Declaration

I declare that this research is my own work and has not been used previously in fulfillment of another degree at the University of KwaZulu-Natal or elsewhere. Use of the work of others has been acknowledged in the text.

Signed:

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Abstract

Currently, the global agenda of sustainability and sustainable development have become the yardstick to which human activities are measured. The concept of sustainability is known to contain directives, when implemented will ensure that resources are used in ways that can benefit current and future generations. The ways in which spatial planning and urban development occur have also become relevant in this respect. Within this premise, urban form has also become relevant to the urban sustainability. Umhlanga Ridge Town Centre is a private development modeled on the concept of New Urbanism. The concept of New Urbanism is known to contain elements which respond positively to current urban challenges such as urban sprawl, increased pollution from automobile dependency and socio-economic polarization. In essence, New Urbanism purports to contribute towards urban sustainability. The main objective of this research has been to ascertain the extent to which the current developments in Umhlanga Ridge satisfy the principles of New Urbanism and urban sustainability. This included the identification of appropriate indicators of a sustainable urban form. Emphasis was made on how the indicators of urban form had manifested in the development of Umhlanga Ridge Town Centre and the impacts they have had on identified urban challenges in the Ethekwini Municipality. The rationale was that sustainable urban development must be able to address local urban challenges and promote sustainable practices within the private and the public domain. The methodology for this research included the use of secondary and primary sources. Interviews were conducted with Tongaat Hulett Development in their capacity as a land owner and planners of the Umhlanga Ridge Town Centre. The Ethekwini Municipality was also interviewed with respect to what impacts this development had had on their overall long-term development strategy. Three renowned planners who had adequate knowledge of urban development trends in the Ethekwini Municipality were also interviewed. A questionnaire survey was undertaken with users of the Umhlanga Ridge Town Centre to gain their perceptions on urban form in relation to their needs. The research revealed that the application of New Urbanism in the development of Umhlanga Ridge Town Centre was partly an investment initiative for profit-maximisation as well as a response to sustainable practices in urban development. Being part of a major investment node in the Ethekwini region, it had contributed towards job creation and enhanced the economic base of the region. However, it was found to have partially fulfilled the principles of New Urbanism used in the assessment. It was concluded that the application of New Urbanism in urban development was not adequate to achieve urban sustainability but provided lessons which can be learnt such the use of high densities to enhance compaction and the creation of a living environment which supported non-motorised forms of transport. Private sector participation and buy-in into the long-term vision of regions had also become necessary to enhance the adoption of sustainable practices into the future.

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Chapter One: Introduction

1.0 Background and Research Problem

The vision of city form by its architects is usually utopian; physically creating spaces that function, either in reaction to or by users. The urban landscape is physically, socially, culturally and environmentally dynamic, reflecting an array of intrinsically well defined thoughts, values and attitudes of its custodians (Mumford, 1961; Harvey, 1973). More often than not, these urban forms represent the ideologies of developers, planners, architects or institutions, usually market-driven and influenced by global trends of reimaging and reconstruction, based on a widely accepted agenda. Cities have become nothing but chaotic spaces, saddled with infinite socio-economic and environmental and political pressures, which every now and then, dismantle laborious attempts to redefine their city collage (Stupar, 2007: 1). New Urbanism, is one such urban design model, promulgated in the early 1990's by some American planners and architects (namely, Calthorpe, Corbett, Duany, Moule, Plater-Zyberk, Polyzoides, and Solomon) who believe it is the most probable antidote to the ills of conventional suburban planning and sprawl (Katz,1994). It represents a movement in architecture and planning that advocates design-based strategies based on "traditional" urban forms to help arrest suburban sprawl and inner-city decline and to build and rebuild neighbourhoods, towns, and cities (Bohl, 2000: 762).

Over the last 20 years, the move towards building sustainable cities has been characterized by the recognition of the interplay of multidisciplinary discourses, following the acceptance of postmodern urbanist and architectural epistemologies. The development of cities and the creation of new towns, over the centuries has been an issue of concern that still remains. The process of urbanization is a continuous phenomena and key players of the built environment are tasked with the challenge to develop and design places of settlement; not just to house the increasing population but to ensure that these cities and neighbourhoods meet the fundamental requirements of the people while being in harmony with the natural systems of the environment and prevailing socio-cultural characteristics (Choguill, 2008: 47).

Like most African cities, Durban, evolved as a "traditional city through the influence of colonisation and apartheid political ideologies, manifested in the spatial planning of mono-functional segregated city development" (Adebayo, 2002: 352). Deliberate attempts to build a 'Sustainable Durban' among other things, have been spearheaded by the adoption of the Compact City approach, the Durban Open Space

System and determination of an 'urban edge' to combat sprawl: yet what is seen on the urban periphery are isolated neighbourhoods (for example, Hillcrest), low density suburban developments (for example Umhlanga Ridge) and outlying peri-urban settlements which hardly have access to basic services (for example water, electricity, sanitation). North of Durban on the urban periphery lies Umhlanga Ridge, evolving from a sugar plantation to an elegant and sophisticated suburbia, supposedly developed around the postmodern New Urbanism theme. The Umhlanga Ridge development is made up of a number of exclusive residential developments, a luxurious shopping and entertainment centre, the Umhlanga new town centre and stylized office estates (Jordan, 2002: 5). The emergence of such a new urban geography has usually been linked to the competing interests of public and private entities. Although planning of cities in South Africa is a municipal function; development of land is both a public and private function (Schoonraad, 2000: 3), and the developments at Umhlanga Ridge have been undertaken by Tongaat-Hulett, who are Durban's major private land owner and developer (Todes, 2000a: 624). In a system of neo-liberalism where divergent interests exist, sustainability is considered crucial and remains to be fulfilled both individually and collectively. These indications are explicit to trigger an assessment of the spatial restructuring of Umhlanga Ridge, with respect to the concept employed, processes and agendas that have accounted for such a transformation, and how these fit into the 'sustainable cities' agenda of the Ethekwini Municipality.

A plethora of theories which offer laudable suggestions pertaining to the processes and creation of sustainable urban forms: for example the Compact City and New Urbanist philosophies provide ultimate justification to auto-dependence and sprawl, each, to an extent, is subservient to the underpinning principles of sustainability (Haughton, 1997; Jenks et.al., 1996). Nonetheless, their appropriateness for application to peculiar sites is faintly considered, usually assuming a *one size fits all* standpoint. With the developers of Umhlanga Ridge presumably subscribing to the New Urbanism approach to suburban development; it is worth investigating its compliance to the ideals of New Urbanism and how these align to the principles of sustainability, especially in pursuit of the 'Durban dream' of a sustainable city.

1.1 Research Objectives and Questions

From a spatial planning perspective, the components of urban form and design (for example, densities, lay-out, open spaces and mixed-use) constitute essential indicators against which sustainability can be measured. With New Urbanism purporting to be a sustainable urban design model, coupled with its

acceptance in South Africa, there is need to establish the broader context within which to situate it in the trajectory of sustainable urban development.

1.1.1 Objectives

The main objective of this research is to ascertain the extent to which the current developments in Umhlanga Ridge satisfy the principles of New Urbanism and urban sustainability. The sub-objectives to this research are as follows:

i. To identify the indicators of a sustainable urban form.
ii. To establish the contributions of New Urbanism towards a sustainable urban form.
iii. To assess the characteristics of Umhlanga Ridge against the principles of New Urbanism.
iv. To determine the degree to which the Umhlanga Ridge Developments align with the principles of sustainability.
v. To establish the varied interests that have influenced the spatial restructuring of Umhlanga Ridge.

The study is intended to take a theoretical and technical standpoint, focusing on the historical, socio-economic and physical dynamics of Umhlanga Ridge, with emphasis on its responsiveness to sustainable urban development. This will assist in the verification of claims by Tongaat Hulett Developments that they truly subscribe to the concept of New Urbanism and principles of urban sustainability.

1.1.2 Research Question and Sub-questions

To what extent does the application of New Urbanism meet the criteria for a sustainable urban form in Umhlanga Ridge, Durban?"

The sub-questions that arise from the main research question are as follows:

i. What are the indicators of a sustainable urban form?
ii. How does New Urbanism contribute to a sustainable urban form?
iii. Which features of Umhlanga Ridge fulfil the principles of New Urbanism?
iv. To what extent has the application of New Urbanism in Umhlanga Ridge been aligned to urban sustainability principles subscribed by the Ethekwini Municipality in its Integrated Development Plan?
v. What are the competing interests that have influenced the spatial restructuring of Umhlanga Ridge?

1.2 Working Hypothesis

The developments at Umhlanga Ridge conform to both the ideals of New Urbanism and urban sustainability, in its response to Ethekwini Municipality's subscription to sustainable urban development.

1.3 Rationale of the Study

The search for sustainable approaches to urban forms continues as cities face the problems of urbanisation and climate change. So far, it seems none of the already sustainable urban form discourses (for example, compact city and smart growth) do justice in their attempt to provide definite solutions. Cities remain as the biggest challenges for testing the validity and application of concepts of and policies for sustainable development (UN, 2001: iii). Although much of the discussions have been on environmental sustainability, urbanisation requires more than just environmentally sound approaches to planning or a New Urbanism which does not respond to the current dynamics of city and society. Cities thus require a concerted set of policies, strategies and processes that can be implemented; and are capable of ensuring that the benefits of urbanisation today will not be unsustainable in the near and long future (Colin, 2004: 1).

It is evident that the Ethekwini Municipality stresses the need for densification, mixed-use and environmentally sound developments (Ethekwini IDP, 2007/2008). In spite of its approval of New Urbanism developments, the researcher is of the assumption that little has been done to verify the suitability and applicability of New Urbanism within the African context. The volumes of critique on New Urbanism have led to Umhlanga Ridge being chosen as a case study (Furuseth, 1997; Ford, 1999; Gordon and Richardson, 1988; Marshall, 2003) and the concerns that have arisen from a private interests' perspective to sustainable urban form. Observations show a contradiction between low density residential developments, for example, gated communities on the urban periphery in a location designated as a major economic investment node as per the Municipality's Spatial Development Framework. In Umhlanga, private suburban developments have occurred on previous farmlands located on the coasts of Durban North. As the reasons are yet to be ascertained, these developments seen at a glance, pose a threat to food security and the ecological footprints of the Municipality. The Ethekwini Municipality and Tongaat Hulett Developments' acceptance of New Urbanism in spite of the massive negative critiques provides the impetus for this study. It makes it worthwhile to examine whether New Urbanism is a sustainable urban form vis-a-vis the principles of sustainability. The outcome could provide a basis to examine whether the concept should be *thrown out* or

customised to suit the African landscape. As Ricoeur (in Campbell, 2002: 282) writes, *there can be many universalities, not one good life* (not one good urban form).

1.4 Research Methodology

Some authors and researchers like Burns (2000) define research as a systematic investigation to find answers to a problem. It is also the "*careful, diligent and exhaustive investigation of a specific subject matter, having that it is aimed at the advancement of mankind's knowledge* (Manheim, 1977: 4)". This study was analytical; consequently, sought to address the 'what', 'why' and 'how' of the issues investigated. Information was attained from both secondary and primary sources. Interviews were conducted to gain access to varying perceptions, attitudes and information which otherwise cannot be solicited quantitatively.

1.4.1 Data Sources

Information was sourced through books, journal articles, relevant unpublished dissertations, planning reports and newspapers articles and the internet. The use of journal articles provided the researcher with current knowledge, analyses and critiques of the subject matter. For the purpose of depicting the spatial transformation that has occurred in the north of Durban, aerial photos and maps were obtained from the City Engineers Department of Ethekwini Municipality.

The primary data sources included personal observation, semi-structured and unstructured interviews. Interviews provided the researcher with first hand information from institutions and bodies who had direct and indirect relationships to the study in question. Personal observation equipped the researcher with direct information, which otherwise could not be obtained from other people. As Patton (2002: 22) writes *"participant observation permits the researcher to understand a phenomenon to an extent not entirely possible from insights of others through interviews*." Also, the researcher used questionnaire surveys for residents and non-residents of Umhlanga Ridge, planners from both the Umhlanga Regional Office of the Ethekwini Municipality and Tongaat Hulett Developments as explained below.

1.4.2 Scope of Study, Data Collection and Analyses

The researcher set out to investigate the motive behind the application of New Urbanism as a sustainable urban form at Umhlanga Ridge Town Centre by Tongaat Hulett Developments and how the development had

been aligned to the development objectives of the Ethekwini Municipality. The area chosen as the case study was limited to the Umhlanga Ridge Town Centre but with references made to its immediate surroundings which had also been developed by Tongaat Hulett. The research identified appropriate indicators which constituted a sustainable urban form and how they had manifested in Umhlanga Ridge Town Centre. This research was also guided by an investigation in the various theories and concepts which related to current trends in urban development. Within this premise, the researcher sought out factors which led to spatial changes in the north of Durban and what benefits they have had at the metropolitan scale. The Ethekwini Integrated Development Plan was used as a guide to identify current urban challenges and the extent to which the development of Umhlanga Ridge Town Centre addressed these.

Data for this research was collected between May and October. Information sourced was mainly qualitative in nature since the intention was to gain access to a comprehensive and subjective viewpoint which would lead to in-depth understanding of the issues at stake. Key Informants interviewed were from Tongaat Hulett Developments and Ethekwini Municipality, as well as three renowned town planners who had adequate knowledge of past and present urban development trends in the Ethekwini. These interviews were conducted through semi-structured questions and were taped upon prior consent from interviewees. Given that Ethekwini Municipality is responsible for strategic planning and development in the region, it was ideal to find out reasons which led to large scale developments at Umhlanga Ridge, what the benefits were to the Ethekwini Municipality, and what their involvements were with Tongaat Hulett Developments. The convenience sampling method was used since a reconnaissance survey of the area revealed strict security measures to access residential apartments, thus, hindering the use of other enhanced sampling methods. However, an attempt was made to gain access to a diverse racial composition of residents and non-residents. A sample size of 20[1] residents and non-residents was used to gain access to individual perceptions of the urban form of Umhlanga Ridge Town Centre and what they perceived as an ideal neighbourhood. Aspects investigated include modes of transport, security, and affordability. The analytical and theoretical nature of the research aided the researcher in seeking out the relationship between theory and practice of New Urbanism in Umhlanga Ridge. Contents of the interviews were categorised to fit into selected themes adopted from the 2006 South African Cities Network Report on Cities.

[1] 10 residents and 10 non-residents (10 shoppers and workers)

1.5 Limitations to the Study

Since qualitative research relies heavily on information acquired from informants, the limits to such information is crippled by what respondents are willing to divulge. The major limitations to the study were accessibility to relevant information, time and monetary constraints which dictated the narrow scope of the study and included the following reasons below:

- The spatial extent was limited to the current built-up area of Umhlanga Ridge Town Centre. A detailed analysis of the land-use pattern of a completed Town Centre and a balanced scale comparative analysis with the adjacent older suburban developments at Umhlanga Rocks would have been possible if the full extent of the Umhlanga Ridge Town Centre was completed.
- The possibility of an in-depth analysis of the local socio-economic environment would have provided a clear understanding of the extent of positive contributions Umhlanga Ridge Town Centre has made to surrounding communities.
- An intensified analysis of institutional arrangements guiding development at the North of Durban would have provided an understanding to the extent to which private developers activities adhere to the overall development strategy and development procedures of the Ethekwini Municipality.
- The unavailability of a local area plan for Umhlanga Ridge hindered a street-level investigation which would have otherwise aided in an in-depth urban design analysis.
- The sample size of 30 as envisaged was impossible due to the restrictive access measures to residences in the Umhlanga Ridge Town Centre

1.6 Outline of Study

Following the introduction, chapter two will be definitions of identified theories and concepts considered as relevant within the context of New Urbanism and current trends in urban development. Among these include sustainability, globalisation, capitalism and postmodernism. Discussions in chapter three will be centred on understanding the foundations upon which the concept of New Urbanism has been laid. This includes insight into the contents of the '*instruction manual*' guiding New Urbanist developments, which is officially known as the Charter for the New Urbanism; and how they are intended to achieve sustainability in urban development. This will lead into an identification of flaws with respect to its applicability to sustainable urban development. Chapter four will outline some of the socio-economic forces and interests which have contributed to the spatial transformation in the north of Durban. Additionally, the planning framework for

Umhlanga Ridge Town Centre will be assessed against selected principles of New Urbanism. Ideally, this assessment will be presented in tabular form which the researcher considers as an easy format for comparison. Chapter four will end with an enquiry into some of the challenges related to private sector involvements in urban development and how they respond to the goal of urban sustainability. In chapter five, a detailed assessment will be given on how the concept of New Urbanism as applied in the development of the Umhlanga Ridge Town Centre respond to the needs of Ethekwini Municipality. Some key urban challenges will be identified in Ethekwini's Integrated Development Plan and these will be used as yardsticks for this assessment. Also, key policy conflicts and practices which hinder the implementation and achievement of urban sustainability will be discussed as a continuation from the final section of chapter four. Finally, chapter six will summarise key findings of this research as well as conclusions; and recommendations where necessary. It is expected that lessons which surface from the research will assist in understanding the niche of New Urbanism within the context of urban challenges peculiar to South African cities and Africa as a whole.

1.7 The Literature Review

The aim of this section is to draw on perceptions contained in existing literature on New Urbanism and also to inform the theoretical structure of the research. A quick review of existing literature gives an indication of both acknowledgement and scepticism concerning New Urbanist goals towards sustainable development. The intention here is to bring out the main arguments that have ensued, without making any judgements. Based on the evaluation yet to be undertaken, it is expected that existing perspectives will be verified or accorded a reasonable judgement. In terms of the methodology, the subject has been discussed around such themes as originality[2]; epoch[3]; and sustainability[4]. To offer consistency, the same thematic approach is adopted in this discussion, however emphasis will be on sustainability since it forms the core of this research. Before addressing these issues, it is necessary to locate the starting point of New Urbanism in planning theory and practice by attempting to examine the concept of urbanism before addressing the themes and the selected cases of Europe and South Africa.

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[2] The inventiveness of New Urbanism has been questioned by most writers (Ford, 1999; Fulton, 1996; Southworth, 2003) since they believe that the principles and models advanced by its supporters are derived from traditional neighbourhood design such as the garden city, city beautiful and neighbourhood concepts of Howard, Olmstead and Perry respectively.

[3] It is often debated whether New Urbanism is a modernist or postmodernist idea. This had ensued from the mixed characteristics it exhibits from these periods (Hebbert, 2003, Southworth, 2003)

[4] New Urbanism have been discussed around its claims of ensuring socio-cultural, economic and environmental sustainability, energy efficiency, control of sprawl, and integration (Gordon and Richardson, 1998 ;Talen, 2002).

1.7.1 American Cities and the Emergence of New Urbanism

Before the ideology of New Urbanism, American cities were known to be characterized by compact mixed-use neighbourhoods. This kind of spatial content began to change with the emergence of modern architecture, zoning and the automobile age. After World War II, the need for housing for returnee soldiers became crucial. As a result, a new system of development was implemented nationwide, replacing neighbourhoods with a rigorous separation of uses that had become known as conventional suburban development (CSD) or sprawl[5]. Unfortunately, what was to become a rebuilding of American cities in the mid 20th Century, Jane Jacobs (1961: 14) adversely described as the "sacking of cities" characterised by...

> low income projects that became worse centres of delinquency, vandalism and general social hopelessness than the slums they were supposed to replace; developments on the countryside; decline of public and social realm; severing of social ties; expressways that eviscerated cities; housing projects which are truly marvels of dullness and regimentation, sealed against any buoyancy or vitality of city life and commercial centres that are lack-lustre imitations of standardised suburban chain-store shopping.

The growing population resulted in encroachment on the countryside for housing. American suburban sprawl was exacerbated by the massive migration of formerly inner city inhabitants, escaping the ills of overcrowding, pollution and disease for healthier environments. Freeway building also opened up even larger areas of suburban land which both manufacturers and housing development companies took advantage of (Ellis, 2008). The post World War II sprawling urbanisation is portrayed as one of the most sinister forces in modern American life, a phenomenon that brought the United States to the brink of socio-economic crises (Furuseth, 1997: 202). This imagery of Post World War II American cities is what stemmed up the New Urbanism Movement in the late 1990s, characterised by a group of architects and planners who were unhappy with the way American urban centres were decaying; and the simultaneous increase of communities that seemed fragmented, car-oriented and spread out[6]. Their intention was to bring back traditional neighbourhood planning or 'Neotraditional Planning[7]' as an alternative to conventional suburban

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[5] www.newurbannews.com

[6] http://www.smartergrowth.net/issues/landuse/newurbanism/history.htm

[7] Type of planning that draws inspiration and technical guidance from early from early twentieth century planners and designers, including Britain's Ebenezar Howard and Raymond Unwin, as well as American progressive era planners Frederick Law Olmstead, Clarence Stein and John Nolan. They are neighborhoods that have a greater sense of community, pedestrian-friendly and promotes diversity of housing, race and income groups. According to Scully it is urban design '...in large part a revival of the classical and vernacular planning tradition...before International-Style Modernism perverted its methods and objectives.' (Scully, 1991 cited by Furuseth, 1997; 201).

development and refrain from city planning practices that promoted environmental degradation and urban sprawl.

1.7.2 What then is Urbanism?

Cities are an aggregation of tangible (for example, buildings, streets) and intangible (for example, behaviour, imagination) entities, out of which emerges different actions and reactions which constitute the urban fabric (Faucoult, 2001; Lefebvre, 2003). Resultant of these is a kind of urbanism, complex in itself yet a natural interconnectedness between space and self. In recent times, the hegemonies of globalisation, capitalism, technological advancements and effects of rapid urbanisation[8] have diminished the importance of open spaces; mutual neighbourhood assistance have been replaced by insurance policies; and social contact is based on interests and inclinations not governed by space (Castells, 1989; Sieverts, 2003). Face to face contacts have been replaced by the telephone, video-conferencing and e-mail; and shopping trips by internet shopping.

Jacobs (1961), Koolhaas (1995) and Wirth (1938) in their writings on cities and planning, express concern about how modern towns and cities[9] have lost their sense of cohesion, both physically and socially. These writers see cities as places of monotony, isolation, anonymity and inorganic whereas previously, cities displayed *attributes of 'urbanism'*[10]. Urbanism is a way of life, as classically analyzed by American sociologist Louis Wirth (1938)[11]. Thus, this 'old and true urbanism' is intended to be revived with the 'formulaic and deterministic' characteristics of New Urbanism (Marshall, 2003:192). The ability of New Urbanism to bring back this *true urbanism* is elusive to the current nature of city life, where there is "a tendency to nervous overstimulation which may lead to a bored and blasé attitude to life; the encouragement of frivolous and fleeting cults and fashions; and where people are detached from their traditional communal moorings, leaving them morally stranded and so inclined to harbour unreal expectations and feverish dreams"[12]. As Simmel (1997, cited in Tonkiss, 2005) noted, the superficial paradox that "one nowhere feels as lonely and lost as in the metropolitan crowd" (ibid) is true of the contemporary city. "Pervasive

[8] For example: encroachment on agricultural land for housing, increased energy use, pollution from automobile and industries, etc
[9] Cities in this context refers to any place of diverse human aggregation including neighbourhoods, suburbs, etc
[10] Attributes of urbanism include elements such as heterogeneity, opportunity, interaction, safety, creativity and preservation.
[11] http://www.britannica.com/facts/5/362484/Georg-Simmel-as-discussed-in-modernization

[12] http://www.britannica.com/EBchecked/topic/387301/modernization/12023/Urbanism-as-a-way-of-life#

urbanisation has modified the urban condition itself beyond recognition" (Koolhas, 1995:1). The essence of urbanism has been destroyed by...

> technological developments in transportation, communication, the quality and quantity of spatial production which mark a new epoch in human history that accentuate the role of cities as dominant elements in our civilization and have enormously extended the urban mode of living beyond the confines of the city itself (Wirth, 1938:4).

New Urbanists purport to postmodern views of pluralism, regionalism and environmentalism; their remedies to revitalising such a contemporary urban condition lies significantly in physical design and architecture and how these act as effective tools in bringing urbanism back to life (Talen, 1999; 2002). Though New Urbanism developments may be regarded as *perfect urban living* settings, they are illusionary and responses to it may be spontaneous (Gordon and Richardson, 1998); and attaining the elements of urbanism will depend on how various individuals intend to perceive it (Saunders, 1981; Lefebvre, 2003). The realities that seem elusive are the changing of urban composition and its inhabitants, yet possess the ability to make and unmake urbanism in its entirety.

1.7.3 New Urbanism: Original or Duplication?

> At the beginning of the twentieth century, two great inventions took place before our eyes: the aeroplane and the Garden City... the first gave man wings to fly and the second promised him a better dwelling-place when he came down to earth *(*Mumford, 1945: 29*).*

City landscapes and for that matter, suburban development have had a changing face, influenced by the nostalgia for a promise of utopia which never came into being. Probably, what Mumford assumed of the Garden Cities is yet to be redefined by the promulgators of New Urbanism, which they intend to replicate and achieve in the 21st century and beyond. Similarly, Mumford's statement could refer to "an intellectual profit-making in top-down planning fashion, whereby human subjects are sacrificed on the altar of utopian planning" as written by Talen (1999: 1362). With the advent of the New Urbanist movement, a group determined to fulfil the promise of a better dwelling-place, the originality of their ideals have been heavily criticised.

To Southworth (2003: 210), "the term New Urbanism expresses what its founders wanted it to be – new and urban", and a genre of postmodern dialectic. Others also see it as the latest in a long line of reform movements that have sought to establish new planning and design principles, and which New Urbanism owes much to the City Beautiful and Garden City movements of the early twentieth century (Fulton, 1996: 41). For example, the emphasis on *aesthetics* by New Urbanists can be traced to the City Beautiful; the neighbourhood approach from Perry's neighbourhood unit concept; the containment of sprawl from the Garden City Concept; a *downtown*[13], also traced to medieval design of squares and plazas, just to mention a few. Critically speaking, a look at the underpinning principles of New Urbanism, as mentioned earlier, is an amalgamation of old-world design patterns, merged with present day demands of sustainable urban development. But its newness lies in the ability to consolidate sustainable features entrenched in modern city planning. Also significant to New Urbanism is its integrated approach to urban planning whereby it brings together the essential elements that make up a desirable neighbourhood: building design, street lay-out, open spaces, housing typology, social and public realm and aesthetics (Bohl, 2000; Talen, 2002). Displaying a mixture of ideas from various eras of urban planning, its originality becomes fuzzy. However, as the mundane debate on New Urbanism's originality continues, such developments continue to emerge strongly and globally, in an attempt towards the global agenda of sustainable human settlements and urban development.

1.7.4 Locating the Epoch of New Urbanism

The planning of urban spaces does not occur in a vacuum. They are somewhat guided by ideology or philosophy. It has become common to compare contemporary planning practices with socio-cultural and political affinities of the enlightenment, modernism or postmodernism. Although conclusions of New Urbanism postulate that it has borrowed ideas from all three periods, popular judgment classifies it as part of postmodernism, especially with its particular adoption to style, language and thinking (Ellis, 2002; Kaplan et.al. 2004; Southworth, 2003) that is commensurate to a postmodern condition. Lindstrom and Bartling (2003: 98) write that even "before New Urbanism had a name, Edward Relph had placed New Urbanism architectural traits within postmodernism." Umhlanga Ridge as an example, specifically, the Town Centre Precinct is comparable to Knox's (1994: 166) listing of postmodern urban features of mixed-use and multiple

[13] Downtown refers to the city centre, with a concentration of diverse activities (commercial, residential, parks) and people meeting to interact.

use developments[14] and architectural design of tourist appeal (Rees, 2003). Part of the debate includes the essential postmodern celebration of difference by New Urbanists who aspire to achieve a balance by embracing spatial equity and equality principles through the distribution of affordable housing that match job opportunities or avoid concentration of poverty[15].

On the contrary, these postmodern thoughts of New Urbanism are considered a contradiction because of the obvious proliferation of sprawling cities, gated enclaves, residential communities, megamalls, and theme parks (Shane, 2003; 2) as part of the global urbanization paradigm, constantly under scrutiny. The structural influence of capitalism on New Urbanism also portrays their style of practices and language in their exercise of coercive power, associated with the period of modernity and enlightenment (Harper and Stein, 1995: 241). Conclusively, some writers (Kaplan et.al. 2004; Koolhas, 1995; Marshall, 2003; Southworth, 2003) are of the view that New Urbanism cuts across all three thoughts mentioned earlier but can be best located in postmodernism where most of its characteristics are situated. However, Ellis (2002) believes that this critical attack on the New Urbanism remains unconvincing since insufficient evidence exists in some cases to make final judgment.

1.7.5 Is New Urbanism Sustainable or Not?

The ideas of sustainable urban form and human settlements have been fundamental to the traditional place-making and development agenda, although not by that name (Choguill, 2008). With the advent of urban sustainability at the forefront of policy-making, we might have found something known as New Urbanism which may be the end to the persistent search for sustainable urban forms to planning 21st Century cities and beyond. New Urbanists view themselves as *"*part of a *new internationale,* formed by the challenge of sustainable development" (Hebbert, 2003:194), however this is highly debatable as they have come under critique as being *not so sustainable* as its supporters ascribe it to be.

Following the global agenda on sustainability, the contribution of the New Urbanist Movement towards sustainable urban development discourse is plausible as it recognises that cities and human settlements constitute one of the most powerful tools of human civilization and development. It follows that within the spatial context of sustainable city building, the Congress for the New Urbanism advocates the restructuring of

[14] Mixed-use and multiple use development are classified as **Functional Mixing** under postmodernism, whereas **Functional Separation** is related to Modernism (Knox, 1994).
[15] The seventh charter principle of the Congress for the New Urbanism

public policy and development practices to support the following principles: *neighbourhoods should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology and building practice* (Charter for the New Urbanism)[16], all jointly under the popular theme, 'Transect Planning'[17]. Agreeably, the comprehensiveness of the New Urbanism Charter and its vision toward sustainable neighbourhoods and cities seek to epitomise neighbourhood qualities that supposedly existed in traditional American urban settings built before World War II such as Annapolis (Maryland), Alexandria (Virginia), Savannah (Georgia) and Charleston (South Carolina) (Bohl, 2002: 763). The mission of New Urbanists is to bring back the urbanity that existed in these towns to modern neighbourhoods.

The New Urbanism Charter demonstrates a holistic sensitivity to sustainability issues of the natural environment, the production of space and social elements; these qualities outlined above together constitute the New Urbanism Philosophy. However what is unclear is its ambitiousness in the scale and the feasibility of achieving social cohesiveness from the physical design of space, with little or no recognition of urban cultures and technological changes that influence human lives in the 21st century (Castells, 1989)[18]. Most criticism has been on how New Urbanists intend to achieve social sustainability. Subsequently, Kelbaugh (2000: 285) refers to New Urbanism as "structuralist (or at least determinist) in the sense that it maintains that there is a direct, structural relationship between social behaviour and physical form". People like Stenberg (n.d) question how developers and planners guarantee their grand designs (albeit walkable ones) will deliver satisfaction to their users, and thus be truly sustainable. Coming to the issue of equity and diversity, Gordon and Richardson (1998: 3) write that:

> the Congress for the New Urbanism rhetoric gives substantial attention to promoting equity, fostering residential mixing, affordable housing provision, and reducing central city-suburb income differentials via middle-class infill development...instead New Urbanist communities, are turning out to be rather elitist settlements with average income levels much higher than in the surrounding areas. Most important of all, it embraces pie-in-the-sky social engineering based on a false diagnosis of society's

[16] New Urbanism is based on a set of 27 principles known as the Charter for the New Urbanism www.cnu.org
[17] Based on ecological theory, the Transect is a regulatory code' that promotes an urban pattern that is sustainable, coherent in design, and composed of an array of liveable, humane environments satisfying a range of human needs.
[18] In his writings on "*The informational city: Information technology, economic restructuring, and the urban-regional process*, he makes note of three major forces that have shaped society: one being the countless global electronic networks which has resulted in individuals cutting adrift of traditional rules of society and forced to craft identities of their own, with one foot in the local physical world and the other in the global virtual world

> urban problems, an excessive faith in the ability to change the world, and the prescription of policies that are implementable only under very special circumstances[19].

New Urbanists assert that the success in implementation of their principles requires that they are written into zoning and development codes. A study by Garde (2004:154), of the University of Waterloo, Ontario, Canada showed that New Urbanists' promotion of neighbourhood design is expected to influence public policy while principles that focus on regional planning may not generate enough support and are unlikely to be implemented. In their stance as anti-sprawl, New Urbanism advocates for both Greenfields and infill developments, however there is widespread perception that most New Urbanist developments are suburban experiments (Bohl, 2002: 766); building low-density suburban developments like gated communities and small-sized suburbs of Kentlands, Celebration, Laguna West and Seaside, all in the United States and eating up agricultural land (Gordon and Richardson, 1998: 3). In such situations, New Urbanist developments neither foster reduction of auto-dependence nor the efficient use of resources. Another major challenge between New Urbanists and ecological design is the role of nature in the city and how it should be integrated. In Southworth's article '*New Urbanism and the American Metropolis*', he writes about New Urbanism co-founder, Andres Duany who believes that:

> ...rural nature has no place in the central city, just as urbanity has no place in rural areas. Urban open space should consist of squares and plazas, not greens or conservation areas. 'Rural elements should be located in rural locations, while urban elements should be located in more urban locations – not unlike natural ecological systems in which plant and animal species co-exist within habitats that best support them (Duany and Talen, 2002: 247, cited by Southworth 2003: 212).

The above statement begins to send negative signals about the scale at which New Urbanists intend to contribute to urban sustainability, especially when they choose to be selective about the aspects of sustainability they wish to incorporate into their projects. It is evident that New Urbanists have been caught up in conflicts within the planners' triangle[20] (Campbell, 1996; 305). Cities as complex entities remain the biggest challenges for testing the validity and application of concepts and policies for sustainable development (UN, 2001: iii). New Urbanism claims as a sustainable strategy in place-making can become relevant if these can be translated onto landscapes to achieve the desired sustainable urban development.

[19] Quoted from a paper presented at the November 1998 Meeting of the American Collegiate Schools of Planning (Pasadena, South California).
[20] The Planner's Triangle by Scot Campbell depicts the conflicts that planners face in trying to achieve sustainable development. He uses three dimensions of sustainability, i.e. social, economic and ecological. He believes that planners must both negotiate the procedures of the conflicts and promote a substantive vision of sustainable development (Campbell, 1996; 305).

1.7.6 Global Response: Sustainable Urban Development and New Urbanism

The sustainability agenda seems to have engulfed every nation, although it has been approached from different dimensions. America's pursuit to curb sprawl may be to subscribe to New Urbanism, whilst others may not. Generally, New Urbanist developments all over the world have initially been embraced either genuinely or through a process of pre-conditioned acceptance, but also faced criticism by members of the urban and regional planning profession. In spite of such criticisms, New Urbanism projects are occurring globally, though at a slower rate than in the United States (Southworth, 2003; Bodenschatz, 2003). The sections below give brief accounts of responses to New Urbanism in Europe and South Africa.

1.7.6.1 Europe and New Urbanism

Before the promulgation of New Urbanism in Europe, countries like the UK, France and the Netherlands had all bought into the idea of building sustainable towns such as the 'eco-cites', 'villes durable' and the transit friendly 'urban extensions' which reflect sustainable elements (Stutz, 2009); however not too much in the context of America. Europe has not been hasty in embracing New Urbanism. In the United Kingdom for instance, the ideas of neighbourhoods has influenced urban form since the 19th century, and Gordon Cherry (1996 cited in Taylor, 2000: 22) is quoted as saying that "the British model has remained the decentralist tradition based on Howard's garden city and Unwin's style of cottage architecture." In Germany where New Urbanism has received a mundane response, projects such as those of Fundus-Gruppe property developers on the Baltic, Wustrow Garden City in Mecklenburg-Vorpommern planned during the 1990s by architects of the New Urbanism remained largely unacknowledged yet become well known in Berlin when the same developers built the Hotel Adlon at Pariser Platz (Bodenschatz, 2003: 273).

While tackling sprawl remains the core mission of New Urbanism, the rate of sprawl in Europe has been recorded to be slower compared to its population growth, however Paris, London, Brussels and every major city has long had outlying rings of lower density development but have remained far more compact than their American counterparts (Stutz, 2009). Over the last 20 years, Europe's sprawl has been accelerated by the regional development policies that have seen the construction of new transit corridors such as the planned road network connecting the Baltic States and Finland to the rest of the European Union (ibid). Seemingly, the European Union is rather concerned with "the revision of the thrust of policy at the local level to counter sprawl, and the replacement of the dominant trends of urbanisation ('laissez-faire') with a new urbanism ('creative control')" (Laconte, 2006 cited in EEA Report, 2006: 38). Europe's stance to achieving sustainable

urban development does not dwell much on urban form but includes sustainable transportation and controlling regional migration patterns through policy coherence and effectiveness (ibid, 40). Bodenschatz (2003: 277) concludes that even though New Urbanism is of interest to Europe, it is unlikely that American traditions of building, residential developments and design will be adopted. He continues that Europeans have more experience with regeneration of inner cities in particular with urban development in shrinking cities (in formerly industrial regions), thus practicing New Urbanism will produce a totally different picture and totally different spaces.

1.7.6.2 New Urbanism in South Africa

In view of searching for the most appropriate urban form in response to urbanisation and the challenge of planning sustainable human settlements, a number of city forms has been formulated internationally, particularly in developed countries, and are usually adopted by developing countries (Todes, 2003; 109). Whereas the focus of developed countries have tended to be on the questions of land consumption, efficient service provision, transport costs and energy usage (Breheny, 1996), in South Africa, the issues at stake have been spatial integration, sprawl, equity and social change (Todes, 2003: 109). Some of the contemporary urban forms practiced in South African cities to overcome sprawl have been the Compact City and New Urbanism as their application have been recorded success in Geneva, Switzerland and Kentlands, Maryland (Kenworthy, 2008; Ellis, 2002). Currently, Greenfield and Infill developments have emerged strongly in Cape Town, Durban and Johannesburg, all influenced by New Urbanism principles. However, these have not provided clear solutions as was expected by planners (Durack, 2001; Jenks et.al, 1996; Neuman, 2005; Todes, 2000a). Irrespective of this disillusion, urban sustainability indicators - *mixed-use environments, compaction and transit-oriented developments* – still remain critical considerations in this regard: their relevance in the South African context can be tied to the search for sustainable functionality of cities with respect to urbanisation and fragmentation associated with apartheid planning policies and the global pursuit towards urban sustainability set by the Millennium Development Goals.

Since the proliferation of New Urbanism into South Africa, planning policies promoting decentralisation have aided the development of suburban housing and commercial projects on the urban periphery, often developed and financed by private developers. Most private suburban and infill developments in Durban (Umhlanga Ridge and Point Precinct), Johannesburg (Melrose Arch) and Cape Town (Century City) have occurred based on New Urbanist principles. An important factor promoting New Urbanist developments is

situated in the global imperative of competition whereby cities aspire to attain recognition through flagship projects that attract tourism, a trait of postmodern urbanisation. New Urbanist neighbourhoods in Johannesburg have been displayed as enclaves of social homogeneity and Dirsuweit (n.d) refers to them as *"the production of secure and democratised spaces*" thus perpetuating attempted efforts of integration by city officials. In Durban, for example, the strategic location of Umhlanga Ridge in relation to the upcoming Dube Trade Port is seen as vital to enhance the global image of the city. However, the economic sustainability of Umhlanga Ridge thus becomes questionable especially in terms of its narrow employment base[21] which is not likely to substantially reduce a 37.5% rate of unemployment in KwaZulu-Natal (KZN Profile, 2004).

One begins to question the sustainable urban development agenda of the municipality authority: is it to satisfy global aspirations or compulsion by private capital to influence planning decisions? The crucial argument is how sustainable urban development can be contextualized and private-public partnerships promoted to achieve the dream of a sustainable city and nation. In view of the application of New Urbanist principles towards sustainable urban development, it is necessary to assess Umhlanga Ridge's appropriateness against the specific dimensions of sustainability that South African cities intend to achieve or "perhaps adopt parts of the New Urbanist design package that are viable, without signing up for the whole package" (Marshall, 2003: 192).

[21] The development is characterized by secondary and tertiary activities, which hardly fits the unskilled employment bass of KwaZulu-Natal.

Chapter Two: Conceptual and Theoretical Framework

2.0 Introduction

This chapter is made up of two major sections: The conceptual framework defines and explains the concepts and theories within which the research is situated and how these relate to each other. They include the concepts of sustainability, globalisation, postmodernism and neo-liberalism. These elements are critical determinants for the contemporary production of space and have been considered influential in the spatial restructuring of Umhlanga Ridge. The second section is a theoretical enquiry that seeks to give logical understanding of the above and explain the processes that shape the built environment. It is acknowledged that the built environment is structured on metamorphosed political, economic and socio-cultural ideologies and models to suit peculiar situations.

2.1 Conceptual Framework

The creation of human settlements as a planning function is the fundamental process within which quality of life is determined.

> Planning is of basic importance to the quality of people's lives. It seeks to shape the places where people live; allows us to create vibrant, healthy sustainable communities; protects and enhances our natural and historic environment; ensures everyone has access to green space and unspoiled countryside; and supports the economic development which is vital to creating jobs and ensuring our continuing prosperity (HM Government, 2007: 5).

The restructuring of space to suit present and future generations is a task that requires careful consideration in terms of limited resources and how efficiently these can be used. The episteme of constructing sustainable human settlements purports that human settlements must be arranged in a way that keeps them in tune with their social, economic, cultural, environmental and political dimensions and vice versa; more or less creating landscapes that speak a language of urbanism. There is a general consensus among writers (Castells, 1978, 1977; Harvey, 1973; Knox, 1995; Sassen, 2006) that urban landscapes have been produced on a range of rationales: among these are the reaction to effects of urbanisation (for example, provision of housing, transportation); the influences of globalisation to a specific prescription of the city image; the overpowering actions of private capital investments; the credence of social theory as an underpinning feature of urban processes and the response to the ambitious global call to sustainable development. Out of the

interconnectedness of these rationales, emerge a heterogeneous process which determines and affects the patterns of production and consumption of cities. These rationales are also known to be entrenched in the culture of postmodernism, which has tended to affect personal identity, the nature of spatial organisation, local cultures and how economies are organised.

Since the functionality of urban landscapes does not only depend on physical structures but also how these spaces are perceived by its users (people), the hegemony of urban processes and thereafter the culture it produces cannot be taken for granted. In view of these, the spatial restructuring of Umhlanga Ridge cannot be said to be only dependent on capital and social interests but also on the institutional desire of Ethekwini Municipality to pride itself as a sustainable city and to achieve an urban ambience which satisfies the praxis of global tourism and investment (Ethekwini IDP 2007/2008 Review). The focus in this chapter is to define concepts that will provide the critical framework for understanding the postmodern urbanisation of Umhlanga Ridge; depicting this landscape as an outcome of urban and social change typical of capitalist societies; a global mantra of symbolism; and an attempt towards sustainable urban development.

2.1.1 The Sustainability Agenda

It is unclear whether sustainability is a concept, a theory, or a discourse. To which of the categories it may belong to is irrelevant as this point. However, important to this study are the actions and outcomes that will give sense to sustainability and sustainable urban development. In trying to construct a path of understanding, sustainability will be treated as a concept to avoid any further complications to an already existing complex debate. It is imperative that one captures some of the accolades that the concepts of sustainability and sustainable development have attracted from different writers; these offer an idea of what the concept needs to be, but also the uncertainty that clouds the ability for this goal to be achieved:

> Sustainability is a broad, vague term that has many meanings. Sustainability is a platonic idea, a category of the good. As a new idea, there is not yet a clear, single image of what sustainability is. Its fuzziness and many facets contribute to its appeal. It is appropriated without fear of challenge because there is no single accepted image of how to specify it exactly and put it to work, despite one accepted general meaning of a balance among equity, economic, and environmental concerns. Sustainability is not yet branded. There is no patent, trademark, or copyright (Neuman, 2005; 17).

> Stupar (2007) refers to sustainability as the *magic* term; the rules of engagement have disseminated into the global realm, representing "an opportunity to justify the hasty decisions and 'progressive strategies, jumping over its real importance"...sustainability theory is still in its infancy, thus the tendency to rally around any kind of theory that seems to contain a banner of the subject matter has become common.
>
> The concept of "sustainable development" is like motherhood and apple pie – everyone finds it a good thing. This is no surprise: How can one possibly be against economic and human development that meets "the needs of the present without compromising the ability of future generations to meet their own needs"? (Leisinger, 2007: 1)

Marcuse (1998: 104) is of the view that "sustainability is both an honourable goal for carefully defined purposes and a camouflaged trap for the well-intentioned unwary". From these different perceptions, it becomes clear that sustainability is good, it is magic but there is almost a non-existent trajectory by which sustainability can be logically expressed without complication. The global challenge over the past three decades has been nations' receptivity to sustainability by adopting practices and actions that represent a sustainable development. Since the Bruntland Report '*Our Common Future'* was published in 1987, sustainability and sustainable development have become established concepts which cannot be easily dismissed. As a concept and a slogan, sustainability had an honourable pedigree of an environmental approach (Marcuse, 1998); however, currently considered as an interdisciplinary thesis, sustainability and its counterpart sustainable development affirm that all actions and practices of humans pertaining to any form of development be it social, economic, environmental or political, must be directly geared towards efficient use of resources and provide benefits which can be enjoyed by current and future generations; and also offer the future generation the ability to meet their own needs (World Commission and Environmental Development, 1987).

The concept of sustainability in urban development is often seen as a remedy to a multi-dimensional problem, dealing with spatial characteristics, geographical location, environmental conditions, economic viability, institutional ability and structure, human development, social relationships, local values and aspirations. The complex set of issues that determine sustainable development and settlement sustainability, and the recognition that these issues are interconnected and interdependent, can identify sustainability as a systemic concept that requires a systems approach to problem solving and planning (Du

Plessis & Landman, 2002). These facets have created a new urban geography, and to a large extent demonstrate the recognition of the sustainable discourse stated in the global prescriptions of Local Agenda 21(LA21) and the Habitat Agenda. The aspiration of built environment stakeholders is to embrace more desirable physical attributes (for example, road layout, open spaces and densities) of cities without severing the complexity of elements within the urban fabric. However, the possibility of achieving sustainable urban development has been blurred by harsh variables and influences such as conflicts, political influence and private capital. These variables also present themselves at any given time and complicate the choice of trade-offs needed to achieve desired outcomes.

The desire for sustainability spans across all professions and is constantly being redefined to coincide with advantageous outcomes of particular professional practices and circumstances. Putting this bluntly, Leisinger (2007) reiterates that the philosophical and political attractiveness of sustainability conceals its operational difficulties resulting from diverging interpretations and significant unresolved issues, yet unavoidable. It has also been suggested that "sustainability has become integrated into the planning profession in one sense: it is clearly recognized as something that relates to planning" (Jepson Jr, 2001). Essentially, it is regarded that the onus of sustainable urban development lies with professional planners, and seen to have the ability to regulate and recommend principles and practices of institutions and actors whose actions influence the built environment. However, the downside of achieving sustainable outcomes is largely associated with the constraints put forward by the competing powers and interests of capitalists, politics and the urban fantasies of city governments. As governments encourage actors of their economies to buy into sustainability and sustainable development concepts, everyone is allowed to use them without any well-defined pointers and is eventually defaced as they become outcomes of negotiations and bargain to suit consensus rather than principle.

2.1.2 Neo-Liberalism and the Production of Space

The relationship between the state and private capital cannot be underestimated simply because of the important role they play in the restructuring of urban spaces. Public functions have been more or less limited to facilitation and control whilst the private sector undertakes activities that revolve on capital investments (Fraser and Kick, 2007; 2358). Without doubt, the action of capitalism has been the emergence of urban spaces that accommodate rapid production, exchange and consumption; they are built, destroyed and rebuilt to allow for a more efficient circulation of capital (Harvey, 1973; Waley, 2007). Cities have become sites for

the production of imagination and the cultivation of spectacle (Bridge and Watson, 2000; 107). The result of these imaginations and processes, coupled with the intent of global symbolism has created urban terrains of hyper-reality, socio-physically disaggregated, exclusionary, privatised and commodified (Douglass and Huang, 2007). Umhlanga Ridge, in many respects, portrays a hegemonic form of spatial practice, as a landscape representing the ideas, interests and values of a dominant voice (Jordan, 2002; 109), symbolic of a neo-liberalist culture.

2.1.3 Postmodern Urbanism

New Urbanism is considered to be part of the episteme of postmodernism. Postmodern urbanism is said to reflect an array of design approaches, contexts and applications, an interface for urban planning and architecture (Velibeyoglu, 1999; 6). Postmodern space-writing makes claim for historical grounding, although does not explicitly reject the idealism of the modern (Calhoun, 1995; 107). Action of postmodernism are embarked upon through power, knowledge and cultural ideals that translate into the style of landscapes it produces. The postmodern city is thus, described as a fragmented space[22], self-contained[23] and characterised by home-based culture based on gentrification and the spiralling fear of *others* (Lemanski, 2006; Rees, 2003; Sandercock, 1998). They are based on themes such as pluralism, positivism, exclusivity, materiality and power which are reflected implicitly in New Urbanist developments and gated communities.

2.1.4 Situating New Urbanism in the Global Context

Perhaps the most comprehensive framework associated with this postmodern urbanism is with the compelling catch-all concept of globalization (Soja 2001: 40) which encompasses the paradigm for all studies of the contemporary urban landscape. Globalisation is gradually influencing and changing the face of urban structures in African cities. Although it has often been argued that globalisation is nothing new (Nichols Clark, 2000; Savitch, 2002) it is acknowledged that contemporary globalisation, more than ever before, affects the activities of cities continually and vice versa. Stupar (2008; 1) writes that "the contradiction of space and time, the urban growth and development have become global imperatives...as the global network of power reflects true nature of modern cities as representations of a perception." The interplay between the *global* and the *local* can often lead to a conflict of interest in terms of addressing imperatives of social needs,

[22] Fragmented space equal suburban developments,
[23] Gated communities as the illusions of enhanced security

economic development and environmental issues. This line of thought can be associated with the role that Umhlanga Ridge can play in relation to development challenges of the Ethekwini Municipality.

2.1.5 New Urbanism and Social Theory

New Urbanism gives precedence to the ability of altering social behaviour through the establishment of a certain pattern of urban design. Social theory provides the grounds upon which urban changes occur; given that social and spatial elements dialectically entrench each other. Urban spaces are in a sense, linked to social structures, relations and processes which constitute the urban fabric. However, the structure of space is not a guarantee but rather a catalyst to social interaction. Urban life in modern cities has been described as isolating, anonymous, degrading of social ties and hostile to community (Tonkiss, 2005; 8). Thus it is suggested that "New Urbanism ideally assembles much of its rhetorical and political power through a nostalgic appeal to "community" as a panacea for our social and economic as well as our urban ill" (Harvey, 1997: 2). However, the use of urban design as a determinant for social interaction has been questioned since current trends in information and telecommunication have reduced the need for physical contact. Also, current urban lifestyles generated by exclusionary spaces or gated communities have become criticised for increasing societal segregation and social divides (Lemanski, 2006: 397).

2.2 The Theoretical Context of Contemporary Urban Development

The core of this enquiry includes understanding the critical processes that shape the built environment. Notably, this does not intend to be a historical account but rather a nomenclature of discourses that give reason to the theoretical underpinnings of contemporary spatial restructuring under the theme, postmodern urbanisation. Obviously, the credibility of theory in planning depends on how constructive it can be in addressing possibilities for better planning and possible direction for innovative work (Forester, 2004: 2).

2.2.1 Modernism

"Modernity and postmodernity represent characteristic modes of civilisation; they are ambiguous expressions of crisis of civilisation and knowledge engaged in the headlong flight from the present and each represents an attempt to impose a new cultural regime" (Benko and Strohmayer, 1997:1). Modernism has its origins in the so-called Enlightenment project which represented rationalism, technocentrism, the standardization of knowledge and production, a belief in linear progress and universal, absolute truths (Meiksins Wood, 1997). With the dawn of western civilisation in the late nineteenth century, modernism signified a paradigm shift

from the beliefs of universal truth and law that governed society to an authority centred on man, based on his creation of a social and intellectual framework for human endeavour (Hurd, 2009). In the same way modernism advances a strong value set, so is the concept of sustainability (Wheeler, 2004: 31). Sustainability is considered as one of the core values and a rule of thumb which supports the emergence of an interdependent world (ibid)

From a philosophical perspective, modernity is considered "a mode of spatial and temporal experience which promises adventure and self-transformation while threatening to destroy the familiar. It bisects geographic, ethnic, class, religious and ideological boundaries" (Cooke, 1998, cited by Graham and Marvin, 1996: 176). The level of rationality that was imbued in modernism and modernity embraced any form of human reason characterised by precision and orderliness (Knox, 1994; Jencks, 1992); anything opposite to these were considered defiance to modernist ideology. In the same manner, a development can be described as 'New Urbanist' if the underlying principles are in accordance to the Charter for the New Urbanism. For example, the actions of modernist architects and planners such as Le Corbusier were strongly grounded in perfect abstraction and aesthetic principles, inspired by the anarchic qualities of capitalist urban development (Beauregard, 1996). In the same manner, New Urbanism gives attention to aesthetic appeal and standardisation of planning codes at the expense of contextualised urban problems. Whilst the modernist culture came to dominate Western epistemology for almost half a century, the "monolithic elitism of modernity such as reductivism, determinism and mechanism begun to be challenged in the 1960s by post-modern [neo-modern] architects, writers, artists and urbanists" (Jencks, 1992: 12), furthering the development of hybridisation (double-coding) which came to be referred to as postmodernism or the post-modern agenda, and to which New Urbanism has been associated.

2.2.2 Postmodernism

As the prefix 'post' suggests, postmodernism is inextricably linked to modernism and the suffix '*modernism*' is significant in terms of the burden it carries of a process which is international and in some sense universal; it represents the end of single world view and by extension, a war on totality and a resistance to single explanations (Jencks, 1992). Whilst modernism is based on rationalism and universal truths which are attained through scientific and technological thought, postmodernism purports to an extreme of multi-visionary thinking; operating on a double-coded premise which responds to the mosaic of the contemporary metropolis (Dear, 2000). In spite of this view, Sandercock (1998) has argued that "postmodernism is not a

meta-paradigm awaiting its historical moment to take over from the modernist meta-paradigm. Rather, it is a multiplicity of critical, deconstructive, and oppositional voices hovering over the corpse of modernism and primarily preoccupied with post-mortems." Consequently, the concept of New Urbanism has been described as a historical amnesia rooted in a myopic form of nostalgia since it tends to replicate traditional living environments as an antidote to contemporary urban problems.

Although postmodernism has been hardly defined, popular explanations usually offered by postmodern writers such as Dear (2000), Harvey (1989a) and Soja (1996), regard it as a condition of deliberate partial divergence from modernist thought. According to Dear (2000), the term postmodernism is used loosely to refer to a multitude of ideas, but identifies three principal references in postmodern thought as follows:

a. *"*Post-modern *as* style is a series of distinctive cultural and stylistic practices that are in themselves, intrinsically interesting. This *post-modern style* denotes a kind of aesthetic significance that had been influential of the world of culture, architecture and arts in the mid-1970s. This stylised version relies ardently on very artistic expressions to deconstruct the '*mechanistic aesthetic unappealing'* of the modernist project". A standard example of post-modern style can be recognised in the built environment through hyped aesthetics and characterised by post-modern language such as 'eclectic' and 'symbolism'.
b. Second, is "postmodernity as epoch which represents the totality of such practices viewed as a cultural ensemble; and a characteristic of capitalism" (Dear, 2000). This period signifies the 'sea-change' in the socio-political and economic condition (Harvey, 1992: 299) overlaid upon a global economic restructuring of space. Though ambiguity engulfs the epoch-making of postmodernity, it is highly identified as a noticeable shift characterised by a 'perspectivism' that radically different realities may co-exist, collide and interpenetrate (Minca, 2001); and sensibility, practices and discourse formations that distinguishes it from the period preceding it (Harvey, 1992: 305).
c. Lastly is "postmodernism as a philosophy and methodology, signifying a philosophical and methodological discourse hostile of the precepts of Enlightenment thought, most especially, the hegemony of any single intellectual persuasion" (Dear, 2000). As a form of textual analysis associated with Derrida (1976), language and communication must be broken apart to produce a signification which could stimulate us to question the fixed systems of representation. This postmodern methodology is grounded in the awareness to the breaks of continuity; the ability to

fragment that which is presented as total; and refrain from escaping that which underlies all our knowledge and thought, but rather undertake a critique of it from within (Ibid).

The explanations of postmodernism presented above offer understanding to the current trends of urban restructuring associated with contemporary architecture, urban design and the kind of language that is being used to identify them. Nevertheless, the differentiation of postmodernism, according to Collins (1992:95), "is not just the specific style which may be identifiable, but also the distinction is in the presence of that style along with modernist, pre-modernist and non-modernist styles; all enjoying significant degrees of popularity with different audiences and institutions within a specific culture". In conclusion, postmodernism as style, epoch and methodology are known to have influenced urban theory and practice and often conveyed as *postmodern urbanism* or *postmodern urbanisation*.

2.2.3 Towards a theory of Neo-liberalist Urban Restructuring

Representing a ubiquitous term in the social sciences, `neoliberalism' is used as both a description of the period as whole which include neoliberal times, neoliberal era, neoliberal decade and neoliberal world (Larner, 2009: 2). Contained in the neoliberal ideology is the belief that open, competitive, and unregulated markets, free from all forms of state interference, represent the optimal mechanism for economic development (Brenner and Theodore, 2002: 350). This typically involves the selective transfer of state capacities to private, parastatal and other stakeholders, as intervention is rescaled in the hope of securing conditions for a smoothly operating world market and to promote supply-side competitiveness on various scales above and below the national level" (Jessop, 2002: 454). Also, capitalism is a feature of neoliberal economies which symbolizes the culture produced from wealth accumulation; and the generation of socio-economic power which manifest in current modes of production.

Contemporary urban spatial structure is situated in the power of capitalism. Democracy and neo-liberalism have unlocked private capital to the extent that "for urbanists of a Marxist persuasion, it is this crucial dependence between the dominion of capital and the configuration of space in the modern metropolis that holds the key to understanding the logic of the city" (Parker, 2004: 104). This influence is manifested in the linkage between money and space, which is easily mobile in capitalist society. For example, Harvey (1985: 12) argues that, "money creates an enormous capacity to concentrate social power in space, for unlike other use of values it can be accumulated as a particular place without restraint". The transformation of urban

landscapes has come to depend largely on corporations "who…influence the symbolic and semiotic structure of urban space and to diffuse urban ideology: big commercial capital…play an important role as 'space directors" (Machimura, 1992: 121).

2.2.4 Globalisation

The past two decades have witnessed more drastic shifts towards globalization and interrelated market-like tendencies than was felt in many previous decades (Nichols Clark, 2000: 6). Globalisation has been defined as…

> a process [or state] of connectivity and interconnectedness resulting from communication, information and transportation technology, which have strengthened and internationalised the rapid exchange of everything from capital, labour, goods, communication, culture and pathogens without obstruction by national borders (Amin and Thrift, 2002; Marcuse, 2006).

The important components in this definition highlighted by Marcuse (2006) are that:

a. There is the socio-economic component of globalisation which is experienced through the evolution of policy frameworks and altering the organisation of societal and economic activities. Embedded in this is rapid urbanisation, often attributed to the changing nature and structure of economies at a global level and subsequently affecting the modes of production, migration patterns and urban identities; and
b. Secondly, the technological component which remains crucial to current and future connectivity is responsible for maintaining the continuous flow of factors of production and information. The tremendous role played by information technology and communication in advancing global activities has served the swift movement and relocation of enormous volumes of goods and services; and transfer of information and capital with speed. These phenomena are collectively referred to as the space-time compression or as "cities on global circuits" (Sassen, 2006).

Essential to this explanation is the consequential attribute of urban spatial restructuring which has accompanied this new global socio-economic and technological order. The interconnectivity of cities through the worldwide web facilitates the transfer of knowledge and this has a tendency to trigger cities to pursue innovative urban strategies to respond to these processes. It has been argued that globalisation represents "a redefinition of the urban scale, that is, a new urbanism that refocuses the criteria of scale construction in

extraordinary urban growth" of *space* and *time* in a world-wide context (Smith, 2002). Different urban settings such as industrial estates, office parks and airport cities have emerged to serve the needs of global corporations, and caused a shift from noxious manufacturing to non-noxious ones such as logistics and other light industrial activities.

Bengs (2005:1) also postulates that "globalisation implies the establishment of a neo-liberal society to match the neoliberal economy*".* Globalisation is largely driven by capitalism and causes cities' economies to either stagnate or progress; alters the methods of production and consumption and the pace of information transfer; the accelerated migration of skilled labour and capital flows whilst affecting the rate of urban change (Castells, 1977; Knox, 1995; Sassen, 2006). The city within the global phenomenon has become a representation of a mode of production suited to capital accumulation; as a source of legitimacy and power; and for capital to reproduce itself (Castells, 2002; Harvey, 1973). Entrenched in globalisation is the territorialisation of power which offers credence to an emergent geography, referred to as the global city (Sassen, 2006). The lifespan of the global city is presumably guaranteed if it is able to keep in tune with emerging innovations and further attract socio-economic activities until a point of hegemonic existence is reached.

While globalisation is yet to be fully understood, its effects are continually felt, regardless of the challenges that it brings to most developing countries whose urban structures lag behind and respond slowly to global needs. Even though there are massive inequalities and welfare problems, the global shift of capital flow and dissemination of global knowledge have generated new tools and social agents for constructing urban identities (Jensen, 2009: 212). As urban and even rural landscapes become places where global aspirations are articulated, global forces will require cities to respond accordingly and will bring about spatial changes.

2.2.5 The Urban Space and Society

> The urban accumulates all content...its contents are mutually exclusive because they are diverse, but inclusive because they are brought together and imply their mutual presence (Henri Lefebvre, 2003: 119)

Urban space is only meaningfully defined according to things, processes and consequences. Urban spaces are no longer material or lived spaces only; they are also spaces of imagination and representation (Bridge and Watson, 2000: 7). Urban space and society construct and deconstruct each other in many ways to

produce particular cultures and patterns which eventually, define them. With continual changes in the spatial structure of cities, urban identities are created, lost and re-created. The emphasis on *space* in urban geography, considers it not just as a medium in which economic, social, political and historical processes are expressed but also as a factor that influences patterns of spatial and urban development and the nature of relationships that develop within it (Knox, 1994; 3). Technically, the socio-spatial process of cities is an important phenomenon that represents the image of the urban fabric at any point in time, thus the heterogeneity of city imagery and culture is dependent on individual and societal perceptions of the city at any given time. The city has become a theatrical space, with a series of stages upon which individuals work their own distinctive magic, while performing multiplicity of roles (Harvey, 1990: 5). Urban space is not static; neither are its producers and consumers (society). In effect, urban space is no longer being analysed and understood fully only by scientific investigation or rationalism as was the case with modernists. In the same reasoning, the design concept of New Urbanism cannot be used to determine human behaviour.

Urban space is socially constructed, according to the social values and norms of society (Castells, 2002; Harvey, 1973; Lefebvre, 2003; Saunders, 1981). Suffice to say that urban spaces contain and produce a spectrum of processes which are intertwined in many respects and can be defined according to particular political or socio-economic themes. For example, it is noted that capitalist decisions in allocating urban space and governing urban social processes are intended to accumulate income to the advantage of the rich (Harvey, 1973). In the process, urban landscapes and societal attributes have been subjected to commodification into things like theme parks, cultural heritage and scarce skills professions. Day by day, society has to face the fantasy of their imaginations in reality and pseudo-reality. This new spatial order has created consumptive societies, with no room for escapism.

In addition, the space-society phenomenon is inseparable from *time*. Time provides the impetus to 'when' and 'what' changes occur in space and society. For example, New Urbanism has been described as a response to sustainable urban development (Marshall, 2003). This phenomenon is increasingly felt in this contemporary period of postmodernism-cum-globalisation. Within the context of globalisation and postmodernism, 'space-time-society' is presumably intertwined and compressed by advanced telecommunication. However, it is argued that space is relevant but the social configuration of space can no longer be conceived in nation-state terms but rather in the processes of uneven development denoted primarily by social group rather than territorial differentiation (Robinson 2001: 159). New Urbanism

developments, especially in the United States have become havens for the middle and high-income class, and not supporting the diversity principle of New Urbanism (Day, 2003; Ellis, 2002). The end result of such processes includes fragmentation and social polarisation.

2.3 Postmodern Urbanisation Trends

Postmodern urbanisation is a process of summative depiction of the major changes that have been taking place in cities during the last quarter of the 20th century (Soja, 1995: 125). Urban activities and experiences are affected by rapid spatial and institutional changes, allowing insufficient time for comprehension before they are further transformed. To provide better understanding of this cosmopolitan process, the triggers and consequences of postmodern urbanisation in direct relation to urban restructuring are identified below:

a. The rapid rates of urbanisation that has engulfed cities has brought into force high levels of unemployment, housing shortages, social injustice and crime. These have conceived a reorganisation of urban space that reflect invasive urbanisation trends of sprawl, fragmentation and separation (Dewar, 1992). The cumulative impact of these trends is inequality, resulting in what is described as islands of spatial affluence in a sea of geographical misery (Williams, 2000). Typical examples are social polarisation, spatial segregation, marginalisation and peripherisation;
b. The global economic and political policies reforms of the 1980's that downsized the role of the State from welfare to entrepreneurial was symptomatic of a reorientation of attitudes to urban governance yet advantageous to the reorganisation of the capitalists' mode of production (Harvey, 1989a);
c. The rise of the network city, dependent on the advancement of telecommunication for knowledge and capital flows which greatly determine the desirability and direction of urban development and largely to facilitate interests of an emergent global elite; and
d. Lastly, yet crucial is the intensity of attentiveness given to sustainability, and is considered critical to all urban processes. It is expressed spatially, economically, socially, environmentally and politically. Though largely conceded by the State in public policy, the context within which sustainability is usually defined subtly commensurate with the capitalist mode of production.

In all these processes outlined above, the compulsion by which society is drawn into the anxieties generated by themselves and others is usually manifested in contemporary urban spatial order and urban culture. The

summation of the major changes which occur in cities are complex, thus the discussion on postmodern urbanisation will touch on a few aspects which are deemed relevant to the context of this research.

2.3.1 A Period of Urban Sustainability

In the postmodern era, urban planning is by default responsible for the quality of life of cities and their inhabitants. Essentially, planning ethos is to be expressed through sustainable practices to meet the range of physical, socio-economic, environmental and political needs. It is the responsibility of urban planning to ensure that the creation of settlements is addressed holistically (Du Plessis and Landman, 2002; 4). Consequently, the long-term visions of cities are being formulated and implemented to help achieve a status of a *sustainable city*, *sustainable urbanism* or *sustainable urban development*. Though this may seem a major challenge, it is believed that there is a strong link between urban form and sustainable development, though not straightforward (Elkin, 1991, cited by Jenks et.al, 1996: 5). Nonetheless, the amalgamation of sustainable urban form in urban development is significant in this respect; though the current dynamics of postmodern urbanisation do not necessarily guarantee sustainable outcomes. In spite of this, the subject of sustainability in the built environment cannot be treated as a case of *throwing the baby out with the bath-water:*; it must be addressed accordingly.

The debate about sustainable urban development is centred on the effective and efficient use of natural, unnatural and human resources. Although thinking on sustainable urban development may seem rather intense in the early 21st century, it is not new to urban planning. Earlier proponents of this phenomenon including Howard, Le Corbusier, Unwin, Olmsted and Mumford expressed thoughts on urban sustainability. Long after them, a number of urban forms (concepts or models) have been propagated to target urban ills such as urban sprawl, associated with low-density developments; pollution, resultant of increased automobile usage; poor housing quality and shortages; stagnating economic growth and social exclusion. On the basis of such degenerative urban conditions, their offsets rest largely on an urban form (typology or model) that must supposedly be entrenched in the principles of sustainability. Invariably, the achievement of urban sustainability will vary from place to place, but the fundamental features that have come to constitute sustainable urbanism or the sustainable city include these widely debated indicators such as compaction; transit oriented development; social interaction; mixed-use; infill developments; environmentally-friendly transport modes; preservation of natural systems; cost effective housing developments; social equity and

inclusive governance (Jenks et. al, 1996; Wheeler, 2002). Whilst some can be expressed spatially, others are outcomes of how urban space is designed.

One dominant urban concept is the Compact City model (Jenks et.al, 1996; 5) which embraces urban containment against sprawl. the compact city model has been argued to be sustainable in terms of its prescription to higher densities that can support public transport and reduce the use of energy; ensure efficient land use that allows for preservation of land in the countryside; and the ability for higher densities to promote social cohesion, diversity and cultural development (Jenks et. al, 1996; Williams, 2000). However, this viewpoint on compaction seems to present itself as a fallacy since it is strongly disputed that higher densities do not necessarily bring about social cohesion or less reliance on the private car (Neuman, 2005). Although the compact city model represents a counter approach to the characteristics of urban sprawl, on the other hand, its attribute of centralization may not work well with peculiar characteristics of a city such as unstable soils, undulating topography, local culture and economic situations. Do such contrasts in debate, mean that a city without compaction is unsustainable?

In addition to this, New Urbanists believe that New Urbanism is a sustainable urban design concept, and as such, an ultimate solution for sprawling cities. The principles of New Urbanism include a multinucleated urban form, supporting non-motorised and efficient public transport as well as the designation of mixed-use regional and town centers (Calthorpe, 2000; Katz, 1994). What makes New Urbanism particularly interesting is how it consolidates design principles and features from the City Beautiful, Garden City and Neighbourhood Unit concepts of the early twentieth century (Fulton, 1996: 41). New Urbanism also contains principles intended to counteract climate change, socio-economic fragmentation, spatial polarisation and urban security. Whilst the theoretical underpinnings of New Urbanism may seem relevant in the American urban condition, in Britain, Prince Charles has led the way towards 'the urban village' as the locus of urban re-generation (Harvey, 1997: 2).

From a theoretical perspective, the sustainability of urban development is conceived as a necessity when viewed diametrically to the challenges of urbanisation. The conscious effort to make urban planning and development sustainable has reached the edge of many considerations. These include the socio-cultural, economic, environmental, spatial and political dimensions in urban development. All these dimensions must manifest in decision-making processes towards urban sustainability. The Compact City, New Urbanism and

Smart Growth encapsulate a range of features in the quadruple bottom line[24] phenomenon, which seem to have sound postmodern arguments. Although higher densities, mixed-use developments and open space systems are currently being promoted as sustainable indicators, their outcomes has features of *postmodern urbanism*, characterised by decentred urban sprawl, fragmentation of places, gated communities, the suffocation of public space, and so forth, they mark a radical departure from rationally ordered modernist cityscapes but also rejecting the central tenets of modernist thought as an objective, scientific, and ordered approach capable of grasping these new urban realities (Dear and Flusty, 1998; Dear, 2000).

While the features of urban sprawl and fragmentation have an alienated impact at the urban and metropolitan scale, there is a contradiction in the creation of communities and a sense of community asserted by New Urbanists (Irazabal, 2006: 74). If the fencing-off of residential areas such as gated communities; preserving natural ecological systems as eco-estates; and promoting recreation through golf-estates are sustainable components of an urban form, then in informal settlements where social interaction and pedestrianisation are effectively practiced qualify to be sustainable in this respect.

As nations and cities become obliged to live by various charters and blueprints which are expected to lead them to a sustainable future, the sustainability agenda must be substantively redefined as current urban conditions continue to intensify. With the contemporary city being perceived as a source of environmental, economic, social and political problems, the extreme debate on the theory of compact cities, New Urbanism and Smart Growth are believed to be important components of a sustainable urban future (Jenks et.al., 1996: 11). As the theory of urban sustainability keeps evolving to encompass all that is relevant to the urban condition, the operationalisation of sustainable strategic decisions still remain a challenge uncertain (Campbell, 2000)

2.3.2 Fragmentation: the quartered or fractured city?

Globalisation and modernisation have socio-economic and spatial ramifications for cities. One of such outcomes is fragmentation. Like many postmodern terminologies, 'fragmentation' has no precise definition.

[24] The commonly used is the triple bottom line which refers to the environmental, social and economic dimensions of sustainability. The adoption of a quadruple bottom line in this case stems from the inclusion of a political dimension, often refereed to as urban governance. This entails participation and consultation in decision-making processes of urban development.

It is considered a slippery concept in the globalisation discourse (Harrison, 2003: 15). Known to have become a common pattern of cities, Dewar (1992) explains fragmentation as a process of development that is occurring in relatively discrete pockets or cells, frequently bounded by freeways or buffers of open space. With fragmentation, today's cities have become spatial and socially divided; they are "fragmented, partitioned, at the extreme, almost drawn and quartered, painfully pulled apart" (Marcuse, 2000: 270). Associated with the discourse of industrial capitalism and decentralization is…

> the epochal shift from a Keynesian-Fordist-welfarist to a post-Fordist-workfarist society…, which is changing the socio-economic conditions in cities, including the reorientation of identities, social conflicts and ideologies towards a more explicitly cultural differentiation (Keil, 2002: 548).

Fragmentation can be explained from the perspective of the physical, socio-economic and political landscapes of cities (Duminy, 2007: 27). From a physical perspective, fragmentation occurs when particular groups of people, either by identity, race class or gender are intentionally (or unintentionally) included or excluded from accessing urban spaces, depending on who creates and manages those spaces. For example, it is common to find public housing projects located on the urban periphery and close to polluting industries which are often occupied by the working-class who commute daily by public transport. Subsequently, the middle to high-income group live in gated communities and exclusive residential developments with the luxury of more than one private car. The interface of these two groups (that is the low-income group and the high-income group) is often an employer-employee affair. Secondly, socio-economic inequality is reflected in the increasing differentiation in the labour market (Harrison, 2003: 15). The emergence of the wealthy elite who have access to global capital flows has created a distinctive dumbbell-shaped social structure characterised by an increase in the wealthy elite and serving underclass at either ends with shrinkage of the traditional middle-class both in number and influence (Clark, 2003, Parker, 2004). Socio-economic inequality is translated spatially into 'a new spatial order' expressed as spaces of exclusivity and escapism (Ellin, 2001; Lemanski, 2006; Marcuse, 2000). This new spatial order includes gated communities, security estates and edge cities for the affluent; and the ghettos and informal settlements for the underclass (ibid). Lastly, political fragmentation stems from the wave of institutional decentralisation of the State, vesting considerable amounts of power and responsibilities to different spheres of government. Coupled with this arrangement is usually the legitimacy of city authorities to make their own decisions, form partnerships towards urban development and management activities. An example of institutional

fragmentation is the Umhlanga Ridge Town Centre Management Association which has responsibilities formerly undertaken by Ethekwini Municipality. In essence, institutional fragmentation has become a process characterised by the "pluralisation of the territorial base of power; perforated sovereignty, and a new medievalism" (Soja, 2000, cited in Harrison, 2003). It has been argued that the consequences of fragmentation hamper the ability of city authorities to deal with urban change and development and furthers socio-spatial segregation and a fragmented political life (Knox, 1994: 338). Additionally, the culture of fragmentation has engulfed all facets of the urban system making differentiation in social, economic and political circles undeniable even as globalisation impacts heavily on urban landscapes.

2.3.3 Commodification and Symbolism as Landscapes of Spectacle

Cities of today are products of capital; and commodification is generated through maximum aesthetical displays. Commodification is a process through which social relationships and self-worth are increasingly subjected to the forces of an alienating and objectifying monetary exchange (Harvey, 1996, cited in Jordan, 2002, 36). Modern societies have become afflicted with what Marx terms "commodity fetishism". This means that "as commodities become external to the self, they receive by awe and reverence attaining significance previously given only to religious objects" (Crook et.al., 1992: 7): what was considered ordinary has attached to itself a status of economic value and marketed for consumption. With profundity, cities have taken much interest in using commodified urban spaces to find their niche in global tourism, making expressions of multiculturalism in the built environment, along with markets, festivals and other events in public spaces, all presented as picturesque back-drops for consumption (Shaw et. al, 2004: 1983). Thus,

> tourism stands at the nexus of the 'distant' processes of commodification and 'local' forces of territorial embeddedness and place particularity. Unlike other commodities that are bought and sold in markets, the tourism commodity and related services are spatially fixed and consumed at the place of production (Gotham, 2007: 309).

The phenomenon of urban commodification has also been highlighted in the nature of development which occurs in proximate location with airport developments (Freestone, 2009). For example, the proximity of Umhlanga Ridge to Durban's new airport has spawned a supply of tourist-related developments such as hotels, restaurants and sidewalk cafes. Also, the Gateway Theatre of Shopping (located in the Umhlanga Ridge Town Centre precinct) is designed with an architectural flare, making it a centre of attraction and consumption. Such commodified developments have subsequently attracted phrases like *ethnoscapes as*

spectacle (Shaw et.al, 2004), *consumption spaces* (Mullins et.al, 1999); and *destination images* (Gotham, 2007).

Cites have peaked to a point of reshaping their environments along romantic themes with strong linkages to leisure and tourism while carving particular images for themselves. While this is congruent to the capitalist mode of production, it is also a way of physically projecting their imaginations and creativity. The Umhlanga Ridge Town Centre, designed on the principles of New Urbanism was to become a showpiece development (Architecture SA, 2008, 51). Thus, the vision of Ethekwini Municipality to become "Africa's most caring and liveable city" relates well to its current standing as a major tourist destination (Ethekwini IDP 2009/2010 review) characterised by *showpieces* such as the uShaka Marine World and the recently completed 2010 Moses Mabhida Soccer Stadium. The desired image for Durban relates well to the features of the Umhlanga Ridge Town Centre in terms of the production of space governed largely by abstraction and pseudo-reality (Lefebrve, 1974; 2003). In the same light, Patton (1995: 113) explains city-imagery as one which affects development of real cities to such an extent that the designs of architects and urban planners have been affected by this widespread nervousness about the moral city living. Whilst these new urban forms are known to raise a host of planning issues, the ultimate concern is to interrogate the extent to which urban projects like airports and tourist-related developments contribute to sustainable urban development (Freestone, 2009: 161).

2.4 A Contemporary Planning Perspective

Traditionally, urban planning is a state function, undertaken by city governments within their respective administrative or economic regions. With the advent of a high degree of institutional decentralization, the powers vested in city authorities' span across urban planning, management and even financing their activities. Current planning practices have come to represent an intense mode of governance which commensurate to what Harvey (1989b) terms "urban entrepreneurialism". The discussion below seeks to debate contemporary planning practice in cities and how these have impacted on local government responsibilities geared towards the public's interest.

2.4.1 Planning in a Postmodern Era

Globally, urban problems are a priority in policy-making debates and processes, as reactions to the call for sustainable urban development gains momentum. In view of this, 21st century drivers to counteract these

challenges have been through innovations in urban development, planning and management which regard urban governance as an important aspect of development and planning processes. This is to ensure that all processes involved in development and planning occurs in a coordinated manner of resource usage between different stakeholders and development agencies to avoid duplication and waste (DPLG, 2000).

With the advent of democratisation and decentralisation, decision-making in the contemporary city are usually a yield of participatory approach of and by the city public. However, in this process of moving away from monopolistic and managerial government, is an emergent entrepreneurial urban regime which signifies the change from *urban government* to *urban governance* (Harvey, 1989b). This phenomenon encompasses the reduction in the role of national and local government, and begins with the formulation of policies that allow for institutional restructuring and democratic planning processes. Although planning ultimately remains a public function; the end product of planning process in a democratic and market economy is largely influenced by different stakeholders with divergent interests. Given different levels of power exercised by various actors, final decisions are often based on consensus (Healey, 1998; Hillier, 1999). However, the tendency for particular interest to supersede those of other stakeholders is indisputable. It is argued that not only has postmodern trends affected the spatial characteristics of urban spaces but also the organisation and set-up of planning practices in urban development (Macleod, 2002). The reality of planning as a social responsibility embedded in value and ethical judgements shows how sustainable planning decisions can be negotiated in the interest of the public, especially with dominant private actors in urban development.

2.4.2 Partnerships in Planning

"For Mannheim (1951), planning was regarded as essential to overcome economic disorganization and reverse the decay of integrative social institutions caused by the continued advance of industrial capitalism" (Meadowcroft, 1997: 167). This was a good assertion to protect the public good; however, current planning practice has evolved to a point where it regards everyone as a stakeholder in urban development. The welfare state is currently almost invisible as city planning and management become modernised. The power of planning no longer lies solely with the State, but entails "…the transfer of some responsibility for, and power over, the visioning of urban futures and the exercise of social action for urban change from public to private-sector actors" (Shatkin, 2008:388). The argument that ensues in this direction is whether planning has become privatised or just a matter of responsibility sharing. However, the crust of this argument lies in how much power and responsibility needs to be transferred to 'non-public actors'.

The privatisation of planning has come to the forefront of contemporary urban planning. Out of this phenomenon has emerged a 'partnership' theory that looks at how cities can be developed and managed in a democratic manner. The emergence of *partnerships* acting with and on behalf of the city is a key characteristic of a new *entrepreneurial* mode of governance (Hall and Hubbard 1996 cited in Hubbard, 2004: 667). The functions of public-private partnerships have achieved vital significance to urban development, considering the financial benefits and project management capacities that accompany partnerships. It is agreed that during the last 20 years, the pitfall of market supremacy and government inadequacy by third world governments, has increasingly led to a rise in public-private partnerships, as part of economic decentralization policies (Osbourne, 2000, cited in Miraftab, 2004: 91).

There is growing reliance on partnership, networks, consultation, negotiation, and other forms of reflexive self-organization, rather than on the combination of anarchic market forces and top-down planning associated with the post-war "mixed economy" or; on the old tripartite corporatist arrangements based on a producers' alliance between big business, big labour, and the national state (Jessop, 2002: 460). For instance, the formal partnership between the Ethekwini Municipality and Tongaat Hulett Development has yielded urban projects such as the Riverhorse Valley States and the Bridge City. These projects are essential in increasing job opportunities whilst contributing to economic growth of the region. Ideally, the State is recognised as the "generator of strategies" (Fuller and Geddes, 2008, 253) and the private sector, the "implementer of strategies".

The downside of partnerships in urban development is highly related to frictions of divergent interests of the public and private sectors. The fear is whose interests will influence planning decisions since the power of private capital can command greater power. This assertion may be debateable, as the State as a representative of the public in urban partnerships also possesses the power to alter strategies in its stance to social responsibility. However, in finding common ground for all actors, Lopes de Souza, (2003) suggests an *alternative planning* where "state and civil society join forces to fight successfully for democratic city planning and management processes". The notion of power sharing in planning becomes laudable if levels of responsibilities and powers are allocated in a manner that does not diminish the mandate of the public authorities in undertaking its responsibility for planning in the public's interest.

Chapter Three: Theory of New Urbanism in Practice

3.0 Introduction

This research will not be complete without giving thought to the theoretical underpinnings and practicalities of New Urbanism (also known as Traditional Neighbourhood Development). Over the last twenty years, theory and practice in planning and urban design have been dominated by the search for sustainable development patterns (Durack, 2001: 64). With the acceleration of urbanisation, and the string effects: issues of environmental protection, the need for energy conservation, agricultural land preservation, urban sprawl, road-side aesthetics and highway gridlock; all these have fuelled a growing public outcry. Thus the concept of sustainability has become the banner around which planners tend to look to develop cities and suburbs. Perhaps the most powerful and certainly the most vocal has been the New Urbanists whose revival of the traditional village prototype is being enthusiastically adopted as a model for sustainable urban development (ibid). Since its inception, a considerable amount of literature has been written about this revolutionary urban design concept, not forgetting the conferences that have been organised by the Congress of New Urbanism to propagate and draw supporters.

The aim of this chapter is to provide insight into the contents of the '*instruction manual'* guiding New Urbanist developments. Officially known as the Charter for the New Urbanism, it outlines twenty-seven principles under three different but interconnected spatial scales: *The region: Metropolis, city, and town*; *the neighbourhood, the di*strict, *and the corridor*; and *the block, the street, and the building*. Hereafter known as the Charter, this analysis is intended to break down these principles of New Urbanism (*especially those relevant to this study*) and make practical sense of its applicability and contribution to sustainable urban development. Section 3.1 of this chapter will be an overview of the major urban problem which makes up the key hostile feature to be tackled by New Urbanists - urban sprawl. Out of this discussion will emerge subsequent features such as increased automobile use; social-economic fragmentation; and the loss of sense of place. Whilst these urban characteristics are not a new phenomenon, the prominence of rapid urbanisation, increased production and consumption signify a crucial moment for the consideration of pragmatic and holistic ways by which these trends can be curbed. Section 3.2 will take a quick glance at the mission of New Urbanism, whilst Section 3.3 will be an enquiry into the modus operandi of New Urbanism in reaching the goal of sustainable urban development. The approach adopted for the analysis is a thematic

one, touching on how the individual principles of the Charter connect to the different dimensions of sustainability.

3.1 The Challenge of Urban Sprawl

As far as the New Urbanism Movement is concerned, the rhetoric of a global agenda for sustainable urban living triggered the awakening of discontentment in a group of American architects and planners who were concerned with the decaying cities of America. The Congress for the New Urbanism views disinvestment in central cities, the spread of placeless sprawl, increasing separation by race and income, environmental deterioration, loss of agricultural lands and wilderness, and the erosion of society's built heritage as one interrelated community-building challenge[25]. Sprawl is considered a menace to cities in its entirety, and it has been proven that it threatens the very culture of cities as it creates environmental, social and economic impacts easily recognisable (Salingaros, 2006). Sprawl has been defined as development that is geographically dispersed, auto-dependent, single use and impossible to walk to your daily needs, and usually, located along highways. It is associated with low-density residential developments, which threaten farmlands and open space, raises public service costs, encourages people and wealth to leave central cities, creates serious traffic congestion and degrades the environment and our quality of life (Tirado, 2008). The European Environmental Agency (EEA) (2006) describes sprawl as development that is patchy, strung out and discontinuous; it leapfrogs over areas and leaving agricultural enclaves. In short, a sprawling city is the opposite of a compact city.

Historical evidence of urban growth in the early 20th century was that cities grew upwards. Skyscrapers came to adorn urban landscapes, but at the end of the 20th century, urban growth had pushed cities further and further out of the centre; finally, the centre could no longer hold (Glaeser and Khan, 2003: 2). The classical explanation of sprawl is associated with the low density outward expansion of American cities dating back to the 20th century; a phenomenon fuelled by the rapid growth of private automobile ownership (EEA, 2006: 5). Contemporary urban sprawl, on the other hand, has been attributed to the high rate of urbanisation: demand for housing and the desire for suburban lifestyle away from decaying inner cities. In parallel to the causes of sprawl are global socio-economic forces which have affected the change in spatial location of economic activities. In America, regional shopping malls located along major interstate routes

[25] www.cnu.org/charter

have become a fashionable character of suburban landscapes. The emergence of a large service industry in cities has also tended to concentrate in outlying locations where ease of accessibility is by use of the car. In attempting to give meaning to such decentralized locations, Joel Garreau's (1991) edge city theory has emerged as a thesis to the type of new cities being created. The important point being made here is that sprawl does not happen on its own; it is dependent on certain forces. Thus, in finding sustainable urban strategies, the drivers of urban sprawl must be fully understood. The European Environmental Agency, in a study of urban sprawl in Europe, identifies a number of driving forces (See Table 1) of which some will be adopted to aid in the following discussion.

Table 3.0: Drivers of Urban Sprawl

Factor	Driving forces
Macro-economic	Economic growth / Globalization / European integration
Micro-economic	Rising living standards / price of land / availability of cheap agricultural land / competition between municipalities
Demographic	Population growth / increase in household formation
Housing preferences	More space per person / housing preferences
Inner-city problems	Poor air quality / noise / small apartments / unsafe environments / social problems / lack of green open space / poor quality of schools
Transportation	Private car ownership / availability of roads / low cost of fuel / poor public transport
Regulatory frameworks	Weak land-use planning / poor enforcement of existing plans / lack of horizontal and vertical coordination and collaboration

Source: EEA Report, 2006: 17

3.1.1 Sprawl and the Private Car

Pieterse, (2008: 29) argues that "the underlying thread of sprawl is the mass diffusion of car cultures – the quintessential emblem of modernity in both developed and developing countries". Transport is a major driver of economic growth but also a major contributor to the world's energy and environmental problems (Pan et.al.2009: 276). Urban sprawl has been exacerbated since the advent of the automobile and the subsequent construction of highways and parking that facilitated this new culture (Kenworthy, 2006:73). For example, the auto-dependence of US cities in 1995 had the highest length (156m /1000persons) of freeway per persons in the world (ibid). With this, spatial patterns of cities have come to conform to this method of transportation, thus not necessitating the need for mixed-use zoning. The increase in automobile dependence in the 21st century has caused an unprecedented outward growth of cities in the world although

the improvement of mobility cannot be denied. The use of the private car can be attributed to what is termed the technological age. The fact is this trend is necessary to boast the economic interests of cities; however, its adverse effects cannot be ignored. However, the problems with this trend are the damaging effects of pollution to the natural environment and human health. Notably, climate change is being perpetuated by the increase in dangerous gas emissions from cars, industries, coal-burning plants and the likes. With respect to the environment, natural ecosystems (flora and fauna) have been disturbed; large tracts of valuable vegetated land have been stripped bare to make way for asphalt layering to facilitate car use, thus, neglecting the planning of efficient motorised and non-motorised public transport systems. This challenge is what New Urbanists intend to address through neighbourhoods planned for pedestrianisation and non-motorised transport modes (for example, cycling and walking) to reduce the need for automobile use which will in turn reduce the rate of dangerous emissions, help maintain a healthy population and prolong the lifespan of natural resources.

3.1.2 Sprawl and Social Bonding

Another dimension to be tackled by New Urbanism is the *social bond breaking* which comes as part of the package for sprawling cities. Contemporary urban landscapes, characterised by low-density development; a separation of land uses; infrastructure that favours the automobile; and the sprawling neighbourhoods of today are thought by many to spawn social isolation among their inhabitants (Freeman, 2001: 69). Before civilisation, people used to settle close to each other and in clusters for security reasons, and because family members were a source of labour. As such, social ties and interaction were strong and neighbours kept watch for each other; in other words, these neighbourhood clusters were real places where a *sense of community* existed. Later in modernity, housing units were bound by fences and concrete walls and later, replaced by electronic security systems; while telephones and the internet have replaced face-to-face interactions. The argument put forward by New Urbanists is the fact that private communication networks cannot be substitutes for *real communities* (Talen, 1999: 1361). The mission of the New Urbanism movement is to rekindle that *community spirit* through sustainable neighbourhood design by increasing densities; mix land use; common open spaces and pedestrianisation which allows for social interaction.

3.1.3 The 'Inner-City-Problems-induced' Sprawl

Inner cities used to be places of admiration. They contained all types of socio-economic activities which gave it a distinct character; but today, inner cities have become a menace to all, both rich and poor (Hubbard,

2004). Traditionally, the inner city was bounded by manufacturing and industrial activities, feeding surrounding areas with both pollutants and products (Ellis, 2008). Today these places are either decaying, empty or serve as residential accommodation for migrants. The consequences of decentralisation and suburbanisation have made visible the sufferings of inner cities: lack of investment, decaying buildings, high rate of crime, prostitution, traffic congestion and aesthetically unpleasant environments (Unsworth and Nathan, 2006:235). Rapid urbanisation has generated a state of inner-cities which resemble concrete jungles with no room for green spaces, thus coercing the suburban lifestyle so embraced by many. However, flights from the inner-city can also be blamed on the new culture of marketing security and utopian living by most private developers. What is left of the inner cities is building the ruins with dreams (Pieterse, 2006). Even though the character of inner-cities seems to be changing with urban renewal projects, the inner-city flight still continues. In line with such renewal projects is the New Urbanists' suggestion of infill development, which takes cognizance of reclaiming marginal and abandoned areas while promoting compaction over peripheral expansion.

3.1.4 Sprawl and Planning Regulation

For most of urban history, planning dealt primarily with the regulation of land use and the physical arrangement of city structures, as guided by architectural, engineering, and land-development criteria (Adams, 1994:3). Prominent with zoning was the separation of land uses, thus requiring daily commuting between work and residence. Within the modernist project, was also embedded, the notions of progress, rationality, and order which were translated into planning ideas and the desire to find a way of organising social and economic activities in cities in a rational, predictable and aesthetically pleasing way (Boyer, 1983, cited in Bridge and Watson, 2000). For example, Reeves (1974, cited in Silverstone, 1997) comments that zoning laws have been exclusionary, though not explicit, but there are no zoning maps divided racially or economically restricted areas, so labelled. Essentially, there are thousands of zoning maps which say in effect *Upper-income, middle to upper-income, no blacks permitted.*

Moving away from this rationalistic philosophy of stringent separation of land-use, mid-20th century planning broadened to include substantive reasoning which allowed for more holistic planning frameworks. Urban planning as an interventionist project, namely plans, control and promotion (Adams, 1994; 8) make it justifiable for such regulations to be used in defining the 'what', 'where' and 'why' of urban activities which if

are left undetermined, will perpetuate the already chaotic nature of cities. Coupled with such directives, cities also remain a playing field on which numerous competitors struggle to manipulate and capture value by constructing or trading land and buildings (Ellis, 2008).

Although planning regulation plays an interventionist role with the intent of altering the existing course of urban development, its prescriptive nature has created landscapes which look rather dysfunctional. Not only that, but it has also been accused of being antagonistic to current realities of urbanisation. Examples of these are the inflexibility of zoning laws to accommodate informality and other livelihood strategies, poor policy implementation, political interference and the influences of the free market mechanism. Eventually, city form is more and more being determined primarily by thousands of private decisions to construct buildings, within a framework of public infrastructure and regulations administered by the city, state, and central governments (Ellis, 2008). Also, the perpetuation of socio-economic divisions and polarisation in cities is often implicit in planning regulation However, the goal of city planning is to intervene in this game in order to protect widely shared public values such as health, safety, environmental quality, social equality and aesthetics (ibid). In alluding to this view, New Urbanists call for a paradigm shift from rigid planning regulation to one that is flexible enough to respond to changing urban processes and to counteract the negativities of planning regulation mentioned above.

3.2 An Organisation and Charter Unveiled

In the United States, the movement now known as "New Urbanism" began to coalesce in the 1970s and 1980s, to build on currents in urban design that aimed to emulate and modernize historic urban patterns (Ellin, 1996). Even though the thoughts of New Urbanism can be tracked back to planners and architects like Jane Jacobs, Kevin Lynch, Donald Appleyard and Allan Jacobs in the 1960s (Southworth, 2003: 210), New Urbanism as a movement, came into being in the late 1980s. Subsequently, this movement became officially known as the Congress of the New Urbanism (CNU) in 1993. Its founders were architects who had had years of experience in creating buildings, neighbourhoods, and regions that provided a high quality of life for all residents, while protecting the natural environment[26]. Founders of New Urbanism include Peter Katz, Peter Calthorpe, Andrés Duany, Elizabeth Moule, Elizabeth Plater-Zyberk, Stefanos Polyzoides, and Daniel Solomon. The Congress was initially spearheaded by Peter Katz as its Executive Director. Consequent to

[26] www.cnu.org

the formation of the CNU, the Congress launched the Charter for the New Urbanism at its fourth annual congress in 1996 (ibid). The Charter comprises of a mission statement and twenty-seven principles which they assert, must guide public policy, development practice, urban planning, and design. In summary, the mission of New Urbanists is that they:

a. Stand for the restoration of ailing urban centres, combating sprawl by making neighbourhoods and conserving the natural environment;
b. Recognise that urban problems cannot be solved by physical solutions but rather with a holistic, coherent and a supportive physical framework;
c. Advocate the restructuring of public policy and development practices to support the following principles: neighbourhoods should be diverse in all aspects; design that gives priority to non-motorised forms of transport; accessibility to public spaces and social facilities; and places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice; and
d. Represent a broad-based citizenry, composed of different stakeholders and committed to re-establishing the relationship between the art of building and the making of community, through citizen-based participatory planning and design

The twenty-seven principles (See Appendix 1) are outlined in three sub-sections: *the region, the neighbourhood and the block* and details how these must be considered in planning and urban design practice to create better urban communities.

3.3 Analysing the Charter for the New Urbanism

Since the discipline of town and regional planning evolved over time and space, it is almost impossible to identify dogmatic principles which nurture and guide planning practice. No theory can also be deemed irrelevant; nonetheless, in their abstraction, planning theory presents itself as a measuring tape for planning practice to reassess its actions. In spite of planning often being accused as too procedural, neither that nor substantive planning can be ignored on the basis of their failures (Faludi, 1986). Similarly, the researcher regards the New Urbanism Charter as an invaluable instruction manual of a 'substantive – procedural' mixture to create a new urbanism place-making perspective. Based on an understanding of current urban challenges, the central motivation behind the Charter is to avoid the excessive separation of functions of modern urbanism along with the social and environmental harms that accompany it (Ellin, 1996: 74). Most

importantly, the assertions of the New Urbanists Charter is not only a decry but a conscious attempt to help resolve the common urban problems so much written and complained about. Contained in Table 3.1 below is a list of charter principles which have been identified as having a direct bearing on this study.

3.3.1 The Region: Large Scale Planning

With much emphasis on both pieces and whole, the Charter opens with a spatially related principle which sees the metropolitan region as the fundamental unit for planning purposes (Hebbert, 2003: 195). New Urbanist planning recognises that the success of sustainable planning is dependent on co-ordination and interconnectivity throughout the region. Albeit the definition of a region has often been defective of a universal criterion: a region could refer to an area which is administratively delineated based on a political, social, economic or topographical criterion. A region could have many characteristics, some prominent, others mundane. The region can also be broken down into different sub-regions for management purposes. Though the parts of a region may dictate different development requirements; it needs a co-ordinated and efficient system of movement, open space, economic opportunities that will present the region as a whole unit. This is why New Urbanists consider the metropolitan region as the fundamental economic unit of the contemporary world which governmental cooperation, public policy, physical planning, and economic strategies must be reflect this new reality [CP2].

On how the region must come into being, New Urbanists suggest that the city, its suburbs and their natural environment should be treated as a whole, socially, economically and ecologically. It acknowledges that treating them separately is endemic to many of the problems we face and our lack of governance at this scale is a direct manifestation of disaggregation (Katz, 1994: xi). One of the reasons for the key concept of the region as a fundamental economic unit lies in what Talen (2002) calls the *regional tax-base sharing* and the *de-concentration of poverty*. The idea behind this is that eventually, the region as a whole, will benefit from a stable appreciating tax base; revenues and resources can be shared more cooperatively among the municipalities and centres within regions to avoid destructive competition for tax-base; and to promote rational coordination of transportation, recreation, public services, housing and community institutions [CP9]. A balance in the region can be achieved if support systems embrace spatial equity and equality principles through the distribution of affordable housing throughout the region to match jobs opportunities and to avoid concentration of poverty [CP7]. To this effect, wastage is almost absent and economic sustainability is achieved.

Table 3.1: Matrix of selected New Urbanism Charter Principles

Charter of the New Urbanism			
CP2[27]	The metropolitan region is a fundamental economic unit of the contemporary world. Governmental cooperation, public policy, physical planning, and economic strategies must reflect this new reality.	**CP15**	Appropriate building densities and land uses should be within walking distance of transit stops, permitting public transit to become a viable alternative to the automobile.
CP4	Development patterns should not blur or eradicate the edges of the metropolis. Infill development within existing urban areas conserves environmental resources, economic investment, and social fabric, while reclaiming marginal and abandoned areas. Metropolitan regions should develop strategies to encourage such infill development over peripheral expansion.	**CP17**	The economic health and harmonious evolution of neighborhoods, districts, and corridors can be improved through graphic urban design codes that serve as predictable guides for change.
CP5	Where appropriate, new development contiguous to urban boundaries should be organized as neighborhoods and districts, and be integrated with the existing urban pattern. Non-contiguous development should be organized as towns and villages with their own urban edges, and planned for a jobs/housing balance, not as bedroom suburbs	**CP19**	A primary task of all urban architecture and landscape design is the physical definition of streets and public spaces as places of shared use.
CP7	Cities and towns should bring into proximity a broad spectrum of public and private uses to support a regional economy that benefits people of all incomes. Affordable housing should be distributed throughout the region to match job opportunities and to avoid concentrations of poverty.	**CP25**	Civic buildings and public gathering places require important sites to reinforce community identity and the culture of democracy. They deserve distinctive form, because their role is different from that of other buildings and places that constitute the fabric of the city.
CP8	The physical organization of the region should be supported by a framework of transportation alternatives. Transit, pedestrian, and bicycle systems should maximize access and mobility throughout the region while reducing dependence upon the automobile	**CP27**	Preservation and renewal of historic buildings, districts, and landscapes affirm the continuity and evolution of urban society
CP9	Revenues and resources can be shared more cooperatively among the municipalities and centers within regions to avoid destructive competition for tax base and to promote rational coordination of transportation, recreation, public services, housing, and community institutions.		

Source: www.cnu.org/charter

[27] 'CP2' is used to represent the second charter principle of New Urbanism. This kind of abbreviation will be used throughout the discussion to denote the sequence of the twenty-seven principles of New Urbanism.

Undoubtedly, the principle of regionalism being promoted by New Urbanists is an aspect of large-scale planning where the achievement of many aspects of sustainable development is made possible (Wheeler, 2000:133). However, the problem with large-scale planning lies in the difficulty of finding political will and institutional capacity to bring about change characterised by weak regional planning and lack of incentives as is the case in North America (Ibid). In an attempt to provide better possibilities for sustainable large-scale planning, New Urbanists present an opportunity for incremental spatial development through a number of neighbourhoods generated from a series of blocks; these minor components (that is the neighbourhood and the block) of the region are the scales at which sustainable practices as easily brought to bear. In the long run, linkages between neighbourhoods will promote equitable distribution of resources; accessibility to public space; support pedestrian-friendly designs, and enhance the social fabric of the region. Once this is achieved, a continuum of spatial structuring elements becomes prominent.

3.3.2 Urban Containment: Infill Development

One major aspect of New Urbanism which has not gained considerable momentum is infill development although it features strongly in the Charter. Reasons for this could be that the design concept is fairly new, thus testing it on Greenfields has a greater potential of portraying the real ideas behind the concept. However, with the ongoing debate on compaction, infill development presents an ideal solution to land-use inefficiencies left behind by leap-frog development as well as revitalising the decaying sections of inner cities. As the Charter presents, infill development within existing urban areas has the ability to conserve environmental resources, economic investment, and social fabric, while reclaiming marginal and abandoned areas [CP4]. Undoubtedly, the assertion by New Urbanists to support development strategies which encourage such infill development over peripheral expansion cannot be overrated in this respect. They recommend that where appropriate, new development contiguous to urban boundaries should be organized as neighbourhoods and districts, and be integrated with the existing urban pattern [CP5]. Appropriate densities must be promoted where possible and open spaces must be adequately provided for in order to achieve a sustainable urban balance.

Embracing infill development is seen as a conscious effort to discourage sprawl. However, New Urbanists believe conventional urban planning has not succeeded in prioritising infill development. The call for infill development by New Urbanists is also supported in the concept of Smart Growth. Smart growth features, as outlined in Table 3.2 generally commensurate with the goals of New Urbanism (APA, 2002). Smart

Growth principles, among others, is said to promote compact urban development by concentrating growth in existing urban areas (Arku, 2009: 243). One aspect of urban development where infill had tended to be useful is urban revitalization either through reutilizing Brownfields or retrofit of public housing projects (Bohl, 2000:766).

Table 3.2: Key Outcomes of Smart Growth

1	Have a unique sense of community and place
2	Preserve and enhance valuable natural and cultural resources
3	Equitably distribute the costs and benefits of development
4	Expand the range of transportation, employment, and housing choices in a fiscally responsible manner
5	Value long-range, regional considerations of sustainability over short-term incremental geographically isolated actions
6	Promote public health and healthy communities

Source: American Planning Association. 2002

Although infill development makes sense from a scarce resource utilisation perspective, it is does not always represent an urban development option (Katz, 1994: xv). Agreeably, sprawl is known to be destructive in any growth strategy, thus in ensuring the success of these smart growth features, the specific nature of a region will dictate which growth strategies are necessary and useful (ibid). Some regions with a slow growth rate may only need incremental infill. Some regions with fast growth and much undeveloped suburban land may benefit from both infill and new growth area projects (ibid). In spite of these, Calthorpe (1994) argues that though infill provides the best opportunity to utilize existing infrastructure and preserve our open spaces, the expectation of infill sites to absorb all or even most new developments is unrealistic. This is because, sometimes there are not enough sites to accommodate the demand and partly because *no-growth* neighbourhood groups often resist such infill. Thus, even though infill developments have been a success, constraints such as racial tension, gentrification and bureaucracy exist and cannot be overlooked (ibid).

Nonetheless, in the event of suburban infill failing to accommodate the quality or rate of growth of a region, new growth areas and satellite towns may be considered (Katz, 1994: xv). As easy as it may be to develop new growth areas with transit and pedestrian-oriented patterns, satellite towns provide a complete spectrum of shopping, jobs and civic features. Calthorpe (1994) justifies strongly that if suburban infill and satellite towns are well planned and transit-oriented, they can complement infill; and help to structure and revitalize the metropolitan region. Alternatively, Chapin (1972: 309) suggests redevelopment which

involves “a revision or replacement of existing land use and population distribution pattern through the acquisition of a predominantly built-up area and the clearance and rebuilding of an area”. Nevertheless, redevelopment is not always a successful option because it is likely to experience resistance like those associated with infill development. In effect, locations earmarked for infill or redevelopment may have to be left undeveloped, leaving Greenfield development as the possible option and this would not have addressed the concerns of urban sprawl strongly opposed by New Urbanists. Strategies for infill and redevelopment should therefore be structured in such a way that other facets of the existing neighbourhood are not disrupted. For instance, infill and redevelopment must be undertaken carefully to ensure that historic preservation, mixed-use, diversity and a sense of place are maintained in a particular neighbourhood, or region (Tirado, 2008).

3.3.3 Promoting ‘Green’ Transportation

The high dependency on private automobile is a major concern on the New Urbanism agenda. Throughout the world, cities are growing at an unprecedented pace and the need to improve mobility without the damaging effects associated with car usage has never been higher (Balsass, 2001: 429). Consequently, existing *dirty* transport systems characterised by high fuel consumption; excessive combustion and pollution have come under rigorous scrutiny. Followed by the ongoing debate on climate change, a major area of concern for the world is finding alternative modes of transport whose negative effects can be contained by natural processes of the planet. However, Choguill (2008) is quick to warn that no single city or country can contribute to overall sustainability if its own component parts are found not to be sustainable. This is the very idea which New Urbanism uses to foster transit-oriented development, and the promotion of *green* transportation alternatives. To minimize pollution from automobiles, New Urbanism supports smart transportation such as the futuristic high-speed trains (Photo 3.0), bicycles (Photo 3.1) and walking, which are most preferable in dense urban areas as a move towards minimising the demand for highway building, decreased energy use; reduced pollution and limiting the destruction of natural environmental systems.

It has been argued that these alternative transport systems as mentioned above tend to maximise access and mobility through the region, whilst reducing the ecological footprints of cities (Crane and Scweitzer, 2003; Kenworthy, 2006). Sustainable modes of transport are also known to depend on street design supportive of traffic calming; roads as shared spaces, safer and possessing the ability for diversified use for all ages. Essentially, road design must be supported by different land-use to allow for less dependence on

auto-transport and as a move towards streets as shared spaces (Hamilton-Baillie, 2008). The point being made is that neighbourhoods must be planned to make them physically, economically, environmentally and socially pleasant without compromising choice.

Photo 3.0: High-speed trains

Photo 3.1: Cycles

Source: www.newurbanism.org/transport.html

Without severing the importance of accessibility by the different modes of transport, Le Clercq and Berlolini (cited in Hayashi and Tomita, 2003: 6) add the need for 'sustainable accessibility'. They believe that concepts of sustainability in transport have changed from environmentally sound systems to creating systems that are also good for the economy and social equity. The principle of sustainable accessibility includes concentrated urban development; proximate activity locations so as to decrease average travelling distance; and the stimulation where possible, of environmentally friendly transport modes (ibid). Logically, the issue at stake are the trade-offs which must be made to achieve a fairly balanced sustainable outcome; especially when the target is at a larger metropolitan scale. Ideally, New Urbanism offers the region, the neighbourhood and the block as the different scales at which sustainable practices can be implemented knowing that cycling or walking cannot facilitate all movements across a wider region or longer distances.

3.3.4 Social Sustainability: design-dependent interaction

> Reviewing the emergent social and environmental agendas of the late twentieth century, it is striking how many of the separate elements of the garden city idea they embody. The progressive rejection of the big city; the desire for small town living and working; the search for real involvement in common affairs; and, not least, the adherence to a new 'green' lifestyle represent widely shared social values (Ward, 1992: 1)

In social terms, sustainable urbanism involves an appropriate mix of dwellings of different tenures, sizes and types, and a variety of spaces and buildings for recreational and community activities, as well as for service providers and commercial enterprises (The Prince's Foundation, 2007: 6). This set of indicators can enable self-sustaining and balanced communities to develop (ibid). In achieving social sustainability, a phenomenon which is design-determinant for New Urbanists, its founders, Duany and Plates-Zyberk present their ideal principles for neighbourhood design. Firstly, the ideal neighbourhood has a centre and edge which defines its focus and a limit; secondly, the neighbourhood centre should be approximately a quarter mile (5 minutes walk at easy pace) from the edge; and thirdly, the ideal neighbourhood should have a balance of mixed-use and diversity in all its components (Katz,1994: xviii). In bringing all these ideal neighbourhood characteristics to work, Alhbrandt (1984: 40) agrees that the centre defines the social fabric of the neighbourhood; a place in which significant interpersonal interaction occurs; and has opportunities to meet their social and emotional needs. Furthermore, the neighbourhood population should be small enough to allow free interchange among members of the local community (ibid). Although the Charter does not specify a required population of a neighbourhood, it has become obvious that typical New Urbanism feature of active open spaces like boulevards and piazzas (for example, Melrose Arch, Johannesburg and Palm Boulevard, Umhlanga) are being used as triggers for social interaction towards building a sense of community for inhabitants. The relevant features that adds up to unleash the potential for social interaction are a concentration of neighbourhood functions, public spaces, civic institutions which are not only intended to generate an opportunity for foot traffic; and to allow less use of the automobile, thus in turn, facilitate interaction between pedestrians.

New Urbanists purport that within neighbourhoods, a broad range of housing types and price levels can bring people of diverse ages, races, and incomes into daily interaction, strengthening the personal and civic bonds essential to an authentic community. The neighbourhood environment, through the quality of life it

offers, the availability of services and the social fabric influences peoples' decisions about participating in neighbourhood activities (Ahlbrandt,1984:39) and to some extent promotes good governance, social equity, self-containment, economic viability and sustainability (Marshall, 2003:189). Often, this aspect of achieving social sustainability through design by New Urbanism has been criticised as being unrealistic. These are some of the difficulties faced by planners who reluctantly acknowledge that the success of spatial planning policies partly depends on the human aspect of space. For the notion of social sustainability to work, people will have to accept the idea of living closer together, and in close proximity to a variety of different people in more heterogeneous neighbourhoods. This will mean significant social change (Brindley, 2003: 53) which is likely to occur over a longer period of time, will be dependent on the aspirations of neighbourhood inhabitants; and more importantly, less dependent on neighbourhood design. Unfortunately, the New Urbanism stance to achieve social sustainability is flawed with deterministic values mainly because of the dynamics of contemporary urbanism. For example, increased segregation, polarisation and ghettoisation have stemmed patterns of social behaviour that do not necessarily give in to specific neighbourhood designs but to other socio-economic, environmental and territorial situations that continually evolve in urban settings. Whereas the overall achievement of sustainable urban development is reliant on a coherent success of the different dimensions of sustainability, social sustainability is possible if the functioning of a community is able to build up its own resource capacity which contributes to the well-being of the community at large (City of Vancouver, 2005: 5).

3.3.5 An Awakening of Cultural Sustainability

The issue of cultural sustainability has gained much response in the light of heritage preservation, identity and sense of place (Gražulevičiūtė, 2006). Once a silent aspect of sustainable development, the driving force behind the revitalisation of the cultural dimension of urban development could be the benefits it reaps for local and global tourism. In doing so, current development controls tend to incorporate laws which protect buildings and sites deemed to be of historical value and the promotion of local arts and culture which is believed to define the identities and citizenships of urban inhabitants. New Urbanism neighbourhood design consider such historical sites and buildings as contributing to the civic realm, the fabric of the city [CP25]; and furthermore, reinforce community identity; culture of democracy; and the continuity and evolution of the urban society [CP27]. However, in cases such as Greenfield developments where such spatial elements are non-existent, the Charter suggests that civic buildings and public gathering places occupy important sites and ideally be located at the centre of the neighbourhood to

promote the organization of a social nucleus (Mumford,1961: 570). As much as emphasis is on heritage, New Urbanism believes that buildings need to be designed by references of their type, and not solely by their function. Furthermore, they caution that a building should not be architecturally designed without compromising their building form or be rendered obsolete but must be designed to allow for changes in use and for multiple adaptations overtime (Katz, 1994:xxiii).

In an attempt to make a success of the various dimensions of sustainability, particularly in the light of cultural heritage, Gražulevičiūtė (2006: 74) warns that it is not just of value to the individuals who own it or live in historic properties. It can also have a value to well-being and quality of life of communities, can help mitigate the impacts of cultural globalization and can become an incentive for sustainable development (ibid). Concurrently, New Urbanists stand to defend the local importance of quality public and civic realm, since they believe these have been handled with little regard for those it serves and for the quality of life that it generates. It is important to mention that sustaining culture in a period of a rapidly changing cosmopolitan world is almost uncertain. However, in stressing the need for increased attention to a rather neglected aspect of sustainability, Bott (2004: 31) points out that…

> if culture - Jon Hawkes' Fourth Pillar - doesn't speak as loudly as the three other pillars - economic, social and environmental - that's largely because of the fluidity of culture, the way culture influences and absorbs and affects, rather than pushes, shapes and hammers home its messages. But make no mistake: culture is not only a key driver behind the other pillars; it underpins and pulls together every factor in the sustainability equation. And more often than not it's the missing link in why things don't work .

A typical example is the use of outdoor artworks to boost the aesthetics of neighbourhoods and make walking fun for neighbourhood inhabitants. Thus, in all the deliberations of planning cities, the task of achieving sustainable urban development is to find the essential features particularly of local culture and optimally incorporate this missing link – culture – which Bott (2004: 31) and New Urbanists regard that as playing a 'binding' role in urban sustainability.

3.3.6 Sustainable Planning Practice: planning and design codes

Finally, New Urbanists strongly assert that the successful way to implement New Urbanist principles is to plan for it and write them into zoning and development codes. The Department of Communities and Local Government (UK) (2006: 11) have defined design codes as…

> a set of illustrated design rules and requirements which instruct and may advise on the physical development of a site or area. The graphic and written components of the code are detailed and precise, and build upon a design vision such as a master plan or other design and development framework for a site or area.

New Urbanists assert that these design codes may be used to generate coherent form even in the absence of master planning where coded elements could be free of association with particular style or school of architecture (Marshall, 2003; 192). The 17th Charter principle states that the economic health and harmonious evolution of neighbourhoods, districts and corridors can be improved through graphic urban design codes that serve as predictable guides for change. Talen (2002: 175) identifies the key concept in this principle, as an importance of codes and ordinances, which New Urbanist recommend, should be incorporated into urban design and planning policies. The judicious application of codes is to result in a diverse, beautiful and predictable fabric of building, open space and landscape that can structure villages, towns, cities and indeed, the metropolitan region. The message being passed across is that architecture and urbanism shall not be separated nor shall formal, social economic and technical functional issues be considered in isolation (Katz, 1994: xxiv).

3.4 Conclusion

This chapter has attempted to understand the basic principles upon which New Urbanism has been founded. This was done by drawing on some of the principles of the New Urbanism Charter which relate directly to both spatial and non-spatial challenges of contemporary urban development. The main focus of New Urbanism is to reinvent the dream neighbourhoods they purport to have existed a century ago whilst dealing with current urban dynamics of sprawl, increased auto-dependency, negative environmental impacts and social disaggregation related to a technological and globalised world. In retrospect, New Urbanism is in fact a blend of modern, rational idealism and traditionalism that may be identified more generally with neo-traditionalism - the philosophy of adapting traditional urbanism to meet contemporary needs (Marshall, 2008: 1). Furthermore, the level of pragmatism contained in the Charter makes neo-

traditional urbanism to be appreciated not only for its formal qualities or style or its traditionalism, but most importantly, for being *functional* (ibid). It combines the elements of urban design and urban planning such as densification, mix land-uses, open spaces, support for non-motorised transport systems, in an attempt to co-ordinate the technical, social, economic, environmental and cultural dynamics of cities. New Urbanism is about the materiality of human living and a refocus on underlying processes; the exclusion of normative ideas about that materiality would seem to contradict their primary interest (Talen, 2008a: 42). Essentially, the dreams of the future city entrenched in the concept of sustainability and sustainable urban development are brought to light.

What is uncertain is the potential of the New Urbanist ideology, in its virility, to address the evolutionary nature of cities' and problems currently being encountered. Rapid urbanisation and its associated drivers, particularly sprawl, are concerns which have made built environment professionals assume a position of endeavour for the better future of cities and their inhabitants. The accelerated crumbling of natural systems and humanity provide a logical reason for immediate pragmatic and innovative actions. Marshall (2008: 9) writes that "given the evolutionary nature of urbanism, we can expect New Urbanism itself to adapt and evolve in the future". However, to work toward achieving the sustainability of cities, various elements of today's industrialised, technological and cosmopolitan world would need to be critically examined in order to formulate workable ideas to reconciling the conflicts between man-made and natural systems on a much larger scale. The solution to sustainable urban development encompasses a myriad of thoughts and not just New Urbanism; it would mean drawing from the Compact City, Smart Growth and New Urbanism without demeaning the importance of either of them, yet ensuring that the scale at which they are implemented are large enough to bring their positive effects to life.

Chapter Four: Drivers of Change in Durban North

4.0 Introduction

In an attempt to present the path to the 'new urban geography' in the north of Durban, this chapter gives an overview of the historical and geographical dimension of the study area within a local and regional context. This is necessary to offer an understanding of the changes in land-use and spatial growth which have occurred over the years, thus justifying the transformation of Umhlanga Ridge from a sugarcane field to a "landscape of spectacle". A series of maps, aerial photos and photographic images will be used to illustrate the change in urban growth patterns of Umhlanga Ridge within the context of the Ethekwini Municipality[28]. The next section will outline some of the socio-economic forces which have accounted for land development in the study area. It is argued that these changes are related to territorial power and urban economic changes related to political change, pressures of urbanisation and the agenda of sustainable development. The final section of this chapter diverges to interrogate the extent to which the private sector can be involved in sustainable urban development vis-a-vis the functions of the State. This will be done with reference to the Ethekwini Municipality and Tongaat Hulett Developments[29].

For clarity in terms of the study area, Umhlanga Ridge encompasses a number of local precincts; however, this study is concerned with the area officially known as the Umhlanga Ridge New Town Centre[30] (see Figure 4.0 on Page 59) which consists of the Gateway Theatre of Shopping and its immediate surroundings.

4.1 Historical Background of Umhlanga and Tongaat Hulett

Coastal locations have always been the popular sites for physical development in colonial territories of Africa. Like any other coastal settlement, Umhlanga is not far from this phenomenon. Settlement on the north coast of Durban started at the Umhlanga village, and subsequently functioned as a small coastal tourist town in later years. Umhlanga began earning its modern reputation as a 'home of fine hospitality' in 1869, when tea and scones were first served at a cottage named Oyster Lodge[31].

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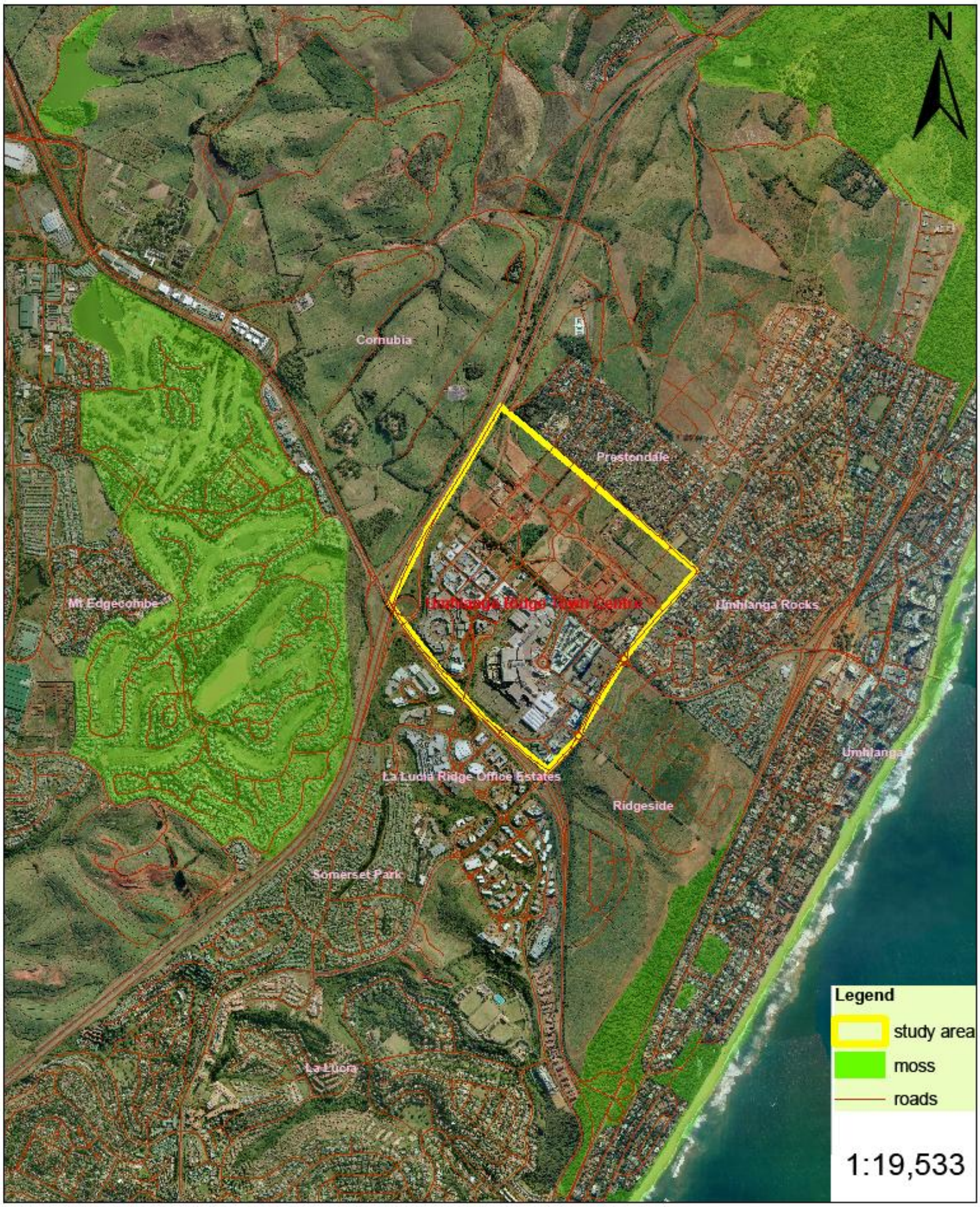
[28] Ethekwini and Durban will be used interchangeably in the rest of the text
[29] Tongaat Hulett Developments was formerly known as Moreland Developments. For consistency, it will be referred to as Tongaat Hulett unless for direct quotations.
[30] Umhlanga Ridge Town Centre will also be referred to as "Town Centre"
[31] http://www.kznnorthhappenings.co.za/umhlanga_rocks_homepage.htm

Figure 4.0: Umhlanga Ridge Town Centre and Surrounding Areas



Source: Ethekweni Municipality, 2009. Modified by Researcher

The Oyster lodge was built on a site overlooking the Indian Ocean, and has over the years become one of Umhlanga's landmarks (ibid). Umhlanga was initially under British control, and it became part of the large estate belonging to the great sugar magnate, Sir Marshall Campbell in 1896 (ibid). With fertile soils and the appropriate climate, the area stretching northwards from the Umgeni River was used for intensive sugarcane cultivation. For over a century, this activity became established and birthed a number of sugar mills in the then Natal and Zululand. The first major development was the Victoria Hotel in 1920, followed by the first shops in 1950, the lighthouse in 1954 and the Natal Anti Shark Measures Board in 1964 (Nomico and Sanders, 2003: 213).

Tongaat Hullet was created in 1982 out of a merger by Tongaat Company and Hulett Corporation Limited. The land north of Umgeni River was privately owned under freehold title, with Tongaat and Hulett as the major private landowners. With a combined land assets stretching from the Umgeni River northwards into Zululand, Tongaat Hulett has been equipped with adequate resources and power to steer the direction of growth in the Durban Region. Their main activity was sugarcane cultivation and milling. Currently, it extends to include aluminium fabrication, land management and property development[32]. With much of Tongaat Hulett landholdings lying close to the urban area; and coupled with the pressures of urbanisation in the 1970s, there arose the need for Tongaat Hulett to release some of its agricultural land and reinvest in land development (VARA, 1988a: 1). Although urban development begun to occur in the North of Durban in the 1950s, it was not until 1973 when major changes became significant. This was attributed to the rapid expansion of white suburbs as a result of the increasing levels of car ownership, increased incomes and other related factors (ibid). Also, one of the early triggers which contributed significantly to urban growth in north of Durban was the rapid growth of settlements in areas like Phoenix which had approximately two-thirds of Indian housing; and informal settlements in Inanda (VARA, 1988b: 19). It is argued that these events between 1950 and 1970 triggered the need for a strategic decision, consequently, the spatial changes currently evident in the north of Durban. Another reason for the northwards expansion of the city has largely been the deliberate attempt to alter the historical land use pattern whereby employment opportunities had a strong bias towards the south.

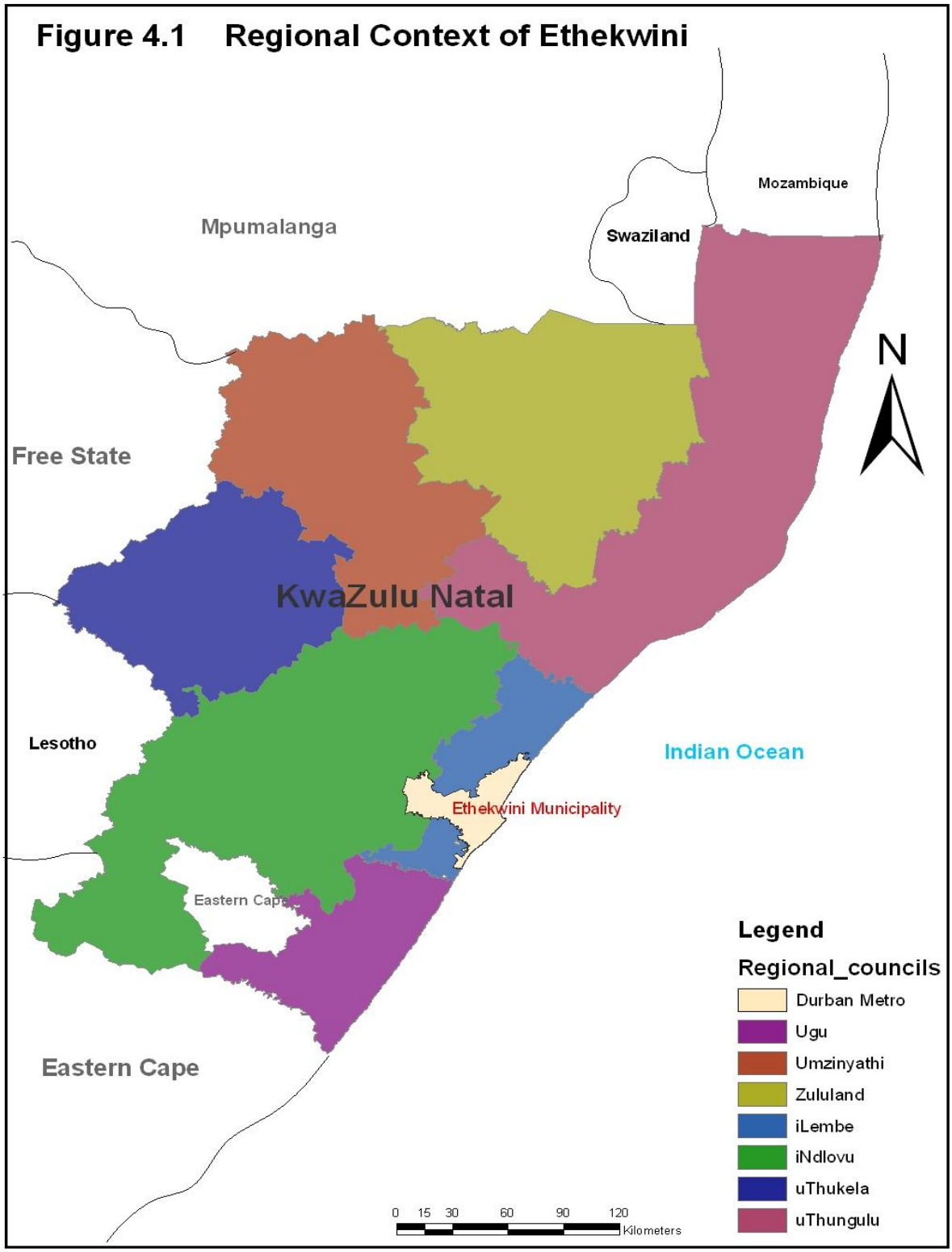
[32] www.thdev.co.za

4.1.1 The Regional Context

In the regional context of KwaZulu-Natal (see Figure 4.1 on Page 62), Umhlanga is located within the northern growth corridor along the coast between Durban and Richards Bay in KwaZulu-Natal (NCSFP, 2004: 3). In terms of linkages with greater provincial region, this area represents a major growth area for the province and the Ethekwini Municipality. The role of Durban in Kwazulu-Natal is considered essential due to its larger Gross Domestic Product contribution from tourism, manufacturing and a seaport serving the Southern African region (Ethekwini IDP Review 2009/2010).

Durban (known administratively as Ethekwini Municipality) stretches along 98km of coastline and has a very desirable sub-tropical climatic condition than any other province in South Africa. The city of Durban has a racially and culturally diverse population of just over 3.4 million (Statistics SA, 2007). Competing with the cities of Johannesburg and Cape Town, Durban presents itself as a collaged city. It is a 'port city'; 'the country's playground' and an 'industrial hub' in Southern Africa but most importantly, the city's future depends on reaching its vision of being "Africa's most caring and liveable city" by the year 2020 (Ethekwini IDP Review 2009/2010). The development goals of the region rest on this vision, thus dictating the city's long-term development strategy.

In terms of spatial and socio-economic transformation, the city of Durban is no different from other South African cities. Physical infrastructure and social amenities were well developed around areas of the urban core bordering major routes but poorly provided for as one moved inland where former black townships were located; and also far from employment opportunities (Schensul, 2008). In the late years of apartheid, the spatial form of Durban begun to change as rapid urbanisation and weakening apartheid controls led to massive growth of informal settlements on the periphery (Todes, 2000a: 618). Because South African cities and towns entered the 1990s with an apartheid urban planning and development legacy, urban planners and managers, and politicians responsible for urban development were faced with the task of reconstructing the impression of a spatially segregated, highly fragmented and dispersed urban society. These changes also meant that the South African cities had to adopt urban development strategies which could address the looming pressures of rapid urbanisation and other socio-political dynamics (VARA, 1988a, 1988b; Strumpfer, 1997)



Source: Ethekwini Municipality, 2009. Modified by Researcher

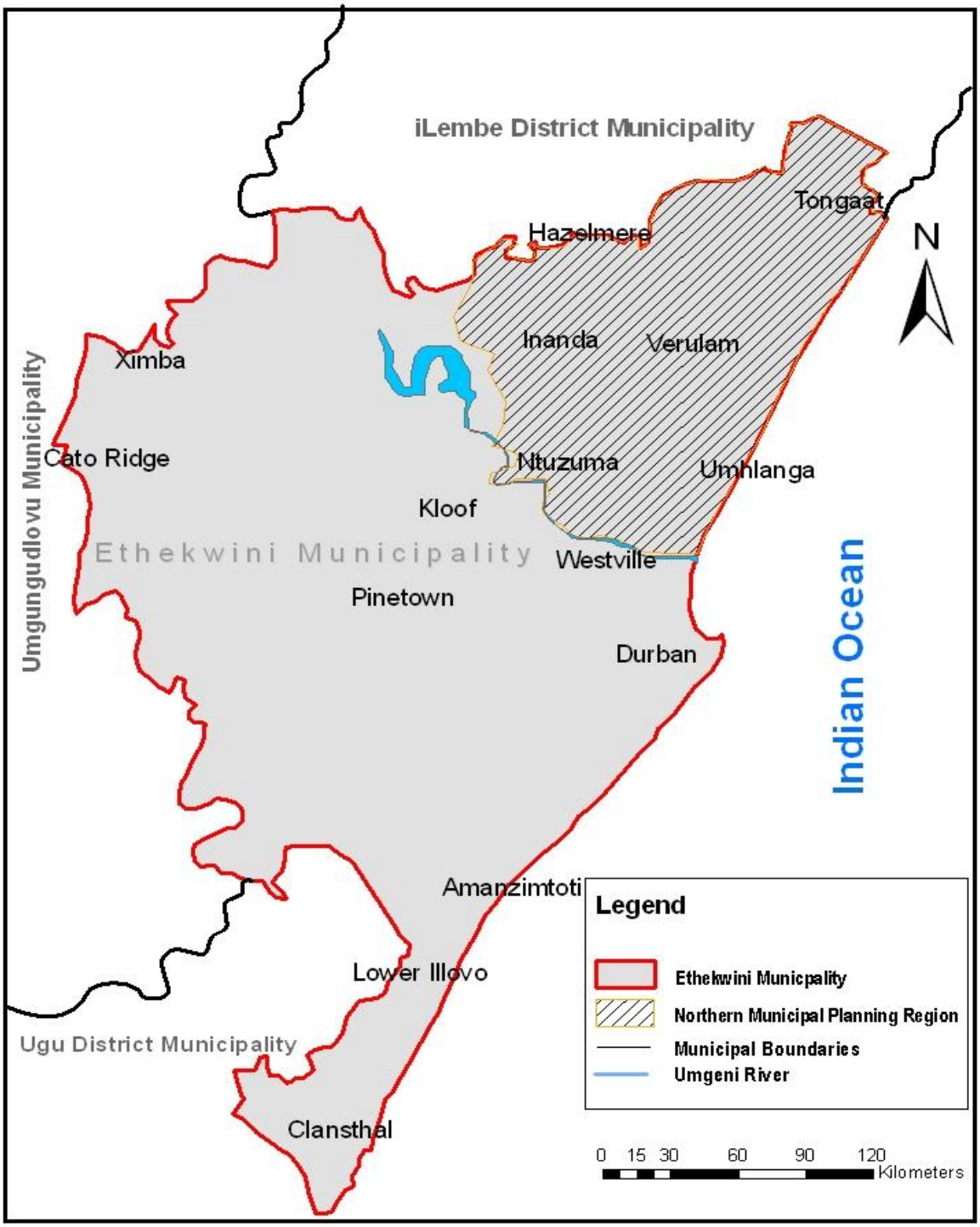
Essentially, the aim of the Ethekwini Municipality has been to resolve spatial fragmentation and inequalities left behind by apartheid as well as strengthen its competitiveness to economic growth in relation to Johannesburg and Cape Town (Robinson, 2008). Spatial restructuring has become prominent especially in the context of encouraging compaction and mixed-use development; optimising the use of existing resources as well as the restructuring of institutional capacities to deal with these urban changes (Harrison, 2003, Pieterse, 2006). Their long-term goal is congruent to urban policy in South Africa which emphasizes the need for integration and sustainability.

4.1.2 The Local Context

The Ethekwini Municipality area is divided into four functional regions: the North, South, Central and Outer West. Umhlanga Ridge is located within the functional region known as the Northern Municipal Planning Region (NMPR). It has a population of about 1.15 million, which is 31% of the Ethekwini's total population of 3.5 million (Statistics SA, 2007). The Northern Municipal Planning Region (see Figure 4.2 on Page 64) extends from the Umgeni River in the south, to Tongaat in the north, with the coastline in the east and the ILembe District Municipality to the west and north. The topography is mixed, with rolling hills in the interior and gently-sloping land to be found towards the coast. Four main river systems, the Umgeni, Ohlanga, Umdloti and Tongati Rivers, dissect the region (NSDP, 2008).

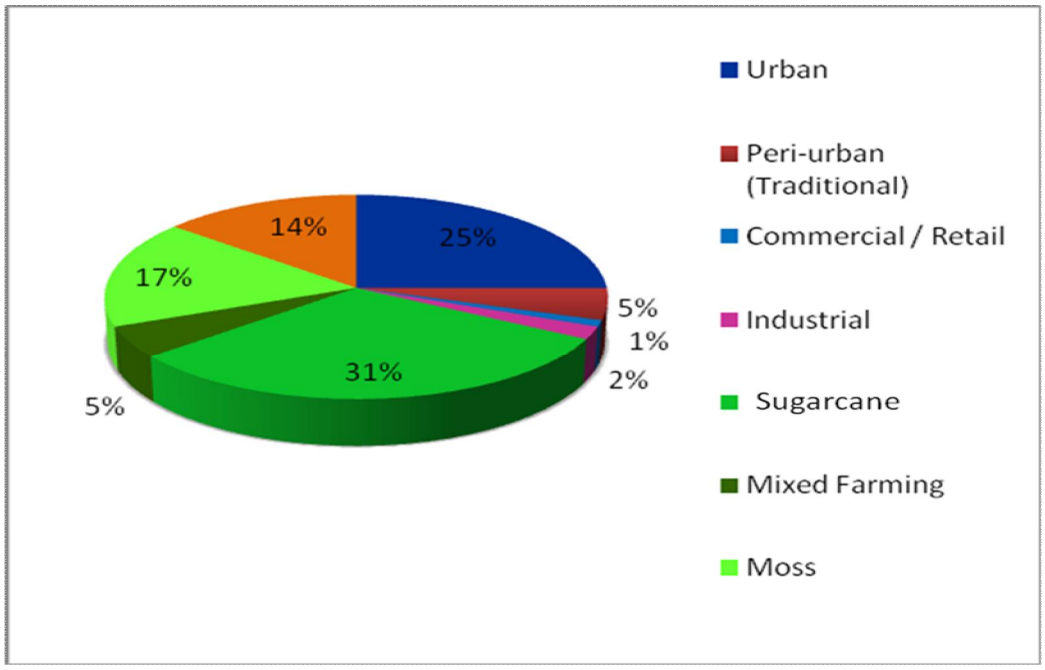
The Northern Municipal Planning Region covers a total area of 56920 hectares, representing about 26% of the Durban Metropolitan Area (NSDP, 2008: 4). Approximately 84% of the land is under freehold title with Tongaat Hulett Group as majority private landowner with about 9000 hectares. The region is about 25% urban, 17% open space, 36% agriculture, out of which 31% is under Sugarcane cultivation while industrial and commercial activities account for only 3% (ibid). The Northern Municipal Planning Region consists of three discrete land use corridors all running parallel to the coast (see Figure 4.4 on Page 66). These are the northern urban corridor, the northern coastal corridor and the northern rural corridor.

Figure 4.2: Northern Municipal Planning Region in the Context of Ethekwini



Source: Ethekweni Municipality, 2009. Modified by Researcher

Figure 4.3: Current Land Use in Northern Municipal Planning Region

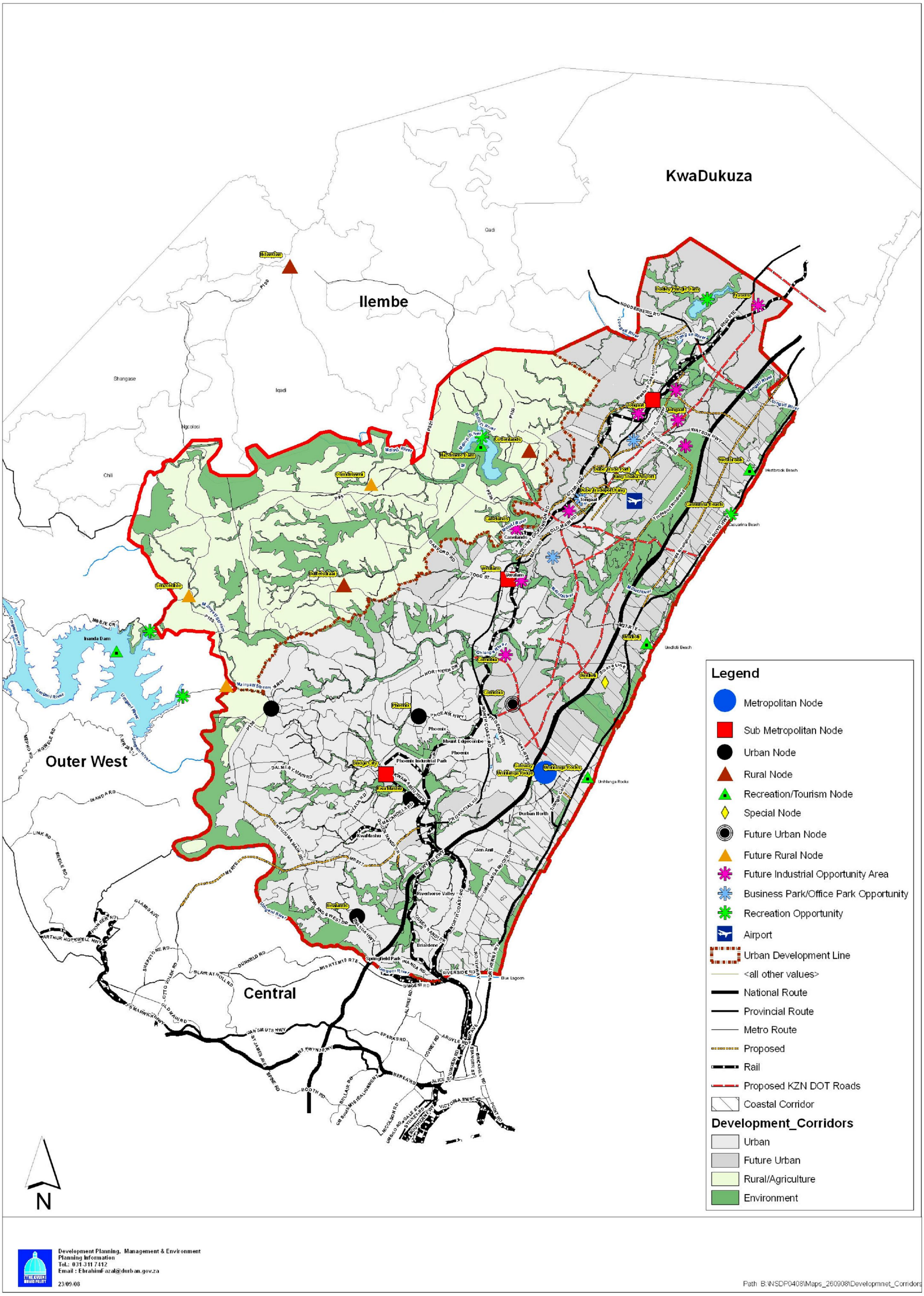


Source: NSDP, 2008: 19

The roles of the corridors are directly related to their inherent landscape, settlement and infrastructure characteristics and potential which include urban, rural and coastal characters (NSDP, 2008: 38). Umhlanga Ridge forms part of the coastal corridor where a mix of uses, particularly tourism, recreation and residential development are to be consolidated. Presently, the spatial development plan for this Northern region supports a trend of coastal and inland corridors development, encouraging activity clustering and higher densities around nodes, strengthening the east-west routes linking the two corridors, and infilling with residential and mixed use development (Robinson and McCarthy, 2007: 36).

With its former status as a dormitory region, economic activities in the Northern region were limited to agriculture, sugar milling and tourism. In order to boost the economic base of the region, a number of catalytic public and private sector initiatives were planned and have been implemented over the past 10 years.

Figure 4.4: Northern Spatial Development Plan



Source: Northern Spatial Development Plan, 2008:40

These include the industrial estates, a regional shopping centre and the Dube Trade Port (VARA, 1988b). It is expected that in the next 10 -15 years, the Northern region will generate a sufficient socio-economic base in its function as a major investment node for the Ethekwini region as a whole.

4.2 Spatial Changes in Durban: 1973 - 2009

In the wake of a post apartheid era, the need to redefine and reimage the new Durban was through a non-racial non-segregated set of policies that hoped to desegregate and deracialise a fragmented landscape (Saff, 1994). Durban, including Umhlanga has undergone massive spatial changes since the 1980s. Having much of Umhlanga and surrounding areas under sugar cultivation, dramatic expansion of urban areas into previously separate axes of urban use occurred between 1973 and 1986 (VARA, 1988a: 6). Changes in the spatial makeup of Durban became significant as agricultural land in the south of the region came under residential and industrial use. In 1973, land in the north was largely under large-scale agriculture; however, informal settlements grew further inland in places like KwaMashu and Phoenix (see Figure 4.5 on Page 68).

> "Progressively, agricultural land had been taken up for urban development with the city growing northwards along two broad 'arms', one along the coast and the other inland, with the coastal arm tending to move in advance of the inland arm. In the course of expansion, pockets of land were 'leap-frogged' and left in agricultural use" (Robinson and McCarthy, 2007: 36).

Two of the key informants interviewed argued that these changes took place rapidly than anticipated and the fragmented nature of municipal governance within the Durban region hampered the possibility of any form of holistic approach to planning and development (Interview with Peter Robinson, 2009). In 1986, what remained in the north of Durban was a protruding tongue of large scale agriculture (see Figure 4.6 on Page 69) owned by Tongaat Hulett Group and small agricultural areas in Hillcrest (VARA, 1998a: 7).

4.2.1 The Planning Framework

In 1988, concerns begun to be raised about rapid urbanisation that was taking place and the lack of co-ordinated planning and vision for the metropolitan region (Robinson, 2009: 119). After a series of deliberations among various stakeholders in the region, the Durban Functional Region Forum (DFR Forum) was created in December 1988 as a platform for assessing the regional situation and to offer support for a co-ordinated long-term planning process for the Durban region.

Figure 4.5: Land-Use in relation to Tongaat Hullet Land Holdings – 1973

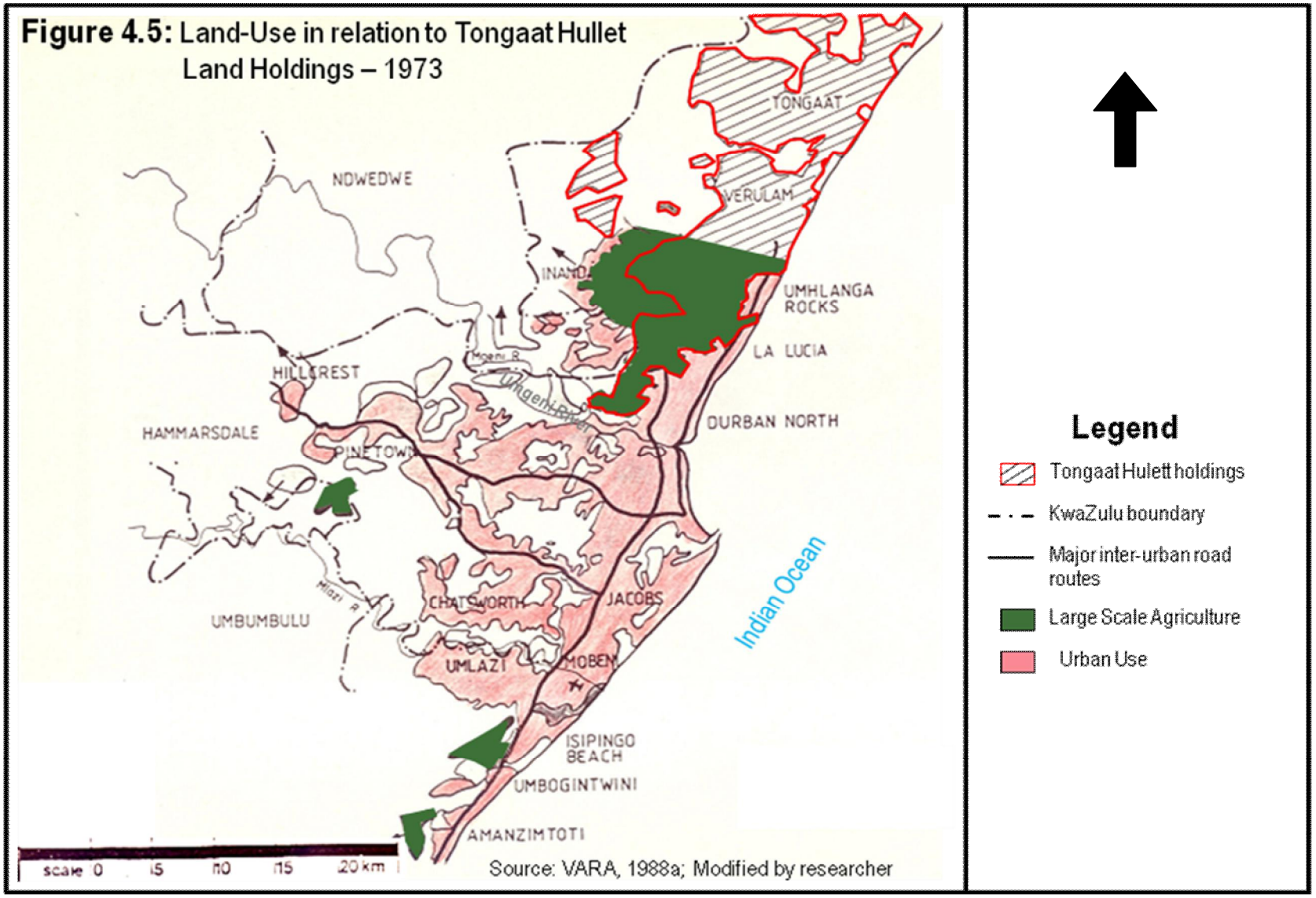
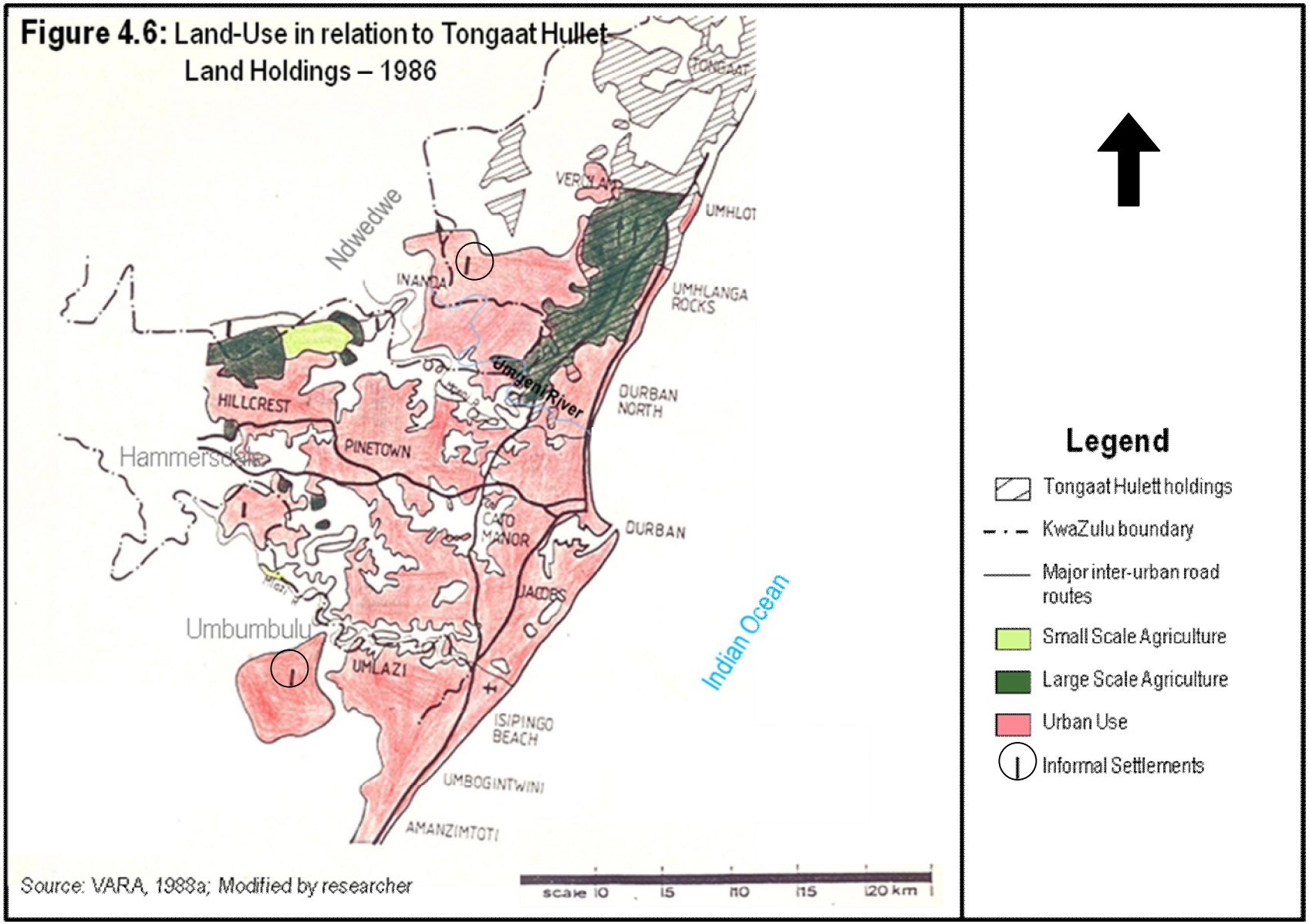


Figure 4.6: Land-Use in relation to Tongaat Hullet Land Holdings – 1986



Source: VARA, 1988a; Modified by researcher

Among other things, the Forum identified trends that would shape the future; identified desired future scenarios; and designed the utilisation of resources to arrive at the desired future (ibid). A significant outcome of the Forum was the regional development strategy known as "Operation Jumpstart". This was literally aimed at "jump" starting strategic developmental projects in the region (Interview with Peter Robinson, 2009).

Within the "Operation Jumpstart" strategy, a number of key development projects were planned and implemented among which included the development of Durban's International Convention Centre, inner city redevelopment (for example, Warwick Junction Project) and the formulation of a metropolitan plan to guide growth and development (Robinson, 2009; Strumpfer, 1997). Although none of the "Operation Jumpstart" projects were planned for the northern region, the conceptualisation of the Northern Corridor was a subsequent outcome of the Forum's strategic planning process. The Northern corridor concept played a major role in the strategic interventions formulated by Tongaat Hulett which were appropriately justified by the expected population growth and the projected urban growth to the north (Todes, 2000b). Ultimately, the development plan for the northern coastal corridor, which includes Umhlanga Ridge, is aimed at being consolidated as a mix-use and mixed density residential, recreation, entertainment and tourist oriented corridor (NSDP, 2008: 39).

With Tongaat Hullet Developments as the major participant and funder of the Forum, "the long-term planning process is known to have patently supported their learning and helped them reap the benefits of supporting the Forum" (Strumpfer, 1997: 8). Essentially, the interest of Tongaat Hullet in the strategic decisions which came out of the Forum was because much of their extensive landholdings were becoming more valuable for urban development than agriculture as was the case at that time (Architecture SA, 2008:50). The Northern Corridor Concept opened up opportunities for a mixed-use inland spine and a residential - tourism coastal spine within the location of Tongaat Hulett landholdings. In effect, the future spatial evolution of the north of Durban has been large scale urban development in subsequent years of the "Operation Jumpstart". The general projection was that the north of Durban (within the red oval in Figure 4.7 on Page 72) will experience large-scale Greenfield development over the next 10-15 years (Robinson and McCarthy, 2007: 19).

A key uncertainty in the 1990s was whether Tongaat Hulett Group would release agricultural land for urban development as rapid urbanisation pressures mounted in the Durban Metropolitan Region (interview with Nacny Odendaal and Peter Robinson, 2009). However, in the last 15 years, agricultural land in the north has been released incrementally for urban development. Tongaat Hulett has been largely responsible for the spatial planning and development of their landholdings in the North, with some level of alignment with Ethekwini's Integrated Development Plan and Spatial Development Framework. Some of the current and future developments in the North of Durban are the Riverhorse Valley Business Estate, La Lucia Ridge Office Estate, Bridge City, Dube Trade Port and Cornubia as shown in Figure 4.8.

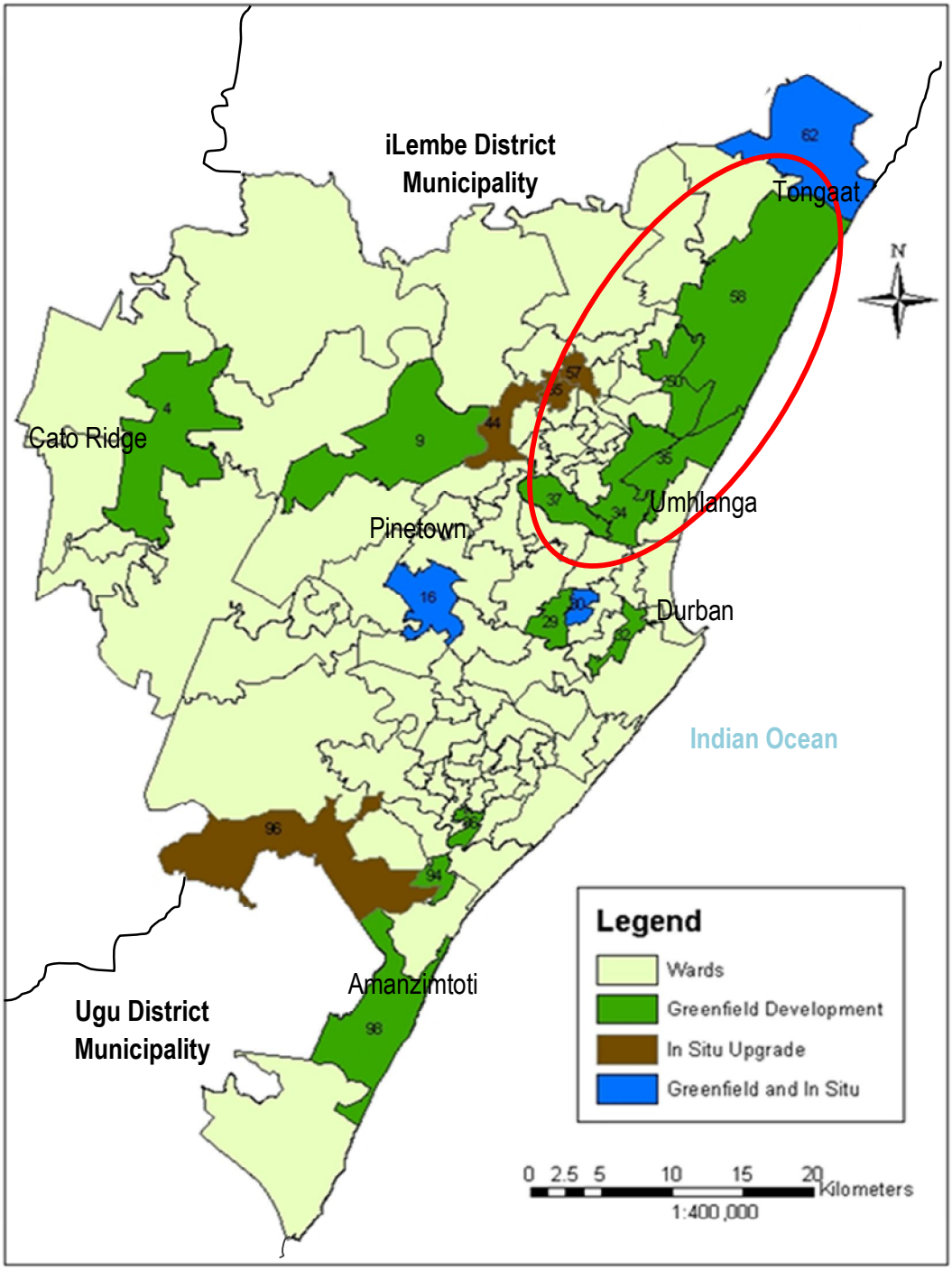
4.3 Umhlanga Ridge as a Catalytic Development

The development of Umhlanga Ridge in the late 1990s marked a new era of major spatial changes in the north of Durban. Whereas Umhlanga Rocks (area adjacent to Umhlanga Ridge) had functioned as a major tourist town in the region for many years, the desired development of Umhlanga Ridge was for it to play a complementary role in that respect. Some of the comparative advantages of the Umhlanga Ridge was its nearness to the Central Business District and major transport routes like the N2, R102, M41 and the M12; a relatively flat topography and the potential for further global investment at the completion of the Dube Trade Port. The future of Umhlanga Ridge thus rests on the Northern Corridor Concept which requires it to evolve into a tourist, residential and entertainment destination, and become part of a major economic investment node in the wider regional context.

4.3.1 Umhlanga Ridge Town Centre

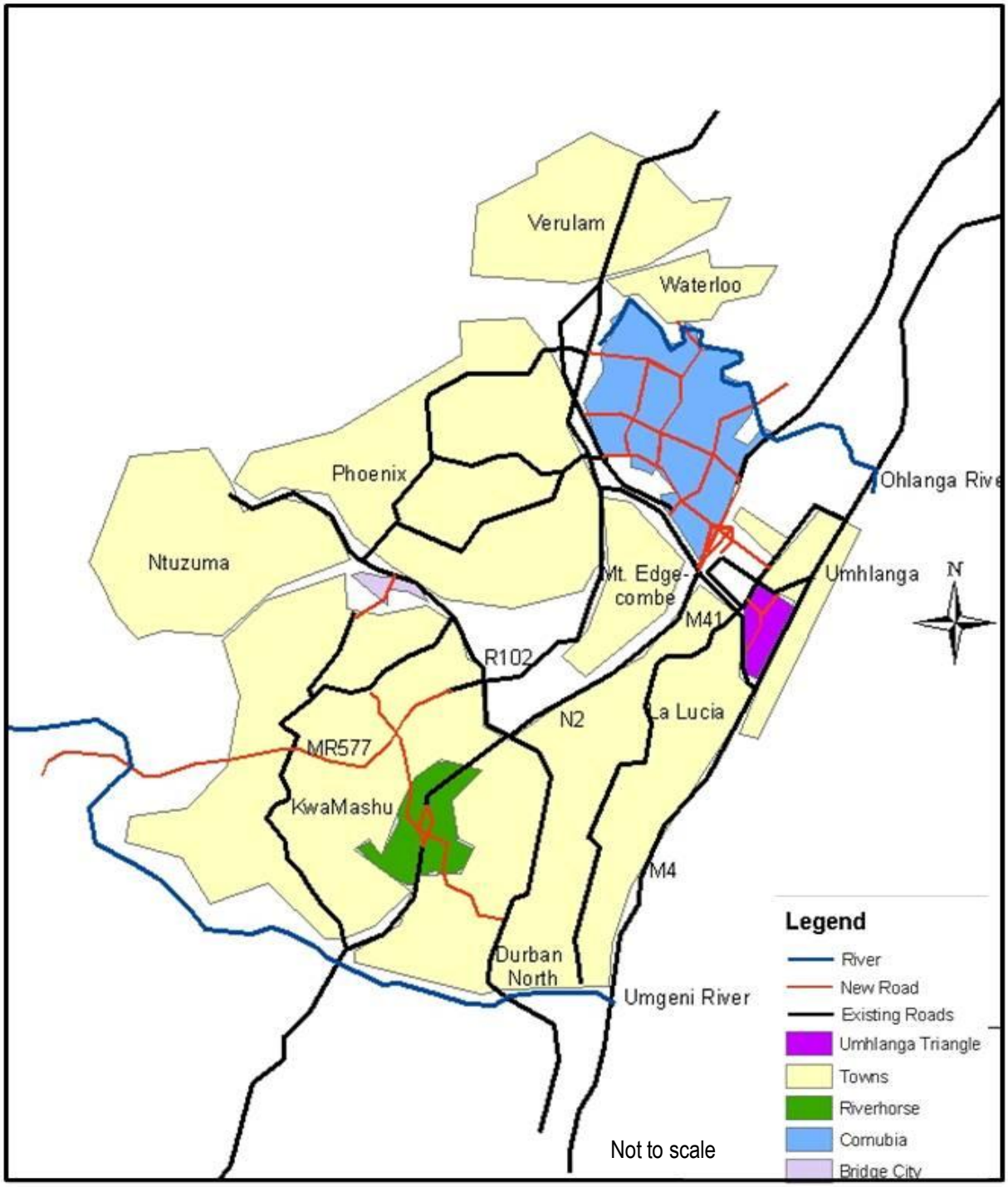
About 15km from Durban's central business district lies Umhlanga Ridge, evolving from a sugar plantation scenery to the most elegant and sophisticated suburbia, developed around the New Urbanism theme. In the early 1990s, Tongaat Hulett, initiated the development of the La Lucia Office Estates as a springboard for a new high intensity, mixed-use town centre for the emerging region (Architecture SA, 2008:51). Covering an approximate area of 240 hectares, the Umhlanga Ridge Town Centre is made up of a number of exclusive residential developments, hotels, luxurious shopping and entertainment centre and stylized office estates (Jordan, 2002: 5).

Figure 4.7: Types of Urban Development in Ethekwini since 2001



Source: Robinson and McCarthy, 2007: Emphasis by Researcher

Figure 4.8: Existing and Future Growth in Northern Municipal Planning Region



Source: Robinson and McCarthy, 2007

4.3.2 The Urban Design Framework

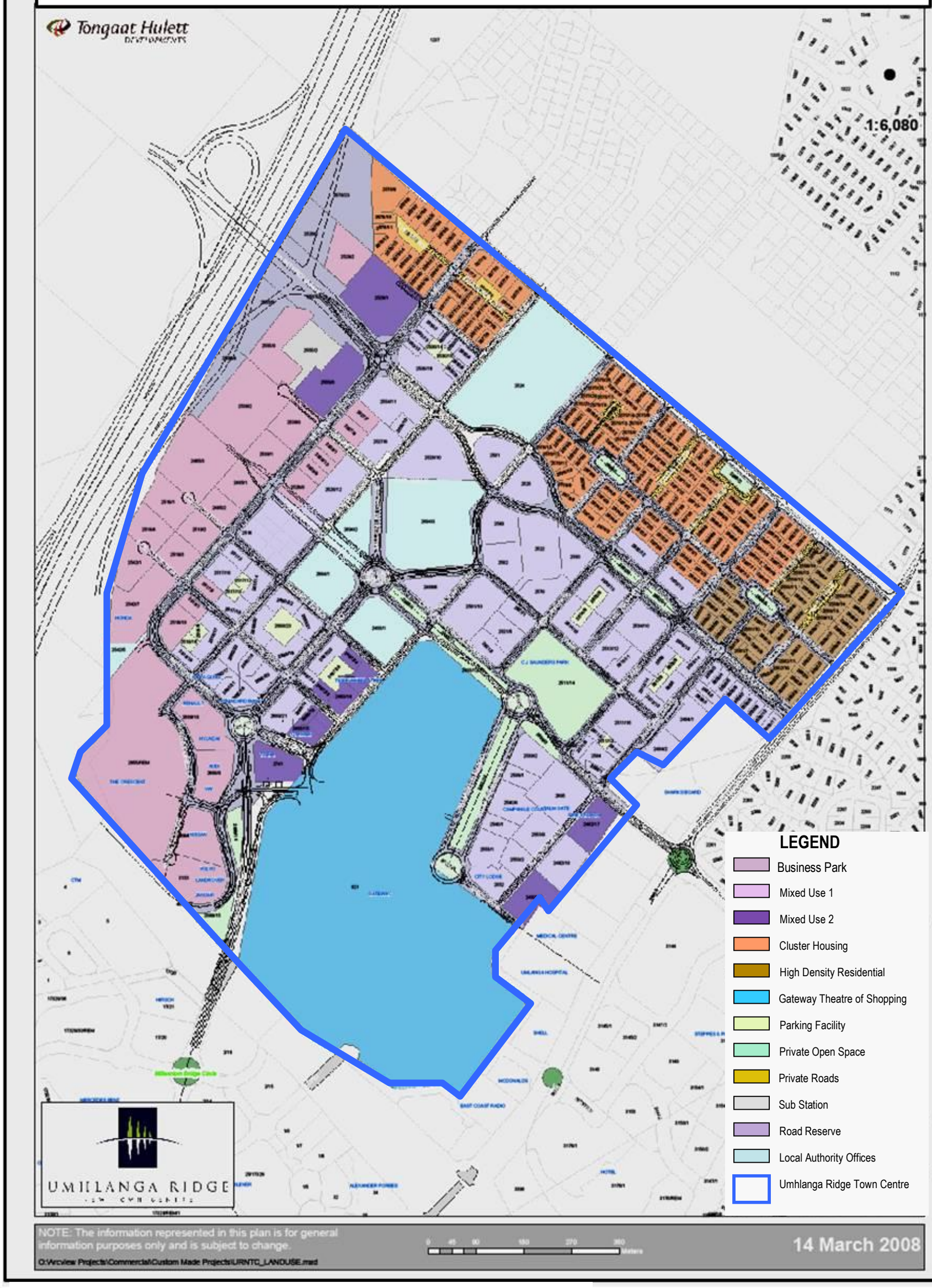
> Umhlanga Ridge New Town Centre transcends suburban mediocrity. It is urbane - sophisticated, gracious, courteous and elegant. It follows the vision of recapturing all those great, timeless qualities of cities that have been lost in suburban sprawl while avoiding all the negative connotations that have come to be associated with modern cities: poor quality environments, congestion, crime, grime and pollution (Moreland Architecture Guidelines, 2002).

The Umhlanga Ridge Town Centre, modelled on the principles of the New Urbanism Charter, is a mastermind of foreign urban designers and Tongaat Hulett; the intention was for the Town Centre to become a showpiece development in South Africa (Architecture SA, 2008:51). The main objective was to create a comprehensive, vibrant and integrated commercial and residential region (New Ground, 2008: 22). It is an attempt to provide a "work, live and play" environment that is easily accessible; pedestrian-friendly; well-kept and managed; offer spaces with the opportunity for interaction; and provide a vibrant mixed-use node with a legibility and place-making that gives the area a distinctive character (Architecture, SA, 2008:51). The extract below explains Tongaat Hulett's intentions and gives a vivid description of the Town Centre:

> Umhlanga Ridge Town Centre is enthused with this vision and focuses, on one hand, on a public environment of quality and distinction…It is a place of treed boulevards, promenades, avenues, verdant landscapes and town gardens and residential parks - a place of memorable urban spaces, vistas and landmarks scaled around pedestrians and established to shape the form and value of the town as it grows - a place where the architecture creates a group form that is human in scale and gives a sense of nurturing enclosure - a place where streets are bright, lively, vibrant spaces lined with shops, restaurants, sidewalk cafes and filled with street life that promotes safety and surveillance - a place where car access and parking, while being of the top order, never dominate the central ethos that cities are for people. The qualities of landscaping, pedestrian convenience, safety and freedom from threat, be it from vehicles or crime, and the richness of living in an urban environment that meets all our needs, without having to get in a car and commute, are ever present and uncompromised. (Moreland Architecture Guidelines, 2002)

The land-use map of Umhlanga Ridge Town Centre (see Figure 4.9 on Page 75) provides evidence of its structuring elements.

Figure 4.9: Land Use for Umhlanga Ridge Town Centre



Source: Tongaat Hulett Developments, 2008. Modified by Researcher

The Gateway Theatre of Shopping was the first project to have been implemented on the site for the Town Centre, thus became a catalyst to further development. In subsequent years, a number of residential developments have been added to the Town Centre precinct. To create a vibrant, mix-use and safe environment, buildings have been set on street boundaries; forming the outer perimeter for courtyard block development with inner courts of common parking and garden (Architecture SA, 2008: 52) (see Photo 4.3 on Page 80). The researcher also observed that the ground and first levels of residential blocks are being used for commercial and retailing activities as part of its mix-of-use principle (see Photo 4.1 on Page 77). The Umhlanga Ridge Town Centre is built on a planned grid and connected to a series of pedestrian-friendly roads, parks and public places, which is evident in figure 4.9 on page 75. Roads are connected with roundabouts as a means to break away from the conventional use of traffic lights, an observation made by the researcher. The Umhlanga Ridge Town Centre is the first New Urbanist development in Durban, and also represents a new type of high density, multiple-use suburban living. With construction still in progress in the Umhlanga Ridge Town Centre, the finished product is expected to be a multiple-use, safe and vibrant urban environment.

Photo 4.0: The façade of the Gateway Theatre of Shopping

Source: Researcher's personal collection, 2009

Photo 4.1: Block of flats with a mix of commercial and retail facilities located on Aurora Drive

Source: Researcher's personal collection, 2009

Photo 4.2: The Palm Boulevard

Source: Researcher's personal collection, 2009

One of the objectives of this study is to verify the characteristics of the Umhlanga Ridge Town Centre against the principles of New Urbanism. Whilst the preceding discussion has provided a general description of the study area, the Table 4.0 below gives a summary of how the Town Centre relates to selected principles of the New Urbanism Charter from the researcher's analysis of the area:

Table 4.0: Measuring the Features of Town Centre against selected New Urbanism Principles

	New Urbanist Principles[33]	**Umhlanga Ridge Town Centre**
CP2[34]	The metropolitan region is a fundamental economic unit of the contemporary world...	Umhlanga Ridge (including the Town Centre) is part of a designated major economic investment node in the Spatial Development Framework of the Ethekwini Municipality. Gateway Theatre of Shopping is a Regional Shopping Centre. However, its investment and employment base is limited to tertiary activities with heavy reliance on specialised skills
CP5	New development contiguous to urban boundaries should be organized as neighbourhoods and districts, and be integrated with the existing urban pattern.	The Town Centre precinct forms part of Umhlanga Ridge. It plays the role of a mix-use environment and its boundaries are structurally defined by major transport routes. Whilst the Town Centre is earmarked for high density residential of 4-6 storey blocks, the immediate area adjacent to the boundary is a low density development, Prestondale. Buildings on that interface will be limited to 2-3 storeys in height to integrate it into the existing urban pattern.
CP7	Cities...should bring into proximity a broad spectrum of public and private uses to...benefit people of all incomes. Affordable housing should be distributed throughout the region to match job opportunities and to avoid concentrations of poverty.	The Town Centre occupies prime land in Umhlanga Ridge. Though it offers a broad spectrum of uses, job opportunities available require skilled labour and housing prices are determined by market forces. Prices of apartments range from R800,000 – R1,300,000 which in the context of South Africa are for high-income earners.
CP8	The...region should be supported by a framework of transportation alternatives. Transit, pedestrian, and bicycle systems...while reducing dependence upon the automobile	On a metropolitan scale, the Town Centre is easily accessible by private cars and a moderately efficient privately-owned public transport system. Within the Town Centre, features such as sidewalks, boulevards and vistas have been used to make walking and bicycle use desirable.
CP13	Within neighbourhoods, a broad range of housing types and price levels can bring people of diverse ages, races, and	Housing within the Town Centre precinct is available to diverse ages, races, but mostly affordable to high middle-income and high income earners. Housing typology is mainly multi-storey within the

[33] Source: www.CNU.org\charter

[34] CP2 denotes the second principle as contained in the Charter for the New Urbanism (see Appendix 1)

	incomes into daily interaction, strengthening the personal and civic bonds essential to an authentic community.	Town Centre, however, other typologies are available at adjacent locations outside the Town Centre but within the Umhlanga Ridge Precinct.
CP15	Appropriate building densities and land uses should be within walking distance of transit stops, permitting public transit to become a viable alternative to the automobile.	The Town Centre offers a density of 220 dwelling units per hectare (Architecture SA, 2008: 52) and a mix of land uses. However, the separation of uses like schools and churches do not allow for walking as an alternative to the automobile. The absence of an efficient public transport system and the presence of major transport route systems do not support the movement between certain land-uses.
CP17	The...neighbourhoods, districts, and corridors can be improved through graphic urban design codes that serve as predictable guides for change.	Tongaat Hulett Developments has a development manual and architectural guidelines which it enforces by a design review process. This is intended to encourage an eclectic, contemporary approach to architecture and achieve the set vision for the Town Centre.
CP19	A primary task of all urban architecture and landscape design is the physical definition of streets and public spaces as places of shared use.	Postmodern architecture and landscape design have been adequately employed to create an eclectic and aesthetically appealing environment. Boulevards, squares, avenues and traffic roundabouts and sidewalks have been used to define private and public space
CP21	The revitalization of urban places depends on safety and security. The design of streets and buildings should reinforce safe environments, but not at the expense of accessibility and openness	Passive surveillance is enforced by the use of ground and first level of residential blocks for commercial and retail purposes. Security systems such as closed-circuit televisions (CCTV) have been installed and security patrols are undertaken on a 24hour basis.
CP23	Streets and squares should be...comfortable, and interesting to the pedestrian. Properly configured, they encourage walking...	There exists a clear distinction between, the public, semi-public and private realm. The gridiron pattern has been used to facilitate, comfortable and varied walking distances, on-street parking and traffic calming.

Source of Charter principles: www.cnu.org\charter

Generally, urban settings have a responsibility to offer opportunities for its users. In applying the concept of New Urbanism to the Umhlanga Ridge Town Centre, it has contributed to a localized degree of sustainable urban development within the following contexts in Umhlanga Ridge:

a. High densities have been achieved towards localized compaction to curb urban sprawl
b. The concentration of different land-uses offer the opportunity for less travel and automobile use

c. Its function complements the activities of surrounding areas such as a coastal tourism node of Umhlanga Rocks
d. Natural vegetation has been preserved where possible and indigenous coastal vegetation has been used for landscaping purposes.
e. A prolonged human presence in streets and open spaces offer opportunities for active and passive surveillance towards a secure and safe environment.
f. Features such as fountains and outdoor artworks have been used to create an aesthetically appealing environment.

Photo 4.3: Courtyard block development with inner courts on Aurora Drive

Source: Researcher's personal collection, 2009

Photo 4.4: Sidewalk cafes and a beautified public space overlooking the Palm Boulevard

Source: Researcher's personal collection, 2009

Photo 4.5: Signage showing the prioritised movement of pedestrians in the Town Centre

Source: Researcher's personal collection, 2009

For the New Urbanists, a neighbourhood such as Umhlanga Ridge Town Centre is an essential element of development and redevelopment of the metropolis. Overall, it appears that every minute detail and sensory pleasure in the neighbourhood has been meticulously planned and ordered to create a picturesque and pristine living environment (Shaw et.al, 2004). In essence, the Umhlanga Ridge Town Centre fulfils the desired lifestyles of the contemporary urban citizen who is prepared to bear the financial costs, giving land owners and developers the platform to extract the maximum value for land and property development.

4.4 Driving Forces to Contemporary Urban Development

Urban development is seen as a necessary process for the enhancement of socio-economic, political, cultural and physical dimensions of society; it has the ability for employment opportunities, economic growth and social change (Dewar, 1992; Hall, 2004; Harrison 2003). It is within the context of urban development that cities become urbanised and also become recognised as part of a global world. However, the future of urban development no longer lies solely with the State but also with private sector actors and civil society (DeSeve, 1986: 58). Development does not occur on its own; the framework of development projects constitutes an avenue for people to take advantage of opportunities and make choices according to what is at their disposal (Sen, 1999). Thus, the desire for investments in urban development by the public and private sectors is to reap benefits of different kinds. Whereas the State often acts on the bases of welfare, the private sector is mainly concerned about monetary profits for further investment. Whatever the case may be, the prerequisites to development include political and socio-economic stability. The discussion below seeks to unpack the different forces within which urban development have occurred in South Africa, with particular reference to Durban and Tongaat Hulett Developments.

4.4.1 The Broader Perspective to Urban Development

Cities are inherently complex entities. This is because they are the result of ever-changing structural determinants interacting with multiple specificities rooted in culture and history (Castells, 1997: 247). South Africa cities have a history of apartheid. They were characterised by fragmentation of urban space, attempted segregation of state-defined groups in the population into those spaces, and surveillance and control of some of those spaces (Mabin, 2005: 45). The Group Areas Act of 1913 was responsible for majority land ownership by a white minority and who had access to better facilities and economic opportunities than other population groups. Blacks, Indians and Coloureds had lesser privileges in terms

of land ownership, access to urban areas, housing and infrastructure (Dewar, 1992; Saff, 1994). However, in the late 1980s, when the apartheid regime begun to weaken, the country experienced an unprecedented rate of rural-urban migration, growth of informal settlements on urban peripheries, informality and other pressures of rapid urbanisation (Todes, 2000a; Pieterse,2004). In effect, these challenges have driven the current trends of urban development (Duminy, 2007: 81). Some of the key drivers to urban development in South Africa are discussed below:

a. Political Change

In the 1990s, it became clear that if South Africa was to become a democratic society, political reform was needed. For this to be possible, a number of legislations which fostered inequalities and segregation had to be abolished or amended. At the urban level, the Abolition of Racially Based Land Measures Act of June 1991 was passed to formally abolish racial discrimination with respect to land (Saff, 1994: 382). The obvious challenge was to initiate a process of change towards an integrated socio-spatial and equitable society. Essentially, the concepts of restructuring and transformation became necessary for the materialisation of a new South Africa. Transformation meant that new policies and legislations had to be formulated and passed to facilitate the processes of socio-political, economic and spatial changes (Williams, 2000). A major aspect to political change was the democratisation process which opened opportunities for the functioning of a stakeholder society, thus downsizing public sector activity (Cameron, 2000). Instrumental to the process of transformation was the enactment of the Development Facilitation Act of 1995 which provided the guidelines for land development. Some of the land development principles contained in the Development Facilitation Act (1995: 6) are:

a. to promote the integration of social, economic, institutional and physical aspects of land development;
b. discourage the phenomenon of "urban sprawl" and contribute to the development of compact towns and cities; and
c. contribute to correction of historically distorted spatial patterns of settlements (

b. Pressures of Urbanisation

Urbanisation is a process which brings urban land into being (Dorau and Hinman, 1969: 12). It is estimated that the world's urban population will grow from 2.86 billion in 2000 to 4.98 billion by 2030, of which high-income countries will account for only 28 million out of the expected increase of 2.12 billion (UN Habitat,

2004/05:1). By 2050, the urban population of the developing world will be 5.3 billion; Africa, with an urban population of 1.2 billion will host nearly a quarter of the world's urban population (UN Habitat, 2008a: xi). South Africa's rate of urbanisation is said to have accelerated in the late 1990s, a period of intense political change (Robinson et.al. 2004; Saff, 1994; Todes, 2000a, 2003). The rate of rapid urbanisation has been accelerated by rural-urban migration, natural growth and the reclassification of areas from 'rural' to 'urban' as a result of urban sprawl (SACN, 2006: 2-16). The result has been the increasing demand for urban land, growth of informal settlements, urban housing shortages, increased pressure on infrastructure and high rates of unemployment.

This urban *epidemic* has raised the need for a pro-active, integrated and sustainable urban planning and management framework. On the premise of reversing apartheid planning, the key actions are redistribution and delivery and to overcome fragmentation and inequalities of the inherited city form (Harrison et al, 2003). Whist this represents an enormous task for the State; it is argued that the challenges of rapid urbanisation are beyond the capacity of local government to manage (Turok and Parnell, 2009: 157). Thus, it has been agreed that, the success of tackling these urban challenges will require the active involvement of various stakeholders particularly, the private sector and other developmental bodies (Robinson et.al, 2004). Indeed, private sector participation in urban development have been acknowledged globally as a necessary drive for better economies (Fraser and Kick, 2007) for the sake of fairly addressing problems such as housing shortages, unemployment and urban decay.

c. A Call to Sustainable Urban Development

Success of political change and rapid urbanisation do not happen in a vacuum. Within a global and developmental context, the underlying element for the processes of change is sustainability. Sustainability in urban development encompasses a decision-making process based on consensus of multiple perspectives (Boschken, 2002); the efficient utilisation of human and natural resources; and an integrated policy and institutional environment (Dewar, 1991; Harrison, 2003). On the global front, South Africa's re-entry into the international arena was accompanied by pressures to perform according to the international development agenda, which included the adoption and adherence to sustainable practices (Patel, 2000: 383). The need to contextualise urban sustainability in South Africa was necessary due to its peculiar history of apartheid which was characterised by spatial and institutional fragmentation; and gross inequalities. The democratisation of South Africa has created a platform upon which various stakeholders

can exercise their developmental rights in a responsible manner. Nonetheless, contemporary literature on urban development and management suggests that stakeholders' participation in project conceptualisation; design, implementation and management could in reality hold the key to sustainable urban development (Chege, 2006: 1).

4.4.2 Tongaat Hulett Developments and Urban Development

> But neither cities nor places in them are unordered, unplanned; the question is only whose order, whose planning, for what purpose, in whose interest (Marcuse, 1995: 244).

Cities are essentially shaped in many ways; economics, politics, society and culture all play crucial parts in this process but an understanding of the planning process is central to any discourse about the city (el-Khoury and Robbins, 2004). In South Africa, political and economic reform has played significant roles in the transformation of cities. Whilst the city is the point of departure for both global and local resource utilisation by various actors, it is almost impossible for activities of private corporations such as Tongaat Hulett Developments to go unnoticed. It can be argued that even though the main objective of the private sector is financial gain, their activities have become beneficial to city economies such as creating job opportunities and contributing substantively to tax revenue. Private sector involvements in urban development have also become consistent with the long-term strategic goals of cities. Whilst conflicts in interest may be present, these are often ignored to allow for development. The following section attempts to explain some of the rational interests embedded in private sector activities with particular reference to Tongaat Hulett Developments.

4.4.2.1 Power on Urban Landscapes

Political and spatial practices represent the hegemonic means by which urban elites construct status and exercise economic and symbolic power over societies; and reconstruct communities. To understand better the relationship between power and urban landscapes, power has been defined as "a mobile, circulating force which through the constant re-citation of practices, produces self-similar outcomes, moment by moment (Amin and Thrift, 2002). This "power is based on momentum, rather than inscription" (ibid). The exercise of this momentum has often been associated with entities like Tongaat Hulett Developments who are also referred to as the "creative class" (Atkinson and Easthope, 2009.) The idea behind this is the extent of power they possess to alter a landscape's attributes according to their own imaginations; and the

fundamental discourse of securing economic investment and competitive advantage (Atkinson and Easthope, 2009; Gary and Bridge, 2000). Essentially, Tongaat Hulett is Durban's major private developer and landowner. The following justifications give a sense of how their power is being exercised:

a. Firstly, Tongaat Hulett, in the 1980s, took the unprecedented step of initiating a large-scale integrated planning initiative, the first in South Africa (Robinson, 2009: 144). In retrospect, this was regarded as an act of desperation, stepping into the breach at a time of increasingly fragmented and ineffective municipal administration (ibid). Though this process marked the beginning of a new planning process for the whole metropolitan region, the underlying element was the territorial power Tongaat Hulett had over landholdings which was to facilitate the future direction of growth.
b. Secondly, their position as a private land owner meant that they had authority over activities occurring on their land. To facilitate this process, Tongaat Hulett has equipped itself with adequate human and financial resources to undertake urban planning and management concerning their landholdings.
c. Thirdly, Tongaat Hulett as landowner has sole responsibility in releasing agricultural land in phases for urban development. Typical examples are the Riverhorse Valley Business Estate and the Bridge City projects which have been developed on land owned by Tongaat Hulett in partnership with the Ethekwini Municipality, all in line with consolidating development in the Northern Urban Corridor.

Even though the above list is not exhaustive, it gives a clear picture of how power has been exercised in a number of ways; from direct actions to adherence to community standards (Short, 2003: 20). With Tongaat Hulett's exercise of power over land development, it is suggested that the growth of Umhlanga Ridge symbolises the *privatisation of planning* due to the large degree of planning expertise and capital investment provided by Tongaat Hulett Developments (Freund, 2007). This phenomenon has also been associated with the aspect of urban development under conditions of globalisation (Beall, 2002; Stupar, 2008). Ultimately, the contemporary city as a collective good can be best described less by fiscal realities and more by social and political power (Short, 2003: 24) as is the case with Tongaat Hulett Developments.

4.4.2.2 Urban Economic Change and Land Development

Economic globalization and urban policy are major thrusts for current trends of urban development. Importantly, the changing spatial structure of cities and associated property forms, moderated by current economic and planning system have important ramifications for investment by private institutions (Jones, 2009: 2369). The interests of Tongaat Hulett Group in land development have grown out of "a solid platform for unlocking the value of prime land" within the urban boundaries of the Ethekwini Municipality (BBQ, 2005: 140). This phenomenon is directly linked to the concept of the bid-rent function which dictates the value to land in relation to its location.

With regards to an urban economy where opportunities to extract higher values on land and property development existed, landholdings under sugarcane cultivation proved unprofitable. Over the past 20 years, Tongaat Hulett developments have successfully undertaken residential, commercial and industrial projects within the northern corridor. It has been documented that Tongaat Hulett achieved operating profit of R325 million (2005: R231 million) which was an increase of 41% (THG Press Release, 2007). Undoubtedly,

> this form of urban development reflects the imperative of the private sector to seek opportunities for profit by cutting through…the `public city' to allow for the freer flow of capital, and to implant spaces for new forms of production and consumption into the urban fabric (Shatkin, 2008: 384).

Another driving force for land development has been Tongaat Hulett Developments' ability to source internal finance from its parent company, Tongaat Hulett Group. From a rational perspective, large-scale projects such as Umhlanga Ridge often require huge investments. With reference to financing some of its earlier projects in the late 1990s, Tongaat Hulett is known to have provided bridging finance to the local municipality for infrastructure development from its own resources when funding via banks was rare (Padayachee, 1998: 12). After successfully undertaking a number of projects, being able to capitalise on the investments; and having a solid platform of earnings, Tongaat Hulett Group operations culminated in its listing on the Johannesburg Stock Exchange (JSE) in 2007 (THG Press Release, 2007). Clearly, its presence on the Johannesburg Stock Exchange made access to global finance possible. The situation presented here demonstrates the shifts in local finance to transnational capital flows which make possible the activities of the global elite or the creative class; however their contributions to urban development in spite of their general interest in profit-making can be acknowledged.

4.4.3 The Public-Private Interface to Sustainable Urban Development

Urban interventions, and for that matter, urban development no longer fall within the confines of the State; they even go beyond national borders (Clark, 2003). In recent times, the *really existing city* has been highly decentralised yet formal structures and critical investment are needed to carry on making positive impacts on citizens (Troy, 2003: 550). The shift from relying on the state for decisions about the allocation of resources to one where the markets were expected to perform this task makes it imperative to examine what the boundaries are in relation to public-private contributions towards urban sustainability (Garcia, 1997: 131).

It is established that private sector profitability depends on their competitiveness to access limited resources within a period of time. This competitiveness is intimately related to the way that resources are deployed, the efficiency with which they are used, and the capacity of industry to innovate and create value-added in order to succeed in national and international markets (Runde, 2006). Whilst these remain as concerns to a sustainable future, there is a need for both public and private interventions to adopt a macro-proactive approach (Garcia, 1997: 136). Preferably, the initiation of such an approach will have to occur within the public domain to allow it to exercise a higher degree of ownership and have legitimate power over its enforcement. However, the role of the private sector will be to make fair contributions to the formulation process to create a sense of ownership for successful adoption into their practices. This level of compromise gives room for flexibility and innovation, thus promoting the overall goal of urban sustainability (Lopes de Souza, 2003; Wolfensohn, 2009).

Another aspect of this argument lies in development priorities. Often, there exists a conflict between the public and private sector priorities to urban development (Marvin and Guy, 1997). The need to identify ways of streamlining the public-private priorities is relevant to urban sustainability since it provides the bases upon which resources can be allocated and used efficiently. Although this can be argued, related to this phenomenon are partnerships in development which have proved to be effective in this respect. Currently, urban policy and planning legislation in South Africa allow for partnerships and collaborations in urban development such as Section 120 of the Local Municipal Finance Management Act 56 of 2003. Although the advantages outweigh disadvantages, it is always advised that caution be taken to understand the distinct roles each party plays within partnerships arrangements (Miraftab, 2005). For example, it is argued that private capital or managerial expertise through public-private partnerships does not guarantee

success in itself; it has to be supported by transparent and equitable risk allocation between partners (Asher and Vasudevan, 2008: 2).

A typical example of conflicting priorities is the development of the northern urban corridor as a major priority to the Ethekwini Municipality rather than to Tongaat Hulett. However, the formal partnership between these two entities has facilitated the development of the Riverhorse Valley Business Estate and the Bridge City to enhance opportunities of employment and industrial growth within that corridor. Although based on varied priorities, this strategic move has benefits to both parties and the capacity for efficient use of resources. In spite of this, private sector buy-in into public sector planning and development initiatives is one aspect which needs to be explored and promoted in the long run. To do this, the strengthening of institutional structures in the public domain is strongly recommended. This is because of the argument that…

> planning at the metropolitan scale particularly in South Africa is rather abstract, and political participation in the process has been weak. While formal commitment to the plan exists, in practice, constituency politics - a politics of investment in 'our areas' – remain (Todes, 2000a: 643).

For example, one of the suggestions to minimise mismatch in urban development priorities, is the need for a strong, defensible and flexible spatial development framework which will inform the preferred direction of urban growth for both the private and public sector (interview with Nancy Odendaal, 2009). The discussion above has revealed strong contrasting aims and interests pertaining to the struggle over the extent to which the public and private-sector share responsibilities to sustainable urban development. Whilst these border ultimately on the priorities and benefits to be derived by either party, the essential goal is to ensure a process of change which has the ability to make positive impacts on beneficiaries in a sustainable manner and contribute to overall urban sustainability in the long run.

4.5 Conclusion

The spatial changes of cities are not new; however, the contexts within which they occur are essential to the proper functioning of cities for its users. The outward growth of metropolitan areas has necessarily, led to a dispersal of new services, especially shopping, and associated consumer services, insurance, banking

and medical services. On a broader scale, the subject of sustainable urban development has come to represent the path of the city's future. One of the ways in which this is being expressed is through different urban planning and urban design perspectives with the banner of sustainability attached. For example, the overall concept of New Urbanism is geared towards intensification of use and densification around activity nodes as a means to curb urban sprawl, maximise pedestrianisation, and promote a mix of land uses. In this light, the New Urbanism movement promote the town centre and neighbourhood concepts towards metropolitan sustainability. Among many advantages of these concepts is the ability to spread market risk. The logic is that the entire project will not hinge on the market demand for only one use as compared to single use projects but will ensure the long-term sustainability of these centres (CNU, 2005: 13). Accessibility is also considered a powerful force to polycentric development and compaction as the new direction for city growth (Clark, 2000: 145) and must be supported by efficient public transport systems to sustain new nodes.

Traditional forms of technocratic and non-participatory urban planning and management have been directed towards the modernization of the city, and the use of rational processes is instrumental in nature and has proved as not serving the common good (Lopez de Souza: 2003). Currently, power and economic changes associated with capitalism and globalization are forces which determine how cities and urban landscapes are shaped. Cities have an authority embedded in them: street layouts, police and the location of things; whatever the question, the answer is always power (Short, 2003: 19). In ensuring that urban development is not compromised, the extent of power between the public and the private can be channelled in various ways to achieve a process of change that will be beneficial to both parties. It is suggested that an *alternative planning* is required, where state and civil society can join forces to fight successfully towards democratic city planning and management processes. Responsibilities formerly of public institutions must be undertaken in conjunction with private institutions and civil society organisations within the frame of well-defined responsibilities and power to be exercised (Lopez de Souza: 2003). The power of a large company such as Tongaat Hulett Developments, using mainly internal financing sources to physically reshape the working and living space of a city is significant in minimizing the cost of urban development on national governments. Attaining sustainable urban development is a shared responsibility, and this comes with major challenges. For example, the Umhlanga Ridge Town Centre has contributed towards an increase in housing stock of the Ethekwini Municipality; however housing affordability is limited to a few high-income earners as was evident in Table 4.0 (see Page 78 and 79). Whilst such upmarket

developments do not represent the priorities of the Ethekwini Municipality in terms of its welfare role, the development of Umhlanga Ridge Town Centre is relevant to support innovation in urban form and design, especially in testing the future viability of New Urbanism toward the search for a sustainable urban form.

Chapter Five: A Contextualisation of Sustainable Urban Development

5.0 Cities and Sustainable Urban Development

The agenda of sustainable development has become the epicentre to every decision made by individuals, businesses, cities and countries. With the majority of the world's population living in cities or towns, their quality of life is largely dependent on how well these urban environments meet their economic, social and environmental goals of sustainable development (Björnberg, 2009: 1007). This means that the demand and consumption levels for resources will increase accordingly. Whilst the aspiration of a sustainable future remains to be achieved, current needs of contemporary cities pose a major challenge to how resources can be efficiently utilised and equally shared. In doing this, hard choices, including trade-offs have to be made to accommodate the competing needs of society. In retrospect, changes in economic, social, environmental and spatial structures of cities have also created the need for a sustained future. Some of the consequences are food insecurity due to loss of agricultural land, unemployment, housing shortages, environmental degradation and governance. The crucial spatial challenge has been urban sprawl, especially in the face of contemporary rapid urbanisation, population explosion and the chain reactions associated with them.

In responding to these challenges, a myriad of planning systems, concepts and theories are being used by built environment professionals in their attempt to secure quality living, working and natural environments for current and future generations. The compact city, integrated development planning and New Urbanism are common examples found in the domain of urban policies towards sustainable urban development. Even though neither of these methods or concepts can be solely proven as the ultimate solution, they are known to contain normative principles which can be employed collectively to achieve a sustainable urban future. With sustainability considered a socio-economic phenomenon, it becomes imperative that urban development practices incorporate sustainability principles into policies, as a guide to rectify the unprecedented growth of urban populations and the sprawling of cities.

The scope for this study is to identify indicators that contribute to a sustainable urban form on a broader metropolitan scale based on local urban challenges and how they play out at a neighbourhood scale such as the Umhlanga Ridge Town Centre. In chapter two, sustainability and sustainable urban development were thoroughly defined within the current framework of city and global policies as well as the

responsibilities planners have to this agenda. Chapter 3 also provided an outline of some of the challenges cities encounter and the need to embrace urban sustainability as the new path to urban development. These preceding chapters have laid the foundation for an enquiry into the sustainable practices within the context of urban challenges in South African Cities, particularly Ethekwini Municipality.

Section 5.1 is a bird's eye view of evolution of planning approaches, specifically, procedural and substantive approaches. This discussion will be in relation to decision-making processes given the different dimensions of urban changes and the agenda of sustainability. Section 5.2 contains a summary of key policy frameworks which guide urban development in South Africa. Emphasis will be on integrated development planning and how the Ethekwini Municipality has expressed its stance to sustainability in terms of its Integrated Development Plan. Relevant aspects of the IDP document will be examined in section 5.3 to help bring out the main arguments with respect to how sustainable urban development is being addressed in the Ethekwini Municipality and the Umhlanga Ridge Town Centre. The South African Cities Network (SACN) in its 2006 Report identified four different but interrelated themes under which urban sustainability was discussed. These themes are the sustainable city, the productive city, the inclusive city and the well-governed city. The first three themes have been adopted by the researcher to analyse sustainable urban development in the Ethekwini Municipality in relation to the concept of New Urbanism used in the development of the Umhlanga Ridge Town Centre. These thematic analyses, based on identified indicators of a sustainable urban form will be the basis for the discussion in Section 5.4. The final section will be a summary of key challenges which hinder the effective implementation of sustainable urban practices in Ethekwini Municipality.

5.1 Planning Approaches and Sustainability

Tracing the roots of planning and planning theory is imperative to gain a solid understanding of the present discourse and direction of planning practice.

> Modern city planning arose from several separate movements at the turn of the 20th century: the Garden City, City Beautiful and public health reforms. These were characterized by three basic eras: the formulative years, where its promulgators[35], did not recognize themselves as planners (1800 - 1910); the period of institutionalisation, professionalization and self-recognition together

[35] Pioneers like Ebenezer Howard and Daniel Burnham

> with the rise of regional and national planning efforts (1910 – 1945); and the post-war era of standardization, crisis and diversification of planning (Campbell and Fainstein,2003;5).

During the post-war era, broader social issues such as poor public health, poverty, widening class divisions, and social unrest were closely linked to the design and non-functioning of cities (Tomalty, 2009: 1). Essentially, this 'tipping point' marked the beginning of urban planning which encompassed comprehensive guidance to the physical, economic, social and environmental needs of communities (ibid). It can be argued that these different needs of cities are the building blocks of sustainability and urban development.

Planning is a task with the intention of altering existing course of events based on timing and legitimacy of such planned interventions. Procedural and substantive approaches to planning intervention have been known to be used in the process (Mannhein, 1940). Procedural planning relies on models of rational decision making that can be carried out in any situation or location. It makes use of empirical information and professional expertise. The process often involves politicians formulating policy goals, while agencies are assigned the task of goal implementation and evaluation. Goals expressing the values of the organisation and effective means to achieve those goals make up the fundamental assumption of rational planning (Björnberg, 2009: 1011). The assumption of planners' expertise and rationale on the ordering of spatial elements were explicit in this respect. However, it became apparent that this approach to planning was largely based on empirical information and deductions without any social or cultural goals (Faludi, 1973). On account of the insufficiencies in rational decision-making processes to address urban problems, planning practice gradually moved away from 'procedure' to a substantive approach which gave attention to the implicit realities concerned with urban planning.

Substantive planning, on the other hand, answers the questions of "what we know about what we are planning for and for whom we plan for" (Alexander, 1992: 7). This approach has legitimate concerns for the intrinsic nature of place and space as well as improvement in socio-economic circumstances for those planning outcomes is meant to serve. These improved conditions are expressed through a combination of rational interventions alongside market mechanisms, values and norms (Murray, 2008). The substantive approach is often regarded as an avenue where issues of public interest, equality, equity and urban form and design can be articulated based on their own merit (ibid). In spite of the legitimate considerations of

the substantive approach, it is argued that the tendency to make arbitrary decisions is unavoidable and the possibility to take a limited view of planning in a particular aspect was imminent (Alexander, 1992: 8).

Globally, the rhetoric of sustainability has become the core principle for policy and planning within the public and private domain (Berke, 2002; Holden, 2008; Leisinger, 2007; Marcuse, 1998). At the same time, neither the public which promotes and responds to certain agendas, nor public officials who set the agendas, nor planners who interpret and implement agendas, have an overwhelmingly shared sense of where sustainability problems originate or how they should be solved (Holden, 2008: 476). In order to further the path of sustainability in the context of decision-making, the procedural and substantive approaches to planning occupy significant positions in terms of aiding research into the origins and aspects of urban challenges that need to be addressed. Essentially, the core of a sustainable future does not dwell solely on empirical evidence of population projections and increased energy use neither can sustainable planning decisions be made based on public interests or a planner's ethical stance. The ideology of urban sustainability lies in the ability of good planning to embrace all parts of the urban condition. On this premise, Etzioni (1968), Faludi (1973), Lindblom (1959), and Rittell and Weber (1973) argue that…

> planners' purposes go beyond the mere physical arrangement of space, but seek to 'maximize welfare and solve problems through the design of analytical tools from the social sciences that influence decisions and through the design of regulations and implementation of strategies that will produce desired outcomes (cited by Sandercock, 1998).

The procedural and substantive approaches to planning are equally important in decision-making processes towards urban sustainability. The ideal situation will be to strike a balance between these two methodologies and determining which one will be most needed in each unique planning situation. This is essential due to the different variables that exist in decision-making processes. For example, a procedural approach will prove relevant to address issues of diversity, openness, and consensus building, whilst a substantive approach will make possible the formulation of a shared public vision in local planning areas dominated by fragmentation and conflict (Berke, 2002: 22).

5.2 Summary of Urban Policy Framework in South Africa

Urban policy in South Africa has evolved from being racially biased state to one of equity (RDP White paper, 1994). Because South African cities and towns entered the 1990s with an apartheid urban planning and development legacy, urban planners and managers, and politicians were faced with the task of reconstructing the impression of a spatially segregated, highly fragmented and dispersed urban society (Donaldson, 2001: 1). The process of change has been followed by an overhaul of policies and legislations concerning urban and land development. Not only that, but also the manner in which policies are formulated have changed from a top-down approach to a more bottom-up approach. Where the post-apartheid South Africa is concerned, national and local policies are to address the issue of development in a pro-growth manner. Ultimately, South African planning policy has shifted considerably from apartheid-based approaches to a framework of planning practice which seeks development that is spatially, environmentally and socially just (Duminy, 2007: 64).

The concept of sustainable development, although relatively new to policy discourse in South Africa, has spread rapidly through policy circles and has been adopted in key policy documents and legislation like the National Constitution (Patel, 2000: 384), the National Spatial Development Perspective, the Urban Development framework, the Development Facilitation Act and Municipal Integrated Development Plans. Table 5.0 (see Page 98) summarises the purpose and impacts of these documents in land and urban development. However, Ethekwini's Integrated Development Plan is the key document upon which the discussions of this chapter will be based.

5.2.1 Integrated Development Planning in South Africa

Planning for development in South Africa has become dynamic and an integral part of the government's pursuit to achieving more sustainable processes and outcomes for progress and development. After almost five decades of the advent of municipal planning in South Africa, planning was practiced on a local level, with emphasis on racial segregation, within a top-down apartheid superstructure, sectoral fragmentation and the non-involvement of potential beneficiaries and stakeholders (Oranje et.al, 2000). One of the major challenges facing local government has been to address the inequalities and inefficiencies resulting from apartheid policies and planning. A new and integrated approach to planning which responds to the needs of local communities is seen as a key to accomplishing reconstruction, overcoming the skewed spatial policies of the apartheid government, and addressing poverty (DPLG, 2002: 1). South Africa's integrated

planning approach was launched after 1994 as a platform for previously marginalised municipalities to directly partake in service delivery planning; reform old and build new institutions; and to identify and prioritise strategic development interventions with both short and long term impact. It can be seen as a new form of regional planning that aims to achieve integrated territorial development (Todes, 2004: 844). So far, the process has provided an opportunity for the active planning processes to occur on a more decentralized yet coordinated manner; that is, local, provincial and national; these offer the different scopes of government to debate and agree on long term development strategies and on a more immediate one for any given municipality (Gueli et. al, 2007). The outcome of this process is an Integrated Development Plan.

The Integrated Development Plan (IDP) is a basic statutory document that informs all aspects of development within local governments (District and Local) in South Africa. It requires municipalities to prepare 5-year strategic plans that are reviewed annually in consultation with communities and stakeholders. These plans seek to promote integration by balancing social, economic and ecological pillars of sustainability without compromising the institutional capacity required in the implementation process, and by coordinating actions across sectors and spheres of government. In essence, Integrated Development Plans were intended to assist municipalities in achieving their developmental mandates and to guide the activities of any institution or agency operating in the municipal area (Oranje et. al. 2000:19).

Table 5.0: Key Documents guiding Land and Urban Development

Document	Development Facilitation Act	Urban Development Framework	National Spatial Development Perspective
Year	1995	1997	2003
General aims and Objectives	Speed up land-related RDP projects; remove obstacles to the provision of land for residential and other use; promotes security of land tenure during development processes; provide the guidelines for any decision, in terms of any law relating to land development and planning.	Promote a consistent urban development policy approach for effective urban reconstruction and development; to guide development policies, strategies and actions of all stakeholders in the urban development process; and to steer them towards the achievement of a collective vision.	Reverse the state of socio-spatial fragmentation inherited from apartheid; define a spatial growth and development trajectory; make strategies choices in the allocation of developmental resources and effort so as to provide optimal benefits; ensure that South African urban regions are globally competitive
Provisions	Sets of objectives and principles to govern land development including sustainability, enforcement of constitutional rights; nationally uniform procedures for the layout and subdivision of land; created provincial DFA tribunals with legal powers to speed up application procedures	Emphasised the importance of public-private partnership creation in the delivery of municipal services.	A spatial development strategy that is context-specific (assumes that urban dynamics are rooted in historical and cultural legacies); focuses infrastructure investment in places with high potential (i.e. Metropolitan regions); social development spending in places with low potential.
Impact on Urban development	Specifically to confront patterns of urban sprawl; necessitates consultation with interested and affected parties during any development procedure; DFA application process enables applicants to bypass the bureaucratic inefficiencies of traditional procedures	To tackle spatial inefficiencies which impact negatively on the accessibility of work and other opportunities, by promoting urban densification in conjunction with more efficient public transportation; to improve the overall quality of the urban environment by better integrating environmental concerns in development planning and urban management; and	The NSDP represents many neoliberal political threads as applied to spatial development. it assumes that: 'even' distribution of social and economic development is impossible through trickle-down or trickle-out effects; different regions have more economic potential than others and their needs may vary as a result

Source: Republic of South Africa, 1995, 1997, 2003; Duminy, 2007: 66-67

5.3 Regional Planning in Ethekwini Municipality

Planning in Durban is based on a package of plans which is hierarchical and integrated; and shows the move from strategy to implementation (Ethekwini IDP, 2009/2010 Review: 23). The Municipal Integrated Development Plan ranks second on the package of plans and centres on broader strategic issues. These strategic decisions filter through to plans lower in the hierarchy to address street level planning issues such as urban form and design.

5.3.1 Overview of the Ethekwini Integrated Development Plan

> If sustainable cities were built with policy documents and vision statements alone, South African cities would have been model cities (Schoonraad, 2000: 1)

Although Durban is far from being a model city, the vision of the city is to be "Africa's most caring and liveable city by 2020". Upon reaching this vision, its citizens would: (i) have ease of movement in the city; (ii) enjoy a safe environment in all parts of the municipal area; (iii) afford what the city offers; (iv) enjoy a clean and green city; (v) have access to economic opportunities; (vi) enjoy homely neighbourhoods; and (vii) have access to services, in particular municipal, health and education services (Ethekwini IDP, 2009/2010 Review: 6). Whilst the achievement of this vision is no easy task, especially on a metropolitan scale, the city has had to make key strategic choices based on its limited resources. The long-term development framework of the Ethekwini Municipality has been formulated with the intention of adopting sustainable practices to meet the socio-economic, environmental and infrastructural needs of its citizens. Essentially, the principles of sustainability and integration are major elements in the City's Integrated Development Plan.

The role which local government plays in urban development is embedded in the power they have over the use of State resources, but most importantly, the responsibilities they owe to the public. In trying to utilise these resources efficiently, Ethekwini Municipality has made a number of key choices to foster the path of its urban development priorities for the city and its citizens. In Table 5.1 (see Page 100) is a summary of selected key choices which have a direct bearing on the scope of this research and will be discussed in relation to the themes of sustainable urban development in Section 5.4 of this chapter.

Table 5.1: Selected Key Choices of the Ethekwini Municipality

Key Choice	Objective
CHOICE TWO Using Land Use Management to increase densities and to reduce sprawl	The Municipality is striving to ensure that people are brought closer to where they live, work, study and relax. While the Council is committed to bringing people closer to areas of economic activity, the **principle of sustainability** will be the driver to ensure that people are living in harmony with the environment. Using the municipal Spatial Development Framework (SDF), the Municipality is committed to the zoning of land in order to increase densities and reduce urban sprawl. The SDF will ensure that: • There is more effective use of facilities. • The Municipality reduces the need to build new facilities. • People live closer to amenities and work opportunities.
CHOICE FOUR A good public transport system	One of the objectives of the 2020 Vision is ease of movement for commuters to and from work, shopping, leisure and school (our specific vision here is that people will not have to take more than two buses, taxis or trains before they reach their destination in Ethekwini). If Durban improves its public transport then it will: • Reduce the need to increase road networks. • Provide a platform of connectivity between people. • Reduce pollution by minimising vehicle usage.
CHOICE FIVE: Ecological and related tourism	The natural resources of the City have large economic benefits for tourism and economic development. This choice seeks to develop an innovative, highly effective and measurable marketing plan to grow tourism numbers with the aim of: • Keeping people active • Retaining natural assets and benefiting from the natural environment • Keeping people healthy
CHOICE SIX Ecological integrity	Ecological integrity is ensured by building sustainability into the way we promote and manage economic development, provide infrastructure and services, manage our City finances, involve citizens in decision making, and protect our threatened ecosystems. This includes: • Decreasing the cost of engineering • Retaining an attractive city • Reducing the cost associated with natural disasters The balancing of social, economic and environmental needs of Ethekwini will result in the efficient usage of all our resources, and therefore ensure that all forms of development occur within the carrying capacity of our natural environment

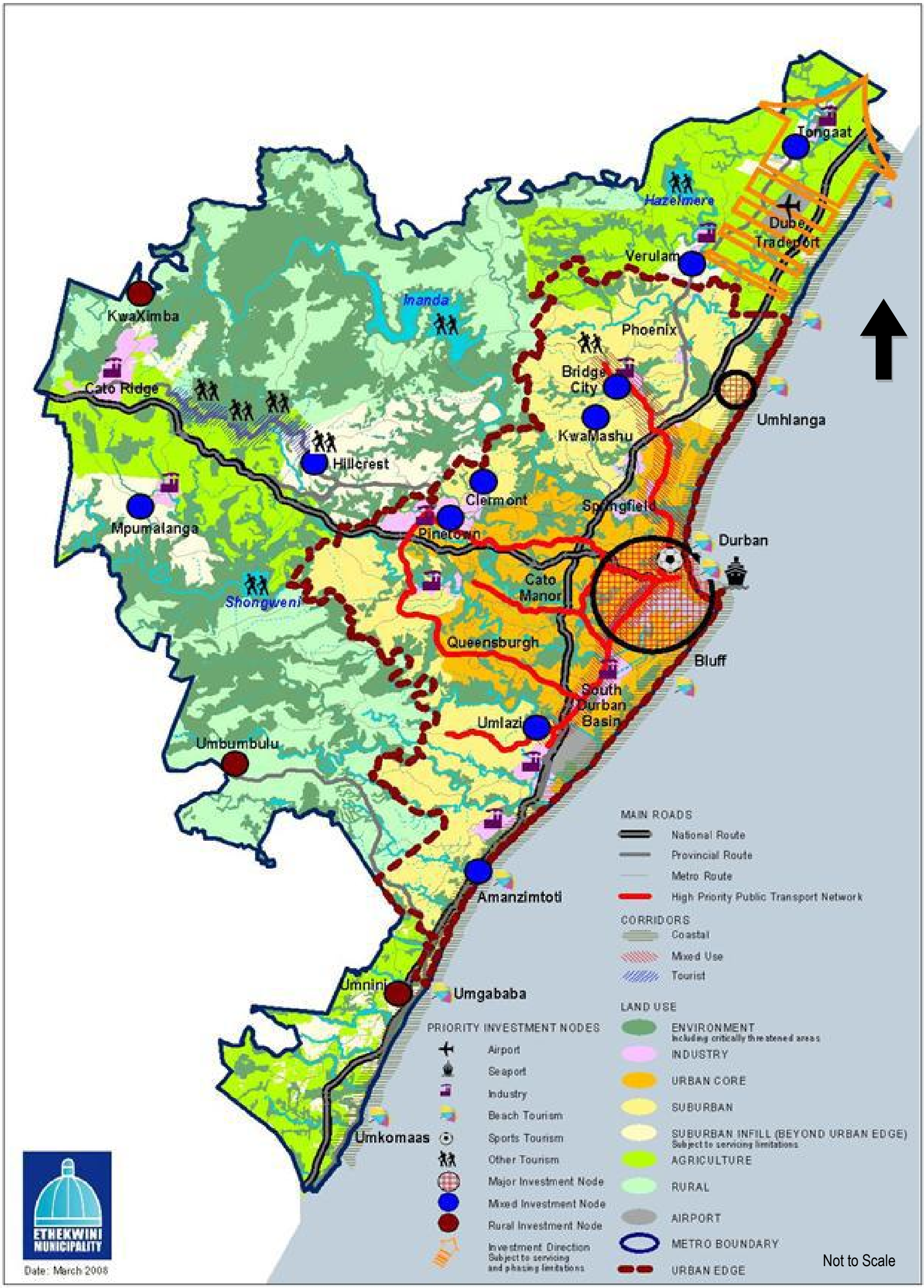
Source: Ethekwini Municipality IDP, 2009/2010 Annual Review: 7

5.3.2 The Spatial Development Framework

The Spatial Development Framework incorporates various aspects of a community into a spatial dimension. It is the point of integration of strategic municipal spatial strategies in the arena of economics, transport, environment and society (Ethekwini IDP Review, 2009/2010: 21). The role of the Spatial Development Framework is to facilitate development in a sustainable manner, in terms of the environmental, social, economic, cultural and possibly political aspects to development. The process of preparing the Spatial Development Framework includes a comprehensive spatial analysis of the area which looks at constraints and opportunities; areas of need and with potential; spatial trends and patterns; accessibility, circulation and movement routes as well as settlement analysis and land uses. Its importance is to predict or foresee where development will occur and what impacts they make. If development occurs too quickly, it may not be sustainable in the long term, which means that any attempt at development now will reap no benefits and result in a cycle of development flaws.

The Ethekwini Spatial Development Framework (see Figure 5.0 on Page 102) uses the concept of corridors and nodes to prioritise urban development. It includes, among others, the identification of key areas for investment, the preferred direction of growth; areas with opportunities for infrastructural development and development management approaches (Ethekwini IDP, 2009/2010 Review). In Table 5.2 (see Page 103) is a list of selected defining features which are considered relevant to the scope of this research:

Figure 5.0: Ethekwini Municipality Spatial Development Framework



Source: Ethekwini Municipality IDP, 2009/2010 Annual Review: 20

Table 5.2: Selected defining features of the Ethekwini Municipality Spatial Development Framework

1	**The compact city model** — An Urban Core, being the urban centre, which generally has servicing capacity and thus opportunity for densification and to support thresholds for a range of services, industry and public transport. — An Urban Edge concept used as a tool to curb urban sprawl, promote compaction, public transport and sustainability, protect environmental assets and prevent inefficient expenditure on infrastructure. This concept in practical terms indicates the boundary within which it is sustainable to provide additional services. This urban edge has been developed in terms of the cost surfaces model which details cost of service provision in the entire Ethekwini Municipal area.
2	An emphasis on accessibility and convenience in more densely populated urban areas
3	**Durban Central and Umhlanga as Major Investment Nodes** — A Northwards investment direction in response to private sector development needs, Dube Tradeport and other public investment projects. This development direction traverses three catchments where services have not been budgeted for and indicative development thresholds are extremely uneven and inefficient and services will thus need to be phased in. — Thus the directional depiction on the plan represents a continuum northwards from the urban edge and discourages 'leap frogging' which can increase servicing costs by up to 30% for development (both for the public and private sector). Hence the thrust of development outside the current urban edge in the next 5 to 10 years will be restricted.

Source: Ethekwini Municipality IDP, 2009/2010 Review: 17-18

In ensuring that the strategic decisions contained in the City's Integrated Development Plan and Spatial Development Framework are carried out adequately, the Municipality has developed a delivery package known as the Eight Point Plan. In Table 5.3 (see Page 104) is the eight point plan (listed on the order found in the IDP) which will guide in the subsequent discussion. These eight separate but related plans filter through a series of programmes and plans which are supportive of each other to ensure greater impact in delivery.

Table 5.3: Ethekwini Municipality Eight Point Plan

Plan Point	Plan	Goal	Desired Outcome
One	Sustaining our natural and built environment	To direct and manage the use of the built and natural environment to ensure sustainable and integrated growth and development of our City.	Citizens will be able to access and use resources to meet their needs without compromising the amenity for others and the resource base of the City in the present and in the future.
Two	Economic development and job creation	To develop the economic wealth of the Ethekwini region for the material well-being of all its citizens	Strong economic growth, sustainable job creation and poverty alleviation.
Three	Quality living environment	Promote access to equitable, appropriate and sustainable levels of household infrastructure and community services, and facilitate access to housing.	Appropriately serviced, well maintained, quality living environments.
Four	Safe, healthy and secure environment	To promote and create a safe, healthy and secure environment.	All citizens living in a safe, healthy and secure environment.
Five	Empowering citizens	To empower our citizens by utilising partnerships to enhance skills, to provide easily accessible information and to ensure a City committed to an innovative approach to governance and service delivery so that all citizens are able to engage actively in the economic, social and political activities of the City.	To develop a City where the skills needs of key commercial, industrial and government players are understood. To develop a City where adult literacy rates are impacted positively through partnerships with the public and private sectors. To develop municipal staff who understand the local government environment, their role in improving the quality of life of Ethekwini citizens and who are sufficiently skilled to do their jobs competently.
Six	Celebrating our cultural diversity	Create the conditions under which sport, recreation, arts and culture, and heritage opportunities can be realised for personal growth, community solidarity and economic advantage.	An environment in the municipality that supports sport, recreation, arts, culture, heritage and cultural diversity.
Seven	Good governance	Ensure a strong and caring institution to promote and support a consultative and participatory local government.	All citizens embracing and practising the concepts of Good Governance.
Eight	Financial viability and sustainability	To maximise the Municipality's financial resources to ensure long-term financial viability and sustainability.	Confidence of all internal and external stakeholders in municipal financial management. • Excellence in the service delivery of municipal financial services. • Compliance with prevailing municipal financial legislation.

Source: Ethekwini Municipality IDP, 2009/2010 Review: 10

5.4 Towards a Sustainable Urban Development

The following discussion is based on the themes adopted by the South African Cities Network (2006) which are the sustainable city, the inclusive city and the productive city. The Ethekwini Municipality's key choices, the Spatial Development Framework (SDF) defining features and the Eight Point plan outlined in Tables 5.1, 5.2 and 5.3 respectively will be the linchpins for the analysis. It is believed that the thematic analyses will assist in bringing out how the elements of New Urbanism fit into sustainable urban development in the Ethekwini Municipality. For the purpose of this research, sustainable urban development will be expressed from a perspective of key urban challenges which have been identified in Ethekwini Municipality's Integrated Development Framework.

5.4.1 The Sustainable City

The sustainable city is complex in the sense that it cannot be defined from a single perspective. Shmelev and Shmeleva (2009: 11) have defined the sustainable city a "a concept, characterising the development of the city as a holistic system, in which social, economic, environmental and institutional aspects of development are harmoniously integrated". The relationship between these aspects of the sustainable city is an interrelated and interdependent one. Although urban challenges occur at different degrees in different locations, particular objectives (also referred to as indicators) of urban sustainability can be seen to include the following: compact urban form; preservation of open space and sensitive ecosystems; reduced automobile use; reduced waste and pollution; reuse and recycling of materials; creation of liveable and community-oriented human environments; decent, affordable, and appropriately located housing; improved social equity and opportunities for the least advantaged; and development of a restorative local economy (Wheeler, 2000: 134). In trying to pool together all the different indicators, the achievement of urban sustainability can be difficult, and the researcher argues that an integrated yet incremental approach can be adopted to allow for flexibility, and could be able to cope with the dynamism of current urban challenges.

On a broader scale, some of the development management approaches towards a sustainable city are the urban edge concept, urban development boundary and the urban development line. The Ethekwini Municipality until recently used the urban edge concept. However, an interview with a key informant at the Ethekwini Municipality revealed that the urban edge has changed to an urban development line. Even though it still shows as the urban edge on the Spatial Development Framework, the criteria for the urban development line is based on the infrastructure and accessibility models. The infrastructure model has been

developed on the intent of controlling urban development in places where bulk engineering services are available and can be financed without much strain on the city's resources (Bretzke, 2009). The accessibility model, on the other hand, has been developed to match the demand for facilities, based on population thresholds and income and age profiles, with the supply and capacity of facilities geographically (Ethekwini IDP, 2009/2010 Review: 53).

5.4.1.1 Compacting the City

Strategic spatial planning is being used as one of the tools to transform apartheid-based spatial development in South Africa and to make cities more environmentally sustainable (SACN, 2006: 6-7). With this, the Ethekwini Municipality has placed emphasis on densification and compaction. This is intended to counteract sprawl and avoid its sustainability pitfalls. Compaction policies are considered as promoting a range of principles, such as urban regeneration, revitalization of the inner city, preventing of urban sprawl, higher densities (mainly residential), mixed land-use, promoting public transport nodes, improved access between employment, housing and services, corridor development and urban infill (APA, 2002; Barton, 2000; Donaldson, 2001; Jenks et.al., 1996; Kenworthy, 2006). These elements are also the fundamental elements of contextualization in South African urban development given the challenges of housing shortages, unemployment and climate change. The mechanism used by the Ethekwini Municipality towards compaction and densification is its Land Use Management Framework.

The aim of compaction and densification is to ensure that people are brought closer to where they live, work, study and relax while living in harmony with the natural environment (Ethekwini IDP, 2009/2010 Review: 7). Compaction is parallel to the "urbanist ideals of Jane Jacobs (1961) which suggest opportunities for higher density living, proximity between home and work, mix-use and social integration" (Todes, 2000a: 617). It is also identified as an essential indicator towards sustainable urban development because land is seen as an important element for development yet a limited natural resource. Thus, within the context of compaction is the shift from low-density development to higher densities. The reason is that higher densities offer the opportunity for a larger population concentration in space, thus providing the viability for a mix of land uses, public transport and social mix (Jenks, et.al, 1996).

In the Ethekwini Municipality, apartheid planning characterised by spatial fragmentation marked the beginning of urban dispersal from the city centre. In adopting sustainable practices, the compact city model is

being used to promote densification and infill development in the urban core where extra capacity for bulk infrastructure exists, while discouraging encroachment on environmentally sensitive areas (Ethekwini IDP, 2009/2010 Review: 18). Additionally, the development corridor concept has become relevant for densification in the mixed-use corridor which stretches from Durban's central business district to Bridge City and KwaMashu (see Figure 5.0 on Page 102). With these strategic moves toward urban development, it is expected that the urban core and development corridors will attract investment toward economic growth, promote spatial integration and contribute towards the achievement of a sustainable city.

The north of Durban, on the other hand, has been recognised as the future direction of large scale urban growth within the Ethekwini region as commented by all key informants interviewed. Furthermore, they noted that although the New Urbanism design concept has not been explicitly embraced by the Municipality in its Integrated Development Plan, its application has become evident in developments such as Umhlanga Ridge and the Point Waterfront. Compaction has been employed through intensification, mixed land uses and higher densities (approximately 220 dwelling units per hectare) at the Umhlanga Ridge Town Centre (Architecture SA, 2008) which is congruent to the compact city model. This is because New Urbanists regard compaction as an essential aspect of neighbourhood development to curb sprawl, promote social contact, decrease automobile use, and subsequently reduce energy use as reflected in the New Urbanism discussed in Section 3.3.2 in Chapter 3.

5.4.1.2 Liveable and Community-oriented human environments

The creation of quality living environments represents a deliberate attempt to halt the monotonous living environments created during the period of apartheid for non-white population groups and even post-apartheid low-density, low-income housing which were provided under the Reconstruction and Development Programme (RDP) (Gilbert, 2004; Todes, 2003). With the democratisation processes, the urban landscape is seen as a crucial site for redistribution and delivery, to overcome the fragmentation and inequalities of the inherited city form (Harrison et. al, 2003). One of Ethekwini's eight point plan is to provide quality living environments for its citizens. Whilst this plan is not peculiar to Durban, the fundamental desire of quality living environments is rooted in South African legislation and policies such as the National Constitution, the National Housing Policy and the Urban Development Framework. A quality living environment is based on the following parameters: safety; walkability; opportunities for recreation and economic enterprises; sound human-oriented design; accessibility to basic services; infrastructure and the sense of community (Barton,

2000; Filipovic, 2008). New Urbanists agree that if the different aspects of the quality living environment are coordinated well; this will enhance the socio-economic needs of inhabitants (Talen, 2002). However it is important to note that an environment can be liveable but not necessarily community-oriented since the latter dimension has more to do with individual behaviour and personal perceptions. Related to the liveable environments is the multifunctional land use which is defined as 'the combination of different socio-economic functions in the same area' (Priemus *et al*. 2000 cited by Priemus et. al, 2004). In the theory of good urban form, Hoppenbrouwer and Louw, (2005: 968) argue that mixing land uses form part of a wider strategy for sustainable development.

"Providing a quality living environment for citizens is as a core mandate of the Ethekiwini Municipality" (Ethekwini IDP, 2009/2010 Review: 49). Essentially, the City's key outcome for this plan is the levels of satisfaction of residents relating to infrastructure provision. Housing is a major need for most citizens of the Ethekwini region. Currently, the City has approximately 110,000 households living in informal settlements (Statistics SA, 2007), which are characterised by lack of basic and infrastructural services[36]. These informal living spaces are known to be unsafe due to high levels of crime, a high susceptibility to ill health and poverty (UN-CSD, 2004). With Ethekwini's target of providing 16,000 low-income houses per year, the danger with this public mandate is the limited financial resources and the unavailability of appropriately located land which often dictate the outcome of low-income living environments. This challenge is typical of trade-offs needed to achieve sustainability in urban development.

The notion of a quality living environment from a New Urbanism perspective is to replicate the idealised small town characterised by a sense of place and community, public realm and socio-economic diversity (Furuseth, 2002: 1997). By employing neotraditional planning, New Urbanists would produce an urban form where neighbourhood life and sense of community are rejuvenated (ibid). Quality living environments are created with a sense of appeal that harbours around elements like easy accessibility and walkability; 24-hour security (provided by security cameras and passive surveillance in Photo 5.0 on page 108); well-kept sidewalks and lawns and the efficiency of communication channels. These elements mentioned are evident of the kind of environment that Umhlanga Ridge Town Centre offers to its inhabitants. In a survey conducted by the

[36] Water, sanitation, formal housing, electricity, social facilities, stormwater control systems, etc

researcher, 15 out of 20[37] respondents stated that Umhlanga Ridge Town Centre meets their perceptions and aspirations of a quality living environment when compared to high density areas like The Point[38].

Photo 5.0: Safety enhanced by high degree of visibility in walkway and security camera (in red circle)

Source: Researcher's personal collection, 2009

It was obvious that these perceptions were based on the physical characteristics of the Umhlanga Ridge Town Centre rather than the implicitly human-oriented ideals that make up a sustainable community or neighbourhood. The remaining 5 respondents were of the view that even though Umhlanga Ridge Town Centre offered a *modern living environment* better than that of the townships[39], its location is detached from the rest of the City and does not offer a vibrant living environment for social interaction among residents. From this, it becomes evident that a quality living environment cannot be defined neither on architecturally appealing design nor palm-lined boulevards but is more dependent on socially-oriented aspects such as interaction which is responsible for the creation of a sense of place and community. This is where New Urbanism as a neotraditional planning concept fails in its attempt to use design as a determinant for social interaction in a postmodern era of technology-based communication.

[37] The researcher used a sample size of 20, comprising of 10 residents and 10 non-residents
[38] An inner city suburb in Durban
[39] Townships is the narrow definition of black areas created the apartheid regime

Alternatively, the aspect of mixed land-use entrenched in New Urbanism plays out well at the Umhlanga Ridge Town Centre, allowing for different kinds of daily activities within a distance of less than 1km as was gathered from all 10 residents interviewed. However, they stated that prioritisation of retail and commercial facilities over social facilities made travelling by private car necessary. Questionnaire survey showed that facilities such as churches, schools and other community facilities were located about 2km outside of the Umhlanga Ridge Town Centre. Although this could be considered a comfortable walking or cycling distance as stated by residents, it was observed that two major transport routes (the N2 and M41) transverse the study area thus making walking or cycling almost impossible especially for the young and elderly. With this, it can be concluded that the human-oriented dimension of the Umhlanga Ridge Town Centre is commendable, but its linkages to surrounding areas has been compromised, thus making up a car-oriented living environment as reiterated by one of the key informants interviewed.

From this immediate discussion, it is evident that the definition of a liveable and community-oriented human environment is relative; it is dependent on individual perceptions, needs and socio-economic status of its occupants. For the urban poor who rely on the public sector like the Ethekwini Municipality for their needs, a low-income housing development (inclusive of water, electricity and a VIP toilet) located on the urban periphery meets an immediate need. Alternatively, a neighbourhood like Umhlanga Ridge Town Centre offers a liveable environment where basic services do not command high value but rather the extra services such as 24-hour security and the aesthetic appeal that come with it.

5.4.1.3 Preserving the Natural Environment

Undoubtedly, the environmental dimension to development pioneered the global agenda of sustainability. It is recognised that natural resources (such as air, vegetation, soils, rivers and ecosystems) are the power to wealth creation and serve as a support system for humans. Without these resources, there would neither be economic activity nor human life, thus the need for a high degree of urgency in wise utilisation of these resources.

Environmental sustainability occupies an important position to urban development in the Ethekwini municipality. In attesting to this, Durban became the first city in South Africa to accept the Local Agenda 21[40]

[40] Local Agenda 21 is a global agenda for local authorities for socially, economically and environmentally sustainable development adopted at the 1992 Earth Summit in Costa Rica

and Local Action 21[41] mandates as a corporate responsibility in 1994 and 2002 respectively (State of the Environment Report, 2003/04: 5). The Ethekwini Municipality's natural assets include 98 kilometres of coastlines; 18 catchments; 17 estuaries; 4000 kilometres of rivers; about 63,000 hectares of open space; and these are considered to have a total service value of R3.2 billion per annum (Ethekwini IDP, 2009/2010 Review). It is evident that the "issue of environmental sustainability is particularly critical to a city such as Durban where its environment continues to act as a key service provider, meeting people's basic needs in terms of climate regulation; flood attenuation; recreation; food, water and air", just to mention a few (State of the Environment Report, 2003/04: 6). In confirmation, the fifth key choice of the Municipal Integrated Development Plan reiterates the economic benefits to be derived from eco-tourism towards economic development. In facilitating this path of environmental sustainability, one of the mechanisms used by the Ethekwini Municipality is the Durban Open Space System Plan[42]. To ensure that this process yields the required results, land development applicants are required to submit Environmental Impact Assessment[43] (EIA) reports, which include the identification of any environmental assets that require protection and management. With this process, the Municipality has currently acquired approximately 64,000 hectares of open space of which 90% is privately owned land (Ethekwini IDP, 2009/2010 Review: 23). Physical development is subsequently prohibited in these areas (ibid) and have been characterised as active and passive open spaces.

In considering environmental sustainability at a neighbourhood scale, the 18th principle of the New Urbanism encourages the distribution of "a range of parks, from tot-lots and village greens to ballfields and community gardens" within neighbourhoods (Charter for the New Urbanism)[44]. The latter part of this 18th principle also states that "conservation areas and open lands should be used to define and connect different neighbourhoods and districts" (ibid). A sustainable living environment is where a neighbourhood's built and landscape forms as mutually dependent, thus the prerequisite of green spaces within building spaces. Umhlanga Ridge Town Centre is a Greenfield development (previously under sugarcane cultivation) where natural vegetation was almost non-existent as stated by the key informant interviewed from Tongaat Hulett Developments. However, he stated that the development guidelines for the Umhlanga Ridge Town Centre

[41] Local Action 21 is a mandate to local authorities worldwide to move from agenda to action and ensure accelerated implementation of sustainable development.
[42] The Durban Metropolitan Open Space System Framework Plan (D'MOSS), aimed at ensuring the conservation and appropriate management of important natural resource base in the Durban Metropolitan Area
[43] The Environmental Impact Assessment process involves a detailed study to predict the possible positive and negative ecological effects of a development project. It is to enable decision-making by city authorities
[44] This is the 19th principle of the Charter for the New Urbanism

requires green spaces to be planted with indigenous vegetation to enhance and reinstate the natural coastal vegetation towards a quality natural environment. Alternatively, the researcher observed that existing indigenous vegetation was preserved and had also been planted for landscaping purposes as shown in Photos 5.1 and 5.2 (on Pages 111 and112 respectively) respectively. The mix land-use principle also allowed for green spaces for recreation within the residential precincts of the Umhlanga Ridge Town Centre.

However, looking at the broader Umhlanga Ridge area, portions of Umhlanga Ridgeside and Mt. Edgecombe (see Figure 4.0 on Page 59) have been identified for conservation and have become part of the Durban Open Space System. Whilst green spaces are essential for the proper functioning of ecosystems and their importance for carbon storage; they contribute to reducing the effects of climate change and provide a sense of nature within the urban environment. To New Urbanists, the relationship between the natural environment, the socio-economic and cultural aspects of sustainability is critical in terms of interdependence; their importance to economic productivity, good health; and preservation of agricultural land.

Additionally, to achieve a sustainable urban form, the aim should be to reduce the lifetime environmental impact of any development by reducing the energy and resources used and waste produced at each stage of the development life cycle – construction, occupation and, if necessary, demolition (Carmona, 2009: 51).

Photo 5.1: Trees in the Roundabout on Centenary Boulevard (highlighted in red circle)

Source: Researcher's personal collection, 2009

Photo 5.2: Planted Trees at the Palm Boulevard, Umhlanga Ridge Town Centre (highlighted in red circle)

Source: Researcher's personal collection, 2009

These thoughts are equally shared by Tongaat Hulett Developments in its 'Building Guidelines for more Sustainable Energy Services' whose implementation is monitored by the Umhlanga Ridge Town Centre Management Association.

5.4.1.4 Public Transport

Public transport has been identified as a useful indicator for driving the path of urban sustainability; and known as "the culprit for initiating a quest for compactness, in an effort to reduce reliance on the motor car, reduce pollution, limit energy consumption and move more people onto public systems (Jenks, et.al., 1996: 71). Transportation is a complementary element of the compact city, and as the diminishing factor between space and time. Urban form, as measured by urban density and the centralization of jobs, is found to have a very strong relationship with transport patterns, especially the level of car dependence and the effectiveness of public transport (Kenworthy, 2006: 69). Whilst transportation in the sustainable city is concerned with energy efficiency and reduced emissions, non-motorised forms of transport such as walking and cycling are relevant to lessen the same concerns and create healthy societies. The current high dependence on automobile does not only have extremely high environmental, economic, and social costs but undeniably, also shapes the way cities are built and grown (Balsas, 2001: 429).

The current modes of transport in Ethekwini Municipality have been described by two key informants as a 'defamation' of the city's desire towards a sustainable city. The dispersed urban form of the Ethekwini region has perpetuated the increase in private car usage facilitated by road building; and coupled with an inefficient public transport system. Knowing that the goal of the Ethekwini Municipality is to implement an effective, efficient, sustainable and safe public transport system, this current situation does not reflect a sustainable transport path. It is documented that Warwick Junction, the busiest transport node in the region, has about 460,000 daily commuters. These include trains trips, 300 buses and 1,550 mini buses (popularly known as taxis), with only 70,000 commuters each on rail and buses respectively (Dobson et. al, 2009). From these figures, it can be concluded that taxis are responsible for more than half (about 320,000 commuters) of commuter movement and this means frequent trips as taxis accommodate approximately 16 passengers per trip. Currently, Ethekwini's average utilization of public transport is 21% rail, 30% bus and 85% taxis. Furthermore, these statistics imply higher volumes of emissions, increased traffic congestion, and subsequently increased travel times. Globally, road transportation is by far the fastest growing source of carbon emission, thus contributing towards climate change (Du Plessis and Landman, 2002: 55). Brown et. al. (2009) has argued that it is often easier for transportation planners to plan for freeways than other sustainable alternatives. Subsequently, this practice continually defies the desires of sustainable transport systems (Kenworthy, 2006). Ultimately, an efficient public transport system offers advantages to easy accessibility, enhanced economic productivity and discourages the use of the private car.

For the north of Durban, public transport has been identified as a major challenge because of the lower population concentration associated with low density development built for private car use. The researcher observed that Umhlanga Ridge Town Centre is only accessible mainly by taxis and the private car (see Photos 5.3 and 5.4 on Pages 114) and this was confirmed by two key informants. Even with this, public transport penetration and connections are non-existent within the greater Umhlanga region. Although the Umhlanga Ridge Town Centre prioritises pedestrian movement over vehicular movement (as shown in Photo 4.5 on Page 81), the researcher observed that no provision had been made for alternative non-motorised modes of transport like cycling. The transit-oriented development promoted by the New Urbanism Concept also seems unrealistic given that the main connections to the Umhlanga Ridge Town Centre are major highways (N2 and M41) which skirt the development and thereby facilitating car usage into the wider region.

Photo 5.3: Taxi Rank at Gateway Shopping Centre

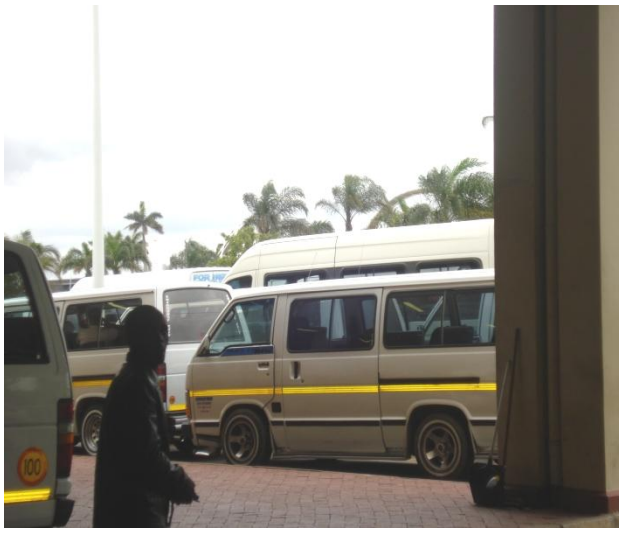
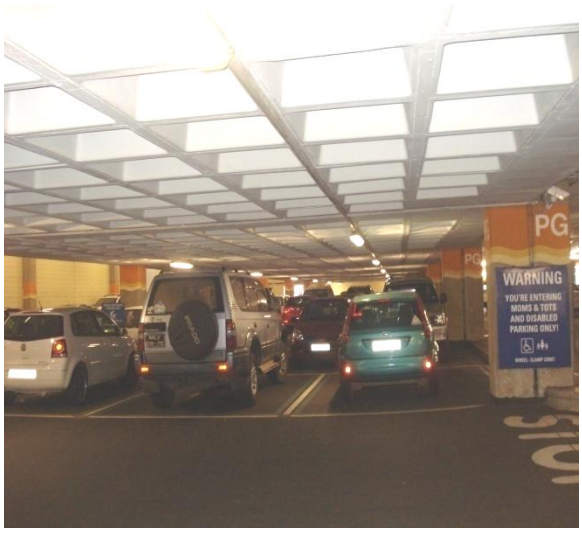


Photo 5.4: Car park at Gateway Shopping Centre



Source: Researcher's personal collection, 2009

Essentially, the implementation of an efficient public transport system can only be viable if land-uses are integrated within the wider development framework; and has the necessary threshold population to support it (Quinn, 2006). However, one key informant interviewed argued that "for New Urbanism to work, it required the correct modes of transport and a land-use pattern that supports it" and that the current challenges with the metropolitan transport systems will have to be critically evaluated to support urban development within the region. It has also been suggested that "efforts to achieve a more balanced transportation system based on New Urbanist principles are currently blocked by a lack of political will and the inertia of existing policies, building practices and built form" (Ellis, 2002: 254). So far, the transport situation at Umhlanga Ridge is not far from this phenomenon except that the previous land-use which was agriculture and subsequently, the kind of low-density development characterised by high car ownership did not make public transport a priority for the Northern Municipal Planning Region. This view was shared by three of the key informants interviewed; and who commented that transport planning in Ethekwini had been marginally addressed, making the use of the private car a necessary alternative.

5.4.2 The Inclusive City

In a broader sense, the caring and inclusive city is related to the 'right to the city'; and social sustainability. It has been defined to entail access to basic service and housing, tolerance to cultural diversity, and settlement integration (SACN Report, 2006). Alternatively, inclusivity in an urban setting has been referred to as the

goal of meeting continuously rising (or non-declining) welfare and utility levels for the city's population (Solow, 1986), while maintaining a respect for clear environmental constraints and the long-term economic viability and attractiveness of the city for internal and external firms. Broadly speaking, it encompasses concerns for equity and equality, social justice (Irurah and Boshoff, 2003: 250) and an urban environment where socio-cultural bonds are easily created and sustained. In the inclusive city, the poor are often the target for whom local authorities intend to meet basic needs. This is mainly due to their state of socio-economic vulnerability and the high possibility for marginalisation which is been exacerbated by current urbanisation trends and economic characteristics of globalisation (SACN, 2006; Irurah and Boshoff, 2003). These phenomena have further increased the widening gap between the rich and the poor. It has been proven that in cities where inequalities abound and persist, there is a chronic dearth of non-monetary resources for the urban poor, including limited access to opportunities and social mobility (UN Habitat, 2008b: 56).

Among the goals of making Ethekwini Municipality an inclusive city are to promote access to equitable, appropriate and sustainable levels of household infrastructure and community services; and facilitate access to housing (Ethekwini IDP 2009/2010 Review: 49). Inclusivity also means celebrating the City's cultural diversity by creating conditions under which heritage opportunities can be realised for personal growth, community solidarity and economic advantage (ibid: 85). For the purpose of this research, the aspect of the inclusive city to be discussed will be limited to housing provision and affordability. This is because housing provision occupies an important position in urban development in South African cities and that property development has become a significant economic activity with financial benefits to local authorities. Low-income housing provision remains essential to urban development, yet there exists little or no political will among private developers towards this need.

5.4.2.1 Housing for the Inclusive City?

The current state of housing development has its roots from the years of apartheid rule. After the African National Congress (ANC) assumed democratic rule in 1994, it committed itself to provide 1million low cost houses in 5 years. This was a priority of the Reconstruction and Development Program (RDP) and was to be achieved through a state capital subsidy scheme plus private sector participation in financing and construction (SIDA, 2007: 9). Since 1994, the low-cost housing programme has mostly involved building serviced townships on urban peripheries, which has been argued to present a myriad of environmental,

social and political concerns (Goebel, 2007; Harrison et.al, 2004; Pieterse, 2004; Todes, 2000a). Public housing delivery in South Africa is driven almost exclusively by national funding that is available through housing subsidies (SACN, 2006: 4-33) with meagre contributions from the private sector. Meeting the demand for housing, particularly for low-income earners and other vulnerable groups in Ethekwini Municipality is a major priority in its Integrated Development Plan. Currently, the City has a housing backlog of approximately 204,000 units with more than 100,000 households living in informal settlements (Statistics SA, 2007). It is envisaged that the City will provide 16,000 houses for low and middle income-earners on an annual basis. Even in keeping up housing provision in Ethekwini, private sector contribution to housing is skewed towards middle and high income earners.

Until recently, there has been a shift from only providing housing to create sustainable human settlements (Breaking New Ground, 2004). The sustainable human settlement is oriented towards giving its inhabitants such opportunities as recreation, employment and safety (ibid). This is not true for many current public housing developments in South African cities. Firstly, the location of public housing development is dictated by market values of land, thus have often occurred on the urban peripheries. It has become evident that these peripheral locations are planned as low-density monotonous living environments with little or no social facilities and economic opportunities. Whilst these practices deviate from the City's goal of compaction and quality living environments, the high rate of unemployment and low incomes in the region also do not provide individuals the opportunity to access housing in mainstream property markets. These actions have prompted concerns to the long-term sustainability of public housing initiatives.

The capacity for housing delivery in the Ethekwini Municipality is currently supported by private entities such as Tongaat Hulett Developments who are known to possess resources such as "enormous project management savvy" as stated by one key informant. The property market buoyancy; a significant shift to denser, high-security housing options; and changes in household dynamics (especially the declining average household size) are known to have fuelled private housing delivery (SACN, 2006: 4-32). In Durban, developments like Umhlanga Ridge Town Centre offer a housing environment based on value for money. Although it contributes to the housing stock of the region, affordability is limited to the *haves* rather than the *have nots*. Viewing Umhlanga Ridge Town Centre from a New Urbanist perspective, one of its principles is the support for diversity, chiefly by encouraging the provision of a range of housing prices and housing types in each community. The implicit idea is that residential proximity will "bring people of diverse ages, races,

and incomes into daily interaction" (Day, 2003: 84). Unfortunately, this is not the case for Umhlanga Ridge Town Centre in terms of socio-economic diversity. The key informant from Tongaat Hulett Developments stated that locational value and costs of development are the major determinants of property prices at the Umhlanga Ridge Town Centre. Information gathered by the researcher from a property developer[45] at Umhlanga Ridge Town Centre was that one-bedroom and two-bedroom flats[46] have been priced at R890,000 and R1,180,000 respectively and the same are being rented at R4,500 and 5500 per month (Home Guide, 2009: 62). These prices, when compared to the Ethekwini's annual household income of R125, 000 and the average income per person per annum is R16,259 (Statistics SA, 2007) show clear disparities between property prices and average disposable incomes. Whilst Umhlanga Ridge Town Centre defies the New Urbanist principle of income diversity, diversity in terms of race was evident[47] from the household survey conducted by the researcher.

Achieving inclusivity in an existing fragmented spatial structure such as the Ethekwini Municipality will remain bleak if profit-oriented housing developments push out any possibilities for socio-economic and racial integration. According to projected statistics, the Northern Municipal Planning region is expected to absorb 44% (that is 470,000) of Ethekwini's population thus increasing its present population from 1.15 million to 1.62 million in 2030 (NSDP, 2009: 32). The forecast is that the majority of this population increase will be among low to middle-income families who will have to be accommodated in public housing developments. Essentially, the Municipality has plans to develop about 79,000 low-cost housing whilst 24,000 middle and high income housing will be provided by the private sector (NSDP, 2009: 34). A matter of concern for a sustainable urban form is the current national housing policy which only supports the development of single detached dwelling units at net development density that ranges between 15 and 40 dwelling units per hectare (ibid). This poses a strain on Municipal capacity to service low-income housing developments. In trying to foster a more sustainable urban path, especially with private sector involvement, a key informant from the Ethekwini Municipality revealed that negotiations were currently underway to develop a large number of low to middle income units at higher densities and a more sustainable urban form at Cornubia in the north of Durban (also see Figure 4.0 on page 60), a development which is to be implemented in partnership with Tongaat Hulett Developments (ibid).

[45] A price list of properties developed at the Umhlanga Ridge Town Centre was derived from the Developer's website.
[46] These apartments measure 52m^2 and 72m^2 respectively and comprise of 1 bathroom and access to a communal swimming pool.
[47] The racial composition of household sample of 10 residents interviewed was 5 whites, 3 Indians and 2 blacks. They stated that there was a mix of racial groups living in the Umhlanga Ridge Town Centre although the White and Indian population outnumbered the black population.

5.4.3 The Productive City

It has been argued within the sustainability literature whether the pursuit of economic development can be sustainable, and the extent to which economic and social transformation is required (Todes, 2004: 846). In managing the complexities of sustainable urban development, the planning processes which seek economic development have been characterised as a "day-to-day planning" (Nilsson, 2007: 441). This mode of planning can be seen as being related to decision-making processes to satisfy short-term requirements of industry and commerce, and tends to emphasise the economic dimension of sustainable development (ibid). Whilst cities remain as centres of economic development and innovation; the productive city is essential for national economic growth and for generating resources needed for public and private investments in infrastructure, education and health, improved living conditions, and poverty alleviation (UN Habitat, 2007). However, the success and sustainability of economic growth and development is dependent on how natural resources are used and how economic activities impact on the well-being of citizens. Additionally, spatial decisions about investment often involve complex trade-offs between economic, social and environmental considerations. Thus, the impact of current trends of economic activities on urban form has become necessary in this regard.

Essentially, the economic aspects of sustainable development require spatial characteristics which facilitate equitable access to resources and opportunities; the fair sharing of finite ecologically productive space that enable sustainable livelihoods; and establishes viable businesses and industries based on sound ethical principles (du Plessis and Landman, 2002). These thoughts are shared in the second point plan of the Ethekwini Municipality which considers its "economic wealth as a critical element to create strong economic growth, provide sustainable job creation and address the issues of poverty" (Ethekwini IDP Review 2009/2010: 34). The Ethekwini Municipality is known to have a strong economic revenue base to support its development activities. Durban accounts for about 10.8% of the country's GDP[48] (Ethekwini IDP, 2009/2010 Review) with a GDP growth rate of 5.6%. These contributions have been largely dependent of the manufacturing, finance, trade and transport sectors, which also provide a reasonable employment base for the city. However, over the past 15-20 years, property development[49] in Durban has remained a key economic development lever of local government and serves a twin purpose by not only enhancing the rates base, but also ensuring the vitality of the tourism sector (Robinson, 2008: 84). In spite of the above statistics,

[48] Original source: GDP and unemployment statistics are for 2007 by Global Insight

[49] including income from rates, land management, and the production of serviced land for business and residential use

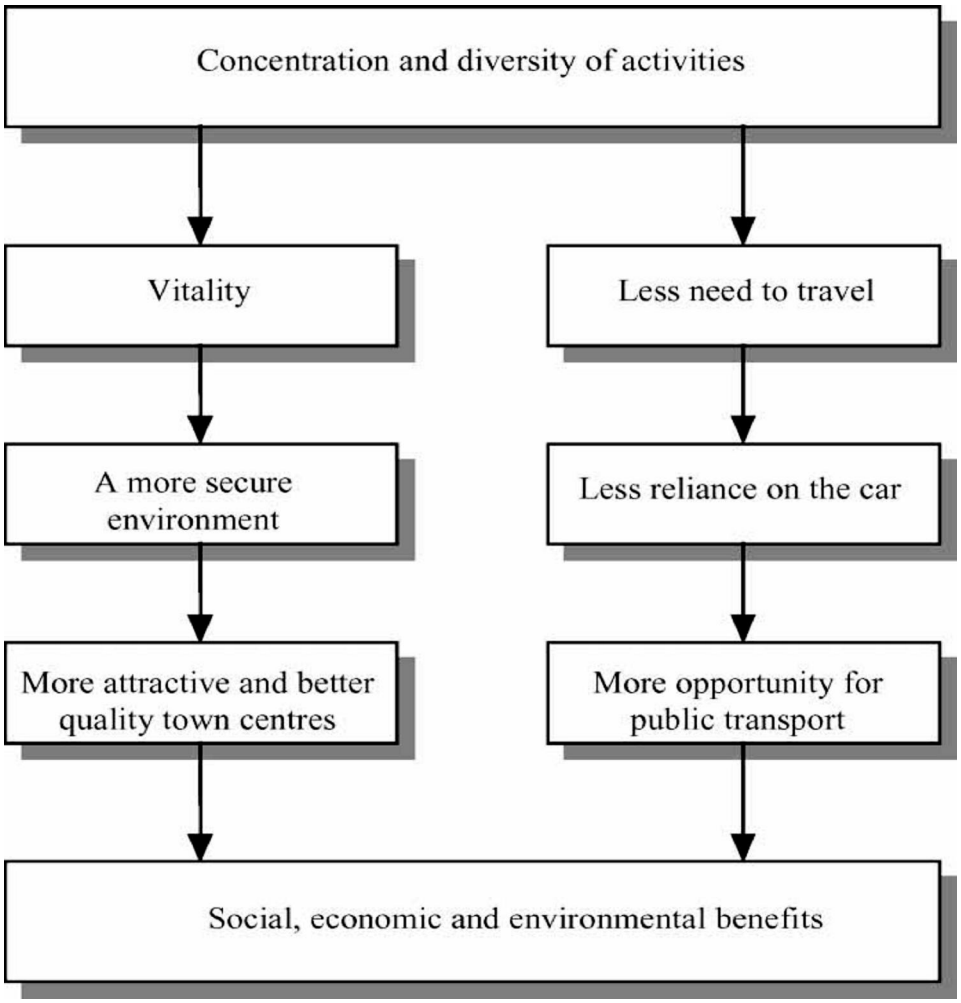
the City, as at 2007, had an unemployment rate of 34.8%, just about 2% less than the national rate (Ethekwini IDP 2009/2010 Review: 129). The City's unemployment is inclined towards a structural dimension. To address this issue, the Ethekwini Municipality intends to develop skills to match the demand of the economy. This is critical to the sustaining jobs; promoting small-scale enterprises; providing social security; and impacting positively on unemployment.

An urban form indicator which is considered suitable towards a sustainable and productive city is the principle of mixed-use developments, also referred to as multifunctional urban land use (Priemus et.al, 2004). This concept is embraced in the compact city model and also by the New Urbanism movement (Jenks et.al, 1996; Barton, 2000). Mixed-use or multifunctional urban land-use is characterised by a mixture of residential, commercial, social and environmental elements within a particular urban space. Most importantly, these elements must be mixed appropriately and to coincide with the different needs of society. Although the mixed-use phenomenon is considered an essential indicator to sustainable urban development, it is argued that it needs to be supported by higher densities to increase the viability of services and transport provision, while at the same time increasing access and the greater choice of services (Jones et.al. 2009: 3). New Urbanism suggests that different land uses should be embedded in neighbourhoods to reduce travel time and distance yet offering opportunities for local economic activities. Umhlanga Ridge Town Centre comprises of a mix of uses which transcend daily uses. The Gateway Theatre of Shopping precinct offers a range of goods, services and entertainment thus playing a 'one stop shop' role. Within the residential precinct are low and middle order activities such as convenience stores, hair salons, estate agencies and automated cash machines. Although this range of commercial activities may not generate substantial amounts of economic growth, they are known to add to the quality and economic vibrancy of the living environment.

The scale at which mixed use is expressed is also essential to the economic sustainability of cities. For example, on a small scale such as the neighbourhood, the mixed-uses produces an urban environment where variety prevails; an enhancement of the urban fabric (Hoppenbrouwer and Louw, 2005) and helps to reduce travel times between different daily activities as conceptualised in Figure 5.1 on page 119. However, the long-term sustainability of neighbourhood-based economic activities will be dependent on neighbourhood population and a match between their needs and what is available.

The mix of land uses is not only relevant at the neighbourhood scale but has a number of sustainable benefits when applied within the wider strategy of the metropolitan region. One of the ways by which mixed-use development is being applied in regional development is through nodal developments. The nodal development concept forms part of the polycentric model which advocates a shift from the core- periphery model to the creation of several 'dynamic zones of global economic integration, well distributed throughout the metropolitan region, and comprising a network of accessible urban areas and their hinterland (Meijers et.al, 2005: 97).

Figure 5.1: Benefits of mixed-use development



Source: Hoppenbrouwer and Louw, 2005: 969

In the Ethekwini Municipality, nodes are being used to decentralise and link economic activities, opportunities and social facilities with disadvantaged planning regions. Also, the establishment of nodal hierarchies is to promote accessibility and ensure that people are well located with respect to employment and services. According to the City's Spatial Development Framework (see Figure 5.0 on Page 102), Umhlanga is one of the two major economic investment nodes in the region; a phenomenon which coincides with the New Urbanism principle which recognises the metropolitan region as the fundamental economic unit of the contemporary world. Umhlanga Ridge Town Centre as one of Ethekwini's strategic economic intervention is a mixed-development node combining residential and commercial activities. With the development of the Dube Trade Port about 12km away from Umhlanga, the kind of economic activities which have emerged in Umhlanga Ridge follow a trend of service industries and non-noxious activities associated with airport-led urban development as has been argued by Freestone (2009). Airport-led urban development are known to be characterised by attractive office estates to house global corporate headquarters, world class hotels, and other tourism related infrastructure; a phenomenon referred to as the "production of global spaces" (Brenner, 1999; Johnson, 2005).

Umhlanga Ridge forms part of a major investment node and represents a deliberate thrust to distribute economic activities across the Ethekwini Municipality. The concept of polycentric and nodal developments are two trajectories to regional development, considered to addresses the territorial distribution of economic and employment opportunities which looks specifically at the *fairness* of this distribution; and promotes accessibility whilst decongesting existing central business districts (Waterhout, 2005: 163). The 2nd principle of the New Urbanism (as discussed in Section 3.3.1 in Chapter 3) promotes regionalism towards economic sustainability. From a sustainable economic growth perspective, polycentric and nodal developments are known to cause competitiveness through linkages, flows and networks, thus increasing their viability for investment and global activities. On the contrary, a query with respect to Ethekwini Municipality is if there exists a guarantee for long-term sustainability. This is because the Municipal challenge of structural unemployment and low skills base (Ethekwini IDP Review, 2009/2010) cannot support emerging global opportunities which often require highly-skilled labour. In such a case, the type of economic activities which emerge at nodes such as Umhlanga Ridge Town Centre will only becomes beneficial to the productive city if existing human resources capacities coincide with the current needs and future aspirations of the City.

5.5 Challenges with New Urbanism and Ethekwini's Status Quo

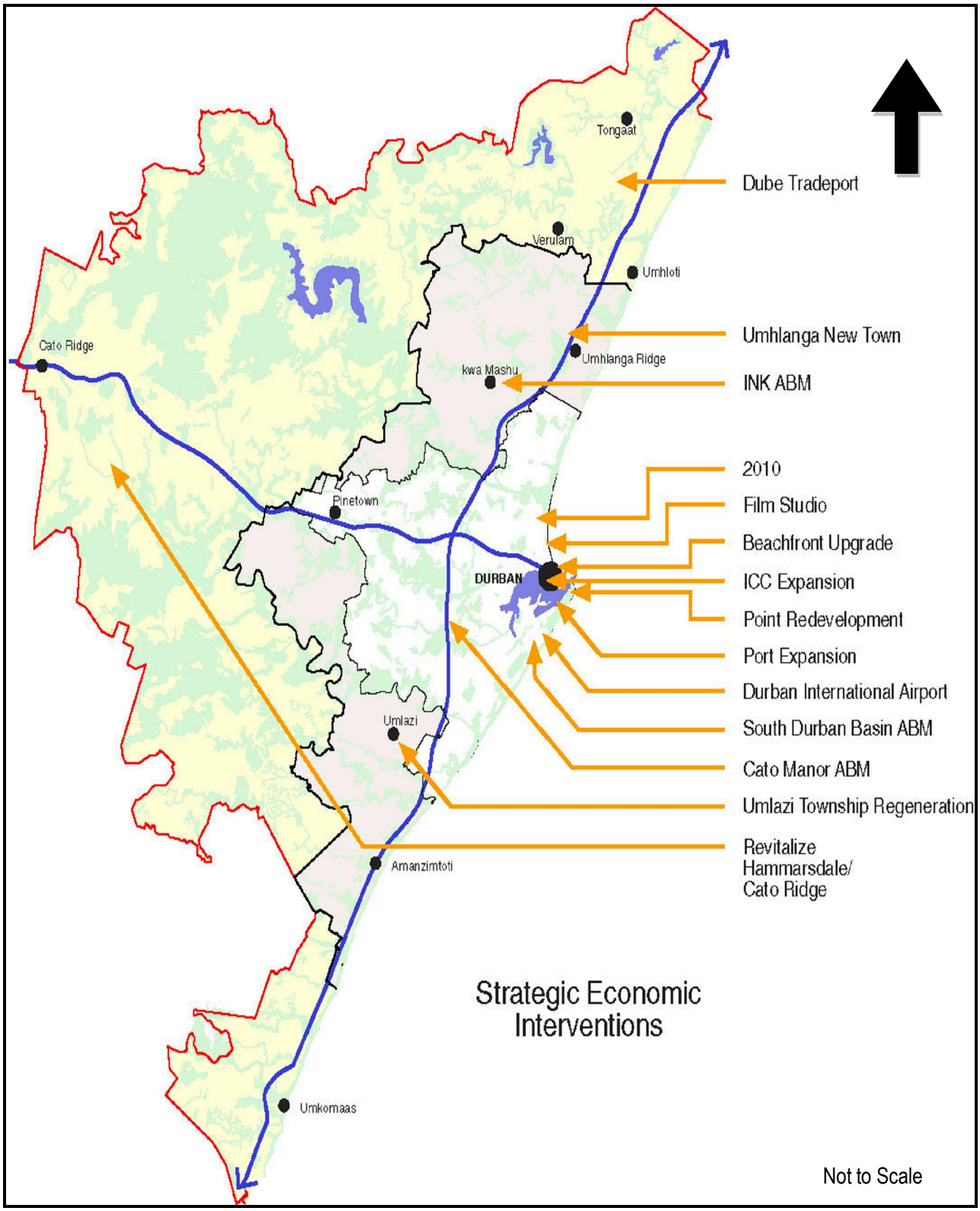
Although some problems to urban sustainability surfaced in the above discussion, this section seeks to summarise some key challenges associated with urban form and the concept of New Urbanism as were revealed in interviews with key informants. Agreeably, the path of urban sustainability is characterised by trade-offs and conflicts which have potential to be rectified given the availability of appropriate policy frameworks and mechanisms; and the willingness of development stakeholders to embrace local priorities and meet the challenges of the future (HM Government, 2007: 100). Some of the challenges to be outlined include land values, development controls, conflicts in public and private sector interests and the bias of development plans.

5.5.1 Land Values in Urban Development

The history of land ownership in South Africa has had a great impact on urban development. It happens that land is predominantly privately owned in most cities in South Africa and has been used to capitalise on development and property markets (Goebel, 2007). The public mandate of local authorities such as Ethekwini to provide housing for vulnerable groups has often been dependent on land availability and market values (Ethekwini IDP Review 2009/2010). Often, centrally-located land command high market values and rationally, are considered unsuitable for non-income generating purposes like low-cost housing. Alternatively, local authorities lose potential land revenue that is higher for developed than undeveloped properties and housing remains unaffordable for the poor (UN Habitat, 2008b: 151). South Africa's policy to provide housing subsidies for the poor is often hampered by rising prices, thus, the not-so-poor and middle-classes are squeezed from the market and end up buying the subsidized houses from the poor, who either end up back in the slums or homeless (ibid).

Developments in South Africa known to subscribe to New Urbanism principles have occurred in both inner city (for example Melrose Arch in Johannesburg) and peripheral locations owned by private entities. Although these developments contain elements of a sustainable urban form, it is believed that its application is being used more as a marketing tool due to locational values as reiterated by one key informant. Umhlanga Ridge Town Centre, in this context, derives value from its near location to the coast and an emergent airport city; a location which is considered invaluable due to the picturesque views and tourism potential assigned to them.

Figure 5.2: Ethekwini Municipality Strategic Economic Interventions



Source: Ethekwini IDP 2009/2010 Review: 37

Such locations automatically drive up property prices and affordability becomes limited to the urban elite and wealthy as was evident in property prices noted in section 5.4.2.1 on page 115. A survey conducted on what share of the population could afford to live in New Urbanists developments like Seaside or Celebration in the United States revealed results which were described as "a little alarming" (Talen, 2008b)[50]. The same outcome was gathered from 10 non-residents interviewed with respect to Umhlanga Ridge Town Centre. All 10 respondents concluded that property prices were high and not within their economic means. As concluded in both surveys, developers of New Urbanism neighbourhoods are not building for all classes of people (ibid) and this goes contrary to their charter principles of social and economic equity and the inclusive city.

5.5.2 Conflicts of Public Priorities and Private Interests

Regardless of how much control the State had over planning activities, the fluidity of democratic systems have caused a paradigm shift with respect to private sector involvement in urban development activities. This shift is known to be steered by urban policy reforms and global economic changes (Brenner and Theodore, 2002; Foster, 2009). Private sector accessibility to global capital and their ability to source highly skilled labour in contributing to urban development is a phenomenon often referred to as 'privatisation of the public sector' (Macleod and Ward, 2002; Le Roux, 2006). Meanwhile, concerns have been raised about how private sector initiatives align with pro-poor public priorities to address local urban challenges.

For instance, it is argued that...

> at the periphery of many cities there is a movement away from a *dirigiste* state creating the spaces of development towards private interests shaping those spaces themselves. Increasingly, private developers prepare the plans, the ground and the infrastructure for such developments, as well as the buildings and their associated features…In such cases, private developers and land owners have been finding new ways to make money at the periphery… (Mabin, 2005: 42).

The situation as described here is no different to Umhlanga Ridge Town Centre. Whilst private sector activities are profit-oriented, public sector priorities on the contrary, lie in the provision of public housing for its poorer citizens with little or no expectation of financial benefits. For example, private sector interest in public housing provision is almost non-existent and the burden on the public sector is continually increased. In such

[50] http://architecture.about.com

a situation, the needs of the urban poor are left out especially with respect to the availability of market-based housing stocks for the wealthy minority and fewer public housing for the poor majority.

Additionally, the lack of synergy between the private and public sectors is known to deter sustainable outcomes in urban development. A key informant from Ethekwini Municipality made mention of the conflict of interests that exist with respect to location of strategic economic interventions and where economic activities actually occur. A typical example of such a case is the designation of Umhlanga as a major economic investment node as shown in Figure 5.1 (see Page 102). It was revealed by one of the interviewees that the City's preferred growth path is the northern urban corridor where large populations of unemployment exist yet lack employment avenues. However, private sector priority has been the concentration of further development along the northern coastal corridor. Unfortunately, this "development direction traverses three catchments where services have not been budgeted for and indicative development thresholds are extremely uneven and inefficient" (Ethekwini IDP Review 2009/2010: 18). The lack of synergy between public and private development interests is seen as a detriment to socio-economic transformation and the productive city. Despite these discrepancies which impact of sustainable urban development, it is evident that the financial benefits which private sector activities generate have become important to finance public obligations of the Ethekwini Municipality. For example, a key informant from Tongaat Hulett Developments noted that the company has been responsible for financing a considerable amount of infrastructural development[51] within Umhlanga Ridge and this was subsequently confirmed by the key informant from the Ethekwini Municipality.

5.5.3 Development Controls and Urban Sustainability

It has been argued that although cities desire to move towards urban sustainability, "implementation mechanisms to achieve such a goal are indeed a complex and often contentious process" (Chan and Yung, 2004: 409). The concept of sustainability demands the adoption of tools that can be used to promote reasonable levels of cohesion between physical, social, economic, environmental, political and ecological elements. Spatially, it calls for land development that promotes wise land use in order to serve present and future generations. In South Africa, a Land-Use Management Framework (LUMS) is a legal component of

[51] Although the exact amount was not revealed, road upgrading and bulk engineering infrastructure were financed in partnership with the Ethekwini Municipality. The generation of tax revenue from residential and commercial development has also become important to the Municipality in this respect.

Integrated Development Plans and contains tools used to control development. Among these tools are town planning schemes and zoning laws. These are seen as essential to drive spatial elements of urban sustainability such as densification, reduction in outward urban growth, incompatibilities in land-use and the protection of environmentally valuable landscapes. However, in an interview with a key informant from the Ethekwini Municipality, it was disclosed that the current tools of the City's Land-Use Management Framework do not support the desired sustainable urban form such as densification in development corridors and nodes. For example, current zoning for Umhlanga Ridge still require parking bays for every land parcel and at the same time promotes low-density developments. Two key informants noted that this mismatch in development goals and the subscription to urban sustainability are challenges which needed to be resolved. In order to correct these anomalies, it was subsequently revealed that Ethekwini Municipality is in the process of rewriting its development controls to support sustainable urban practices.

5.6 Conclusion

This chapter has examined the indicators of a sustainable urban form. It argues that the success of sustainable urban development involves the adoption of contextualised practices which are capable of addressing local urban challenges. The main concerns to the urban sustainability debate has been geared towards urban sprawl, increased harmful pollution from high auto dependence, disintegration of social networks, environmental degradation and even urban poverty. All these elements are associated with urbanisation and have prompted the need to find alternative actions that will positively address them.

South African cities are characterised by sprawl and the Ethekwini Municipality is not excluded from this spatial dynamic (Biermann, 2000). Urban sprawl which has its origins in colonial land utilisation patterns, apartheid segregation and the more recent impact of decentralisation, is a key feature of urban development in most South African cities (SACN, 2006: 3-60). Although integrated development planning and the subscription to sustainability and integration remain embedded in urban development policies, municipalities still battle to keep up with rapid urban changes. In dealing with the pressures of urbanisation, the compact city model and New Urbanism concept have become guides to the spatial structuring of cities. Essentially, these approaches contain indicators of sustainable urban form, fervently concerned with how energy usage can be reduced; suggestions for increased densities at appropriate locations and mixed-use developments; the need for the preservation of open spaces to aid to the absorption of harmful pollutants; and consequently reduce emissions, travel times and distances. In the context of the Ethekwini Municipality the sustainable

city, the inclusive city and the productive city concepts encompasses several pointers which have the ability to drive the path of a sustainable urban development.

It has been identified that the term *sustainable city* may have different meanings depending on the stage of development of a city (Hayashi and Tomita, 2003: 5). Within the growing economy of a developing country, sustainable means 'the ability to control spatially sprawling suburbanization' and to a developed country it would mean 'smart growth'. Reaching this goal of the sustainable city will include an efficient public and non-motorised transport systems which support nodal and corridor developments, appropriate mix land-uses, as well as intensification of use. The successful implementation of these indicators require supporting development controls; change in societal preferences and attitudes; as well as synergy between development stakeholders towards urban development. In spite of these efforts towards sustainable urban development, there is growing concern that some policy directives do not support this path. A common example is the financial limits of the National Housing Subsidy to support housing innovation. Essentially, low cost housing developments are rarely implemented in central locations in terms of the *compact* city and *integration* ideals. Rather, they occur on peripheral locations characterised by low densities, high transportation and servicing costs, with associate high levels of energy consumption (Biermann 2000). Mixed-use developments and higher densities as applied in New Urbanist developments such as Umhlanga Ridge Town Centre represents a prototype to which public decision-makers can investigate and replicate where necessary. On the contrary, the emphasis on improving the physical environment by New Urbanists is considered overenthusiastic by some (Ellis, 2002; Ford, 1999; Marshall, 2003) since there may exist more pressing needs. For instance, Day (2003: 88) argues that...

> many urban neighborhoods face serious problems, including poverty, joblessness, poor schools, and so forth. The question thus becomes not only whether physical solutions will indeed ameliorate the problems they seek to address (the charge of environmental determinism) but rather the more fundamental question of *which* problems to address - for example, improving services and/or improving home values. Lower-income groups and those with greatest need may prefer to concentrate limited public resources on pressing social issues

Although the compact city model could improve economic attractiveness of an area, research shows that it generates higher land prices, making housing and business premises prohibitively expensive. Thus in its application, it is important to find out the sustainable balance between ecological and economic performance

potential and to extrapolate benchmark values and recommendations for sustainable urban development (Chan and Yung, 2004: 411). The same goes for the concept of New Urbanism. But, is Durban as an African city, equipped with the enormous resources that go into large scale lavish developments of New Urbanist neighbourhoods? Urban planners and architects do not need to be coaxed into strictly adhering to traditional or neo-traditional planning ideologies. "Perhaps one can adopt parts of a design package that are viable, without signing up for the whole package" as suggested by Marshall (2003:192). It is not exactly clear whose interests' sustainable urban development serves (Dale and Newman, 2009: 670). Unless equity through affordability, housing needs, employment opportunities and economic productivity are deliberatively planned for, and funded with strong political will and leadership, the path to a sustainable future will not be worthwhile.

Addressing sustainability at a metropolitan scale is a rather difficult task yet the most rewarding in the long term. It has been argued that if any of the aspects of sustainable development is left unattended, could jeopardize the intent of achieving the sustainable city. For example, the presence of an efficient transport system will require threshold populations in its catchment areas to make it economically viable. On the other hand, the possibility of simultaneously addressing all aspects of the sustainable city calls for an incremental approach. Urban sustainability needs to be approached tactfully, in order to embrace all aspects of the economy, both tangible and intangible. It is vital that regional planning techniques are used to control and shape cities into achieving sustainability. At the same time, it has to be remembered that urban planning by itself only provides only a partial solution to the achievement of urban sustainability. Thus, it is not a sufficient condition for the achievement of urban sustainability (Choguill, 2008: 47). The State, private sector and individuals have a vital role to play in the development of sustainable cities and countries as a whole.

Chapter Six: Findings, Conclusions and Recommendations

6.0 Introduction

This chapter presents a summary of findings, conclusions and recommendations of this study. The main objective of this research was to establish the extent to which Umhlanga Ridge aligns to the principles of New Urbanism and urban sustainability. It was hypothesized that the developments at Umhlanga Ridge conform to both the ideals of New Urbanism and urban sustainability, in its response to Ethekwini Municipality's subscription to sustainable urban development. The researcher set out to identify the contributions made by the concept of New Urbanism towards a sustainable urban form and measured the characteristics of Umhlanga Ridge Town Centre against selected principles of the New Urbanism Charter. Some of the key influences to spatial change on Tongaat Hulett developments in the north of Durban were also identified and an attempt was made to determine the extent to which the Umhlanga Ridge Town Centre contributed towards sustainable urban development in the Ethekwini Municipality. The data gathered were from secondary sources, questionnaire interviews; interviews with key informants; and personal observation (see Section 1.4.2 in Chapter 1). Conclusions drawn are based on the researcher's findings.

6.1 Summary of Findings

It is acknowledged that rapid urbanisation was found to be the major challenge exacerbating urban sprawl. In turn, urban sprawl has been identified as one of the major challenges to cities (Jenks et.al, 1996; Kenworthy, 2006). It is being driven by factors such as the increase in private car ownership, lack of efficient transport systems, household preferences for suburban lifestyles characterised by low density developments and the deterioration of inner-cities (Jenks et. al, 1996; Knox, 1994; Pieterse, 2006; Saligaros, 2006). Some of the negative impacts of urban sprawl identified are social fragmentation and the encroachment on agricultural land (Katz, 1994; Unsworth and Nathan, 2006).

6.1.1 Identified Indicators of a Sustainable Urban Form

The researcher did not find a precise definition for a sustainable urban form, however, many writers expressed that an urban form was sustainable if it enabled its inhabitants to adopt lifestyles which have minimal negative impacts on economic productivity, social relations, the physical and ecological environment (The Princes Foundation, 2007; Carmona, 2009). This required practices which prolonged the lifespan of natural resources, minimised waste at every stage of the development cycle, provided opportunities for

economic activities and employment; and contributed to better quality of life (Carmona, 2009; Jones et.al., 2009). The compact city model was identified as a sustainable option to urban development to assist in dealing with the sprawling of cities (Ford, 1999; Jenks et.al., 1996). The researcher identified a number of elements in the course of the research in Umhlanga Ridge. These are briefly discussed below:

An increased residential density in urban development was identified as relevant as to the reduction to the rate of urban sprawl. It generated threshold populations which supported public transport and other land-uses and reduces travel times and distance in reach of daily activities. Increased densities also led to a reduction in the demand of land for urban development and thus, protected natural environmental systems and allowed for socio-economic diversity based on different housing typologies. Secondly, it was established that increased densities promoted the provision of basic services and social facilities in close distances thus reduced the need to travel longer periods and less energy usage. This phenomenon was described as the mixed-use principle by Barton, (2000), Jenks et.al. (1996) and Priemus et.al (2004).

Mixed land-use was considered as an essential indicator of sustainable urban form because when applied appropriately, generated opportunities for local enterprises which contributed towards localised economic sustainability (Jones et.al. 2009). Furthermore, socio-economic integration and diversity were enabled through the provision of different housing typologies in a particular place and this was seen to encourage social interaction and socio-economic diversity and created a sense of community. The incorporation of open spaces (that is both active and passive open spaces) in neighbourhood development also contributed towards quality living environments and preservation of natural ecosystems (Kenworthy, 2006, 2008).

An efficient public transport system was also identified as a critical indicator to drive a sustainable urban form (Jenks, et. al, 1996, Kenworthy 2006, 2008). This was confirmed by key informants interviewed at Tongaat Hulett Development and Ethekwini Municipality with respect to the Umhlanga Ridge Town Centre where an efficient public transport barely existed. The efficiency of a transport system was measured based on the availability of transit systems and 'green' alternatives such as walking and cycling by Crane and Scweitzer, (2003) and Kenworthy (2006) and was explained in Section 3.3.3. These transport alternatives were found to offer choice, maximise accessibility and mobility within a region whilst reducing the rate of emissions from excessive car use. Also, the success of pedestrianisation and cycling were dependent on: firstly, street design which facilitated traffic calming and safety for pedestrians and cyclists; and secondly, by different

land-uses in proximate distances to decrease travel times (Hamilton-Baillie, 2008). The effective implementation of these facets of transport contribute to the physical, economic and environmental sustainability of neighbourhoods and cities as a whole (Cervero, 2003; Hayashi and Tomita, 2003; Kenworthy, 2006, 2008)

6.1.2 Principles of New Urbanism and Sustainable Urban Form

In measuring the characteristics of Umhlanga Ridge Town Centre against 10 principles of the New Urbanism and its contribution to a sustainable urban form (see Table 4.0 on Page 78), the researcher found that the designation of Umhlanga as a major investment node in Ethekwini's Spatial Development Framework confirmed the importance of Umhlanga Ridge as an economic activity node to the Ethekwini region as a whole. The principle of mixed land-use adopted in the Town Centre precinct had created employment opportunities for both skilled and semi-skilled labour as was evident from the different types of economic activities observed by the researcher and confirmed by key informants interviewed. The benefit of mixed-use developments is revenue generated from property rates paid to Ethekwini Municipality from Tongaat Hulett developments. This had become essential to finance service provision and other urban projects in other parts of the region. This finding was acknowledged by key informants interviewed and was in line with the 2nd principle of the New Urbanism Charter (see Section 3.3.1 in Chapter 3 and Table 4.0 on Page 78) which promoted regionalism for the benefit of a *regional tax-base sharing* and opportunities for employment (Talen, 2002).

Umhlanga Ridge Town Centre fulfilled the 5th principle of the New Urbanism Charter since it constituted one of the neighbourhoods contiguous to urban boundaries of the greater Umhlanga Ridge area. It was revealed in an interview with Tongaat Hulett Development that the proposed design for buildings on the interface of low-density developments such Prestondale were to be limited to 2-3 storey blocks to blend new developments into the existing urban pattern (shown as cluster housing on Figure 4.9 on Page 75).

Thirdly, the Umhlanga Ridge Town Centre was found to be a multi-functional development catering for commercial, residential and recreational needs available for public and private use as evident from the proposed land-use map obtained from Tongaat Hulett Developments and was also confirmed by the researcher's observation. The distribution of housing within the Town Centre was available and exclusive to the middle to high-income class. Property prices ranged from R800,000 – R1,500,000 while Ethekwini's

annual average household income remained at R125,000. Essentially, these property prices had been determined by locational value and development costs as mentioned by interviewees from Tongaat Hulett and Ethekwini. Consequently, these property prices have not favoured socio-economic diversity in Umhlanga Ridge Town Centre and appeared to be in contrast with Ethekwini's principle of integration as was explained in Section 5.4.2.1 in Chapter 5. The exclusivity of Umhlanga Ridge Town Centre is found to oppose the 7th and 13th New Urbanism principles which support a distribution of affordable housing different income groups and racial and diversity (see Table 4.0 on Page 78).

Although the 8th New Urbanism principle supports a region with transport alternatives, this had been partially fulfilled in the Umhlanga Ridge Town Centre. Essentially, the presence of sidewalks, boulevards and vistas within the Umhlanga Ridge Town Centre were considered appropriate for walking and cycling although provision had not been made for cycling lanes as confirmed by observation by the researcher. There exists a taxi terminal within the shopping centre precinct which is being used adequately. However, 7 out of the 10 non-residents interviewed by the researcher complained of limited public transport circulation within Umhlanga Ridge. It is apparent that an efficient public transit system is non-existent in the Ethekwini region and this was confirmed by key informants interviewed. Thus, the usage of the private car is a necessity for users of the Umhlanga Ridge Town Centre and the metropolitan region as a whole. According to the 15th New Urbanism principle, appropriate building densities and land uses should be within walking distance of transit stops, permitting public transit to become a viable alternative to the automobile. Umhlanga Ridge Town Centre is a mixed-use development with a proposed high density of 150 – 220 dwelling units per hectare (according to residential density standards of Ethekwini and Tongaat Hulett Developments). Observation by the researcher's showed a range of 4-5 storey apartments with a variety of retail and service activities in the mixed-use precincts (see Figure 4.9 on Page 75 and Photo 4.1 on Page 77). However, household survey conducted by the researcher revealed that the absence of schools and other social facilities (situated about 1.5 - 2km) outside of the Town Centre did not make walking or cycling an alternative to the automobile. Also, the absence of a public transport system and the presence of two major fast routes acted as barriers to easy movement such as walking by children and the elderly between certain land-uses. This was the view of residents interviewed. As such, Umhlanga Ridge Town Centre partially fulfilled the 8th and 15th principles of the New Urbanism Charter which support transport alternatives and different land-uses in walking distances and transit stops.

In assessing the 21st principle of New Urbanism with Umhlanga Ridge Town Centre, it was found that Umhlanga Ridge Town Centre offered beauty and safety to its users as well as a distinct separation of different movement channels (see Photo 4.1 on page 77). Passive surveillance was provided by frequent use of streets and the use of closed circuit televisions to enforce 24hour safety and security in the Town Centre. This finding was confirmed by residents interviewed and observations by the researcher which is evident in Photo 5.0 on Page 108. The presence of well-manicured lawns and outdoor artworks (see Photos 4.0 and 4.2 on Pages 76 and 77 respectively) were elements which provided beauty and encouraged the use of public spaces in the Umhlanga Ridge Town Centre. Residents and non-residents interviewed confirmed that safety and a beautiful environment were essential characteristics of a quality living environment.

Finally, the 23rd principle of New Urbanism promotes the use of graphic urban design codes to serve as predictable guides for change in urban development. The researcher found that Tongaat Hulett Developments has developed a set of architectural guidelines and development manuals which it uses to control design and building activities in the Umhlanga Ridge Town Centre. In addition to this, a design review process is undertaken by the Management Association[52] to enforce and encourage the eclectic, contemporary approach to architecture towards the achievement of the set vision for the Umhlanga Ridge Town Centre.

6.1.3 Spatial Change in Umhlanga Ridge

A number of factors have influenced spatial changes in Umhlanga Ridge. These were found to include increased car ownership and increased income levels in the 1970s which created a high demand for suburban residential development in the 1970s (VARA, 1988a, 1988b). Tongaat Hulett Developments (then Moreland Developments) responded by undertaking its first residential development in the north of Durban.

The Northern Corridor concept was an outcome of the Tongaat Hulett Planning Forum in the 1980's, and future plans for development of the Dube Trade Port are some of the planning decisions which opened up opportunities for a mixed-use inland spine and a residential-tourism coastal spine within the location of Tongaat Hulett landholdings. These decisions were made at a time when Tongaat Hulett landholdings had

[52] It is officially known as the Umhlanga Ridge Towne Centre management Association and comprises of representatives of homeowners and investors of the Umhlanga Ridge Town Centre.

become valuable for urban development than under agriculture (interview with Town Planner, Tongaat Hulett Developments, 2009). An interview with one key informant also revealed that the northwards expansion of the city was largely due to the deliberate attempt to alter the historical land use pattern whereby employment opportunities had a strong bias towards the south of the Durban Functional Region.

Another factor identified by the researcher was political change in the late 1990s which downsized public sector activities and subsequently opened up more opportunities for stakeholder involvements in urban development. This was the case with Tongaat Hulett Developments (Cameron, 2000). The major integrated planning initiative undertaken by Tongaat Hulett in the 1980s for Metropolitan Durban served as a determining factor for future development on its landholdings in the north (Robinson, 2009). To facilitate the process of land development, Tongaat Hulett subsequently equipped itself with adequate human and financial resources to undertake urban planning and management concerning their landholdings as revealed by a key informant interviewed. Following these events mentioned above, Tongaat Hulett as a major private landowner had sole responsibility in releasing agricultural land in phases for urban development as mentioned by key informants interviewed. This resulted in projects like the Riverhorse Valley Business Estate and the Bridge City projects which were undertaken by Tongaat Hulett in partnership with the Ethekwini Municipality (interview with Rampersad and Odendaal 2009). Essentially, these projects were geared towards the consolidation of development in the Northern Urban Corridor which had made available economic and employment opportunities to inhabitants in the north of Durban; and have also contributed to Ethekwini's economic growth and sustainability.

6.1.4 Umhlanga Ridge Town Centre and Urban Sustainability in Ethekwini

One of the objectives of this research was to establish the extent to which the application of New Urbanism in Umhlanga Ridge has been aligned to urban sustainability principles in the Ethekwini Municipality Integrated Development Plan. Findings are based on how the identified indicators of a sustainable urban which had been applied in Umhlanga Ridge Town Centre and how they had assisted in addressing some of the urban challenges in Ethekwini. Some of the urban challenges present in Ethekwini included lack of access to basic services especially in peripheral locations, urban sprawl, poverty and unemployment, an imbalance in the spatial distribution of economic activities and social facilities, as well as environmental problems (Ethekwini IDP Review, 2009/2010). The discussion was based on three themes adopted from the 2006 South African

Cities Network report on cities. These themes included the sustainable city, the inclusive city and the productive city. Sustainability and integration were identified as the primary principles upon which Ethekwini's development were founded. Both public and private developmental decisions were expected to be aligned to these two principles towards the achievement of the long-term vision of Ethekwini.

Under the themes of sustainable city, the inclusive city and the productive city, elements such of urban compaction, quality living environments and natural environment preservations, economic productivity and housing were discussed. The Spatial Development Framework and Land-Use Management Framework of Ethekwini Municipality were being used to facilitate environmental, social, economic, and physical development in a sustainable manner. These frameworks are being used to promote and control urban growth within the boundary of the Urban Development Line (see Figure 5.0 on Page 102). The essence of the Urban Development Line included the containment of urban growth within the designated area where spare capacity for bulk engineering services and infrastructure existed. This is to ensure wise spending and reduce service costs for the Municipality whilst encouraging infill, densification and economic activities along development corridors and at activity nodes.

The research revealed that the Greenfield development of Umhlanga Ridge Town Centre occurred within the urban development line where capacity for bulk infrastructure existed. However, the scale of the development and the subsequent concentration of population in the Umhlanga Ridge areas prompted the need to upgrade existing infrastructure (interview with Town Planner - Tongaat Hulett Developments, 2009). A large proportion of the upgrading cost was borne by Tongaat Hulett Developments (interview with Tongaat Hulett Developments and Ethekwini, 2009) which otherwise, would have caused a financial strain on Ethekwini Municipality. This was considered as an important move to support the financial sustainability by Ethekwini Municipality. The situation explained above demonstrates the relevance of private sector involvement in development cost sharing and contributions towards urban sustainability.

Secondly, the compaction of development within the Urban Development Line was being encouraged in Ethekwini's Integrated Development Plan. The achievement of a localised scale of compaction through higher densities applied at the Umhlanga Ridge Town Centre was commended by four of the key informants

interviewed. However, they raised the obvious concern of public transport inefficiencies which made the use of private cars a necessity for commuters and users of the Town Centre. Densification was seen to promote pedestrianisation in the Town Centre (see Photo 4.5 Page 81) and was considered vital to encourage less use of the automobile and contribute to environmental sustainability as revealed in an interview with Manoj Rampersad (Ethekwini Municipality, 2009). The researcher's initial assumption of Umhlanga Ridge Town Centre as a product of urban sprawl was clarified in an interview with one key informant who stated that the *leapfrogging* of development which occurred in the north of Durban in the 1970s and 1980s made Umhlanga Ridge Town Centre an infill development rather than an element of sprawl. Also the location of Umhlanga Ridge Town Centre within the boundary of the Urban Development Line did not qualify it as an element of sprawl (interview with Rampersad, Ethekwini Municipality, 2009).

Thirdly, the researcher found that the location of Umhlanga Ridge Town Centre was within the northern coastal corridor where tourism-related developments were being encouraged as confirmed by the Northern Spatial Development Framework (2008). Creating an environment which responded to local and tourism needs was seen as crucial to achieve Ethekwini's vision as *a caring and liveable city* whilst contributing towards economic stability. Thus the application of the mixed-use principle in Umhlanga Ridge Town Centre influenced the provision of hotels, restaurants, shopping and entertainments facilities which served the needs of tourists and the general public (interview with Rampersad, Ethekwini Municipality, 2009). Ultimately, the use of Umhlanga Ridge Town Centre by local and international tourists was seen as a potential to boost the economic base of the Ethekwini Municipality towards the path of economic sustainability (Robinson, 2008)

Fourthly, the researcher's identification of a quality living environment as one of the indicators of a sustainable urban form was also found to be a common goal for Ethekwini Municipality and the New Urbanism movement. The quality living environment was described as one which had a mix of uses and provided safety as well as opportunities for recreation and local economic enterprises to its inhabitants (Priemus et. al, 2004). This description given above was evident through the researcher observation and the proposed land-use map of Umhlanga Ridge Town Centre (see Figure 4.9 on Page 75). Also it was found that the quality living environment was one which provided choice in terms of its location in relation to employment opportunities; and the availability of different housing typologies to suit the different needs to society (Barton, 2000; Talen, 2002). Although it was agreed by 15 of the 20 respondents that Umhlanga

Ridge Town Centre was a quality living environment, the remaining 5 respondents disagreed because of its detached location from the rest of the City and the absence of a vibrant living environment for social interaction among residents, especially when compared to the townships[53]. The use of sidewalks and public spaces in Umhlanga Ridge Town Centre was to promote social interaction and social vibrancy. However, from the thoughts shared by some respondents interviewed, the researcher is of the view that these elements of the Town Centre were not definite determinants to social interaction towards social sustainability. With these findings, the researcher concluded that the definition of a liveable and community-oriented human environment was relative since this was dependent on individual perceptions, needs and socio-economic status of its inhabitants. However, these divergent thoughts expressed by all 20 respondents provided insight to the need for an urban form which was not necessarily beautiful but also had the ability for different people to interact freely. This phenomenon is commensurate with the social and cultural sustainability in neighbourhood development, and which the latter was seen as the binding factor to all the other dimensions of urban sustainability (Bott, 2004; Grazulevièiûtë, 2006).

Affordability in terms of housing was also found to be critical to Ethekwini's achievement of a sustainable city. Data collected revealed that the supply of low-income housing and other public housing projects were lower than what was being demanded in the Municipality (Ethekwini IDP, 2009/2010). However, the researcher's finding on property market prices (ranging from R800,000 – R1,500,000) was seen as a major setback for most of Ethekwini's population whose annual average income per person was R16,259 (Aspect Price list, 2009, Statistics SA, 2007). In effect, Umhlanga Ridge Town Centre was described by the researcher as a perpetuation of socio-economic segregation and was in defiance of the New Urbanism principle of social and economic diversity for neighbourhoods. This differentiation of market-related property prices and the average income were not considered to be in favour of socio-economic sustainability in Ethekwini Municipality.

Finally, the discussion on the productive city and economic sustainability of Ethekwini Municipality took two different dimensions. The initial argument was made from a spatial perspective; and was centred on how the

[53] Townships is the narrow definition of black areas created the apartheid regime

polycentric and nodal development models made accessible employment opportunities and increased the productivity of regions. In this regard, the researcher, based on secondary data, considered nodal developments to promote equitable distribution of economic activities in metropolitan regions such as Ethekwini (du Plessis and Landman, 2002; Jones et.al. 2009; Talen, 2002). It was revealed that nodal development contributed to open up opportunities for further economic activities in regions where development was negligible (Waterhout, 2005). Umhlanga Ridge Town Centre as part of a major investment node in Ethekiwini was recognised as necessary to enhance job creation and economic productivity in the north of Durban.

The other dimension for the economic sustainability of nodes was the availability of skills to match jobs which emerged at nodes in Ethekwini (interview with Rampersad, 2009). The researcher's finding included the low-skills base of the unemployed population in Ethekwini as compared to the emergent tertiary sector in Umhlanga Ridge which relied mainly on skilled personnel. Also, it was argued by a key informant interviewed that the type of economic activities emergent in the north of Durban would likely be limited to light industrial and tertiary activities, a trend which was often associated with locations contiguous to airport developments. The researcher was certain that the development of the Dube Trade Port would increase the potential for business location in the Northern Municipal region. However, the long-term positive impact of economic sustainability on unemployment in the Ethekwini region was questionable especially when the available human resource capacities did not coincide with current needs of an emergent tertiary sector in the north of Durban.

6.2 Conclusions

Ultimately, the role of urban form in sustainable urban development cannot be underestimated. This is because the impact of spatial planning decisions and practices play a major role in ensuring that resources are used wisely to the benefit of humans and contribute towards the socio-economic and environmental needs of society. The objectives of the Compact City and New Urbanism are both seen to be concerned about the current challenges faced by cities. For example, the preservation of agricultural land remained vital to ensure the continuous provision of food for human and animal consumption; and the promotion of 'green' transport alternatives had a role to play in slowing down the high levels of pollution currently experienced in the cities. The benefits to be derived included environmental sustainability as well as socio-

economic sustainability. Even without the generic subscription to sustainability, the principle of mixed-use was considered essential to create living environments which are filled with vibrancy and offered choice to its different users. The researcher concludes that Umhlanga Ridge Town Centre, to a large extent, qualifies as a New Urbanist development based on the researcher's assessment. The measurement of Umhlanga Ridge Town Centre against the principles of New Urbanism has provided insight into how the principles of the New Urbanism Charter could be implemented based on a critical evaluation of local situations. The researcher is of the view that the New Urbanism Charter only represents a guide to urban form and development, and can be altered to fit particular situations at any given time.

Tongaat Hulett's contributions to Ethekwini's development have been enormous over the last century and remain critical to economic productivity in the region. Umhlanga Ridge Town Centre and its surrounding areas have impacted strongly on the economic base of the region. The researcher is of the view that urban development in Umhlanga Ridge is relevant to support the long-term sustainability of the Northern Municipal Region since it has been projected to experience large-scale Greenfield development in the next ten years. Also the potential for Umhlanga to attract further investment upon completion and full operationalisation of the Dube Trade Port is certain. Without doubt, Tongaat Hulett's involvement in urban activities will remain market-oriented as is the case of the Umhlanga Ridge Town Centre, whilst local authorities such as Ethekwini Municipality would have to act in the interest of its poorer citizens. However, their contribution to infrastructure provision in the north of Durban is to assist towards financial sustainability of the region. Revenue generated from Umhlanga Ridge Town Centre and surrounding areas would in turn become relevant to finance Ethekwini's public mandates in other parts of the region. This goes to confirm that urban development is a shared responsibility, yet the role of the private sector in achieving urban sustainability in its entirety still remains to be researched.

The development of Umhlanga Ridge Town Centre based on New Urbanist principles was largely influenced by private sector response to satisfy market demand for suburban living and global economic needs such as tourism and the provision of office space for transnational companies. Although it extends to meet housing and infrastructural needs of the region, major setbacks such as property prices and inefficiency in public transport systems do not support the goal of integration and sustainability. The rectification of these setbacks within the metropolitan region is necessary to advance the principles of sustainability and integration. The researcher concludes that sustainability is a continuous path and can only be achieved

incrementally. Umhlanga Ridge Town Centre as a neighbourhood can only contribute very little to urban sustainability on a localized scale. Yet, New Urbanism can be promoted based on its support for pedestrianisation and cycling over the use of the automobile although this was on a rather limited scale in the Umhlanga Ridge Town Centre. Basically, the success of urban sustainability hinges largely on transportation systems which consume less energy, yet making movement easy for both people and goods (Kenworthy, 2008, 2009). Likewise, the contributions of Umhlanga Ridge to environmental sustainability would have been made possible if an efficient public transit system existed in the metropolitan region to which it would be connected.

6.3 Challenges and Recommendations to Sustainable Urban Development

The scope of this research included the identification of constraints to urban sustainability and development which were discussed in Chapters 4 and 5. Although the desirability of sustainable urban development has become popular with the public and private sectors, a number of institutional inconsistencies which undermined the achievement of metropolitan sustainable goals were present. Essentially, the goal of sustainability has been regarded as an on-going process, and that current practices in urban development must not only be based on normative principles but also be contextually formulated and be workable under any specific situations. Firstly, it was established that market competitiveness and profit maximisation were the main reasons for Tongaat Hulett activities, whereas Ethekwini had a mandate to act in the interest of its poorer citizens with rather limited resources. Whilst Tongaat Hulett Developments remained a major contributor to housing stock in Durban, their orientation towards upmarket housing was contrary to the needs of the average income of majority of the Ethekwini's working population as was explained in Section 5.5.2 in Chapter 5. Affordability thus posed a major setback for potential homeowners and had increased the demand and supply of public housing in the Municipality. In spite of these public-private divergences in development goals, an interview with the key informant from Ethekwini acknowledged that the successful implementation of the Riverhorse Valley Business Estate and Bridge City through a partnership between Tongaat Hulett and Ethekwini Municipality had contributed to job creation and economic productivity in the north of Durban.

Current development controls such as zoning laws also proved to be setbacks to urban sustainability (interview with Rampersad, 2009). Clearly, the disjuncture between densification and zoning laws which

supported low density developments and parking requirements were identified as some of the prescriptions which were contrary to densification. Not only that, but also the need for flexibility in development controls and building regulations had become essential to encourage sustainable practices in private sector developments. It has been suggested that the revision of development controls had become appropriate to urban sustainability (Chan and Yung, 2004). Garde (2004: 167) expresses that policies that address concerns such as those related to sustainability are often not adopted even though they are backed by strong moral (and economic) arguments. This is because sustainability is usually viewed more as a theoretical construct and as an agenda to which politicians pay lip-service (Chan and Yung, 2004) as was explained in Section 2.1.1 in Chapter 2. Local authorities such as Ethekwini Municipality (as an agent of development) have a major role to play in promoting private and political buy-in to sustainable urban practices through the strengthening of communication mechanisms with various urban actors.

The current trend of privatised planning processes especially by major land owners such as Tongaat Hulett had also been identified as an issue of concern to urban sustainability. Clearly, the Ethekwini Municipality as a public entity has a responsibility to prepare an overall development framework (a process which includes participation and consultation) within the area of its jurisdiction. However, the power and ability to implementation was a shared function among various actors with divergent interests. The occurrence of the scale and type of development in the north of Durban had been attributed to the lack of a strong defensible Spatial Development Framework by the Ethekwini Municipality which created loopholes for private sector initiative to determine the direction of growth. The research revealed that the designation of Umhlanga as one of Ethekwini's major investment node was resultant of large-scale private sector investment rather than a deliberate regional planning decision. This goes to show the importance of master planning as a tool for determining the type and direction of growth in cities. For example, the Singapore's 2003 Master Plan was a statutory document which was aimed at private sector development control (Han, 2005: 88-89). In this Master plan, a new land-use zoning approach known as the Impact-based zoning[54] was used as a strategy to promote private sector development but most importantly towards environmental and economic sustainability. It used the "New White Zone"[55] as a tool to promote mixed-use developments (ibid). The

[54] This zoning approach was used to house different business activities according to their level of pollution at different locations.
[55] The new white zone could have housing, offices, shops, hotels, clean industries, educational facilities, recreational facilities as well as community spaces.

flexibility of Singapore's 2003 Master Plan gave room for the private sector to apply their preferred design and mix of uses but most importantly, contributed towards sustainable urban development.

Another major challenge related to public housing projects in South Africa was the lack of institutional support for housing innovation. Low-income housing had contributed immensely to urban sprawl yet the lack of political and consumer support for housing innovation leaves little to the desired sustainable future. Umhlanga Ridge Town Centre as an example of contemporary high density living environment was desired by 85% of respondents who took part in the questionnaire interviews. Although the sample size was not very representative of the Ethekwini's population, the fact remains that high density living is not an option for some due to livelihood, cultural and lifestyle preferences. For example, planners involved in public housing projects in Cato Manor were faced with "consumer resistance to anything other than the single house on their own stand" (Dewar and Kaplan, 2004). The original policy framework for Cato Manor included a strong emphasis on achieving higher densities (ranging between) comprising of a range of housing typologies but was not fully realized (ibid: 133). Eventually, a density of approximately 40 – 50 dwelling units per hectare was achieved, and was known to be higher than in some other low-income metropolitan areas. This situation experienced in Cato Manor goes to confirm the magnitude of this challenge for most local authorities in South Africa. Without doubt, the promotion of higher densities as a sustainable urban form needs to be revisited given the current anomalies in public transport systems, zoning laws, and building regulations which are essential to support this goal.

Integrated Development Plans are intended to be holistic multi-sectoral plans, which guide the future development of the locality, giving direction to both the municipality and other spheres of government operating in the area (Todes, 2004: 844). Additionally, national legislation suggests that IDPs should contribute to sustainable development and to which Coetze (2002) has argued, is (referring to IDPs) South Africa's version of Local Agenda 21 (ibid). This dissertation has argued that the method of development prioritization and the extent of *integratedness* of different developmental needs in Integrated Development Plans still remain questionable. However, crucial to all these challenges outlined above, is the revision of national policies which must reflect the active support and implementation for sustainable practices to urban development in South African cities.

6.4 Final Thoughts

Urban form is only a critical component of the sustainable development agenda but has the ability to trigger chain reactions which impact on the different dimensions of urban development. The role which spatial planning plays in reaching the aspiration of a sustainable future is enormous. Reasons for this include the relevance of spatial planning decisions to promote economic activities where they are most needed; and to match existing jobs. Also these will have to occur without excessive damage to their physical and ecological environments. The use of New Urbanist principles in the structuring of cities is not a guarantee to a sustainable future. Cities and their inherent processes are not static and therefore, the strict adherence to any set of spatial planning principles would not necessarily address urban challenges.

The free flow of capital in modern society has resulted in the enhancement of private sector activities such as Tongaat Hulett, therefore, their involvement in activities which satisfy global needs cannot be ruled out even when local challenges need to be met urgently. More so, the emergence of Umhlanga Ridge as an airport city is forthcoming and Tongaat Hulett Developments is likely to undertake development to meet global needs. Undeniably, the benefits to be derived by the Ethekwini Municipality would be heavily inclined towards revenue to be generated from economic activities.

In spite of the concerns raised with respect to the application of New Urbanism in Umhlanga Ridge, the possibility remains for the concept of New Urbanism to be contextualised for the purpose of contributing to the overall development goals of a region. The Ethekwini Municipality also has a role to play in enforcing the adoption of sustainable practices in its public sector activities. Even as negotiations continue for the development of Cornubia (located northwest of Umhlanga Ridge Town Centre) into a mixed-income neighbourhood, it is necessary for all stakeholders involved to reflect on how best they can contribute towards integration and sustainability. Also, as the development of Umhlanga Ridge Town Centre remains to be completed, it is hoped that it will become an urban neighbourhood which mirrors the principles of integration and sustainability. Most importantly, as we work towards achieving urban sustainability, various elements of today's industrialised, technological and cosmopolitan world would need to be critically examined in order to make relevant trade-offs and formulate workable ideas to reconcile the conflicts between man-made and natural systems on a much larger scale.

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Interviewees

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Nancy Odendaal, Town and Regional Planner

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