



**CHANGE AND CONTINUITY: THE DEVELOPMENT OF
FLORENCE NIGHTINGALE DRIVE IN WESTCLIFF CHATSWORTH**

BY

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DECLARATION

The work described in this dissertation was carried out at the College of Humanities, School of Built Environment and Development Studies, Faculty of Humanities, Development and Social Science, University of KwaZulu-Natal, Durban, under the supervision of Dr Koyi Mchunu.

I hereby state that this thesis is the result of my original work and has not been submitted in any form for any degree or diploma at any other university. Where use has been made of the work of others, it is acknowledged in the text.

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ABSTRACT

The rapid transformation of arterial roads into unauthorised economically viable and sustainable local mixed use activity corridors in the apartheid-planned residential townships like Chatsworth, Umlazi, Soweto, Chesterville and Phoenix connected by nodes by residents is becoming difficult for municipalities to manage. These business operate on sites zoned for residential purposes and provides a variety of goods and services within easy reach and at competitive prices comprising of clothing stores, essential services such as attorneys, auto services, tax consultants and specialty stores to residents. These business have created local economic development by creating employment and empowering women. This study demonstrates the rationale of unplanned local economic development on a local activity corridor, using the Florence Nightingale Drive unplanned mixed use local activity corridor and it also shows the innovation, creativity and entrepreneurship of the residents to improve their socio economic status over time without any municipal interventions.

Using research methods such as a physical analysis of the study area, a review of the current zoning, land use surveys, interviews, an assessment of the built form and secondary data, it was found that the Florence Nightingale Drive is an unplanned economically viable and sustainable local mixed use activity corridor which has organically grown linearly by private initiative and entrepreneurship connected by a transport node and an urban node.

This study investigates the reasons why Florence Nightingale Drive has transformed over time from 1970 into an economically viable and sustainable local activity corridor which has organically grown linearly by private initiative and entrepreneurship based on a physical assessment of the study area with interviews with the residents, business owners and municipal officials from Ethekewini Municipality. These businesses provides residents with easily accessible goods and services at competitive prices and also created and provide employment opportunities to residents within the study area and the broader Chatsworth. As peoples socio economic status changes over time from one generation to the next, the needs of the residents also changes.

The results of the investigation of the study area has showed that although the currently zoned for residential uses only, Florence Nightingale Drive has transformed over time over time into an economically viable and sustainable local activity corridor by private initiative which employs an significant number of local residents. It has the characteristics of an activity corridor which is connected by a transport node and an urban node.

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LIST OF ACRONYMS

ABM	Area Based Management
CSDP	Central Spatial Development Plan
CSIR	Council for Scientific and Industrial Research
EDU	Economic Development Unit
ETA	Ethekwini Traffic Authority
GIS	Geographic Information System
IDP	Integrated Development Plan
LED	Local Economic Development
LUMS	Land Use Management Section
KZN	Kwazulu- Natal
MSDF	Municipal Spatial Development Framework
MTRP	Master's Town and Regional Planning
PGDS	Provincial Growth and development Strategy
PPDC	Provincial Planning and Development Commission
PSEDS	Provincial Spatial Economic Development Strategy
SDP	Spatial Development Plan
SDF	Spatial Development Framework
SPLUMA	Spatial Planning Land Use Management Act
SSPB	Strategic Spatial Planning Branch
UMF	Urban Management Forum
UKZN	University of KwaZulu-Natal

CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

An initial impression of Florence Nightingale Drive in Westcliff, Chatsworth, is one of an economically active formalised mixed-use area, comprising of residential units with a variety of businesses, professional services, and small manufacturing enterprises that are open for business from 8.00 am till late at night as shown in photograph 1 and photograph 2 below. A local resident or a passer-by can engage the services of an attorney, a tax consultant, buy flowers, buy a car battery, order built in cupboards, or purchase designer clothing for any special occasion from NISSA, a designer store (Photograph 2). These are just some of the businesses and services that are available on Florence Nightingale Drive. Florence Nightingale Drive functions as a local activity corridor between three established nodes, Chatsworth Town Centre, Westcliff Station and the Sunset Drive industrial area in the Chatsworth area within the Ethekewini municipal area.

Photograph 1 above and photograph 2 below shows the conversion and modification of existing two storey semi-detached houses from residential uses to a designer clothing store and professional services such as attorneys.

Photograph 1: A double storey semi-detached house converted to an attorney's office



Source: Researcher's photograph

Photograph 2 A double semi-detached house with an attached residential house converted to a designer clothing store



Source: Researcher's photograph

The transformation of a variety of fifty unplanned businesses and professional services from the 1970, along Florence Nightingale Drive, was motivated by residents to provide these business and services such as florists, clothing stores, attorneys and accountants. Tees Florist was the first business which started in 1970.

These land uses were not provided in the town planning schemes for apartheid-planned townships like Chatsworth, Umlazi, Soweto, and Phoenix. The residents in the study area have accepted the informal mixed-use in the study area because it provides services and goods within walking distance. A large number of land use deviations have occurred on properties fronting Florence Nightingale Drive. Many properties are utilised for both residential and commercial activities and appears to occur in a symbiotic manner as shown in Photograph 1 and Photograph 2 above.

This dissertation focusses on the gradual transformation of Florence Nightingale Drive, an arterial road in a former apartheid planned residential township, in Chatsworth into an economically viable and sustainable mixed use local activity corridor by the residents with the successful integration of residential and business land uses on Florence Nightingale Drive in Westcliff Chatsworth. Although these mixed uses are illegal in terms of the municipality's Central Scheme, they provide goods and

services at competitive prices with easy reach of the residents and have also provide employment opportunities. These townships were planned with neighbourhood commercial areas that provided limited basic needs. People's needs and wants change as their socio-economic status changes over time, they require more goods and services. The transformation of arterial roads in townships the South African context is demonstrated through in-depth analysis of the Florence Nightingale Drive as an economically viable and sustainable mixed use local activity corridor in Westcliff Chatsworth as a unique case in the lower income, urban context. The key lessons learnt from the analysis add to the field of knowledge intended for implementation of future initiatives for apartheid planned townships.

1.2 Historical Background

Chatsworth was originally planned as a residential Indian housing scheme to house Indian people in the southern part of Durban who were forced to relocate because of forced removals from Clairwood, Cato Manor and Bayside due to the apartheid governments Group Areas Act of 1960. It originally comprised of 11 neighbourhood units, to accommodate some 22000 families. Each of these neighbourhoods were planned to be self-sufficient with enough "civic, commercial, educational and recreational requirements met in each one respectively. Each unit was designed to contain a unit "centre" which comprised of a government building, such as a library, clinic, community hall, cinema and shopping complex to provide for the community's everyday needs" (City Engineer's Department, 1983). Photograph 2 below shows the original council built semi-detached house.

Commented [S1]:

Photograph 3: Council built semi-detached single-storey and double-storey housing typologies.



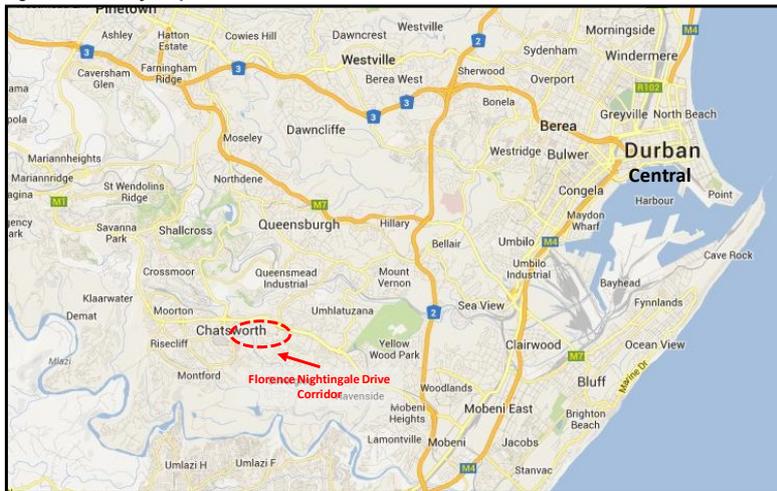
Source: Ethekwini Municipality Archives

1.3 FLORENCE NIGHTINGALE DRIVE: THE STUDY AREA

Chatsworth is an Indian township in Durban, which was created in the late 1960's and early 1970's as a result of the Apartheid Government's Group Areas Act No. 41 of 1950. Early residential

developments within Chatsworth consisted of single-storey and double semi-detached dwellings erected on a minimum site size of 180m² for low income residents and a minimum site size of 400m² for middle income residents based on a rental system with the option to purchase the houses after a specified of time with the municipality. Chatsworth is approximately 26km to the south of Durban.

Figure 1: Locality Map



Source: Ethekwini Municipality GIS

Florence Nightingale Drive is an arterial road in ward 70 that is 1.9km long from Westcliff station on Higginson Highway to Chatsworth Town Centre on the west in the Ethekwini Municipality. The study area is bounded by the Woodhurst Area to the north, Bayview to the east, of Silverglen and the Chatsworth Town Centre to the South, and Arena Park to the West. Westcliff is situated in the South-Central Municipal entity of the Ethekwini Municipality.

1.4 MOTIVATION

Development corridors and corridors in general seems to be the focus of various local and regional economic and social development strategies. The Florence Nightingale case study displays typical post-Apartheid planning in South Africa. This case study investigates change of land uses to a variety of businesses by residents in the study which is economically viable and sustainable which should have been addressed through the development corridor concept. The case of the Bellair

Road Development Corridor has been identified as not achieving its initial objectives and criticised as not being as functional as it was envisaged to be. This indicates that the concept is challenging to implement in reality.

Initiatives which are planned for and anticipated in municipalities offer limited evidence and follow up of their actual success or failure within municipalities with apartheid planned townships. Lessons learnt are not documented well enough to allow for a precedent for similar future cases. As such, this dissertation is a systematic study of the corridor concept and its application in South African cities, particularly the Florence Nightingale Drive. The purpose would be for the researcher to gain an in-depth understanding of the application of the corridor concept. This short dissertation adds to the field of knowledge in spatial planning drawing on contemporary planning practice and issues, policy etc. experienced by local government planning.

It is obvious that the Chatsworth Town Centre is unable to accommodate local community needs as other commercial uses and professional services uses such as attorneys and estate agents have increased along Florence Nightingale Drive.

The transformation of predominantly residential land uses to business uses on activity corridors have also occurred in other apartheid-planned townships, for example along activity spines like Shezi Main Road in Mpumalanga KwaZulu-Natal which has transformed into a variety of unauthorized mixed-use industry activities ranging from local tuck shops/spaza shops, hair and beauty salons, taverns, crèches, designer clothing outlets, local fast food outlets, to a school uniform factory on Shezi Main Road.

Although the municipality's CSDP and Spatial Development Framework (Ethekwini Municipality, 2016/2017) acknowledges that Florence Nightingale Drive has the characteristics of becoming an activity corridor because of its mixed-use pattern, there has been no interventions by the municipality to formalize these unauthorised businesses.

In general it seems that development Corridors and corridors have become the focus of various local and regional economic and social development strategies including local municipalities to manage where a municipality responds to the an activity corridor like Florida Road with plans to formalise the mixed use precinct. Florida Road a predominantly white privileged area pre 1994. This is in contrast to Florence Nightingale Drive, an arterial road connected by an urban node and a transport node

which has evolved from 1970 to an economically viable and sustainable mixed use local activity corridor in Westcliff Chatsworth by the residents own innovation, creativity and entrepreneurial skills to provide a range of goods and services at competitive prices within easy reach of the community in an apartheid planned dormitory residential planned township. The organic transformation of arterial roads in other apartheid planned dormitory townships such as Umlazi, Chesterville and Mpumalanga is also occurring by the residents without any municipal interventions.

The purpose would be for the researcher to gain an in-depth understanding of the application of the corridor concept. This short dissertation adds to the field of knowledge in spatial planning drawing on contemporary planning practice and issues, policy etc. experienced by local government planning. The case study firstly demonstrates how residents respond to improving their life style by providing goods and services which they need at that are easily accessible without any municipal interventions. Secondly, this research assesses how the residents respond to the mixed use development in a residential area which predominantly has semi-detached houses as shown in photograph 1, thirdly, this research attempts to investigate what are the municipality's plans to formalise the unauthorised mixed uses on Florence Nightingale and finally has Florence Nightingale Drive changed to a local activity corridor.

Municipalities planned and anticipated Initiatives which provided limited evidence and follow up of their actual success or failure within municipalities. Lessons learnt are not documented well enough to allow for a precedent for similar future cases. As such, this dissertation is a systematic study of the corridor concept and its application in South African cities, particularly the Florence Nightingale Drive local activity corridor. The researcher's purpose is to gain an in-depth understanding of the application of the corridor concept. This short dissertation will add value to spatial planning by reviewing of contemporary planning practice and issues, policy etc. experienced by local government planning.

The motivation for this research is to develop an integrated, sustainable, and habitable residential development, together with sustainable business opportunities for the residents that will address the following:

- Respond to pressure for non-residential development,
- Establish an Local Activity Corridor of mixed-uses whilst protecting the integrity of existing residential built form,

- Identify opportunities for future urban, rural, and natural environments ,
- Improve existing transportation networks,
- Provide clear land development guidelines to manage unauthorised land uses.

1.5 MAIN RESEARCH QUESTION

The main research question is to establish the rationale for the change and continuity of Land Use Development along Florence Nightingale Drive that will create a land-use framework to coordinate and inform the current and future land use intentions and built form along Florence Nightingale Drive that will benefit the residents.

1.6 SUB-QUESTIONS

Sub-Questions:

1. To determine the rationale for the evolution of variety of businesses and professional services by residents without any municipal interventions on Florence Nightingale Drive.
2. To establish if the business owners are residents of area.
3. To investigate the municipality's interventions to address and formalise the non-conforming businesses and professional services,
4. To assess the impacts and challenges of the variety of businesses and professional services on the existing residents,
5. To establish what interventions could be undertaken to improve the functionality of Florence Nightingale Drive as a mixed-use local activity corridor.
6. To investigate and assess the types of businesses and services that operate from semi-detached on Florence Nightingale Drive.
7. To assess the changes in the socio economic status and life style changes in the study area.
8. To establish if these businesses employ local people and how many people are employed.

1.7 HYPOTHESIS

Florence Nightingale Drive has organically transformed into an economically successful activity corridor by the local residents over the past 40 years, contributing to the economic and social lives of the residents in Westcliff and the greater Chatsworth area. It impacts positively on the lives of the

residents by creating employment opportunities and providing goods and services within easy reach of the consumers at competitive prices, but it may affect them negatively in terms of built form and aesthetic appeal. Although the net result is positive in employment creation, improving socio-economic status and quality of life with availability of a variety of goods and services within easy reach of the residents at competitive prices, there is also little municipal involvement to create an integrated, sustainable and habitable mixed-development, together with sustainable business opportunities.

1.8 RESEARCH METHODOLOGY

Research methods are the tools used to conduct research and collate information and research methodology is the logical sequence, design and structure undertaken to carry out the research intended and the collection of relevant data to be analysed.

1.8.1 DATA SOURCES

The data sources represent the research methods used to carry out the research outlined below. This relates to the way in which relevant information is to be collected for the requirements of the study. For the purposes of the scope of the current dissertation both qualitative data will be collected. The collection of information is to be carried out for the case study and the literature review/conceptual framework.

Secondary Sources

Secondary sources of data include sourcing information through books, journals, conference papers, minutes of meetings, internet articles, project plans and documentation, relevant unpublished dissertations, planning guidelines and maps generated using GIS as well as aerial photography. The secondary data used is specific to the case study.

Libraries and search engines on the internet were used to collect and search for data which has due authority, is viable and which holds substantial information. Secondary data was also obtained from key informants who had access to certain project specific information such as past project plans and project documentation.

Primary Sources

Primary sources of data were collected in two distinct ways; by a physical analysis of the study area land use survey and by interviews with key informants.

- **Physical Analysis and Land Use Surveys** - A physical analysis was undertaken to record and document the dynamics of the study area. These data sources informed a local area analysis of the study area and current land use activities was captured from a land use survey in the study area to determine the types of businesses in the study area.
- **Current Zoning and Town Planning Controls**
- **Land Use Survey** -The land use survey assisted to identify the residential and business land uses and the types of businesses in the study area.
- **Semi Structured Interviews** - The researcher conducted interviews with municipal officials from relevant departments to firstly find out if the municipality addressed the unauthorised businesses uses in the study area and secondly to if there are plans and policies for to address the organic transformation arterial roads in former planned apartheid townships to economically viable and sustainable local activity corridors by residents and to understand their responses.

The business owners were interviewed to determine the type of business, ownership, how long the businesses were in operation, where they lived, who are their customers, how many staff they employ including times and days of business and what changes they would like to see in the area.

The residents were interviewed to determine if they are property owners or tenants, do they support the businesses, how these businesses affects them and what changes they would like to see in the area.

All the Interviews were conducted face to face to obtain the necessary information at the convenience of the interviewee.

Municipal officials from the municipality were selected for their specialised role and their departments function in the study area. The interview questions for the municipal officials representing their respective departments varied according their functions in the municipality and were broken down into themes emanating from the literature and Development Corridor

concept. The researcher interviewed senior staff at eThekweni Municipality and staff who have been involved with the study area intimately.

The interview questions were designed for the relevant municipal officials representing their relevant departments in Table 1, for the business owners, and the residents. Interviewees were informed of the purpose of the research and given an informed consent form. Most of the interviewees signed and returned the form to the researcher. Recording of information was done through note taking and recording subject to the permission of the respondent. The details of interviewees are tabulated below. In addition to these interviewees, informal discussions were held with consultants and practitioners about the topic.

Table1: List of Key Informant Interviewees

Area of Interest	Name	Department
Ethekweni Economic	Shunnon Tulsiram	(Head: Economic Development Unit and Economic Promotion)
Senior Manager: Traffic Engineering	Eugene Naidoo	Ethekweni Traffic Authority
Ethekweni Land Use Management Section	Eric Parker	Regional Coordinator
Ethekweni Strategic Spatial Planning Branch	Devoshini Konar	Senior Professional Planner
Architecture and Urban Design	Bilal Haq	Acting Manager: Ethekweni Architecture
Residents		
Business owners		

- **Key constraints to interviews:** The researcher intended to interview the 25 residents in the study area. However, due to limitations where the residents were unavailable or did not have the time to for the interview (because this is a low to middle income area where both the husband and wife work from Mondays to Saturdays and the Saturday afternoons and Sundays are used for religious, social and cultural functions), the researcher used the

stratified sampling method that was used in selecting the 10 interviewees. Due to time constraints total of 17 of the 39 businesses were interviewed in the study area although the business owners were willing to be interviewed.

Questionnaires for the representatives of the different departments in Ethekewini Municipality as shown Table 1 above in Ethekewini Municipality is in Annexure A. Business owners questionnaires is attached in Annexure B and residents questionnaires in Annexure C in the study area.

Maps and Imagery: were used to demonstrate findings which assisted in evaluation of the study area. Maps were created using the ESRI ArcGIS software with relevant latest shapefiles obtained from the EThekewini Municipality.

1.9 CHAPTER OUTLINE

This dissertation has been arranged in 5 chapters.

Chapter 1: Introduction

This current chapter has outlined the purpose of the dissertation, the main research question, sub-questions, and the hypothesis. It has also given the reader a clearer picture of the case study area of Florence Nightingale Drive.

Chapter 2: Literature Review and Theoretical Framework

This chapter provides the foundation upon which the research is based, and highlights the relevance of certain concepts, theories, national and international precedents related to the research topic at hand. This chapter illustrates how the conceptual framework informs the research undertaken.

Chapter 3: Data Collection

This chapter outlines the methodology that will be utilised to fulfil the research aim and to successfully answer the research questions. There are a number of steps involved in this process and this chapter provides a description of these steps, which are essential in order to conduct the research. It also provides the reader with additional information, such as the limitations to the study and suggestions to improve the study.

Chapter 4: Findings and Data Interpretation

This chapter provides the reader with a detailed analysis of the area with regard to its spatial, economic, social, and historic background and the results of interviews conducted with relevant stakeholders, and findings from field observations and also shows an assessment the present-day built form of the former municipal-built two bedroom semi-detached houses had converted into modern architectural designed businesses with professional signage and trademarks of the supplier.

Chapter 5: Recommendations and Conclusions

This chapter formulates recommendations based on the information collated from the previous chapter.

CHAPTER TWO: THEORITICAL FRAMEWORK AND LITERATURE REVIEW

2.1 INTRODUCTION

This chapter contextualises this study by providing a historical overview of planning in the modern and post-modern eras to contemporary sustainable city planning and the structural impact on cities and urban form today. It also provides a historical overview of planning of South African Cities and the origin of the corridor concept, local economic development and related strategies (at an international and national context), to determine the importance of the use of the concept as a strategic tool within eThekweni and South Africa through legislation and policy.

These concepts and theories are relevant as one is able to establish that Florence Nightingale Drive has the typical characteristics of nodes and activity corridors hence, reinforcing the notion that Florence Nightingale Drive has transformed into a sustainable economically viable a mixed-use local activity corridor.

It was necessary to draw on international (2.11.1) and national (2.11.2) precedents in terms of corridors and nodes, how they function, and what is expected of them in order to ascertain Florence Nightingale Drive's potential as a mixed-use activity corridor. It makes the reader aware of the fact that the potential of Florence Nightingale Drive as a successful mixed activity corridor as it shares similar characteristics as those successful case studies mentioned in the latter part of this chapter, and reveals the benefits of having such activity corridors and nodes.

2.2 THEORETICAL FRAMEWORK

The neoclassical theory and locational theory will be used to explain the evolution of a variety of businesses by the residents of Florence Nightingale Drive and the Chatsworth area.

2.2.1 Neoclassical Theory

Neoclassical development theory has its origins in its predecessor: classical economics. Classical economics was developed in the 18th and 19th centuries and dealt with the value of products and on which production factors it depends (Colander, 2002). Nodes are places of high accessibility that are usually located at important transport interchanges and characterised by a concentration of a mixed-

use development. While transport interchanges creates a node, a node could encourage corridor development. Carefully planned activity nodes allow people to conduct different activities in one place and this improves overall accessibility to a range of goods and services. Nodes are priority areas for densification, integration, intensification, and improvement of environmental quality (Urban Econ., 1998:34). Classical economists supported the free market against government intervention markets. The 'invisible hand' of Adam Smith ensures that free trade will ultimately benefit all of society. John Maynard Keynes was a very influential classical economist as well, having written his General Theory of Employment, Interest, and Money in 1936.

Thorstein Veblen introduced the neoclassical theory in his 1900 article 'Preconceptions of Economic Science', in which he related marginalists in the tradition of Alfred Marshall et al. to those in the Austrian School. Neoclassical economics is a set of solutions to economics focusing on the determination of goods, outputs, and income distributions in markets through supply and demand. The neoclassical theory was later used by John Hicks and George Stigler (Stigler, 1941) which included the work of Carl Menger, William Stanley Jevons, Léon Walras, John Bates Clark, and many others (Colander, 2002).

Neoclassical development theory became influential towards the end of the 1970s, with the election of Margaret Thatcher in the UK and Ronald Reagan in the USA. In 1980, the World Bank also shifted from its Basic Needs approach to a neoclassical approach. The neoclassical development theory was actually acknowledged and used from the beginning of the 1980s.

This determination is often mediated through a hypothesised maximisation of utility by income-constrained individuals and of profits by firms facing production costs and using available information and factors of production, in accordance with rational choice theory. Neoclassical theorists also agree that individuals act voluntarily and rationally, as demonstrated in this research study.

Neoclassical economics is characterised by several assumptions common to many schools of economic thought. There is not a complete agreement on what is meant by neoclassical economics, and the result is a wide range of neoclassical approaches to various problem areas and domains ranging from neoclassical theories of labour to neoclassical theories of demographic changes.

According to Weintraub (2007), neoclassical economics is based on three assumptions, although certain branches of neoclassical theory may have different approaches:

- People have rational preferences between outcomes that can be identified and associated with values
- Individuals maximise utility and firms maximise profits.
- People act independently on the basis of full and relevant information

The four core features of neoclassical methodology are methodological individualism, rationality, equilibrium, and the importance of the price mechanism. For this research the methodological individualism and the rationality features are relevant to the study area.

The methodological individualism explains economic phenomena in terms of the characteristics and the behaviour of individuals because everything dependent on what individuals do. The methodological individualism also says that any theory of how the economy runs should be based on the understanding of how the individuals within it behave within the economy.

For neoclassical economics, clear boundaries are required around what is being explained because theories cannot explain everything. For example, the methodological individualism does not look at the influence of the economy on the characteristics of individuals, on their tastes. Instead it is concerned with the influence of individuals on the economy, and neoclassical economists base their analysis on the fundamental characteristics of individual economic agents, such as their tastes, as given. This means that such characteristics are taken either to be fixed and if they do change, this is due to factors that are outside the economic field of enquiry. In the terms of economic theory, these characteristics are said to be exogenous.

Neoclassical theory assumes that all individual behaviour is 'rational' according to a very specific definition of this term. Individuals are assumed to be self-interested and to have well-identified goals that they pursue in the most efficient way possible. To do this, they maximise something; usually consumers are assumed to maximise pleasure (utility) subject to what they can afford, and firms are assumed to maximise profits subject to what it is technically possible for them to achieve.

Institutionalist theories criticize the assumption of rationality from different angles. Evolutionary economists, for example, reject the notion that agents can maximise their goals, and see behaviour as aimed at the achievement of a satisfactory outcome through adaptation in response to previous experience rather than a conscious effort to maximise.

Other Institutional theories question whether we can see the goals of individuals as given, rather than being produced by the economy, while more interdisciplinary approaches suggest that values beyond pleasure and profit inform human behaviour; in particular, that people may also act out of habit, a desire for status, a sense of obligation, or concern for others.

2.2.2 Location Theory

Location theory gives a theoretical framework for studying the location decisions made by firms and households based on transport cost and spatial differences in the accessibility of inputs and markets for outputs (Kathuria & George, 2005). Location theories have created the foundation to understand spatial disparities that exist and how these can be exploited to help achieve desired results for considerable levels of uniformity in regional development landscapes. For over a century, geographers and economists have sought to explain the distribution of economic activities over the geography of countries and regions. Johann Heinrich von Thünen including other theorists such as August Lösch, Alfred Weber, Andreas Predöhl, Oskar Engländer, Hans Weigman, Tord Palander, Bertil Ohlin and Edgar M. Hoover, all looked for general explanations which, formulated the theories that contain the essential elements for the understanding of economic agglomeration as a universal phenomenon (Palacios, 2005:165).

2.2.3 MODERN, POST-MODERN AND SUSTAINABLE CITIES: HISTORICAL CONTEXT AND IMPACT ON CURRENT URBAN LANDSCAPES

Planning approaches have changed over time from rational comprehensive modernist planning which promoted orderliness to radical planning theories (Cloke et al., 1999) where community participation was vital to planning in the public interest. These planning theories have advanced to a situation where the concern is on integration, enhanced quality of life as well as sustainable development for planners. There is also no one theory and approach to planning in the 21st century because approaches vary according to context for both developed and developing countries.

Modernity is based on the view that world problems can be known, understood and therefore controlled which is linked with "rationalism, technocratic and positivistic thinking, ethnocentrism, the standardisation of knowledge and production. According to Dewar (2000), the urban characteristics of modernism which is imported from the United Kingdom, Europe and United States includes a pro-suburban ethos, separation of land uses to avoid conflict, segregation and fragmented planning. Dewar (2000) also notes that the promotion of the neighbourhood unit linked by movement networks, the emphasis on technological improvement and the

disregard for social and environmental issues as well as the scaling of neighbourhoods to the private vehicle as aspects of modernism.

Post modernity in comparison to modernism, is seen to respond to flexibility, change and uncertainty, social and cultural diversity, and responding to minority and disadvantaged groups (Goodchild, 1990). Soja (2000)¹³ discusses themes that demonstrate post-modern planning include; globalisation of capital, labour, culture, and information flows and Fordist economic restructuring, restructuring of urban form and social order focussing on the interrelated social and spatial outcomes of the 'new' urbanisation processes such as sprawl, segregation, and poly centric cities and urban hyper reality. Post-modern planning is criticised to be extensive and vague and is still adapting to post-modern challenge (Allmendiger, 2001). It is also considered as having a 'dark side' which can intensify inequalities, segregation, and exclusion, and can reinforce socio-economic gaps to only support the markets.

2.3 SUSTAINABLE CITIES

From the UNHSP discussions (2010) a principle of urban planning is to promote sustainable development. Sustainable cities basically deals with the notion of sustainable development. The Brundtland Commission defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Houghton, (1999) defines sustainability as "the long term survival of the planet and its processes of dynamic evolution". Satterthwaite (1997) argues, this is broken down into two main components; a) development and b) sustainability. Development refers to human development which comprises of the economic, social, cultural, environmental and institutional aspects of life and also defines the 'meeting the needs of the present' aspect of the Brundtland definition as addressing the:

- Economic needs relating to adequate livelihood or productive assets,
- Social, cultural, environmental and health needs which includes access to services, adequate housing,
- Infrastructure, healthy living environments, equitable distribution of resources and where peoples social and cultural priorities are met,
- Political needs which relates to community participation and inclusive decision making,

In addition, Satterthwaite (1997) also defines the 'without compromising the ability of future generations to meet their own needs' an aspect of the Brundtland definition which addresses the minimising use or waste of non-renewable resources including the consumption of fossil fuels for industry, housing, commerce, transport etc., sustainable use of limited resources relating to a minimal ecological footprint with regard to land consumption, biodegradable wastes not overtaxing capacities of renewable sinks and non-biodegradable wastes not overtaxing the capacity of global sinks to absorb or dilute them without adverse effects.

Sustainable development seems to be an all-embracing notion and has therefore been criticised for being too vast and there are problems with implementation. Also approaches to sustainability have failed to analyse the various aspects such as physical, social and political adequately (Rees, 1995). It can be said that the sustainable development concept has been on the agenda for over two decades and is the present and future concept to adhere to and implement based on local conditions (Satterthwaite, 1997). Haughton (1999) provides an overview of models of sustainable cities with a focus on environmental sustainability and equity principles. The article mentions that environmental problems are linked to poor design of the urban fabric with special concern for sprawl and the increased usage of the private motor vehicle and mentions corridors increased densities, mixed land use among other strategies to create more sustainable cities (Haughton, 1999).

2.4 PRINCIPLES OF URBAN RESTRUCTURING AND SUSTAINABLE URBAN FORM

According to Martens (2001) and KZN PPDC (2008), the use of corridors was and is still being used as a tool for restructuring the Apartheid city and the Apartheid space economy. Development Corridors in KZN (KZN PPDC, 2008) in The Research Report and Guidelines document provides an essential consideration for the need of a defined consensus of urban restructuring in South African cities. The researcher acknowledges that this is essential and necessary to understand and gain access to recent research in order to acquire a trend of uniformity to understand concepts especially in the urban context. In the recent research by KZN PPDC (2008) and with past research such by Martens (2001), urban restructuring and consequently the urban model has six main requirements, which is to embrace intensity and higher densities, fostering of non-motorized and public transport movement as dominant modes of transport, encouraging mixed land use of urban activities, achieving higher levels of integration, promoting equity and convenience through creating access and taking new opportunities to people. The objectives of the Florence Nightingale Drive can align completely with these requirements which will be discussed in detail later in Chapter 3.

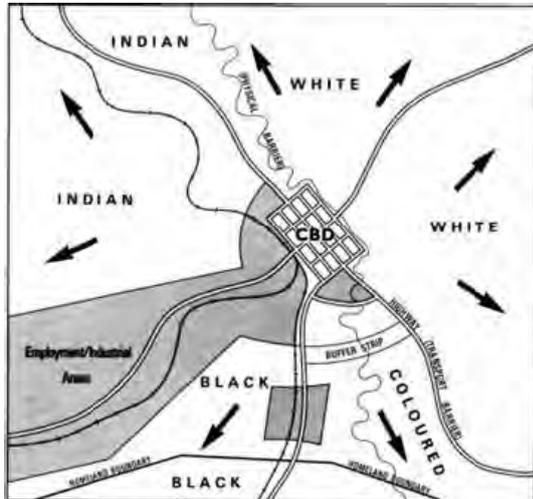
The approaches to urban restructuring are infill and densification within the city: in central areas, around areas of economic activity and along major transport routes (Todes, 2003). The purpose of the development of nodes and activity corridors in a city is to integrate the city, create good routes for public transport and to provide accessible locations for the development of economic activity and services.

It is also important to note that there are constraints to urban restructuring in the South African context. These constraints by Martens (2001) include; conflict around core city development where low-income housing developments in the central areas are resisted by established middle and high-income residents, unwillingness of the private sector to move away from established and centralised commercial and industrial areas closer to population concentrations due to security and poor environmental conditions, resistance from upper income suburban residents and informal land invaders in urban areas because of accessibility and availability of peripheral land, resistance to mixed use development where commercial uses expand into existing residential areas, political violence on the urban periphery, which slows down the service delivery, planning and development process and increases costs, lack of co-ordination within local government structures around development initiatives and public investment and extremely restrictive planning and land use regulations which have restricted low-income development, local economic development. This has also created mono-functional land use patterns and the co-existence of various ownership models.

2.5 THE SOUTH AFRICAN CITY

The socio-political policy of Apartheid determined urban form and structure in South Africa. Firstly, different race groups were uprooted and relocated in racially exclusive enclaves, and unfortunately, it was the poorest people who were moved to the periphery of urban settlements, often sixty to seventy kilometres from places of employment, and of commercial and social opportunities. Secondly, large tracts of open space, which acted as spatial buffers, surrounded neighbourhood units or cells, and increased separation. Furthermore, the limited number of access and egress points to and from these cells proved useful from a security perspective in times of social unrest. Thirdly, the system of apartheid depended on high-speed routes in terms of linking the fragmented parts of the city, and included rail and road systems. The three spatial characteristics, most commonly used, to describe South African cities and towns are sprawl, fragmentation, and separation. It is this low-density, sprawling nature of urban growth which works against pedestrian movement, and which makes the use of fixed line movement modes such as trains non-viable. The birth of the minibus industry became well-suited to navigate these complex and decentralized metropolitan areas. (Dewar and Todeschini, 2004:20).

Figure 2 - Model of the Apartheid City



(Source: Google Images)

The map in Figure above shows the spatial structure of the racially segregated Apartheid city which eventually shaped the structure of South African cities into becoming inefficient allowing for inequity and marginalization. The influence of Apartheid Planning by the Modernist regime which according to Dewar (2000) has allowed Apartheid planners to aggravate and use the urban form characterizing modernist planning for preferences of racial discrimination.

South Africa is experiencing very rapid growth and change. Amongst the most far-reaching dynamics of change has been urbanisation. Significantly, the majority of this urban explosion is occurring amongst the poorest people: the dominant demographic tendency is towards a younger and poorer urban population. This dynamic of growth, also includes high and increasing levels of poverty and unemployment (Dewar and Uytendogaardt, 1991:16) Increasing numbers of people struggle daily to satisfy basic needs, while having to accommodate and inculcate changes in almost all dimensions of their lives, that is, behaviorally, socially, culturally, economically, and politically.

In 1994 South Africa moved to a democratic era with inclusive governance and a new constitution. The new democratic government began to reverse the spatial and social implications of the apartheid regime with policies to restrict increasing inequalities, spatial inefficiencies that apartheid planning implemented to correct spatial patterns (Pieterse, 2004). The 1994 democratic introduced a new approach in response to the modernist master planning to manage the inability to accommodate urban expansion and informality. This

approach includes the following concepts as discussed by Todes et. al (2009) and KZN PPDC (2008):

- a focus on sustainability;
 - integration between sectors and with budgets;
 - participatory planning, bringing in a wide range of stakeholders; (decentralised governance)
 - understanding markets and producing credible plans, backed by public investment where appropriate;
 - recognition of the reality of informal settlements and slums;
 - development of contextually appropriate, affordable, strategic and effective forms of planning and land use management;
- pro-poor and inclusive planning, recognising diversity" (Todes, 2009 and KZN PPDC, 2008).

The growth of South African cities, according to Dewar and Todeschini (2004), has primarily been shaped by three interrelated forces, namely, market-driven responses, public planning, and informal settlement formation. Market-driven responses have dictated the distribution of middle and upper class development and economic activity, while public planning has determined the distribution of lower income townships and their facilities. The informal settlement formation has taken the form of break-away responses to the inadequacy of the townships and to problems of entry into the urban system.

The land uses should be mixed and designed or developed a manner that allows for their harmonious interaction through the development of a destination or catalytic projects (Jordaan, 2003). Density works in close collaboration with land uses of a corridor. A corridor relies on both the "minimum density of uses" and should "generate high density of populations and economic activities" through the mixture of land uses (Jordaan, 2003:19).

"South African cities are some of the most inefficient cities in the world as a result of the spatial planning which was adopted by the apartheid regime" (Maharaj, no date). According to Brown (2007), racially-based apartheid spatial planning affected the lives of the urban poor through;

- "Forced removals which destroyed community networks on which the poor depend for survival with

- people who moved to Chatsworth from Clairwood, Block AK and Clairwood
- Zoning and planning laws placed restrictions on trading and retail activity in the townships and ensured that commercial activity was concentrated in rich white suburbs.
- The unequal provision of services,
- The design and layout of the apartheid city also resulted in a long time spent travelling and more money to and from work, because of the location of settlements for the poor and as a result the poor began locating themselves in informal settlements near employment opportunities" (Brown, 2007).

Accessibility to basic needs and economic opportunities remains one of the biggest challenges in the urban areas of South Africa. Currently, 38% of all urban households within the Durban metropolitan area face the daily challenge of basic affordable access, as no affordable means are available to them within the current transport system. Up to 29% of the urban population use public transport, with most of these (19% of all urban dwellers) being captive to the cheapest mode of transport. This clearly illustrates the high dependence on public transport for the functioning and development of cities (CSIR, 2003:1).

2.5.1 THE EVOLUTION OF DEVELOPMENT CORRIDORS IN SOUTH AFRICA

The corridor concept was introduced in South Africa in the 1970's by a group of planners at the University of KwaZulu-Natal, in particular David Dewar and Roelof Uytenbogaardt from the research undertaken by Martens (2001) Todes (2000) and Taylor (1993). David Dewar produced many publications based on the corridor concept as indicated by Martins (2001) which advocated the use of corridors in the South African context in response to dysfunctional apartheid planning (Todes et. al, 2000: 233 in: Martens, 2001) and he also published various articles with the corridor concept as the subject including the policy document, A Manifesto for Change. In some of his findings and key arguments accessibility to activities and facilities is a fundamental response in response to inequitable urban forms which impacted the poor and that would improve the quality of lives of people. The guidelines are as follows:

- definition and control of a fixed urban edge
- creation of an efficient public transportation network

- co-ordination of movement modes to create a hierarchical order of accessibility
- creation of activity arms or spines
- creation of a system of public spaces to structure urban development (and the celebration of these)
- identification of major social institutions
- introduction of more complex processes of city development' (Dewar, 1984: 49-52 in: Martens, 2001).

As the corridor concept gained momentum and used as an alternate form of spatial restructuring in South Africa by organizations such as CSIR and the Urban Foundation. The corridor was also promoted through transport agendas in response to urbanization patterns in order to integrate land use and transport planning to combat the spatial fragmentation and socio-economic disparities.

2.6 POST-APARTHEID POLICIES, STRATEGIES AND PLANS

The post-apartheid policies and strategies was developed in response to the above mentioned issues of inequality and limited opportunities through distorted spatial patterns to ensure efficient planning processes which was required to restructure the apartheid city and to promote efficient and integrated land development. The intention of these policies was to also promote compact city development, enhanced mix of land uses and increased densities where employment opportunities would be easily accessible to reduce travel costs and to discourage urban sprawl which is unsustainable according to Godehart (2006).

In order to reintegrate South African Cities and reverse the effects of Apartheid Planning, the Development Corridor concept and related concepts have been mainstreamed and referred to as a spatial strategy. This political transition also had huge implications for governance and institutional processes related to spatial planning. It is also important to understand for the processes beyond planning such as implementation, management and monitoring and evaluation.

2.6.1 NATIONAL LEVEL

From a national level y development corridors and underlying principles have been supported and established through national policies and strategies which include the National Infrastructure Plan 2012, the Policy on the development of Special Economic Zones in South Africa, 2012, the New Growth Path 2011, the National Spatial Development Perspective (NSDP) 2006, National Urban Development Framework (NUDF) and Draft Spatial Planning and Land Use Management Bill 2011 and the National Development Plan 2030 as well as the Moving South Africa Action Agenda, 1999 and National Land Transport Act (Act No. 5 of 2009).

The intention of South Africa's National Development Plan 2030 is to mainstream infrastructure development through promotion of mixed housing strategies and more compact urban development to help people access public spaces and facilities, government agencies, and work and business opportunities and investment in public transport, to benefit low-income households by facilitating mobility" among other strategies for employment creation and an increased quality of life and access to services. This is the NSDP's (2006) fifth principle which identifies the prioritization of higher settlement densities along transport corridors and the 5th Job Driver of the NGP (2011).

The Spatial Planning and Land Use Management Bill refers clearly to development corridors by specifying that the Municipal Spatial Development Framework must "identify current and future significant structuring and restructuring elements of the spatial form of the municipality, including development corridors, activity spines and economic nodes where public and private investment will be prioritized and facilitated". In July 2015 regulations were adopted for the Spatial Planning and Land Use Management Act (2013) - SPLUMA. SPLUMA was developed to provide a single integrated planning tool for the country. This Act was brought about to aid spatial transformation in South African cities by guiding the formulation of Spatial Development Frameworks (SDF) and Land Use Management Systems (LUMS). This will have a direct impact on planning for the development corridors in South African cities. The importance of LUMS and SDFs will be discussed further on in this chapter.

The Moving South Africa Action Agenda and The National Transport Transition Act advocated the promotion of an efficient public transport system and other mechanisms for developing an integrated approach (KZN PPDC, 2008) and addressing the need for corridor densification to overcome strategic challenges (Marrian, 2001).

The National Transport Transition Act (2009) gives direction to the realization of the importance of the integration of land use and transportation planning and recognizes densification along development corridors. It is clear to see from the objectives of key transport policy and legislation described above, that the integration of land use and transportation planning are a priority area to enhance society and access to opportunities.

2.6.2 PROVINCIAL LEVEL

In July 2005, The KwaZulu-Natal Cabinet decided to pursue the concept of corridor development as a stimulus to economic growth in the KwaZulu-Natal (PSEDS, 2012). With the KwaZulu-Natal Provincial Growth and Development Strategy 2011 (PGDS) and related implementation guidelines such as the Provincial Growth and Development Plan, 2012 (PGDP) and the KZN Provincial Spatial Economic Development Strategy (PSEDS), 2012 corridor development was advocated. The frameworks identified nodal and corridor development essential to economic development through road and rail infrastructure development. Corridor and nodal development is also seen as a means to achieve spatial equity and corridor development aims to provide accessibility to services, facilities and amenities.

Although the discussion on corridors on a much larger scale, it provides a context within which development corridors are utilized as a strategy in KwaZulu-Natal. This implies that the intention of the corridor will vary for different scales of corridors. The scale of a corridor is important in determine the exact intention of the effects of the corridor and what it hopes to achieve.

2.6.3 ETHEKWINI LOCAL STRATEGIC PLANNING

EThekwini Municipality has embarked on a process of strategic long term planning which will be illustrated in this section and integrally linked to development corridors.

2.6.3.1 INTEGRATION AND MUNICIPAL INTEGRATED DEVELOPMENT PLANNING

According to the research document by KZN PPDC (2008) land use and transportation planning were seen in silos until the 1990's when the notion of integrated development planning was introduced in terms of the Municipal Systems Act (Act No. 32 of 2000).

The Municipal Systems Act (Act No 32 of 2000) provides for facilitation of internal operations of municipalities. Municipal integrated development planning has become a focus in South African cities and guides land use decisions by providing a framework for development. Integrated development planning requires sector plans such as Housing plans, Land Reform initiatives, Water Services Development Plans, Transportation Plans, and Local Economic Development Plans etc., to be amalgamated and related into a single plan, that is, the Integrated Development Plan (IDP) and spatially represented on a Spatial Development Framework (SDF).

The integrated development plan is a flexible instrument that manages urban growth within municipalities. Spatial frameworks are spatial representations showing current and expected growth patterns based on the interventions identified in the IDP.

According to the KZN PPDC (2008), at the local level, the use of corridors and nodes is evident as a spatial structuring tool in the preparation of IDP's and SDFs. Integrated development planning is especially important for corridors utilized in eThekweni as a corridor is defined by various land uses with the need for integration of various sectors. IDP's reflect the development objectives, strategies and budgets of government as a whole, which requires joint intergovernmental prioritization, coordinated resource allocation and synchronized implementation' (KZN PPDC, 2008).

Integration can mean two things in exploring the development corridor concept, the planning for spatial integration and allocation of resources [in response to segregated socio-spatial planning and resource allocation due to Apartheid] and the integration through institutional processes of implementation and management from various sector departments and disciplines such as land use and transportation. Despite the positive and negative aspects facing integration, it is key to the South Africa agenda presently and the need exists for it to be investigated through monitoring and evaluation techniques which could also be achieved through investigating the use of the spatial strategies to achieve restructuring and integration in light of the dysfunctional spatial form.

2.6.3.2 ETHEKWINI INTEGRATED DEVELOPMENT PLAN 2016/17

The IDP encompasses six development Dialogues in order to achieve the vision and an eight point plan for delivery. The development corridor concept is addressed as a spatial strategy to achieve two of the development dialogues namely, to create an accessible city and creating sustainable livelihoods through the densification of activity these corridors to promote accessibility to services

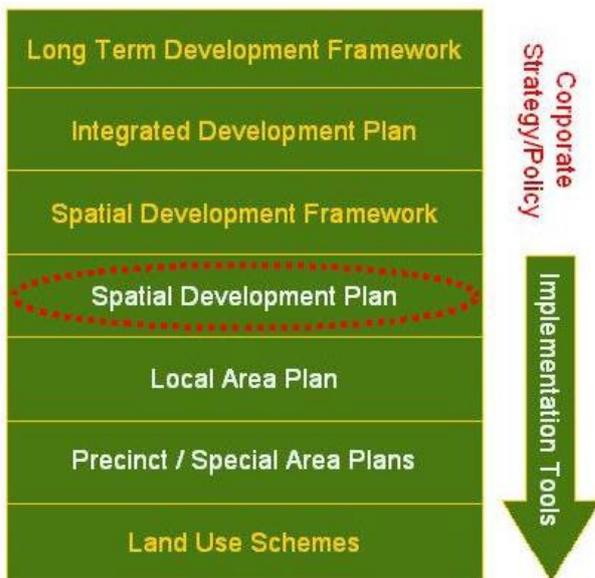
and facilities in order to increase the quality of lives of residents. In addition, the nodes and corridor concept is seen as a mechanism to provide guidance on the spatial characteristics of economic development. The municipal vision for eThekweni is:

“By 2030, eThekweni will enjoy the reputation of being Africa’s most caring and liveable City, where all citizens live in harmony” (EThekweni Municipality IDP, 2017).

2.6.3.3 ETHEKWINI PACKAGE OF PLANS

The package of plans being implemented by the Municipality will initiate spatial and physical planning at scales and levels of detail appropriate to the levels of development and management intervention required in different parts of the municipality and are hierarchical and integrated highlighting movement from strategy through to implementation.

Figure 3: Package of Plans (Source: EtheKweni Municipality, Central Spatial Development Plan 2014/15)



2.6.3.4 SPATIAL DEVELOPMENT FRAMEWORKS

The purpose of a Spatial Development Framework is to guide all decisions of a municipality relating to the use, development and planning of land. See Todes (2009) and Forster, McCarthy and Robinson (eds.) (2004) for a critique of spatial development frameworks which include; weak understanding of space economy and dynamics/trends, use of concepts of nodes and corridors loosely e.g. the production of 'button and zip' plans.

2.6.3.5 ETHEKWINI SPATIAL DEVELOPMENT FRAMEWORK (SDF) 2016/2017

The Spatial Development Framework (SDF) of the eThekweni Municipality is the primary spatial strategy response to the development context, needs and vision of the municipality as described in the IDP. It is the primary level of translation of social, economic and environmental development and management policy into spatial terms and is the primary Land Use Management (LUMS) tool of the Municipality.

In order for this spatial strategy to become achievable and successful and in order for the city to be spatially restructured the SDF needs to be translated into more geographically specific physical development and land use management guidelines. This can be achieved through the preparation of Spatial Development Plans (SDPs). The purpose of the SDP is therefore:

- To translate the policies contained within the eThekweni Municipality Spatial Development Framework (SDF) into more detailed and geographically specific land use directives.
To consolidate update and review existing spatial planning and development management mechanisms in the Central region.
- To guide the preparation of more detailed local area plans, precinct plans and land use schemes.

To provide a more concrete spatial and land use guideline policy for use by municipal and other infrastructure service providers in planning and delivering their services.

- To provide direction and guidance to private sector and community investors with respect to
- the levels, locations, types and forms of investment that need to be made, which the Municipality can support in terms of a phased plan over a period of time.

The SDF is the main tool for Land Use Management in the municipality and is based on a **compact city model**, supported by two important concepts:

- Urban core - central urban area which generally has servicing capacity and with the opportunity for densification and support thresholds for a range of services.
- Urban edge - a tool to curb urban sprawl, promote compaction, public transport, protect environmental assets and prevent inefficient infrastructure expenditure (EtheKwini Municipality SDF, 2016/2017).

EThekwini is identified as a port city in terms of the municipality's SDF (2016/2017) and economic growth and development is based on the Durban port. It makes obvious use of the corridor concept as a spatial structuring tool to target a host of socio-economic and spatial problems that the city faces. The strategies for corridor development are discussed in further detail below:

a) EThekwini Densification Strategy

As part of the Spatial Development Strategy, the EThekwini Municipality SDF (2013) makes explicit use of the nodes and corridor concept and densification of these nodes and corridors. The purpose is to make efficient use of existing infrastructure and create a threshold for public transportation. EThekwini has a Densification Strategy which aims to achieve a more equitable, compact and integrated city form to combat sprawl, target scarce resources and manage urban growth and migration through densification around activity nodes and mixed use activity corridors. It also aims to improve economic opportunities and infrastructure provision, clustering and accessibility to opportunities and services (health, education, housing etc.).

b) Increasing Accessibility

The above relates to improved accessibility to jobs and other opportunities through an efficient public transport system. This aspect of the EThekwini Municipality SDF (2013) defines the movement route hierarchies which are useful to the corridor concept as it defines the characteristics of the route and associated function and land uses.

c) The Integrated Public Transport Network (IPTN)

The IPTN provides an application of the integration of land use and public transportation was formulated in 2011 in response to the Public Transport Action Plan (2007 – 2010). The objectives are to realise, equity of access to facilities, reduce overall impact of transport on the environment, promotion of a liveable city and enhancing spatial structure. The IPTN initial phase included selecting modes of transport to promote through the IPTN and one of the criteria was the ability of the mode to, support Transit Orientated Development and modes which support further land use development and densification along modes of transport routes (EThekwini Transport Authority ITP, 2011).

The modes of transport selected for the IPTN focus on rail and existing road based corridors. According to the EThekwini Municipality IDP (2012) land use strategies that support the development and performance of an effective and sustainable transport system are focused around the major IPTN corridors and include the following:

- “Protecting existing employment opportunities within these corridor areas; Maintaining the quality of high value investment, office, retail, residential and tourist areas within the corridors;
- Discouraging the development of major employment opportunities outside the corridor areas in the short term until the corridor investment has gained momentum;
- Stimulating higher employment and residential densities within these corridors in particular, as well as the promotion of residential densification within the core urban area in general;
- Renewing areas around major stations and modal interchanges as high density residential, office and retail uses” (eThekwini Municipality IDP, 2012).

d) Development Corridors:

The EThekwini Municipality SDF (2013) identifies that development corridors are viewed as growth axes with robust mixed activity that serves the municipality. These include:

- “Urban Service Nodes and Corridors supporting mixed use urban activities;
- Rural Service Nodes and Corridors supporting local level services;
- Coastal Corridor consist of high quality natural coastal assets and consist of mixed uses

including mixed density residential, recreation, entertainment and tourist oriented activities;

- Tourism Corridors supporting tourism activities;
- Industrial Corridor supporting primarily industrial activities;
- Agriculture Corridor ; and
- Airport Noise Zone” (eThekwini SDF, 2016/2017).

2.6.3.6 CENTRAL SPATIAL DEVELOPMENT PLAN (CSDP) 2014 – 2015

EThekwini municipal area is spatially managed by four functional regions (Central, South, North, and Outer West planning regions). These spatial development plans for the four regions was created in 2007, together with the municipality’s Package of Plans to prepare the Spatial Development Framework. The Central region is further divided into eight local areas and Florence Nightingale Drive is within the Greater Chatsworth Area. Each local area has its own inherent character which presents unique opportunities for development that needs to be managed and planned accordingly. The objective in the case of these local areas is to encourage local activity systems which provide a range of facilities, opportunities and services required by local residents

Three Area Based Management (ABM) areas fall within the Central Spatial Region namely; Inner eThekwini Regeneration and Urban Management Programme (iTrump), Cato Manor and part of the South Durban Basin (SDB) and Chatsworth Urban Management Forum which was launched in Chatsworth is within the 2014/2015 Central Spatial Development Spatial Plan which is the central region of the municipal area with the Umgeni River to the north, Umlass Canal to the south and the Kloof escarpment to the west. In terms of the municipality’s Package of Plans, the town planning scheme and the SDF are statutory documents.

Table 2: Key Characteristics of Greater Chatsworth (Source: EtheKwini Municipality Central Spatial Development Plan, 2014/2015)

Key characteristics	Medium to low density residential Lower income earners Presence of informal dwellings
Role of the Local Area	A residential area for middle to low-income earners.

	<p>Has a good cluster of social facilities and a range of commercial activities such as the Chatsworth regional shopping centre and RK Khan Hospital.</p> <p>Maintain a high quality, well balanced residential environment.</p>
Proposed residential land use and densities	Encourage densification opportunities in areas with potential for infill and compaction especially in vacant and underutilised areas and adjacent to HPPTN.
Planning: Industrial	Pressure for industrial use is evident in this district, there is however limited space for development. Considering the residential character of the district the encouragement of industrial uses within this region is not likely a suitable option as conflict between residential and industrial uses would ultimately manifest in time.
Proposed mixed use:	No current mixed use interventions identified at present however there is an influx of illegal uses prevalent in this district.
Proposed movement system	<p>The local area experiences high volumes of traffic and some congestion problems due to insufficient capacity of road network.</p> <p>No current major interventions are planned although the Ethekwini Transport Authority will look at improving overall road capacity in the region.</p>
Open space/environment	Maintain the existing quality of D'MOSS in terms of the open space such as Silverglen Nature Reserve.
Services	Upgrade and maintain existing service infrastructure to ensure ongoing capacity is maintained.

2.6.6 PLANNING AND LAND USE MANAGEMENT BY-LAW, 2016

It was necessary to draw on literature that deals with land use theories especially those that are applicable to the South African context. Given the historic development of South African cities, it is clear that dispersed and low density development has resulted in the costly provision of public transport services that struggle to provide effective coverage (Dewar and Uytendogaardt, 1991:64). At the metropolitan level, it is important that settlements should be as continuous as possible and not leapfrog land, as has occurred in the past, and continues to do so with regard to low-income settlements and new commercial developments.

The changing nature of city form is also a major challenge to land-use and transport planning. The former uni-centric cities are making way for cities containing a multiplicity of nodes that serve different functions in the urban fabric. To ensure public transport viability, it is important that these nodes are both large enough in terms of floor area and compact in coverage.

2.7 ROLE OF NODES AND ACTIVITY CORRIDORS

It is essential to obtain a comprehensive understanding of nodal development by firstly acknowledging that there are different types of nodes that prevail such as primary nodes, secondary nodes, metropolitan nodes, sub-metropolitan nodes, commercial nodes, tourism nodes, transport nodes, economic nodes; and secondly, that activity corridors are connected by nodes. It is also necessary to identify the significance of the nodes and activity corridors in relation to a metropolitan area, its neighbourhood, and district.

According to Warnich and Verster (2005:344) corridors really present a predominantly dominant and effective planning strategy for the purpose of restructuring the spatial inequality of the city and to initiate economic growth points in close proximity to low income areas. Activity corridors are therefore supposed to function as tools for restructuring fragmented South African cities into more intensive and integrated urban environments that allows for equitable access to socio-economic opportunities and ultimately allow for poverty alleviation and social justice (Lotz, 1995).

Activity corridors are broad bands of dense mixed-use linear urban development which promote intensive social interaction and economic activity. They operate along a public transportation route with the function of integrating two or more activity nodes (Warnich and Verster, 2005). It is however

important to note that activity corridors are not elongated nodes of activity, but rather take on a “string of beads” approach where there are different concentrations of activity clusters located along a corridor (Dewar & Todeschini, 2004). The most accessible locations are usually used for concentrated activity clusters of high order activities and the less exposed areas are used for lower order activities (Dewar & Todeschini, 2004).

Corridors were initially developed to cater for a variety of needs in order to provide links between nodes, important business areas, cultural centres, and political spaces. However, the relationship between spaces can change but the connectivity or corridors always remain (Schönharting et al., 2003).

The Ethekwini SDF, the Cape Town Metropolitan Council’s Municipal Spatial Development Framework (MSDF), Priemus and Zonneveld (2003) and the CSIR (2003) identified a major transport route, public transport modes, linkages between nodes and sub-nodes, intense human interaction, availability of services and public investment in the immediate vicinity of the activity corridor.

Based on the researcher’s observations in the study area thus far, there are in fact additional characteristics at a local scale that include high density areas, low to middle income residents with commercial and service type industries, operating in the form of semi-detached residential units and where this type of development is culturally and socially acceptable.

An activity corridor can function at both the metropolitan and local scales. At the metropolitan scale, an activity corridor can provide a higher density development opportunity and also provide a multimodal transport system that is able to link a number of activity nodes (Curtis and Tiwari, 2008). At the local scale, an activity corridor is focused not only on the vehicular movement but on creating a “place” of a street that enhances the “sense of place” as it builds a stronger community (Curtis and Tiwari, 2008).

An activity corridor is referred to as a “dynamic space” where conflict may arise between the various functions of such corridors (Chapman *et al*, 2003). According to the Chapman, Pratt, Larkham and Dickens (2003) these conflicts could be dominated by a number of positive consequences from the development of a corridor:

Talen (2006) also agrees that mixed-use increases accessibility by proximity that reduces the need for transportation which in turn improves environmental quality as car dependency decreases with more activities available within walking distance. People who are brought out into the streets, help to contribute to the vitality and diversity of street life.

Lotz (1995) states that the development of corridors can create a strong well-defined city structure in the South African context to address the urban deficiencies experienced in metropolitan areas. Activity corridors provides a means to integrate those parts of the metropolitan area with no coherent and integrated structure into the larger urban environment. The poor or undeveloped economic and social activities are therefore identified here as “urban deficiencies”, especially where there is a lack of activities and facilities in the lower income areas (Lotz, 1995). He also argues that the activity corridor has the capacity to address these deficiencies in the following ways:

- Increased densities,
- High concentrations of land-uses,
- And the generation of through traffic.

The first function, namely increased densities, is of utmost importance as it can create the demand thresholds for viable service provision, including public transport to sustain a vibrant society (Lotz, 1995).

A corridor is used to describe a linear development based on the idea that along a single linear configuration there is a concentration of all the major activities that are developed around the access to transportation in planning (Jordaan, 2003). The term can also be used to describe an urban corridor which refers to “a broad (commonly in the order of at least a kilometre wide) band of mixed-use activity continually identified around one, or, more commonly, an interlinked system, of transportation routes of different lengths” in which there is at least one route that accommodates public transportation. The term ‘corridor’ has also allows for a number of other terminologies to be used interchangeably to describe it. These terminologies include concepts of land-use planning and transportation, economic corridors, and infrastructural corridors (PPDC, 2007).

An activity corridor for example is associated with the “principles of accessibility by all modes of transport and with it place-making in order to integrate land use with transport” (Curtis and Tiwari,

2008:1). It is also important to understand how corridors have developed over the years, especially the different corridors that co-exist.

2.8 INTEGRATION OF LAND USE AND TRANSPORT

Integrate means to put together, to combine, to incorporate, join together, to assimilate or to amalgamate. In the planning context, integration can therefore refer to an amalgamation of race groups into one area, a mix of land uses - integration between the residential, economic, and social spheres, it could be the incorporation of different activities (like schools, playgrounds, open spaces, commercial facilities), combination of transport and land use planning (linkages) or it could be the working together and or joining of different departments (like planning and implementation) (Adapted from Robinson, et al., 2004:98).

The planning of urban transportation can no longer be viewed in isolation from land uses, especially when taking into account sustainable development. Himanen argued that transport plays “an intricate role in any quest for global sustainable development” (as cited in Curtis, 2008: 104).

Corridor development can also be linked to sustainability. For example, in order for transportation to be sustainable, it should be integrated with land use by providing a variety of mixed land uses that would reduce the need to travel provided that public transportation be in close proximity which would encourage the development of an urban environment that promotes walking and cycling (Curtis, 2008).

Integration can mean two things in exploring the development corridor concept, the planning for spatial integration and allocation of resources [in response to segregated socio-spatial planning and resource allocation due to Apartheid] and the integration through institutional processes of implementation and management from various sector departments and disciplines such as land use and transportation. Despite the positive and negative aspects facing integration, it is key to the South Africa agenda presently and the need exists for it to be investigated through monitoring and evaluation techniques which could also be achieved through investigating the use of the spatial strategies to achieve restructuring and integration in light of the dysfunctional spatial form.

2.9 LOCAL ECONOMIC DEVELOPMENT

International experience advocates that Local Economic Development (LED) concept is sometimes difficult to define (Syret 1995; D'Arcy and Guissani 1996 cited by Meyer Stamer 2003). LED has been interpreted in different ways in South Africa resulting in policy confusion (Rogerson 1997). However, among its core elements, there is an emerging agreement that, LED encourages local economies to grow which also addresses poverty alleviation (Rogerson 1999). Jeppe (1980) defines local economic development as a conscious process where small communities assisted by better developed institutions work toward improving standards of social and economic life. Basically LED facilitates joint development between the local government, community, private sector, NGO's and any other stakeholders. Local economic development is defined by the World Bank 2003 as local people working together to achieve sustainable economic growth that brings economic benefits and quality of life improvements for all in the community

A community is defined as an area, a city, town, metropolitan areas or sub national region. Local is defined as any urban area ranging from large cities to small towns and also implies the inclusion of rural areas linked to towns (World Bank 2003). LED can be described as a territorial planning tool employed by local authorities, using local resources to withstand national and global pressures (Pose 2001). LED thus can be defined as:

"A process in which partnerships between local government, the private sector and the community is established to manage local, and access external, resources that can be used to stimulate the economy of a well-defined territory. In its earlier incarnations, the goal of LED was generally restricted to growing the economic and tax base of a location. More recently, in the context of the Millennium Development Goals, a distinction has been made between economic growth as the "immediate goal" and poverty eradication as the "overall goal" of LED" (Meyer-Stammer and Hindson, 2007: pg 10)

The purpose of LED is to promote economic growth and poverty reduction and it is endogenous, involves partnerships, should be sustainable and seek to improve the quality of life of the city's citizens. It is seen as an appropriate process to create suitable conditions for sustainable employment, small and medium enterprise creation and growth; and to promote human development, and decent work (Canzanelli 2001; ILO 2001). Nonetheless it is still has a problem of how achieve the above. The necessary by Canzanelli (2001) to achieve poverty reduction and economic growth namely: participation, endogenous resources, and support to vulnerable groups and sustainability are briefly described below.

Participation- It is necessary that the stakeholders share a mutual vision of the future in order to realize sustainable development at local level, it (Canzanelli 2001). Even though this is not a necessary condition, it is required and, is generally lacking in developing countries (ibid). The sharing of a mutual strategic vision of development may be one of the most difficult things to achieve and the only way to meet this condition is to initiate a long and tortuous conversation among the local actors which may also be unsuccessful (ibid). The problems of succeeding in the explanation of a common shared vision are related to the wideness of the area concerned (ILO 2001). The area must be big enough to ensure that a critical quantity of resources is available on which to base a LED intervention and the area must also be small enough to allow for a suitable bottom-up participatory approach (Canzanelli and Dichter 2001). This basically means that LED should try to encourage participation even though difficulties may arise.

Endogenous resources. A Local Economic Development approach should be based on the exploitation and development of the local endogenous resources (Canzanelli 2001, Bond 2003). The sustainability of the intervention strongly relies on the positive response to this condition (Canzanelli 2001). Therefore local economic development should be based on local resources. Foreign direct investment is not excluded in this milieu, but it should anyway be directed towards the use of local potentialities (Canzanelli 2001).

Support to vulnerable groups. Local Economic Development practices should be carried out as means to favour social inclusion of the vulnerable groups (Canzanelli 2001). Activities should be based on the broader concept of human development (UNDP 2006). So issues such as the access to economic opportunities, the provision of decent work, the safeguarding of the environmental biodiversity should be incorporated in a LED program (ILO 2001).

Sustainability. LED should not undermine from but rather improve the economy to achieve the same goals in the future. It embodies the promise of societal evolution towards a more equitable and wealthy world in which the natural environment and our cultural achievements are preserved for generations to come (EDA 2007). LED should therefore seek sustainability financially, socially, institutionally and environmentally. Financial sustainability suggests that an LED intervention should be able to cover its own expenses, possibly detaching itself as soon as possible from the funding of the donor agencies which sustained the intervention at the beginning (Canzanelli 2001) .Social sustainability implies that a common vision of future development is reached among all the

stakeholders (Canzanelli and Dichter 2001). Institutional sustainability suggests that local administrations and authorities are fully dedicated to support the process and to channel to it all the public initiatives to be implemented in the area (ILO 2001).

From the above discussion it is clear that LED involves participation and social dialogue, it is territory based, entails mobilisation of local resources and competitive advantages, it is endogenous and should be sustainable. LED can therefore be broken down in three to come up with a better understanding as described below.

- **Local:** which entails endogenousness or a specific territory (Pose 2001)
- **Economic:** which entails identifying investment opportunities and improving competitiveness (EDA 2007; Meyer-Stamer 2005)
- **Development:** entails improvement in the living conditions or quality of life or a shift from ill being to well-being (Chambers 2006)

Meyer Stamer (2005) also identifies six key issues from the LED breakdown above. These six key issues are:

Target group- LED targets organisations or companies that are locally based external investors and business start-ups.

Locational factors-these are factors which define attractiveness of a location; they may be tangible for example access to roads, and intangible factors, for example quality of life.

Synergies-this refers to three interrelated and at times competing strategies of LED namely: economic promotion, employment creation/poverty alleviation/community development, and urban development. It is necessary to clearly define the three competing strategies to avoid conflicts that may arise. To create synergies between the fields is another challenge so that they are reconnected in a meaningful way (Meyer- Stamer 2005).

Sustainable development- looks at sustainability in economic, social and ecological aspects of development.

Governance-this means, it must be based on administrative and regulatory streamlining in the public sector and organisational development in the private sector which appropriate for LED (Meyer –Stamer 2005).

Process management-means that LED should be based on iterative planning implementation, monitoring and evaluation, benchmarking and reflecting which leads to adjusting and additional planning (Meyer-Stamer 2005).

2.10 RELEVANCE FOR FLORENCE NIGHTINGALE DRIVE

The concepts and theories discussed above will act as a framework against which the researcher will compare characteristics prevalent on Florence Nightingale Drive in the study area. This will be done in order to ascertain whether or not Florence Nightingale is an economically viable mixed use local activity corridor connected by a transport node, Westcliff Station and the Chatsworth Town Centre, a local urban node in Chatsworth within the Ethekwini municipal area and to investigate the how residents improve their socio economic status by empowering themselves to start businesses to in order to provide goods and services within easy reach of the residents at competitive prices.

The following chapters (Chapters 4 and 5) will define Florence Nightingale Drive along these concepts and theories. For example, the researcher will use Florence Nightingale Drive to reinforce Dewar and Todeschini's argument, that transport interchange points are particularly important points of opportunity. The researcher will also indicate that while the location of Florence Nightingale Drive may not have been deliberate, but a result of Apartheid planning, it is highly accessible, and offers an opportunity for a decentralized node or rather corridor-type development.

2.11 INTERNATIONAL AND NATIONAL PRECEDENTS

2.11.1 International Precedents

The following case studies, namely, Curitiba in Brazil and Sembawang in Singapore, were chosen to convey international precedent as related mixed-use activity corridors and nodes due to their successful implementation and ultimate benefit to the respective cities' at large.

2.11.1 Curitiba

The city of Curitiba in Brazil, the most famous of the corridor-initiatives is to be found in the international arena. In Curitiba, the successful integration between land use and transport has been almost perfected by making use of a bus-based corridor system that has been in operation for more than twenty years. The replicability of the Curitiba model is, however, in doubt as it was set up with a very strong hand at a time of military dictatorship in Brazil and is, even today, in a more democratic environment, strongly controlled by the local authority (Rabinovitch, 1996).

The case of Curitiba demonstrates a 30-year learning process which began in 1965 and is still continuing to the present day. The integration of land use and transport planning was viewed as a key tool for guiding and coordinating growth.

Five arterial corridors were planned and gradually implemented to extend from the central area. These were developed using previously existing streets and only minor physical modifications. These corridors were created by using the existing street pattern and the corridors followed increasing demographic patterns. The layout of these corridors followed demographic growth tendencies. They were to act as high-density pathways for both transportation, circulation and settlement growth.

Land use legislation changes happened incrementally. The 1965 Master Plan established four structural sectors that were designed for the north, south, east and west. The 1970's unpredicted demographic concentration of lower-middle income households occurred simultaneously toward the southeast along specific existing avenues. The city planners were able to respond by establishing a fifth structural sector.

In the case of Curitiba, Rabinovitch (1996) discusses the use of an urban land use policy by responding to the question, "Should a city follow the policy, or should the policy follow the city?" In other words, should a policy aspire to 'shape' a city according to a predetermined 'model', or should such a 'model' change according to the growth tendencies of a given city?

The central hypothesis of this short analysis is that land use policies should not be static throughout time and should ideally be combined with other dynamic elements existing within the urban fabric, such as the mobility of the population, so as to benefit as many people as possible.

In conclusion, the question posed by Rabinovitch is in all probability one of the defining features of a good plan. In actual fact all plans cannot be static, there must be room for change, because as populations change and increase, so too do the problems, constraints and opportunities, therefore a plan must be able to solve problems and implement changes in order to keep with the demand of the population (Rabinovitch, 1996).

2.11.2 Sembawang

The proposed Sembawang activity corridor development from the Sembawang Town Centre in the middle of Sembawang, to the Jalan Legundi area plans included integrated bus interchange which included the following interventions:

Streets and nodes

The major node on this activity corridor is Sembawang Shopping Centre with the land along this corridor zoned for commercial activities with residential uses for the upper levels. This type of zoning allows people to live within the corridor in close proximity to the amenities and facilities in the activity corridor.

Transport modes

In Singapore, public transport is still the most important mode of transport to work. In 2000, one in two residents commuted to work by public transport - public bus, Mass Rapid Transit station or taxi (Statistics Singapore, S.8:1). The proposed bus interchange at the new White site Sembawang Town Centre provides a seamless travel experience to the commuter (Urban Redevelopment Authority, 2003) The White site is directly linked to the Sembawang Mass Rapid Transit station, which resulted in improved access between the various public transport modes and commercial activities.

Business / economic opportunities

The White site area in the Sembawang activity corridor has a plaza that would function as a gathering and activity point for residents with business opportunities planned for the Sembawang Shopping centre as well as the Town centre and surrounds (Urban Redevelopment Authority, 2003).

Residential to corridor spatial juxtaposition

As mentioned earlier, along Jalan Legundi and Jalan Tampang, with commercial activities on the first floor of the buildings and the higher storeys are occupied by residential uses, these mixed land-uses

promote the integration of the various elements in the activity corridor. This results in the efficient utilisation of land.

The following can be learnt from the Sembawang experience:

- An affordable, efficient, and extensive public transport system can result from the corridor-orientated structure and the surrounding densities
- A proposed bus interchange in the vicinity of the Sembawang Mass Rapid Transit station is expected to create a high concentration of activities and facilities (node)
- Mixed land uses along a corridor could result in residential uses close to amenities and facilities

2.11.2 NATIONAL PRECEDENT

The following case studies, namely, Florida Road and Swapo Road, previously known as Broadway were chosen to convey national precedent as related mixed-use activity corridors and nodes due to their successful implementation, policy documents, and site analysis to ultimately benefit the respective cities' at large. Mr. Mohamed Bilal Haq (Acting Manager: Ethekwini Architecture Department and Mr. Shunnon Tulsiram (Head: Economic Development Unit and Economic Promotion) both stated in interviews with the researcher that although Florence Nightingale Drive is at a different scale with low cost council built houses and its own set of economics compared to Florida Road, the municipality's integrated planning, land use management and national building regulations that were implemented to reinvent Florida Road could have a Florida Road effect on Florence Nightingale Drive. Their responses from their interviews will be analysed and discussed in detail in chapter four.

2.11.1 FLORIDA ROAD

The Florida precinct functions as a city wide and local function with a very distinctive quality comprising up of mixed-uses with visual, aesthetic character of the street. Florida Road is connected to Mitchell Park in the north which serves as a recreational facility, to Argyle Road south to the city centre (Iyer, 2012).

Ethekwini Municipality responded to the Florida Road's physically degeneration and moral degeneration due to the uncontrolled nightlife and alleged underhanded dealings based on a recommendation from the approved Berea Plan in 2012 by Iyer Design Studio for a Functional Area

Plan for the Berea Study area. A Precinct Plan for Florida Road was done to reinvent Florida Road into an activity corridor with restaurants, retail outlets, offices, and residential clusters, comprising of many existing listed shops, houses and flats.

The implementation of a Functional Area Plan transformed Florida Road into a well-developed entertainment and tourist precinct with a range of retail, business and offices, combined with religious and recreational activities, mostly with single and double storey developments. The municipality implemented the following interventions in the identified Berea Plan for the Florida Road Precinct:

- The character of the area has been conserved and any new development must align with the existing development
- Shops and restaurants were encouraged to relate to the street. This area needs protection and appropriate interventions to reinforce and benefit the evolved character
- The new zoning typology will set the base for this intention, and an Urban Design Management Overlay must be developed to direct development together with appropriate Municipal interventions
- A substantial amount of residential development had to be retained and these developments and adjacent areas are protected from externalities
- The General Residential 1, General Residential 2, General Shopping, Special Zone and the Maisonette 900 zone were replaced with Restaurant and Retail Development and Multi-Use Retail and Offices in the revision of the Durban Town Planning

Florida Road is a landmark location where property owners and residents have invested into Florida Road to prevent the area from degrading. The physical interventions are visible changes such as cleaning, maintenance, and security services which changed and improved investor confidence.

Florida Road has a range of retail, business, and office opportunity, combined with religious and recreational activities within walking distance because of its mixed-use nature. The area is visually pleasing with the vibrant energy of Florida Road and the area is unique because it attracts tourists and locals. The area also has a number of listed buildings with many refurbished to its original condition. This, together with the diversity in the mix of uses, makes this area highly desirable and attractive. Florida Road was upgraded to improve the aesthetic appearance of the road, pavement treatments of the intersections, sidewalks, and improved lighting within the precinct (Iyer, 2012).

The upgraded market space between Gordon Road and Florida Road is underutilised during the week. Although the revised Town Planning Scheme allows for additional bulk of approximately 77 500m² within certain zones, it is difficult to grant the additional bulk because this will further increase the parking problems within the precinct if the developments do not cater for on-street parking.

2.11.2 SWAPO ROAD

Historically, Swapo Road was a predominantly residential area that connected west onto Kenneth Kaunda Drive previously known as (Northway) and east on the Leo Boyd Highway which connected the city centre to the northern suburbs. Adelaide Tambo Drive previously known as Kensington Drive is a major road parallel to Kenneth Kaunda Drive that intersects Swapo Road (Ethekewini Municipality Archives).

In 2003, Ethekewini Municipality's Development and Planning, Land Use Management Section initiated the Upper Broadway Community and Business Precinct Development Project to provide land for retail and office use outside of the central business district and closer to the communities they serve in the north of the city (Ethekewini Municipality Archives).

The detailed project planning was confined to both properties fronting onto Swapo Road, previously known as Broadway; and Adelaide Tambo Drive and those properties that were likely to be impacted upon by land use changes in and around the area.

The Land Use Framework Plan assisted the municipality to define, guide, and manage the development of the community and business precinct with and an Urban Design Plan with detailed proposals for the rationalisation, upgrading and improvement of the Upper Broadway/Kensington Road reserve and the general public space.

Some of the objectives of the project included the creation of a Land Use Development Framework, a functional and economically viable mixed land use community, and business precinct and civic heart for the greater Durban North area. It had to be accessible, legible, visually appropriate, human in scale to reflect a sense of "place and uniqueness" while offering variety, richness and robustness and to create the necessary spatial pre-conditions to maximise the economic opportunities for small and medium retail, office, entertainment, recreational, and civic activities.

2.12 CONCLUSION

It can be said that the location of nodes, activity corridors, and linkages and local economic development by residents determines the economic viability and importance of activity corridors in the municipal area. In this chapter the researcher's intention is to demonstrate how residential land use changes over time to mixed-use development and how unplanned occurs land use integration occurs on activity corridors connected by strategic nodes.

The common thread in both international and national experience is the need to integrate land use management with planned and unplanned mixed-use development on emerging or existing activity corridors, with intense economic activity and dense residential use, based on private transport and public transport facilities in close proximity of existing nodes, ensuring greater viability of mixed-use development. It is also important for town planners to be aware of the changing trends and to respond to the changes in land use.

Some of the best city transportation systems are generally viewed as corridor-related strategies.

The causative relationship where public transport may possibly be a predeterminant for vibrant activity corridor development, is investigated in Chapter Four. It can therefore be assumed that activity corridors where resident's sees initiatives to improve socio economic standards together with local economic development opportunities and public transport which are mutually supportive, can create local viable economic growth and mixed use in a sustainable manner.

The use of a private cars as the main mode of transport, combined with rail taxis and bus services, is also common among the case studies. Fortunately, Florence Nightingale Drive is already equipped with these modes of public transport and associated facilities, and like those in the case studies, Florence Nightingale Drive is connected to a public transport node at the Westcliff Station, an industrial node in the Sunset Drive Industrial Area, a commercial node in the Westcliff commercial area, an urban node at the Chatsworth Town Centre, and RK Khan Hospital acts as a structuring tool for present and future development.

Florence Nightingale has organically transformed into a economically viable mixed use activity corridor comprising of a variety of residential units, businesses and professional services in a predominantly low income to middle income established residential area into a mixed-use area business that provides goods and services within walking distance and by public transport seven days a week. The residents

have not objected to the change from residential use to a variety of business uses and professional services uses.

This chapter has provided an overarching framework within which the development of the Florence Nightingale Drive local activity corridor concept is placed. The following key points emanate from the above research which informs the remainder of this thesis.

The following Chapter discusses the data collection used in this research study to understand the rationale for the evolution of the variety of businesses and services with the successful transformation of Florence Nightingale into a mixed use local activity corridor.

CHAPTER THREE: DATA COLLECTION

3.1 INTRODUCTION

The types of methods used to conduct the research and the techniques used to gather the data is discussed in this chapter. The methodological approach adopts a qualitative study. This study included the use of instruments such as reviewing the current zoning and town planning controls of the study area, a physical analysis of the study area to observe the formal activities, the traffic, and the general physical appearance of the study area a land use survey, interviews, and an assessment of the built form. The purpose of this chapter is to detail the steps that were carried out in order to obtain data relating to the key objectives stated for this study. The data that was collected and analysed depends on both primary as well as secondary sources of data.

These steps are further discussed, below, in the sequence that they were carried out.

3.2 A PHYSICAL ANALYSIS OF FLORENCE NIGHTINGALE DRIVE

Once the literature review process was complete, it was necessary to physically analyze the study area, Florence Nightingale Drive to observe the formal activities, the traffic, and the general physical appearance of the study area. This required the researcher to map out the geographic boundary of the study area, both physically and by means of a cadastral map and an aerial photograph.

A physical analysis of the study area provided the researcher with a context within which to undertake field observations and land use surveys. The cadastral and aerial maps were available on the eThekweni Municipality's website (www.durban.gov.za).

The physical analysis of Florence Nightingale Drive, that is, the core study area, analysed the location of Westcliff railway station, Higginson Highway, the Chatsworth Town Centre and its influence on the activities in the area. The residential component of the area was analyzed in terms of the range of dwelling types, and the condition thereof. It was also necessary to observe the formal commercial activities, and the Bangladesh Market in the area. Further observations were of the streetscape, pedestrians, and general physical appearance of Florence Nightingale Drive

3.3 ZONING MAP AND TOWN PLANNING SCHEME

A zoning map with the municipality's 2016 Central Town Planning Scheme which includes the Chatsworth area was obtained from Ethekewini Municipality to compare the primary land uses, land uses permitted by special consent, the precluded land uses, and the development controls for the Special Residential 180 and Special Residential 400 zoning on Florence Nightingale Drive.

3.4 LAND USE SURVEY

It was necessary at this stage to conduct a land use survey, and to compare the existing Central Town Planning Scheme, Zoning Map and Clauses, which was available from the eThekewini Municipality offices with that of actual land uses.

The researcher recorded 53 businesses from a land use survey on Florence Nightingale Drive. However when the researcher conducted the interviews in the study area, two businesses were closed for business. Four houses were used to advertise businesses and services outside the study area, with two tuck shops being excluded from the business interviews. A total of 17 of the 39 businesses indicated in Table 3 below were interviewed in the study area, and that legal practices (attorneys) are the most dominant type of business service (15.38%).

The aim of this survey was for the researcher to gain knowledge of the range of businesses in operation on Florence Nightingale Drive, and if there is any apparent disjuncture from what was planned for the area in terms of the Central Planning Scheme. The survey also assisted in determining what formal and informal businesses exist in the area.

3.5 INTERVIEWS

3.5.1 Target Group

The city officials comprised of Mr. Shunnon Tulsiram (Head: Economic Development Unit and Economic Promotion, Mr. Eugene Naidoo (Senior Manager: Traffic Engineering), Mr. Eric Parker (Regional Coordinator: Land Use Management Section), Mr. Mohammed Bilal Haq (Acting Manager: Architecture), and Miss Devoshini Konar (Strategic Spatial Planning Branch: Professional Planner).

The city officials mentioned above are responsible for projects in the Chatsworth Area, and Miss Devoshini Konar is responsible for central region of the Spatial Development Framework, which

includes the Chatsworth area and in particular Florence Nightingale Drive. Mr. Eric Parker is the Regional Coordinator for the South Central Town Planning Region within the municipal area and Mr. Eugene Naidoo, Ethekewini Traffic Authority manager.

3.5.2 The Interview Process

The researcher used a semi-structured interview process using questions that were selected prior to the interviews. The interviews were not be restricted to these questions because qualitative interviews tries to understand selected people on their own terms and how they make meaning of their own lives, experiences, and cognitive processes (Brenner, 2006: 357). Semi-structured interviews were conducted.

3.5.3 The Need for the Interviews

Face-to-face interviews were conducted with the relevant stakeholders of the area. The following categories of people were interviewed:

- City officials
The intention of interviewing these city officials is because that they are involved in the spatial planning, land use management, and transport planning, and are currently intimately involved in the annual review of the 2016/2017 Spatial Development Framework for the area, including the assessment and SPLUMA applications and building plans.
- Business owners within the study area.

The aim of interviewing the business owners was to provide important information on their reasons for starting their businesses, types of business, when the businesses were started, and the number of people employed definitely provided qualitative data with regard to the change and continuity of Florence Nightingale Drive.

Table 3: Sample size per business type

Business Types	Sample Size	%
Attorney	2	11.76
Accountant	1	5.88
Aluminium and Glass	1	5.88
Car Spares and Accessories	2	11.76
Car Wash and Suspension Repairs	1	5.88
Florist	2	11.76
Loans	1	5.88
Online Lounge Suites Sales	1	5.88
Security Company	1	5.88
Sweet Wholesalers	1	5.88
Designer Clothing	2	11.76
Counselling and Life Coaching Programmes	1	5.88
Office and Computer Supplies	1	5.88
Total	17	100

Source: Fieldwork and Interviews 2016

The researcher intended to interview the 39 businesses in the study area. However due to limitations where the owner was unavailable or did not have the time to for the interview, the researcher used the stratified sample frame and a sampling size of 16 interviews. Due to time and resource constraints, the stratified sample contained a specific number of interviewees (refer to Table 3 above) from each category of business type. The business owners interviews also determined whether or not the business owners lived in the Chatsworth or in the study area for a period of 10 to 30 years or more, and secondly on an availability basis.

- Residents within the study area

The aim of interviewing the residents who lived next to the businesses was to provide important information on ownership: how long they lived at their home, whether they were affected by the businesses, whether they supported the businesses, and what changes they would like to see in the area.

The researcher intended to interview the 25 residents in the study area. However, due to limitations where the residents were unavailable or did not have the time to for the interview (because this is a low to middle income area where both the husband and wife work from Mondays to Saturdays and the Saturday afternoons and Sundays are used for religious, social and cultural functions), the researcher used the stratified sampling method that was used in selecting the 10 interviewees.

The aim of interviewing these persons was to provide important insight on the area considering their day-to-day dealings with the area. Persons that have been residing or owning businesses in the area for a period of 10–30 years or more definitely provided qualitative data with regard to the of Florence Nightingale Drive from the development of from earlier days to present.

A stratified sampling method was used in choosing interviewees. The different types of businesses were identified and thereafter a sampling size of 17 was chosen. The different types of businesses were identified from the land use survey conducted by the researcher.

3.6 BUILT FORM ASSESSMENT

It became apparent to the researcher from the interview with the business owners and residents to record transformation of municipal built semi-detached houses into modern architecturally designed houses and businesses with photographs to demonstrate the built form, land use integration, aesthetics, and the streetscape.

3.7 DATA ANALYSIS AND RECOMMENDATIONS

Data collected had to be considered in terms of its relevance to the research problem and questions. The primary data that was collected from the above mentioned sources in this chapter was analysed with the qualitative data obtained from interview process, which was recorded and transcribed. The information gathered from interviews was typed and described in a thematic format. Thereafter the opinions, facts, and knowledge from experiences derived from the key respondents to discover the impact of the mixed use development by residents. For other primary data analysis, the research through purposive sampling conducted interviews with city officials, business owners, and residents. This enabled the researcher to establish the rationale for the changes of land use from residential to a variety of businesses on Florence Nightingale Drive.

The data collected from the residents were recorded and documented, and how the residents' responses and interaction with these businesses and service providers coexist in the study area were coded in order to be analysed more effectively. Typical answers from open-ended questions were also coded.

The data from questionnaire surveys was analysed and represented within graphs, such as pie charts, to compare people's opinions. Other data interpretations and information gathered from interviews and questionnaires directed towards employees of the municipality and public works, was presented in a thematic format to discover the role of governance in privatising public spaces.

The questions posed to the city officials were specific and directly related to the research topic, and were therefore used accordingly. Their information, however, also assisted with the comparison of international experience and trends with that of Durban in terms of what is expected of a mixed-use activity corridor.

Data collected from business owners was categorised according to the number of years they had been residing or owning businesses, their reasons for starting the businesses, the number of staff employed, and the type of business were considered to have invaluable input with regard to the transition from earlier to current spatial and economic trends in the area.

Information from the secondary data analysis was synthesised and presented thematically from maps, photographs, and documents, and put into context within this research presentation (Brenner, 2006). Thematic analysis of data allowed the data to be presented in a logical sequence and to expose implicit and explicit ideas within the data. In addition, thematic data analysis was used to identify and group relevant themes and ideas to allow for a systematic and coherent presentation of analysis.

This allowed the researcher to ascertain the rationale for the transformation of Florence Nightingale Drive from an arterial residential road to an economically viable and sustainable local mixed use activity corridor comprising of a variety of businesses and service in operation from 1960. Interviews with businesses and service providers assisted the researcher to record and document the reasons for the businesses, types of businesses and service providers, land values, women empowerment, number of people employed and opportunities that are in operation on Florence Nightingale Drive.

3.7 CONCLUSION

This chapter provides an understanding of how the research has been carried out in the study and it details the study and the study area. Although there were constraints and limitations, the prescribed methodology yielded some interesting results. The results and findings with an assessment of the built form in the study area proved to be very useful in this research to understand the rationale for the evolution and integration of the variety of businesses and services in the study area.

CHAPTER FOUR: FINDINGS AND DATA INTERPRETATION

4.1 INTRODUCTION

This chapter presents the land use and transport assessment based on the key corridor components

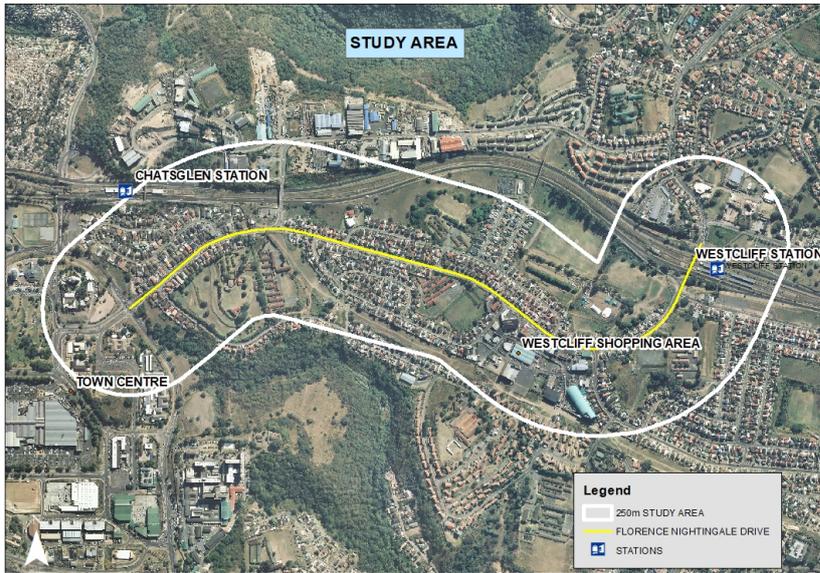
This chapter discusses and analyses the findings for the transformation of Florence Nightingale Drive from an arterial residential road into an economically viable and sustainable mixed use local activity corridor by entirely residents on their own with their own initiative creativity and entrepreneurship. This chapter also presents the findings, based on a physical assessment of the study area, an assessment of the current town planning controls, a land use survey, on interviews with the relevant stakeholders, and on the assessment of the built form. This will in turn set the basis for analysing issues that are deemed important, and such issues are to be addressed in the subsequent chapters of this document.

4.2 A Physical Analysis of the Study Area

The Physical Analysis of the study area shows that Florence Nightingale Drive is connected by an urban node, Chatsworth Town Centre to the west and the Westcliff Station, a transport node to the east on Higginson Highway which is also a high visibility road that is attractive because of the Bangladesh Market which operates on Fridays and Saturdays.

The Westcliff shopping area on the east is an established neighbourhood commercial area in Westcliff with the RK Khan Hospital south of the town centre. An existing industrial node, Sunset Avenue Industrial Area comprising of hardware businesses, light and general industrial uses north of the study area on Sunset Avenue connects to Florence Nightingale Drive over the Higginson Highway via Sagittarius Street.

Figure 4: Florence Nightingale Drive: The Study Area

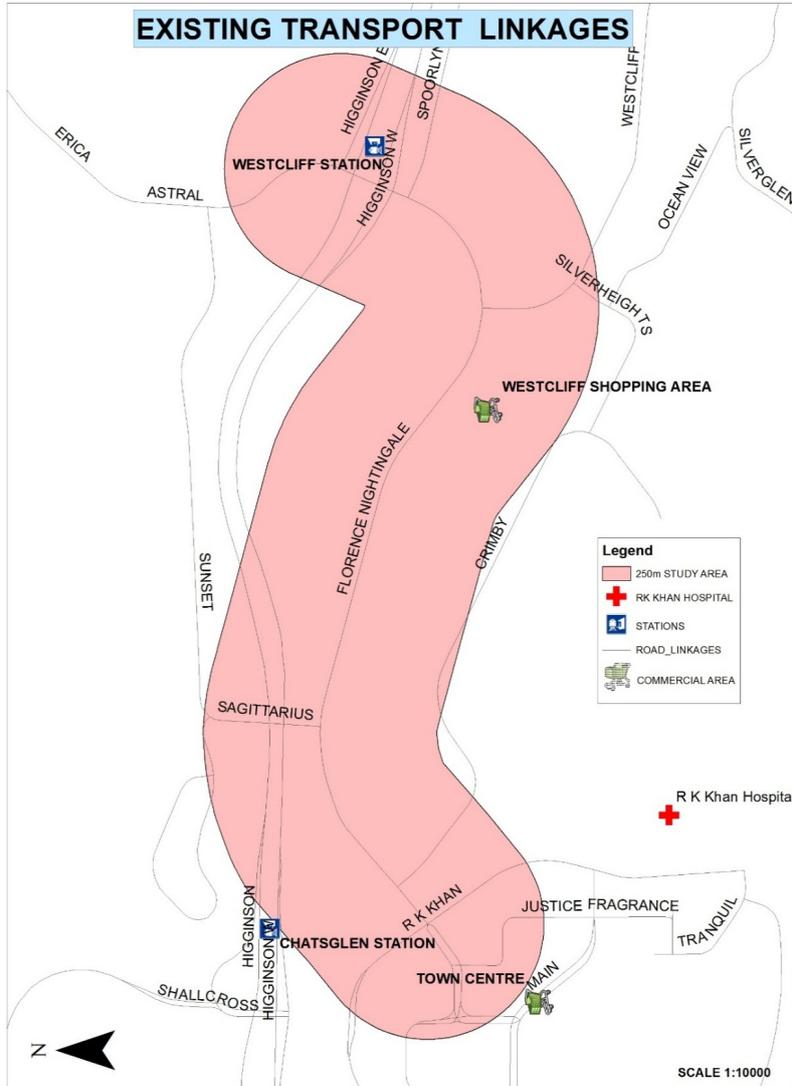


Source: EtheKwini Municipality GIS

The workers from the industrial node access Florence Nightingale Drive via Sagittarius Street to public transport and taxis on Florence Nightingale Drive. The main mode of public transportation are minibus taxis. There are no taxi ranks located along Florence Nightingale Drive, however provision has been made for public transport lay-bys. The Westcliff Station and the Chatsglen Station intercept the study area. There is a significant amount of pedestrian activity along Florence Nightingale Drive with pedestrian movements emanating from the residential area of Westcliff to the surrounding commercial activities.

Florence Nightingale Drive is also used as an alternate shorter route to RK Khan Hospital, the Town Centre, and surrounding suburbs and also emanates a deep sense of community because of its Indian culture and heritage. Florence Nightingale Drive feeds off the Western edge of the Chatsworth Town Centre. The Chatsworth Town Centre is identified as an “existing urban node” in terms of the municipality’s CSDP (EtheKwini Municipality, 2014/2015).

Figure 6: Existing Transport Linkages



Source: Ethekwini Municipality GIS

4.3 ZONING AND TOWN PLANNING CONTROLS

An assessment of the current zoning shows that the sites on Florence Nightingale Drive from Westcliff Station to Sagittarius Street are zoned Special Residential 180 and the site from Sagittarius Street to RK Khan Drive are zoned Special Residential 400 in terms of the Ethekewini Municipality's Central Town Planning Scheme. In terms of the Special Residential 180 and Special Residential 400 zones, the primary uses are Dwelling House, Multiple Unit Development, Public Open Space, Private Open Space, and Conservation Area with the following applicable development parameters listed below.

The Special Residential 180 development parameters are:

Minimum Erf Size	:	180.00m ²
Height	:	2 Storeys
Coverage	:	60%
Floor Area Ratio (FAR)	:	N/A
Building Line	:	7.5m relaxed to 3.0m if onsite parking is provided
Side Space	:	Aggregate of 3.0m with one side not less than 1.0m
Rear Space	:	5.0m

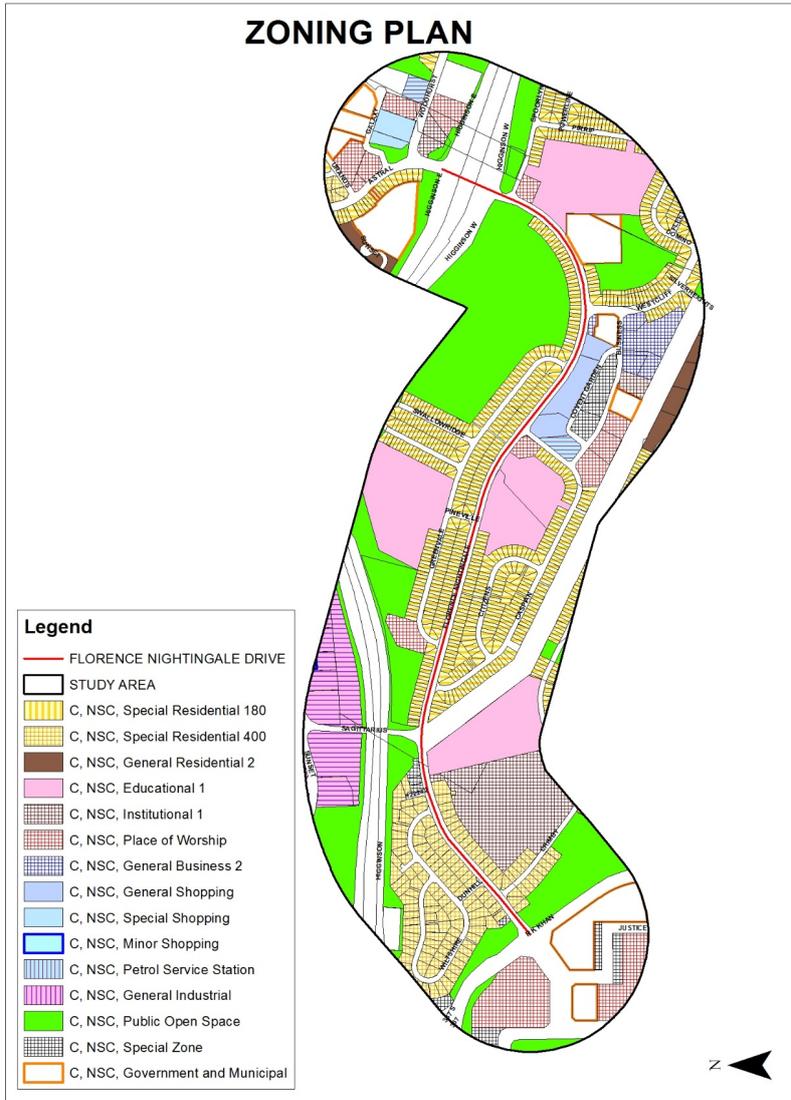
The minimum site size for the Special Residential 180 is 180.00m² which means that building footprint is restricted to an average of 108.00m² that also includes a garage or an ancillary unit with a building height restriction of two storeys. These houses are semi-detached houses built with a common wall separating the two semi-detached houses on individual properties. The Special Residential 180 sites are along Florence Nightingale Drive from the Westcliff Station to Sagittarius Street.

The Special Residential 400 development controls are:

Minimum Erf Size	:	400.00m ²
Height	:	2 Storeys
Coverage	:	50%
Floor Area Ratio (FAR)	:	N/A
Building Line	:	7.5m relaxed to 3.0m if onsite parking is provided
Side Space	:	Aggregate of 5.0m with one side not less than 2.0m
Rear Space	:	5.0m

The minimum site size for the Special Residential 400 sites is 400.00m² which means that building footprint is restricted to a coverage of 200.00m² that also includes a garage or an ancillary unit with a building height restriction of two storeys. Property owners were able to design and build their own homes on individual vacant sites and this created the middle to low income class system in the study area.

Figure 5: Zoning Plan



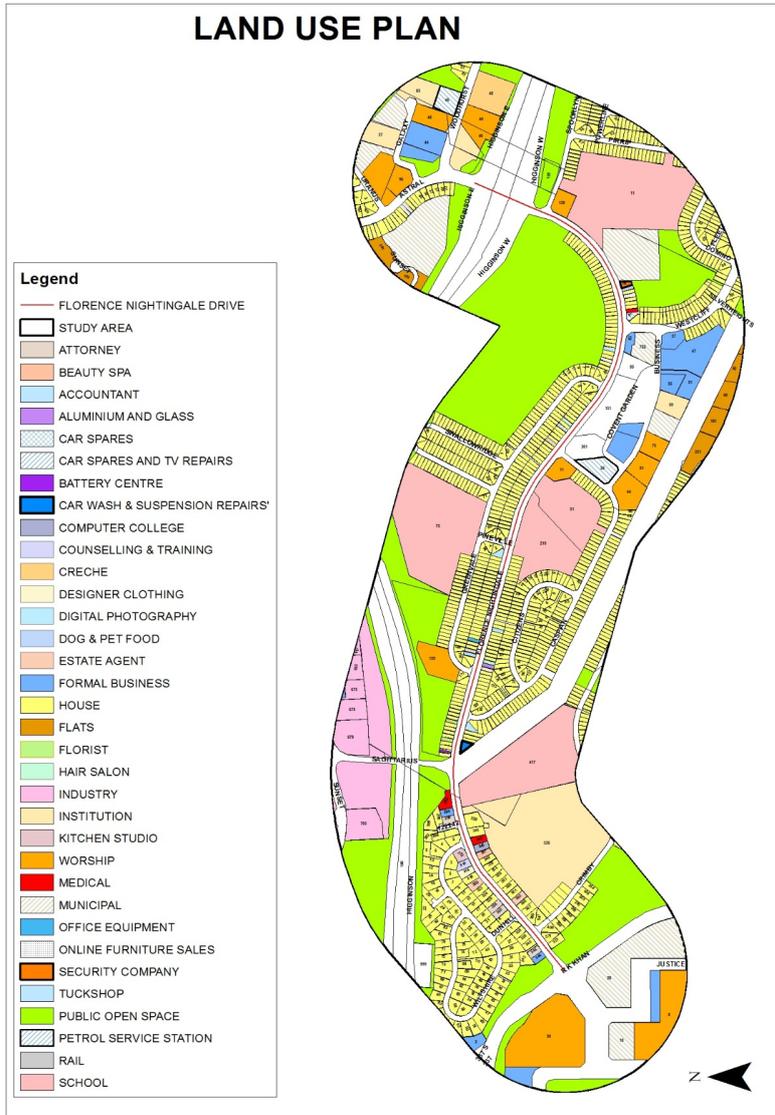
Source: EtheKwini GIS 2016

4.4 LAND USES ON FLORENCE NIGHTINGALE DRIVE

The spatial distribution of the various businesses currently in operation in the study area are on sites zoned Special Residential 180 from Higginson Highway to Sagittarius Street, and Special Residential 400 from Sagittarius Street to RK Khan Drive as shown in the land use map below.

A variety of goods and services are available to the community and the surrounding Chatsworth area as shown in Table 4 below. These goods and services range from professional services such as attorneys, conveyancers, furniture and household items, designer clothing outlets, florists, car spares and accessories, health and beauty treatment, a computer college, estate agents, medical practioners, and a community counselling centre.

Figure 5: Land Use Plan



Source: EtheKwini GIS 2016

Table 4: Types of businesses in the study area

Business Type	No.	%
Attorneys	6	15.38
Aluminium & Glass Sales	1	2.56
Accountants	2	5.12
Car Spares and Parts	3	7.69
Computer College	1	2.56
Computer Equipment	1	2.56
Car Wash & Suspension Repairs	1	2.56
Counselling & Training	1	2.56
Catering	1	2.56
Debt Counselling	2	5.12
Designer Clothing	2	5.12
Estate Agents	2	5.12
Florists	2	5.12
Furniture	2	5.12
Hair and Beauty	3	7.69
Discount World	1	2.56
Medical	6	
Musical Instruments	1	2.56
Office Solutions	1	2.56
Loan Companies	2	5.12
Photo & Printing	1	2.56
Security Company	1	2.56
Sweet Wholesalers	1	2.56
TV & Digital Equipment	1	2.56
Total	39	100

Source: Fieldwork and Interviews 2016

4.5 INTERVIEWS

Face-to-face interviews were conducted with the relevant stakeholders of the area. City officials, business owners, and residents were interviewed.

4.5.1 Perspectives of City Officials

The city officials appear to share similar opinions that Florence Nightingale Drive has transformed into a vibrant mixed-use activity corridor with private initiative and investment because it connects communities, attracts business, and customers. They stated that their respective departments have not engaged in any discussions on the current and future status of Florence Nightingale Drive. A common consensus is that Florence Nightingale Drive has the characteristics of a mixed-use activity corridor, which has developed organically into a high visible business route that is economically viable and provides goods and services at competitive prices. The municipality has to intervene with a proactive approach to formalise these businesses with a revision of the town planning scheme and with plans to improve the traffic flow by effecting necessary road improvements.

The following sections 4.3.1.1, 4.3.1.2, and 4.3.1.3 provide comments from the municipality's Economic Development Unit, Architectural Department, Traffic Authority, Strategic Spatial Planning Branch and Land Use Management Section.

4.5.1.1 Economic Development Unit (EDU)

According to Mr. Shunnon Tulsiram, manager of the Economic Development Unit, Florence Nightingale Drive has developed into a significant mixed use activity corridor from residential to commercial, retail, and service supports the viability of Florence Nightingale Drive that also allows residents to access goods and services. The municipality has to respond when these type of trends emerge, with amending the town planning scheme, national building regulations, elevation control to improve aesthetics to create an ambience, and landscape that opens to the street with the urban design principles.

From an economic point of view, businesses and service industries create employment and allows residents to access goods and services in a cost-effective manner. According to Mr. Shunnon Tulsiram, the formal creation of jobs by private individuals should be encouraged. The city needs to be proactive in how town planning responds to emerging trends in the municipal area. Some of the

businesses operate at different times allows people to access goods and services at times to suit their lifestyles. The legalisation of these businesses by rezoning to the appropriated business zones will also increase the city's rates base because municipal rates for a property is calculated on the land use of a property.

4.5.1.2 Architectural Department

The Architectural Department acknowledges that an urban design framework plan is required to address the Bangladesh Market parking issues on Fridays and Saturdays. Mr. Bilal Haq, the Architectural Department's acting manager, says that elevation control is required to improve aesthetics because currently there is no interface with the building edges and street.

The Architectural Department does not have any plans and cannot prepare any plans until the municipality's Land Use Management Section (LUMS) amends the town planning scheme to address the mixed-use development on Florence Nightingale Drive. Land use management with urban design principles is needed to formalize the mixed use change on Florence Nightingale Drive. The Architectural Department Parking prepared plans for parking under the electrical power line servitude with a net under the electrical power lines to provide parking for Bangladesh Market on Fridays and Saturdays. Due to compliance with electricity regulations parking cannot be accommodated under electrical power line servitude.

4.5.1.3 Ethekewini Traffic Authority (ETA)

From a traffic point of view, officials agree that traffic is a concern mainly on Fridays and Saturdays because of the Bangladesh Market. The increased vehicular traffic and pedestrian volumes and turning movements, because of changes in land use, generated a higher frequency of turning movements into and out of properties, and the verges/sidewalks has created additional conflicts and risks to the public. A traffic assessment conducted in March 2014 by ILISO Consulting Engineers recommended that Florence Nightingale Drive should be upgraded to accommodate the illegal businesses. The community did not support the road upgrade because the community wanted the issue of the illegal businesses to be addressed. From March 2014, the number of businesses have increased since the traffic assessment was conducted. Unfortunately, this assessment will have to be amended because the number of illegal businesses have increased over the last few years from 2014 to 2016.

4.5.1.4 Strategic Spatial Planning Branch

Florence Nightingale Drive is not recognised in the municipality's 2014/2015 Central Spatial Development Plan and 2016/2017 Spatial Development Framework as an activity corridor because the area is in transition with residents converting their homes into businesses. However, it is characterised by an emerging mixed-use pattern. A pattern has emerged with the road as showing signs of being an activity corridor.

Urban nodes are existing and well located lower order nodes serve the needs of local areas only. These nodes are located at transport interchanges and or at the intersections of development spines. Their role is to provide essential 'day to day' commercial needs and social and commercial services to immediate adjacent communities. These local nodes are varied in activity mix and are determined by the thresholds which they serve.

Existing urban nodes in the Central Spatial Region are Chatsworth, Malvern, Westville, Musgrave, and Glenwood/Berea areas as they meet the daily requirements of smaller populations in their specific locales. These nodes provide local shopping and/or local public sector services, such as civic and community uses and need to be maintained, consolidated, or expanded to ensure long-term viability.

In light of the above, Florence Nightingale Drive was never identified as an activity corridor. It has since evolved over time and it is recognised that the area is in transition. In this respect, the council then decided to undertake a study to assess the trends and transgressions in land uses along this road and in this precinct. It is evident that the road has emerged as a mixed-use corridor with small scale businesses and professional offices operating within the precinct. The recommended next action item would be to reconsider the scheme provisions making allowances for business and office considerations within this precinct. However the scale should not be of a magnitude that is not compatible with the surrounding land uses, which is largely residential. In this regard, it is imperative that a scheme review be undertaken for this area to guide the management of the precinct and to encourage owners and businesses to formalise their activities in a structured manner.

It is an area that has clearly transformed into mixed-use activity corridor that needs to be properly regulated and managed. The municipality has to balance the needs of the community with having a properly regulated environment. It has to play the role of a custodian of the greater public good. A first intervention would be to undertake a study of the area in the form of a precinct plan and then undertake

a possible scheme review. It is imperative that public consultation with the residents and users of the area need to be factored into the equation. The Florence Nightingale Drive area is a vibrant active space in which a community has demonstrated survival modes of subsistence in a tough economic climate.

4.5.1.5 Land Use Management Section (LUMS)

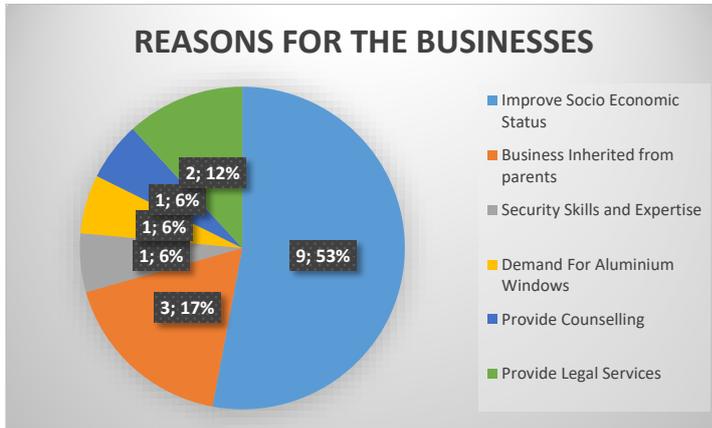
Mr. Eric Parker, the Land Use Management Section's Regional Coordinator says that a municipal decision has to be taken on the land-use changes in the area. Currently there is uncertainty on whether the land-use changes are supported and the illegal uses are encouraging additional conversions. According to Mr. Eric Parker, the municipality needs to act decisively on the land use changes on Florence Nightingale Drive because most of the uses are illegal.

The illegal uses have to be formalised by regularising through the appropriate town planning procedures to comply with the Durban Town Planning Scheme by the municipality's LUMS department by a block rezoning to minimise individual rezoning costs, because the evolution of the businesses has made economic sense and business sense. This also connect communities, attracts business and customers.

4.5.2 Perspectives of the Business Owners

Business owners who reside in the area were able to provide valuable information with regard to the ownership of their businesses, the reasons why and when they started the businesses, number of people employed, their customer base, the potential of the area, days and hours of operation, problems being experienced, and what changes they would like to see in the area. All the business owners stated there has been no complaints from the residents and that there has been no consultations with the municipality with the exception of Ethekewini Traffic Authority, who consulted with the residents and business owners for the upgrading of Florence Nightingale Drive. ETA initiated an intervention to address the increased traffic volumes that emerged due the land use transgressions. It did not feature as a priority by the other department in the short term as the city has more pressing priorities from a service delivery perspective in the municipal area. However, it is duly noted that this area is in need of planning intervention due the non-conforming land uses and as identified in the recommendations a scheme review is required to deal with the management of land uses in the study area.

Figure 6: Chart 1 Business Owners' Reasons for Establishing their Businesses



The interviews revealed that all the businesses were started to improve the socio-economic status of the owners, to provide professional and social services, to provide employment opportunities, and to provide goods and services in a cost-effective manner. The passing traffic on Florence Nightingale Drive is good for business and economic development because a variety of goods and services are available within easy reach of the consumer at competitive prices.

Some of these businesses started in the early 1990's, others such as Tees Florist started in 1976 by Terence Reddy's grandmother and passed it on to her son and to the current owner. Marks Florists was started by his father in 1990. Although Marks Florist is 70 metres from Tees Florist, both these businesses are successful. Bens Accounting and Bookkeeping services was started by the father in 1996 and was given to his daughter in 2012, and provides accounting and tax services to individuals and companies. The owner of the security company who lives on Florence Nightingale Drive is skilled in the security field and saw this as an opportunity to provide a security service in the area.

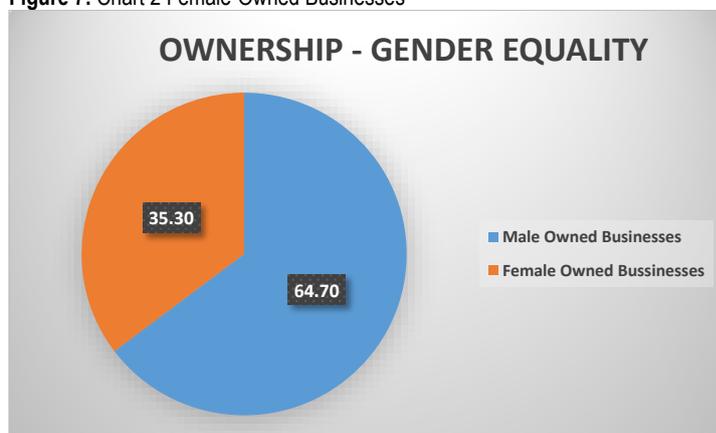
The two attorneys interviewed provide legal and conveyancing services to a broad spectrum of clients in the Chatsworth and surrounding areas. The attorney at Law Chambers at 234 started his law practice in 2014. Subhash Maharaj and Associates, an attorney and a conveyancer started his legal practice in 2006. Lotus Loans has been in operation for the past 25 years specialising in micro-loans to the community. The Aluminium and Glass Wholesalers was started in 1996 because of a demand

in aluminium products. The owner of the Online Designer Furniture Sales started this business in June 2016.

A total of 126 people are employed from the 17 businesses interviewed with 40 people working as volunteers for the Sinako Uthando Counselling Centre. The Sinako Uthando Counselling Centre was started 7 years ago because of the lack of social development in the area and provides free counselling to 89% to the people of Chatsworth and 11% to people outside Chatsworth. Future Electronics, a security company employs 50 local people, with Subhash Maharaj and Associates, an attorney and conveyancer employing 20 people from within and outside the Chatsworth area. Lotus Loans, a loan company employs 15 local people.

All the business owners indicated in the interviews that they all started their businesses to improve their socio economic status and improve their lifestyle while providing goods and services at competitive prices within easy reach of the communities. It was also recorded from the interviews that six of the 17 (35.92%) businesses interviewed owned and managed by females as shown in Table 3 below, and this shows women empowerment, and gender equality within in the male-dominated Indian culture.

Figure 7: Chart 2 Female-Owned Businesses



The female ownership and management of businesses in the study area demonstrates change in the gender demographics and social context as evidenced in the study area, as opposed to the past where

businesses in the area were solely owned and managed by males. There is a noticeable change in this case where females play a more dominant role in business ownership.

Table 5: Table showing ownership, gender equality duration, and number of staff employed

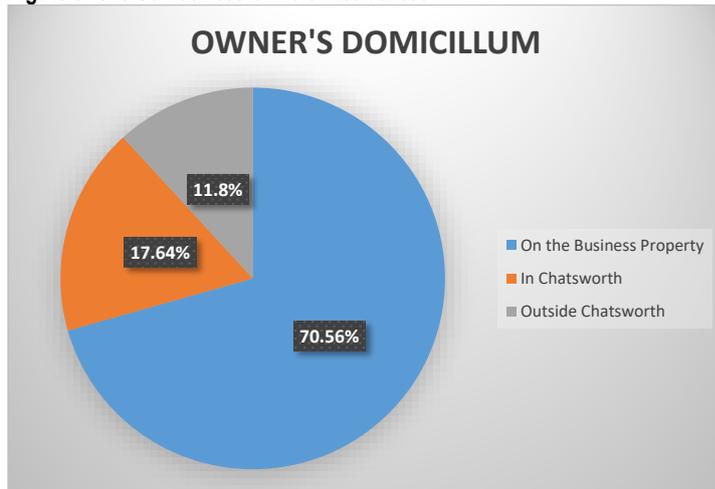
NAME	OWNER	GENDER	DURATION	STAFF
Lotus Loans	Yes	Male	25	15
Future Electronics	Yes	Male	20	50
Chatsworth Spares	Tenant	Male	4	1
Bens Accounting Service	Yes	Female	4	4
Clutch & Brake	Tenant	Male	2.5	1
Taj Sweet Wholesalers	Yes	Female	3	2
Aluminium and Glass Wholesalers	Yes	Male	20	8
Law Chambers at 234	Yes	Male	2.5	1
Car Wash & Suspension Repairs	Yes	Male	19	10
Tees Florist	Yes	Male	40	2
Online Designer Furniture	Yes	Male	6 Months	2
Marks Florist	Yes	Male	26	2
Subhash Maharaj & Associates	Yes	Male	10	20
Designer Clothing	Yes	Female	3	3
Counselling and Life Coaching Programmes			7	40
Office & Computer Supplies	Yes	Female	10	1
Health & Beauty	Yes	Female	3 months	3

Source: Researchers Business Interviews 2016

Twelve of seventeen businesses run their businesses from their homes in which they live, which have been converted to suit their type of business form their homes Florence Nightingale Drive with three

businesses renting premises on Florence Nightingale Drive who live in Bayview Chatsworth and two attorneys on Florence Nightingale Drive who lives outside Chatsworth.

Figure 8: Chart 3 Business Owners' Residences'



The seventeen business owners interviewed indicated that a review of the Central Town Planning Scheme will give them development rights suitable for the business operation and they also indicated that the release of municipal-owned land will provide more land for business and commercial activities that will also create employment opportunities and bring more goods and services at cost-effective prices within easy access to the community.

All the businesses have stated that there has been no consultation or interventions by the municipality to amend the Durban Town Planning Scheme to formalise the existing businesses that will allow for mixed-use zones in the study area. They also stated that are willing to meet with the municipality to formalise the illegal businesses with an appropriate land use that will suit the business and residential mixed-use. From the interviews conducted with the business owners, the residents have no objections to the businesses because these businesses provides them with the goods and services that they require.

4.5.3 Perspectives of the Residents

Nine of the ten residents interviewed are property owners who have lived on Florence Nightingale Drive for the past 40 years. Two of the residents stated that they are affected by the businesses next to their homes because the businesses have infringed on their residential rights, for example, noise and air pollution, and they do not support these businesses. One resident indicated that the businesses infringed on the residential rights to his property and he is affected by business parking on the road verge. Another resident indicated that the area should be residential in nature.

The general consensus of the residents is that they support these businesses that provide the goods and services that they need at competitive prices to a low-income area, and that these businesses create and provide employment. The number of people employed by these business clearly demonstrates the ability of small businesses to create sustainable employment opportunities without state intervention.

4.6 BUILT FORM ASSESSMENT

On conclusion of the interviews, it became apparent to the researcher that the existing built form of the municipal-built two bedroom semi-detached houses had transformed into modern architectural designed businesses with professional signage and trademarks of the supplier. The homes of varying sizes and architectural styles have been converted to a host of businesses ranging from attorney and accountants to television and digital sales, florists, aluminium and glass sales, car spares, and designer clothing shops as shown in photographs below. Without a doubt these uses are in contravention to many city development policies yet they remain the vibrancy of the area in many ways.

Photograph 4: Tees Florist



Source: Researcher's photograph

Photograph 5: Brake and Clutch Shop



Source: Researcher's photograph

Photograph 6: Aluminium products and windows business



Source: Researcher's photograph

Photograph 7: Security Company on the road level and residential uses



From an urban design perspective, Florence Nightingale Drive has no defined public realm that is legible and easy to navigate, nor is it a pleasant and user-friendly experience being within a public zone. Whilst it can be argued that this is part of the area's charm, the clash of activities, people, and cars, proves most problematic on the busiest and not so busiest of days. Parking requirements in terms of land use controls have not been satisfied. This, combined with the road design that prioritises fast moving traffic, creates a public realm that is unsafe for pedestrian movement, especially children. Moreover, the public movement system is not clearly demarcated and very little has been done to

strike a balance between cars and people. The difficult topography and small sites and town planning controls makes commercial land-uses a challenge especially for the provision of parking.

Photograph 8: Cluster of business and residential uses



Source: Researcher's photograph

The interface of the ground floor and the pavement needs to be addressed in terms of urban design. The road will need to be narrowed to reduce speeds and off-street parking must be provided where necessary. Also, sites will need to be identified close to shopping areas, where people can park and move through a network of safe covered paths to commercial activities swiftly and safely. The width of the existing pavement will need to be increased to accommodate people movement, outside dining and socialising, landscaping, and street furniture.

Photograph 9: Streetscape of Florence Nightingale Drive



Source: Researcher's photograph

The hard surfaces will need to be paved adequately to indicate pedestrianised zones and this can be carried into the road network to create a movement pattern that is legible and easy to use. It would be possible to pedestrianise a significant section of Florence Nightingale Drive by considering a one-way system, which will help to slow down the speeds of vehicles and limit traffic to those residents that will shop along Florence Nightingale Drive from the surrounding residential area.

This also creates the opportunity to create a more civic space that prioritises pedestrian movements and slow moving vehicles. To ease the pressure for parking, there is a few municipal owned vacant sites that can be developed into landscaped parking lots with easily navigable paths leading to commercial activities.

The streetscape and built form of houses show transformation of municipal houses built in the 1960's into modern architecturally-designed houses with some tree-planting on the road verges in Photograph 10 below.

Photograph 10: Architecturally designed semi-detached houses



Source: Researcher's photograph

The business appearance and aesthetics with the appropriate signage by the supplier, such as Battery Centre, Lesley Anne's Creations in photographs 15 and 16 below, and the professional signage by the business owners clearly demonstrates business confidence, customer satisfaction, and the economic viability of these businesses on Florence Nightingale Drive.

1 Battery Centre Signage



Source: Researcher's photograph

Photograph 12: Lesley Anne's Creations



Source: Researcher's photograph

An opportunity exists to develop the existing Bangladesh Market site as a multi-storey parking garage, which will ease the traffic volumes and parking needs significantly. Limiting taxis to the outskirts to demarcated ranks will assist in reducing the congestion but this will need to be combined with pathways and safe zones to cross that are quick and easy.

From an urban design point of view, the land use changes is pivotal to activities within the public realm. Promoting a mixed-use corridor along this length will strengthen the existing fabric and will create a streetscape that has the potential of becoming very vibrant adding value to the community it serves. A mixed-use activity corridor increases the level of safety and security with passive surveillance of the public space taking place on a 24-hour cycle. This allows businesses to operate 24 hours. Imagine a mixed-use corridor with a variety of activities spilling onto a widened street edge with people enjoying eating, shopping and socialising.

4.7 The Nature of Corridors

Table 6 below, compiled by the researcher, summarises the nature of corridor developments throughout the world, as suggested in documented theory and the sources cited in the references which answers the question that Florence Nightingale Drive all the characteristics of a corridor which has transformed into an economically viable and sustainable local activity corridor connected by a transport node and a local urban node by the residents without any local government intervention.

Table 6: The Nature of Corridors: Typical theoretical characteristics

Aspects	Features
Densification	Concentration of people High Density Development Interaction of activity
Economic Environment	Provision of social and economic activities Initiation of economic growth points Commercial and service facilities along major business main roads
Public Transport	Major transport route Public transport services Variety of public transport services
Social Environment	Social facilities Intense human interaction
Urban Qualities	Quality urban environment Maximisation of choices
Other	Implementation happens over time

It is clear is that corridor planning has become a well-accepted strategy to restructure cities, promote economic growth, planning must be proactive to the needs of the residents in a focused way to identify economic and business opportunities that connect communities

4.8 CONCLUSION

From the land use survey interviews, and the interviews with city officials, business owners, and residents, Florence Nightingale Drive has transformed organically into an economically viable and sustainable local mixed-use activity corridor from 1970 because of private investment and initiative. The successful land use integration also demonstrates that the business owners acted voluntarily and rationally on their own to improve their socio economic status, provide employment opportunities and contribute to economic growth. The city officials also agree that Florence Nightingale Drive is a successful and economically viable mixed-use activity which provides a variety of goods and services at cost effective prices to the area.

The city officials, business owners and residents believe that an amendment of the city's town planning scheme for the area by the Land Use Management with appropriate urban design

principles for the area to function as a mixed-use activity corridor. These residents and business owners have lived in the area for decades, and are proud of it due to the transformation of the area from a low income area to a low to middle income mixed-use area. It also apparent from the interviews conducted that the city officials, private consultants, and businessmen, in particular, see great potential in renewing the

The interviews, particularly, those with city officials proved very useful and informative. Florence Nightingale Drive has the characteristics of an activity corridor and functions efficiently as a mixed use local activity corridor. The business sites will have to be rezoned to cater for the variety of businesses and services in the study area. The lessons learned and the information acquired from the business and residents interview can assist the municipality to identify emerging mixed-use activity corridors in former apartheid planned residential areas with the municipal area. Amidst this lawlessness, this organic setup really works, which begs the question as to how can it work better to become a Florida Road type corridor in some ways?

The analysis of the built form shows that Florence Nightingale Drive has the characteristics of an activity corridor that exhibits nodes, connectivity, sound urban design principals such as clearly defined paths which can become more legible, safe clean and green, a multi-dimensional approach is necessary. This involves reviewing the current land use patterns, the traffic impacts and pedestrian movements. The current zoning needs to be review to allow a mixed-use arrangement insisting that ground floor should be commercial and offices and second floor residential and a maximum height of two floors.

The final task was to prepare and propose recommendations, based on the data collated. These recommendations can be found in Chapter 5 of this dissertation.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this study was to explore the corridor concept through a local case study, Florence Nightingale Drive, in Westcliff Chatsworth. The main research question relates to exploring the factors responsible for influencing the extent to which the corridor is achieving its objectives. In answering this question key objectives were addressed by exploring international and South African literature which included research on the concept and related concepts, reviewing local policy and legislation and undertaking a detailed local area analysis together with key informant interviews specific to the case study. This allowed the researcher to successfully address the research question and key objectives set out. The study was carried out in a systematic manner beginning with:

- By contextualizing the study in Chapter 1 within the sustainable city debate and reviewing the spatial dynamics of South African cities, exploring the evolution of the use of Development corridors as a spatial restricting tool and exploring the policy environment to understand how the concept has been advocated in the local context;
- Reviewing literature on the corridor concept in Chapter 2 to establish the main components to be explored, key factors and preconditions for success, and realities of such a concept; and using this directive to explore the case study in Chapter 3 looking at the history of the corridor and how it was planned and implemented in eThekweni Municipality;
- Chapter 5 provided an analysis of findings and a discussion of findings of the case study with key lessons learnt.

The researcher has successfully managed to address all objectives as set out in Chapter 1 through the methodology set out. This study has provided a working example of the way in which such initiatives can be implemented in the other apartheid planned dormitory residential townships. This chapter concludes this study by outlining the key findings, lessons learnt and presents key recommendations to guide future initiatives.

With various policy and strategic frameworks (Integrated Development Planning, Spatial Development Plans etc.). South Africa and eThekweni Municipality have encouraged the integration of land use and transport planning through the development/activity corridor concept. The purpose is to increase density, increase the mix of land uses and intensity along public transport networks with

the main aim of enhancing accessibility to opportunities to the previously disadvantaged communities through urban restructuring. This is done locally within the sustainable development agenda by using sustainable urban forms to achieve compact cities in order to reduce the use of resources and create quality, interactive living environments. The study provided a useful interpretation of the history of the concept in South Africa and eThekweni Municipality.

The literature review identified that the corridor concept comprises of a complex mix of land uses and services which confirms the positive functioning of such an initiative. A range of activity needs to be coordinated and can, most effectively be done through a dedicated management body which serves to integrate all components. Also, Florence Nightingale local activity corridor has the profile of the beads along a string type corridor.

A mixed-use increases the level of safety and security with passive surveillance of the public space taking place on a 24-hour-cycle. This allows businesses to operate for twenty-four hours. Imagine a mixed-use corridor with a variety of activities spilling onto a widened street edge with people enjoying eating, shopping, and socialising. The potential of Florence Nightingale Drive of becoming a place that is people-centred is highly possible but as mentioned previously it requires a multi-dimensional approach that is backed by a strong political will and public campaign. There must be a cost and benefit to residents that is appealing for the transformation of Florence Nightingale Drive to be a success.

The transformation of Florence Nightingale has managed to maintain and enhance aesthetic appeal and built form for the residences and the businesses and creating an attractive environment is essential to retain the image of an area.

This study indicates that in order for such an initiative to function effectively, there needs to be on-going management to facilitate development and deal with any issues that may arise. Corridors are complex and cannot be over planned as they grow and develop according to the changing market forces and as socio economic status changes. This means that the original strategic framework and plans and approach will need to be constantly reviewed based on current research. In order achieve the integration of activities and functions on the ground a lot of effort is required from dedicated implementing agents to coordinate these complex projects. Corridors should be planned with sufficient land available for development and line departments need to share a common understanding of the concept.

The recommendations made in this chapter are based on the information collated in previous chapters, and are made in order to enhance Florence Nightingale Drive as a mixed-use activity corridor within the Ethekewini Municipal area.

5.2 SUMMARY OF FINDINGS

The researcher documented sub-question for the municipal officials, businesses, and residents in section 1.4, which helps to answer the main research question. Answers to these sub-questions were dealt with in a very systematic manner. The history and evolution of Florence Nightingale Drive from a residential road in Chatsworth to an economically viable mixed-use activity corridor was explained in section 4.3. Section 4.1 described the current land uses and land use integration, and section 4.2 discussed current zoning and town planning controls of Florence Nightingale Drive, its surrounding suburbs, and the rest of the metropolitan area. Sections 3.1 and 3.4 explained the role and function of a mixed-use activity corridor within the context of Metropolitan Durban. Sections 4.3 and 4.4 discussed the extent to which Florence Nightingale Drive functions as mixed-use activity corridor, and presented perspectives of relevant stakeholders, which highlighted successful functioning of Florence Nightingale Drive to full potential as a mixed-use activity corridor. The recommendations required to improve the functionality of Florence Nightingale Drive is discussed in section 6.4.

The researcher has therefore managed to successfully answer the main research question, which is, 'To what extent does Florence Nightingale Drive function effectively as a mixed-use activity corridor in the Chatsworth area within the Durban municipal area?' Section 6.3, below, provides conclusive evidence as to why Florence Nightingale Drive does have potential in terms of being a mixed-use activity corridor.

5.3 CONCLUSIONS

In time, as supply and demand increases and economic opportunities presents itself, more and more residences will be transformed into small-scale commercial activities. It is already evident by spotted conversions taking place in the broader surrounding areas within the Florence Nightingale Drive precinct. A precinct plan that proposes parameters to allow such conversions to take place, and which strictly adheres to a mixed-use strata of commercial at street level office or residential above is required within the study area. It has to be acknowledged that Florence Nightingale Drive is a localised

central business district which has organically grown linearly and outwardly to link up with commercial activities in the Chatsworth Town Centre and Pelican Drive commercial area.

This would be in line with government policies to encourage employment opportunities. These have to be combined with a strong urban management plan and enforcement policies to clamp down on any contraventions. A strong campaign to promote a mixed-use corridor in consultation with the municipality, residents, and businesses, is required for Florence Nightingale Drive to be acknowledged that Florence Nightingale Drive is a localised central business district.

The potential of Florence Nightingale Drive becoming a place that is people-centred is highly possible but as mentioned previously, it requires a multi-dimensional approach that is supported by a strong political will and public campaign. There must be a cost and benefit to residents that is appealing for the transformation of Florence Nightingale Drive to be a success.

A large section of land behind Take and Pay Supermarket and Checkout Supermarket falls within an electrical power transmission line servitude which has the potential of becoming a convenient place for parking. Presently, people are parking here at their own risk; however there is an opportunity to unlock this linear strip, which is a significant piece of land to be used as parking and other economic opportunities. The risk is that cables could snap causing injuries to people down below; however, there are ways to mitigate this by installing a fool-proof switch and a safety net to prevent cables from hitting people or cars.

The transformation along Florence Nightingale Drive needs to be embraced positively. In time, as supply and demand increases and economic opportunities presents itself more and more residences will be transformed into small-scale commercial activities.

5.4 RECOMMENDATIONS

What interventions could be undertaken to improve the functionality of Florence Nightingale Drive as an economically viable mixed-use activity corridor?

1. From a strategic spatial planning level, a study of the area in the form of a precinct plan is required with a scheme review. It is imperative that public consultation with the residents and users of the area need to be factored into the equation.

2. The current zoning needs to be designed to allow a mixed-use arrangement insisting that ground floor should be commercial, first floor offices, second floor and third floor residential and a maximum height of four floors.
3. Minor traffic interventions such as creating a slipway to and from RK Khan Drive at the Florence Nightingale Drive and RK Khan Drive intersection onto Florence Nightingale Drive will improve the traffic flow.
4. Limiting taxis to the outskirts to demarcated ranks will assist in reducing the congestion but this will need to be combined with pathways and safe zones to cross, that are quick and easy. The vacant land within an electrical servitude with the necessary safety measures behind Take and Pay and Checkout can be used for public parking.
5. In order for Florence Nightingale Drive to move towards a mixed use activity corridor that shows sound urban design principals such as clearly defined paths, become more legible, safe clean and green, a multi-dimensional approach is necessary. This involves reviewing the current land use controls, land use patterns, the traffic impacts and pedestrian movements.
6. From an urban design point of view, the land use changes is fundamental to activities within the public realm. Promoting a mixed-use corridor along this mixed use activity corridor will strengthen the existing fabric and will create a streetscape that has the potential of becoming very vibrant adding value to the community it serves.

5.5 LIMITATIONS OF THE STUDY

Although all the businesses owners were willing to provide information about their businesses, they had time constraints due to the nature of their businesses, and some businesses were managed by the staff.

The evolution of Florence Nightingale Drive's development has not been documented extensively. In spite of the researcher's efforts, it was not possible in the time available to find an autobiography of an Indian who lived in Westcliff, consequently, this section on the history of the area is somewhat limited.

The residents of Florence Nightingale Drive comprises of low to middle income people where both the husband and wife work Mondays to Fridays and some on Saturdays, which limited the researcher's time for interviews on Saturday and Sunday afternoons. This also clashed with family time, religious obligations, and family functions.

There is no documented information and literature available for which have for arterial roads into local that have changed from arterial roads to economically viable mixed use local activity corridors in former apartheid planned dormitory townships in South Africa, as demonstrated in the this research for Florence Nightingale Drive. In addition, Ethekwini Municipality has no plans or interventions for the former apartheid planned townships as indicated in this research thesis as opposed to the Florida Road case study and the Swapo Road case study where the municipality intervened with the Florida Road Precinct and the Broadway Plan which were former white privileged.

5.6 SUGGESTIONS TO IMPROVE THE STUDY

More time is required to obtain more information, and the use of experienced interviewers could assist, although this must be traded off against cost. Furthermore, time frames need to be adhered to with regard to the collating of information and interviews so that counter-measures can be taken if tasks cannot be fulfilled.

This study aimed to explore the corridor concept through a local case study, the Florence Nightingale Drive local activity corridor. The main research question relates to exploring the factors responsible for influencing the extent to which the corridor is achieving its objectives. In answering this question key objectives were addressed by exploring international and South African literature. This included research the on the concept and related concepts, reviewing local policy and legislation and undertaking a detailed local area analysis coupled with key informant interviews specific to the case study. This allowed the researcher to successfully address the research question and key objectives set out. The study was carried out in a systematic manner beginning with:

- Contextualizing the study in Chapter 2 within the sustainable city debate and reviewing the spatial dynamics of South African cities, exploring the evolution of the use of development corridors as a spatial restricting tool and exploring the policy environment to understand how the concept has been advocated in the local context;

- Reviewing literature on the corridor concept in Chapter 2 to ascertain the main components to be explored, key factors and preconditions for success, and realities of such a concept;
- and using this directive to explore the case study in Chapter 3 looking at the history of the corridor and how it was planned and implemented in eThekweni Municipality;
- Chapter 5 provided an analysis of findings and a discussion of findings of the case study with key lessons learnt.

The researcher has successfully managed to address all objectives as set out in Chapter 1 through the methodology set out. This study has provided a working example of the way in which such initiatives are implemented and managed and key limitations experienced in the lower income, urban context. This chapter concludes this study by outlining the key findings, lessons learnt and presents key recommendations to guide future initiatives.

South Africa and eThekweni Municipality in specific have advocated for the integrated of land use and transport planning through the development/activity corridor concept through various policy and strategic frameworks (Integrated Development Planning, Spatial Development Plans etc.). The aim is to increase density, increase the mix of land uses and intensity thereof along public transport networks with the main aim of enhancing accessibility to opportunities to the previously disadvantaged communities through urban restructuring. Locally, this is done within the sustainable development agenda by using

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ANNEXURE A

INTERVIEW SHEETS This interview consists of a list of open ended questions:

ETHEKWINI ECONOMIC DEVELOPMENT UNIT (EDU)

Questions:

1. What are the economic challenges on Florence Nightingale Drive?

2. What is the role of Florence Nightingale Drive for the Economic Development Unit?

3. From an Economic Development point of view, what is the economic value of these businesses to the municipality?

4. What are the Economic Development Unit's plans for Florence Nightingale Drive?

Other Comments

ETHEKWINI CITY ARCHITECTURE

Questions:

1. What is the Architectural Department's role in the Chatsworth area and in particular Florence Nightingale Drive?

2. What are the built form challenges on Florence Nightingale Drive?

3. What is the role of Florence Nightingale Drive from an Architectural point of view?

4. What are the Architectural Department's plans for Florence Nightingale Drive?

5. Has there been any bilateral discussions with the other departments on the future of Florence Nightingale Drive?

Additional Comments

ETHEKWINI TRAFFIC AUTHORITY

Questions:

1. What are the traffic challenges on Florence Nightingale Drive?

2. Did the Traffic Authority conduct any traffic impact assessments to assess the traffic and parking issues?

3. How has the Traffic Authority responded or intervened to the additional traffic and parking issues and if yes, what are these interventions?

4. Has the Traffic Authority received any objections or comments from the residents?

5. What are the challenges faced by the Traffic Authority?

Additional Comments

ETHEKWINI MUNICIPALITY STRATEGIC SPATIAL PLANNING BRANCH (SSPB)

Questions:

1. Why is Florence Nightingale Drive identified as an activity spine?

2. What are the intentions of the Spatial Development framework (SDF) for Florence Nightingale Drive?

3. Has the municipality intervened to address the variety of businesses and professional services, and if yes, what are these interventions?

4. Has the municipality received any objections or comments from the residents?

5. What are the challenges faced by the municipality?

6. How does the municipality intend to facilitate and formalise the non-conforming mixed-uses on sites zoned residential purposes?

Additional Comments

ETHEKWINI MUNICIPALITY LAND USE MANAGEMENT SECTION (LUMS)

Questions:

1. What is LUMS response to the non-conforming business on Florence Nightingale Drive?

2. What are LUMS plans to formalise these businesses?

3. How does the LUMS respond to land use change and zoning issues on Florence Nightingale Drive?

4. Has the municipality received any objections or comments from the residents?

5. What are the challenges faced by LUMS?

6. How does the municipality intend to facilitate and formalise the non-conforming mixed-uses on sites zoned residential purposes?

Other Comments

ANNEXURE B

BUSINESS OWNER'S INTERVIEWS

Interview ____

Date: _____

Time: _____

Questions:

1. Are you the owner of the business?

2. What motivated or inspired you start the business?

3. How long has business been in operation?

4. What is the type of business and days of operation?

5. Where do you live?

6. Do you rent / own the property?

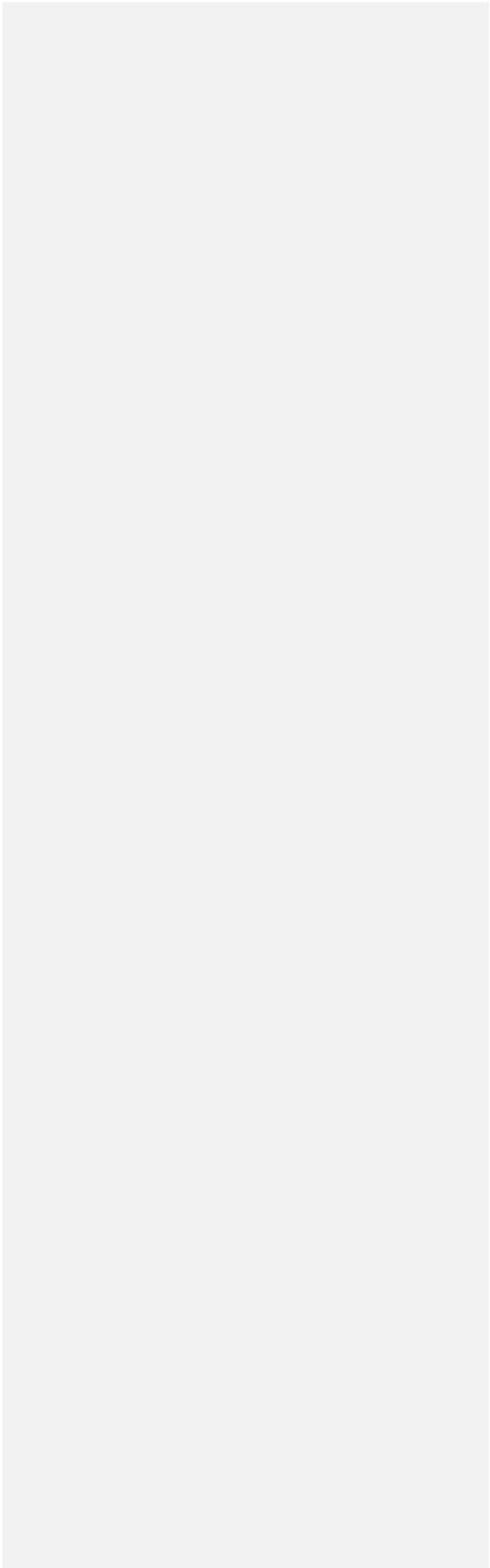
7. Who are your customers?

8. How may do you staff you employ and they staff local people?

9. What changes would you like to see in the area?

10. Has there been any consultation with the municipality?

Comments/Suggestions



ANNEXURE C

RESIDENTS INTERVIEWS

Interview ____

Date: _____

Time: _____

Questions:

1. Are you the owner or tenant?

2. How long have you lived at this address?

3. How do you feel about the business next to your house and the other businesses on Florence Nightingale Drive?

4. Do you support these businesses?

5. What changes would you like to see in the area?

Comments/Suggestions
