EU's urban-rural spatial structure through polycentric development (Dabinett, 2006, Priemus and Zonneveld, 2003). According to Drewett

(1980:52), the recent restructuring of the European spatial structure is a product of previous centralizations of population and employment centres within a particular node, as cities rapidly evolve over time. However, the instrumental nature of underdevelopment amongst member states determined the use of transnational transport linkages for redevelopment (Dabinett, 2006:289).

Implementing the ESDP amongst member states incorporates transnational inter-modal links in countries such as France, Germany, the Netherlands and Spain. A key spatial feature of the EU redevelopment policy is the promotion of light-rail or high-speed train networks to link member states, especially the under-developed parts of northern Europe. Both passenger and freight movement are encouraged through the upgrading of existing lines, the provision of new links, and service improvements (European Spatial Development Perspective, 1999:43-69). Since 1997, the Netherlands has promoted several transport networks amongst municipalities. This has involved the use of integrated transport plans for local and regional public transport, roads, parking and incorporating various land uses along the network. Strengthening and improving public transport at the regional level, in cooperation with adjoining regions, is a key feature in Denmark and Germany. Key nodes for road, rail, water and air transfers are identified in these countries' policy frameworks; a multi-modal approach is identified in Germany (regional freight haulage centres), the Netherlands, Spain (transport logistics centres), and the UK (European Commission, 1997:140).

In most EU member countries, traffic congestion and a high rate of private car usage was noted by the (European Spatial Development Perspective, 1999). This prompted an emphasis on spatial decentralization; European integration presented an opportunity to achieve the sustainable and territorially balanced development of the EU (European Spatial Development Perspective, 1999:19). The pursuit of sustainability has driven local authorities to seek ways to reduce private car use in towns and cities, to improve public transport, and to improve conditions for pedestrians, cyclists and less mobile persons, especially in Denmark, France, Italy, the Netherlands, and the United Kingdom (European Commission, 1997:140). In pursuit of the goal of achieving desirable levels of clean-air by 2020, member states are taking integrated and multi-modal transport approaches more seriously. This finds expression in the identification and promotion of bi-modal and multi-modal nodes for interchanges between one transport mode and another. Again, there is clear recognition amongst member states of the need for integration of land use and transportation to achieve sustainable

development (European Commission, 1997:141). The Amsterdam and Rotterdam municipalities in the Netherlands, for example, have integrated land use and transport infrastructural integration to achieve a clean-air environment (Priemus and Zonneveld, 2003).

### **3.4 Compact City Development**

Compact city development in developed and developing countries has been perceived along different lines, but there are similarities. In developed countries, the idea of compaction is more concerned with land consumption, efficient service provision, transport costs, and energy usage (Breheny, 1995; Hillman, 1996; Williams, 2005). In developing countries, and in South Africa in particular, compact cities and development corridors have been drawn along the lines of equity and social change (Dewar and Todeschini, 2004; Todes et al., 2000). However Dewar and Todeschini (2004) have noted that the concept's application in South Africa points to the fact that government is seeking to deal with service delivery backlogs arising from the spatial nature of apartheid cities.

Internationally, it has been argued that compact city development will lead to sustainable development, increased transit ridership, reduced travel distance, the curtailment of sprawl, and improved public transport systems (Jenks, 2000; Burgess, 2000, Williams; 2005). This suggests the reasons why the majority of municipalities in South Africa are adopting this concept. Msunduzi Municipality has emphasized the compaction and densification of various nodes along the ENC (Msunduzi Municipality, 2006b). This concept is driven by the need to discourage urban sprawl and to reinforce sustainable economic growth. In principle, Burton (2000a) claims that compaction of cities will promote social equity which will benefit low-income groups. More specifically, there is the possibility of improved public transport; reduced social segregation; better access to facilities; more efficient utility; and revitalization and regeneration of inner urban areas. South African cities, which exhibit many of these problems, would therefore benefit from compaction (Burton, 2000a, Burton, 2000b, Kenworthy, 2006).

In most developing countries, the aim of promoting compact development and corridors is to restructure and integrate the transport networks built by the colonial 'masters', to link core cities to the ports for export, and to peripheral areas for labour services. In South Africa, compaction and corridor development has aimed to locate residential homes closer to

transportation routes. Socio-economic development is brought closer to where people live and sustainable development is achieved (Dewar, 1994; Dewar and Todeschini, 2004). The European Commission (EC), along with national and local governments in many Western countries, bases its idea of decentralization and integration on this concept (Breheny, 1995). Restructuring European spatial imbalances emphasizes infill and densification within the core cities of Europe, and economic activity in areas along transnational corridor routes, or the Pan-European corridors (Breheny, 1992). These transnational corridors are aimed at integrating activity areas and non-activity areas while creating routes for public transport. Studies by Dewar have shown that South African municipalities can also achieve prosperity if they embrace integration by way of compaction and the use of development corridors (Dewar, 1994; Dewar and Todeschini, 2004; Dewar, 1984).

### **3.5 Local perspectives on Development Corridors**

The development corridor approach in South Africa is generally credited to the city of Cape Town. This concept evolved as a planning approach to resolve the challenges of the spatial inequalities facing the city as the result of apartheid (Dewar and Todeschini, 2004; Dewar and Uytenbogaard, 1991). The early 1990s represented the dawn of the development corridor concept, as a new spatial arrangement to restructure the apartheid-built city. The Metropolitan Spatial Development Framework (MSDF) identified the Wetton-Lansdowne Development Corridor Project to restructure and improve infrastructural provision to underdeveloped areas. The corridor aimed to integrate the wealthy western suburbs of the city with the marginalized communities living in Khayelitsha, Philippi, Claremont, Bellville and Mitchell's Plain (Harrison et al., 2008).

Galvin and Habib (2003) note that the need to incorporate these areas was obvious. These apartheid-affected areas needed decentralized economic activities. As the concept evolved in Cape Town, it was adopted by national government as a spatial restructuring tool. Dewar and Watson (1981) note that the reconstruction of apartheid cities through decentralization will play a key role in unlocking the constrained growth of the townships and in promoting the location of economic activity that was prevented by the Group Areas Act. The reconstruction of Cape Town through the corridor concept has resulted in a number of improvements, although traces of the apartheid legacy still exist. (Smith, 2005:19) observes that: "Between 1995 and 2001 the Western Cape economy grew at an average annual rate of 3.3% with the

Gross Geographic Product for the region estimated to be R187.6bn”. It was forecast that the integration progress would create approximately 40 000 jobs per annum and that beyond 2004 the economic growth rate would have surpassed 4% (Smith, 2005).

Kleynhans et al. (2003) note that apartheid policy created homelands outside Johannesburg for different race groups; these homelands developed in isolation. By 1982, the Regional Industrial Development Programme Policy (RIDP) was adopted in an attempt to attract investors and businesses to these isolated areas, as the apartheid government came under pressure from the global community (Holden, 1990). In the view of Geyer (1989), this isolation meant that regional competitiveness, the allocation of resources, and the development of South African industrial policy continues the neglect to areas outside the CBDs. “By 1991, new RIDP was adopted, with the emphasis shifting from centralized development towards an approach where natural potential and market forces were high priorities” (Kleynhans et al., 2003:619).

The problem with this approach was a “lack of criteria for identifying growth points, their most suitable locations, and the optimal size and type of investment that was required” (Kleynhans et al., 2003:619). Furthermore, in the wake of these problems, the choice of growth nodes came into play. However, there were low concentrations of development within the nodes and linkages to other nodes were problematic. Within the metropolitan areas of Gauteng, “the Johannesburg SDF emphasizes the need to develop and integrate the poor areas that consist of largely informal settlements with few economic opportunities and inadequate infrastructure and social facilities” (Harrison et al., 2008:125). The Johannesburg SDF incorporates local plans and projects to resolve the imbalances caused by apartheid planning. The SDF has shown how development, particularly around stations and nodes, can be used for investment. Both the Gautrain system and the 2010 World Cup stadium have had an important impact on developmental growth and rethinking the concentration of urban development along corridors linking the nodes (Harrison et al., 2008:126).

### **3.5.1 Application of Development Corridors in KwaZulu-Natal**

In KwaZulu-Natal (KZN), the development corridor concept has played a role in incorporating many townships that were devastated by apartheid planning policies. In a bid to integrate these areas, various municipal policy documents like IDPs and SDFs incorporate

and stipulate reconstruction procedures through the use of the development corridor concept, as informed by the NSDP (Harrison et al., 2008, KwaZulu-Natal Provincial Government, 2008). Research shows that the corridor concept has been attempted in KZN since the 1980s, and more recently from 1994 with the dawn of democracy and the election of a Black majority government (KwaZulu-Natal Provincial Government, 2008:28).

In Msunduzi Municipality, the incorporation of the development corridor concept is still in its infancy. Not many corridors exist in Msunduzi, unlike in eThekweni Municipality, where this concept has been applied in different forms, for example, the Bellair development corridor in Cato Manor. Apart from the ENC, other corridors within the municipal area are still in the policy framework stage (Msunduzi Municipality, 2009-2010; Msunduzi Municipality, 2009). The literature review aimed to provide an understanding of the application of this concept within KZN. It shows that Msunduzi is at an advantage, with the ENC undergoing retrofitting. In other municipal areas within KZN, the corridor concept is still being debated. The Newcastle Municipality Spatial Development Framework identified two development corridors with the primary aim of establishing urban cohesion. However, neither of these corridors has been implemented (Newcastle Municipality, 2008:37). This could be linked to the fact that development corridors in Africa have thus far been limited to policy, rather than practice. Within KZN, eThekweni municipality has been a leading player in using this concept. In the late 1980s, this concept “first entered the public planning realm through Uytendogaart’s *et al.* (1989) plan for Southern Pinetown, and the Tongaat-Hullett planning Forum (1990) proposal for urban spatial restructuring” (Todes et al., 2000:233).

In 1989, Uytendogaart and Dewar proposed development corridor projects in the then Pinetown Municipality, currently part of the larger eThekweni Municipality. The plan presented ‘Activity Street’, as it was called, through the low-income existing route of Mariannhill near Pinetown, as an approach to promote the economic development of the area (KwaZulu-Natal Provincial Government, 2008; Uytendogaart and Dewar, 1992a). In developing this plan, it was considered that the majority of people in the Greater Mariannhill area would benefit from this project, with employment being created along the corridor in close proximity to residential areas. The benefits surrounding high density compaction and integration along development corridors influenced this plan. The plan was seen as a welcome development by the Mariannhill community, due to the fact that a low-income group was set to benefit from it. However, local planners opposed the implementation of the

plan, stating that increased densities were not possible due to the nature of the topography and the physical constraints of Mariannhill (KwaZulu-Natal Provincial Government, 2008).

During the early 1990s, the components of compacting development along corridors started gaining acceptance, with Dewar and Uytendogaart presenting the approach as the solution to increase the threshold of townships, which can enable investment in the affected areas to alleviate poverty. Several studies (Miralles-Guasch and Domene, 2010; Owen et al., 2012; Plaut, 2004; Todes et al., 2000), have illustrated that the cost of subsidising transport to peripheral areas by government is very high. High-density mixed use development would help reduce this cost. It has been found that increased “transport subsidies to peripheral areas will nurture both underdeveloped areas and employment centralization within the Durban core and the Southern Industrial Basin. This can also be applied elsewhere”. (Todes et al., 2000:233).

By the mid-1990s, infrastructural provision had begun shifting from the CBDs towards the townships and informal areas. Corridors and nodes had been proposed as a strategy to integrate these areas with the major cities. While there has been evidence of improvement, the perceptions of people living in the townships and informal areas do not support this conclusion (Donaldson and Kotze, 2006; Todes et al., 2000). Although services have shifted to the townships and informal areas, the services provided are substandard and cannot be compared with those found in the previously White areas (Donaldson and Kotze, 2006).

The mid-1990s saw a hugely innovative approach to spatially reconstruct Cato Manor, a historically renowned area affected by apartheid policy. “By the early 1990s the redevelopment of Cato Manor had emerged as a priority on the agendas of various organisations and initiatives in Durban” (Robinson and Forster, 2004:56). By 1993, the Cato Manor Development Association (CMDA) had been established to drive the implementation of projects in the area (Robinson and Forster, 2004). The CMDA’s priority was to use the development corridor concept and an efficient public transport strategy “to create an efficient and productive ‘city within a city’, targeting mainly the poor and marginalized residents of greater Durban” (Robinson, 2003:1). The plan proposed two corridors and nodes to redress apartheid legacies in this area; the compaction of mixed use development on the nodes and along the corridors was seen as a solution to the distance from activity areas. Among these corridors, the Bellair Road corridor plays a significant role in the reconstruction of this area,

although it is believed that the corridor is yet to fulfil the key objectives for which it was proposed (Dewar and Kaplan, 2004).

“Post-1994, the new government struggled to find the best policy to drive national reconstruction. By 1996, the first political opportunity was given for the concept of the spatial restructuring of the country” (Todes et al., 2000:236). A Spatial Framework Committee (SFC) was established, which comprises councillors, officials from the metropolitan council, local councils, representatives from the provincial government, and business groups. The committee was tasked with developing a SDF which will guide development (Todes et al., 2000). The report of the SDF was presented in 1997. It stated that spatial restructuring should seek to boost compaction along corridors and nodes, aimed at achieving sustainable, equitable and efficient development (Todes et al., 2000).

In eThekweni, the response to reconstruction has included proposals for creating activity spines within townships. “More importantly, attention is given to development corridors linking townships and the city. This is evident in the Inanda Development Forum of 1995” (Harrison et al., 2008:49). On the other hand, “the strategy responds directly to the poor spatial organisation of townships, and provides a way of testing which locations work better and could be suited to more permanent developments” (Harrison et al., 2008:53). In the township areas of Inanda and Umlazi, the proposed activity spines have shown signs of stimulating market growth and they are believed to control crime (Harrison et al., 2008).

Currently, “eThekweni is focusing on a development corridor to boost the economic base of the Cato Ridge area. The Outer West Corridor (OWC) in Cato Ridge accommodates roads and a rail linkage between Durban and Gauteng. Cato Ridge/Harrison Flats and Shongweni are seen as investment opportunity areas, while Hammarsdale is proposed as an industrial node” (eThekweni Municipality, 2010:28). As the OWC study puts it, “provision of improved and more direct linkage between the N3 and the industrial precinct is of major significance for the future development of the area” (eThekweni Municipality, 2010:28). With the proposed expansion of the Durban sea port and a proposed site for a second Durban regional airport in Cato Ridge, this is seen as the ideal location for new development; it will also facilitate development in Edendale due to its proximity to Cato Ridge through the N3 (eThekweni Municipality, 2010).

An important initiative aimed at restructuring past distortions of land use in KZN focuses on stimulating local economic development within the townships. This is seen in the development of large retail centres that are accessible to the township areas along the development corridors (Harrison et al., 1997; Harrison et al., 2008). Harrison et al. (1997) presented evidence as to how employment and economic imbalances inherited from the apartheid regime are being addressed through the provision of employment opportunities along the development corridor. Harrison et al. (2008) confirmed that there has been changes in the spatial form in townships in the post-1994. The development of these townships has followed the concept of corridors which has made possible the growth of consumer markets within these townships. The evidence shows that “despite the poverty rate in these townships, consumer incomes in Durban’s Inanda-KwaMashu-Ntuzuma (INK) areas are of the order of R3 billion” (Harrison et al., 2008:153). This suggests that businesses can grow very well within the townships, provided that infrastructure is put in place.

The KwaZulu-Natal Economic Council (KZNEC) is a non-profit organization which is tasked by the provincial government to assist with the development and formulation of policies on how to advance economic growth in a sustainable manner (Nel and Hill, 2001). In addition to finding a lasting solution to the economic conditions of neglected townships, “the KZNEC supports the sub-regional and locality-specific development of clusters” (Nel and Hill, 2001:358). Thus, the strategy of the KZNEC supports both a wide range of regeneration projects within the central cities of the province, and the development of new growth centres.

“In 1996, local authorities were given legislative powers to prepare IDPs, which will inform the spatial development of each municipal area” (Harrison and Todes, 2001:69). In KZN, this was followed by the introduction of regional IDPs, which were produced in the same year, following the restructuring of local government in the country (Harrison and Todes, 2001). “The emphasis was on a neo-liberal agenda and promoting spatial growth, focusing economic development on areas of growth and ensuring efficient movement between cities and townships” (Harrison and Todes, 2001:70).

### **3.6 Problems and Implementation of Development Corridors in South Africa**

The KZN provincial research document on development corridors, “Towards appropriate planning within KZN” (2008), shows that this concept to integrate townships and cities is yet

to be proven as a tool for the urban reconstruction of the apartheid distorted landscape (KwaZulu-Natal Provincial Government, 2008). This may require innovative approaches. Researchers in the field of spatial planning, who focus on development corridors and the integration of South African townships and urban areas (including Dewar, Todeschini, Uytendogaart, Todes, Robinson and Harrison) have found that there seems to be a gap in the implementation of this concept in South Africa. They suggest that, while the concept is well-represented in studies and policy documents, what is lacking is clear implementation on the ground. Dewar and Todeschini (2004) confirmed that the major issues facing development corridor implementation in South Africa are the thresholds of some areas that are proposed to house the developments. In effect, these thresholds are the 'livewire' of business growth in any area. In South Africa, some municipalities find it difficult to attract funding and investment for corridor projects, due to the fact that the threshold of the area cannot feed the market. This has hampered development growth and the integration process aimed at resolving the distortions caused by apartheid policies.

Khan and Maharaj's (1998) study illustrates how the concept of activity corridors, otherwise known as development corridors, was applied in the reconstruction of the Cato Manor area. They state clearly that the use of the corridor concept in this area does not guarantee automatic economic development as stipulated in most policy documents. Seneque and Brown (1994:3) "questioned the efficiency of this concept in rebuilding a new South Africa, after development had been hampered in some areas". They argued that, for this concept to work, an analysis of its applicability and failures should first be undertaken. However, Seneque and Brown (ibid) accepted that the benefits embedded in development corridors could be a reason for their adoption in South Africa. "In Cato Manor, there is evidence that the activity nodes lie outside the most needy areas" (Khan and Maharaj, 1998:208).

In spite of the advantages of development corridors and nodes, Khan and Maharaj (1998) caution that, "given the apartheid experience where towns and suburbs were planned to benefit big business interests at the expense of small-scale business enterprises, potential sources of benefit and opportunities should be offered to the poorest of the poor" (1998:208). Attending to problems facing the poor in townships will help to alleviate poverty in the informal settlements in and around existing economic activity areas (Khan and Maharaj, 1998). Another problem raised by Khan and Maharaj (1998) is the issue of densification, given the fact that the population in Cato Manor is a youthful one and that the area has a high

birth rate. They foresee a situation where the population will outgrow the cluster facilities planned for the area, in particular, schools, leading to the dilapidation of infrastructure.

Harrison et al. (2008:154) “examined cases in South Africa where corridors and nodes have been planned or implemented without prior consideration of the long-term prospects of economic development”. In particular they note that there have been many instances where plans for development corridors to restructure a particular area possess little potential for economic growth, even in the long-term. Yet the concept is still adopted in developing such areas, even though the planning institution or municipality finds it difficult to lure investors to the area, leading to the rejection of the project. An alternative approach would be to incorporate LED with the development corridor to improve living standards along the corridor. Harrison et al. (2008:154) note that “this concept of a corridor has been applied in Cato Manor, even though they acknowledged that progress in reconstruction and the use of the corridor and node concepts has been slow in this area”. They confirm that there was wasteful allocation of land that had been earmarked for vast investment in business development within a short term period. The envisaged investment failed to materialize, leaving a shortage of land for other activities.

While most South African municipalities are adopting the development corridor concept for the reconstruction and integration of their areas, there are concerns over the delays in processing land-development applications. “These delays stymie accelerated economic growth through infrastructure delivery” (Harrison et al., 2008:156). In KwaZulu-Natal, “...the 1949 Town Planning Ordinance remains, but largely covers historically White, Coloured and Indian areas, with significant areas falling under the control of traditional authorities, or under systems of land-use management historically designed for ‘Black’ areas...” (Harrison et al., 2008:163). This makes implementation of development corridors difficult as land is not readily available. In many cases, communities are involved at an early stage in negotiations to buy land. However, this has not always worked and even when it does, problems arise which discourage investors.

The processing of land and development applications is not the only problem facing the implementation of development corridors. As noted by Adebayo and Musvoto (2010), many projects planned with the intention of transforming apartheid cities, like “creating a vibrant urban space of integrating people, place and accommodating old and new architectural

character, fail to integrate all population groups due to the fact that the concept is shaped by the infrastructure and desires of the rich affluent people and excludes the poor population” (2010:1130).

In South African higher education institutions where planning is taught, development corridors and the integration of distorted land use have been the focus of many dissertations since the new democratic dispensation. Kleynhans’s (2001:170)<sup>1</sup>, dissertation is a notable example; it explored the rationale behind the use of development corridors to restructure and unlock the economic potential of the western parts of greater Pretoria, the Mabopane-Centurion Development Corridor (MCDC). The findings of this study showed that since the inception of the MCDC, a number of developments had taken place. However, this project has not fully met the job creation targets detailed in the economic development framework.

Heeralall-Bhoora’s (2009)<sup>2</sup> dissertation examined the role of Isipingo as an inter-modal transport node in relation to the reconstruction of Isipingo within Metropolitan Durban. The researcher affirmed that the movement system in the area is not fully integrated. She further observed the non-existence of transportation infrastructure and land use linkages that would promote close proximity and achieve the desirable livelihoods envisaged for new South African cities. Central to the aforementioned is the need for “decentralized patterns of accessibility in order to encourage decentralized patterns of opportunities and activities” (Heeralall-Bhoora, 2009:93). Again, the author was of the view that land use and transport coordination would generate urban opportunities within the residential areas of the poorer communities.

Martens (2001)<sup>3</sup> studied the Durban Municipal Area and the application of the activity corridor concept as a restructuring paradigm to address apartheid ills. One of the key findings emerging from the literature review of this study is that developing low-income higher density housing is a barrier to the development of corridors. Furthermore, his study

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<sup>1</sup> Kleynhans, H. A. (2001). The Mabopane-Centurion development corridor: A historical analysis of successes and constraints and proposals for improvement.

<sup>2</sup> Heeralall-Bhoora, R. (2009). The role and potential of Isipingo as an inter-modal transport node within the Durban metropolitan area.

<sup>3</sup> Martens, A. (2001). An enquiry into the use of activity corridors as a spatial strategy to restructure South African cities: A review and evaluation of activity corridor theory and practice, with reference to the Durban Municipal Area.

confirms high land costs along the corridor. This threatens the achievement of mixed use development and investment along the corridor that will stand to benefit poor communities.

### **3.7 Conclusion**

This chapter reviewed the literature on development corridors as a concept for urban reconstruction. It demonstrated that there is a link between development corridors and economic development. The successful application of the corridor concept in the urban reconstruction and sustainability of EU member states' cities was noted. It also revealed that this concept has become the norm in South Africa. However, the low-density nature of the townships threatens the successful development of corridors. It was also noted that a gap exists between the policy framework for implementing corridors, and implementation on the ground. For this reason, it is very important for planners to understand the idea of development corridors and have good insight into local communities targeted by such initiatives.

## CHAPTER FOUR

### 4.0 RESEARCH METHODOLOGY AND THE EDENDALE-NORTHDALÉ CORRIDOR CASE STUDY AREA

#### 4.1 Research Methodology

Stoker and Marsh (2002:11) describe research as a procedure that “offers ordered knowledge based on systematic inquiry”; a systematic approach would yield answers to the problem under investigation. With the above explanation in mind, this study set out to understand the effectiveness of Edendale-Northdale Corridor (ENC) in addressing the problem of economic development and how it can help in the reconstruction of affected areas. This study adopted a qualitative approach in order to gain an in-depth understanding of the retrofitting of this corridor. A qualitative method is appropriate as the intention of the study is to understand how the corridor can foster economic growth. Instruments for this study were informed by the literature review undertaken for the study. Related studies (Brundige et al., 2011; Heeralall-Bhoora, 2009) of Isipingo as an inter-modal transport node, regional development corridor, and spatial development initiatives played a key role in informing the development of the interview questions.

##### 4.1.1 Primary Data Collection

The primary data for this study were gathered by the researcher during field work. This information was collected between December 2011 and March 2012, using a multifaceted approach: key informant interviews, group discussions, and field observations. The key informant interviews were conducted face to face to elicit in-depth information and allow for follow-up questions. At the time of the data collection, some of the officers from the Transport Department who were knowledgeable and part of the project from its inception had left the Municipality and had moved to distant offices that the researcher could not reach. Efforts were made to get them to respond to interview questions *via* email, but these were unsuccessful. Furthermore, the busy schedule of the Manager of Provincial Spatial Planning for Cooperative Government and Traditional Affairs (Cogta), did not allow her to grant me a one-on-one discussion; rather, she chose to respond *via* email at the end of her working day.

### **4.1.2 Interviews with Key Informants**

Interviews were conducted with Msunduzi Municipality officers, the Greater Edendale Development Initiative (GEDI), and Provincial Cooperative Government and Traditional Affairs (Cogta) Spatial Development Initiatives officers. These officers have knowledge of past and present urban development trends with regards to the use of the corridor concept in the reconstruction of the city. Other key informants were interviewed to establish the effectiveness of the Edendale-Northdale corridor and how it can assist the reconstruction of areas affected by apartheid planning; these included consultants with knowledge of the planning of this corridor and stakeholders from the Pietermaritzburg Chamber of Business. These interviews were conducted using semi-structured questionnaire and were tape recorded with the consent of the interviewees. Prior to the interviews, the question guide was sent to each of the key informants; once they had agreed to be interviewed, a suitable date and time was set for each interview.

#### **4.1.2.1 Sample:**

The target set was interviews with 12 key informants and six group discussions with beneficiaries in the three principle nodes along the ENC, including inhabitants and businesses. The target for the key informants were seven Msunduzi Municipality officers, two consultants that worked on the corridor study project, one from the Msunduzi Innovation Development Institute, one from the provincial Department of Economic Development and Tourism, and one from the Pietermaritzburg Chamber of Business. However, the researcher was also unable to achieve the target of six group discussions due to difficulties in bringing the business group together. Instead, face-to-face interviews were conducted with one company in each of the nodes.

### **4.1.3 Group Discussions**

Bryman (2008:473) states that group interviews can take two forms: a focus group discussion and a group interview or discussion. In a focus group discussion, a specific theme or topic is explored in depth, whereas group interviews often span a wide range of subjects. A group discussion is a means of gathering a large body of general information about an issue. This approach saves time and money, as the researcher is able to gain easy access to the views of many community members (Borrini-Feyerabend, 1997, Bryman, 2008). Morgan (1998), Smith and Bowers-Brown (2010:120) suggest that, “for the purposes of group discussions, groups should comprise between six and 10 members”. They note that “individuals

sometimes agree to participate, but fail to show up for the discussion”. In another view, Smithson (2008:358) recommends groups of six to 12 members. The researcher opted for group discussions or interviews rather than focus group discussions. More than 20 community members and businesses along the corridor were invited to participate in a group interview in separate sessions. The number of participants was dependent on the level of community mobilization by the Ward Council chairpersons after a series of meeting with the Community Development Service Department of Msunduzi Municipality.

The Municipal Ward map was used to identify Wards that fell within each of the principal nodes (Edendale node, Northdale node and Pietermaritzburg CBD node). However, given the vast nature of the corridor and the time frame of the study, the most suitable ward within the node was chosen with the aid of GIS software. With the help of the community service department, the chairpersons of these wards were invited to a meeting at the Municipality’s offices. After the meeting with the Ward Chairpersons, information on the date and time of the group discussion was communicated through the Community Development Service Manager, who then confirmed the arrangements with the researcher by email. The discussions were conducted in community halls and municipal board rooms.

The researcher and his research assistant guided the discussions by first explaining the purpose of the meeting and assuring the participants that the information they provided would be useful to the community in addressing economic development, employment opportunities and poverty. The research assistant led the discussion in areas where the majority of the inhabitants speak isiZulu. The research assistant speaks isiZulu fluently and was chosen due to his knowledge of the study area, and the related field of study in geography and environmental planning. The research assistant was well briefed prior to the interview; the discussion was recorded and transcribed by research assistant.

#### **4.1.4 Field Observation**

Additional information was collected through field observation to augment the data from interviews and group discussions. The purpose of the field observation was to understand, by means of a visual assessment, if the existing and proposed attributes of corridor development and infrastructure that can guide the area to economic development exist. Neuman (1991:344) notes that field observation is necessary in research that seeks to understand how

a group's past experiences affect them. During the field observation, the researcher used a structured checklist informed by the literature to identify existing land uses and the possibilities of facilitating economic development along the corridor (see Appendix 7).

While in the field, new and ongoing developments along the corridor were noted, which prompted the researcher to engage in brief discussions with community members in order to understand their perceptions of these developments and how they think the corridor development could help their communities. Since the researcher is a non-Zulu speaking person, discussions were mainly held with community members that understand English. Although efforts were made to incorporate isiZulu-speaking people, when people heard a conversation being conducted in English, they did not stop to participate. Observation conducted using a questionnaire could have enabled the research assistant to engage in discussions with community members. However, the field observation was designed as a personal assessment with a specific goal in mind which could only be achieved by the researcher interacting with community members and taking photographs.

#### **4.1.5 Secondary Data Sources**

Secondary data were sourced through books, journal articles, corridor project plans, the proposed ENC study retrofit, municipal and national policy documents, relevant unpublished thesis and shape files for making maps and aiding the analysis from the Municipality's GIS department. Journal articles provided information on trends in global current development corridor practices.

#### **4.2 Data Analysis**

The primary data collected in the form of interviews were transcribed, in the case of key informants by the researcher and in the case of group discussions by the research assistant. The data were then coded and arranged in themes. The data were presented in the form of discussions with pictorial images from the field observation. GIS software was used to produce maps and trace the trends in the changes that have occurred since the identification of the corridor.

#### **4.2.1 Material and methods of GIS application in the study area**

The materials that were used for this GIS application was acquired from the Msunduzi Municipality's GIS department and include aerial photography for 2004, 2006 and 2009. The 2009 aerial photography was the most recent available and was updated to 2012 with the information gathered from the field observations. According to the municipality, in 2010 the city was able to produce aerial photography only for the city centre and Northdale; no aerial photos have been taken since then. The reasons for this were not disclosed to the researcher. In selecting the study period, it was important to take into consideration the fact that ENC was identified in 2002; this influenced the choice of 2004, 2006 and 2009 to understand what has taken place since then.

The aerial photography from the municipality was used to detect changes in land use along this corridor since its identification. According to Rimal (2011:6) rapid urbanization increases new opportunities in developing areas, but has also led to the loss of land that was designated for different proposes. A number of studies (such as Dai et al., 2001; Li and Yeh, 2004; Punithavathi et al., 2012; Rimal, 2011) have used this technique to detect changes that occurred within their study area. Many used aerial photographs over a two to three year period with the aid of GIS application, while some applied remote sensing; similar results were recorded in all cases. For the ENC the major interest lay in understanding if development is occurring along the corridor that will create the kind of jobs that will change people's living standards. For this reason it was considered reasonable to overlook the calculation of total sq. km and modeling for future study.

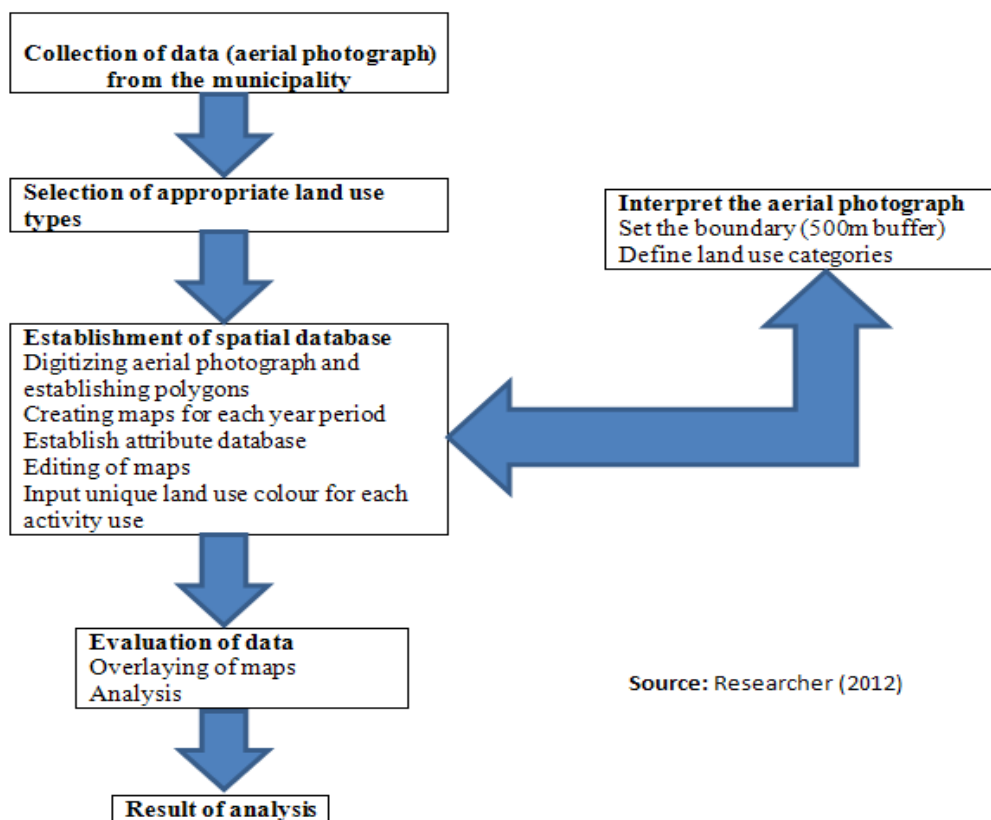
As noted earlier, this study used 2004, 2006 and 2009 aerial photographs to create a 500 m buffer along the two lengths (width) of the corridor for each of the years. This was followed by digitizing using the PC ArcGIS 9 basics software which is ArcMap and ArcCatalog. The 500 m buffer that was created was then digitized to create a land use for the study area since the municipality only had a one year period for the city centre and the Northdale section. Due to the apartheid approach to planning, the Edendale area had no land use scheme. The aerial photograph was used to create a land use scheme for the study area as it previously existed and currently existing development along the ENC in each of the periods. The 2009 aerial photograph was updated and used to detect trends in the changes that have taken place. A unique value of land use colours were inputted for each of the activity parcels. These colour

values were based on the APA land classification standards and were inputted to give each of the land uses a unique colour which represents the use as digitized or observed in the field.

#### 4.2.2 Data Processing

The land use maps that were created after the digitizing were then presented in each of the periods and were overlaid. The overlay was carried out to understand the changes that took place. The 2004 and 2009/2012 land use map that was created was overlaid with the aid of join tools from ArcMap which then created a different layer and its attribute tables. This new layer showed the changes that took place by joining the attribute tables of both periods, although this was not the only change that took place. Other changes included expansion within a particular site; this proved to be difficult to distinguish from already existing development. For this reason, another map was produced which clearly showed all the land use that took place between 2004 and 2012.

**Figure 4.1** Flow-chart for GIS application tracing land use for ENC



Source: Researcher (2012)

Source: Researcher (2012).

### **4.3 Limitations and Problems Encountered**

The use of qualitative method generates in-depth information, but the drawback of qualitative research is that researchers rely heavily on the information acquired from the respondents. This is determined by the amount of information the interviewee is willing to disclose. “Another problem in qualitative research is that interviewees might not have a good understanding of the researcher’s meaning system” (Bryman, 2008:211). Nevertheless, the face-to-face semi-structured interview approach enabled the researcher to bridge these gaps. The major limitations of this study were the length of the corridor, language barriers, and time and financial constraints, which confined the study to the three principle nodes, with observation throughout the three sections of the corridor. The limitations are summarized below:

- The corridor length, which is about 17 km, was too long for the researcher to cover given the time allowed for a Master’s study; the transportation system does not allow for easy movement from one zone to the other. For this reason, the major focus was the main nodes of each section.
- The proposed number of interviews could not be achieved because some of the groups proved difficult to get hold of and the researcher had to readjust the numbers.
- The long period between making an appointment and then having interviewees not turn up prevented the gathering of other important information for this study.
- The unavailability of local literature on corridor development within Msunduzi Municipality hindered an understanding of the implementation of this kind of project in the city. For this reason, majority of literature used for the case study area was based on the project documents.
- The study was funded solely by the researcher. Financial constraints prevented a thorough investigation throughout the entire corridor.

## **4.4 The Edendale-Northdale Corridor Case Study Area**

### **4.4.1 Introduction**

This study examines the extent to which the ENC can foster economic development and growth along its length to redress apartheid legacies. This section of the chapter discusses the Edendale-Northdale corridor project in detail. The bulk of the discussion focuses on the regeneration of the affected suburbs and the central area, and the existing and proposed

development approach of the Municipality. The discussion reflects on the project strategies and what is envisaged.

#### **4.5 The role of the Edendale-Northdale Corridor in the Reconstruction of the City**

Reconstruction within Msunduzi Municipality focuses on improving and extending urban infrastructure to those areas that were affected by the apartheid planning. This approach also aims to regenerate infrastructure along the CBD corridor section (Msunduzi Municipality, 2006a). In terms of local government restructuring in South Africa, townships are being integrated into the economic hubs of cities. In Msunduzi, township restructuring is driven by the ENC and other approaches like Area Based Management (ABM), linking apartheid designed townships such as Edendale and other areas to Pietermaritzburg's CBD (Iyer Rothaug Collaborative, 2005). "Msunduzi Spatial Development Framework clearly sets out integration procedures to redress apartheid imbalances within the city" (Msunduzi Municipality, 2009:71). This aims to improve infrastructure and create new economic opportunities along this corridor especially in the GEA (Iyer Rothaug Collaborative, 2007).

"ABM aims to incorporate areas which were previously disadvantaged during apartheid. The new municipality inherited huge infrastructural backlogs which informed the need for transformation" (Msunduzi Municipality, 2009-2010:21). The Greater Edendale-Imbali area was identified as a potential opportunity area with an abundance of labour and availability of land. "The aim has been to transform the Greater Edendale-Imbali Area from a set of distorted suburbs into sustainable human settlement area, as one of the spatial components of Msunduzi" (Isibuko SE-Africa, 2009:1). The Greater Edendale Development Initiative (GEDI) was established as an urban reconstruction initiative by Msunduzi Municipality to drive reconstruction within the Greater Edendale-Imbali ABM (Isibuko SE-Africa, 2009). Another objective of the GEDI was overseeing land acquisition as most land within the area is community and state-owned (Iyer Rothaug Collaborative, 2007). The drive to restructure the city was partly due to the influx of people into Pietermaritzburg and the problem of informal settlements at the fringes of economic activity due to severe housing backlogs (Msunduzi Municipality, 2009).

The Spatial Development Framework Review draft situation analysis study for the Greater Edendale-Imbali area shows that this influx necessitated transformation through the use of the

corridor concept to create opportunities and housing (Iyer Rothaug Collaborative, 2007). It was further stated that given the small nature of the Pietermaritzburg landscape and the proximity of Greater Edendale-Imbali, Northdale and Eastwood there is a need for transformation of these areas from dormitory suburbs into vibrant, urban mixed-use areas (Isibuko SE-Africa, 2009:9).

According to (Coetzee, 2005:48) “Pietermaritzburg and the uMgungundlovu District have achieved remarkable growth in economic activity during 2003 and 2004 and the first two quarters of 2004...” This demonstrates business confidence and that further growth in economic activity can be expected. “Msunduzi Municipality contributes about 9 % of the provincial Gross Geographical Product (GGP)” (Coetzee and Millin, 2006:5). This makes the city a major player in revenue generation within the uMgungundlovu District and the province. However, it spurs population growth and migration to the city, as well as attracting investment. This presents the Municipality with opportunities for reconstruction to accommodate new growth and balance economic activities. The GEDI proposed a development corridor with several mixed use investment zones along the corridor linking the Pietermaritzburg central area (Isibuko SE-Africa, 2009), while the 2002 Msunduzi Integrated Development Plan (IDP) stated the need for a corridor to drive the reconstruction agenda of the Municipality (Msunduzi Municipality, 2002).

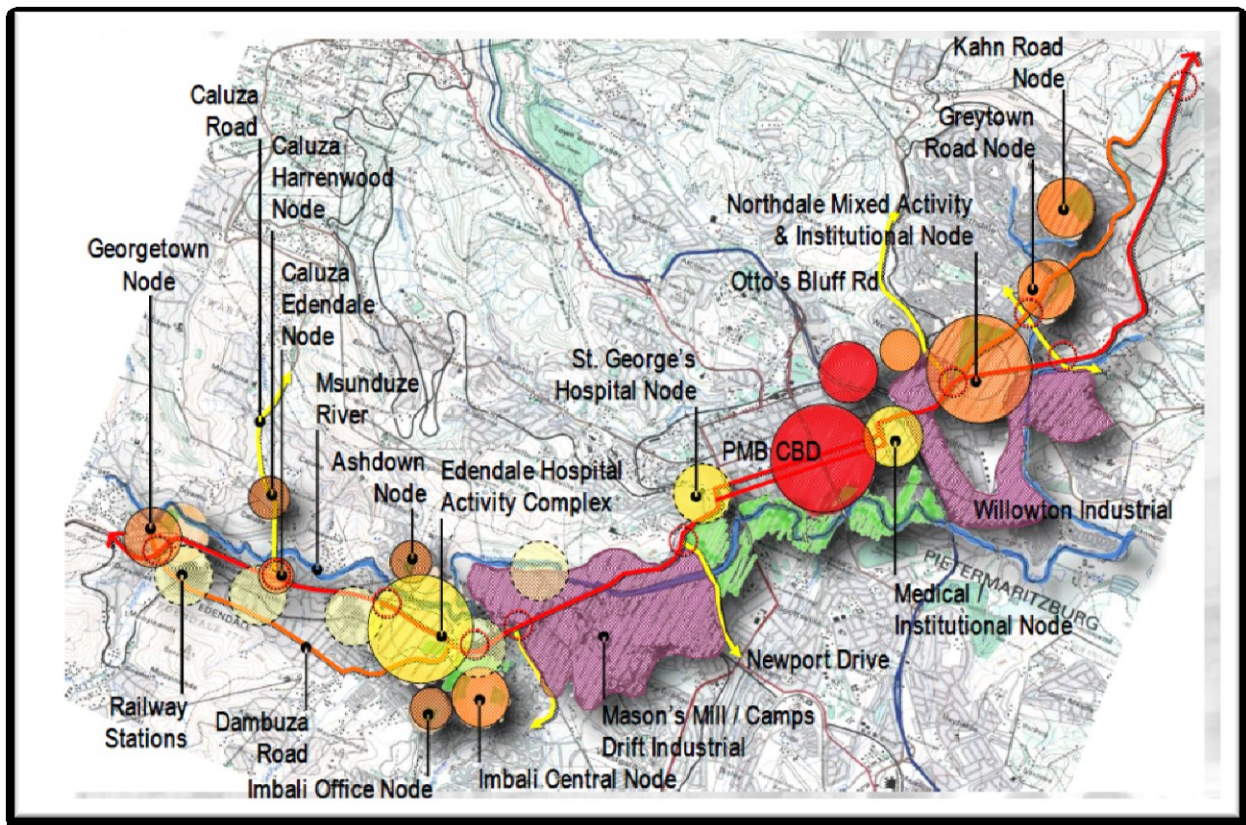
Between 2005 and 2009 several studies were carried out on the ENC. The Greater Edendale Area (GEA) of this section of the corridor is given priority due to the high level of poverty within the area (Iyer Rothaug Collaborative, 2005). “A hierarchy of development nodes has been identified along this corridor to effect equitable distribution of social and economic services” (Iyer Rothaug Collaborative, 2005:7). The ENC stands to play an important role in bridging the gap in economic growth and addressing the long distances people have to travel to access social and economic activities within Msunduzi Municipality. The Iyer Rothaug Collaborative (2005:6) concludes that “several hierarchies of activity nodes exist along the ENC that require improvement”. The importance of this corridor is that it “links a diverse range of areas and associated hinterlands within the Msunduzi Municipality, encompassing rural agricultural, semi-rural traditional settlements, semi-urban or suburban townships and other suburban residential to urban and industrial areas”. The corridor will “ensure access to activities and equity to a greater number of people” (Iyer Rothaug Collaborative, 2005:7).

#### **4.6 Edendale-Northdale Corridor (ENC) Development Initiative**

The Edendale-Northdale development corridor is an initiative of Msunduzi Municipality which was identified by the SDF as the city's primary east-west development corridor from Georgetown in the west through Edendale, stretching across the CBD into Northdale (Iyer Rothaug Collaborative, 2005:27). According to the study by the Iyer Rothaug Collaborative (2005:22) the identification of this corridor was supported by the well-developed residential, industrial and commercial areas located along it. The city's primary objective is to enhance and develop the corridor through an efficient public transport system which is accessible to activity nodes and various communities. Msunduzi Municipality aims to develop an efficient public transportation system and promote appropriate land use development along the ENC which will enable the city to achieve coherent development and address apartheid legacies (Iyer Rothaug Collaborative, 2005:22).

A contextual study of the ENC established an overall spatial perspective of the corridor which includes existing urban development along the corridor. A review was undertaken of ENC socio-economic activities, current policies and the development principles guiding the development of the corridor, which informed the design of the components of the corridor project (Iyer Rothaug Collaborative, 2005:4). Existing policies and socio-economic activities were assessed in the three different sections of the corridor: the Edendale section, the Pietermaritzburg section and the Northdale section (Iyer Rothaug Collaborative, 2005:4). Each of these sections of the corridor will be discussed in detail in terms of the nodes identified in Figure 3.2 below.

**Figure 4.2** Proposed Edendale-Northdale Corridor and Node



**Source:** Iyer Rothaug Collaborative (2005:28).

#### 4.6.1 Edendale Section of the ENC Initiative

The Edendale section of this corridor is structured around the M70 which is the Edendale Road stretching from Georgetown and incorporating Camps Drift (Msunduzi Municipality 2006:61; IRC 2005:4). “This section runs parallel to the northern side and integrates railway lines with four stations” (Iyer Rothaug Collaborative, 2005:4). According to the Iyer Rothaug Collaborative (2005:5) most of the residential development along this section developed south of the road due to the undulating nature of the landscape. However, the contextual analysis of existing facilities along the corridor shows that major part of this corridor section is “dominated by the Edendale Hospital Activity Center and its associated sporting and community facilities”. On the other hand, within the Edendale section of the corridor, three primary nodes have been identified which are spaced along the corridor with the secondary and tertiary nodes (Msunduzi Municipality, 2006a:63).

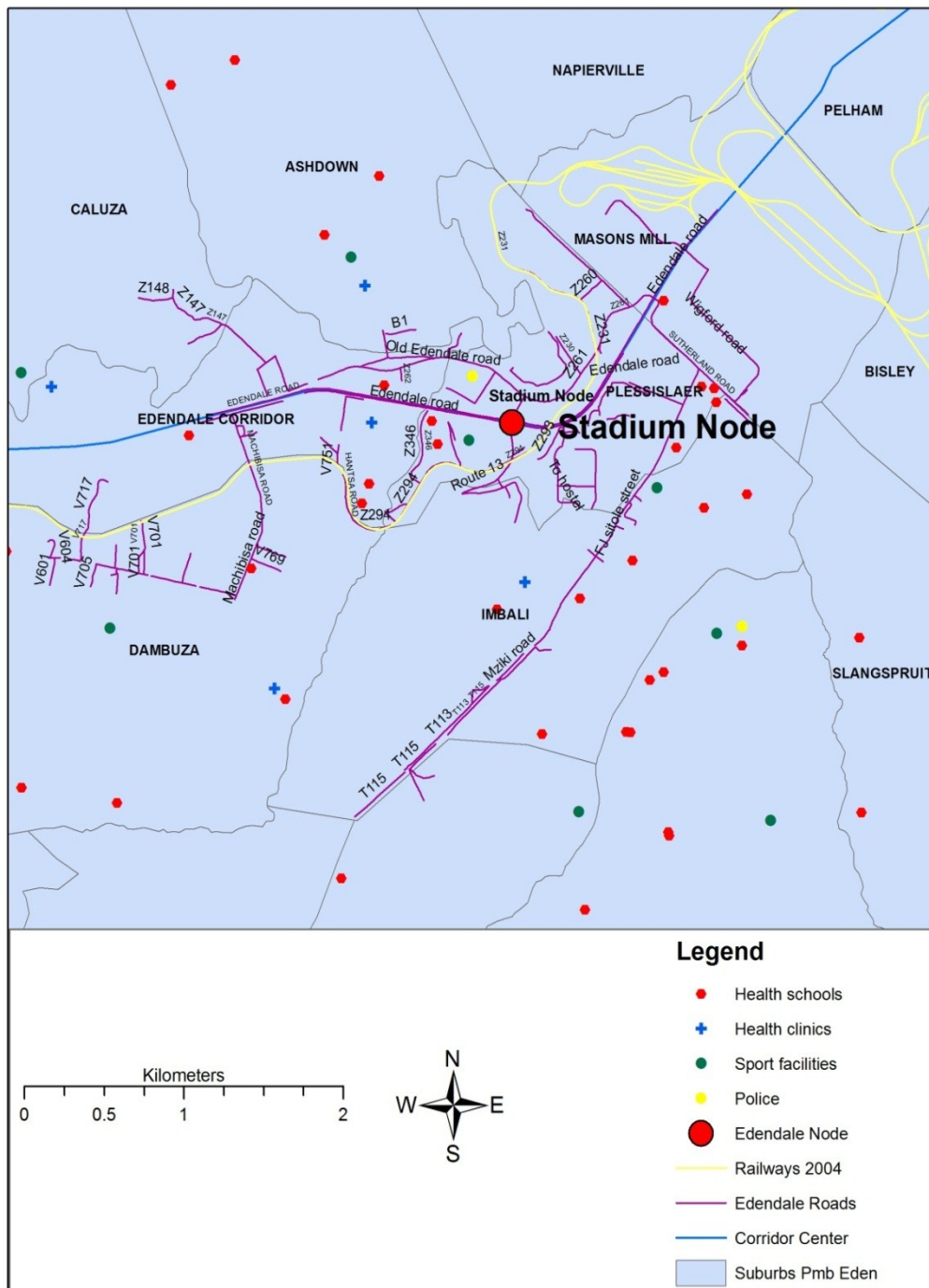
The Msunduzi Municipality (2009:60) states that the application of nodes and the corridor concept in the municipality is driven by the need to create a polycentric city which will decentralize economic centers across the Municipality to redress apartheid imbalances. Several studies on the GEA indicate that the spatial landscape of the city is driven by a polycentric city modal with priority given to nodes within the Edendale section of this corridor. The (Isibuko SE-Africa, 2009) argues that the priority given to the GEA is due to the fact that this area was previously disadvantaged and isolated from the economic hub of the central area. A township regeneration strategy has been formulated which will be applied to the whole Edendale-Imbali ABM (Isibuko SE-Africa, 2009:2). Several nodes with mixed-use activities have been identified along this section of the corridor. The Ekhrosini node has been identified as a proposed livestock market and centre for retail development which will function as part of the Edendale corridor section to boost economic growth and job creation (Isibuko SE-Africa, 2009:2). This includes secondary nodes, like Georgetown, where Edendale originated (Isibuko SE-Africa, 2009:5).

According to the study undertaken on the ENC by the Iyer Rothaug Collaborative (2005), the existing Georgetown Town Centre node will be revitalized as a primary node. Thus, this node will function as mixed-use and multi-use development with several retail, institutional, service and light industry, and residential uses. Within this node a transport hub (park and ride) is to be considered at the northern edge of the town centre; this will reduce the number of private cars travelling into the Pietermaritzburg CBD (Msunduzi Municipality, 2006a:63).

The Qokololo stadium node will function as the priority primary node; this will be the largest within the Edendale section and has the potential to attract investment and grow the economy of the GEA (Msunduzi Municipality, 2006a:63). It is envisaged that a retail facility will function as a catalyst to drive development within this node. Thus, the development of this node is seen as the driver of reconstruction and redressing apartheid legacies. The stadium will be relocated to a new site in the educational area. As the major node within this section, a transport transfer facility is to be developed with institutional uses. Densification will be encouraged within this node which will draw investment to the area (Msunduzi Municipality, 2006a, Iyer Rothaug Collaborative, 2007). Due to the nature of the development and the intersection in this node, safe and secure bicycle-stacking needs to be considered for the area, as well as a pedestrian-friendly environment (Msunduzi Municipality, 2006a:63).

The Msunduzi Municipality (2006a:68) notes that “Camps Drift, which is a part of the Edendale section of the corridor, will function as a primary node with existing mixed and multi-use offices, retail and higher density residential developments. However, another study on ENC has it that Camps Drift and Mason’s Mill is an industrial area which is well serviced by rail infrastructure” (Iyer Rothaug Collaborative, 2005:5). According to Msunduzi Municipality (2006a) the Edendale-Northdale Public Transport corridor report shows that additional vehicle and pedestrian links to the adjacent existing residential developments are needed.

**Figure 4.3** Map of Edendale showing the stadium node



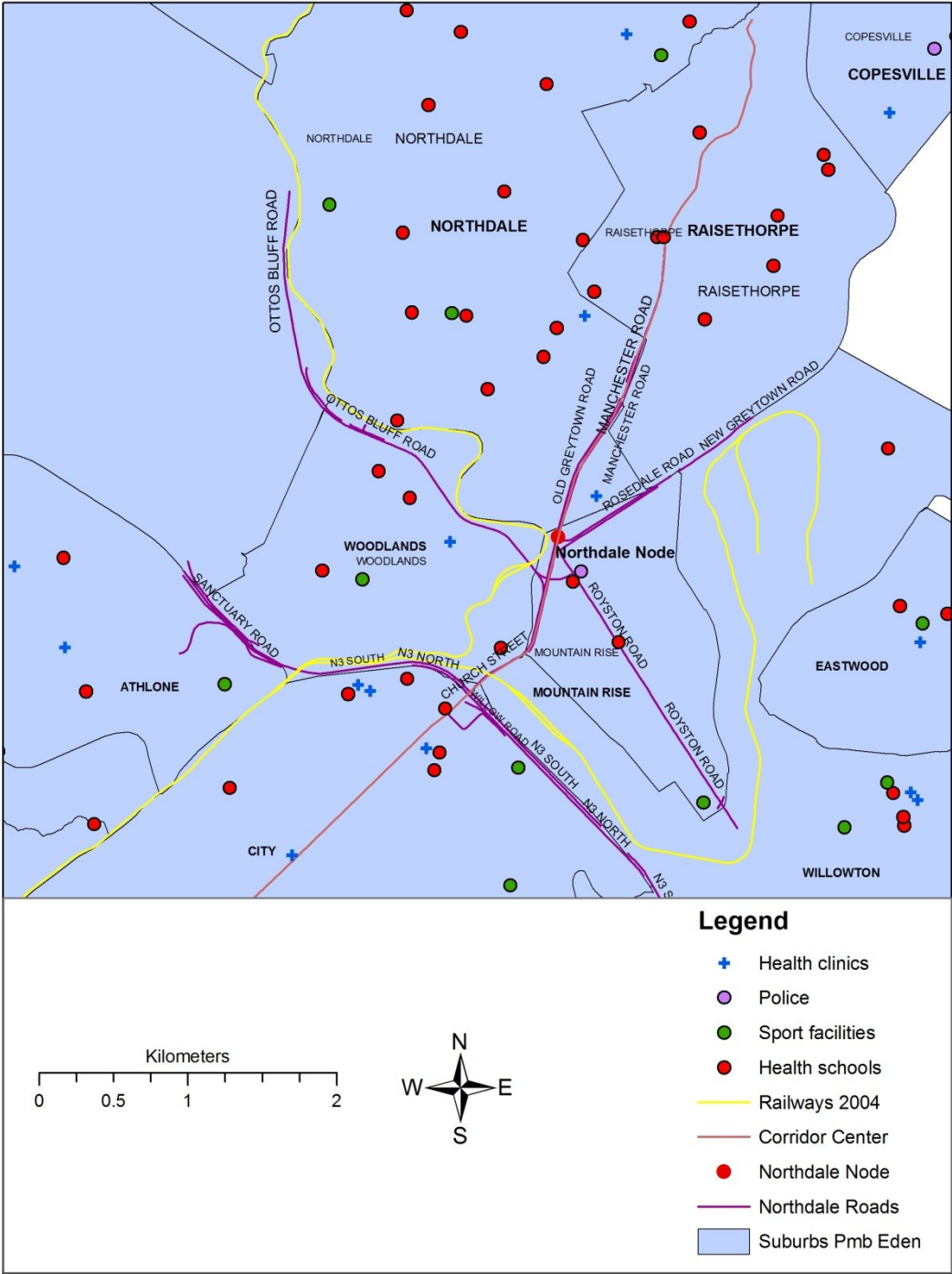
**Source:** Researcher 2012.

#### **4.6.2 Northdale Section of the ENC Initiative**

The Northdale section of the ENC is structured along the Old Greytown Road, the M10, and the New Greytown Road, which forms the R33 (Iyer Rothaug Collaborative, 2005:6). The corridor runs through to the Willowton industrial complex and into the Northdale Hospital node where it splits into the above mentioned Old Greytown Road and New Greytown Road (Iyer Rothaug Collaborative, 2005:6). According to the ENC public transport study undertaken by Msunduzi Municipality (2006a:74), within this section of the corridor, there is only one primary node at the intersection of the Old Greytown Road and New Greytown Road. This node has various mixed-use activities, with the hospital as its major landmark (Msunduzi Municipality, 2006a:74). Other tertiary nodes are also linked to the Old Greytown Road. Nevertheless, it should be noted that the Northdale section has been more integrated into the Pietermaritzburg CBD since the end of apartheid than the Edendale section. This is confirmed by the Msunduzi Municipality report on the ENC public transport corridor study, when it states that within this section, “there are limited opportunities for residential, commercial and industrial improvement, intensification, or extensions along the Greytown Road corridor” (Msunduzi Municipality, 2006a:74). “Major spatial interventions in this section will take the form of urban design-oriented improvements, relating to the aesthetics of the environment and pedestrian safety” (Msunduzi Municipality, 2006a:74).

According to the urban design and development principle for the Northdale primary node, the development of this node is focused on the restructuring of the intersection between the Old Greytown and New Greytown Roads (Iyer Rothaug Collaborative, 2005:76). The reconstruction of this node envisions developing this area with its link to the N3 provincial corridor and would allow more traffic flow to the area (Iyer Rothaug Collaborative, 2005). “The nodes within this section of the corridor already exist, but require enhancement to function effectively” (Msunduzi Municipality, 2006a:77).

**Figure 4.4** Map of Northdale showing the Northdale Node



**Source:** Researcher 2012.

#### **4.6.3 Pietermaritzburg CBD Section of the ENC Initiative**

As stated by the Iyer Rothaug Collaborative (2005:5) “Pietermaritzburg’s CBD forms the major node along this corridor”. However, the Pietermaritzburg CBD reflects a true picture of a South African city under apartheid. The CBD and its associated suburbs are dominated by the White minority, and socio-economic activities are concentrated in this area. Church Street forms the major access route of the corridor and needs improvement, especially considering the decline of the area and the need to develop pedestrian-oriented facilities (Msunduzi Municipality, 2006a:72).

According to the study on ENC public transport, Church Street will function as two sets of one-way pairs on either side of the street. This will enable the diversion of traffic into each of these one-way pairs. The reconstruction of the CBD will incorporate a programme for redesigning Church Street as a semi-pedestrianized street that only allows public transportation and pedestrian access, with pedestrian right of way, comfort and safe movement (Msunduzi Municipality, 2006a:74). The report further argues that this approach to movement along the corridor within the CBD will enable efficient movement within the gridiron concept of the central area (Msunduzi Municipality, 2006a:74).

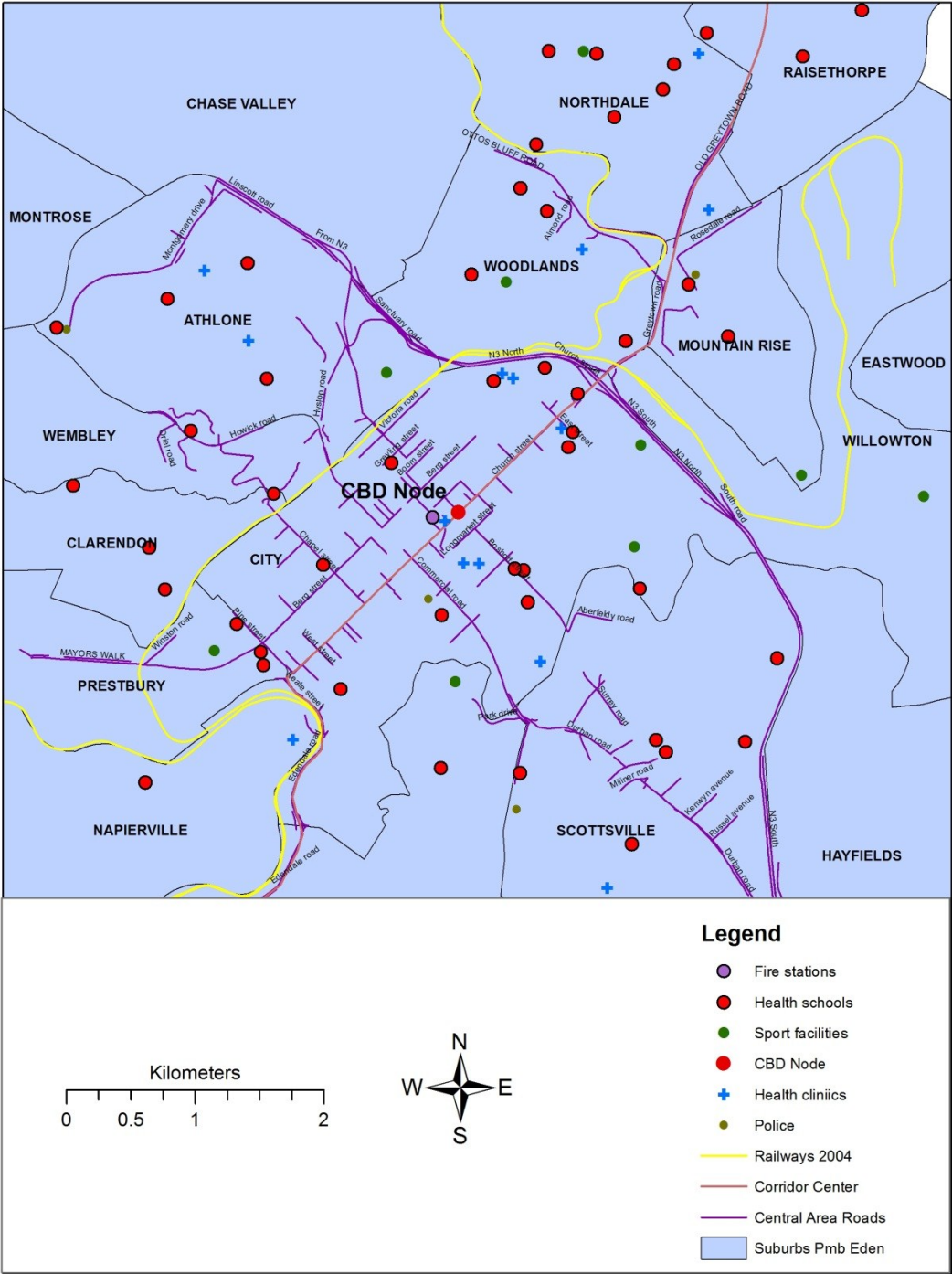
As discussed in chapter two, in Curitiba, the development corridor concept enabled the revitalization of the CBD, as this approach was used to direct development out of the CBD along the corridor. This allowed room for reconstruction which integrated open-air pedestrian access in the CBD. The ENC encompasses a CBD that suffers from similar problems to those of the Curitiba CBD. The design to retrofit this section of the corridor integrates an active plan, as in Curitiba, to revive the city. As part of this plan, the city aims to implement the following:

- The reconstruction of the station node to incorporate pedestrian-oriented facilities and possibly formalized informal activity areas. This project will include an intermodal transport facility with associated trading areas.
- The station node will require residential improvements in the form of upgrading, densification, and potentially social housing. The area will comprise of multi-and mixed-use development, consolidating, building and developing on existing activities.

- The office and retail zone will require improvement and enhancement. The report further stated that most of these projects are linked to the partial pedestrianization of Church Street, improvements to the street furniture and pavement treatment.
- The development requires an improvement in the lanes as part of the core zone and distinguishes those areas that require attention. This involves the improvement and enhancement of existing commercial developments in the area.
- The institutional and civic zone is to be consolidated and improved, with clear, accessible pedestrian spaces and routes within it and with the adjacent zones. The southern edge of the civic zone will be encouraged to become an office consolidated zone which will be redeveloped to form an extension of the existing office area that comprises of mainly government-related offices that should be attracted adjacent to the existing Natalia area and civic zone.
- The secondary retail and residential zone adjacent to the retail main area and civic zone will be improved with clear pedestrian routes, public transport stops, and appropriate spaces and public areas for informal activities. This area will function as part of the semi-pedestrianization of Church Street.
- The waterfront zone is proposed for redevelopment and will accommodate mixed and multi-use offices, and residential and recreational zones (Msunduzi Municipality, 2006a:72).

If these plans reach fruition, they will play a key role in the economic growth of the city, if the achievements of the US cities of New Haven, Detroit, Denver, New Orleans and San Francisco are anything to go by. Infrastructure decay within the city will be reversed and the corridor will become an attractive environment for existing businesses and also a historic area as experienced in Curitiba.

**Figure 4.5** Map of central area showing the CBD node



**Source:** Researcher 2012.

## 4.7 Existing Socio-Economic Situation of the Corridor

### 4.7.1 Demographics

According to StatsSA, the 2001 Census revealed that Msunduzi Municipality has a total population of 553 229 residents. The recently released 2011 Census results show that Msunduzi Municipality's population increased by 5.3% to 618 536 since the 2001 Census (Statistics South Africa, 2012:6-20). Because the detailed 2011 Census results had not been released at the time of this study, the researcher made use of the 2001 results used in the ENC project document by Iyer Rothaug Collaborative (2005), which illustrated that about 18.4% of this population resides along the ENC (StatsSA 2001). This further confirms the need for and the importance of the ENC in the spatial reconstruction of the Municipality from the apartheid distortion of the landscape to a more integrated city.

Table 3.1 below provides an outline of the total population located in each of the above sections of the corridor.

**Table 4.1** Population along the Edendale-Northdale Corridor – 2001 Population

BROAD AREA	POPULATION	% OF PMB POPUALTION
CBD	87203	15.8%
Edendale	197483	35.7%
North of N3	166875	30.2%
Other	101668	18.4%
Total Msunduzi Population	553229	100.0%

**Source:** StatsSA Census 2001 cited in Iyer Rothaug Collaborative, 2005

With regard to the demographic profile of the Edendale section, the Imbali ABM within the GEA is where majority of the population resides. The bulk of this population falls within the Imbali ABM which includes Wards 13, 14, 15, 16, 17, 19, 22, & 23; “the highest numbers of population are in Wards: 13 & 15, with 17 878 and 17 950 individuals respectively” (Isibuko SE-Africa, 2009:23). The local economic study for the GEA shows that the area is predominantly inhabited by African people; however, in recent times, it has seen an increase in the number of Coloured, Indian and White people that now reside in the GEA (Coetzee

and Millin, 2006:6). In my view, this suggests that not all Whites, Indians and Coloureds are well-off, because the GEA or the Imbali ABM is a mostly medium-income area. However, growing economic development within this area and the cost of living and doing business in the Pietermaritzburg CBD and its suburbs may have stimulated this type of movement into these areas that were once rejected, especially by the White minority; this may be a good omen for the successful integration of the city.

#### **4.7.2 Socio-Economic Analysis**

As noted above, the three sections of the corridor are further subdivided into zones. The first zone classified by the corridor study is zone one, which is the Edendale area. Economically, this area has been neglected for quite some time. Along the corridor section of Edendale there are many abandoned buildings and some squatters (Iyer Rothaug Collaborative, 2005, Msunduzi Municipality, 2006a). As noted by the study on the GEA, 90% of businesses within the Edendale area, excluding manufacturing and industrial companies, trade on an informal basis and do not pay tax (Isibuko SE-Africa, 2009, Msunduzi Municipality, 2006a). “These businesses employ between one and five people; it is also noted that about 25% of other businesses employ between six and 10 people” (Isibuko SE-Africa, 2009:47). The Edendale Hospital employs more than 400 staff and serves as a training facility for graduates from the local FET colleges at Edendale and Plessislaer (Iyer Rothaug Collaborative, 2005:64). According to Coetzee and Millin (2006:5) along the corridor length running from the Edendale section through the Pietermaritzburg CBD to the Northdale section, are industries like footwear, wood products and furniture, aluminum and tourism. Along the section of the Edendale corridor, industrial development is found at the east end of zone 1 running into zone 2 (Mason’s Mill to Camps Drift); however, this is not sufficient to improve employment figures within the GEA as the number of unemployed surpasses existing job opportunities in the area (Iyer Rothaug Collaborative, 2005:13).

Zone three is structured around the Pietermaritzburg CBD. The CBD is the hub of economic and social activity within Msunduzi Municipality. It is second only to eThekweni Municipality in its contribution to the province’s GDP. The city has all the characteristics associated with the main core of a city; these range: “... from government buildings to taxi ranks, hotels, malls, banks, old residential areas, well established schools and good health care” (Iyer Rothaug Collaborative, 2005:13). The city is “easily accessed from the N3 in two

directions and is the nerve center for the entire area both commercially as well as socially” (Iyer Rothaug Collaborative, 2005:13).

Zone four is found at the northern end through the CBD (the Northdale section of the corridor) and can also be accessed *via* the N3. This zone is far ahead of zone one and is fairly developed compared to zone three. The study report on this corridor shows that poverty levels in this area are lower than in zone one and it has an industrial area within easy walking distance, but lacks government institutions and the levels of employment in the CBD (Msunduzi Municipality, 2006a:34). The study on the ENC by the Iyer Rothaug Collaborative (2005), states that the Northdale section of the corridor is much more integrated economically and socially. This is due to the mixed-use development evident along the corridor length of this zone and the fact that, socially, the population demonstrates a level of integration among various race groups. (Iyer Rothaug Collaborative, 2005). Furthermore, this study noted that “there is no informal trading or settlement and no abandoned structures that were evident from the main roadway” (Iyer Rothaug Collaborative, 2005:14).

In the Edendale section (zone one), food is expensive and people within this zone need to travel to the CBD (zone three) for cheaper groceries. It was established that the frequency of visits to the CBD for shopping has been reduced with the recent construction of the Greater Edendale Mall. However, the location of the mall has made it difficult for residents of some GEA areas to shop in the new mall; they still shop in the CBD. Within the Northdale zone, food is cheap and shops are within walking distance; taxi fares are relatively cheap compared to the high costs in the Edendale area (Iyer Rothaug Collaborative, 2005). According to the same study report, “Most of South African’s leading fast food brands have franchises in the central business district and majority of the businesses are run by residents and the employees of those same businesses come from that area as well” (Iyer Rothaug Collaborative, 2005:14).

#### **4.7.3 Economically Active Areas and Unemployment Rate**

Pietermaritzburg’s CBD is the economic hub of the Municipality and generates the majority of job opportunities within the Municipality. However, the Northdale area, with its links to the N3 and the CBD, has better opportunities compared to the Edendale area in terms of job creation. Available information at the time of this study shows that the total labour force

percentage of the area's population stood at 65.3% in 2001 and 68.3% in 1996 (Coetzee and Millin, 2006:10)<sup>4</sup>. However, this may have change with the release of the 2011 census results. This figure shows that roughly two-thirds of the total population in Edendale comprises the Economically Active Population (EAP) or total labour force (Coetzee and Millin, 2006:11).

According to Barker (2003) the 1996 and 2001 census results indicate that the unemployment rate in South Africa is increasing. It was also found that the unemployment rate in Msunduzi Municipality increased from 33.4% in 1996 to 40.5% in 2001 and that the GEA is the worst affected area. This is close to the 41% unemployment rate noted in the Imbali mixed-use investment *status quo* report (Isibuko SE-Africa, 2009). According to the recently released 2011 Census data the unemployment rate in Msunduzi Municipality declined from 48.25% to 32.99% (StatsSA 2011). However, the GEA still has the highest unemployment rate, at 48.5% (StatsSA)<sup>5</sup>.

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<sup>4</sup> At the time of this study, the area level 2011 Census data had not been made available to the public.

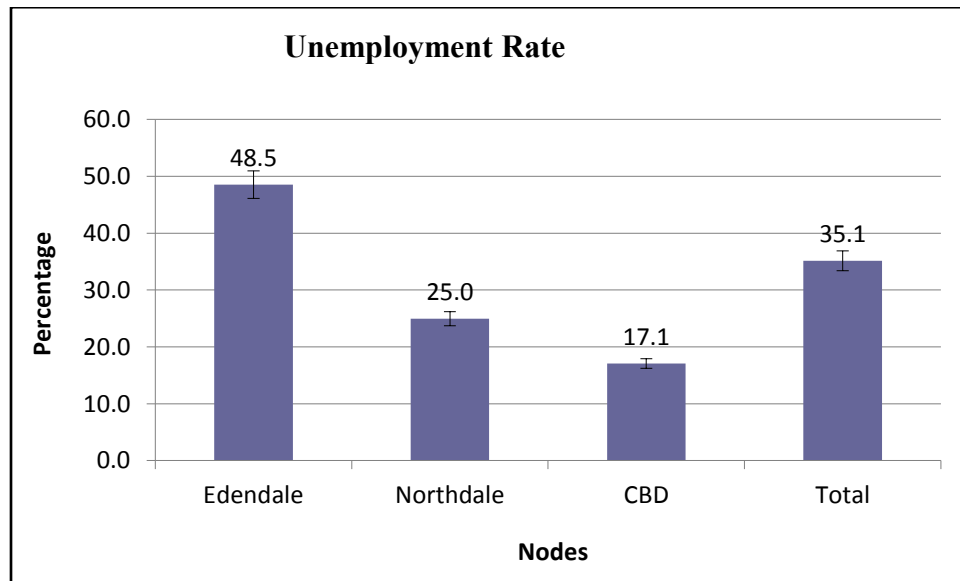
<sup>5</sup> This calculation made use of the broad data and did not include all the wards in the city because this data was not available to the researcher.

**Table 4.2** Unemployment by wards in the three areas of the node along the ENC

<b>Edendale</b>	<b>Employed</b>	<b>Unemployed</b>	<b>Discouraged work-seeker</b>	<b>total unemployment (broad)</b>	<b>Total (Labour force)</b>	<b>Unemployment rate (percentage)</b>	<b>Other not economically active</b>	<b>Total</b>
52205011	3223	3973	1429	5402	8625	62.63188406	4642	13267
52205010	2115	2471	1283	3754	5869	63.96319646	3474	9343
52205012	2543	1446	370	1816	4359	41.66093141	3564	7923
52205020	2369	2432	407	2839	5208	54.51228879	3862	9069
52205021	2029	1620	546	2166	4195	51.63289631	2545	6741
52205022	3413	1739	823	2562	5975	42.87866109	4196	10171
52205023	3253	2995	442	3437	6690	51.37518685	3307	9997
52205013	5304	3173	1000	4173	9477	44.03292181	5369	14846
52205014	2425	2188	912	3100	5525	56.10859729	4579	10104
52205015	4300	2437	773	3210	7510	42.74300932	5080	12590
52205016	3928	3639	1065	4704	8632	54.49490269	5851	14483
52205017	5540	3091	704	3795	9335	40.65345474	5184	14519
52205019	3078	3117	471	3588	6666	53.82538254	5104	11771
52205024	5894	1627	386	2013	7907	25.45845453	3717	11624
<b>Edendale</b>	<b>49414</b>	<b>35948</b>	<b>10611</b>	<b>46559</b>	<b>95973</b>	<b>48.5126025</b>		
<b>Northdale</b>	<b>Employed</b>	<b>Unemployed</b>	<b>Discouraged work-seeker</b>	<b>total unemployment (broad)</b>	<b>Total (Labour force)</b>	<b>Unemployment rate</b>	<b>Other not economically active</b>	<b>Total</b>
52205028	7268	1436	290	1726	8994	19.19057149	5842	14836
52205029	5604	2741	661	3402	9006	37.77481679	4639	13645
52205030	7276	1162	653	1815	9091	19.96480035	5231	14321
52205031	3116	886	468	1354	4470	30.29082774	4117	8587
52205034	6532	3057	556	3613	10145	35.61360276	4723	14869
52205035	5965	1619	517	2136	8101	26.36711517	3778	11879
52205036	8239	548	175	723	8962	8.067395671	5294	14255
52205037	5644	1256	486	1742	7386	23.58516112	3598	10983
<b>Northdale</b>	<b>49644</b>	<b>12705</b>	<b>3806</b>	<b>16511</b>	<b>66155</b>	<b>24.95805306</b>	<b>37222</b>	<b>103375</b>
<b>CBD</b>	<b>Employed</b>	<b>Unemployed</b>	<b>Discouraged work-seeker</b>	<b>total unemployment (broad)</b>	<b>Total (Labour force)</b>	<b>Unemployment rate</b>	<b>Other not economically active</b>	<b>Total</b>
52205025	6983	414	52	466	7449	6.255873272	3307	10756
52205026	7087	771	129	900	7987	11.26831101	5129	13116
52205027	5319	1016	116	1132	6451	17.54766703	3687	10138
52205032	4678	1516	674	2190	6868	31.88701223	4404	11272
52205033	4025	945	144	1089	5114	21.29448573	4473	9587
<b>CBD</b>	<b>28092</b>	<b>4662</b>	<b>1115</b>	<b>5777</b>	<b>33869</b>	<b>17.05689569</b>		
<b>3 places above</b>	<b>127150</b>	<b>53315</b>	<b>15532</b>	<b>68847</b>	<b>195997</b>	<b>35.12655806</b>		

Source: StatsSA (2012).

**Table 4.3** Unemployment distribution for areas of the three nodes



**Source:** StatsSA (2012).

#### **4.7.4 Income Distribution among the three Nodes**

The ENC study has shown that “more than 70% of Edendale households earn less than R1 600 per month” (Iyer Rothaug Collaborative, 2005:16). However, at the other end of the corridor in the northern areas (Northdale section) it was confirmed that 11.2% of the households close to the N3 earn R12 801 per month and above (Iyer Rothaug Collaborative, 2005). This provides direct evidence of the high unemployment rate in the Edendale section, and equally determines the high cost of basic food in the GEA. The report of the ENC study illustrates the suffering caused to inhabitants of the GEA by the expensive Kombi transportation system, which is used to travel to the Pietermaritzburg CBD to shop for daily or monthly groceries (Iyer Rothaug Collaborative, 2005).

#### **4.7.5 Education**

The Msunduzi Municipality is home to a number of higher education institutions, including the University of KwaZulu-Natal, (UKZN) Further Education and Training (FET) Colleges and a Durban University of Technology (DUT) campus. These institutions are located not far from the CBD section of the corridor. The CBD is also home to many well-established schools with a high level of education. In terms of education, the Northdale area seems to have an advantage

over Edendale (Iyer Rothaug Collaborative, 2005). Education infrastructure within the GEA has been neglected for some time. The ENC report argues that "...this problem can be clearly seen in the condition of Georgetown High School that produced significant leaders in the black liberation movement" (Iyer Rothaug Collaborative, 2005:13).

However, the colleges along Sutherland Road seem to be developing on their own (Iyer Rothaug Collaborative, 2005). According to Isibuko SE-Africa (2009), almost 39% of the GEA population has attained secondary school education and this may be an important consideration for future development within this area. The report also reveals that the change in persons with no schooling between 1996 and 2001, showed a remarkable decline of -11.7%; the latest Census figures, which were not available to the researcher, may reflect a different situation. Such improvements might well position the area in the right direction for poverty reduction and improvements in labour productivity (Coetzee and Millin, 2006:10).

#### **4.8 Infrastructure in the Edendale-Northdale Corridor**

The municipal IDP notes that "Msunduzi Municipality faced severe infrastructure backlogs after the end of apartheid. The IDP document notes that the Infrastructure Strategy and Investment Plan (ISIP), was adopted in 2007 to drive infrastructure delivery" (Msunduzi Municipality, 2009-2010:117).

##### **4.8.1 Transportation**

Msunduzi Municipality's public transport cordon counts showed that the major mode of public transport within the Municipality is the minibus-taxi with 87% of commuters using this form of transport and 13% using buses (Msunduzi Municipality, 2006a). Furthermore, the "majority of trips along the major arterial roads, especially leading to the CBD, were made during peak morning and afternoon periods, with less movement during the off-peak hours" (Msunduzi Municipality, 2006a:17). The count found that about 8 350 passengers make use of minibus-taxi services during morning peak hours and more than 10 000 during peak afternoon hours. It was further observed that many problems are associated with these taxis, including overloading and overcrowding of central roads (Msunduzi Municipality, 2006a). According to the report on urban

design, land use and social-economic analysis of the ENC, the “Edendale Road section of this corridor incorporates a railway line with four stations running parallel to the northern edge of Edendale Road (M70)” (Msunduzi Municipality, 2006a:43). In terms of the generic corridor concept, accessibility enables free flow of traffic along the corridor route. The Edendale Road corridor is the main arterial linking Edendale and the city centre, with several connecting routes and other modes of transport like rail. However, the 2005 ENC study report noted that “the Edendale section is the only section that incorporates a rail line running in linear form”, this is in line with the generic corridor concept which enables free movement along the corridor (Iyer Rothaug Collaborative, 2005:27). Although the CBD and Northdale sections incorporate a rail line, this falls outside of the corridor area.

#### **4.8.2 Roads**

The Edendale Road corridor is served by a four-lane, dual carriageway arterial with service roads on either side, and with wide emergency lanes. “The Edendale-Northdale Corridor public transport study report showed that, the service roads on the south side of this corridor run over 4.2 km, serving as a primary route for pedestrian walkways” (Msunduzi Municipality, 2006a:43). However, the ENC report states that the majority of the roads leading from residential areas into the Edendale Road corridor need improvement and many are still made of gravel (Iyer Rothaug Collaborative, 2005). Along the corridor passing through the Edendale Hospital, Imbali, the industrial areas and the CBD the road narrows with no emergency lanes provided (Msunduzi Municipality, 2006a). According to the Iyer Rothaug Collaborative (2005), the Edendale area of the corridor requires improvement and upgrade in the form of public transport stops, landscaping, hard surfacing, street furniture and lighting, pedestrian safety and crossings along the corridor. This will facilitate an improved pedestrian-friendly “...environment with regards to safety, comfort and convenience” (Iyer Rothaug Collaborative, 2005:66).

In the Northdale area, the New Greytown Road (R33) serves as a mobility route which is utilized by various transportation modes but does not hold potential for investment. The Old Greytown Road serves as a primary collector. According to the report on the corridor, “this section will not see major expansion due to the level of development along the corridor, but development will take the form of improvements to the road infrastructure” (Iyer Rothaug Collaborative, 2005:76).

The Msunduzi Municipality's Revised IDP notes that the further development of the Northdale section will have a major impact on the N3 provincial corridor. Thus, there will be a need for the interchange along the Northdale-N3 corridor to be improved (Msunduzi Municipality, 2009-2010). The corridor within the CBD runs through Church Street, linking the Northdale section through to the east and Edendale to the west. "The CBD section of this corridor will require improvement to accommodate pedestrians and safe pedestrian crossings. Public transport stops and public areas for informal activities along this section of the corridor will also be required" (Msunduzi Municipality, 2006a:72).

#### **4.8.2.1 The Development of the Edendale Pilot Cycle Track and Footpath**

"Msunduzi Municipality is promoting non-motorized transport as one way to achieve a sustainable transportation system. This includes walking and cycling. The GEA has high unemployment rates (SSI Engineers & Environmental Consultants, 2009:33); it stood at more than 40% in 2001, the highest in the Municipality (Msunduzi Municipality, 2006a, SSI Engineers & Environmental Consultants, 2009). "The study on the ENC revealed that the major system of movement along the Edendale Road corridor was walking" (SSI Engineers & Environmental Consultants, 2009:33). This is, of course, not by choice, but simply because taxi fares are so expensive (Msunduzi Municipality, 2006a). According to the study document, the major constraint to cycling along the Edendale corridor is the lack of continuous infrastructure between Edendale Hospital and the CBD. Other problems associated with cycling along this corridor include high traffic volumes and speeding (Msunduzi Municipality, 2006a, SSI Engineers & Environmental Consultants, 2009).

A pilot project in 2006 involving a cycling track and pedestrian footpath was developed along this section, separated from automobile traffic. "It was stated that financial constraints prevented the expansion of the project along the entire Edendale corridor" (Msunduzi Municipality, 2006a:38). "Prior to the pilot project, a survey conducted in November 2003 revealed that the number of people walking and cycling along the corridor between Edendale Hospital and the CBD stood at 558 pedestrians and 69 cyclists during the 14 hours that data were recorded. Scholars constituted 6% of pedestrians and 7% of cyclists scholars along the corridor" (Msunduzi Municipality, 2006a:38). Another survey was carried out two months after the

construction of the cycle track and footpath in 2003. The survey showed that the average volume of pedestrian and cycle traffic increased from 558 to 779 pedestrians and 69 to 211 cyclists. This also shows that many residents travel long distances to reach social and economic activities. A scholar who walks a long way to school is worn-out by the time they arrive; this affects their concentration at school.

### **4.8.3 Electricity**

Electricity and electricity infrastructure in Msunduzi pose problems of their own. “Eskom is licensed to supply the GEA and Vulindela areas with electricity, while Pietermaritzburg Electricity provides services to the CBD, Northdale and the rest of Msunduzi Municipality” (Msunduzi Municipality, 2009-2010:120). The IDP document notes major challenges relating to the provision of electricity services in informal settlements and low-income areas (Msunduzi Municipality, 2009-2010). The Spatial Development Framework Review Draft for Greater Edendale-Imbali ABM confirms that “majority of the formal settlements to the south of the city have Eskom lines” (Iyer Rothaug Collaborative, 2007:4). However, the IDP states that many of the informal settlements were developed on non-developable sites and in-fills that were not properly planned.

The IDP document further stated that, steps will be taken to investigate possible solutions to this problem. However, the electrification of such areas will encourage more development of this kind should the Municipality embark on it without proper planning. It was observed that these settlements were developed on private property in non-developable areas which exacerbates the problem, as they stand to be removed in the near future (Msunduzi Municipality, 2009-2010). As stated in the IDP, “the National Electricity Regulator (NER) has undertaken to supply electricity services to anyone who can afford to pay for them” (Msunduzi Municipality, 2009-2010:120). It is therefore necessary to establish whether the inhabitants of these informal areas can afford to pay for electricity services. In any society, electricity forms the backbone for economic growth. Without an efficient and affordable electricity supply, investors will not invest in an area. Electricity efficiency in Msunduzi Municipality is hampered by aging infrastructure and the high cost of replacing and maintaining it. Power outages are common. The IDP notes that, “there are a total of ten transformers that are more than 38 years old which need

replacement or refurbishment” (Msunduzi Municipality, 2009-2010:121). “It will cost R5m to replace each transformer. However, the Municipality has embarked on a 10-year plan to replace electricity infrastructure, including the replacement of the transformers” (Msunduzi Municipality, 2009-2010:121).

#### **4.8.4 Water**

The 1994 RDP was the first major policy document produced by the South African Government of Nation Unity towards addressing the country’s water needs. It recognizes the right of all South Africans to access clean water and adequate sanitation for the attainment of household water security (African National Congress, 1994). Access to water services in Msunduzi is provided through Umgeni Water from Midmar Dam; the city is responsible for reticulation to individual users. The report on the Edendale-Imbali situational analysis shows that the Municipality inherited different levels of water services and sanitation with the incorporation of the Greater Edendale and Vulindlela areas in 1996 and 2000 respectively (Iyer Rothaug Collaborative, 2007, Msunduzi Municipality, 2009-2010). According to Isibuko SE-Africa (2009:29) “the majority of people living in the GEA have access to water; 20% have water inside their yard, 12% have piped water in their homes; and 8% are served by community standpipes within 200m of their houses”.

The study carried out for the Msunduzi Municipality by Isibuko SE-Africa also observed that an abundance of water infrastructure exists in the GEA (Isibuko SE-Africa, 2009:53). Thus, there is potential to supply water to new developments. However, the consultants assisting Msunduzi Municipality confirmed that major areas like Inumiso, Plessislaer and Sukuma are fed from Sutherland Road *via* a single 150mm connection off the existing 560mm diameter steel main from Masons Industrial Break Pressure Tank (Isibuko SE-Africa, 2009).

#### **4.8.5 Sanitation and Sewage**

“There are currently huge sanitation backlogs in Msunduzi. The IDP (2009-2010) states that the majority of the houses in the GEA are served by conservancy tanks which require emptying on a regular basis” (Msunduzi Municipality, 2009-2010:129). According to Isibuko SE-Africa, “a

225mm diameter bulk sewerage line exists, running along the eastern side of F.J. Sithole road towards Sutherland Road” (Isibuko SE-Africa, 2009:52).

The IDP confirms that the “...Municipality has since embarked on a process of eliminating the conservancy tanks by connecting affected households within the GEA to the existing sewerage network” (Msunduzi Municipality, 2009-2010:129). “The Municipality built 3 300 VIP toilets and ensured that all existing and new industrial areas were fully reticulated” (Msunduzi Municipality, 2009-2010:129). A study for the ENC confirms “...that the existing 225mm diameter bulk sewer line and the pumping station (at Alexandra Park), which pumps all the sewage to the Darvill Wastewater Treatment Plant are at full capacity and are overdue for upgrade” (Isibuko SE-Africa, 2009:53). “The IDP confirms that this causes problems for houses near the area and poses a health risk whenever it overflows” (Msunduzi Municipality, 2009-2010:129). However, it was noted that efforts have been made to ensure that a new waste water treatment plant is built in order to ease the pressure on the pumping station. Furthermore, it was understood “that this was not achievable in the near future as the council has disposed of the land made available for the project” (Isibuko SE-Africa, 2009:53).

#### **4.9 Conclusion**

This chapter presented the method and approach used in this study to arrive at the findings. It also pointed to the limitations of the study and how the researcher was able to bridge the gaps that were encountered during the data collection. Finally, the chapter examined the literature on the Edendale-Northdale Corridor (ENC). Various ENC project documents were explored to assist in measuring the data gathered in the field. This chapter also looked at the socio-economic situation in each of the three sections of the ENC where the three nodes that were studied are located. As observed in the study document, between 1996 and 2001 the unemployment rate increased in the GEA. While the 2011 Census data show that there was a decline in the level of unemployment within the municipality, the GEA remains the area with the highest unemployment rate. It was also clear from the literature that the poor state of infrastructure threatens economic investment in the Edendale corridor area.

## CHAPTER FIVE

### 5.0 RESULTS AND DATA PRESENTATION, ANALYSIS AND DISCUSSION

#### 5.1 Introduction

This chapter presents the findings of the study and an analysis of the effectiveness of the Edendale-Northdale Corridor (ENC) in fostering economic development along the length of the corridor. Due to the time constraints noted in chapter three, this analysis focuses on the Edendale (Qokololo Stadium), and Northdale (Old Greytown and New Greytown) nodes. This included the corridor areas along these nodes. Because of the complexity of the central area (CBD) as a node, the researcher focused on the block that contains the Municipality's offices to represent the CBD node. The analysis focused on data gathered during the field work (interviews, observation and group discussions). This data is used to answer the question which this study posed: "How can the proposed Edendale-Northdale Corridor encourage economic development to the disadvantaged parts of the Msunduzi Municipality?" The respondents' responses (Table 4.1) have been coded for the purposes of confidentiality and display only the coded names. The OR that appears at the end of the informants statement signifies oral interview.

**Table 5.1:** Interview codes for informants

<b>INSTITUTIONS</b>	<b>CODED NAMES</b>
<b>Government officials</b>	<b>Code Names</b>
Department of Town Planning	KI 1
Department of Economic Development and Growth	KI 2
Greater Edendale Development Initiative (GEDI)	KI 3
Provincial Cooperative Government and Traditional Affairs (Spatial Development Initiative COGTA)	KI 4
<b>Other Stakeholders</b>	<b>Code Names</b>
Iyer Rothaug Collaborative	KI 5
Udidi	KI 6
Pietermaritzburg Chamber of Business	KI 7
<b>Business Group</b>	<b>Code Names</b>
Dick Shoes	KI 8
Timber City	KI 9
Russell furniture	KI 10
<b>Group Discussion</b>	<b>Code Names</b>
Edendale Mall	GDEM
Edendale Inhabitants	GDEI
Northdale Inhabitants	GDNI
CBD Inhabitants	GDCBDI
Edendale Informal Traders	GDEIT

**Source:** Researcher (2012).

The primary data, gathered through semi-structured interviews have been analyzed thematically into the following five themes: Towards an integration of Msunduzi Municipality, socio-economic improvement along the Edendale-Northdale Corridor; transportation and linkages to economic areas in Msunduzi; the Edendale-Northdale Corridor and employment opportunities; challenges in implementing the Edendale-Northdale Corridor; and application of GIS in the ENC. These themes have been identified as relevant in answering the research questions. The findings have been compared to, and used to engage with, the literature review. The themes that were identified arose from the broad objective of Msunduzi Municipality’s Spatial Development Framework (SDF) and were broken down following the collection of data from the field. The data are therefore analyzed using the polycentric city theory.

## **5.2 Towards an Integrated City in Msunduzi Municipality**

### **5.2.1 Msunduzi and the Concept of Integration in the post-apartheid Era**

The polycentric city model has prompted many South African cities to pursue the corridor and node concepts. This approach has been adopted to redress apartheid imbalances and promote economic and other opportunities in previously disadvantaged townships. As Priemus (1994) argues, the polycentric city theory advocates that smaller or medium-sized cities be linked in a linear pattern which opens up possibilities for regional economic growth. An example is the European Spatial Development Perspective (1999), which aimed to balance the EU's urban-rural spatial structure through polycentric development (Dabinett, 2006, Priemus and Zonneveld, 2003). The restructuring of the European spatial structure is a product of previously centralized population and employment centres within a particular node, as cities evolve rapidly in response to the need for expansion (Drewett, 1980). In Msunduzi Municipality, the city of Pietermaritzburg remains the centre of social and economic activities. The townships surrounding Pietermaritzburg depend heavily on the economic wealth of the central area.

According to a key informant in the Town Planning Department, “the ENC is an initiative of Msunduzi Municipality government to integrate and address development in areas that were previously disadvantaged by apartheid policies” (11 January 2012, KI...OR). Another official from the Department of Economic Development and Growth in the municipality pointed to the importance of integrating the various areas of the city. This interviewee had cited the Northdale node as the industrial hub of the municipality and the central area as the commercial and institutional node. According to this informant, the majority of job opportunities in the municipality are found in these two areas and inhabitants in the Edendale area corridor have difficulty in accessing such opportunities (29 December 2011, K2...OR). The most challenging problem noted by the various groups interviewed is transportation. It was stated that during peak hours, taxis load faster; after peak hours it takes time for some routes to load. In separate discussions with four taxi drivers during the field observation, the taxi drivers revealed that during morning peak hours, commuters are usually moving towards the areas of opportunities, while in the evening peak hours, they head back home. “It was noted in chapter three of this

study that a study carried out for the ENC project also found this to be the case” (Msunduzi Municipality, 2006a:17).

Apartheid policies and practices created a city with a structure and spatial form that resulted in constant travel by means of informal taxis. The taxis in Msunduzi are not cost effective and sustainable; they are also governed by their routes<sup>6</sup> and this creates problem for those who commute to the CBD on a daily basis. This has exacerbated poverty and inequality in the townships areas within the municipality and added to discrepancies between the social and economic sectors in the city. The Greater Edendale Development initiative (GEDI) is an arm of the Msunduzi Planning Office which is tasked with planning and the acquisition of land from the community in a quest to address the abovementioned challenges. An interview with a GEDI official revealed that the city is committed to addressing these problems. According to the official,

The Edendale area is a previously disadvantaged township ... For us to integrate these areas *via* a transportation link which is extremely important given that there are only few access points to Edendale and few main roads through Edendale was extremely important to us. So Northdale area is your previously disadvantaged well I would not say previously disadvantaged but your predominantly Indian areas and your CBD of course your business hub of the city and Edendale area is previously disadvantaged so suddenly you had a situation where we can link all these areas together via a transportation route and start developing economic opportunities at key catalytic points (12 January 2012, KI3...OR).

The ENC is one of the municipality’s initiatives to address inherited imbalances in the spatial form of the city. According to two other municipal officials, nodes have been identified along the Edendale corridor which will help to address both employment and infrastructural challenges in the Greater Edendale Area (GEA). According to KI3 (12 January 2012...OR) the municipality plans to cluster mixed-use activities on the stadium node; this will create various kinds of jobs

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<sup>6</sup> The taxis are not allowed to transport passengers from any area that is not assigned to them, which makes it difficult for some communities to commute on daily basis. This also stymies business growth in these areas; during the group discussion with the inhabitants in Edendale, they stated that they spend more on transit and transfer to their destinations.

closer to where people live. Another view was offered by a municipal official who pointed out that not everyone would have an opportunity of a job closer to where they live. For this reason, there will be still be a need for an efficient public and affordable transport system that will function as an integral part of this corridor (29 December 2011, KI2...OR).

The problems experienced in the Edendale area are not restricted to transportation; the apartheid system created many problems like poor housing settlements and a lack of industrial and economic opportunities. These areas have not been able to attract sufficient investment that can create employment in the area. This is compounded by the poor transport network linking the GEA and the nodes. The complexity of the problems and delays in finding solutions has led some to lose hope in the African National Congress (ANC)-led government. According to the information gathered from stakeholders and beneficiaries, many people are also sceptical about the implementation of the ENC. This is because of past maladministration which led to the provincial government taking over to address the city's leadership crisis in 2010. However the ENC has the potential to drive infrastructure development in the municipality, especially in the areas that were affected by apartheid. The field observation carried out by the researcher revealed that the state of infrastructure along the ENC is not encouraging, especially in the Edendale corridor area.

In the Northdale corridor area, the recent improvement of the Chota Motala Interchange has enabled improved infrastructure. However, discussions with inhabitants in the Northdale area node revealed that communities like Copesville and Bishopstowe will benefit the least, because they live on the outskirts of the corridor (21 March 2012, GDNI...OR). The same applies to the Edendale node. In the case study area, the project document stated that many inhabitants stay far from the corridor (Iyer Rothaug Collaborative, 2005). The 2001 Census calculated Msunduzi Municipality's population as 553 229, of which 18.4% resides along the ENC (StatsSA 2001). The field observation revealed that the majority of Edendale's population resides in the Imbali area further away from the corridor, going by the cluster of housing density surrounding the stadium node. Transportation will play an important role in making sure the stadium node functions efficiently; judging by the views of tenants in the Edendale Mall, this is not presently the case (10 January 2012, GDEM...OR).

While there is global agreement on the need for urban and regional integration, this has not always been carried into practice. Cities in different parts of the world, particularly in Europe, have adopted different approaches to integrate economic and non-economic areas; these include the corridor and node concept, transit-oriented settlement, spatial development initiatives, and mixed-use development (Dabinett, 2006). In 2002, Msunduzi Municipality adopted the corridor and node concept to integrate the municipality's fragmented landscape. However, interviews with most of the key informants at Msunduzi Municipality revealed that the importance of the ENC for the Municipality lies in integrating previously disadvantaged townships with the CBD through a transportation route, developing economic opportunities at key catalytic points. While the ENC is not yet developed (Iyer Rothaug Collaborative, 2005), it was observed that it presents the characteristics of a generic corridor development. The Municipality is currently reviewing its SDF at the time of this study and this includes implementation plans for advancing the ENC as stated by an official in the municipality (12 January 2012, KI3...OR).

To establish whether any development had occurred in the ENC since its identification in 2002 that could foster integration of these previously separated areas into the city, a set of three aerial photographs (2004, 2006 and 2009) covering an eight-year period were analysed through GIS for change detection (Figures. 4.1, 4.2 and 4.3). Many land use types were identified in the ENC during this period; they include residential, commercial, industrial, institutional and mixed use development.

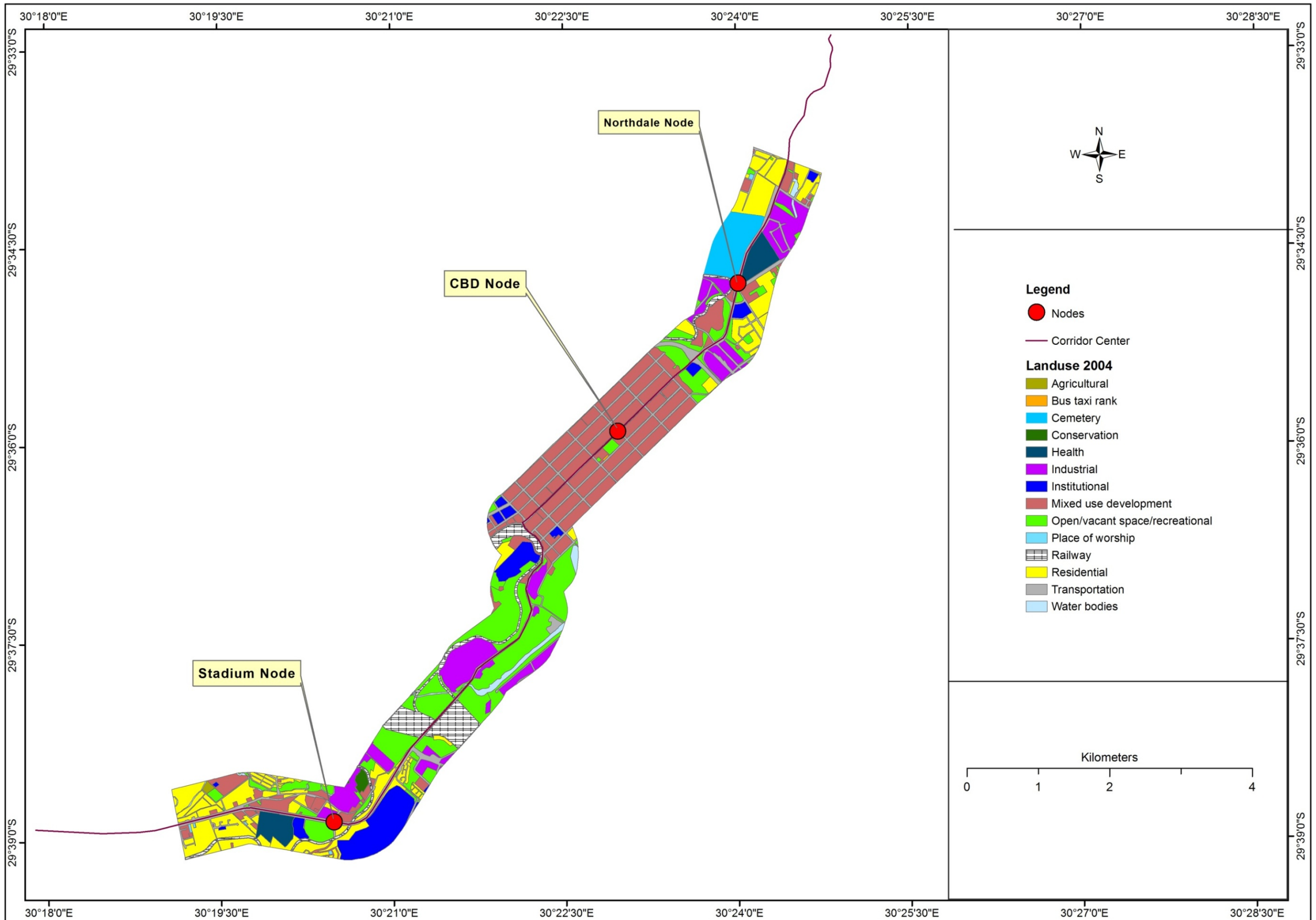
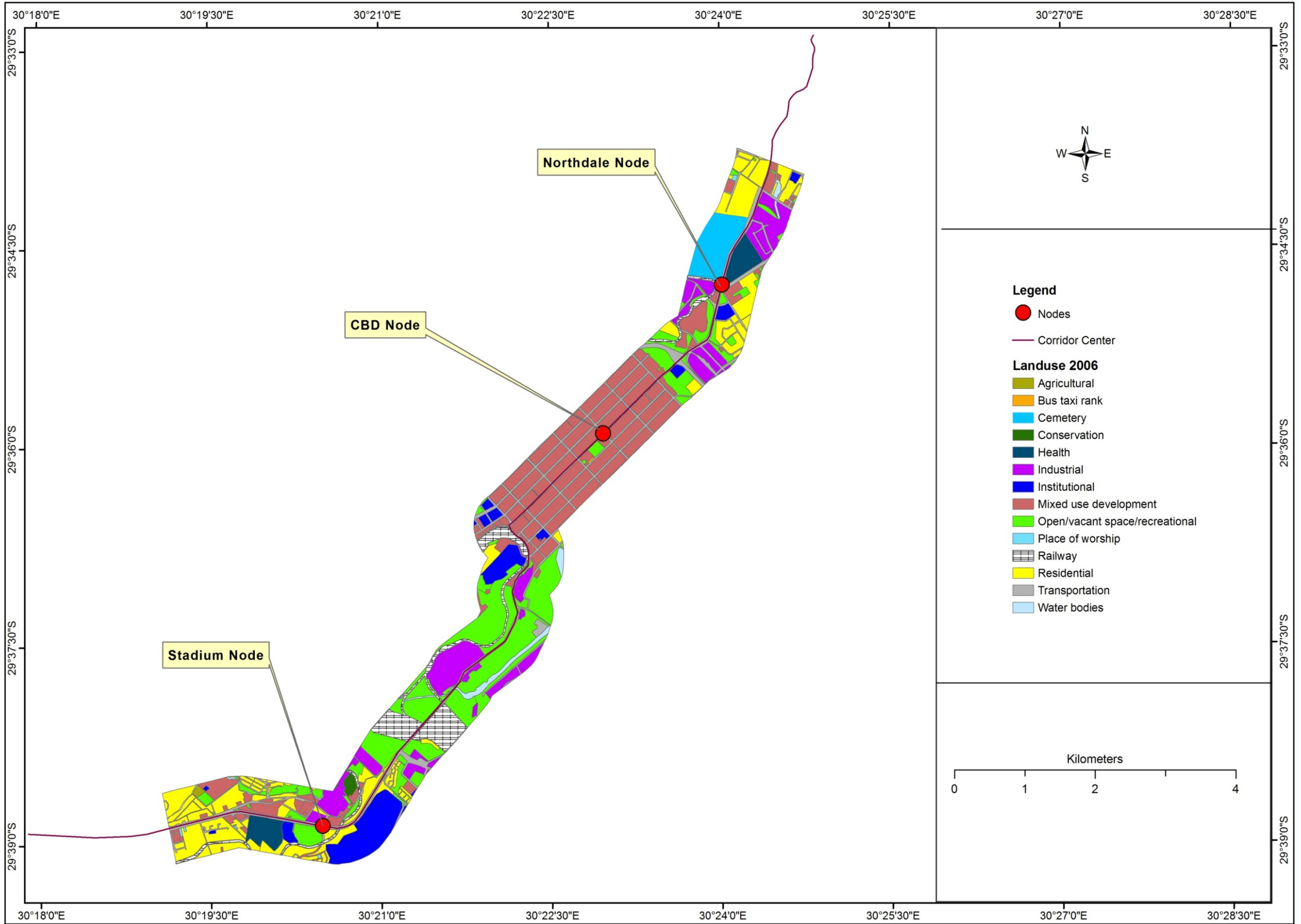


Figure 5.1 Land use map for Edendale-Northdale Corridor, 2004

Source: Researcher (2012)



Source: Researcher (2012)

Figure 5.2 Land use map for Edendale-Northdale Corridor, 2006

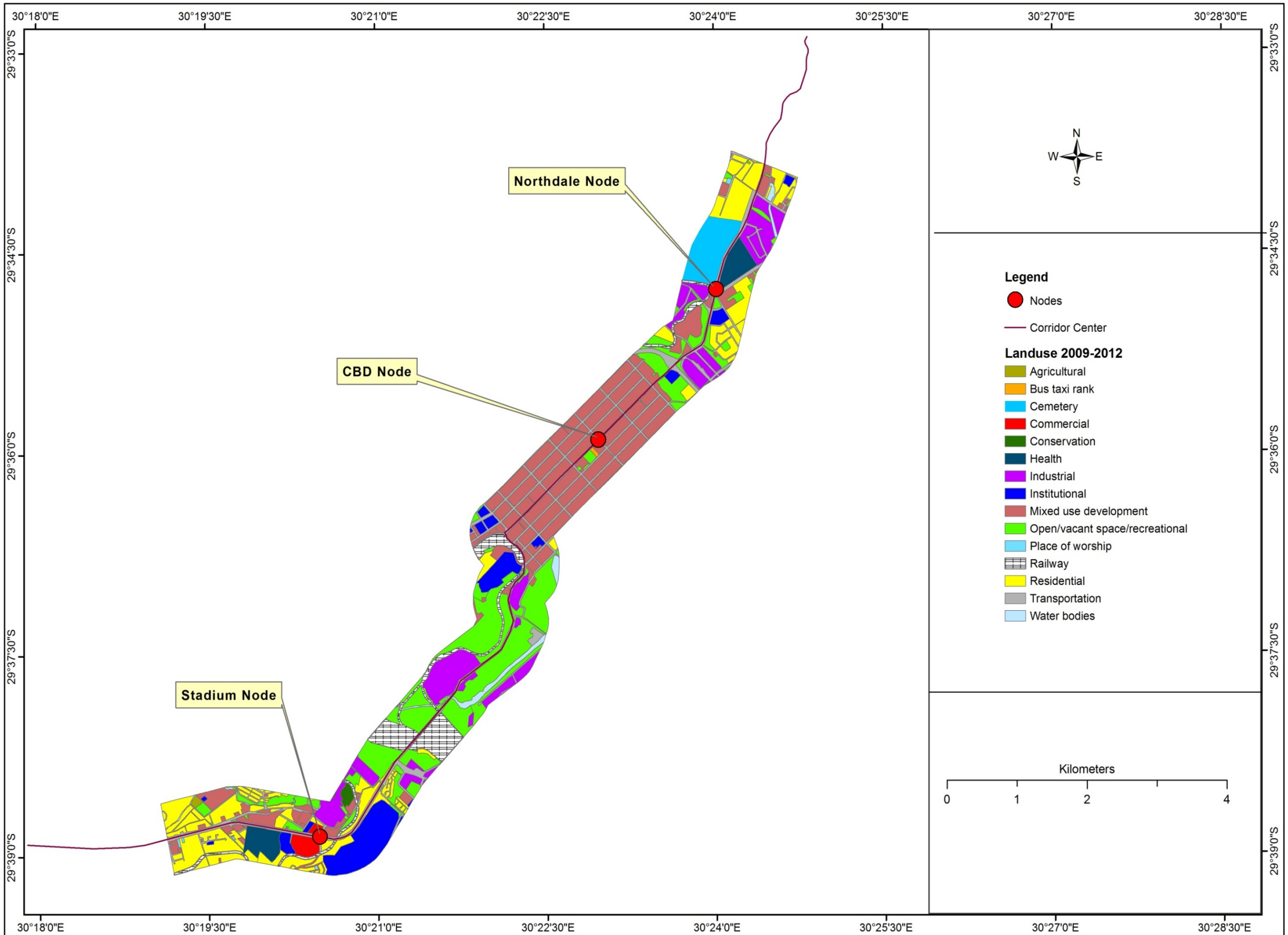


Figure 4.3 Land use map for Edendale-Northdale Corridor, 2009-2012

The results of the GIS land use analysis (Figures 4.4 and 4.5) reveal that the degree of development that occurred along this corridor was not sufficient to integrate the previously separated areas. However, between 2004 and 2006 (Figure 4.4) the Msunduzi Municipal Library in the Pietermaritzburg CBD was extended. This included an additional section that enabled the employment of more staff to service the community following the transformation of the Natal Library to the Msunduzi Municipal Library. From 2006 to 2012, much more significant change occurred compared with the level of development between 2004 and 2006. Two major shopping areas were established along the corridor in the Stadium node located in the Greater Edendale Area (GEA). These shopping areas have helped to reduce the distanced travelled for shopping purposes for residents in some areas of the GEA.

However, as revealed by interviewees in the Edendale node, there is a problem with the location of the Edendale Mall which was planned as a catalyst for the Stadium node. As discussed earlier, the bulk of the population in the GEA lives in the Imbali area and shops in the CBD or Northdale areas due to the lack of direct transport to the Edendale Mall. The interviews with three municipal officials revealed that this problem is receiving attention, but will take some time to rectify. The officials maintained that the construction of the two malls, especially the Edendale Mall, had a positive effect as it created more than 400 jobs. Other changes that occurred between 2006 and 2012 took place in the CBD (Figure 4.5). These include the ultramodern *Freedom Square Taxi Rank* which is a transport point for different areas of the municipality. Next to the taxi rank is the nearly finished recreational hub which has the potential to create employment and entertainment in the city. The location of the taxi rank was a partial change of use; a major recreational park in the CBD was abandoned and part of it was used for the taxi rank. In the Northdale node, the result (Figure 4.5) shows an expansion of an industrial area; other developments included the expansion of the corridor section in the Northdale node. As noted earlier, many community members and businesses in the area believed that this will enable business growth in the area.

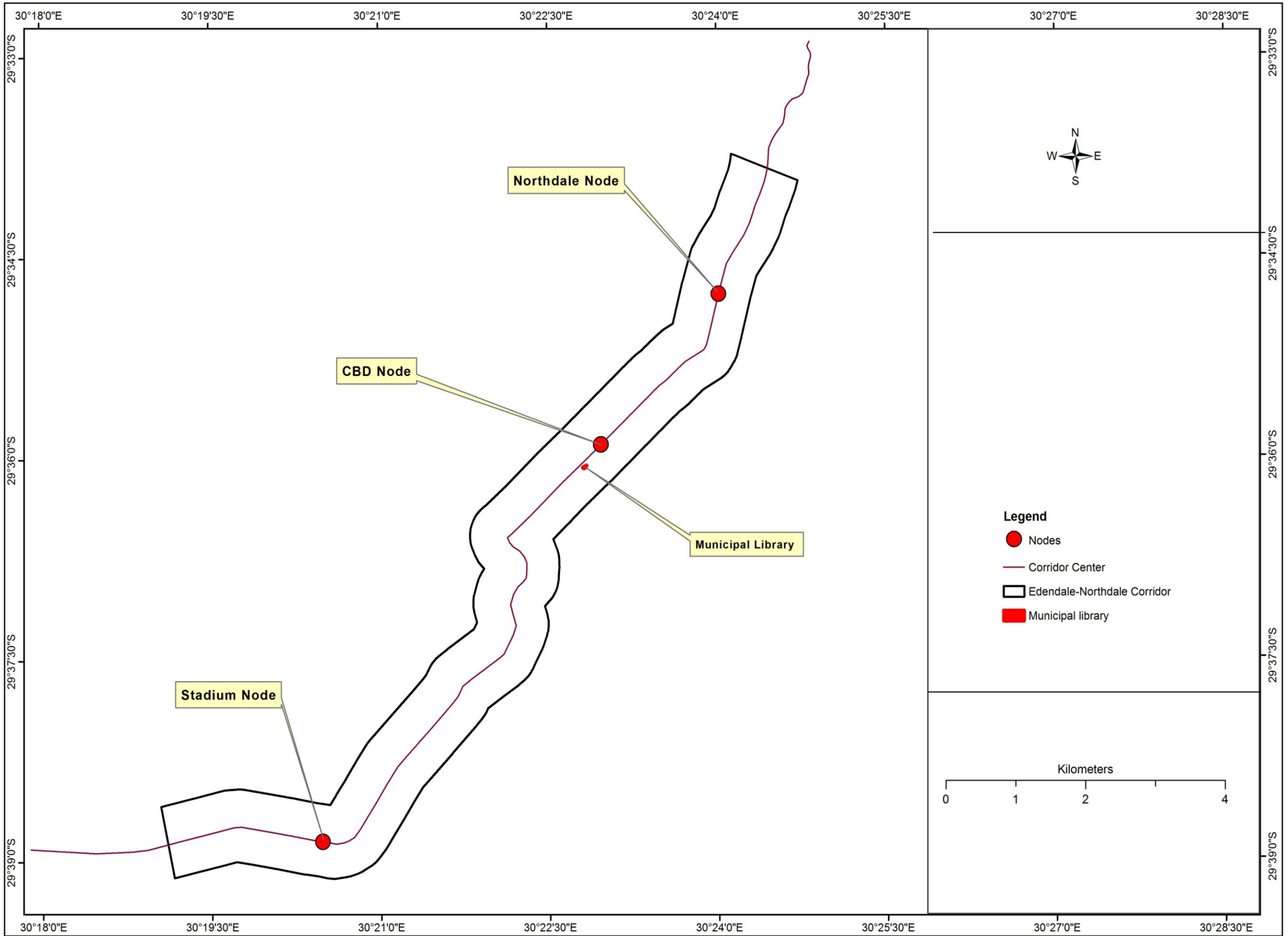
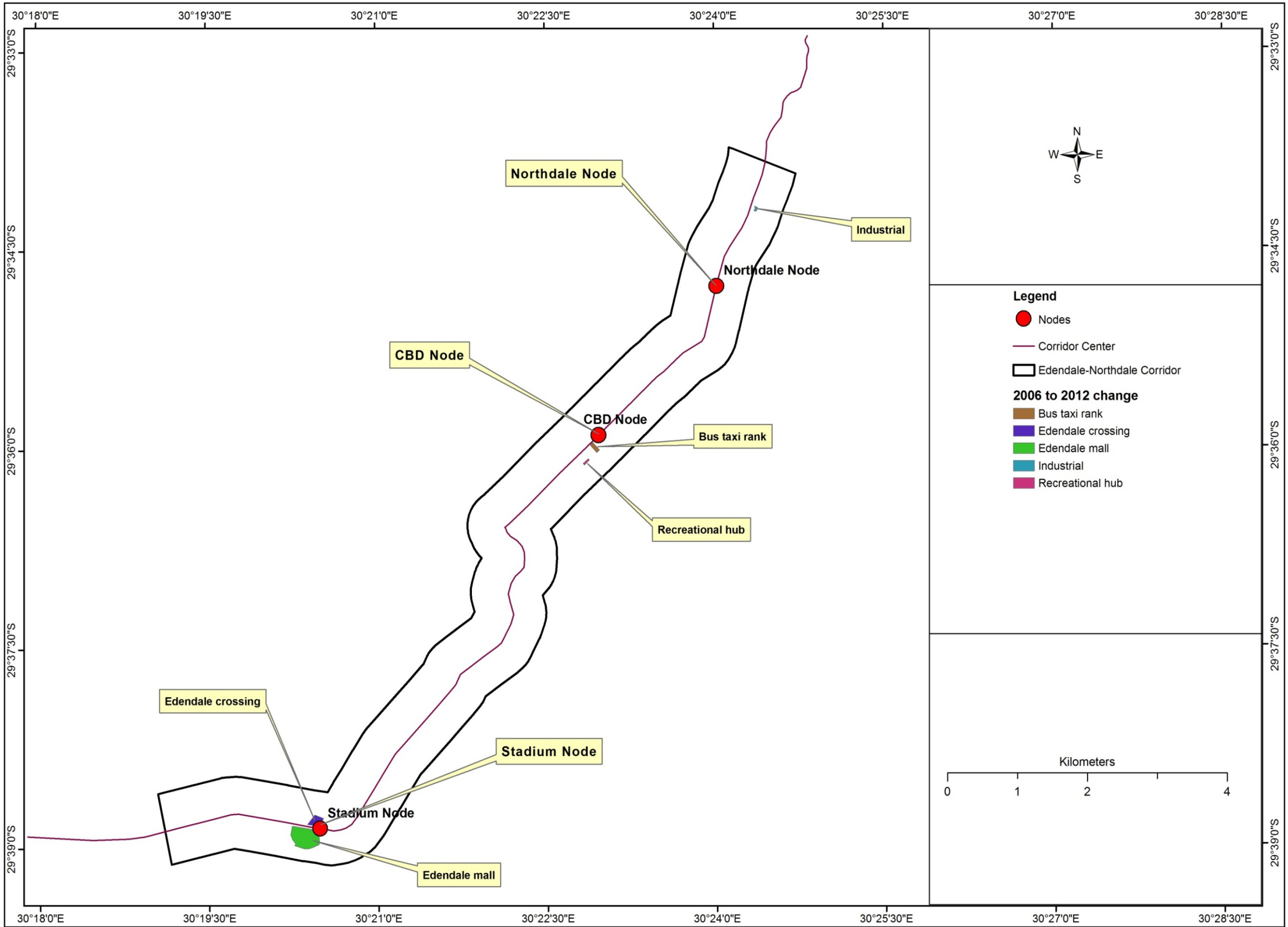


Figure 5.4 Land use change, 2004 to 2006

Source: Researcher (2012)



Source: Researcher (2012)

Figure 5.5 Land use change, 2006 to 2012

In summary, the results from the 2004, 2006 and 2009 aerial photo analysis revealed that the changes which occurred during this period were from one land use type to another. For example in Edendale, the establishment of the Edendale Mall was a change from recreational to commercial use while the construction of the shopping centre was a change from what looked like an abandoned industrial area to a commercial area. The changes in the CBD and Northdale areas took the form of expansion, excluding the recreational hub under construction which used to be a taxi rank.

### **5.2.2 The role of the ENC in the Reconstruction of Msunduzi Municipality**

In common with other South African cities, Msunduzi Municipality still exhibits some apartheid characteristics. In Msunduzi, the situation is getting worse, because of the lack of opportunities available to the densely concentrated population in the township areas. Dewar (1994:238) notes that “where such opportunities do exist in townships, they tend to be monopolized by larger-scale activities”. It is therefore important to deal with the issue of fragmentation of a city in a sustainable way where every sector is integrated. The indicators show that the ENC, which cuts across the three major parts of the city, can be a tool to integrate the city. The majority of the beneficiaries in the GEA, and even in the CBD and Northdale nodes, expressed dissatisfaction with the distance people have to travel on a daily basis to engage in socio-economic activities due to the spatial nature of the city and its transport system. The ENC has the potential to curtail further, uncontrolled city sprawl, which exacerbates the problem of jobs being located far from where people live. This could reduce transportation costs, which have increased steadily over the past year as a result of continual increases in the price of petrol that affect the poor the most.

The ENC also has the potential to foster infrastructural development; this will attract investors to areas along the corridor and lead to job opportunities for the poor in the townships. On the other hand, the further isolation of the areas, especially in the GEA and parts of Northdale, could well result in serious public protests, as witnessed recently in many municipalities in South Africa, with the poor on the city peripheries (townships) agitating for better service delivery and economic opportunities in their areas. For example, Stanton (2009:14) reported in “2009 that about 5 000 people in Durban (KwaZulu-Natal province) from an informal settlement took to the city centre to demand better housing and service delivery”. These protests are due to the fact that

poor people living on urban peripheries believe they are still marginalised in the post-apartheid era. During the group discussions with the various communities in the three nodes, especially in the Edendale areas, community members stated that the Municipality can use corridor development to improve people's standard of living. It is clear that communities are not satisfied with the levels of service delivery in the city. For example, the Edendale group observed that services within their area are sub-standard and that a corridor could be an opportunity to develop the area. It is also a way vital to expand economic growth in the municipality, support redistribution and create an equitable society which will allow the municipality to generate more revenue. At present, the inhabitants of many areas in the GEA do not pay rates or for municipal services because they are poverty-stricken and/or unemployed.

Dewar (1994) argues that apartheid entrenched a situation where the roads are dominated by cars; and there is over-specialization within core areas, particularly CBDs. Furthermore, Dewar confirms that this system increases vulnerability and does not enable the integration of a city; rather, it distorts movement patterns and generates enormous amounts of unnecessary movement. An experienced professional who was interviewed supported Dewar's arguments. He felt that the ENC is important in restructuring the low-income areas on the edge of the city, where public transport enables the movement of the poor. Furthermore, corridors have been proven as a tool to deal with the problems particularly associated with low-income areas that rely on public transport. In this way,

...activities are allowed along this same route which reinforces public transportation, and reinforces that activities work together (9 March 2012, KI5...OR).

In conclusion, the interviewees stated that implementing the ENC will help restructure the GEA and other areas in the Northdale node (9 March 2012, KI5...OR). According to KI5 (9 March 2012 ...OR) the people on edge of the city have been disadvantaged over a long period of time; to achieve a sustainable corridor development which can create the kind of jobs needed to reduce unemployment and poverty, the development of the nodes must take place at the right location, be the right size and must be at an intersection (9 March 2012, KI5...OR). While the city authorities and planners aim to reconstruct the city landscape, it is important to understand that

the ENC can open up opportunities and change the way areas like GEA are perceived by investors.

Links to the city have determined the level of development in the three major parts of the city. A key informant stressed that the Northdale area and the city centre are linked directly from the N3, but Edendale is not; this makes development of the area difficult. He believed that not enough effort was made in the past to incorporate the Edendale area as an important part of the city. This informant was also of the view that, the corridor could be used to restructure Edendale and the rest of the city. But it “will make much sense to give Edendale direct access through the N3” (14 January 2012, KI7...OR). Moreover, no investor would want to engage in industrial activity like warehousing in the Edendale area due to the lack of access to the N3 (14 January 2012, KI7...OR). Another key informant at Msunduzi Municipality, while agreeing that there needs to be direct highway access to the N3, stated that there are three different links into the Edendale area. However, the Municipality “...has been trying to boost those areas but unfortunately getting a new highway link into Edendale is difficult due to funding” (12 January 2012, KI3...OR).

### **5.3 Socio-Economic Challenges along the ENC**

One might expect that the end of apartheid would have brought with it improved living standards, especially to the disadvantaged. As noted in chapter one, apartheid limited socio-economic opportunities for race groups other than Whites, especially African people. Black people were excluded from core economic areas. This created varied problems, ranging from long distances between place of work and people’s residences, to poverty, unemployment, inadequate education and lack of opportunities in the so-called townships. Dewar (1994:238) refers to the “belief that social communities can best be created in new residential areas if they are designed as physically discrete, self-centred suburbs”. This form of development has not encouraged economic development which can create employment opportunities in the townships. In the case of Msunduzi Municipality, central Pietermaritzburg remains the socio-economic core within the municipality, while the township areas like the GEA and parts of Northdale have been underdeveloped. While there have been some small improvements, it cannot be denied that there is still a long way to go. Some argue that improvement will take time, because of the level of

underdevelopment within the townships. For example, Donaldson and Kotze (2006) argue that measures aimed at integrating former townships with the economic areas of the main cities are still perceived negatively by township inhabitants. Furthermore, the state of infrastructure in the townships is of much lower quality than that in the areas formerly occupied by Whites or those that are closer to areas with economic opportunities.

### **5.3.1 Poverty and Low Income Levels**

According to Coetzee and Millin (2006: 5) “Pietermaritzburg and the surrounding areas (the region) contribute about 9% to the gross geographical product (GDP) of the province”. They add that 30 to 35% of Pietermaritzburg’s population resides in the GEA. Given the size of the GEA’s population, one would expect that many would be working to earn income to sustain their households. However, this has not been the case; apartheid subjected the inhabitants of the GEA to high levels of poverty. During their interview, tenants at the new Edendale Mall noted the low levels of spending power among the population in the areas surrounding the mall and pleaded for efficient and direct transport for people living in the Greater Imbali Area, where there are higher levels of income. More than 10 tenants believed that if these transport problems were resolved, their sales levels would increase and there would be a growth of businesses in the surrounding areas of the node. According to a municipal informant who was interviewed, the Edendale Stadium node is a potential growth point; with the recent development around the node, in 50 years time it will be like any other node in the city. However, the severe lack of infrastructure has hampered investment in the area. Poverty levels are increasing in the GEA. Mall tenants confirmed during a group discussion that:

“The unemployment in the neighbourhood contributes...to the poverty (in another view, the participant stated that) ...since the opening of the mall, I have not reached the target once and am waiting to see what is going to happen as the year goes by....The feet are not the problem. We are averaging at around 650 000 visitors a month which is equal to Liberty Mall who has been in existence for eight years so the feet are not the problem, but the consumer spending potential at the moment and the fact that we have more browsers than actual buyers. We’ve got the feet ... in January there was [sic] 550 00 visitors and in December we were ... on par, 650 000 visitors. The problem is, is there spending potential like the survey said? So you need to go back to the

survey and say the average spending potential is R2 000 for each household but have they got money to purchase something for R600? Pick ‘n Pay entrance is the busiest entrance” (10 January 2012, GDEM...OR).

As noted above, population numbers are not the problem; lack of spending power is. This can be linked to the lack of social activities; people go to the mall not to shop, but to sightsee. The large number of people visiting the mall could also be due to the search for jobs at shops in the mall. One of the stakeholders stated emphatically that the area around the mall is a “rundown area”; this could point to a lack of income in the area. Furthermore, the interviewee stated that:

All the new housing development[s] of ... Imbali is [sic] actually not on the Edendale road and in fact, the linkages from the Imbali, the Greater Imbali and other related areas back to the Edendale road are not direct (9 March 2012, KI5...OR).

Earlier, the tenants of the new mall had argued that the growth of the node depends heavily on direct access for middle-income residents of Greater Imbali. However, the above statement by KI5 confirms that there is a serious need for integration between the Stadium node, the home to Edendale Mall, and the Greater Imbali area. The discussion with the tenants revealed that for the mall to achieve its goal there is a need for government intervention to address the taxi route problems to give the people of the Greater Imbali Area (GIA) direct access to the mall (10 January 2012, GDEM...OR). During the group discussion, the manager of the mall said, “...when this mall was built, the vision to bring people from Impendle, Bulwer, Richmond, Greater Edendale means it’s a wide area over a million people you are looking at, so that in actual essence is not happening, due to a simple thing, like a taxi problem” (10 January 2012, GDEM...OR).

**Figure 5.6** Abandoned (dilapidated) houses along the Edendale stadium node corridor section



**Source:** Researcher (2012).

Information gathered for the ENC project found that 11.2% of households living in the Northdale area have a monthly income of R12 801 and above, compared to the Edendale area, where the monthly income is on average R800 a month. The beneficiaries of the project in the Edendale area confirmed that poverty is an issue confronting the area, resulting in low levels of spending; many people are unable to afford the prices of some items in the mall.

**Table: 5.2** Monthly household income levels in area of influence

<b>AREA</b>	<b>No incom e</b>	<b>R1 -R 1 600</b>	<b>R1 600 - R 6 400</b>	<b>R 6 401 - R 12 800</b>	<b>R 12 801 and above</b>	<b>TOTAL</b>	<b>Under R 1 600 pm</b>
<b>CBD area</b>	20.5%	36.6%	25.4%	9.8%	7.6%	100.0%	57.1%
<b>Edendale area</b>	26.0%	47.8%	22.3%	2.8%	1.1%	100.0%	73.8%
<b>Area North of N3</b>	13.6%	28.7%	31.9%	14.6%	11.2%	100.0%	42.3%
<b>TOTAL</b>	19.7%	37.5%	27.0%	9.2%	6.7%	100.0%	57.1%

**Source:** Iyer Rothaug Collaborative (2005: 16).

A company manager in Northdale argued during an interview that the Edendale area remains the most disadvantaged area in the city in terms of economic opportunities. Thus, efforts should be made to attract low cost supermarkets like Save, which has products on special on a weekly basis. He also stressed that the new Edendale Mall may not change much. The manager noted that people in the Edendale area are poor and spend a large portion of their income on transport because there is no direct transportation to the CBD or to Raisethorpe in the Northdale area, where they can shop for cheaper groceries (29 February 2012, KI9...OR). The manager stated that, even though Edendale residents are the poorest of the poor, whereas a loaf of bread will cost someone in Northdale R8.50, in Edendale it will probably be R11. Transporting goods to the area adds to their cost. According to the manager, part of the problem is that Edendale residents do not have access to shops in the CBD and Northdale area that offer lower prices (29 February 2012, KI9...OR). On the other hand, one of the stakeholders from the Pietermaritzburg Chamber of Business stated that if careful decisions are taken, the GEA can attract huge investment. Furthermore, there is a need to promote investment through the existing access route between Edendale and the N3 due to the traffic in the city centre. According to the same stakeholder, promoting such access will enable investment to flow into the Edendale-Northdale East-West corridor to foster the kind of economic development that will help create job opportunities for

people in the GEA (14 January 2012, KI7...OR). Although the GEDI official agreed there needs to be another highway to link Edendale area to the N3,

There are about three different links coming into the Edendale area and we have been trying to boost those areas but unfortunately for us to get a new highway or a new link into Edendale is a bit difficult at this point due to funding. So your Edendale road is your main route in, it actually goes all the way through Edendale into the Vulendela area (12 January 2012, KI3...OR).

According to the GEDI official, the future development of the GEA or the corridor within the Edendale looks promising because:

We were discussing with the national department of transportation and they are piloting a project on roads classification which may soon see the Richmond Road as an “N” class road (12 January 2012, KI3...OR).

The researcher’s field observation revealed that there is a great possibility of traffic inflow from Richmond road into the ENC at the Edendale area, if the national government improves Richmond Road as an “N” class road. This will encourage more motorists to use this route to the Eastern Cape; this will attract investors to the GEA and create employment opportunities in the area. It will also reduce transport costs because people will not need to travel such long distances to work; the Bus Rapid Transit system (BRT) will benefit those who still have to travel long distances.

The group discussion with beneficiaries in the Northdale area revealed that the high unemployment rate amongst the youth contributes to poverty in the area. It was noted that Northdale is close to the farm areas, where the poverty rate is really high. These beneficiaries expressed concern regarding how the ENC would benefit people living on the outskirts of the corridor. In order to discourage urban sprawl in the long-term, all the areas need to be integrated using the ENC. The ENC study confirms that the Northdale area remains the most integrated part of the corridor (Iyer Rothaug Collaborative, 2005). In Northdale, the majority of activities are within walking distance. Depending on the area, it is also within walking distance of the city

centre. This suggests that people living in Northdale will spend much less on transport than people residing in Edendale. However, a Northdale resident is likely to spend more on accommodation, because the standard of living in the Northdale node area is higher than in the Edendale area. Some also argue that, while Northdale has the advantage in not being far from the Pietermaritzburg CBD, peak hour traffic is a serious problem in the area. According to an informant working for a company located in the CBD:

Take the Northdale area for example, it took them so long to finally realize that it is a high traffic area; sometimes it takes people like one and half hours to get to work, travelling a distance of like 5km (21 March 2012, KI10...OR).

The Northdale beneficiaries and the informant working for a company in the CBD were impressed with the ongoing improvements that have given the Northdale section of the corridor a new 'look'. Many believed that the traffic problems in the area will be resolved and were confident that the improvements already made will boost economic growth in the area. This will boost employment. An official at the municipal transport department confirmed that the BRT system is expected to be implemented soon; this will integrate the East-West Corridor (the Edendale-Northdale Corridor). One of the major findings of this study is the high rate of unemployment in the three nodes studied, particularly in the GEA. During the researcher's field visits, it was observed that many young people turned up on a daily basis at the municipal offices in the GEA to volunteer their services. Personal enquiries by the researcher revealed that they were unemployed graduates. A DUT graduate said that to be offered a job, you must be a 'comrade' (i.e. a member of the ANC in the Ward). Unemployment is not restricted to this corridor, but extends to the city at large. In all three nodes, inhabitants spoke to the researcher of their hopes that the corridor concept will reduce the rate of unemployment in the municipality by bringing investment that can provide jobs. The unemployment rate in the GEA is further confirmed by the 2011 Census data, which reflect an unemployment rate of 48.5% for the area. However, many were not convinced that the project did not represent mere promises on the part of politicians that will never materialize.

Is this, in fact, the case, or have these communities simply lost faith in the government? A municipal informant stated that in any given project, there is always a set of programmes that “in the next five years this is what we are hoping to achieve and we will budget accordingly” (29 December 2011, K2...OR). Another municipal official from the GEDI department stated that “we have taken the project into the SDF and from there your local plan and in that way we are creating an implementation plan to actually roll out the ideas of the Edendale, Northdale corridor” (12 January 2012, KI3...OR). Although some of the officials were of the view that the ENC has not yet reached the implementation stage, a documentary review confirmed that some pockets of projects which were planned within the corridor have taken place. During the interviews, the three municipal officials also acknowledged that some development linked to the corridor had been implemented, but noted that the city has yet to move to full implementation. Bearing this in mind, it is still not clear how the corridor will be phased in year by year. This leads to the question of whether the set goals will be achievable so as to attract investors. In the city centre, a participant in the group discussion questioned whether it is government’s responsibility to create jobs or put infrastructure in place to enable investors to appreciate the area’s potential. According to the manager of a company in the Edendale node,

we use to have Cornelli in fact it died out of the area...we use to have two tanneries in close proximity which use[d] to supply us, remember we’re [a] footwear manufacturing company and we get our supply from them which was created around here. One is closed down and the other one is downscaled, it means we’re not able to get the materials we need from them which now forced us to go outside and get that. Basically we get all we could get from the area; the rest comes from Durban, overseas... (28 February 2012, KI8...OR).

According to the CBD group discussion participant, government’s responsibility is to create an enabling environment which will assist investors. Inhabitants in the three nodes indicated during the group discussions that they do not believe that the city is not doing enough to create employment. In the Edendale node, community members agreed with the manager of the company in the Edendale node, stating that if the authorities were keen on solving the unemployment problem in the city, they should have revived the tannery companies within the area; this would create more job opportunities. The GEDI official said that there are plans “to

rehabilitate the Standford tannery; there is [sic] a whole lot of ideas that have come up and it is kind of exciting to see how it is all starting to unravel” (12 January 2012, KI3...OR). The local literature notes that the corridor and node concept has been proposed as a means to integrate townships into the main cities in South Africa (Dewar and Todeschini, 2004). It is also believed that this kind of integration will foster development and economic growth in these townships. However, Todes (2000) also shows that service and infrastructure provision in the townships are of a low standard compared to the CBDs and their suburbs (Todes et al., 2000). A municipal official confirmed that infrastructure in the Edendale area is substandard (11 January 2012, KI1...OR). This will hamper efforts to attract investment. This was one of the major reasons behind the ENC initiative to develop world class infrastructure that attract investors along this corridor (11 January 2012, KI1...OR).

### **5.3.2.1 Unemployment and Race in the City**

On the one hand, it was found that the racial segregation imposed by the apartheid government still exist in Msunduzi to some extent. The Northdale areas are inhabited mainly by Indian and Coloured people, and a very small number of Africans. The Edendale area is dominated by African people, while the city centre hosts all race groups. However, while all participate in economic activities in the CBD during the day, at night many Black people remain there, while Whites return to the suburbs. This also plays a role in employment equity in the city. According to two of the Northdale beneficiaries,

In terms of employment opportunities, we've got challenges where other areas are offered opportunities through the Municipality and yet they don't reach our area, employment is one of this [sic] major issue[s] and for those who are employed, they're getting peanuts. So that is why some people are not working because what they're earning is not enough to get them to work.

On the other hand, another person was of a similar view that,

Within our area the employment opportunities are basically found along the corridor but major development now is going the Edendale way (21 March 2012, GDNI...OR).

### 5.3.2.2 Barriers to Employment Opportunities in Munduzi Municipality

While these problems are not unique to Msunduzi Municipality, the authorities have to respond to unemployment in the best possible way. There were many complaints that past and present administrations have been running the affairs of the city in an improper manner. These views were particular to the two groups of beneficiaries. According to the manager of a company in the Northdale, it is not clear why some companies closed down in the area (29 February 2012, KI9...OR). Furthermore, it was stated that when companies closed or moved, unemployment increased. The manager further stated that flaws in the policies adopted by the city could be a reason for the relocation of these companies out of the area. Another stakeholder said that:

... When businesses threaten to relocate ... most of the times [sic], that is an idle threat because they can't afford to do [so] anyway and it's just empty words. But I think you've got to take it quite seriously when in fact they are expressing the view that if they were not in Pietermaritzburg, they would be better off (14 January 2012, KI7...OR).

Similarly, a participant in the CBD discussion said,

Maritzburg is not cost effective. There are other municipalities that offer cheap rates and electricity. To be able to attract investment you have to be better than your neighbours (29 March 2012, GDCBDI...OR).

The respondent from the Pietermaritzburg Chamber of Business expressed the following view:

...there has been a lot of development apart from that. But there have been huge difficulties with regard to the municipality and the way it went about doing things. I mean the caravan park is still not developed and there has [sic] been countless proposals for that. It should have been developed but it hasn't been developed. There was a proposal for development in the Woodburn area just across the road from the Shell garage which was a very nice proposal for development. It never happened and it never happened because somebody in the municipality was concerned about the technicality of servitude. I mean it was ludicrous. Some understanding could have been reached but nobody was

prepared to reach understanding. I went to launches of the so-called waterfront development where we were taken to the site and shown what a marvellous front we were going to have but nothing happened. And a lot of these developments were stalled when there was a councillor shift change over from one mayor to the next because when the new councillor came in, 2006 I think, they wanted to turn their backs on everything that has been done previously (14 January 2012, KI7...OR).

The above views relate to the issue of poor management in the municipality and the high cost of doing business in Msunduzi. It is worth noting that the municipality has not responded adequately to these obstacles to economic development. Personal field observations revealed the lack of economic investment in the GEA. This can be seen in the daily movement of people into the CBD. Interviews with businesses and community members confirmed the lack of investment in the post-apartheid era; businesses are relocating away from the municipality. This may pose a threat to the reconstruction of the city and job creation. The corridor itself does not create jobs; rather, it creates a vehicle which attracts investors who, in turn, create job opportunities. In the group discussions, all participants in all three nodes said that it would be to people's advantage to work closer to home. The steady increase in the price of petrol has led to rocketing transport costs. The respondent from the Pietermaritzburg Chamber of Business stated that:

I think it is also significant to recognise in this country the cost of transport, so if you can reduce the cost of transport to people who have to work every day then you are making a positive contribution perhaps towards economic development because if people are having to pay less for what is an unproductive service or expense, then is [sic] more to their advantage (14 January 2012, KI7...OR).

It is also important to understand that unemployment, especially among the youth, increases crime. In the CBD, many of the beneficiaries confirmed that unemployment is a problem and has occasionally caused violence. Two respondents in the CBD suggested that people are desperate for jobs and that they look for ways to survive. They observed that:

Have you ever heard of urban farming? It is against the city law but it is happening all over the city and no one is saying a thing. People are desperate for work, we cannot blame them much but the city has to

provide alternative means for those people because it affects space within the city.

And,

I have young ladies coming in looking for jobs, while you are taking to the one, the other one grabs it [your handbag]. I live at the bottom end of West Street which is the poorest within the city. We have terrible poverty there and we have drug dealers so you can't really walk in these streets easily, at night but even during the day (29 March 2012, GDCBDI...OR).

Sufficient employment opportunities would improve the standard of living in the city. More people would pay municipal taxes and the revenue base would increase. While apartheid created many of these problems, it is time for the authorities to stop blaming the past government and focus on rebuilding the city. Some respondents suggested that the government should engage existing businesses in the city in a discussion in order to establish what needs to be done in the best interests of both parties. As noted earlier, in the Northdale area people have lost their jobs as a result of the relocation or closure of some companies. A spokesperson for the manager of a company in the Northdale confirmed that people who used to work at PG Bison and Bayer, that relocated and closed down respectively, could not get jobs elsewhere. The manager explained that many of these employees were old and could not relocate with the company. However, the participants in the group discussion in Northdale called for the city authorities to implement a system that can create job and address unemployment in the city. As noted by one participant,

...again mugging, safety is one of the most important issue of the area, that's why there needs to be job opportunities for the youths because if they do have jobs, I don't think mugging will be so alarming within the area as [at] present (21 March 2012, GDNI...OR).

The GEA seems to be the area most affected by unemployment along this corridor. As noted earlier, there are many issues surrounding unemployment and investment in the area. Information gathered in the interviews revealed that security and accessible transport are the most challenging issues apart from lack of infrastructure. The manager of a company in the Edendale area was of the view that security is an impediment to investment; investors are still not

convinced about investing in the GEA due to security factors. All the municipal officials that were interviewed confirmed that investors are scared of moving into the GEA, but noted that the city is doing a lot to promote the business potential of the area. Furthermore, the officials argued that even though there were security issues in the GEA in the past, this is no longer the case, as the new Edendale Mall shows that things have changed. According to the respondent from GEDI, the commitment of the municipality to promote investment in the GEA and provide adequate security for investors and inhabitants in the area is shown by the establishment of the Plessilaer police station. Similarly, the GEDI informant stated that, “there is a program through Safe City where they are actually going to be putting up CCTV cameras around the Edendale area” (12 January 2012, KI3...OR). In the group discussion in Edendale, one of the participants stated that the GEA has been disadvantaged so much in the past that investors only see the area in a negative way. This has led to high levels of unemployment in the area, while those who manage to get jobs in the CBD and Northdale do not earn enough and spend much of their income on transport. In this respondent’s view, “...unemployment rate is high so we hope that when this project is implemented all of this will change” (22 March 2012, GDEI...OR).

#### **5.4 Transportation and Linkages to Economic areas of the City**

The availability and ease of public transport within a city is regarded as a necessary step to enhance social and economic activities. This has the potential to improve employment opportunities and economic growth, as well as living standards. Goh Ban (2010) argued that Curitiba offers many lessons to developing nations. The Curitiba development corridor has an efficient public transport system which has enabled the growth of Curitiba’s economy. In Msunduzi Municipality, it is argued that the structure of the landscape hinders free movement by means of public transportation. This hampers local economic growth, especially in the township areas of the city. Many of the key informants and other stakeholders agreed that industry is concentrated in the Northdale nodes. For this reason, the ENC is of great importance to the municipality in addressing the transportation problems facing the city. An interview with a municipal manager in the Department of Economic and Growth Development explained that,

The critical thing is for the Municipality to develop an efficient public transport system that will foster connectivity between Edendale and Northdale (KI 2 2011).

In contrast, the stakeholder from the Pietermaritzburg Chamber of Business was opposed to the ENC giving direct access from the Edendale node through the city centre down to the Northdale node. He argued that the traffic congestion within the Pietermaritzburg CBD could have been avoided by giving Edendale direct access from the N3 to Northdale. According to the stakeholder, “it makes more sense to talk about N3-Edendale corridor because that will give Edendale direct and easier access to the Northdale suburb because of Willowton industrial estate” (14 January 2012, KI7...OR). However, the informant in the Department of Economic and Growth Development was of the view that,

...the critical thing is for the municipality to develop a really efficient public transport system that will foster this kind of connectivity between the two areas because I think that if you take the extent of the corridor itself, the corridor from the City center going west along Edendale Road and from the City center going north east that’s around Old Greytown Road (Dr Chota Motal Road) going up there, that’s about fifteen to twenty kilometers of road basically of corridor so I think the City should focus on not just the corridor but for the City itself for the very efficient public transport system so that people that are living in the Edendale would be able to get quickly to a job opportunity to the north eastern side of the City (29 December 2011, KI2...OR).

The location of the GEA, the central area and Northdale lays a good foundation for a proper integration; the city can reduce the long distances travelled by people by means of efficient public transport through the ENC. Moreover, the municipal informant in the Department of Economic and Growth Development suggested that:

The positive thing in terms of the apartheid city layout in the Municipality was the laying out of industrial pockets at the fringes of [the] previously disadvantaged (29 December 2011, KI2...OR).

In the current Msunduzi Municipality, this has been a problem because there are insufficient employment opportunities in some areas. According to KI2 (29 December 2011, OR) the Willowton-Eastwood industrial area between Northdale and the city centre serves people in the Northdale area. In the Edendale area, between Edendale and the city centre, the Masons Mill industrial area provides job opportunities. The municipal official noted, however, that job opportunities within these areas are obviously not enough, especially in the Edendale area where the population is growing (29 December 2011, KI2...OR). In conclusion, he was of the opinion that there is need for efficient public transport system that would move people in Edendale who cannot get jobs in Masons Mill or the city centre to the north-eastern areas in the Northdale node. Similarly, one of the underlining issues raised by many of the respondents during the interviews and group discussions was the need for a bus system along the ENC.

**Figure 5.7** Transport infrastructures along the ENC



**Source:** Researcher (2012).

#### **5.4.1 The Importance of a Bus System in the Reconstruction of the City**

It was noted earlier that one of the findings of this study was that the transportation system is one of the biggest problems facing the reconstruction of the city and economic development.

According to Johnson (1974) distance reduces the level of productivity and increases the cost of a service, while integration of land use and transport can improve productivity and benefit citizens. The researcher was unable to interview any officials from the municipality's transportation department, because officials knowledgeable about the ENC project are no longer working with the municipality (see chapter three). However, during field observation, efforts were made to speak to someone from the transportation department. According to one respondent from the transport department, the city is committed to providing better transportation for the whole city which will foster economic development in high priority areas. This respondent stated that plans for the city's first phase of the Integrated Rapid Public Transport Network (IRPTN) are at an advanced stage and will soon be rolled out. Going by the information gathered from the same official, the first phase of IRPTN will be along the ENC and will link the Edendale and the Northdale industrial areas, which will make it easier for employees living in Edendale to get to work. Furthermore, the official also stated that IRPTN project is a key part of the ENC. *The Witness* newspaper stated that the city recently "...unveiled a multi-billion-rand public transport plan to alleviate traffic congestion, reduce transport times and create jobs" (Ngqulunga, 2012: 1). According to the newspaper,

...people will spend less time travelling through the city as the new public transport system will focus on upgrading routes from the Vulindlela, Edendale, Imbali, central business district and the northern suburbs (Ngqulunga, 2012: 1).

However, during the discussion with the tenants of the mall, the manager of the mall stated that, "the Edendale Mall is the only mall in South Africa that pays taxi associations to bring people to the mall" (10 January 2012, GDEM...OR). Field observation revealed that the Edendale Mall has an ultramodern taxi rank to enable convenient shopping. According to information gathered during the group discussion with the tenants of the mall, there are difficulties in the transportation system. Some confirmed that even when small distances are involved, there are problems in transit before the taxi reaches its destination or the mall. The respondents revealed that this difficulty is common in Imbali, especially Unit 13, BB and so on (10 January 2012, GDEM...OR). According to a community member visiting the mall who participated in the discussion, taxis cost R8 in transit and another R5 to get to the Edendale Mall from Imbali.

Transportation from Imbali to the Pietermaritzburg CBD is cheaper. This means that a substantial portion of GEA residents' monthly income is spent on transportation. It was also disclosed that there have been problems with the taxi associations that are governed by routes, which means that taxis are not allowed to carry passengers in a location that was not designated their route.

Similarly, the informal traders in Edendale confirmed that transport for people coming from Imbali to the location of the node is a problem. However, a professional who studied the ENC, argued that the mall was not located in the best place. He felt that the intersection before the stadium node would have been the best location, and pointed out that people do not usually go backwards; given the location where the bulk of the population lives, getting to the Edendale Mall involves going backwards (9 March 2012, KI5...OR). The field observation confirmed that the location of the node situated at the intersection of Sutherland and the Edendale road seems a better node, with vacant land that can be used for infill development and provide housing for many. It was also confirmed by the area manager of Edendale during a tour visit that the Sutherland node was the site for the Edendale megacity which has been delayed. Across the Edendale Road just adjacent to the Edendale Mall is the Edendale crossing shopping centre. Surprisingly, some of the shops in Edendale Mall still exist at the Edendale crossing. The researcher asked whether this was because there were so many customers, but was told that the development of the Edendale crossing centre was politically motivated. This has also contributed to the poor functioning of the Edendale Mall, which was planned to develop the stadium node. During the group discussion at the mall, it was revealed that some shops in the Edendale crossing had closed down after a few years of operating; some shop owners in the Edendale Mall were saying "we see how this go by the end of the year". As stated earlier in section 4.2.4, poverty and low income levels in the area affect the viability of these businesses.

According to the informant from the Department of Cooperative Government and Traditional Affairs (Cogta), the establishment of one of the malls was politically motivated. However, it was noted that an efficient public transport can help solve the problems facing the Edendale Mall. According to a group discussion member, if the authorities develop a system where "...people from Imbali can commute straight to here, and then we can say we can get customers especially

those coming to the hospital” (12 March 2012, GDEIT...OR). The traders noted that they order their stock from town and the traffic has not promoted the growth of their businesses. In order to avoid the heavy traffic within the CBD between 7 and 8am, the traders wait until 9am when the traffic subsides. However, this truncates their business day. Many of these traders stated that, by the time they “leave at 10am to order, maybe it takes you from one and a half to two hours, I come back late and when the customers from the hospital come, the stall is closed” (12 March 2012, GDEIT...OR). According to the city Mayor as reported by *The Witness*, the IRPTN project will put an end to this and will create “...about 1 000 permanent jobs...by the municipality and the private sector will also create permanent employment through this project” (Ngqulunga, 2012:1). Indications are that the IRPTN is a welcome development but the challenge is centred on how the city will integrate the existing taxi operators to avoid the kinds of problems experienced in the implementation of the BRT in Johannesburg, where taxi operators protested against the new service.

## **5.5 Employment Creation and Income Generation**

Unemployment is a national challenge. The South African President’s State of the Nation address in 2012 placed job creation at the top of the agenda. Since then, various municipalities, including Msunduzi have pursued this agenda, particularly in response to growing youth unemployment.

### **5.5.1 Qokololo Stadium Node as catalyst for Development in Edendale**

In Msunduzi Municipality, the two major nodes are the CBD node and the Northdale node. As noted earlier, the idea of corridor is intended to address the social and economic problems facing the previously disadvantaged townships along this corridor. The Qokololo Stadium node is the major node within the GEA which fosters ongoing economic development in Edendale. According to (Lin et al., 2006) empirical findings have shown that many countries in modern society have developed corridors to promote employment and recreational opportunities. In most cases, this has reduced the proliferation of sprawling communities and fostered economic growth in newly created settlements. A key informant at the GEDI office explained that the activity corridor is a gateway to a community. The municipality has embraced the corridor concept to create an enabling environment that will attract investors.

According to the informant; firstly, “we are looking at landscaping, street furniture and these might seem like small stuff to the normal person... This kind of improvement... will create a sense of place for the people; it makes them feel proud about the area they live in, proud about coming into the area” (12 January 2012, KI3...OR). Community members expressed similar views in a group discussion; they were of the view that if government is able to create an enabling environment along this corridor, that will attract more investors like the new Edendale Mall. Many of the beneficiaries in Edendale stated that Edendale has been isolated for a very long time. The community believes their isolation from Pietermaritzburg has hindered infrastructural development in Edendale. However, they stated that Edendale has great potential to develop into an important place in Pietermaritzburg, like Scottsville. A community member emphasized that if this corridor implemented with proper infrastructure, “it will change the way others perceive us and the way we think of our place because when your surroundings are not what you aspire your mind tend [sic] to be limited” (19 March 2012, GDEI...OR).

An evaluation of the ENC study document showed that a retail facility was envisaged to function as a catalyst for economic development in the Qokololo Stadium node along the ENC (Iyer Rothaug Collaborative, 2007: 11). However, during the field observation, it was discovered that the retail facility has been developed as the new Edendale Mall. Many of the municipal officials that were interviewed stated that since the development of the Edendale Mall, the Qokololo Stadium node has been a target area for many investors. According to an official in the Town Planning Department,

there are lot [sic] of interest from other private sectors, people want to put flats, people want to put offices, people want to put some other activities so that is a catalyst of Edendale, in 50 years to come this node will develop like Howick (11 January 2012, KI...OR).

An official from the GEDI office was of the view that things are beginning to change. However, the GEDI official argued that what the Edendale node lacked in the past was business confidence; investors were not keen to invest because, as a township, Edendale is not profitable and is also associated with crime. For example, it was revealed by three municipal officials that many private investors have approached the municipality for investment opportunities around the

Edendale Mall. The GEDI official added that while investors ignore the GEA on the grounds that is not profitable, they forget that the middle to high income earners live in the GEA, mainly in Imbali (12 January 2012, KI3...OR). In contrast, an experienced professional planner who played an important role in the study of the ENC was of the view that Imbali would have been the best choice of node, given that this is where the bulk of the population resides (9 March 2012, KI5...OR).

However, the discussion with traders at the new Edendale Mall confirmed that there have been a number of problems in some areas in the GEA which were attributed to the transportation route. One of the employees working at the mall shared his experience that people from Imbali Unit 13 and BB have serious difficulties in reaching the mall. “For me to get to work, I have to first take a taxi which will stop half-way to the mall and another to get me to the mall” because of the rules governing taxi routes (10 January 2012, GDEM...OR). The discussion revealed that this system causes delays and results in residents going straight to the CBD, since there are direct taxis into the city for shopping and other daily activities from Greater Imbali and some parts of Edendale (10 January 2012, GDEM...OR).

**Figure 5.8** Greater Edendale Mall showing the corridor section in Edendale



**Source:** Researcher (2012).

### **5.5.1.1 The Impact of Retail Development in Townships**

In recent years, a number of studies have been conducted on the impact of developing retail facilities like malls in townships. For example, (Lighthelm, 2006) conducted a study on the impact of shopping malls on existing small informal retailers in Soshanguve Township in Gauteng. The findings of this study show that the distance of small retailers from shopping malls and effective customer service on their part might ensure the survival of some of these spaza or retail shops in the townships. It would appear that the idea of development corridors and attracting economic development within nodes in South African townships is possible through the establishment of retail shopping centers. The manager of the Pietermaritzburg Chamber of Business explained that retail malls “enlarges the base of consumerism” (14 January 2012, KI7...OR). People cannot survive without food. The success of the malls/retail areas would assist in attracting investors along a corridor due to the confidence it will create within the node. Writing in the *Financial Mail*, Hlengani (2007) reported on the result of two studies carried out in Johannesburg: the Soweto Retail Strategy and the Soweto Investment Framework,

commissioned by the City of Johannesburg. The studies found that while the retail spending power of consumers in Soweto was more than R4.2bn per year, only R1.05bn is being spent in the township. This gave investors the confidence that development in townships is profitable.

Similarly, investors have only recently started to see potential in retail clusters in Msunduzi townships. The Northdale node remains somewhat independent in terms of retail establishments and its industrial cluster. This is not the case in the Edendale node, where people still travel to the CBD or Northdale nodes for daily grocery shopping. However, various municipal officials revealed that with the advent of the Edendale Mall, investors' perceptions regarding the GEA have changed. The GEDI official observed that the Edendale Mall is positioned as a catalyst to develop the area. Furthermore, she confirmed that it would have been difficult to attract other forms of investment without establishing business confidence in the area. The newly built Edendale Mall made more than R15 million in its first day of operation. It could also be argued that retail facilities such as malls serve as anchor institutions for development, especially given the nature of South African townships. There is no doubt that development corridors in South Africa have seen the growth of many nodal points with anchor retail malls like Edendale. A Durban case revealed that "despite the poverty rate in these townships, consumer incomes in Durban's Inanda-KwaMashu-Ntuzuma (INK) areas are of the order of R3 billion" (Harrison et al., 2008:153).

The CEO of the Pietermaritzburg Chamber of Business disagreed that the Edendale Mall had not done a lot to change living standards in the area. He noted that, "the Edendale mall was constructed in isolation with the spaza shops". Thus, "quite a number of these spaza shops might have fared a lot worse since the major supermarket got into [the] township" (14 January 2012, KI7...OR). On a positive note, a municipal official was of the view that informal trading remains one of the major "backbones" of African economies. However, interviews with the informal traders in the area revealed that those who were trading in similar goods that could be brought in the mall have been losing sales. However, those that were engaged in other forms of businesses like pay-phones stated that their businesses have benefitted from the construction of the mall. An official in the GEDI office stated that, while it might be true that some local businesses have

been affected, joint efforts are made with the management of the mall to incorporate these local businesses.

According to (Lighthelm, 2006) retail development has always been an important element in the economic and social welfare of African communities. This is regardless of whether the retail system is formal or informal. On the issue of whether the development of the mall affects local businesses in the GEA, the manager of the Msunduzi Municipality's Department of Economic Development and Growth argues that some may have been affected but the impact cannot be quantified in comparison with the gains of the mall in the area (29 December 2011, KI2...OR). He pointed out that one of the gains the mall has brought to the area is that it has been able to give more than 300 community members that were unemployed jobs - which the spaza shops could not have done. The study document on the economic situation along the ENC indicated that businesses along the Edendale section of the corridor employed between one and five people (Isibuko SE-Africa, 2009:47). Going by the number of employees accommodated in the mall, it is safe to say that the mall has had an impact on unemployment in the GEA to some extent. This will have a positive impact on the living standards of people within the GEA as a whole. Moreover, respondents revealed that the development of this mall has given investors confidence in the improvement of the Qokololo Stadium node and created jobs.

#### **5.5.1.2 The Edendale-Northdale Corridor as a tool for a competitive City**

The nature of some areas outside the CBD and Northdale nodes makes it difficult for Msunduzi Municipality to generate revenue. This would help the city to fund reconstruction to redress apartheid legacies. The idea of the corridor idea is to promote economic activities along the corridor through Public-Private Partnerships (PPPs). In Europe, spatial development using development corridors shows a clear understanding of how the economic performance of regions which are lagging behind could be stimulated through the corridor idea (Egeraat & Sokoleds 2006:143). According to Van Egeraat and Sokol (2006:143), the linkages between European regions enable an increase in economic agglomeration and the competitiveness of the centres that were lagging behind. An interview with a key stakeholder revealed that the Edendale section of this corridor is cut-off from the other sections; as a result, the Edendale node suffered under-development. According to this stakeholder, there is a need for direct access, linking Edendale to

the N3, to foster economic investment within the Qokololo Stadium node, and create opportunities for people to work closer to home. He suggested that the pivot in the middle of the Pietermaritzburg CBD has not helped the development of Edendale and said that this pivot would be better before the city centre, perhaps off the N3 by the market exit at Mkhondeni (14 January 2012, KI7...OR).

The information gathered revealed that traffic congestion through the Pietermaritzburg CBD into Edendale does not encourage industrial development, which provides tremendous opportunities to improve living standards. The manager of the Chamber of Business pointed to the fact that accessing Edendale “through the city is quite a cumbersome journey due to the traffic within the city” (14 January 2012, KI7...OR). It would therefore make sense to improve access and link Edendale directly with the N3. As suggested by this stakeholder, there are potential opportunities for “warehousing, industries, light industry if not heavy industry to provide people with jobs close to where they live” along this route (14 January 2012, KI7...OR). Furthermore, the stakeholder was of the opinion that, while much emphasis has been placed on the retail sector in South Africa, this is not the case in China where more emphasis is placed on the manufacturing sector to balance the economy and create jobs (14 January 2012, KI7...OR)..

### **5.5.1.3 Skills Acquisition and the Corridor in Edendale**

According to the draft document on Imbali mixed use investment precinct, a study that is part of the ENC, about 39% of the GEA’s population has acquired secondary school education. Given modern industry’s need for skilled employees, this would make it difficult for GEA residents to get jobs; during the interviews many community members expressed concerns regarding the low level of skills in the area (Isibuko SE-Africa, 2009:24). In the Curitiba corridor project, it was noted that adequate training was a necessary ingredient for success. As part of its rehabilitation, Curitiba set up a mobile classroom that moves around the low-income districts to teach new skills which have enabled many to make a living (Rabinovitch, 1996:70). During the interviews, the researcher sought to establish if Msunduzi Municipality has plans for a similar programme. The municipal official that was interviewed in the Department of Economic Development and Growth stated that,

...we do not have the capacity for that kind of stuff, but certainly we can partner with ... FET colleges, DUT, the University and so on. That is the kind of stuff that is tailor-made for partnering with... We can barely provide skills for own workforce... Although we are involved in ... ICT rolling out those kinds of skills, it's a very slow process, but we have got one ICT in the center... In the project I know that there is a recycling project going on now... We've checked in Pietermaritzburg through our landfill sites, the waste pickers are earning between R2 000-R3 000 a month, they know the value of plastic, what is valuable what is not and metal and all those kind of things. It is dangerous work but they are earning a living (29 December 2011, KI2...OR).

However, the Chamber of Business stakeholder questioned the rationale behind abandoning the plan for an IT hub, which had the potential to boost skills training in the GEA. He attributed this to a lack of management (14 January 2012, KI7...OR). It was also revealed by many of the beneficiaries that participated in the Edendale node group discussion that the IT hub plan was important for skills development in the GEA, but the city abandoned the project. This seems to be the reason behind the request from the communities for an agreement with investors to establish a training centre or programme. A community member noted that, "we can have access to the jobs that will be proved [sic] but not be able to get them because of the shortage of the skills" (19 March 2012, GDEI...OR).

In respect to skills development in the Edendale area, it was gathered from the Edendale group discussion, that due to lack of skills,

...when the mall was built, we had some of our brothers and sisters working there but right now there is not a single person who was there during the construction of the mall but people from outside. You cannot tell me if you give a person a salary for three months you have given that person and their family [a] future. Yes the project will benefit people but not our people in the long term and on their socio-economic needs (19 March 2012, GDEI...OR).

According to the manager of the Edendale Mall who also participated in the discussion, a working environment like a mall does not require much skills and training. But many, especially the beneficiaries in Edendale, argue that the skills centre is about infrastructural development.

### **5.5.2 Chota Motala Interchange As Catalyst to the Northdale Node**

Improving traffic flow is an important strategy to improve the socio-economic environment of a particular area. However, in the case of ENC, the Northdale section is faced with serious traffic problems which hinder business growth in the area. Marrian (2001:8) states that efficient and integrated feeder routes for buses and taxis, with separate pedestrian walkways enable the free flow of traffic and ease of access for commuting. This could stimulate economic investment within the surroundings of the corridor which will lead to job creation (Marrian, 2001). In an interview with a company based in the Northdale node, the manager stated that the company has been doing business in the area for more than 20 years. The manager had explained that the traffic within the area was an impediment to business growth. Given the area's industrial status and the cheap goods that are always available, the improvement of this corridor is crucial for business growth in Northdale. According to the manager, people come all the way from Botswana, Lesotho and Swaziland to shop in this area. Similarly, a stakeholder in the CBD observed that this corridor would have a significant impact on business growth within the Northdale node (11 January 2012, KI6...OR). While people come from other countries to shop in Northdale, people from Hayfields and Scottsville in Pietermaritzburg avoid shopping in the Northdale area due to traffic congestion (29 February 2012, KI9...OR).

**Figure 5.9** Improvement of Chota Motala interchange and corridor in the Northdale node



**Source:** Researcher (2012).

The ENC document indicates that the corridor section of Northdale area will undergo major improvements due to the already developed nature of the area. However, development within the Northdale node will focus on improvement of traffic flow along this corridor (Msunduzi Municipality 2006:77). Another study document on the ENC argues that the Northdale section of this corridor is the most integrated section in terms of mixed-use development (Iyer Rothaug Collaborative, 2005). The document suggests that the Municipality collaborate with the provincial and national government to improve the Chota Motala Interchange along this corridor since it has an impact on the traffic flow along the N3 provincial corridor (Msunduzi Municipality, 2009). On this note, the ongoing improvement of this interchange with the corridor section in the Northdale is seen as a welcome development.

According to the respondent from the company in Northdale, this improvement will help the delivery of industrial goods from Northdale, and,

...whereas it was taking 45 minutes to get to town it will take 20 minutes, let's hope it improve people's life. If you look at people from Hayfields, Scottsville they [are] reluctant because of this traffic but with this new interchange and free follow of traffic people would love to come here because of the cheap price and business will grow ... (29 February 2012, KI9...OR).

The respondent continued that before the improvement of the interchange, their company delivered products to clients using the N3 corridor *via* Edendale due to traffic in the Pietermaritzburg city centre. The Chamber of Business stakeholder agreed that there is a need for a direct link from the N3 into Edendale due to the traffic in the CBD. However, the company manager in Northdale viewed the improvement of the Chota Motala Interchange as a way of resolving the traffic problems in Northdale and improving business (29 February 2012, KI9...OR). The field observation revealed that the improvement of this corridor from the Chota Motala Interchange towards the Northdale node at the Old Greytown and the New Greytown intersection runs on a four lane dual carriageway. The section of the corridor running into the CBD runs in a four lane dual carriageway as well, terminating at the edge of East Street. Based on the field observation, the traffic problems would appear to be resolved in the area of the interchange, but after the interchange there will be traffic congestion due to the narrow lane moving towards the City Hall or municipal offices. One of the senior managers the researcher spoke to on a visit to the Group 5 site in Northdale, stated that their job was to solve the problem around the interchange; anything outside that will be taken care of by the municipality.

In the Northdale area, the beneficiaries stated that traffic congestion in the area affects economic growth and that the location of the city's socio-economic areas makes it difficult for the poor and unemployed to survive. The beneficiaries stated that that even though the Eastwood and Willowton industrial areas are located in the northern area, there are many unemployed youths in Northdale and government is not doing enough to solve this problem. They criticized the fact that government allowed industries and companies that were located in the area to leave without making any efforts to retain them. The relocation of these companies has increased unemployment in the Northdale area. However, it was also noted that there is a lack of industries that can create large number of jobs. Part of the problem is that information on job openings is

not readily available; the city's youth centre is not performing in line with expectations (21 March 2012, GDNI...OR). It was on this note that one of the community members stated that there is a need for some of the municipal facilities to be decentralized. Many of the beneficiaries believe that the corridor initiative is a step in the right direction which will bring about job creation if the municipality seeks the opinions of local communities.

According to Dewar (1994:238) decentralization is achievable through the net flow of people, since urban energy is expressed largely in terms of the flow of people, goods and investment. The energy driving the flow determines the distribution of the most intensive activities, such as economic enterprises, commercial facilities, social and cultural events and so on, which are dependent on high levels of public support for their existence. Significantly, these potentials could be enhanced through the flow process; when this flow is broken into various points the results usually generate shopping and gathering. In turn, the cluster will strengthen local economic establishments and the expansion of development beyond local areas. In the Northdale area, beneficiaries stated that they have to travel to the CBD to access many social services. The South African Social Security Agency (SASSES) offices are far away and the Home Affairs mobile offices do not visit their area. The officials at Home Affairs are too busy to attend to their needs. Many confirmed they had travelled to town for three consecutive days without been attended to despite the fact that they are unemployed and can ill afford the transport costs.

### **5.5.3 Inner City Regeneration as Catalyst for the Central Area**

The CBD is normally the commercial, historical and institutional heart of a city. Activities spread out from there to other growth points. Curitiba's CBD was overpopulated, and it wanted to preserve the city's cultural heritage. The corridor approach was used to address congestion in the city; this resulted in less traffic and enabled the city to widen some avenues and convert them into an open-air pedestrian malls and walkways (Rabinovitch, 1996). All the study respondents felt that the Pietermaritzburg CBD is overpopulated and that other nodes should be developed. Many of the beneficiaries in this node expressed the view that there is little room for major developments; however, changes will be visible in other nodes. In contrast, a planning professional argued that Pietermaritzburg's CBD is not necessarily congested, but is very disorganized, with lots of vacant premises (9 March 2012, KI5...OR).

Nonetheless, during the field observation, it was observed that the CBD does suffer from traffic congestion during peak hours. No vacant buildings were evident along the corridor within the CBD on Church Street. However, it was obvious that buildings at the end of the CBD corridor section in Church Street linking the Edendale corridor section are in need of rehabilitation. Many of these buildings house commercial businesses on the ground floor, while the upper floors are vacant. One stakeholder argued that, in order for investors to be attracted to the CBD, there needs to be a favourable environment. He was also of the view that the CBD is disorganized and in need of rehabilitation. He observed that, “there is a need for refurbishment of buildings and when these buildings are refurbished there will be competition which will attract more people to this inner city” (KI6 11 January, 2012...OR).

**Figure 5.10** Buildings in Pietermaritzburg’s CBD



**Source:** Researcher (2012).

An interview with a business informant and a group discussion in the CBD revealed that there has been a decline in business within the central area as businesses move out of the city. The commercial sector, which generates many jobs, has drifted to the suburbs, creating problems for commuters. A community stakeholder stated that one of the major problems facing the CBD is overpopulation, which has led to a shortage of accommodation and the development of informal

settlements at the edge of the corridor in the CBD linking the Northdale section. The beneficiaries were of the view that “the provision of adequate accommodation in the CBD would improve living conditions in the city and create a more healthy environment; at the moment, there are too many people living in one apartment; such an environment will discourage investors” (29 March 2012, GDCBDI...OR).

## **5.6 The Challenges of Implementing the Edendale-Northdale Corridor**

### **5.6.1 Infrastructure Challenges**

The fact that Msunduzi’s infrastructure is central to the growth of economic development is well understood by the city’s policymakers. The focus appears to be on infrastructure (transportation, roads, electricity, water and sanitation), which have been seen as essential to promote economic development within the city. The Msunduzi Municipality Integrated Development Plan (2009-2010) has confirmed that there is a challenging backlog of infrastructural development within the Municipality. This is the result of apartheid policies and the incorporation of formerly isolated townships during local government restructuring. As a result, the city has struggled to address the services backlog in the city.

### **5.6.2 Transportation Challenges**

Given the substantial distances between many residential areas and social and economic activities in the city, an efficient transport system is perhaps one of the biggest challenges facing the municipality. The Msunduzi IDP notes that infrastructural backlogs affect investment in the city, especially in the transportation sector. This was the rationale behind the public transport cordon counts conducted by ARUP (2006a). An analysis of these counts revealed that the “major mode of public transport within the Municipality is the minibus-taxi, used by 87% of commuters, while 13% use buses” (Msunduzi Municipality 2006:17). The interviews conducted for the present study confirmed that the minibus-taxi is the predominant form of transport in the city; stakeholders added that employment opportunities are mainly concentrated in the CBD or Willowton Industrial Estate. Transport connectivity to this employment area has always been a problem. In the Edendale area, which many pointed out was isolated during apartheid there are few employment opportunities and social activities. People gravitate to the CBD in search of

jobs and to access social activities and to the Northdale area for cheaper shopping and employment opportunities.

An interview with a senior staff member at a company along the corridor between the CBD and Northdale confirmed that many of their employees come from the Edendale area. However, it is likely that majority of these jobs are unskilled jobs which do not pay enough to cover their transportation costs. The literature review revealed that more than 70% of people living in the GEA earn R1 600 a month (Iyer Rothaug Collaborative, 2005:16). This suggests that even though many may be employed, their income does not allow for a decent standard of living, especially when transportation costs are taken into account. The manager of a company in the Northdale area stated that the ENC will help solve the city's transportation problems. According to another informant, the ENC will facilitate the restructuring of the city and foster connectivity between the various nodes along the corridor. The city's recently-announced plans for a bus system could alleviate many problems within the GEA. However, careful negotiations will need to be held with the taxi associations to avoid the kind of problem experienced in Johannesburg, where taxi associations protested against the launch of a new bus service (11 January 2012, KI6...OR).

A business manager in the Edendale node revealed that there are also individuals from Northdale that work in the Edendale area. Improved public transport along this corridor will enable the effective movement of people between Northdale and the Edendale area. This will foster business growth that can create employment opportunities. The manager argued that due to the cost of transportation and the delays associated with Kombi taxis, many of his company's staff prefer to travel by private cars in a lift-clubs; this is cheaper and faster (28 February 2012, KI8...OR). Furthermore, connectivity within these nodes is not the only transportation problem. At the new Edendale Mall, the manager and tenants stated during a group discussion that route and connectivity problems affect the mall's business, especially relating to people living in the Imbali area. However, one of the participants in the group discussion who lives in Imbali area wondered why one would have to use two taxis to get to the new mall, due to its close proximity. Discussion participants urged the municipal authorities to address these issues of transportation

in consultation with the taxi associations in order to facilitate business growth in Edendale (10 January 2012, GDEM...OR).

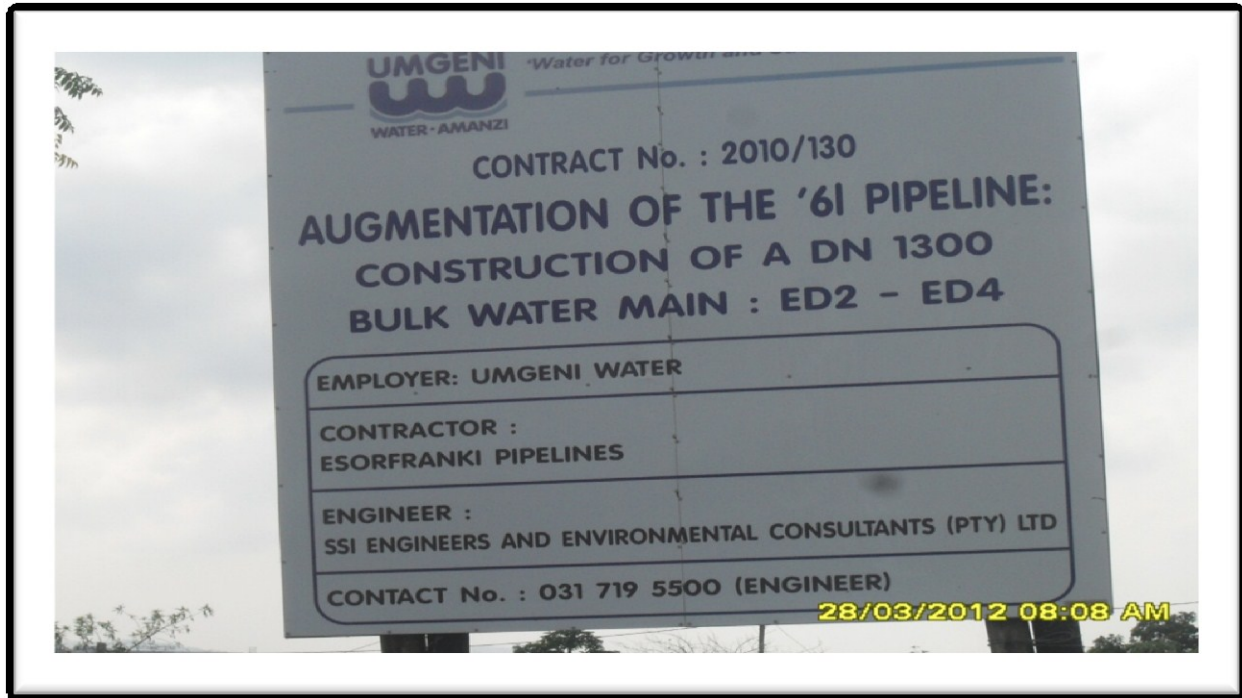
Beneficiaries in the Northdale node expressed similar viewpoints. They noted that the municipality needs to develop an effective transportation plan in consultation with the taxi associations that would enable those living on the outskirts of the ENC to use buses (21 March 2012, GDNI...OR). The Northdale beneficiaries also noted that Edendale Hospital is the only government hospital in the municipality where eye specialists are located. They added that sick people have to first travel to town before boarding another Kombi taxi to Edendale. Should the person be seriously ill, they could die before they reach the hospital. A community member that spoke during the discussion wondered why the municipality and provincial authorities cannot develop the same system as operates at Grey's Hospital, also located in Msunduzi Municipality on the outskirts of the Pietermaritzburg CBD: "In Grey's Hospital I go there and there are buses that bring patients from Newcastle, Ladysmith, Richmond and Underberg, why can't they have the same system running here" (21 March 2012, GDNI...OR).

### **5.6.3 Water Infrastructure Challenges**

The importance of water for socio-economic development is globally recognized. However, increasing populations and industrialization have put strain on the delivery of water for various uses. There are challenges with water provision in Msunduzi Municipality. The city's IDP attributed these to the apartheid administration (Msunduzi Municipality, 2009-2010). Post-apartheid, the city has been working towards providing a clean water supply to households and industries in the Municipality. The IDP noted that, despite the challenges, a lot has been achieved. During an interview, a stakeholder pointed out that water is one of the biggest challenges facing the Edendale section of the corridor. He argued that this was as a result of the apartheid administration which isolated the GEA from the main city. He added that, "the incorporation of GEA into the economy of the main city has been a matter of deficiency to the extent that enough effort has not been made to incorporate the GEA as an important part of the city" (14 January 2012, KI7...OR). Nonetheless, within the Greater Edendale Area (GEA) there has been adequate provision of water infrastructure since the end of apartheid. There is potential to supply water to any development on site. Personal observation confirmed that water is

adequately provided to the GEA's households and companies. It was also established that the Municipality is committed to providing clean and affordable water, particularly to the GEA due to the legacy of apartheid. Several water projects are underway in the GEA.

**Figure 5.11** Bulk water infrastructure under-construction in Edendale corridor area



**Source:** Researcher (2012)

A business stakeholder in the Edendale corridor noted that there is adequate water for use in their factory and assumed that the same could be said for nearby communities. However, he expressed concerns regarding maintenance; old water infrastructure in the GEA has resulted in several leakages (28 February 2012, KI8...OR). While this might appear to contradict the literature, which confirmed that efforts have been made to provide water to the GEA since the demise of apartheid, it should be noted that this company has operated in the area for 66 years, which explains the worn-out water infrastructure in its vicinity. However, this will discourage investment if it is not addressed. An official from the Municipality stated that, in line with its commitment to attracting investors to the area, efforts have been made to overhaul the older water infrastructure in the area, but this cannot be achieved overnight. Improvement of water services in the GEA is part of ongoing plans. In the Northdale area, community members felt that

there is adequate provision of water and believed water would not pose a problem to development within the area.

#### **5.6.4 Challenge for Waste Management in Msunduzi**

Waste generation is a global issue; waste is an unavoidable outcome of human activities. Rapid urbanization exacerbates this challenge. Waste management impacts negatively on the Msunduzi Municipality's efforts to attract investors in order to bolster social and economic development. During the interviews, various stakeholder interviews questioned why the city is facing such severe problems in this regard. As the 'city of choice', Msunduzi should lead by example in the full knowledge that sanitation is key to development. Furthermore, adequate sanitation obviously promotes a healthy environment and economic productivity. The beneficiaries confirmed that waste and sanitation have been a challenge for a city that was known for its cleanliness. According to the Northdale community, the piles of rubbish all over the city are alarming and would not encourage an investor. They felt that inefficiency in the waste management department could be at the root of this problem.

As noted in chapter three, the Msunduzi IDP stated that waste collection is a challenge as a result of apartheid policies and inadequate levels of staffing in the waste department also contribute to this problems (Msunduzi Municipality, 2009-2010:129). This impacts seriously on the city today, especially in the light of the influx of people into the city. In the Northdale node, the community members said that they understand that the past planning system still haunts the city; nevertheless the waste department has failed to keep the city clean. Community members said that, "we have dump truck coming to fetch rubbish once every two weeks or every three weeks creating problems, very inconsistent and within four days you got maggots everywhere around this place of rubbish whereas you find kids playing everywhere"; "most of the time you find that the central waste come around after some time and not during the time that the waste should be taken"; "One thing I would say for our area is that our councilor have [sic] been fighting for them to take this away, there is even a community initiative that have started where the community is volunteering to clean up our area, every Saturday there is a [sic] voluntary services that happens in our area with community members trying to keep our area clean without the assistance of the Municipality" (21 March 2012, GDNI...OR). In the CBD community members

also bemoaned the state of the environment and noted that rubbish was strewn all over the city. The disabled person among the CBD group complained bitterly about the state of the walkways in the city, which is an obstacle to the free movement of the disabled.

According to (Kelly, 2010) development corridors are usually seen as gateways into a city. With this in mind, it is important that corridors are always clean. It is further argued by Kelly that first impressions are very important in attracting residents and investors that are willing to create jobs in the corridor. As such, waste and sanitation form part of the major core of developing a corridor. However, this was not the case along the ENC; community members stated that attracting more investors along this corridor will require cleaning up the mess and creating a pleasant environment. It was revealed that waste problems in the city became worse after the Msunduzi Municipality waste management workers' strike in 2010. This strike exposed the understaffing of the waste department. According to a group discussion member, the waste problems got so bad that he called the department's offices several times with no reply. When he eventually got through, he discovered that the manager of the depot doubles up as a waste truck driver (21 March 2012, GDNI...OR). This shows that the department is understaffed and overworked and will not be able to deal with waste collection which is increasing as the population of the Municipality grows.

Observation in the field revealed that waste disposal is a common problem in the well-developed sections of the Municipality; this does not mean that it is not an issue in the developing parts of the city. In the Edendale road corridor, there were no complaints about waste, but field observation uncovered refuse dumps on some vacant land. Again, the isolation of the GEA during apartheid seems to have created unplanned development, with vacant land close to the residential areas and along the corridor for people to dump their waste. A municipal official stated that people must take ownership of development within their area which will help further development and employment creation. In his view, the case of the newly developed Edendale Shopping Crossing has not been encouraging as the communities living close to the area have used this shopping centre as a dumping ground.

**Figure 5.12** Uncontrolled waste disposal along Edendale-Northdale Corridor



**Source:** Researcher (2012).

Along the corridor in the city centre and Northdale section, rubbish lies everywhere, creating an unpleasant setting that will not promote the objectives of the corridor. What is needed is a change in individual attitudes, which will require education on waste disposal not just along the corridor, but in the Municipality as a whole. According to a discussion group member in the CBD, people need to be educated not to throw rubbish on the streets. This community member felt that the city could learn from Singapore which, like Msunduzi, was one of the filthiest cities in the world. Street policing was introduced and people caught throwing something on the street were fined an equivalent of R500 and jailed for not paying the fine (29 March 2012, GDCBDI...OR). The field observation revealed that insufficient waste bins along the corridor contribute to the dumping of waste. The *Public Eye* newspaper reported the views of the newly-appointed Mayor of the city on the state of waste collection within the city. In the Mayor's view, as reported by *Public Eye*, the new administration inherited enormous problems regarding waste, but efforts have been made towards resolving these problems. The Mayor apologized for the erratic collection of waste stating that the waste department would henceforth "...fall under the urban renewal project to be managed by the office of the Mayor" (Public Eye, 2012:3).

### 5.6.5 Road Infrastructure Challenges

Road networks impact on economic and social development in any society. Industries prefer to locate in areas that have ease of access for easy movement of freight. The ENC is believed to be a tool that can foster development and create employment opportunities closer to home for the unemployed population. A key challenge for the Municipality is improving road access in some part of its jurisdiction. The report on the ENC study states that the majority of the roads into the Edendale corridor need improvement; many are still gravel roads (Iyer Rothaug Collaborative, 2005). A stakeholder confirmed during an interview that many bus and feeder routes that are used on a daily basis in Edendale are gravel. The condition of these roads has been an impediment to development and has contributed to delays in public transport. The Municipality therefore needs to upgrade these routes in order to promote access to various socio-economic opportunities and attract more investment in the area (11 January 2012, KI6...OR).

**Figure 5.13** Nature of feeder roads in the Edendale corridor section



**Source:** Researcher (2012).

A planning professional acknowledged that the GEA was seriously disadvantaged by the apartheid administration and that the Municipality is committed to addressing this problem through the corridor initiative. According to his view, key nodes were identified to address the socio-economic problems of the GEA closer to the area. However, for this to be achieved there should not be too many nodes along the corridor; the focus should be on the key nodes to attract the kind of concentration that is needed. He argued that the majority of the population lives inwards of the corridor, not directly along the corridor. Information gathered from the literature did not concur with this informant's perspective. In contrast, it was found that about 18.4% of the Municipality's population falls along the ENC, which makes the corridor important in the reconstruction of the city (StatsSA 2001). Further discussion with the informant confirmed that the location of the Edendale key node (Qokololo Stadium node) makes it difficult for some districts within the GEA to access transport to the node.

According to this planning professional, the densely populated part of the GEA consists of the Imbali ABM outside the corridor. The roads that lead to this node (Qokololo Stadium node) do not constitute well enough the intersection required to identify a node. As such, Imbali residents will need to go backwards to get to the node at the Stadium node intersection in Edendale. He argued that the ease of access to transport of middle-income employees living Imbali to the city centre to shop has discouraged movement to the Edendale Stadium node, the location of the Greater Edendale Mall. Even though Imbali is close to Edendale, there is a lack of connecting buses to the Greater Edendale Mall. This means that the middle-income groups in Imbali that the mall relies on for daily business have to spend more to reach the mall. The roads will need some realignment for the location to work efficiently; the development should be on one quadrant of the location. Field observation confirmed that development is on-going on two of the quadrants. First-hand information reveals that the development of the adjacent quadrant of the node to the Greater Edendale Mall was politically motivated. However, the professional planner explained that this development on the two quadrants of the Stadium node poses the threat of serious accidents, as shoppers have to cross a major highway. He was of the view that the second quadrant of the Stadium node, where the Edendale Crossing Centre is located, should rather be developed as a service sector (9 March 2012, KI5...OR).

The group discussion with shop managers at the new Edendale Mall situated at the stadium node revealed that it is difficult for Imbali residents to access the mall, which makes it difficult for them to meet the monthly targets (10 January 2012, GDEM...OR). It is obvious that this problem is associated with the taxi association which controls the route. Informal traders in the Edendale area confirmed residents from some parts of the GEA have serious problems getting to the Qokololo node. These traders were of the view that if the residents of Imbali were able to access the node more easily, their businesses would benefit (12 March 2012, GDEIT...OR). Observation during field work revealed that many Imbali residents prefer to go directly to the CBD from Imbali, because it is cheaper. According to the people the researcher was able to speak to those living in some parts of Imbali have to take two or even three taxis to reach the Edendale Mall. Reaching the CD requires only one taxi. These problems were not experienced to the same degree in the Northdale and CBD nodes, although, as noted previously residents in some neighbourhoods do have problems accessing the corridor. A municipal official argued that the city will need to rethink the issue of one-way movement within the city. Currently, many roads within the CBD are one-way but with the increasing population, there is a need to develop a new concept of movement which will enable an efficient flow of traffic to reduce congestion during peak hours (29 December 2011, KI2...OR).

#### **5.6.5.1 The Importance of Rail Infrastructure**

Railways and roadways are the two kinds of transport infrastructure commonly found along corridors. The railways have an advantage over the roadway system due the large volume of people and heavy loads they can carry over long distances. Furthermore, rail-lines are usually free movement areas, whereas transportation by means of roadways encounters various form of traffic congestion. Many cities, townships and rural areas in South Africa are linked by a rail-line. While some believe that this was an apartheid approach, with today's ever-growing population, there is potential for the development of an intermodal development corridor to redress the ills of apartheid and enable the free flow of movement. The state rail infrastructure in the country has been of concern to both government and passengers. The ENC has rail-lines with four stations that have the potential to boost the development of this corridor (Iyer Rothaug Collaborative, 2005). Group interviews with beneficiaries established that people would appreciate an efficient rail transport system. It was stated by many in the Northdale node

discussion group that rail transport can benefit the area. As noted, although the rail-line in the Northdale area does not run parallel to the corridor, the area is associated with heavy traffic congestion and this could be a way of decongesting the road along this route (21 March 2012, GDNI...OR).

According to personal field observation, the Edendale section of the ENC has a rail-line running parallel to it; this was also noted by consultants in the study document. Although the participants in the group discussion said that there is a demand for rail transport, it is obvious that little or no emphasis is placed on rail transport in the city. Many pointed out that the rail-line through the Woodlands running to the rural areas of the Municipality only carries goods; they pleaded with the authorities to get this rail-line functioning better to carry passengers to help ease traffic along the Northdale corridor section (21 March 2012, GDNI...OR). This rail transport issue in the Northdale corridor area is also a similar case in the Edendale section of the corridor. However, it is not clear from the community members if there is a high demand for rail transport in their area but many see rail transport as a means to the end of traffic in the city. A stakeholder stated that part of the unemployment in the GEA can be addressed by linking Edendale and the industrial part of Northdale through a rail-line (14 January 2012, KI7...OR). In another view, a municipal official was of the same view and stated that this would yield further opportunities within the city and boost productivity (29 December 2011, KI2...OR). Meijers (2007) argued that the polycentric city model in an urban setting advocates for a linkage of the CBD with the suburban satellites. Priemus (1994) confirms that linking these areas through the corridor development approach creates possibilities for regional economic growth. The views expressed in the interviews concur with those in the literature.

#### **5.6.6 Challenges of Land along the Edendale-Northdale Corridor**

Historically, land has been at the centre of many challenges facing South African society. Land challenges can hinder development. In the former homelands and townships, land is not always readily available to investors. Land use control in the Curitiba development corridor provides a good example of how to approach land issues along a corridor. It was driven by the need to achieve land use and density that will enable urban growth and the utilization of public transport. One of the successes of the Curitiba development was the land audit undertaken to establish uses

and owners of the land. This enabled the authorities to acquire land for low-cost housing and development along the corridor (Rabinovitch, 1996). According to beneficiaries in the CBD, land remains a problem in the success of the ENC. In the Vulindlela ABM in the GEA, land is not individually owned, and communities do not have title deeds for the land they occupy. Land within this area is owned by the Ingonyama Land Trust and this hampers the social and economic development of the area.

During an interview, communities in the GEA confirmed that there would not be a problem with the sale of land in their area, because selling land to developers would create employment opportunities and improve their lives. However, a community member in the Edendale group discussion stated that “land is an asset to the community and investors are profit-driven and they sometimes forget about the community once they get hold of the land” (19 March 2012, GDEI...OR). In order to prevent this, the community member suggested that agreement be reached with investors that they have a programme for skills development, because investors will surely need skilled employees. Economic development in townships like in the GEA has often sidelined community members. This is chiefly due to a lack of skills. The community members noted that youth in the area are offered unskilled jobs in the developmental stages in their area, citing the new Edendale Mall as an example. At a later stage when the development is complete, community members find it difficult to gain employment. Similarly, a stakeholder viewed the issue of land in GEA as a problem and stated that this has hindered economic development in the area.

According to (14 January 2012, KI7...OR) the problem in the GEA is that land owners do not want to sell because they believe the investors are out to make profit, not to promote development. This informant cited the case where Spar was unable to acquire land to develop a supermarket in Edendale for many years; this would have created many jobs in the community (14 January 2012, KI7...OR). This stakeholder agreed with the community members that investors are profit-driven, but was of the view that for land to become available to investors, the community needs to understand how they will benefit. It was noted in chapter two that the objective of the Curitiba development corridor was not just to make profit, but to develop the community. The development of the corridor provided the community with a skills training

centre which was implemented through mobile classrooms that taught skills throughout the district of Curitiba.

### **5.6.7 Investment in Housing and Accommodation**

“One of the most important elements of corridor development are employment, housing and transport connections between these areas” (Turok, 2001:2350). In post-apartheid South Africa, many cities face ever-increasing demands for housing, which ANC the government’s RDP housing programme has been unable to meet. “Housing problems have been the focus of public and community organizations due to the growing population within cities” (Turok, 2001:2368). The interviews revealed that housing is a significant challenge facing Msunduzi Municipality, with informal settlements having been established on the fringes of economic areas. According to the officials interviewed the housing problem is particularly acute in the Edendale area. Solving these problems will require long-term commitment from the municipality. The literature notes that concentration of housing along a corridor enables public transport. Brooks (2010:8) noted that “the benefits of TOD extend beyond facilitating freight movement. This concept can also promote social equity and economic opportunities, cost savings and environmental benefits. This specifically refers to a model that incorporates mixed-use development and integrates residential neighbourhoods with quality public transportation operations”.

According to a municipal official, the approach to housing development in the past was an unsustainable one that failed the city. For example, in an area called France within the municipality, the city had built more than 1 600 housing units:

Since these was [sic] built for people in the working class or low-income, some of them sold these RDP houses and now stay in the informal settlement around town (11 January 2012, KI...OR).

The question is whether this was due to the fact that this housing was built in isolation from social and economic activities. Turok (2001:2369) studied a similar case in Cape Town and confirmed that occupants have sold their RDP houses due to lack of economic opportunities in the area and service charges. A municipal official who was interviewed was of the view that these houses were built far from employment opportunities and social activities, prompting

people to move back to the informal settlements and shacks on the fringes of the city. Field observation revealed that the appalling state of housing along the Edendale corridor, characterized by haphazard development. According to KI11, the idea of mixed-use development on the identified nodes is incorporated in infill development where the municipality plans to develop good housing units. The official stated that there are ongoing housing projects in the GEA, although not along the corridor. This will discourage urban slums, because people will have employment opportunities and work closer to home (11 January 2012, KI...OR).

In the Edendale node, the manager of one of the oldest business in the area (the company has been operating in the area for 66 years) said that apartheid subjected many people, especially in the Edendale area to poor housing. The company does not provide housing or housing loans to its employees. However, individual employees have formed a housing club that provides money to help them purchase a home (28 February 2012, KI8...OR). The GEDI official in Edendale revealed that one of the Municipality's efforts to redress apartheid is geared towards providing houses for many in the GEA. According to this official, there are many informal settlements in the GEA, not immediately along the corridor, but adjacent to it. These informal settlements like Dambuza and Caluza have been identified by the executive committee of the Municipality as priority projects for housing. Applications for subsidy funding to develop these settlements have been lodged with the Department of Human Settlement and layout plans for these areas have been completed in line with national housing and sustainable human settlement policies (12 January 2012, KI3...OR). Further information from the GEDI informant revealed that different types of housing plans were designed for these areas to suit different categories of inhabitants. The options include "flats, one house and one site situation". Roads, health and education facilities and open spaces have also been provided in both Dambuza and Caluza (12 January 2012, KI3...OR). These social and economic facilities will ensure that people no longer have to travel far from home to work but will be within walking distance of jobs.

**Figure 5.14** Informal housing along the Edendale-Northdale Corridor



**Source:** Researcher (2012).

Another informant from Msunduzi Municipality stated that there are haphazard unplanned housing developments along the Edendale section of the corridor. He added that,

Driving along the Edendale road to the most densely populated areas in the city you find toilets right on the edge of the road (29 December 2011, KI2...OR).

According to this official, the Municipality hoped that upgrading the East-West corridor would result in houses being provided to people living in such unplanned settlements. The GEDI official added that there are at least five housing development projects that are ongoing in the GEA (29 December 2011, KI2...OR). Although efforts have been made to address housing in the GEA and to ensure that residential areas are close to work opportunities, it remains to be seen whether this problem will become a thing of the past, due to land challenges in the GEA. According to a provincial official, development corridors are viewed as a tool to undo the separation of workplace and housing by concentrating mixed-use activities along corridors. As

such the provincial government is committed to assisting municipalities within the province with funds and expertise to develop such corridors. But with the ENC, the challenge is for the municipality to address the “security of land tenure which will assist in opening up housing development in the whole area” (KI4 2012). As noted previously, other stakeholders also pointed to this challenge.

In the Pietermaritzburg CBD and the Northdale nodes, municipal officials did not respond to questions *vis-à-vis* housing problem. However, beneficiaries in the two areas disclosed their views. Many in the Northdale node were of the opinion that housing development in the municipality is now taken place in the GEA, with the Northdale area being neglected (21 March 2012, GDNI...OR). This was also the case in the central area, but many of the people in this area accepted that the GEA had been disadvantaged and deserves attention. However, it was disclosed that accommodation is a problem in the central area due to the high number of people coming into the city (29 March 2012, GDCBDI...OR). The Msunduzi SDF stated that the relocation of government offices to Pietermaritzburg as the capital city of KwaZulu-Natal Province put stress on the city’s infrastructure, including housing (Msunduzi Municipality, 2009). According to Msunduzi Municipality (2012:1) the long-awaited multi-million rand social housing project planned for the Grange area is set to address housing challenges within the city. Furthermore,

The housing development will help to address the city’s housing backlog, build a new rates base, create more job and business opportunities for the area... (Msunduzi Municipality, 2012:1).

One of the observations made is that recent housing projects have been focused outside, rather than inside the corridor. The major problem facing Edendale inhabitants is poverty; this requires infill development where housing projects are located close to economic and social activities. The inadequacies of the city’s transport system were pointed out by many stakeholders. People who live far from the corridor will have difficulty accessing it by means of informal public transport. It was noted that the issue of routes compounds this problem, with people in some areas finding it difficult to access taxis that take them where they want to go.

## 5.7 Policy and Intervention

Interviewees identified the policies adopted by Msunduzi Municipality as serious impediments to investment. These policies refer both to the approach to levies, and the attitude towards investors and existing companies in the city. Indeed, it was noted that existing investors are looking to relocate to other areas. This will swell unemployment statistics. Six informants and community members in three of the nodes mentioned that many projects had been abandoned in the city. In the case of the Edendale node, a municipal official revealed that projects are sometimes abandoned due to destruction by the communities. It was noted that the city started constructing a leisure complex in Edendale, but each time material was dispatched there it went missing, even with security in place (29 December 2011, KI2...OR). Thus, the municipal official was of the view that people must take ownership of their own lives. According to a stakeholder from the Pietermaritzburg Chamber of Business, the Municipality neglected the existing economic investment in the city. This was due to a lack of understanding of local economic development:

...What happened in Msunduzi over the years was that the existing generator of the economy was quite substantially alienated because the municipality really didn't pay sufficient attention to businesses that were already there (14 January 2012, KI7...OR).

It was also found that consistency has been a problem in many projects in the city. According to the same stakeholder,

There is no respect for continuity anymore. So any time we get an election and there is change [sic] in personnel ... we all expect that everything is going to change because they go into denial about everything that has been done before and I mean that doesn't make sense to me because it is the same political party for goodness sake for the most part and you would think the opposition has gotten into power (14 January 2012, KI7...OR).

Even though the researcher was unable to interview the City Manager, who would have given insight into his plan for the ENC project that was identified long before he came to office, all the municipal officials stated that the project is a priority for the city. The plans for the city's bus

system show that there are intentions to achieve this corridor. On the other hand, a consultant employed by the city that carried out studies on spatial related issues viewed planning as an integral part politics. For this reason,

I think the main thing will be, because most of the decisions are taken politically and it's important to get a political buy in and you can only get that by training the councillors on what the objectives of a corridor development are, the benefit... (11 January 2012, KI6...OR).

The beneficiaries stated that the success of the ENC will depend on the municipality's adoption of a proper strategy to transport the people living outside the corridor. It was understood that the ENC should be able to solve the problem of the routes governing the taxis in the municipality so that residents can easily use the bus system that will be developed to gain access to employment opportunity or social activity areas. According to a professional that played a key role in this project, some of the proposed plans for this project had already been ignored. Thus, for the ENC to work efficiently, the city must develop limited nodes which will enable a concentration of the population and the efficient operation of the bus system (9 March 2012, KI5...OR).

Several informants and stakeholders revealed that land might pose a serious problem for the project. They stated that the municipality needs to develop a suitable mechanism to make land available to investors. As noted earlier, the GEDI proposed to acquire land from the communities. KI 7 (2012) argued that the GEDI has not functioned the way it should and does not have the kind of money that would enable it to acquire this land. According to this stakeholder,

I know for example that Spar wanted to build a super market in Edendale but they couldn't get land, they couldn't persuade any of the owners to sell it (14 January 2012, KI7...OR).

Many argue that the biggest challenge to the implementation of the ENC will be funding. According to a provincial official, the main reason for the reconstruction of the city is to integrate the major townships that were isolated by the apartheid system from the main city. However, the challenge to the corridor in the Edendale area is that "slow progress may result in

stakeholders losing hope” (1 April 2012, KI4...Email). Similarly, an official stated that even though money will be a problem there is still a need to develop a step by step plan for the project, which will enable its success. Importantly, the provincial official confirmed that,

The formation of GEDI as an agency to facilitate development has assisted in facilitating linkages with the private sector and with international donor agencies such as the EU and World Bank. Some projects being targeted for development are donor funded. Working closely with the BESG has assisted in identifying potential partners for support in the implementation of the Greater Edendale development linked to the corridor (1 April 2012, KI4...Email).

These funds could be managed and invested to create an enabling environment which will attract investors that create job opportunities for the unemployed. The funds could also be used to acquire land, since land has been seen as a problem facing the project.

## **5.8 Conclusion**

In conclusion, this chapter has examined how the ENC can be used to effectively restructure the city, particularly its township areas, in order to foster economic development along this corridor. It argued that the success of this corridor development requires the adoption of appropriate practices which are capable of addressing local challenges in order to attract investment that will create job opportunities. The main concerns of the ENC include integration, infrastructure development, socio-economic improvement, transportation and access. All these factors prompted the need for a proper alternative approach to the reconstruction of the city. The next chapter presents a summary of the findings, conclusions and recommendations.

## **CHAPTER SIX**

### **6.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **6.1 Introduction**

This chapter presents a summary of the findings, a conclusion and recommendations drawn from the previous chapter as informed by the analysis of data gathered from the field. The main objective of this research study was to establish how the concept of a development corridor can be implemented to promote economic growth along the Edendale-Northdale Corridor (ENC). This is based on the premise that the ENC has the capacity to play an important role in reconstruction of the apartheid city of Pietermaritzburg, in pursuit of the broader integration of the larger metropolitan Msunduzi Municipality that will promote economic development. The characteristics of the ENC were measured against the principles of polycentric theory in chapter five. It was found that the ENC possesses the principles that underpin polycentric theory. Underlying problems relating to the spatial separation of the city were also identified and an attempt was made to determine the extent to which the ENC as a corridor may contribute towards urban reconstruction in Msunduzi Municipality.

#### **6.2 Summary of Findings**

It has been noted that corridors and mixed-use development can promote social equity which, in turn, will benefit low-income groups, improve public transport, reduce social segregation, and provide improved access to facilities and the reconstruction and regeneration of inner cities in South Africa (Burton, 2000b). The discussion below summarizes the findings of this research study.

##### **6.2.1 Lack of Efficient Public Transportation System**

It was identified that Msunduzi Municipality has struggled with an informal system of public transport which has been a problem for the poor at the edges of the municipality. Three key findings were made regarding the issues of transportation: (1) lack of structure in the public transport system (2) inward location of population (3) poor access to the densely populated areas.

### **(1) Lack of Structure in the Public Transport System**

The four groups that were engaged in discussions all acknowledged the problems regarding public transport in the city, which can be addressed through the ENC. A municipal official noted with concern the growing population in the city, and argued that this calls for a rethink on the one-way system of roads in the Pietermaritzburg city centre, which has not enabled the efficient movement of people using public transport. Another municipal official in the GEDI office also argued that the Kombi taxis were not efficient; in her view the city needs a proper bus service, given the growing number of private cars on the city's roads and the congestion experienced on a daily basis.

However, some informants maintained that there was a problem with access by means of public transport through the Pietermaritzburg CBD to Northdale node, where more job opportunities are available, because of the traffic in the CBD. The company manager that was interviewed in the Stadium node in Edendale confirmed that some staff living in Northdale area arrive late for work. Some use private lift clubs, which either bypass the city centre or leave early to avoid the traffic. Three municipal officials and two stakeholders stated that there is a need for direct access from the N3 into the Edendale section of the corridor which could assist the movement of goods from companies in the Edendale area. This will help unlock economic potential and investment in the Edendale node. Two municipal officials who stressed the need for direct access from N3 into Edendale stated that the municipality cannot fund a new highway into Edendale at the moment given the infrastructure backlog facing the city noted in chapter four. However, efforts are being made to reinforce the other two existing access into the area while future plans area on how the municipality can fund other links into the area which will boost investment in GEA.

On the other hand, the group discussions with beneficiaries in the three nodes confirmed problems with transportation. According to the beneficiaries, this corridor will be important for the poor who do not own cars, and will help to reduce both the high taxi fares and the unnecessary number of taxis taken for a single trip. Some also stated that the traffic problems in the city can be solved through the ENC; the introduction of a bus system will reduce the number of private cars on the city's roads. In principle, the idea of a corridor helps to solve traffic problems. In the Curitiba development corridor, "emphasis was placed on linkages between and

connecting structural roads; this allowed the Bus Rapid Transit System (BRT) to move freely in its lane”. On the other hand, it was found that the Curitiba development corridor reduced the distance people had to travel to work and improved productivity (Rabinovitch, 1996:55).

## **(2) Inner Concentration of Population**

Although the South African census of 2001 revealed that about 18.4% of the population within the Msunduzi municipality resides along this corridor (StatsSA 2001)<sup>7</sup>, it is also important to note that the report on the ENC stated that the bulk of population, especially in the GEA, resides farther away from the ENC (Iyer Rothaug Collaborative, 2005). The application of GIS in chapter four showed that, the 500m buffer created (as shown in Figures 4.1, 4.2 and 4.3) had residential land uses and mixed-use development along the corridor, but the interviews confirmed that the bulk of the population in the GEA live outside the corridor and are located in the Imbali area. Another finding from the group discussions in the three nodes was that the routes governed by the taxi associations need to be addressed to enable the movement of people and their goods after shopping. As discussed in chapter four, the Imbali area is close to the Edendale Mall, but because there is no direct taxi route to the Mall, residents opt to do their shopping in the CBD.

In the Northdale area, the beneficiaries stressed that some people in the area still suffer transport problems, due to their location. The same location problem applies in the CBD; it was found that taxis do not go to some areas in the city. A discussion with an official in the city’s transportation department revealed that there are plans to address the movement of people living the Imbali area by the means of a bus system along the ENC. According to the official, the city is busy with a comprehensive transportation master plan for the entire city which will put an end to these difficulties. The official revealed that the route system used by the informal taxis will soon give way to a structured new system that will be operated by various companies in each area. As explained by the municipality official on the planned system for the city of Msunduzi Municipality, observing from the Curitiba and Trasmilenion corridor that were studied in chapter two. In the Curitiba case, similar to what the official has explained is obtainable in the city where feeder buses convey passengers from the corridor to the interiors. According to Bocarejo et al.

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<sup>7</sup> This figure may change with the 2011 Census data which had not been released at Ward level at the time of this study.

(2013:78) “the Trasmilenio corridor differ from that of Curitiba because integration between land-use planning and transport has not been achieved like in Brazil because it was never planned for integration”. In another account, though it was stated that higher density of population in Bogota lives in the interior, the Transmilenio corridor had an exclusive lane for the BRT and a feeder route that operates a 40ft buses to the interior (Federal transit administration 2006: viii). In these two cases, it was obvious that location of population can be addressed using a feeder buses which is being considered by the municipality.

**Figure 6.1** Transmilenio corridor showing the exclusive lane



**Source:** Cain et al. (2006:10).

### **(3) Poor Access to the Densely Populated Areas**

Another finding of this study was that public transportation in the city has not functioned efficiently and is not accessible in all areas. It was also revealed that poor access in the densely populated areas of the city and along the ENC, especially in the GEA (the greater Imbali and Vulindlela areas in particular) has been an impediment to the effective operation of public transport and the growth of business within these areas. Photo 4.9 in chapter four and personal field observation on the state of roads and infrastructure in the GEA confirms the views of the business informant that was interviewed in the CBD. Three informants (in business and working

as a consultant) stated that poor linkages between the ENC and the densely populated areas are one of the challenges to public transport along the Edendale section. During the rainy season, taxis are unable to drive into the interiors of these areas because the roads are narrow and not tarred; this discourages people from going out daily. From a business point of view, the rainy season is one of the worst times to deliver goods to areas in the GEA. This is because many of the feeder roads linking the ENC in the Edendale section to the interior areas of the townships are not tarred, slippery and narrow and have no street names. Again, the issue of another highway into the Edendale area was found to be a major problem for investment. According to a stakeholder and a municipal official, both of whom are economists, attracting industrial development which can create more jobs in the Edendale area requires direct access to the N3 freeway. It was also observed that a number of pedestrians, especially students from DUT and FET Colleges use the section of the corridor in Edendale between Sutherland Road and the Stadium node (to Edendale Mall). A pedestrian walkway leading to the intersection of Edendale Mall would help to save lives, as vehicles travel at high speeds in this area.

### **6.2.2 Lack of Proper Integration**

Most of those interviewed confirmed that Msunduzi Municipality is still not integrated and one would expect that infrastructure provision 18 years after the demise of apartheid would have changed. The majority of the job opportunities in the municipality are found in the CBD and the Northdale area, which results in traffic congestion on the roads in the CBD. Three municipal officials and a provincial official stated that in the corridor within the Edendale area several nodes have been identified where the city plans to cluster economic and social activities. This will help to address traffic congestion on roads leading to the CBD because services would have been decentralized with anchor institutions pulling away population to reduce the number of people into the CBD. According to a professional planner, there is no point in having too many nodes within the Edendale area; the more nodes you have, the more you dissipate the population. The findings also revealed that some professional recommendations on the location of nodes in the GEA have been ignored. Perhaps this is the reason behind the unavailability of direct taxis to the mall from the areas of high concentration people. Again the same professional planner as mentioned above noted that the stadium node is not running direct into Imbali and that was why it was not chosen as the main principal node of the area.

### **6.2.3 Lack of Adequate Housing Provision and Infill Development**

In the area of housing, it was found that efforts have been made to change the old system of housing development that continued even after apartheid, where residential areas were separated from economic areas. As revealed by municipal official, some of the low-cost housing developed in *France* area of the city abandoned and some sold. For this reason, a GEDI official stated that the new approach to housing development within the GEA is motivated by the need to integrate residential homes with economic areas. Some of these developments are focused on areas where economic development already exists, and vacant land in these areas is used for infill and housing development.

### **6.2.4 Lack of Employment Opportunities**

One of the key findings of this study revealed that unemployment in the Edendale and Northdale nodes threatens the Msunduzi Municipality's economy. This is because many communities especially in the GEA live on social grants and are unemployed. Despite this, people spend a great deal on transport due to the location of economic activities in the city. As revealed by the informant from Pietermaritzburg Chamber of Business, the informant of the company in the Northdale node and inhabitants of both Northdale and CBD nodes, there were cases where companies in the city had closed down, while some had relocated to another province because the municipality is regarded as an expensive place to do business. The findings also illustrated that some employees had lost their jobs due to this relocation, adding to the number of unemployed in the city. Furthermore, some respondents argued that many projects with the potential to create jobs that had been proposed were abandoned. Although in support of the ENC project, the beneficiaries called for a more pro-active approach. In all three nodes, it was revealed that unemployment has led to an increase in crime.

Although there is a high rate of unemployment in the city as revealed by information gathered during the interview, the 2011 Census result shows a reduction from 48.25% in 2001 to 32.99% in 2011. This was further confirmed by the GIS analysis in Figures 4.4 and 4.5 in chapter four, especially in Figure 4.5 where the most development occurred. It was found that some community members who were previously unemployed have benefited from this new investment. In the Edendale area, the Edendale Mall and the Edendale shopping centre have

employed people from local communities. However, an economist argued that the retail sector is not the driver of the economy and for this reason, not much would have been achieved in terms of employment creation by the two retail shopping centres. He felt that efforts should be made to promote warehousing and industries that can offer job opportunities through Archie Gumede Road from the N3 into the Edendale section of the node.

### **6.2.5 Improvement of Infrastructure development**

It was found that infrastructure has been improved along the ENC. The development of the Edendale Mall has improved the traffic flow along the intersection of the Stadium node with a partial walkway and traffic-light. There is also improvement in the area of water supply. Another interesting improvement is the ultramodern taxi rank incorporated into the Edendale Mall. In the Northdale section, the Chota Motala Interchange incorporates world class infrastructure and is seen by many as encouraging investment in the area. The documentation of the ENC presented in chapter three also reveals that the CBD node has witnessed many improvements, ranging from the Freedom Square Taxi Rank as seen in the GIS application in Figure 4.5 of chapter four. It was also observed that the proposed pedestrianization of Church Street had been completed.

### **6.2.6 Land ownership problems**

It was obvious that land is a very important factor in promoting economic development along the ENC, especially in the Edendale area. All the informants confirmed this. In the CBD group discussion, one of the participants stated that the CBD node is fully developed and that Edendale is the only potential area for growth close to the CBD, where land is available for development. Edendale remains the only area in the country where individuals retained land ownership rights under the apartheid government. This land is not owned by the government and individual land owners might be reluctant to sell because they are not convinced that the community would benefit. The bulk of the land in Vulindlela ABM, just outside Edendale, but still part of the GEA, is held by the Ingonyama Trust. Ingonyama Trust land on the other hand, as an institution has the mandate through the *KwaZulu-Natal Ingonyama Trust Act, (Act 3 of 1994)* to manage about 2.7 million hectares of land spread throughout the province. In this system of traditional land ownership, the legal landholder remains in the hands of the *Amakhosi* who grants approval right for development on land belonging to Ingonyama Trust land on a lease based agreement but not

as freehold over a short or long period of time (Ingonyama Trust Board, 2008). Thus, from an investors point of view, developers will not be willing to invest in a land that is not readily available and which they only own property and not with the land. Perhaps this system of land ownership within the Vulindlela ABM and some part of GEA has hindered development in the area (Ingonyama Trust Board, 2008).

### **6.2.7 Crime and security issues**

Crime and security issues are also major concerns in the Edendale corridor section. In the group discussion in Edendale, the beneficiaries were of the view that because the GEA is a township, investors do not see anything good about the area. Three municipal officials argued that crime and security issues attributed to the Edendale area may have existed in the past like many other areas in the country but believe that things have changed in recent times. The municipality has initiated the *Safe City Project*, and *CCTV* cameras will be installed to monitor crime in the Edendale area. It was also stated that the Plessislaer police station in the Stadium node is another way of controlling crime and has been of great benefit to the city. The crime statistics supplied by the South African Police Service and reflected in the table below illustrate a drop in crime within the Edendale area.

**Table 6.1** Crime within the Stadium node for April to March 2003/2004 - 2011/2012

Crime Category	April 2003 to March 2004	April 2004 to March 2005	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2008 to March 2009	April 2009 to March 2010	April 2010 to March 2011	April 2011 to March 2012
<b>CONTACT CRIMES (CRIMES AGAINST A PERSON)</b>									
Murder	156	177	138	117	130	133	138	124	91
Total Sexual Crimes	381	335	327	273	292	249	435	368	346
Attempted murder	121	69	49	48	50	61	79	64	52
Assault with the intent to inflict grievous bodily harm	966	881	745	681	522	604	728	812	762
Common assault	2 049	1 913	1 085	1 193	969	1 258	1 420	1 357	1 311
Common robbery	217	179	130	144	148	119	142	139	135
Robbery with aggravating circumstances	505	406	291	273	320	327	330	245	252
<b>CONTACT-RELATED CRIMES</b>									
Arson	26	27	10	18	9	21	25	25	17
Malicious damage to property	568	606	430	486	442	439	459	462	443
<b>PROPERTY-RELATED CRIMES</b>									
Burglary at non-residential premises	110	94	86	71	96	116	109	99	71
Burglary at residential premises	828	729	681	664	666	711	848	808	877
Theft of motor vehicle and motorcycle	94	105	48	58	65	75	82	91	106
Theft out of or from motor vehicle	167	175	93	93	76	121	113	143	197
Stock-theft	90	71	68	72	119	112	119	101	79
<b>CRIMES HEAVILY DEPENDENT ON POLICE ACTION FOR DETECTION</b>									
Illegal possession of firearms and ammunition	116	122	125	93	98	80	85	90	71
Drug-related crime	400	442	636	895	933	764	1 063	1 095	1 137
Driving under the influence of alcohol or drugs	29	45	63	91	55	68	53	66	75
<b>OTHER SERIOUS CRIMES</b>									
All theft not mentioned elsewhere	1 980	1 829	899	782	901	968	908	880	873
Commercial crime	23	28	19	14	20	28	101	167	144
Shoplifting	1	1	0	2	0	1	7	9	61
<b>SUBCATEGORIES FORMING PART OF AGGRAVATED ROBBERY ABOVE</b>									
Carjacking	41	23	17	26	24	43	28	14	14
Truck hijacking	0	0	0	0	1	0	1	0	0
Robbery at residential premises	132	104	90	69	02	61	00	57	40
Robbery at non-residential premises	1	3	1	0	12	4	30	14	11
<b>OTHER CRIME CATEGORIES</b>									
Culpable homicide	50	45	29	58	37	47	45	36	30
Public violence	0	0	1	1	1	2	5	1	9
Crimen injuria	94	99	93	103	96	119	169	136	128
Neglect and ill-treatment of children	15	75	43	24	11	21	10	10	5
Kidnapping	17	17	11	17	10	9	12	17	5

**Source:** South African Police Service (2012).

In terms of the crimes that are generally of concern to prospective investors, murder, kidnapping, illegal possession of firearms and ammunition, burglary at non-residential premises and malicious damage to property have all decreased. However, shoplifting is on the increase; this could be attributed to the high rate of poverty in the area and the presence of the new Edendale Mall.

According to information gathered in the CBD discussion, the most prevalent crimes in the CBD are drugs and muggings. In the Northdale node, it was mentioned that crime ranges from truancy among school pupils to muggings. High rates of unemployment are one of the major causes of these kinds of crime.

### **6.2.8 Inadequate Waste Management**

Waste disposal was found to be one of the challenging problems facing the city in recent times. Many of those who were interviewed saw inadequate waste management as an obstruction to development; it was discovered that there is uncontrolled dumping of waste in some areas of the city. According to the disabled person in the CBD group discussion, waste disposed on pedestrian walkways obstructs the free movement of wheelchairs. A municipal official also revealed that the dumping of waste in the city has become a norm, making the city filthy. The official believed that the city is doing enough to solve this problem. This official stated that people must take ownership of development within their areas. A municipal official cited the dumping of waste in the Edendale Crossing shopping centre as an example of people needing to take ownership of their own development. It was further noted that such behavior will discourage investors. The findings of this study confirmed the observation made in the Municipal IDP (as discussed in chapter three) that the city's waste department does not have sufficient staff to meet the demand for its services.

### **6.2.9 Institutional body for the Edendale-Northdale Corridor**

Few of the informants were concerned about the institutional body that will deliver the mandate of the ENC. However, three consultants and two municipal officials were of the view that it will take a special institution like the GEDI to implement the full project. On the other hand, one of the consultants argued that the city needs to establish another body like the GEDI in the Northdale section or empower the GEDI in terms of both professional know-how and funding. The case study of Curitiba revealed that the Curitiba city planning institute carried out the development of the Curitiba corridor. This was found to be missing in the case of the ENC, even though the Edendale corridor was borne out of the GEDI before the integration of the entire section as one corridor.

### **6.2.10 Funding and financial challenges**

Funding was seen as a key to the successful implementation of the ENC. Three of the municipal officials that were interviewed stated that at the time of this study the city was struggling to finance many of its projects for rebuilding the city. The provincial official pointed out that the

focus of corridor is the GEA, but, due to the fact that this area is a township, investors are not keen. It was also pointed out that the province has made external funds available for this project in the past. Although this was confirmed by the municipality, it was revealed that this funding was invested in the planning of the ENC project. Furthermore, the official stated that the problem with implementing corridors in the province is not funding, but lack of good plans from the local municipalities. It was also disclosed that the KwaZulu-Natal (KZN) government is committed to funding corridor projects in cities and had advised municipalities in the past to draw up corridor plans so that the province can fund them; few municipalities responded to this call.

### **6.3 Conclusion**

Several conclusions can be drawn from this study. Ultimately, the issue is not whether Msunduzi Municipality should be restructured or not, as the spatial form of the city shows inefficiencies arising out of apartheid planning, which resulted in some groups benefitting and others were suffering. The role of the corridor in the reconstruction of Msunduzi Municipality cannot be underestimated because the Edendale-Northdale Corridor has the potential to open up possibilities for investment in the townships. This is because of the impact of development corridors in ensuring that resources are used judiciously and to the benefit of all, as well as contributing to the fulfillment of socio-economic and environmental needs (Brooks, 2010). For example, residents in the GEA and the Northdale area commute daily to the Pietermaritzburg CBD to satisfy their socio-economic needs, even though this is less the case for Northdale than the GEA. If the identified and existing nodes are effectively developed, the standard of living will improve, as people gain access to employment because of the opportunities the corridor will create. The findings of this study have also illustrated that the use of informal taxis is not sustainable; this has slowed the growth of business in the GEA and other areas in the city while encouraging the use of private vehicles, leading to congestion on the city's roads. The researcher concludes that, to a large extent, the Edendale-Northdale Corridor (ENC) possesses the qualities of a development corridor based on the researcher's evaluation. The researcher holds that each development is unique. For this reason, the development and improvement of the ENC should be implemented to suit local needs. This will require a good understanding of Local Economic Development (LED), as was pointed out during the discussion with the stakeholder from the Pietermaritzburg Chamber of Business.

The ENC's contribution to the reconstruction of Msunduzi Municipality will be substantial over the next few years and remains critical to the economic development of other nodes in the municipality. With the development of the Edendale Mall at the Stadium node in Edendale and business confidence returning to the area, further attention should be shifted to the Sutherland intersection, which could be a significant node due to its proximity to people from the greater Imbali area. Adequate attention should also be given to each node; too many nodes should not be developed at the same time. Development in Edendale should remain at the present location while the Sutherland node is developed; over time, it will combine with the Stadium node due to the direct access offered to inhabitants from Imbali. This area has the potential to be a fast growing and upcoming node and has the capacity to impact positively on the economic base of Msunduzi Municipality.

Hlengani's (2007) study on retail spending of consumers in Soweto revealed that, of the more than R4.2bn earned annually by Soweto residents, only R1.05bn was spent locally in the township. Similarly, an interview with a GEDI official, cited in chapter four, confirmed that on its first day of operation, the Greater Edendale Mall made over R 15million. The researcher is of the view that the ENC is a relevant tool to support the long-term vision of the city as an integrated and sustainable city with an efficient and effective public transport system. Based on the corridor cases that were studied, the ENC possesses all the attributes necessary for a development corridor along its three nodes. There can be no doubt that the ENC improvement of the Northdale section of the corridor has promoted industrial growth in the Northdale area. The contribution of the ENC to infrastructural provision in the city will boost the financial health of Msunduzi Municipality. For instance, it was revealed that some areas in the GEA have not been paying rates; the ENC will allow the city to increase its revenue base.

It can be concluded that it is possible to restructure the apartheid city of Pietermaritzburg and make it work more economically and efficiently for the benefit of all citizens. It has also been shown that the ENC can foster economic development, as noted in the Stadium node along the corridor. It is clear that the city is committed to improving socio-economic activities in the city, especially in the GEA. Plans for an Integrated Rapid Public Transport Network (IRPTN) will unlock further investment in each of the nodes. Such investment will create job opportunities and

reduce the rate of unemployment. The success of the corridor will depend on various factors, including an efficient public transport system, the ease of moving goods, the development of fewer nodes which will enable population thresholds to be established, a change in attitudes, viable funding and the availability of land.

## **6.4 Recommendations**

During the course of this study, it became clear that development corridors are drivers of economic growth and can foster rapid urban reconstruction. In the case of the city of Pietermaritzburg which forms part of Msunduzi Municipality, it was clear that the suburban townships have suffered isolation in the past and continue to do so to the present day; this calls for a special effort in the form of the development corridor to drive the integration of the entire city. In order to ensure that the ENC project does not become a ‘white elephant’, the following recommendations are offered to address potential challenges.

### **6.4.1 Addressing Poverty**

A key factor that will ensure the success of the ENC is the improvement of living standards for low-income households along this corridor. This is in keeping with the goal of the national and provincial governments to eradicate poverty. This can be done in a number of ways. In the GEA, a major concern along this section of the corridor is to convince investors to invest in an area with limited highway access for the free movement of goods. Business incentives can be a driving factor where land is made available and utility rates are lowered. The city could assist low-income households with credit and loans to enable them to establish small businesses. Education and training can also equip the community for the jobs that are being provided in their areas. In the Edendale community, it was noted that some residents get jobs during the construction stage of development, but will not be able to gain employment during the operational stage due to a lack of skills. For this reason skills training will be needed to upgrade this community.

### **6.4.2 Transportation and Access**

The researcher is of the view that more attention should be given to the feeder routes linking the ENC in the three sections of the corridor with a reduced price that is affordable to the low-

income population along this corridor. The operation of buses from the feeder areas should be managed by a private firm for purposes of efficacy. There could also be an agreement between government and the taxi associations where government could buy out the associations; this could help to overhaul the transportation system in Msunduzi Municipality. High charges for parking in the CBD would encourage the use of public transport. An efficient service would also encourage car owners to use public transport.

#### **6.4.3 Availability of land**

There is an urgent need for government to engage communities in discussions on why land needs to be made available to investors; community leaders should be brought on board to persuade people to sell. The city should further develop a plan to ensure that investors are not only investing for profit; they need to give back to the community. Regarding the Ingonyama Trust, where land sales are not possible; the city should consider entering into a partnership with the board of the Trust, to sell land to developers. A certain percentage of the value of the property could be paid back to the Trust over 20/30 years. It would also be in the best interests of the city to promote the sale of land and the provision of land for industrial development in these areas through favourable publicity. This will give the area a good image.

#### **6.4.4 Provision of Adequate and Affordable Housing**

Housing provision needs to be designed and implemented in such a way that social and economic activities do not exist in a vacuum. The city will also need to provide significant subsidies for the poor, especially those living in informal settlements along the corridor in the Stadium node in Edendale. This subsidy could be in the form of site-and services and could be achieved by applying to an international organization like the World Bank for assistance. This would help alleviate poverty; furthermore, some residents could operate personal businesses from home.

#### **6.5 Areas for Further Study**

During the course of this study, a number of issues arose that could not be investigated in depth. The following areas of research are recommended for further study: (i) the availability of land for economic investment in the GEA; (ii) a critical study on ways to implement a regeneration

process for the Pietermaritzburg CBD; (iii) an in-depth study on the implementation of a BRT or bus system in Msunduzi Municipality; (iv) a comprehensive study on the provision of adequate low-income housing in the three nodes that were studied; (v) a comprehensive study of each of the three sections of this corridor. This will enable the identification of individual problem areas along the ENC and the best approach to address each of these problems in a particular locality.

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## Appendices

## APPENDIX 1: ETHICAL CLEARANCE LETTER



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7 October 2011

**Mr I N Okeke (210549913)**  
**School of Architecture, Planning and Housing**

Dear Mr Okeke

**PROTOCOL REFERENCE NUMBER: HSS/0981/011M**

**PROJECT TITLE: The Role of Corridor Development in Urban Reconstruction: The Case of Edendale-Northdale Corridor in Msunduzi Municipality.**

In response to your application dated 4 October 2011, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

**PLEASE NOTE:** Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....  
**Professor Steven Collings (Chair)**  
**Humanities & Social Science Research Ethics Committee**

cc Supervisor – Professor M Dayomi  
cc Mrs. S van der Westhuizen



Founding Campuses: ■ Edgewood ■ Howard College ○ Medical School ■ Pietermaritzburg ■ Westville

**APPENDIX 2: INVITATION LETTER TO THE PARTICIPANTS**

**INVITATION LETTER TO THE PARTICIPANTS**



**Faculty of Humanities, Development and Social Sciences**

School of Architecture, Planning and Housing  
University of KwaZulu-Natal  
Private Bag X54001  
Durban  
4001

Dear Sir/Madam,

29 February 2012

**Invitation to Participate in a Voluntary and Confidential (Masters) Research**

I, the undersigned, Ikenna OKEKE, a Master’s degree student of Town and Regional Planning at the University of KwaZulu-Natal, is inviting you to participate in my research: *The role of corridor development in urban reconstruction: the case of Edendale-Northdale corridor in Msunduzi Municipality*. You have been identified and selected as a potential key informant for voluntary participation in an anonymous interview that I am conducting. I would appreciate your honest participation and responses as well as your permission to use your responses for official research purposes only. Your personal identity will be treated with utmost confidentiality and anonymity throughout the study and at no stage shall it appear in print.

If you have any queries about this study, feel free to contact me at (0732076250) or my supervisor at (0312602147).

Be reminded that you are free to withdraw your participation at any time.

If you are willing to participate, please sign the attached consent form that gives me the permission to use your responses in my research. The interview will be scheduled to suit your convenience *inter alia* the time limit of this study. Thanks for your corporation.

Yours faithfully  
Ikenna Nwagbo Okeke

Cell: 0732076250  
Email: 210549913@ukzn.ac.za

**DETACH AND RETURN  
Declaration of Consent**

I ----- (Please write your NAME in full)

Hereby confirm that I understand that the content of this document as well as the nature of the research project. I consent to participating in the research project. I understand that am at liberty to withdraw from the project at any time, should I so desire.

Signature of participant-----

Date -----

**APPENDIX 3: INTERVIEW WITH MUNICIPAL OFFICIALS**

EDENDALE-NORTHDALE CORRIDOR STUDY: SEMI-STRUCTURED INTERVIEW

SECTION 1: KI: MUNICIPAL GOVERNMENT OFFICIALS

<b>General Questions to Introduce the Research</b>
<ol style="list-style-type: none"> <li>1. Could you please tell me what you know about the Edendale-Northdale Corridor?</li> <li>2. What are the important issues the municipality plans to use this corridor to achieve?</li> </ol>
<b>Research Question 1</b>
<b>To explore issues with regard to how the implementation of the corridor lead to economic decentralization and community development.</b>
<ol style="list-style-type: none"> <li>3. Over the next few years, if you were to imagine future Msunduzi achievements in what would you like to see as “the new” along the corridor?</li> <li>4. What opportunities do you foresee from the implementation of this corridor development?</li> <li>5. How is this corridor project going to facilitate the resolution of housing problem?</li> </ol>
<b>Research Question 2</b>
<b>To understand the prospects of the corridor in attracting economic development as well as improving the living standard of the people.</b>
<ol style="list-style-type: none"> <li>6. In your views how do you think this corridor is facilitating job creation and income development?</li> <li>7. How would this corridor implementation respond to the general public service delivery lacuna?</li> <li>8. The implementation of the corridor is to lead to emergence of certain nodes: what are the plans for these nodes?</li> <li>9. How will these nodes respond to development and economic decentralization around Pietermaritzburg?</li> <li>10. Do you think this corridor would close the gap of long distance travelling?</li> </ol>
<b>Research Question 3</b>
<b>To evaluate the project plan in order to explore the feasibility of the corridor being implemented within the municipality successfully.</b>
<ol style="list-style-type: none"> <li>11. How are the broad objectives of the project plan ensuring equitable economic growth within Msunduzi?</li> <li>12. How are the business organizations reacting towards this corridor project?</li> <li>13. How will this corridor project affect public transportation system between the nodes?</li> <li>14. Do you think this project integrates an active plan to bring opportunities closer to the people?</li> <li>15. Where do you think the municipality should concentrate on increasing density along the corridor?</li> <li>16. How is the Municipality partnering with the business sector within and outside South Africa to facilitate this project?</li> </ol>
<b>Research Question 4</b>
<b>To understand the major challenges of implementing the corridor project and identify possible solutions.</b>
<ol style="list-style-type: none"> <li>17. What do you foresee as possible obstacles for the successful implementation of this corridor?</li> <li>18. What are the plans to address financial challenges in the implementation of this corridor?</li> <li>19. What do you think are the business development challenges facing this corridor project?</li> </ol>

## APPENDIX 4: INTERVIEW WITH THE INHABITANTS

### EDENDALE-NORTHDALÉ CORRIDOR STUDY: FOCUS GROUP DISCUSSION WITH BENEFICIARIES AT THE THREE PRINCIPAL NODES

*We're holding this discussion with you today to understand some of your feelings about the long-term initiative of corridor development by the municipality. The response you give to me today will be of great important as it will help me in my research project and to identify some of the challenges face by the community in social-economic activities. This will further help me to draw conclusion and recommend what possible solution be taken to improve the area.*

### INTERVIEW WITH THE INHABITANTS ALONG THE CORRIDOR

1. Do you live, work and shop in this area?
2. Can you please explain the challenges you face in terms of economic opportunities in your area?
3. How do you achieve your socioeconomic needs on daily basis, do you need to travel along this corridor to a particular area to fulfill this?
4. What are the daily challenges you encounter in this area before this corridor initiative?
5. What do you think that could be done to improve the living standard of your people?
6. How do you think your area will grow in the next 25 years after the implementation of this corridor improvement programme?
7. How will the Edendale-Northdale corridor play a role in these changes?
8. What are your views of the new arrangement of restructuring the city through this corridor and node concept, given the explanation of what corridor development is, in relation to communities far off from economic development?
9. Do you think the corridor initiative can create sufficient employment and generate income within your area?
10. With the proposed development, would you want to work in close proximity to your residence, shopping center and recreational facilities or far away from it where you may need to drive all the time please explain your answer?
11. Is there anything else you feel that is important which you would love to add to the discussion?

## APPENDIX 5: INTERVIEW WITH THE CONSULTANTS

### EDENDALE-NORTHDALÉ CORRIDOR STUDY: SEMI-STRUCTURED INTERVIEW

#### SECTION 2: KI: INTERVIEW QUESTIONS FOR THE CONSULTANTS

1. How would you describe development corridor?
2. What is the significance to the Edendale-Northdale subject corridor?
3. How would you want to see this corridor project in the next 3 years in view of the reconstruction of the affected areas during apartheid especially the Edendale section of the corridor?
4. Do you know of any good reason why this corridor project was prioritized?
5. What strategies should the city or other partners adopt to encourage this corridor development?
6. How do you think the corridor can help in revitalization of the declining nature of the Pietermaritzburg central area?
7. This corridor is believed to be a tool for reconstruction of the municipality: could you please give an insight on how this can be linked to economic growth especially with areas outside the central place?
8. Distance/linkages (nodes, edges, etc) to economic opportunities have been a problem: How do you think this corridor can address such issues?
9. What could be done to improve access to the areas of opportunity?
10. What approach or suggestions do you think the municipality needs to take in making sure this project is realized and for the municipality to be a better place for business (general income and employment creation leading to economic empowerment)?
11. Finally, have you found this interview helpful in expressing your views on how best this corridor can be implemented to influence economic growth along and within the communities in rebuilding the municipality?

## APPENDIX 6: INTERVIEW WITH BUSINESS GROUP

### EDENDALE-NORTHDALÉ CORRIDOR STUDY: FOCUS GROUP DISCUSSION WITH BENEFICIARIES AT THE THREE PRINCIPAL NODES

*We're holding this discussion with you today to understand some of your feelings about the long-term initiative of corridor development by the municipality. The response you give to me today will be of great important and will be well taken care of by the municipality why the implementation goes on.*

### INTERVIEW QUESTION WITH BUSINESS LEADERS ALONG THE CORRIDOR

1. How long has your business been in this area?
2. How can you explain the growth of your business since the operational face in this area?
3. How does your business use the Edendale-Northdale corridor?
4. The concept of development corridor is known to be a driver of economic development, how do you think the Edendale-Northdale Corridor will improve your business?
5. How do you think the improvement of this corridor will change the living standard within Edendale area?
6. What is the prosperity of the community with your business around this area?  
Do you employ local people?  
What is the knowledge like or do you need to train the staffs?
7. Do you think the implementation of this corridor will enable more business and industries locate in this area?
8. Who are your major consumers and where do they come from?
9. What are the challenges they face?
10. What are the challenges faced by you and your business organization along the Edendale-Northdale Corridor?
11. Is there anything else important you wish to add to the discussion?

## APPENDIX 6: ISIZULU INTERVIEW WITH INHABITANTS

### EDENDALE-NORTHDALE CORRIDOR STUDY: FOCUS GROUP DISCUSSION WITH BENEFICIARIES AT THE THREE PRINCIPAL NODES

*Le ngxoxo esizoba nayo imayelana nokuthola izimvo zakho mayelana nesu komhubhe wentuthuko elizoqalwa nguMasipala waseMsunduzi. Lo msebenzi uhlelelwe ukuba kwakheke indawo yamabhizinisi uphinde uvulele amathuba emisebenzi kubahlali. Izimpendulo ozonginika zona namuhla zibaluleke kakhulu ocwaningweni engilwenzayo futhi zizosiza ngibone izingqinamba umphakathi ohlangabezana nazo kwezenhlalo-mnotho.*

### INTERVIEW WITH INHABITANTS ALONG THE CORRIDOR

1. Kungabe uhlala lapha futhi usebenze uphinde uthenge kule ndawo?
2. Kungabe zikhona izingqinamba ohlangabezana nazo mayelana nezindaba zokuthuthuka komnotho kule ndawo? **Chaza kabanzi**
3. Nizifeza kanjani izidingo zenu zenhlalakahle kanye nezomnotho enihlangabezana nazo nsuku zonke? Kungabe nihamba kule nxanxathela yemigwaqo ukufeza lokho?
4. Ingabe yiziphi izingqinamba zansuku zonke enihlangabezana nazo kule ndawo njengoba lo mhubhe usahleliwe?
5. Ucabanga ukuthi yini engenziwa ukukhuphula izinga lenhlalo labantu abahlala kule ndawo?
6. Ucabanga ukuthi le ndawo izothuthuka kanjani eminyakeni engama-25 ezayo emva kokuqalwa kokuthuthukiswa kwalenxanxathela yemigwaqo?
7. Kungabe lomhubhe omaphakathi kweZideni neNorthdale ubamba liphi iqhaza kulolu shintsho?
8. Emva kokuchazwa kokuthi uyini umhubhe wentuthuko, zithini izimvo zakho mayelana nokumiswa kabusha kwedolobha ngalenxanxathela yemigwaqo kubantu abahlala kude nentuthuko yomnotho?

9. Ucabanga ukuthi isu lalo mhubhe lingavula amathuba emisebenzi kanye nemali yokuziphilisa endaweni yangakini?
10. Ngale ntuthuko ehlongozwayo, ungathanda ukuba nebhizinisi elinjengezitolo nezinye izikhungo ezingenisa imali endaweni yangakini? Ngicela uchaze kabanzi?
11. Kungabe kukhona okunye ocabanga ukuthi kubalulekile ongathanda ukukwengeza kule ngxoxo?

## APPENDIX 7: PRELIMINARY CHECKLIST FOR FIELD OBSERVATION

For the purpose of this study, the checklist has been developed to aid the primary data collection. This checklist is a visual assessment to establish existing/proposed infrastructures and development that can support effective economic growth. The observation will be done in each sections of the corridor proposed by the Msunduzi Municipality.

Features to examined in the field		Description	General remarks
<b>Network linkages</b>	<b>How is the linkage of this corridor connected to each of the nodes and what are the transport facilities in place?</b>		
<b>Intermodal transportation system and efficient public transportation system visible to enable economic growth strive well</b>			
<b>Safe crossings areas</b>			
<b>Pedestrian sidewalk wide enough to take more than two people</b>			
<b>Mix of land uses</b>	<b>What land uses exist along the corridor?</b>		
<b>Residential</b>			
<b>Commercial</b>			
<b>Industrial</b>			
<b>Designated open space</b>			
<b>Agricultural</b>			
<b>Other</b>			
<b>Nodes</b>	<b>What are the dominant activities present in each of the nodes</b>		
<b>Threshold of settlement</b>	<b>How concentrated is each of the nodes along this corridor? Is the presence of economic opportunities evenly distributed?</b>		
<b>Community facilities</b>			
<b>Urban design and layout elements (aesthetics environment)</b>			

