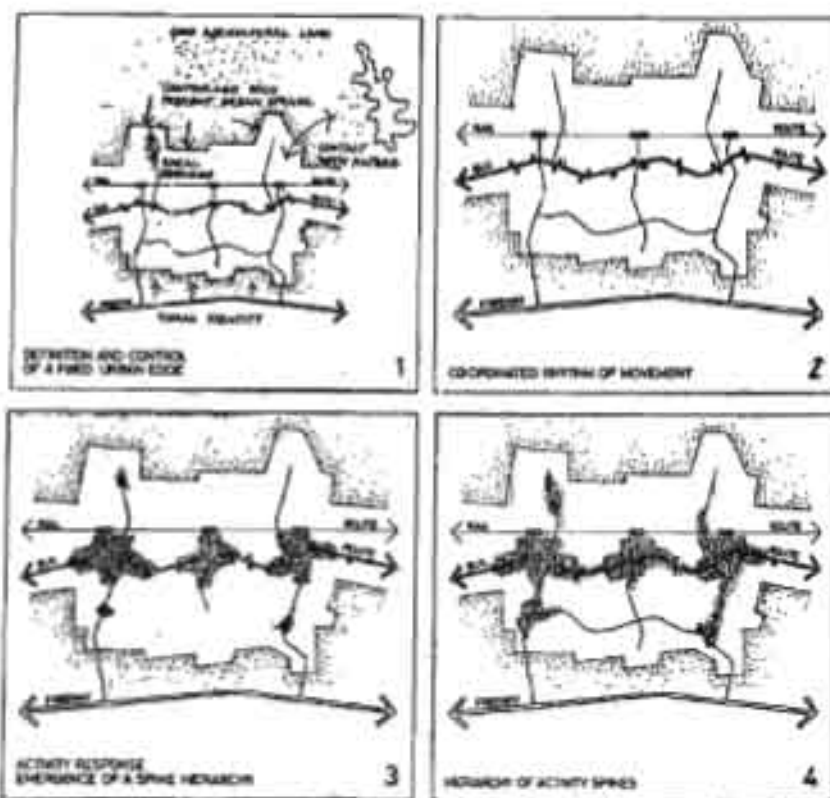


**UNIVERSITY OF NATAL, DURBAN**

AN ENQUIRY INTO THE USE OF ACTIVITY CORRIDORS AS A  
SPATIAL STRATEGY TO RESTRUCTURE SOUTH AFRICAN CITIES:  
A review and evaluation of activity corridor theory and practice, with reference  
to the Durban Municipal Area.

A. MARTENS



## AN ENQUIRY INTO THE USE OF ACTIVITY CORRIDORS AS A SPATIAL STRATEGY TO RESTRUCTURE SOUTH AFRICAN CITIES.

A review and evaluation of activity corridor theory and practice, with reference to the Durban Municipal Area.

by

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December 2001

Submitted in partial fulfilment of the requirements for the degree of Masters in Town and Regional Planning, in the School of Architecture, Planning and Housing, University of Natal, Durban.

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## 1. INTRODUCTION

### 1.1 Background

This dissertation outlines an enquiry into the use of activity corridors as a spatial strategy to restructure South African cities. The aim of the study is to review and evaluate activity corridor theory and practice, with particular reference to the Durban Municipal Area (see Figure 1), in an effort to unpack the theoretical notions that underpin the concept and to identify the key limitations and opportunities for implementing activity corridor strategies and initiatives.

The study is prompted by the relatively recent changes in the political and institutional environment within which planners operate in South Africa and the related shifts in planning theory and practice. It has been widely recognised that past planning practices have contributed to the creation of highly dysfunctional cities in South Africa and that innovative planning approaches are required if past imbalances are to be redressed and future urban growth accommodated in a manner that optimises the use of scarce resources.

With the advent of a 'post-apartheid' era, increased attention has been focused on the need to restructure South Africa's urban areas to create more efficient, equitable and sustainable cities that not only contribute to redressing past imbalances but which are also capable of accommodating the needs of a generally poor and increasingly urbanised population. In this context, the notion of activity corridors has received increasing attention over the last two decades as a means of restructuring the built environment and improving urban efficiency, equity and sustainability.

Activity corridors are advocated as a central component of a number of key documents dealing with urban restructuring and management in South Africa in general and Durban in particular. Activity corridors have been incorporated into a number of metropolitan scale planning frameworks for major urban centres in South Africa, including the Central Witwatersrand (GAPS 1993) and the Cape Metropolitan Region (WCEDF 1995). The activity corridor concept has also been advocated in a number of key policy documents for South African cities (Dewar *et al* 1991; Hindson *et al* 1993; DoH 1997; DoT 1999). In addition, various aspects of the activity corridor concept have been incorporated into different pieces of legislation such as the 1995 Development Facilitation Act, the 1998 KwaZulu Natal Planning and Development Act and the 2000 National Land Transport Transition Act.

In Durban, a number of important metro-wide planning and development frameworks make reference to the activity corridor concept. This includes reports prepared between the late 1980's and mid-1990's for the former Durban Functional Region (DFR) on behalf of Tongaat Hulett (McCarthy *et al* 1990) and the DFR Interim Development Forum (Smit *et al* 1993; McCarthy *et al* 1993). It also includes several Green Papers prepared as part of the Rapid Action Programme for the former Durban Metropolitan Area (DMA) with regard to urban form (UFTWG 1996), transportation (Martens *et al* 1996) and housing (Byerley 1996). And finally, it includes more recent spatial and integrated development planning reports prepared mainly in the late 1990's for the former DMA (DCC 1994; SDFSC 1997) and the six previous Local Councils within the DMA (IDP TTT 1998; Siyakhana Consortium 1998; UEPT 1998; ME 1999; 2000a, 2000b).



In addition, a wide variety of important local projects have focused on the use of activity corridors, spines and streets to restructure different parts of Durban. This includes plans and proposals for Mariannhill (Uytenbogaardt *et al* 1989, 1992), the Durban-Pietermaritzburg Corridor (McCarthy 1994), the Durban Corridor Study for the R102 (SSMB 1995; SMB & SWK 1995a, 1995b, 1995c), Cato Manor (GCMDF 1992; SSMB 1994; ME 1995; CMDA 1997; Iyer Rothaug 1999), Inanda (IDF 1995; ME 1997a, 1997b; DPD 1998; Iyer Rothaug 1998), KwaMashu (VMA 1998), Berea (Iyer Rothaug 2000) and the Hillcrest/Gillitts Activity Corridor (OWLC 2000).

And finally, a number of investigations have been undertaken since 2000 by the Council for Scientific and Industrial Research (CSIR) for the recently established Durban eThekweni Municipality including the *Land Use Corridors and Nodes Study* (Green *et al* 2000, 2001a, 2001b), the *Fundamental Restructuring Project* (Gordge *et al* 2000; Oranje *et al* 2001) and the *Accessibility Mapping Project* (Green *et al* 2001c). These projects provide the first detailed application of the activity corridor concept to Durban at the metropolitan scale and are likely to form an important component of spatial restructuring and growth management initiatives in the city in the future.

The preparation of the abovementioned documents has been prompted by legitimate concerns over the future of the built environment, and the people who use it, in a period of fundamental change in South Africa. The activity corridor concept has emerged locally as a strategy to restructure South African cities to the benefit of the majority of its inhabitants.



Figure 1 : Durban Municipal Area

## 1.2 Research Problem

Despite this abundance of literature motivating or advocating the use of activity corridors and its prevalence in present debates and proposals for restructuring, the validity and viability of the concept has yet to be adequately tested or demonstrated. Not only has there been insufficient critical exploration of its applicability in the Durban context, but there is, as yet, little detailed understanding of what functional conditions are necessary for the development and operation of corridors and few practical guidelines as to how they may be implemented.

The lack of clarity over, and the widespread support for, activity corridors in current urban debates and strategies are a cause for concern and an opportunity for further research. With regard to the first, there is the danger that an emerging 'consensus' in favour of activity corridors might pre-empt a more rigorous critique of the strategy and its implications for urban planning and management. This could, in turn, lead to the adoption of inadequate or inappropriate responses to the challenges currently facing urban planning in South Africa, either through the misapplication of the concept or through the premature rejection of alternative approaches.

At the same time, however, the prominence of the topic in current debates and the fact that it is the focus of a number of significant projects in Durban, provides a fertile starting point for potentially useful research. These projects represent the first substantial attempts to tackle the issue of activity corridors in Durban and therefore provide an indispensable empirical base for the research undertaken as part of this dissertation. In the light of the recent instatement of the eThekweni Municipality in Durban, it is imperative that the opportunity be used to clarify and critique

the concept if an appropriate response to planning and decision-making in Durban is to be developed.

The aim of the dissertation is, therefore, to review and evaluate the activity corridor theory and practice with reference to the Durban Municipal Area. This will focus its suitability as a spatial strategy, its applicability in the Durban context and its ability to be implemented.

## 1.3 Scope of the Enquiry

The study has been conceived as an 'Intervention Focused Academic' dissertation that incorporates both *empirical and theoretical components*. The theoretical component consists of a review of the existing literature that describes the origins and development of the activity corridor concept and which provides the basis for evaluating the main theoretical considerations underpinning the concept and its usefulness as an urban restructuring strategy.

The empirical component consists of a review and evaluation of specific attempts within the Durban context to implement activity corridors, spines or streets. These two components provide the basis for highlighting the relationships between activity corridor theory and practice and for identifying the key factors that either limit or provide opportunities for implementing the activity corridor concept.

Given the broad scope of the dissertation, it was considered essential to define the parameters of the study in order to focus the research and to ensure that the requisite tasks were manageable within the allotted time.

Firstly, the study is primarily concerned with *spatial interventions* that attempt to effect improvements in urban form and structure to the benefit of urban residents. This does not in any way downplay the need for social, economic and institutional transformation in addressing the socio-economic needs of urban populations. Clearly, a co-ordinated effort is required that incorporates both spatial and broader social, economic and institutional interventions if substantial improvements are to be made in the quality of life of urban residents. Indeed, a key component of the enquiry is the attention given to the influence of social, economic and political factors on the prospects for implementing the activity corridor concept.

Secondly, the focus of the dissertation is on the *local and metropolitan scale* since this is primarily the scale at which 'activity streets' and 'activity spines and corridors' operate. The study does not refer in any significant detail to the regional implications of the concept (by referring, for example, to the proposed 'Durban - Pietermaritzburg Corridor'). It is believed that this focus is justifiable given that there are more examples of local-scale activity streets, spines and corridors and that more progress is likely to have been made in terms of implementing these more local-scale projects. Clearly, a more broad-based exploration would be necessary if a critical understanding of the potential for a network of activity routes to develop in Durban is to be achieved.

Thirdly, the dissertation provides an *overall review and evaluation* of the current state of activity corridor theory and practice in Durban. It therefore attempts to provide a relatively representative cross-section of theories and projects associated with activity corridors and does not attempt to provide comprehensive coverage of the wide range of activity

corridor related initiatives currently underway or to delve in any great detail into the specificities of particular projects.

And finally, the study recognises that it provides but one single input to a very broad and complex debate surrounding appropriate urban planning and management strategies for South African cities. It is no way intended to provide the last word on activity corridor theory and practice but should rather be seen as an effort to take stock of the present state of the activity corridor debate and to extract some indication of possible future directions for spatial planning approaches and interventions.

#### 1.4 Research Methodology

In formulating an enquiry into the use of activity corridors as an urban strategy, the study combines both theoretical and empirical research components. The main elements of the research process are as follows.

Firstly, a critical *review of the existing literature* on activity corridors was undertaken to identify the origins of the concept and to trace its development in academic debates, research projects and public planning policy over the years. This provided the basis for evaluating the theoretical foundations of the concept, its relationship with other urban debates and the key elements underpinning activity corridor strategies. The evaluation of the concept's linkages with related theoretical concepts and urban debates in South Africa and, to a lesser extent internationally, sought to locate the notion of activity corridors within a broader conceptual framework regarding urban form and structure and the need to restructure South African cities.

Secondly, an analysis of various *case studies* in Durban was undertaken that incorporated activity corridors, spines or streets. This entailed a review of the available documentation as well as structured interviews with key planning practitioners involved in each case study to ascertain the experiences involved in planning and implementing the activity corridor concept in the Durban context and any difficulties that might have been encountered.<sup>1</sup> These case studies included the Fundamental Restructuring Project, the Land Use Corridors and Nodes Study, the Urban Core Extension Areas Project, the Hillcrest/Gillitts Activity Corridor Local Development Plan, the Bellair North Activity Spine Precinct Development Plan and the Amaoti/Amaotana Activity System Development Framework.

The evaluation of these case studies focused on: the degree to which they fulfilled the preconditions and principles outlined in the literature; their performance in terms of the criteria described in the literature; the metropolitan significance of these routes; their contribution to surrounding residential areas; the relationship between through traffic and roadside activities; the compatibility of adjacent land uses; the densities involved; the perceptions of users; and their ability to integrate the city. Ultimately, this analysis attempted to draw out the differences, if any, between the performance and environments created by activity corridors and the purported benefits identified in the literature.

This then provided the basis for *analysing and synthesising* the activity corridor theory and practice in Durban around a relevant set of theoretical and practical issues. The ultimate objective of the research process was to

arrive at a critical understanding of the potential for, and limitations involved in, using activity corridors as an urban strategy in the Durban context. The following section provides an indication of how the different research elements were organised to address this task.

### 1.5 Structure of the Enquiry

The dissertation is divided into seven chapters. The first chapter (covered above) provides an **Introduction** to the enquiry that defines and contextualises the research problem, indicates the scope of enquiry and outlines the main elements of the research process.

The second chapter provides a **Conceptual Framework** for the study. This includes an outline of the key terms and concepts applicable to the study as well as a critical review of the relevant literature. The literature review traces the emergence and development of the activity corridor concept and highlights the key theoretical issues that have been identified in relation to the activity corridor concept.

The third chapter provides an **Evaluation of the Conceptual Framework** that explores the theoretical foundations and concepts that underpin the activity corridor concept and the concept's relationship with broader debates including urban restructuring, sustainable development and the compact city. This chapter also identifies the key elements of activity corridor strategies and provides the basis for the empirical research that occurs in the following chapter.

The fourth chapter provides a review of the **Durban Case Studies** of activity corridor practice that have been selected for the purposes of the

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<sup>1</sup> A copy of the Interview Schedule is attached as Appendix 8.3.

dissertation. This includes metro-wide applications of the concept as well as local applications in different urban contexts.

The fifth chapter provides an **Evaluation of Durban Case Studies** in relation to the key theoretical and practical considerations identified in the preceding chapters. This draws on the analysis of the limitations of the approach in the Durban context to critically reflect on the viability of using activity corridors as part of broader urban strategies.

The sixth chapter explores the **Key Requirements of an Activity Corridor Strategy**. This includes the institutional and political support for activity corridor concepts and initiatives in Durban, the prospects for implementing specific requirements of an activity corridor strategy and the links with other forms and levels of planning.

The seventh chapter presents the **Conclusions and Recommendations** of the study. This chapter draws on the review and evaluation of activity corridor theory and practice outlined in the preceding chapters to evaluate and suggest the role of an activity corridor strategy in an overall approach to urban spatial restructuring in Durban. The chapter also provides a number of recommendations regarding future efforts to conceptualise and support an activity corridor strategy.

And finally, a number of **Appendices** provide relevant supporting information including the References that have been used to inform and prepare the dissertation, a Glossary of Key Terms and Abbreviations contained in the dissertation and the Interview Schedule used for the case study research.

## 2. CONCEPTUAL FRAMEWORK

The following chapter outlines the key terms and concepts relevant to the enquiry and reviews the main sets of literature that pertain to activity corridors. This provides the basis for the theoretical evaluation outlined in Chapter Three and the empirical research presented in Chapter Four.

### 2.1 Key Terms and Concepts

In presenting an enquiry into the use of 'activity corridors' to restructure urban areas, the study refers to a number of key terms and concepts which are central to any discussion over urban spatial planning and restructuring.

The following chapter firstly defines urban form and structure before elaborating on the key concepts underpinning the notion of activity corridors.

#### 2.1.1 Urban Form and Structure

Since the focus of the dissertation is essentially on the form and structure of urban areas, it is important to clarify what is meant by the terms 'urban form' and 'urban structure' and what factors determine them. Although the differences between the concepts of urban form and urban structure are not always clear, the following definitions are provided for the purposes of this study.

##### a) Definition of Urban Form and Structure

In the context of planning, the term 'urban structure' generally refers to the "spatial geometry or pattern of settlement as created by connecting elements of the urban area such as transport links, parks, squares and other open spaces and how they relate to one another" (WCEDF 1995: vii).

The major land use patterns associated with the main movement routes create high levels of activity through the city. Structure can, therefore, not be "detached from 'movement', or the temporal flows of people, vehicles and goods as dictated by the arrangements of that structure" (Chittenden 1990: 6).

The term 'urban form', on the other hand, generally refers to the three dimensional quality and appearance of urban areas. This includes the height, size and shape of the city as a whole, as well as the relationships between different urban elements, particularly the physical structures and spaces within the city (WCEDF 1995: vii).

When combined, therefore, the term 'urban form and structure' refers to the visual appearance and spatial arrangement of the vertical and horizontal elements of a city (typically buildings and the spaces between), the relationships of which determine the qualities of urban space (Chittenden 1990: 6; WCEDF 1995: vii). The form and structure of urban areas is also related to the size and shape of the city and the density or intensity of people and activities within the settlement.

##### b) Significance of Urban Form and Structure

Urban form and structure are important considerations of urban planning, development and management since they have a major impact on a city's social, economic and environmental functioning and performance. Firstly, the structure of a city affects the ability of an urban system to generate a range of economic, social, cultural and recreational opportunities and facilities (Dewar *et al* 1991: 16). Urban structures that increase opportunities for a wide range of social and economic interactions are

more likely to accommodate the diverse needs of urban dwellers such as employment opportunities, access to services and facilities, cultural expression, etc.<sup>2</sup>

Secondly, urban structure affects the distribution of people in relation to urban opportunities, resources and facilities and therefore their ability to access these opportunities. Urban structures that result in large distances or major barriers between urban residents and the opportunities they need, or wish, to access impose major costs and inconveniences on urban dwellers. This is particularly significant for the urban poor, for whom transport costs are a major, and often unaffordable, burden. The structure of a city therefore affects its ability to meet the basic needs of urban dwellers such as shelter, utility services and community facilities.

Thirdly, urban structure affects a city's ability to promote collective activities and social interaction, which are essential ingredients of city life and urban development (Dewar *et al* 1991: 17). The structure of a city can either promote or retard social interaction, depending on its ability to provide high quality and suitably located public spaces where interaction can occur.

And finally, a city's form and structure affects the environmental quality and sustainability of urban areas. The form of a city has a direct bearing on the environmental quality of public spaces and built form. In addition,

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<sup>2</sup> For example, a city whose structure provides affordable places with a suitable market for the informal sector to provide services will increase the survival chances of these traders by providing employment in a context where formal employment opportunities are becoming increasingly scarce.

cities with limited and fragmented open space systems are likely to be less ecologically sustainable due to the decreased diversity and interrelatedness of their open space systems.

Urban form and structure is therefore not only a critical component of the social and economic life of a city but is also significant in terms of its environmental quality and sustainability and has a major impact on the quality of life of urban residents. This is not to deny the importance of aspatial factors to the urban economy or quality of life. Spatial planning and restructuring efforts cannot be successfully pursued in isolation from the prevailing social, economic and political dynamics of the specific context in question (Dewar *et al* 1991: 11).

### 2.1.2 Activity Corridors

The concept of activity spines and corridors emerged in the late 1970's and early 1980's as a response to the poor performance of the existing urban form and structure of South African cities. The concept was initially developed by Dewar (*et al* 1978; 1984c) and was subsequently refined over the years to provide a commonly accepted definition of activity corridors.

#### a) Definition of the Activity Corridor Concept

The idealised activity corridor originally envisaged by Dewar (1984c: 51) is indicated in Figure 2 and has since been conceptualised as consisting of the following commonly agreed elements (Chittenden 1990: 5; Green 1990: 16-17; Dewar *et al* 1991: 101; SSMB 1995: 31-32; WCEDF 1995: iv; Green *et al* 2001a: xvi):

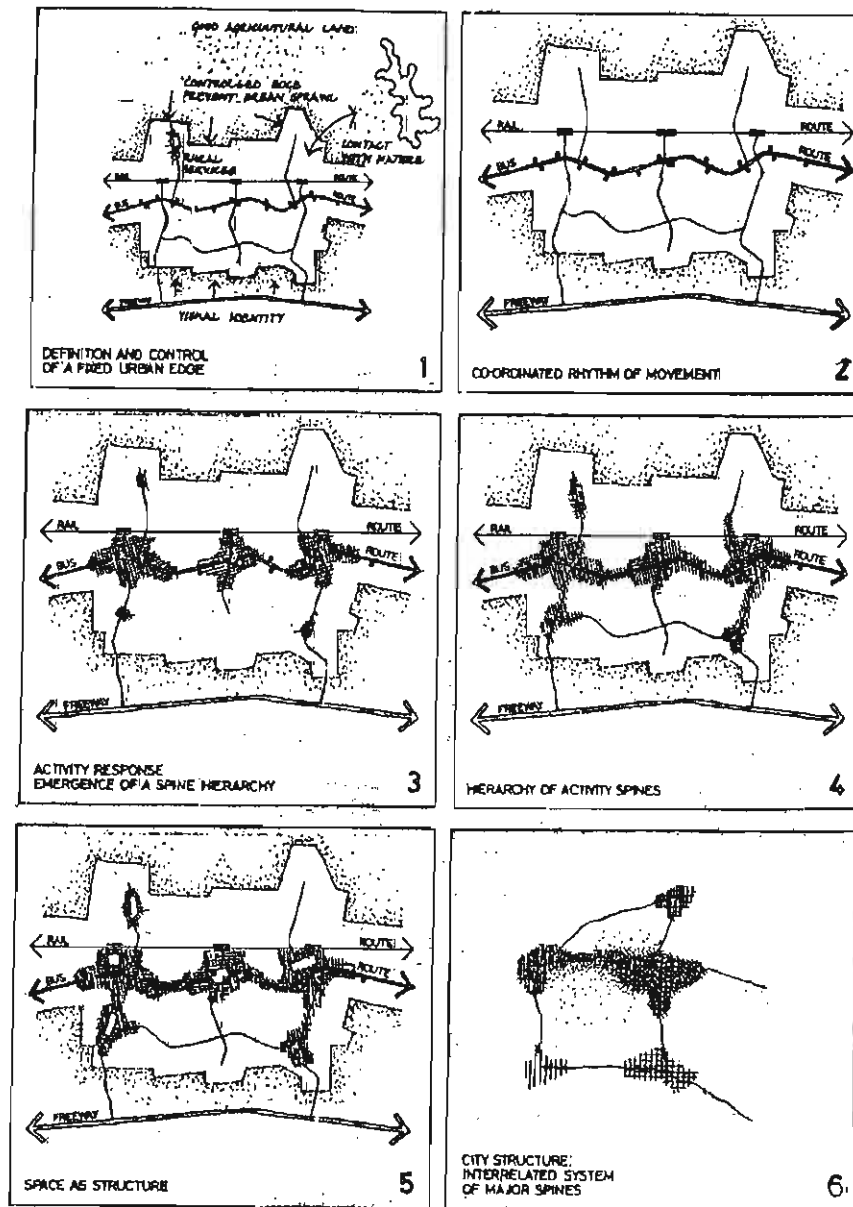


Figure 2 : Idealised Activity Corridor

### 1. Activity Corridor

An activity corridor is a metropolitan scale linear zone, approximately 2kms wide, of mixed use, high-density urban development concentrated along a high-friction public transportation route with residential, commercial, industrial and recreational activities in close proximity to one another. An example of a 'mature' corridor is Voortrekker Road in Cape Town. In Durban, the southern corridor, extending from the CBD southwards to Amanzimtoti along the R102, is perhaps the best example.

### 2. Activity Spine

At the centre of an activity corridor, a continuous activity spine carries the major road-based public transport and consequently provides the best locations for more intensive activities such as businesses and community facilities, as well as high-density housing. The most commonly cited example is Old Main Road in Cape Town. The R102 North and South Coast Roads are the main examples of activity spines in Durban.

### 3. Activity Street

An activity street is a smaller version of an activity spine where the same principles of linearity, accessibility and market threshold apply but where there are much lower levels of opportunity. Activity streets occur at the residential scale and are primarily of local significance. Examples in Durban include the emerging activity street along Bellair Road in Cato Manor and the relatively 'mature' activity street along Sparks Road in Sydenham.



#### 4. Activity Node

An activity node is a place of high accessibility and advantage (for example, at transport interchanges or traffic intersections) where both public and private sector investment tends to concentrate. Activity nodes provide optimal locations for shops, offices, community facilities and the informal sector and act as growth points for the development of activity routes by stimulating movement and passing trade. Tongaat and Amanzimtoti are examples of activity nodes in the Durban context.

This definition represents the 'conventional' understanding of the activity corridor concept. The concept therefore not only incorporates the 'activity corridor' but also the notions of 'activity spines', 'activity streets' and 'activity nodes'. The references to the 'activity corridor concept' in this dissertation should therefore be understood as referring to these other components as well.

In addition, where the dissertation refers collectively to activity corridors, spines and streets it will term them 'activity routes'. Where a distinction is drawn between these different components, the dissertation will refer directly to the 'activity corridor', 'activity street', 'activity street concept', etc. And finally, where the dissertation refers to 'activity corridor initiatives', 'activity corridor case studies' or 'activity corridor strategies', these should be understood as a general terms for planning projects or approaches that incorporate one or more components of the activity corridor concept as central features of their proposals.

This definition of activity corridors provides a useful starting point for reviewing the development of the activity corridor concept (in the Literature Review) and for identifying activity corridors, spines and streets and related projects in the Durban context (in Chapter Four). Additional definitions for other aspects of urban planning that are relevant to the dissertation are provided in Appendix 8.2.1.

#### b) Significance of the Activity Corridor Concept

The activity corridor concept, as defined above, is of major importance to current debates around appropriate urban planning and management in South Africa. As indicated in Chapter One, the activity corridor concept has been incorporated into a wide variety of urban development policies, plans and proposals in South Africa and in Durban. The concept therefore has a strong influence on the way in which spatial planning initiatives are being conceptualised, planned and implemented across the country and in Durban.

The notion of activity corridors has been widely adopted as part of an urban strategy dealing with a range of land use, transport, social and economic issues simultaneously (SSMB 1995: 41). Indeed, it has been suggested that activity corridors represent an organising concept that not only acts as a spatial integrator, providing 'seams' that knit the urban fabric together, but also as a 'development integrator', integrating different development sectors and interventions around a common structure (Markewicz *pers com* 2001).

As such, the activity corridor concept affects a number of different sectors across the city. This includes the activities and opportunities of individuals

and communities in specific contexts, the attractiveness of different areas for private sector investment and the development priorities of public sector investment directed into social facilities, housing, infrastructure, etc.

It has been argued that activity corridors, spines and streets generate major advantages for urban areas, including (Naude 1988 cited in Green *et al* 2001a: 91-92):

- Accommodating urban population growth, facilitating a general increase in population densities and establishing a greater variety of housing options, particularly higher density living environments mainly attractive and affordable to single or small, upwardly mobile households.
- Containing urban sprawl, reducing the number of subsidised public transport routes and preventing the haphazard location of major traffic generators through a pro-active corridor development policy, which will concentrate and spatially order the location of routes and traffic generators and reinforce the incentive for people to live along corridors.
- Containing and channelling vehicular traffic and promoting public transport through the relative concentration of traffic generation and attraction along a limited number of movement corridors, which makes it feasible to reduce the number of criss-crossing main roads in an urban area and to develop a viable multi-modal public transport system.
- Creating complementarity between different transport modes through the provision of parallel routes for private car and different forms of

public transport movement, which allows for different modes, in particular public transport, to start supporting each other.

- Creating complementarity of business development in potentially competing locations through the location of new residential development as an extension and support to an existing development corridor and commercial node, rather than developing in a relatively self-contained manner with the business centre always in the middle.
- Creating opportunities for new business to be visible and accessible to passing traffic since local and through-traffic are not separated (at least not until it becomes absolutely essential to provide a freeway standard through-route to accommodate through-traffic) but intermingle, slowing through-traffic down and bringing it into contact with roadside enterprises.

Although considerable attention has been given to the activity corridor concept, there appears to be little evidence of the successful implementation of the concept in Durban as yet. These issues are explored further in Chapter Four and Five of the dissertation.

## 2.2 Literature Review

The literature review that follows traces the emergence and development of the activity corridor concept and highlights the various debates surrounding this widely utilised, but often poorly understood, concept.

### 2.2.1 Origins of the Activity Corridor Concept

Although the activity corridor concept only emerged in the late 1970's, its origins can be traced back to earlier ideas and trends that exerted

considerable influence over urban planning approaches prior to the emergence of the concept. According to Green *et al* (2001a: 88):

“The development of ideas about activity corridors within the transport planning profession, can be traced back to the 1930’s and 1940’s, when the spontaneous development of such corridors was viewed with much disapproval and labelled as ‘ribbon development’. Legislation was enacted to curb the excesses of such ‘ribbon development’ and to control the number of access points along main roads.”

The attitudes to corridor development amongst land use and transportation planners started to change in the 1960’s and 1970’s, however, as new ideas and trends emerged internationally. During this period, a number of influential authors<sup>3</sup> had attacked the prevailing planning paradigms and the resulting urban environments produced in the post-war period in both the United Kingdom (UK) and the United States of America (USA). These authors proposed the development of more appropriate planning approaches and urban forms that would not only promote more efficient development patterns but also the qualities of ‘urbanity’.<sup>4</sup>

Significantly, linear development forms (or ‘ribbon development’) were increasingly regarded as an efficient development pattern that were more likely to generate the qualities of urbanity than the existing nodal patterns

<sup>3</sup> See for example, Crane (1960), Jacobs (1961), Alexander (1966), March (1967), Martin (1972) and Lynch (1961, *et al* 1974).

<sup>4</sup> See Chapter Three for a definition of the concept of ‘urbanity’.

and it was proposed that urban growth be “directed to create planned ribbons” (March 1967: 335). This international concern with urbanity and urban form was to provide an important impetus for local research around urban form, urbanity and the emerging activity corridor concept.<sup>5</sup>

The changing opinions regarding corridor development were given further impetus in the wake of the ‘oil crisis’ in the early 1970’s, as concerns over energy consumption and efficiency began to influence the planning profession. Of particular importance was a report by the Driessen Commission, which “strongly favoured stimulating public transport through the development of high density residential-employment corridors, focused on transportation axes” (Green *et al* 2001a: 88).

In South Africa, the concern with appropriate urban forms (including the emerging activity corridor concept) was reinforced through the critique of the apartheid city structure that emerged in academic planning circles in the 1970’s and 1980’s (Todes *et al* 2000: 233). During this period, the typical low-density sprawling apartheid city, with its fragmented urban fabric and separated land uses, urban elements and population groups, was highly criticised for its severe human and environmental consequences (Dewar 2000: 211).

### 2.2.2 Emergence of the Activity Corridor Concept

The initial emergence of the activity corridor concept in academic planning circles in Cape Town in the late 1970’s and early 1980’s can therefore be

<sup>5</sup> The links between these international debates and the local development of the activity corridor concept are explored in greater detail in Chapter Three.

understood as part of an alternative urbanist vision to the dysfunctionality of the apartheid city (Todes *et al* 2000: 233). The earliest references to the concept appeared in research undertaken by staff at the Urban Problems Research Unit (UPRU) of the University of Cape Town (UCT), particularly the work of planning academics and practitioners David Dewar and Roelof Uytenbogaardt.

In the late 1970's, Dewar *et al* (1978) produced a seminal research report<sup>6</sup> that was to lay the foundation for the activity corridor concept. This document used a comparative evaluation of different residential environments in Cape Town to formulate principles that, it argued, contributed to the promotion of 'urbanity' in urban environments. The central observation of the report was that those environments where growth had occurred in an 'evolutionary' or 'organic' manner alongside the main movement and activity routes in the city performed better than those which have been consciously planned and separated from other land uses, and from these activity routes, as a result of the application of formal town planning and design principles (Dewar *et al* 1978: 7-8).

The report argued that these activity routes performed a number of vital functions at different scales in the city. At the metropolitan scale, they structured growth, integrated different parts of the metropolis and provided continuity and comprehensibility to the city. At the local area scale, they contributed to the convenience and urbanity of the flanking residential areas by providing accessible opportunities and facilities in close

proximity to local residents and by stimulating passing trade, which increased thresholds and produced economic benefits (Dewar *et al* 1978: 9-10).

In the early 1980's, the activity corridor concept was developed further through a series of articles written by Dewar (1984a, 1984b, 1984c) and published in *Architecture SA*.<sup>7</sup> These articles were not only informed by the earlier research project undertaken by the UPRU in Cape Town, but also by ideas that had emerged internationally in the 1960's and 1970's around the notions of urbanity (Jacobs 1961; Alexander 1966) and appropriate urban forms (Crane 1960; March 1967; Martin 1972).<sup>8</sup>

In these articles, Dewar located the notion of activity corridors within a broader understanding of the predicament of the urban poor and the challenges facing development in South African cities. Dewar (1984a: 27) argued that the inefficient and inequitable form of the South African city had the greatest impact on the poorest urban inhabitants and proposed a number of changes to the "dominant city building practices" in order to improve the lives of the urban poor.

These articles proceeded from an analysis of the problems facing South African cities to the formulation of certain performance criteria that, Dewar argued, could be used to judge the quality and functioning of the urban environment. Dewar (1984b: 48-49) argued that the main indicator

<sup>7</sup> *Urban Poverty and City Development: Some perspectives and guidelines* (Dewar 1984a, 1984b and 1984c).

<sup>8</sup> This issue is discussed further in Chapter Three.

<sup>6</sup> *Housing: A comparative evaluation of urbanism in Cape Town* (Dewar, Uytenbogaardt, Hutton-Squire, Levy and Menidis 1978).

of the performance of urban environments was the degree to which they promoted access to nature and natural conditions and to the benefits of urbanity (i.e. access to all of the opportunities, activities and facilities generated by the concentration of people in cities). Dewar (1984a: 28) regarded these qualities as 'timeless' and advocated the protection and promotion of those environments that exhibited these qualities through appropriate urban planning and management.

For Dewar, these performance criteria provide the basis for proposing certain guidelines that, it is argued, improve the quality of life of the urban poor by structuring the city and the spread of resources in such a way as to make them accessible to the majority of urban dwellers. The guidelines proposed by Dewar (1984: 49-52) include the:

- definition and control of a fixed urban edge
- creation of an efficient public transportation network
- co-ordination of movement modes to create a hierarchical order of accessibility
- creation of activity arms or spines
- creation of a system of public spaces to structure urban development (and the celebration of these)
- identification of major social institutions
- introduction of more complex processes of city development

According to Dewar (1984c: 49), "these represent the main elements of a publicly-provided urban spatial framework which directs and controls private and public decision-making and investment. They are the basic building blocks for city development". For Dewar, one of the main

features of this spatial framework was the creation of "an interlocking, reinforcing and hierarchical network of spines" (1984c: 51) that would allow "intensive activities such as work, commercial, cultural and recreational activities to locate directly in relation to the major movement flows of the city" (1984c: 50).

According to Dewar (1984c: 51), this hierarchical network would range from "spines of city-wide significance which link many local areas...to local area spines, which would carry little more than social services and small traders and producers". These activity routes would need to be complemented by specialist movement channels, such as freeways, at the edge of urban developments to provide by-pass routes for high-speed traffic so as not to overload the activity systems.

Dewar (1984c: 50-51) argued that the creation of a hierarchy of activity spines had a number of advantages for urban areas:

- activities along spines serve to integrate the city through a complementary relationship between movement and activities and the provision of places for urban dwellers to meet and mix
- linear activity patterns allow greater accessibility to a wider range of opportunities than nodal systems
- linear development generates the necessary thresholds for a range of activities through the combination of the resident population and passing trade and activities are therefore more likely to survive

- linear patterns provide greater opportunity for small businesses to locate closer to higher order facilities and therefore to benefit from the thresholds they generate
- linear systems are more flexible in accommodating processes of growth and change than nodal developments
- the structural clarity of the through-route protects the adjacent residential fabric and allows for fine-grained residential fabric to exist close to places of high intensive activity
- linear patterns also enable a complex and highly positive integration of activities to occur spontaneously in space

The research undertaken by the staff of the UPRU, and David Dewar in particular, in the late 1970's and early 1980's has had a strong influence on the subsequent development of the activity corridor concept and typifies the methodology used to provide support for activity corridors. This entails the extrapolation of design principles from an analysis of existing urban environments, rather than the pursuit of some 'ideal' urban environment based on abstract planning principles. In particular, the activity corridor concept has been based on a linear form that had developed organically over a long period of time (around 100 to 150 years) and under specific contextual conditions (such as a high level of reliance on fixed-line public transport) in Cape Town. This issue is explored further in Chapter Four.

### 2.2.3 Refinement and Extension of the Activity Corridor Concept

From the late 1980's, the activity corridor concept received increasing attention as it "became linked to a broader agenda for transformation, as the apartheid state began to crumble" (Todes *et al* 2000: 233). During this period, the activity corridor concept was refined and extended through a number of research projects and its incorporation into broader debates regarding urban spatial restructuring and reconstruction in South Africa. Of particular importance was the research undertaken on behalf of the Urban Foundation (UF) and the Council for Scientific and Industrial Research (CSIR) by a number of prominent planning theorists and practitioners in South Africa.

A series of confidential reports<sup>9</sup> prepared for the UF in the late 1980's focused on the poor social, economic and environmental performance of South African cities and the potential role of alternative urban structures in contributing to urban spatial restructuring and reconstruction. This research initiative provided an important perspective on the activity corridor concept as part of a broader spatial strategy to compact and integrate South African cities.<sup>10</sup>

One of the reports prepared for the UF (Smit *et al* 1987) evaluated five alternative spatial 'models' in terms of their ability to address the major social, economic and spatial challenges facing South African cities. Smit *et*

<sup>9</sup> See for example, Dewar (1986), Mills (1986), Smit and Todes (1987), Naude (1987) and Woods (1989).

<sup>10</sup> This issue is explored in greater detail in Chapter Four.

*al* (1987: 33) argued that compact, integrated cities have great advantages over fragmented, attenuated growth but that substantial interventions would be required to ensure that the city was restructured in a more efficient and equitable manner and to ensure that the poor were not excluded from strategic locations in the city.

The relevance of the paper is that it approached the concept of ‘activity corridors’ (here articulated as part of the ‘compact city approach’) from a broader and more critical perspective that attempted to assess the social, economic and spatial advantages of the strategy in relation to other urban forms. An important observation made by Smit *et al* (1987: 33) was that:

“It makes little sense to prescribe abstract models of spatial form. Each of the metropolitan areas have geographies which have evolved in response to a range of influences some of which are quite specific to particular metropolises. Topography has for example had very particular influences on cities such as Cape Town and Durban and will continue to provide both opportunities and constraints on future forms”.

This observation highlights the need for research into the peculiar ‘geography’ of Durban and the impact this may have on an activity corridor strategy. This issue is explored further in Chapter Three.

The research into appropriate urban forms initiated by the UF in the late 1980’s was continued through the efforts of the Division of Roads and Transport Technology of the CSIR, primarily in the early 1990’s. Two

separate research projects were undertaken by the CSIR on behalf of the Department of Transport during this period.

The first project<sup>11</sup> focused primarily on the transportation problems caused by the prevailing pattern of urbanisation and the potential role of activity corridors and streets in alleviating some of those problems. The second project focused on “the channelling of urbanisation along activity corridors” and the potential contribution of activity corridors to economic upliftment (Naude 1991: 1-1).

A key concern of the first research project was “the massive level of subsidies...required to keep South Africa’s urban transport systems functioning” (Chittenden 1990: 4). It was recognised that a highly subsidised transport sector (a result of the peculiar spatial features of the South African city) was not a viable long-term prospect and that mechanisms needed to be found to reduce the need to travel, particularly for the urban poor (Naude 1988b: 1).

It was argued that “urban activity corridors can accommodate a significant proportion of the expected population increase, contain urban sprawl, stimulate business, promote public transport and constrain vehicular traffic growth” (Naude 1988b: 1). Again, the motivation for the approach is founded on a critique of the disadvantages of low-density residential sprawl on the fringes of cities and the high costs imposed by the attenuated

<sup>11</sup> See for example, Naude (1988a and 1988b), Chittenden (1990) and Green (1990).

pattern of development, particularly for the urban poor, who are largely dependent on public transport (Naude 1988b: 6).

A report prepared by Derek Chittenden and Associates for the CSIR in 1990 focused on the use of 'activity corridors' as an urban strategy for guiding the development of Cape Town's south-east region. The report acknowledged that its proposals "must accommodate local conditions, community needs and social, economic and political trends, and the scale of intervention must change accordingly" (Chittenden 1990: 7).

Nonetheless, it strongly supported the notion of activity corridors as a general approach and provided a review of the preconditions and principles considered necessary for activity corridors to function effectively (and which should therefore inform their use as spatial tools).

According to Chittenden (1990: 11-14), the preconditions and principles considered necessary for developing and reinforcing activity corridors are that:

- activity corridors must have metropolitan significance, i.e. they should transcend local areas and act as a major conduit through the metropolitan area as a whole
- housing and economic conditions within activity corridors and nodes should have meaning and significance to a broad range of people within the city
- activity corridors should connect metropolitan nodes since they constitute the growth points of development

- activity corridors need to be 10 to 20km in length and 800m to 1km in width to ensure the necessary thresholds and to ensure that activity spines are within walking distance of residents
- activity corridor densities need to be high (100-300 persons per hectare) to support higher order facilities
- activity corridors should be the focus of a wide variety of important metropolitan and local activities to increase opportunities for small enterprises and convenience to users
- activity corridors should offer a wide range of transport options (such as freeways, activity spines, rail, bus and pedestrian), and particularly public transport, to increase commuter choice
- activity corridors need to be as direct and continuous as possible for them to be effective (in terms of public transport)
- an urban edge needs to be defined to directly address the issue of urban sprawl

A report prepared by Cheri Green for the CSIR in 1990 focused on the local scale implications of the activity corridor concept. This report argued that activity streets constitute an important structural element in improving opportunities in the low-income townships developed as a result of apartheid planning. It argued that "on certain roads the through traffic and the roadside activities interact to the benefit of both" and that these activity routes were able to "promote economic growth through improved access and the sharing of facilities in low-income areas" (Green 1990: 3).



This document outlined the key principles involved in the planning of activity streets in low-income residential areas and examined the procedures and issues associated with their implementation along collector routes. The report provided a valuable examination of the detailed issues involved with applying the activity corridor concept at a local level. This scale of development is essential to those areas that have been isolated from the main concentrations of social and economic opportunities (and, in the case of Durban, also from the two main activity corridors) in South African cities.<sup>12</sup>

A number of other research projects were also undertaken in the early 1990's in Cape Town by the UPRU and David Dewar<sup>13</sup> in particular. This included a series of research reports that examined the development problems and costs that were resulting from Cape Town's size, form and structure and urban growth trends and patterns, particularly urban sprawl<sup>14</sup>. It also resulted in the preparation of the *Manifesto for Change*, a highly influential policy document produced by Dewar *et al* (1991), and a review of higher density housing trends and implementation options produced by Behrens (1993), both of which were prepared for the UPRU and which provide strategies to deal with Cape Town's development problems.

<sup>12</sup> In Chapter Four, an analysis of two case studies of activity streets is provided to examine the application of these principles in the Durban context.

<sup>13</sup> See for example, Dewar (1991, 1992a, 1992b) and Dewar and Uytendogaardt (1991).

<sup>14</sup> See for example, Dewar *et al* (1990a, 1990b, 1990c) and Behrens and Watson (1992).

These documents have not only received significant attention in Cape Town but more broadly as well. According to the authors of the *Manifesto for Change* (Dewar *et al* 1991: 7):

“The specific focus of the project is Greater Cape Town. It is believed, however, that the majority of issues and problems found in, and appropriate strategies for, Cape Town, apply equally to other South African cities and, indeed, to many cities in other developing cities: the precise form of problem and strategy may change with variations in context but the principles, it is believed, do not.”

The activity corridor concept forms an important component of the strategies proposed within these documents to address the development problems in Cape Town. Whilst the explanation of the activity corridor concept contained within these research reports is not substantially different to arguments put forward elsewhere, the documents are significant in locating the concept within a broader framework for the management of growth in metropolitan areas.

It is clear from the review outlined above that the activity corridor concept has emerged primarily from research undertaken in Cape Town from the late 1970's through to the early 1990's through the efforts of a number of authors and organisations concerned with developing appropriate urban planning and management responses to the Apartheid city (including amongst others, David Dewar, the UF, the UPRU and the CSIR).

#### 2.2.4 International Perspectives on the Activity Corridor Concept

From the late 1980's onwards, international debates and experiences have increasingly provided fresh perspectives on the activity corridor concept. The international ascendance of environmental concerns and debates through the 1970's and 1980's culminated in the emergence of a new development paradigm – that of 'sustainable development'. The term was originally defined by the Brundtland Commission (WCED 1987) as: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

In the early 1990's, this concern with sustainable development gave rise to an increasing awareness in international urban debates regarding the role of land use planning and urban form in contributing to greater urban sustainability.<sup>15</sup> These international debates were increasingly reflected and incorporated into South African environmental and development debates and policies and provided a renewed impetus for research regarding sustainable urban forms in general and the compact city and activity corridor concept in particular.

In Durban, an Environment and Development Study was undertaken in the mid-1990's as the first step in Durban's Local Agenda 21 programme (NSCLC 1996: 4). This study endorsed the links between urban form and sustainable development and argued that a sustainable city form would be promoted by building on the evolving structural grid provided by "existing,

incipient and potential activity spines" in Durban together with the city's open space systems (NSCLC 1996: 27).

In the mid-1990's, the support for the activity corridor concept was further bolstered through the widely cited successes of spatial restructuring efforts in Curitiba, Brazil.<sup>16</sup> In 1965, a new development plan was prepared for the city consisting of five major structural axes based on a 'trinity' road system with three parallel roads each one block apart and an exclusive bus lane in the central spine (SSMB 1995: 28). The spatial development of Curitiba along these lines has been widely hailed as a unique third world success story and typical benefits of the urban structure that have been highlighted include the corridor system's ability to accommodate urban growth, facilitate public transport and protect open spaces on the urban edge.

In the mid-1990's, the successes of planning and development in Curitiba received increasing attention in South Africa not only in academic circles but also more directly through the Foreign Cities Tour and subsequent fact finding visits to Curitiba by South Africa study teams in January, May and June 1994 (Nicks 1994: 2; MLH 1995: 1). The Curitiba experience was widely hailed as a working example of sustainable urban development that provided a number of important lessons for planning in South Africa.<sup>17</sup> This included, amongst others, the need and feasibility of increasing

<sup>16</sup> See, for example, Rabinovitch (1992), Herbst (1992), Devas (1993: 159-160) and Kay (1994).

<sup>17</sup> See for example, Nicks (1994), Nicks *et al* (1994), Gray (1994), Kannenberg (1995), MLH (1995) and WCEDF (1995: 21-24).

<sup>15</sup> See, for example, Newman and Kenworthy (1989), Breheny (1992), Banister (1992), Rickaby *et al* (1992), Owens (1992, 1995) and Barton (1992).

densities, the need to change the housing delivery paradigm and the need for greater leadership, accountability and flexibility in urban planning.

More importantly with respect to the enquiry presented here, is the fact that the Curitiba experience has provided a working example of urban spatial restructuring along activity corridor lines in an urban context not dissimilar to South African cities, that is, a developing city of around three million people with major development needs and scarce resources. This has provided considerable support for the activity corridor concept in the local context in terms of the benefits that it can be expected to deliver and the apparent ability to implement an activity corridor strategy in the developing context typical of South African cities.

The primarily research-oriented documents produced in the 1980's and 1990's in South Africa, and the support provided by the Curitiba experience, provided the basis for developing the *Metropolitan Spatial Development Framework* for the Cape Metropolitan Area in 1995 (WCEDF 1995). The activity corridor concept received considerable attention from the late 1980's onwards not only through the work of Dewar but also by a number of other authors and organisations such as the Urban Foundation, the Council for Scientific and Industrial Research and a number of local authorities across the country.

### 2.2.5 General Adoption of the Activity Corridor Concept

The contention that the principles and strategies (including the activity corridor concept) developed in relation to Cape Town were equally relevant to other South African cities was readily accepted by urban planning practitioners and officials elsewhere. This is clearly evident in the

range of research projects, policy documents, planning frameworks and pieces of legislation that have incorporated the activity corridor concept since the early 1990's across South Africa.

Two documents in particular provide an example of how the activity corridor concept has been applied at a metropolitan scale as part of an urban strategy dealing with a range of land use, transport, social and economic issues simultaneously. This includes the generally applicable document dealing with *Restructuring the Built Environment* in South Africa's metropolitan areas (Hindson *et al* 1993), which was prepared by the National Housing Forum in 1993, as well as *An Interim Strategic Framework for the Central Witwatersrand* prepared by GAPS Architects and Urban Designers in 1993 (GAPS 1993).

These and other important documents have incorporated the activity corridor concept as a central component of their restructuring proposals. Although these documents do not 'break any new ground' in the sense that they offer new insights or contest the arguments made in favour of activity corridors, they are useful in indicating the role that activity corridors are assigned in relation to other spatial and aspatial strategies for restructuring and growth management in their respective contexts.

In the mid to late 1990's, the activity corridor concept has also been applied through specific projects associated with proposed activity corridors and development corridors.<sup>18</sup> The activity corridor concept has

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<sup>18</sup> This includes the Germiston-Daveyton Activity Corridor (EGSC 1998), the Wetton Corridor Project (Fensham 1998), the Mabopane-Ceturion Development Corridor

also been incorporated in various forms into key policies and pieces of legislation in South Africa in the late 1990's.<sup>19</sup>

### 2.2.6 Application of the Activity Corridor Concept in Durban

In Durban, the activity corridor concept has been incorporated into a wide variety of planning frameworks, research projects and planning projects since the late 1980's onwards. The concept "first entered the public planning realm through Uytendogaardt *et al's* (1989) plan for Southern Pinetown and the Tongaat Hulett Planning Forum (1990) proposal for urban spatial restructuring" (Todes *et al* 2000: 233).

The *Mariannahill Structure Plan*<sup>20</sup> prepared by Uytendogaardt and Dewar in 1989 proposed the development of an activity street in the existing underdeveloped and low-income area of Mariannahill to the south of Pinetown. Whilst the conceptual approach adopted by the project was widely praised, the plan met with considerable resistance from both the authorities and communities resident within the area (and has since been criticised by planners for being unsuited to local conditions, particularly the steep terrain), and has consequently not been implemented.

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(GPMC 1997) and the Mdantsane-East London Development Corridor (Lamont 1999).

<sup>19</sup> Examples include the *National Urban Development Strategy* (DoH 1997) and *Moving South Africa* (DoT 1999) as well as the 1995 Development Facilitation Act, the 1996 Local Government Transition Act (Second Amendment), the 1998 KwaZulu Natal Planning and Development Act and the 2000 National Land Transport Transition Act.

<sup>20</sup> See also *A Structure Plan for the Greater Mariannahill Area Pinetown, Natal* (Uytendogaardt and Dewar 1992).

In the early 1990's, a number of important metropolitan scale planning and development frameworks were prepared for the former Durban Functional Region (DFR) that incorporated the activity corridor concept in their proposals and strategies. This included the earlier Tongaat Hulett's study<sup>21</sup> and the subsequent DFR Interim Development Forum (IDF) policy documents<sup>22</sup>. These initiatives provided interim frameworks for development in the political vacuum created by the absence of democratic local government in South Africa in general and Durban in particular.

As with many other planning initiatives in Durban in the 1990's, the IDF documents proposed a dual strategy of "concentrating population around major urban cores...and creating [activity] corridors linking peripheral low-income townships and informal settlements with core areas" (Todes *et al* 2000: 233). These ideas received considerable support "through their acceptance within the inclusive forum processes that were established during the transitional period in Durban, and in the run up to the 1996 local government elections" (Todes *et al* 2000: 233).

In the early 1990's, planning initiatives placed greater emphasis on development around core areas than along activity corridors (Todes *et al* 2000: 335). This was largely due to the impetus to 'break down' the apartheid city form through the development of low-income areas on

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<sup>21</sup> For example, *Alternatives for Managing the Spatial Growth of the Metropolitan Areas in South Africa* (McCarthy and Smit 1990).

<sup>22</sup> Including *A Normative Framework for Guiding and Assessing Development Initiatives and Future Planning Work in the DFR* (Smit *et al* 1993) and a *Short-Term Strategic Plan for the DFR* (McCarthy *et al* 1993).

parcels of strategically located vacant land that existed in close proximity to the existing employment concentrations in Durban.

By the mid-1990's, however, the "emphasis had shifted to improving service conditions in townships and informal areas, and the development of [activity] corridors and nodes to integrate these areas into the city" (Todes *et al* 2000: 234). This was partly due to difficulties experienced in practice with developing low-cost housing on strategically located vacant land and the overestimation of the amount of vacant land available for development. It was also influenced by the "disappearance of formal apartheid, and the establishment of representative local government in 1996...[which] led to political pressure for 'development where we are'" (Todes *et al* 2000: 234).

Around the mid-1990's, two research reports investigated the application of the activity corridor concept at the regional and metropolitan scale respectively. The first was the plan for the *Durban-Pietermaritzburg Corridor*<sup>23</sup> and the second was the *Durban Corridor Study*<sup>24</sup>. The Durban Corridor Study was initiated to investigate the North and South Coast Roads as part of an information gathering, analysis and strategy formulation process for the Durban City Council. This project was prompted by concerns over the future of these important metropolitan elements as different, and often competing, proposals have been put forward for their development.

<sup>23</sup> McCarthy J (1994) *The Durban - Pietermaritzburg Corridor: Towards a Plan*.

With the advent of democratic local government in 1996, there was renewed effort to develop widely inclusive and representative policies and plans for the then Durban Metropolitan Area (DMA). Several significant documents incorporated the activity corridor concept as central components of their proposals. This included several Green Papers<sup>25</sup> prepared as part of the Rapid Action Programme for the Joint Steering Committee of the former Durban Metropolitan Council. It also included more recent integrated development planning reports prepared for the former DMA<sup>26</sup> and the six previous Local Councils<sup>27</sup> within the DMA, mainly in the late 1990's. Of particular importance has been the Spatial Development Framework (SDF) prepared for the DMA in 1997, which aimed to achieve a sustainable, equitable and efficient city, partly through a

<sup>24</sup> Including a number of reports prepared as part of the *Durban Corridors Study* (Seneque Sinit Maughan-Brown 1995; Seneque Maughan-Brown and Scott Wilson Kirkpatrick 1995a, 1995b, 1995c).

<sup>25</sup> Including the *Urban Form Green Paper* (Urban Form Technical Working Group 1996), the *Metropolitan Roads and Transportation Green Paper* (Martens and Williamson 1996) and the *Green Paper on a Housing Strategy for the Durban Metropolitan Area* (Byerley 1996).

<sup>26</sup> Including the *Urbanisation Framework for Greater Metropolitan Durban* (Durban City Council 1994) and the *Spatial Development Framework for the Durban Metropolitan Area* (Spatial Development Framework Steering Committee 1997).

<sup>27</sup> Including the *Integrated Development Plans* for the North and South Central Local Council (IDP Technical Task Team 1998), Inner West City Council (Markewicz English 2000a), Outer West Local Council (Markewicz English 2000b), South Local Council (Urban-Econ Project Team 1998) and the North Local Council (Siyakhana Consortium 1998); and the *Spatial Development Plan* for the Inner West City Council (Markewicz English 1999).

focus on “nodes and corridors to integrate the city and build on its economic strengths” (Todes *et al* 2000: 236).

From the early 1990’s onwards, the activity corridor concept was also applied at a more local scale through the integrated development planning exercises undertaken to transform ‘areas of need’ in Durban such as Cato Manor<sup>28</sup>, Inanda<sup>29</sup> and KwaMashu<sup>30</sup>. These plans were “based on community participation and capacity building” and “promoted nodes and corridors, integrating these areas internally and with the core, and providing a focus for the provision of social facilities and for economic activity” (Todes *et al* 2000: 234).

In the late 1990’s, the activity corridor concept was also applied in the more established urban areas in Durban such as the relatively central area of Berea<sup>31</sup> and the more peripheral areas of Hillcrest and Gillitts<sup>32</sup>. These

areas already have emerging activity corridors, spines and/or streets and the plans provide guidelines for directing existing growth and investment pressures into suitable locations along these routes. These projects have highlighted some of the difficulties associated with the application of the activity corridor concept in different local contexts.<sup>33</sup>

Since the late 1990’s, the activity corridor concept has also received significant attention at a metropolitan level as the SDF and IDP’s have been drawn into an evolving Metropolitan Spatial Development Plan (MSDP) (Todes 2000: 3) and through a number of important investigations undertaken for the recently established eThekweni Municipality by the CSIR.<sup>34</sup> The MSDF has evolved amidst concerns that it is not providing sufficient direction to spatial changes in Durban due to a number of social, economic and institutional constraints (Todes 2000).

The recent CSIR reports have been undertaken since the year 2000 and provide the first detailed application of the activity corridor concept to Durban at a metropolitan scale. These studies are likely to form an important component of spatial restructuring and growth management

<sup>28</sup> Including *A Policy Framework for Greater Cato Manor* (Greater Cato Manor Development Forum 1992), a *Preliminary Planning Report on Corridors and Nodes in Cato Manor* (Seneque Smit and Maughan-Brown 1994) the *Bellair North Activity Spine Precinct Development Plan* (Markewicz English 1995) the *Greater Cato Manor Structure Plan* (CMDA 1997) and the *Horley Road Preliminary Design Plan* (Iyer Rothaug 1999).

<sup>29</sup> Including the *Inanda Development Framework* (Inanda Development Forum 1995), the *Inanda MR93 Business Plan* (Markewicz English 1997a), the *Inanda Structure Plan* (Markewicz English 1997b), *Towards a Development Plan for Inanda* (Development and Planning Department 1998) and the *Amatoli/Amatana Activity System Development Framework* (Iyer Rothaug 1998).

<sup>30</sup> Vines Mikula Associates (1998) *KwaMashu Spatial Development Framework*.

<sup>31</sup> Iyer Rothaug (1998) *Urban Core Extension Areas Project*.

<sup>32</sup> OWLC (2000) *Gillitts/Hillcrest Activity Corridor*.

<sup>33</sup> In order to explore the sources of these difficulties, four local projects have been selected for further research, with two each in the low-income areas and established areas. This is discussed further under Chapter Four.

<sup>34</sup> Including a number of reports prepared as part of the *Land Use Corridors and Nodes Study* (Green *et al* 2000, 2001a, 2001b), the *Fundamental Restructuring Project* (Gorge *et al* 2000; Oranje *et al* 2001) and the *Accessibility Mapping for Community Social Services and Public Facility Investment* (Green *et al* 2001c).

initiatives in the city in the future.<sup>35</sup> The case study material produced by these studies also represents an important source of information on the environments and conditions associated with local corridors.

The new ideas that have emerged in Durban and elsewhere regarding corridors herald a move away from the conventional definition of the concept based on a 'high street' model. As Green *et al* (2001a: 89) note: "other research and development of ideas has elaborated on and/or qualified these ideas specifically with regard to the complexity of the concept and the need for greater flexibility with regard to implementation".<sup>36</sup>

The recent application of the activity corridor concept in both local and metropolitan contexts is also starting to engage with the new Land Use Management System (LUMS) currently being implemented in KwaZulu Natal (KZN) in terms of the KZN Planning and Development Act (Act No. 6 of 1998) (Jewell *et al* 2000: 1).<sup>37</sup> This LUMS is intended to replace the current statutory development control system embodied in existing Town Planning Schemes and to provide more flexible and facilitative land use zones and controls that are informed by broader policy statements and

<sup>35</sup> These research projects have also been explored further in Chapter Four due to their importance to Durban and the extensive research undertaken around the application of the activity corridor concept in the local context.

<sup>36</sup> These emerging ideas around activity corridors are explored further through the Durban Case Studies reviewed and evaluated in Chapter Four and Five.

<sup>37</sup> See for example, the *Hillcrest/Gillitts Activity Corridor Local Development Plan* (OWLC 2000) and the *Urban Core Extension Areas Project* (Iyer Rothaug 2000).

objectives, such as those embodied in the MSDF, the IDP's and other planning frameworks in Durban (TRPC 2000).<sup>38</sup>

### 2.2.7 Critical Perspectives on the Activity Corridor Concept

As mentioned earlier, there has not been substantial critical examination of the activity corridor concept and its general suitability as an urban restructuring strategy. The concept has been the focus of a number of dissertations produced for academic institutions in Durban<sup>39</sup> and Pietermaritzburg<sup>40</sup> since the early 1990's, but these have generally not unpacked the concept or critiqued it in any significant detail.

A dissertation by Poulsen (1991) examined a case study of an activity spine in the DMA (Brickfield Road) with the aim of developing mechanisms for implementing activity corridors. A significant observation of this dissertation is that, despite the fact that the case study acts as an activity spine and forms interceptory nodes at important intersections, it does not perform as effectively as the literature suggests.

Another dissertation of some relevance to an enquiry into activity corridors, approaches its subject more critically, but focuses on the broader

<sup>38</sup> This has also highlighted a number of important issues regarding the implementation of the activity corridor concept and is explored further through the review and evaluation of Durban Case Studies in Chapter Four and Five.

<sup>39</sup> See for example, the dissertations prepared by Poulsen (1991), Taylor (1994), Briggs (1994) and Lilleby (1995) for the Masters in Town and Regional Planning at the University of Natal, Durban (UND).

<sup>40</sup> See for example, the Masters Thesis prepared by Meiklejohn (1992) for the Geography Department at the University of Natal, Pietermaritzburg.

'compact city approach' to urban planning and management (Briggs 1994). Although it makes reference to activity corridors and touches on similar concerns within the Durban context, the central emphasis of the dissertation is on the issue and implications of increased densities, rather than on the structural forms these higher densities might take. Nonetheless, it provides useful insights into some of the theoretical weaknesses of the activity corridor concept, such as the limitations involved with using 'universal performance criteria' as a basis for analysing urban environments and dynamics, the inappropriateness of applying the design process to decisions at a metropolitan scale, and the static characterisation of the 'South African City' (Briggs 1994: 20-38).

More recently, a document examining the sustainability of compact city forms in developing countries has highlighted a number of critical factors affecting the prospects for implementing the activity corridor concept. Schoonraad (2000: 228), for example, highlights a number of cultural and institutional obstacles to compact cities in South Africa:

“These obstacles are the current survival strategies of the poor that necessitates lower building densities; the freedom and power afforded private landowners and developers within the capitalist market system; the lack of development control measures to ensure that development takes place at higher densities, at central localities and with mixed uses; the lack of exemplars of compact living and the advantages thereof within the existing city; and the anti-urban mindset of both rich and poor.”

This view is echoed by Dewar (2000), who suggests that a range of factors is contributing to ongoing urban sprawl and undermining compaction efforts. In particular, Dewar (2000: 216-217) cites the attitudes of local planning authorities to peripheral developments, the cost of well-located land in the land market, numerous in-built cultural attitudes to land, a lack of investor confidence and the national housing policy as obstacles to greater compaction.

And finally, a recent series of articles by Todes (1998, 2000, *et al* 2000) provide a critical perspective on the compact city approach adopted in Durban, which incorporates activity corridors as a central feature. Briefly, these articles highlight a number of social, economic and political constraints to compaction, spatial restructuring and activity corridors and raise concerns regarding the ability of current spatial planning frameworks in Durban to guide and direct the spatial changes currently occurring in the city.

These emerging trends and factors have led to a revised conception of the restructuring potential of activity corridors in more recent activity corridor debates and initiatives. The realisation that residential and economic growth rates are significantly lower than previously anticipated has led to a recognition that there is limited opportunity to use residential growth and economic development to 'knit' the city together. This has effectively downscaled the anticipated role of corridors as a metropolitan restructuring strategy and resulted in “a greater acceptance of working within the existing spatial structure of the city” (Todes *et al* 2000: 236).



### 2.2.8 Conclusions

The preceding section has revealed that there is a substantial cross-section of planning theory, research and practice that incorporates the activity corridor concept. It is also clear that many local and international influences have contributed to the development of the notion of 'activity corridors' and that a variety of authors have emphasised different aspects of the concept and provided different insights into its use as a potential urban strategy.

Despite the prevalence of this idea and its widespread adoption, however, critical debate regarding the viability or applicability of the activity corridor concept has only recently started to emerge and still appears to be in its infancy. For example, the contention that the activity corridor concept is equally applicable to contexts outside of Cape Town (where it was originally developed) has not been sufficiently explored and tested. It assumes that conditions in South African cities are sufficiently similar to warrant the proposal of a 'general approach' to urban growth management. This assumption ignores the significance of such factors as topography, which poses a major constraint to development in Durban.

There appears to have been a lack of critical thinking that has accompanied the proposals for the use of the activity corridors in the Durban context. This is highlighted by the problems experienced by different organisations in attempting to apply the concept in Durban (in Mariannhill and Cato Manor, for example), the poor performance of local activity spines and the absence of clear guidelines indicating how the concept may be implemented. The extent to which this is a result of bureaucratic or professional 'inertia', or of a fundamental weakness

of the concept when applied to the local context, is an issue which needs to be clarified if meaningful urban strategies are to be developed for Durban.

Other key areas of concern are the issues of the methodology used to develop the activity corridor concept and the ability to implement the concept, which has generally not been adequately addressed in the available literature. It remains unclear how the historical examples of activity corridors and spines, which developed organically over a long period of time (around 100 to 150 years) and under specific contextual conditions (such as a high level of reliance on fixed-line public transport), are to be recreated in other contexts in a period characterised by very different social conditions and economic trends using the tools generally available to town planners.<sup>41</sup>

The enquiry presented in this dissertation attempts to address some of these issues through an investigation of various attempts to apply the activity corridor concept in the Durban context. This exploration is considered to be necessary given the apparent lack of clarity and direction regarding the concept in current spatial planning debates and initiatives in Durban and elsewhere. It is essential that the different dimensions of the concept be drawn out and clarified if the planning debates and initiatives in Durban are to be sufficiently informed to effectively guide urban growth and management in the city.

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<sup>41</sup> This issue is revisited in greater detail in Chapter Three.

It should be borne in mind, however, that the immediacy of these proposals and the length of time taken for 'organic' activity corridors, spines and streets to develop, limit the potential insights that may be gained from this approach. This would clearly need to be revisited once there has been sufficient opportunity to implement these plans more fully so that a more rigorous assessment can be made of the activity corridor concept and the progress that has been achieved.

### **2.3 Key Issues Emerging from the Conceptual Framework**

The Conceptual Framework outlined in the preceding sections provides a (conventional) definition of the activity corridor concept and reviews in some detail the development and application of the concept. This has highlighted a number of important theoretical and practical issues regarding the activity corridor concept.

Firstly, it has revealed that the activity corridor concept has been developed over a substantial period of time in response to a range of theoretical and practical issues concerning the poor performance of South Africa cities and the role of planning in creating more positive urban environments. The development of the activity corridor has been traced from its emergence in the late 1970's in Cape Town, to its refinement and extension in research projects in the 1980's and its inclusion in various planning frameworks and initiatives in the 1990's.

Secondly, it has revealed that there are a number of key theoretical foundations and concepts that underpin the activity corridor concept. This includes the notion of 'urbanity', the concern with appropriate urban forms and the reference to historical and contemporary precedents. These

aspects are explored in more detail in the following chapter and their to relevance to the Durban Case Studies is discussed in Chapter Five.

Thirdly, it has revealed that the activity corridor concept has become intertwined with broader urban debates regarding appropriate urban planning, management and performance. This includes linkages with debates regarding urban spatial restructuring, sustainable urban development and compact cities. These aspects are explored in more detail in the following chapter and their to relevance to the Durban Case Studies is also discussed in Chapter Five.

Fourthly, it has highlighted a number of benefits that the activity corridor concept is purported to provide in terms of urban functioning and environmental quality. The key components of the activity corridor concept include the promotion of public transportation, the stimulation of economic development, the supply of high-density and low-income housing, the provision of public facilities and utility services, the creation of a defensible public environment and the links with social integration. These aspects are explored further in Chapter Three and Six.

### 3. EVALUATION OF CONCEPTUAL FRAMEWORK

#### 3.1 Theoretical Foundations and Concepts

The literature review outlined in Chapter Two highlighted some of the theoretical foundations that have informed the development of the activity corridor concept. The following chapter explores these theoretical foundations in greater detail and highlights their links with the activity corridor concept.

##### 3.1.1 The Notion of 'Urbanity'

From its earliest expositions onwards, the activity corridor concept has been underlain by a broader debate regarding the need to promote 'urbanity' in cities. 'Urbanity' is the generic term used to describe the positive urban qualities of complexity, density and diversity generated by the concentration of people and of social and economic activities and opportunities in cities. Urbanity has been characterised by the opportunity for: direct human interaction; the free exchange of goods; and human freedom as expressed in the multiplicity of choice (Mills 1986: 41; Poulsen 1991: 13).

##### a) The Urbanist Position

The notion of 'urbanity' has been a prominent theme in urban planning debates, particularly since the early 1960's. The 'urbanist' approach to city development emerged essentially as a reaction against suburban and other 'anti-city' development patterns and city planning approaches in the post-war period. The 'urbanist critique' has possibly been most clearly articulated internationally through the work of such authors as Jane

Jacobs<sup>42</sup> and Christopher Alexander<sup>43</sup> and locally through the works of David Dewar and Roelof Uytenbogaardt<sup>44</sup>:

Jacobs attacked the modernist planning paradigm<sup>45</sup> prevalent in America in the post-war period, particularly the doctrines of the 'visually ordered city' and the 'statistically ordered city'. For Jacobs (1961), both "the art of city planning and its companion, the pseudo-science of city planning, have not yet embarked on the effort to probe the real world of living".

Jacobs (1961: 18) argued that the modernist planning paradigm had resulted in a number of "powerful and city-destroying ideas" and practices. These included, *inter alia*, the:

- over-simplification of the role and scope of planning as a static and generally inflexible series of highly-controlled interventions (such as urban renewal initiatives) that did not match the complexity and dynamism of cities and urban development processes

<sup>42</sup> Particularly the book *The Death and Life of Great American Cities* (Jacobs 1961).

<sup>43</sup> Most notably, the essay *A City is not a Tree* (Alexander 1966).

<sup>44</sup> Particularly the reports *Housing: A comparative evaluation of urbanism in Cape Town* (Dewar *et al* 1978) and *South African Cities: A manifesto for change* (Dewar and Uytenbogaardt 1991).

<sup>45</sup> Which, Jacobs (1961) contended, had been influenced by the 'anti-urban' ideas of Ebenezer Howard (i.e. Garden Cities), the 'decentrists' (including Lewis Mumford, Clarence Stein, Frank Lloyd Wright and Catherine Bauer), Le Corbusier and the 'City Beautiful' movement (led by Burnham).

- ill-founded support of the decentralisation and suburbanisation of urban growth that undermined qualities of ‘urbanity’ (such as diverse and complex urban environments) in favour of the separation and fragmentation of different land uses and activities
- misplaced concentration on housing quality as a means to achieving improved urban environments rather than on the public environment (such as streets), which provides the main focus for social and economic interactions in urban areas

Jacobs’ critique of the sterile urban environments produced in the post-war period as a result of suburbanisation processes, urban renewal initiatives and inappropriate city planning in the United States was partly informed by the opposed notions concerning the ‘organic’ process of urban growth and the essentially ‘artificial’ nature of imposed planning constructs. For Jacobs, the restrictive nature of the planning paradigms of the time was inconsistent with the natural growth of cities, which she regarded as a direct outcome of the activities of urban living (Martin 1972: 7). This “opposition between ‘organic’ growth and the artificial nature of plans, between living and the preconceived system within which it might operate” (Martin 1972: 7) was a major component of the urbanists’ criticism of the planning paradigms of the time and was picked up by other commentators such as Christopher Alexander (1966)<sup>46</sup>.

<sup>46</sup> In his essay entitled *A City is not a Tree*, Alexander (1966) states that: “I want to call those cities that have arisen spontaneously over many years ‘natural cities’. And I shall call those cities or parts of cities that have been deliberately created by planners ‘artificial cities’. It is more and more widely recognised today that there is some essential ingredient missing in the artificial cities.”

In response to the purported shortcomings of modernist town planning and the sterility of existing urban environments, Jacobs argued for the development of a more flexible and facilitative planning approach that would promote the qualities of urbanity in cities. In particular, Jacobs argued that cities should be revitalised through programmes that emphasised high-density, medium-rise structures and a rich mix of land uses and activities (Jacobs 1961).

Of particular relevance to the activity corridor concept were Jacobs’ criticisms of the ‘decentrists’<sup>47</sup> views regarding streets. Jacobs (1961: 20) contended that streets were not the poor environments suggested by ‘decentrists’ but rather that streets were an active public realm that should be supported and encouraged. Houses should therefore not be faced away from the street towards sheltered green spaces but should actively engage with the street. In addition commercial activities should not be segregated from residential areas and recreational areas but should be combined with these uses along appropriate streets. In Jacobs’ view, streets were therefore an important component of the urban fabric that could contribute to achieving urbanity.

The notion of urbanity was also strongly informed by the need to improve the social performance of urban environments and to support the collective activities and social ties of urban dwellers. This element received particular attention through the notion of ‘defensible space’ that emerged initially

<sup>47</sup> The ‘decentrists’ such as Lewis Mumford, Clarence Stein, Frank Lloyd Wright and Catherine Bauer proposed that urban growth be structured through decentralisation.

through the work of Newman (1973). Newman argued that “the form of the static components of our living environment is, in and of itself, a factor which significantly affects crime rates”. Using statistical research and ‘territorial’ theories of behaviour, he suggested that architects and planners could “provide building [and site] layouts which prevent vandalism, assault and rape and so help the enforcement of ‘law and order’ in cities” (Hillier 1973: 539).

According to Newman (1973), planners and architects should pursue ‘organic’ rather than ‘compositional’ design solutions that help to create ‘defensible space’. He claimed that:

“By grouping dwelling units in a particular way, by delimiting paths of movement, by defining areas of activity and their juxtaposition with other areas, and by providing for visual surveillance, one can create – in inhabitants and strangers – a clear understanding as to the function of space and who are its intended users. This will be found to have led to the adoption by residents, regardless of income level, of extremely potent territorial attitudes and self policing measures.”

The notion of defensible space was therefore an important component of efforts to promote urbanity through the planning and design of urban environments that would enable community surveillance and promote social identity and ownership of public spaces.

#### b) **Relevance to the Activity Corridor Concept**

The concerns articulated by Jacobs, Alexander and other urbanists have not only influenced planning debates internationally but also locally, most notably in the work of Dewar and Uytenbogaardt. Perhaps the earliest reference to the notion of urbanity is contained in a seminal study prepared by these and other authors (Dewar *et al* 1978) that uses a comparative evaluation of different residential environments in Cape Town to formulate principles that, it argues, contribute to the promotion of ‘urbanity’ in urban areas. These include: greater mix of complementary land uses and activities; finer-grained development pattern; increased diversity and complexity; and more organic development process.

In a subsequent series of articles, Dewar (1984a: 29) argued that access to the benefits of urbanity is a basic right of urban dwellers. For Dewar, this would include “access to all of the opportunities, activities and facilities which can be generated through the power and energy of large numbers of people living in close proximity to each other” (Dewar 1984a: 29).

Dewar (1984b: 49) argued that the prevailing forms of urban development in South Africa at the time undermined the ability of urban dwellers to easily access the benefits of urbanity. Dewar (1984b: 49-51) argued that the main problems associated with the existing low-density, sprawling and fragmented urban structure and the dominant urban development processes included:

- expensive service provision and construction costs, which were ultimately passed onto the user and therefore aggravated the problems of poverty and inequality

- massive financial and social costs to the commuter to access work opportunities, particularly for the urban poor who would often have to travel 80km every day and spend over 30% of their salary on travel costs
- major costs to society to provide transport infrastructure to overcome the large distances between places of work and home resulting in huge energy consumption, increasing congestion and increasing pollution
- marginalisation of small entrepreneurs due to their exclusion from the main economic centres (due to unaffordable land prices) and movement flows (due to land costs or harassment) and the small thresholds available in their local residential areas
- major costs to the majority of consumers to gain access to higher order commercial opportunities and community facilities, which tended to be located in higher income areas far from the urban poor
- inadequate and costly public transportation system, which impacts most severely on the urban poor
- sterile and monotonous urban environments that create unpleasant places to live and work and which do not support collective activities

Uytenbogaardt and Dewar (1991: 16) argued that, whilst “people come to cities in order to experience the economic, social, cultural and recreational opportunities and facilities which can be generated through the physical agglomeration of large numbers of people”, the “ability of an urban system to generate these opportunities is not related solely to its demographic size: it is profoundly affected by the way in which the city is structured and made”. Urban structures such as activity corridors that promote ‘urbanity’

are therefore more likely to generate opportunities since they provide a greater number of choices and improved connections and relationships between different aspects of urban life.

### c) Response to the Urbanist Position

The urbanist position has not been without its detractors. Briggs (1995), for example, highlights two key criticisms of the urbanist position. Firstly, he argues that the urbanist position is based on a critique of modernist town planning that erroneously conflates different strands of modernist thinking “without drawing sufficient distinction between various key thinkers and planners” such as Howard, Le Corbusier and Burnham (Briggs 1995: 33). Jacobs’ focus on American inner cities also “partly explain her failure to consider what have arguably been significant successes of integrated metropolitan planning in other contexts” such as the plans for Copenhagen and Stockholm (Briggs 1995: 34).

Secondly, Briggs (1995: 34) argues that the contention by urbanists that modernist town planning was a major determinant of the sterile urban environments produced during that period exaggerated the influence of modernist town planning concepts and approaches. Rather, it was the inability of planning to direct the prevailing “rampant economic and social forces which underlay and shaped urban processes” (Briggs 1995: 34). The ineffectiveness of planning was largely due to the “lack of co-ordination and integration in planning at metropolitan level in the United States” and the more powerful influence of the zoning system, which tended to separate activities and income groups (Briggs 1995: 34).

Another criticism that has been levelled at the urbanist position concerns the notion of organic urban growth. March (1972) questioned Alexander's (1966) contention that there is "some essential ingredient missing" in all 'artificial cities'. He noted that there are numerous examples of mediaeval cities that were built on a systematic gridiron pattern (and which would therefore be considered to be 'artificial' by Alexander) and which succeeded in their time (Martin 1972: 8).

The gridiron pattern was also extensively used for planning and developing colonial cities and, as March (1978: 8) notes: "In a large number of American cities, the artificial grid originally laid down remains the working frame within which vigorous modern cities have developed". March (1972: 8) concluded that "an artificial frame of some kind does not exclude the possibility of an organic development" that would result in the growth of overlapping patterns of human activity as favoured by Alexander and Jacobs.

A related criticism that could be levelled at the urbanist position concerns the contemporary relevance of historical development patterns. The urbanist position denigrates modern urban environments in favour of the more dense, complex and human-scaled environments that emerged historically over a long period of time as a result of organic growth processes. This is potentially problematic in the sense that the emergence of these organic urban environments was based on contextual circumstances that are no longer evident in modern cities.

For example, the reliance on limited building technologies and public transportation were major factors in creating the compact, medium-rise

built form and pedestrian oriented cities that urbanists tend to romanticise. The advent of modern building technologies and widespread access to private transport has fundamentally altered the built form and urban structure of modern cities. It is debatable whether planning will be capable of recreating the urban qualities associated with these older organic urban forms in the context of powerful social and economic forces that promote decentralisation, fragmentation, etc.

The notion of 'defensible space' that forms part of the urbanist position has also been questioned by Hillier (1973). Hillier questions the contention that "certain types of design – in particular high rise double loaded corridor blocks on large estates – attract crime" since the statistical evidence cited by Newman does not conclusively link physical factors to crime levels (Hillier 1973: 542). Hillier argues that a far more obvious and generally supported hypothesis to explain the correlation would be that "a society that produces underprivileged groups from which the majority of criminals come, also produces buildings and estates where, whether by invisible selection mechanisms or deliberate policy, the underprivileged groups are concentrated – namely, very large high rise blocks on big estates".

And finally, it is arguable that the creation of dense and mixed urban environments supported by the urbanist position does not accommodate the lifestyle preferences or economic realities of all urban dwellers. In South Africa, for example, suburban, peri-urban and rural lifestyles overlap with urban creating a need for a wider range of choices that responds to the survival needs of the urban poor (e.g. larger lots on the urban periphery for urban agriculture) and the lifestyle preferences of the middle class and economic elite (i.e. for low-density suburban environments).

The notion of urbanity has clearly been influential in the development of the activity corridor concept and it has become an important component of urban management debates and strategies in South Africa. Although the limitations of the urbanist position have been highlighted, it is arguable that the promotion of urbanity remains a valid consideration, albeit in specific locations and/or circumstances in urban areas such as the inner city and the main public spaces. Activity corridors, spines and streets clearly have an important role to play in terms of promoting urbanity but alternative urban development patterns and qualities may also be desirable in specific cases or contexts.

The related notion 'defensible space' has also been incorporated into the activity corridor concept, although it appears to have been largely discredited internationally. Given the alarmingly high crime levels in South African cities, the relationship between physical planning, human behaviour and crime levels is clearly a critical consideration of urban planning and the implications for activity corridors need to be further investigated.

### 3.1.2 The Concern with Urban Form

The activity corridor concept has been strongly influenced by ideas that emerged in the 1960's and 1970's regarding the role of planning in creating appropriate urban forms.

#### a) Appropriate Urban Forms

This concern with appropriate urban form emanated from a critique of the predominant planning paradigms that were prevalent during that period and the urban environments that had been created by the 'modern industrial city'. These concerns have been articulated through the works

of American and English planning theorists and practitioners such as David Crane, Kevin Lynch, Lionel March and Leslie Martin.

#### The Capital Web

In a series of articles published in 1960<sup>48</sup>, David Crane<sup>49</sup> criticised the prevailing social and procedural planning paradigms on the grounds that they had led to a non-physical concept of planning that was incapable of addressing the "physical chaos in cities" that had resulted from ongoing processes of physical urban change (1960c: 280-284). He argued that these planning doctrines had resulted in a "freezing of city planning method around the concept of land use planning... [which] takes no account of the effect of time in changing the uses of city parts, chiefly because it is an incomplete concept of form and deals very little with the more timeless (but still changing) geometrical properties of land, buildings, open spaces, and movement channels" (Crane 1960c: 283). In addition, he suggested that the preoccupation of procedural planning with the process rather than the product of planning had led to a paradoxical situation whereby government had withdrawn from large-scale physical ordering of the urban environment yet the myriad of government regulations and controls affected almost every aspect of the detailed planning and design of urban environments and buildings (Crane 1960c: 282).

Crane suggested that a more complete and appropriate planning approach should be developed that: acknowledged physical structure as the major

<sup>48</sup> This included *The Dynamic City* (Crane 1960a), *Chandigarh Reconsidered* (Crane 1960b) and *The City Symbolic* (Crane 1960c).

<sup>49</sup> At the time, David Crane was an Assistant Professor in the Department of City Planning, School of Fine Arts, University of Pennsylvania.



concern of planning, recognised the temporal dimensions of urban development and change, and which embraced the need of urban dwellers for symbolic and intelligible meaning in the urban environment (Crane 1960c: 283-284). This concern with the symbolic quality of urban form was echoed in the concept of 'imageability' advocated by Lynch (1989), although Crane (1960c: 284) argued that symbolic quality was only partly embodied in this concept.

Crane argued that planning should respond to the "great scale and potential disjointedness of the modern city" (Crane 1960c: 284) by utilising large-scale urban design and major public investment to give form to the city. He suggested that city form be designed as an intelligible physical ordering system that not only revealed and shaped the underlying development processes and patterns in the city, but which was also designed with built-in capacity for further adaptation and change (Crane 1960c: 283-284).

The "new philosophies of city form and new processes of city form-making" proposed by Crane (1960c: 284) are embodied in a theoretical exercise undertaken with his students to plan a New City in India (Crane 1960b). This exercise was then used to develop a new city-making theory that would be relevant to a rapidly developing urban context with scarce material resources.

A key feature of this new theory was the proposed creation of a macro-scale 'capital web' of development extending across the metropolitan area (Crane 1960b: 38). This capital web would be comprised of the major movement and development axes that extend across the city along which it

was proposed that the main public facilities, public spaces, commercial nodes and higher density housing be concentrated (Crane 1960b: 38). Formal and informal residential areas and lower order facilities would be oriented to these axes and have access to the facilities and activities contained.

The articles written by Crane suggest that the notion of a capital web provides a number of spatial, economic, social and symbolic benefits. Firstly, it recognises "the role of movement as a city-builder or as corridors of visual intelligence" (Crane 1960b: 39) that give structure and intelligibility to the urban fabric. Secondly, the capital web "is largely designed for walking and mass transportation" (Crane 1960b: 34) with the majority of travel trips concentrated along the movement axes and pedestrian access to the facilities and activities along the axes. Thirdly, the capital web provides a favourable location for economic activities and can accommodate further economic growth. And finally, it provides a flexible structure that can adapt to urban changes and accommodate ongoing urban growth.

Crane suggests that it is primarily the role of government to establish the capital web: "Local government... [must] design and build its own facilities in an ordered time-space sequence [along the development axes] as a basic control and creator of growth and changeability" (Crane 1960b: 36). The capital web will then provide a framework for private creativity and what Crane terms "the power of the City of a Thousand Designers", thereby generating complexity and multiplicity (Crane 1960b: 36). In this way, local government investment can shape and direct diverse and sometimes

chaotic city-making processes that would otherwise result in formless urban growth and undesirable urban environments.

### The Semi-Lattice

An article<sup>50</sup> by Christopher Alexander provides another important input to the debates around urban form that emerged in the 1960's and which was to influence the development of the activity corridor concept. Alexander criticised the "notion [common in much post-war planning] that activities can be parcelled out into separate entities and can be fixed for ever in a plan" (Martin 1972: 9). Alexander "equate[d] this kind of thinking with an organisation like that demonstrated by a mathematical tree" and attacked this approach for "deal[ing] with highly complex and overlapping patterns of use, of contacts and communications in a way which prevent[ed] this overlap from happening" (Martin 1972: 9).

Instead, Alexander argued that the notion of a semi-lattice provided a far more complex mathematical structure that more closely resembled the complex and overlapping patterns of activities found within the more organic cities (Martin 1972: 9). Alexander argued that the semi-lattice provided a "distortable, open-ended grid network" that acted as a spatial ordering device providing an enabling framework that would promote: maximum choice, legibility, strong connections, robustness, distortability and multi-layers (Seneque Smit Maughan-Brown 1995: 32-33).

### Linear Development Forms

An article<sup>51</sup> by Lionel March<sup>52</sup> provides another important perspective on the emerging concern with appropriate urban forms in the 1960's. In a theoretical study of the ability of alternative urban forms to accommodate urban development across the regions of England and Wales, March concluded that the linear form provides a more efficient option than the nuclear form of urban development (March 1967: 335).

Through the application of geometrical principles and mathematical formulae to a hypothetical set of models of urban form, March (1967: 335) demonstrated that:

- it could be shown mathematically that social facilities were likely to be more accessible in a linear form, provided that these were distributed evenly with the population
- it was possible that "the linear pattern will give an overall impression of being less built-up than the nuclear pattern" particularly when driving along cross-country routes, provided that the route alignments and urban development concentrations were appropriately designed
- a coarse-grained gridiron pattern had greater traffic capacity than a fine-grained gridiron pattern and that "by decreasing the number of routes by half, the capacity of the system can be increased just over fourfold"

<sup>51</sup> *Homes Beyond the Fringe* (March 1967).

<sup>52</sup> At the time, Lionel March was based at the Centre for Land Use and Built Form Studies in the School of Architecture, University of Cambridge.

<sup>50</sup> *A City is not a Tree* (Alexander 1966).

- a linear development form was far more economical than concentrated forms since it reduced the length of roads and the number of junctions required
- with less junctions, the linear form was likely to have higher travel speeds and therefore lower travel times

Based on these observations, March (1967: 335) suggested that “the forces behind the most spontaneous and energetic form of urban growth to have occurred in this century in [England], are seen to be not only rational but economical in respect of road and services” and that “if these forces had been directed to create planned ribbons the feeling of built-upness in the country as a whole could have been less, not more, than today’s emphasis on urban envelopes will produce”.

A second aspect of the study related to the question of alternative densities of urban development. Using mathematical ratios relating to the centre and periphery of a hypothetical square-shaped urban area, March (1967: 336) demonstrated that the present pattern of concentrating the highest densities (in form of the tallest buildings) at the centre of cities was inefficient since the same floor area could be accommodated at much lower densities (in a much lower-rise form) in a ring of linear urban development around the periphery. As a result, he argued that “since skyscrapers do not use central land very efficiently, the only sense that high buildings make in nucleated centres is in terms of real estate speculation” (March 1967: 336).

As a result of these observations, March (1967: 337) argued against the existing regional pattern of urban development consisting of nuclear cities

separated from one another by green belts. Instead, he argued for the development of city regions based on ribbon development along the major transport routes. In support of this proposed regional urban form, March cited two existing examples of ribbon development in the United States of America (USA).

In Florida, Route 1 (R1) connects the two nucleated cities of Jacksonville and Miami. Adjacent to the R1 lies one of the most powerful industrial areas in the United States, 560km long and barely 5km wide. Two parallel roads provide alternative routes to the congested and bustling R1, including Federal Route 95, a limited-access high-speed route with no development frontage about 4km inland of the R1, and route A1A, a narrow and intermittently developed scenic highway along the coast about 4km from the R1. March (1967: 337) argues that the virtually continuous commercial, industrial and residential strip created along these routes “is not all beautiful, but it works” and that it is “a direct expression of the diversity of its inhabitants, of their enterprise, exuberance and industry”.

In Bucks County near Philadelphia, the countryside has been developed on the basis of a grid of urban development. March (1967: 337) argues that in such a network city, every person or family could have their own house, many facilities would be within walking distance and the remainder within 10 minutes by bus or 5 minutes by car and public transport could serve an even and mixed distribution of activities and populations. March (1967: 337) concludes by suggesting that: “there are many excellent geometrical reasons, especially of a probabilistic nature, to suppose that a free, loose development along a network of routes has advantages of capacity, accessibility, density, and use distribution and that, with a positive policy

towards open spaces, it is likely to prove the most reasonable form for the emergent city”.

### **The Grid as Generator**

An article<sup>53</sup> written by Leslie Martin<sup>54</sup>, a contemporary and colleague of March, expanded on the geometrical arguments for linear and gridiron development patterns. Martin (1972: 9) disagreed with the opposition between ‘organic’ growth processes and the imposition of ‘artificial’ plans put forward by Jacobs and Alexander and argued that the notion that “elaborate patterns of living can never develop within a preconceived and artificial framework is entirely false”.

In support of this argument, Martin (1972: 8-9) provided numerous historical examples where the gridiron plan had provided the main structuring element that had shaped the organic growth of many medieval and colonial cities and contributed to the development of elaborate and overlapping systems of activity within an organised framework. Based on this evidence, Martin (1972: 9) argued that “organic growth, without the structuring element of some kind of framework, is chaos” and that “it is only through the understanding of that structuring framework that we can open up the range of choices and opportunities for future development”.

Martin (1972: 14) disagreed with many of the critics of gridiron plans who argued that the gridiron pattern created monotonous and poorly scaled

urban environments. Martin argued that this was not the inevitable outcome of a gridiron pattern but rather the result of the land market, zoning controls, etc. Martin (1972: 10-13) cited numerous examples of cities that had been planned and laid out according to a gridiron street arrangement and subdivisional pattern where very different built forms and patterns of activity have emerged within this organising framework.

Martin argued that the grid “can accept and respond to growth and change” (1972: 14) and concurred with Le Corbusier and Frank Lloyd Wright<sup>55</sup> regarding the “capacity of the grid to respond to diversity and freedom”, provided that it is used as a responsive and adaptable structuring framework for urban growth and the emergence of elaborate patterns of activity (1972: 16). Martin argued that it was the manner in which the gridiron is applied and the various elements and activities are planned, designed and combined that determines the environmental quality created within the gridiron system. For Martin, no matter how much the gridiron pattern is distorted to fit contextual circumstances, it still provides a network of streets to which activities will respond and be structured by.

Martin (1972: 20) also cited the work of March regarding different built form options for accommodating urban development. As with March, Martin (1972: 20) used geometrical principles to demonstrate that the courtyard-type form (with development distributed around the perimeter of subdivisions) was more favourable to the more common pavilion form

<sup>53</sup> *The Grid as Generator* (Martin 1972).

<sup>54</sup> At the time, Sir Leslie Martin directed the research being conducted at the Centre for Land Use and Built Form Studies in the School of Architecture, University of Cambridge.

<sup>55</sup> In a competition to plan Chicago in 1913, Wright accepted the established gridiron of the city as a basis for subdivision with businesses, factories and utilities tending to “cling naturally to the main arteries of traffic” and residential areas occupying the remaining mass of the subdivision (March 1972: 16-17).

(with development centred in the centre of subdivisions). Provided that the grid of streets was enlarged, Martin argued that the same floor area could be accommodated by the court but with improved access, lower buildings (up to one third the height of the pavilion option), a clearer definition of the streets and large open spaces left at the centre of courts (March 1972: 21). Martin was not trying to suggest that this built form be applied as a blanket strategy but rather that it provided a possible alternative to the current pattern of multi-storey buildings and skyscrapers found in the centre of most cities.

#### **b) Relevance to the Activity Corridor Concept**

The increasing concern with urban form articulated by the likes of Crane, March and Martin has been particularly influential in terms of the development of the activity corridor concept. Indeed, Dewar makes explicit reference to the works of March (1984c: 50) and Crane (1984c: 52) in his development of guidelines regarding the creation of activity spines and more complex processes of city development, respectively.

The work of Crane has been particularly influential in terms of the development of the activity corridor concept. Indeed, the network of activity spines proposed by Dewar (1984c: 50) bears a striking resemblance to the capital web proposed by Crane (1960b: 38) with the main public facilities, public spaces, commercial nodes and higher density housing concentrated along the major movement axes in both cases. Dewar (1984c: 52) also refers to Crane's (1960b: 36) concept of the 'city of a thousand designers' in which the capital web, or the activity spine network, provides the guiding framework for both public activities and interventions and private sector investment and creativity.

The structure created by a capital web was not dissimilar to the semi-lattice structure proposed by Alexander (1966), which was also to provide an important informant to the activity corridor concept. The semi-lattice provided a spatial ordering device for understanding "how nodes and activity corridors, spines and streets relate to each other spatially within a metropolitan area" (SSMB 1995: 32). It was argued that: "Corridors and nodes provide a spatial structuring framework where a primary lattice is seen as connecting metropolitan scale nodes and corridors" and that "within this framework a secondary lattice is created connecting lower scale nodes and activity spines/streets" (SSMB 1995: 32).

The linear nature of activity corridors and spines has also been informed by March's (1967: 335) research regarding the significant benefits of linear development forms in terms of reducing travel time, improving access to facilities and activities, allowing for more human-scaled built form, etc. This is a view shared by Dewar (1984c: 50) who has argued that "history shows that the dominant structuring tendency in high-performance environments has always been linear".

In extending the argument for linearity, Seneque Smit Maughan-Brown (1995: 29-30) argue that some of the advantages of linearity include:

- it allows more places to focus alongside it and scarce resources can be spread more evenly through areas
- it has the ability to accommodate land use and population growth at various points, differing in scale and density
- as growth occurs a pattern of peaks of activity tends to develop

- accessibility to an entire range of activities is facilitated within a single movement route and journey
- economic opportunities are created for small to large entrepreneurs – land values are said to vary at different points on a linear development
- residential development abutting a linear route enjoys high levels of convenience and accessibility to various consumer markets and transport modes

Seneque Smit Maughan-Brown (1995: 30) argued, however, that whilst linearity is more advantageous in principle than nodal developments, the two always operate together in urban areas. They argued that: “Attempts to disperse economic activity to maximise convenience (through linearity) will in most cases be juxtaposed by counter tendencies to concentrate flows and development in order to prevent leakage and wastage (through nodality)”.

March’s (1967: 337) reference to the urban corridor development along the R1 in Florida, United States represents an important contribution to the activity corridor concept. The R1 corridor consists of a series of parallel routes with two parallel high-speed routes providing an alternative to the central high friction route. The concept of high-speed by-pass routes is a central feature of the activity corridor concept with typically a freeway and rail route providing high speed and/or less congested alternatives to the central high friction activity spine (Dewar 1984c: 51).

And finally, Martin’s (1972) concept of the grid as generator has exerted a considerable influence on the network of activity spines envisaged by

Dewar (1984c: 51). Martin also made reference to Alexander’s notion of a semi-lattice that acted as a “distortable, open-ended grid network” in developing his argument for gridiron patterns. This grid provides the structural ordering device for planning urban areas using a hierarchy of activity corridors, spines and streets. The advantages of the court built form over the more typical pavilion form found in most cities was also accepted by Dewar as a means of defining the street space more clearly and creating a human-scaled and pedestrian oriented built form.

### c) Response to Appropriate Urban Forms

The notion of metropolitan design has been questioned by Briggs (1994: 49), who argues that it places too much faith in the “organic processes of urbanity, and the creative instincts and interventions of the humanist designer/planner”. In relation to the compact city approach, Briggs (1994: 49) argues that: “The approach provides very little basis for the incorporation of systematic analysis of complex urban processes, or of the demands and needs of urban participants. It is a conceptualisation which over-simplifies the multi-dimensional nature of the planning and management process at this scale, and which introduces a strong interventionist and ‘top down’ element into the planning process”.

### 3.1.3 The Reference to Historical and Contemporary Precedent

A theoretical issue related to the concerns with urbanity and urban form is the support garnered for the activity corridor concept by references to historical and contemporary precedents of linear development forms in South Africa and internationally.

### a) Local and International Precedents

Locally, it has been argued that 'mature' activity corridors, such as Voortrekker Road and Old Main Road in Cape Town, create "positive and enabling [environments] which have contributed directly to increasing the life chances of people with low personal mobility and limited access to economic opportunities" (SSMB 1995: 27). These corridors have developed over a period of 150 to 200 years, originating as node connectors, then developing into semi-continuous business strips and ultimately culminating in the creation of an integrated corridor system with the construction of by-pass routes (SSMB 1995: 28).

The use of local precedents has been reinforced through reference to what are considered to be positive aspects of urbanism in other contexts internationally, particularly the older 'organic' urbanism of European market towns (McCarthy 1994: 8) such as Venice, Rome and Paris (Dewar *et al* 1991: 22-33). A number of examples are provided, however, where planned settlements also provide 'structural clarity' and complex levels of order, such as Jerusalem, Israel and Jaipur, India (Dewar *et al* 1991: 31).

There are also a number of contemporary urban examples of corridor development in both developed and developing countries. With regard to developed cities, contemporary precedents include the high streets of the United Kingdom and Europe and the commercial strips of North America.

In terms of developing cities, a contemporary precedent that is often cited in support of the local concept of activity corridors is the case of Curitiba

in southern Brazil<sup>56</sup>. In 1965, a new development plan, consisting of five major structural axes radiating from the city centre, was prepared for Curitiba in order to structure the city's urban fabric, accommodate population growth and improve public transport services (Kannenberg 1995: 1-3).

These axes, or corridors, were developed in the early 1970's based on a 'trinity' road system, consisting of three parallel roads each one block apart with an exclusive bus lane in the central spine. The land on either side of the central spine was zoned for high density and commercial development, whilst the outlying blocks were reserved for lower density development (SSMB 1995: 28).

The planning and development of Curitiba has been widely hailed as a relatively unique third world success story in terms of urban spatial planning and sustainability<sup>57</sup>. Typical benefits highlighted include the corridor system's ability to accommodate population growth<sup>58</sup> and commercial development, facilitate efficient public transportation<sup>59</sup> and maintain vast open space areas on the urban edge.

<sup>56</sup> See, for example, Nicks (1994), WCEDF (1995: 21-24), Kannenberg (1995) and MLH Architects and Planners (1995).

<sup>57</sup> See also Rabinovitch (1992: 62-73) and Devas (1993: 159-160).

<sup>58</sup> According to Naude (1988), two thirds of the Curitiba's 22% population growth rate between 1970 and 1974 was accommodated in these corridors.

<sup>59</sup> According to the WCEDF (1995: 22), 70% of daily commuters make use of the public transport network, which consists of an extensive network of feeder routes linking the five transport axes, despite relatively high car ownership rates (330 vehicles per 1000 population).

### b) Relevance to the Activity Corridor Concept

Local precedents such as the Voortrekker and Old Main Roads in Cape Town have had a strong influence over the development of the activity corridor concept. Firstly, the positive environmental and urban qualities observed along these existing corridors provided the initial impetus for researching and proposing corridors as a viable alternative to other existing urban forms, such as suburban and township developments, that did not provide the same qualities of urbanity, access, convenience and choice. Secondly, the existing attributes and characteristics of these corridors provided the basis for identifying the desirable or necessary qualities of 'ideal' corridors in other contexts, including their size and spatial arrangement and the nature of transport routes and land uses contained within them.

The examples of 'natural' corridor development in Cape Town and internationally provided empirical evidence of the benefits of this type of linear development in terms of the positive environmental attributes and functional relationships produced. Dewar and Uytendogaardt argued, however, that these environments and benefits could be generated through planning intervention to create activity corridors. This contention received support through an unexpected source – the success of spatial planning efforts in Curitiba, Brazil. The planned development of this city was seen as evidence that planners could create corridors and that these would deliver the types of benefits expected.

### c) Response to the Use of Precedents

The use of historical and contemporary precedents to support the activity corridor concept is not entirely unproblematic. In relation to historic

precedents and particularly the Old Main Road and Voortrekker Road examples, it is argued that the development of these corridors was influenced by particular contextual circumstances that are no longer evident in our cities (Masson *pers com* 2001). These linear systems developed over a long period of time when the trolley bus was the main mode of transport and there were few alternatives to public transport. The trolley bus lines provided the basis for the development of these linear systems during a period of suburban expansion. Unless these conditions can be recreated, it is debatable whether corridors of the type envisaged can be created or planned with any success.

There is, however, a danger involved in the adoption of this type of methodology that is not recognised by the document. The successful performance of these environments is a result of the particular conditions under which they developed, such as the far lower levels of car ownership and the absence of planning controls. It is debatable whether this 'historical' form is capable of accommodating the rapid changes occurring in South African cities (demographic, technological, etc.), both now and in the future. Even if the form is flexible enough to accommodate major changes, it is not clear how a pattern that developed over such a long period of time (around 100 to 150 years) is to be produced by the type of tools available to town planners.

In the case of the widely lauded Curitiba, detractors argue, however, that the success of Curitiba is based on unique conditions and circumstances that are not necessarily applicable in other developing contexts. These include, *inter alia*, very strong and sustained local government leadership and direction, a culture of high rise flat dwelling (with blocks of flats of up



to 30 storeys high for higher income groups along the axes) (Kannenbergh 1995: 3), the fact that these structural axes form only one part of a broader management plan for the city, which encompasses a range of urban management interventions (such as an industrial park, waste management projects, preservation of the historic core, etc.). In addition, Curitiba has followed the same plan 30 years, which has provided sustained direction and support allowing the corridors sufficient time to develop (Masson *pers com* 2001).

It is arguable that these conditions and prerequisites are not prevalent in South African cities in general and Durban in particular. Unless the spatial plans for Durban receive the necessary institutional and financial support over an extended period of time, the likelihood of them developing in the manner intended is limited.

The development of the activity corridor concept can therefore be understood as a combination of approaches advocated by the concerns with organic urban growth and the resulting qualities of urbanity, and the concerns with a structuring framework for growth and the resulting ordering of urban space. This is clearly reflected in the urban restructuring approach advocated by Dewar *et al* (1991), which incorporates both 'classical' and 'romantic' elements.

As Briggs (1994: 61) notes: "The approach is 'romantic', in that it is open to organic, not necessarily planned, processes of urban development. The 'classical' dimension of the approach lies in an emphasis on the conscious arrangement and 'making' of public places, spaces and paths so as to structure a desired interaction of key elements of the urban fabric".

### 3.2 Links to Broader Urban Debates and Strategies

The review of activity corridor theory and practice outlined in Chapter Two reveals that the concept has been incorporated into a number of different debates around appropriate urban planning, development and management in South Africa. The following chapter explores the links between the activity corridor concept and three key urban debates, notably urban spatial restructuring, sustainable urban development and compact cities. A discussion of these debates is important as support for, and indeed criticism of, activity corridors is often a result of support for these broader urban strategies.

#### 3.2.1 Urban Spatial Restructuring

The activity corridor concept has been closely linked to broader urban planning, development and management debates regarding the need for urban spatial restructuring in South African cities.

##### a) Emergence of the Urban Spatial Restructuring Debate

The need for urban spatial restructuring has been the focus of substantial research and attention in South Africa since the late 1980's not only as a way to redress the inequalities and inefficiencies associated with the structure of the 'apartheid city', but also as a mechanism for planning and accommodating future urban growth in a 'post-apartheid city'.

#### Forces Underlying the South African Urban Structure and Form

Whilst there are clearly a wide range of factors underlying the current structure and form of South African cities, the key forces that have shaped current urban spatial patterns have been identified as apartheid ideology

and planning and modernist planning principles and controls (Dewar 2000: 210-211).

Dewar (2000: 210) argues that most urban development in South Africa has occurred since the advent of modernism and the associated importation of urban planning and management systems and policies from the UK, Europe and the US has therefore “strongly entrenched the urban characteristics of modernism” in South Africa. This includes a strongly anti-urban or pro-suburban ethos, an emphasis on the separation of the major activities of urban life, a quantitative or programmatic approach to settlement building, the promotion of the cellular neighbourhood unit concept, and the predominant concern with technological efficiency to the virtual exclusion of social or environmental considerations.

Dewar (2000: 210) argues that the influence of modernism has been overlaid by the policy of apartheid, which enforced the spatial segregation of racial groups in urban areas and regionally through the Group Areas Act and the removal of non-whites to self-contained settlements beyond the urban edge. Dewar (2000: 210) also asserts that the resulting apartheid urban structure has not changed significantly since the repeal of the Group Areas Act in 1991 and the advent of democratic government in 1994.

This is due to the significant investments of households, the absence of an active land market and the established social ties in these remote locations, as well as the considerably more expensive land prices in more central urban areas (Dewar 2000: 210-211). The ongoing pattern of residential sprawl has also not been matched by urban employment and commercial opportunities due to a lack of investor confidence and entrenched patterns

of accessibility. Growth has therefore tended to reinforce, rather than breakdown, the entrenched apartheid city structure.

### **Form and Structure of the South African City**

It has been argued that the “combination of these [modernist and apartheid] forces has resulted in the three spatial characteristics of low density, fragmentation and separation, which fundamentally describe South African towns and cities” (Dewar 2000: 211). These three spatial patterns have been described as follows (Dewar 1992b: 244-245):

#### **1. Low Density Sprawl**

Low-income and higher income housing developments tend to occur on the urban edge, largely due to the availability of more affordable land, the increased visual amenity provided by these locations and entrenched suburban values and residential development models.

#### **2. Fragmentation**

Urban development tends to occur in relatively discrete pockets (frequently bounded by physical elements such as freeways or open space buffers) linked by a simplified and limited access movement system. This coarse-grained development pattern is the result of entrenched spatial planning concepts (such as the ‘neighbourhood unit’ or ‘urban village’) and the tendency to undertake formal housing developments as large entities on discrete, consolidated sites.

#### **3. Separation**

Land uses, urban elements and race and income groups are all highly separated due to former Apartheid policies (e.g. the previous Group

Areas Act), planning approaches and controls (e.g. zoning and separation of land uses) and market forces.

### Impacts of the South African City Structure and Form

Together, these three spatial patterns result in major human and environmental consequences (Dewar 2000: 211) and impose massive costs<sup>60</sup> on the urban system and the lives of urban residents and the urban poor in particular. According to Dewar (1992b: 245-246):

“The sprawling, fragmented urban system generates an enormous amount of movement, but fails to create the preconditions for viable, efficient and widely accessible public transportation systems to emerge. The costs of this movement to urban dwellers, in terms of time and money, are becoming increasingly intolerable: the structural system is aggravating significantly the major development issues of poverty, unemployment and inequality. It is economically inefficient, inflationary and mitigates against economic growth. The large distances and low densities ensure that distributional costs form an inordinately high proportion of total costs in the cost structures of most businesses. The market concentration necessary to generate vibrant local economies does not exist and the limited number of points of high accessibility, in combination with the spatially extensive

market catchments, ensure that only large economic units can really flourish: the physical structure promotes economic centralisation and monopolisation. It fails to generate high levels of social and commercial services: indeed the costs of providing the sprawling system even with adequate utility services are becoming prohibitive. It wastes society’s scarce resources such as land, energy and finance. It is resulting in extensive environmental destruction and pollution. Finally, the potential of the housing process to generate economic development and achieve a wider circulation of income via inward industrialisation is not being realised.”

This characterisation and critique of the South African city has been echoed by a wide range of authors<sup>61</sup>, albeit with different emphases and levels of detail, and has formed a common starting point for articulating a new planning approach to the management of urban areas.

#### b) Restructuring Proposals for South African Cities

In responding to the sprawling, fragmented and segregated urban structure identified above, it was argued that a number of key responses were required (Dewar 1992b: 248-253 and Hindson *et al* 1993: 26-34):

##### 1. Establish an Urban Edge

It was argued that a fixed urban edge between urban, agricultural and primeval land was necessary to protect valuable productive and

<sup>60</sup> See, for example, *Spread City! Evaluation of the costs of urban growth in metropolitan Cape Town* (Behrens and Watson 1992) for a detailed assessment of the capital, operating, individual, environmental and economic productivity costs of urban sprawl in Cape Town.

<sup>61</sup> See, for example, McCarthy (1990: 9-12) and Hindson *et al* (1993: 2-5).

primeval land from urban sprawl and to enable urban dwellers to use and enjoy these areas.

## 2. Increase Urban Densities

It was also argued that the form of the city should be compacted in order to achieve high-performance urban environments and that this would include “efforts to increase land use and residential densities, promote ‘infill’ development in under utilised land between the existing fragments of the cities, and rehabilitate and densify inner city and suburban housing stock” (Hindson *et al* 1993: 27).

## 3. Promote Spatial Integration

It was argued further that urban redevelopment should promote greater spatial integration (between places of residence and work, between the urban core and the periphery and between complementary land uses) in order to increase the ability of the urban system to generate opportunities, to improve access to the opportunities and facilities available within urban areas and to make better use of urban facilities and infrastructure. A particularly important element of spatial integration is the provision of low-income housing opportunities in well-located urban areas with access to urban facilities, services and opportunities.

## 4. Redefine Essential Infrastructure

It was argued that other forms of ‘essential infrastructure’ (apart from utility services, housing, schools, etc.) should be considered that accommodate important social and economic needs. Key elements identified were urban agriculture, public urban spaces, economic

infrastructure, improved information and communication and the multi-functional use of existing urban elements and urban spaces.

## 5. Promote More Fine-Grained Development Pattern

It was also argued that a more fine-grained development pattern should be promoted that generates a greater number of opportunities for small-scale businesses and a wider range of settlement choices for urban residents.

## 6. Stimulate More Complex Urban Management Processes

Finally, it was argued that more complex urban development processes would enable a wider range of agents to enter delivery systems (e.g. housing), thereby facilitating greater diversity, complexity and spontaneity in the design and development of urban environments.

These spatial restructuring concerns and proposals have subsequently been incorporated into the ‘compact city debate’ (Todes 2000). Activity corridors have been identified within these broader restructuring and compact city debates as a mechanism for compacting and integrating South African cities.<sup>62</sup>

<sup>62</sup> See, for example, Smit and Todes (1987), Bernstein and McCarthy (1990: 65), McCarthy and Smit (1990), Hindson *et al* (1993: 29) and Hindson and Morris (1995: 13-15).

### c) Response to the Urban Spatial Restructuring Debate

Urban spatial restructuring efforts have not gone unquestioned in South Africa. Commentators have highlighted a number of methodological, institutional, social and economic limitations to urban spatial restructuring and these are outlined briefly below.

#### Characterisation of the South African City

Arguments advanced in support of the general application of restructuring strategies (such as activity corridors) often rest on an analysis of the universal spatial problems facing South African cities. This characterisation of 'the South African city' identifies low-density sprawl, fragmentation and separation, monotonous and monofunctional environments, and unequal access to urban resources and opportunities as the main problematic features of the spatial form and structure of all major South African cities.

Although it is clear that, at least in broad terms, South African cities do share these (and other) characteristic features, Briggs (1994: 35) cautions that the characterisation of South African cities in these terms is potentially problematic. Firstly, he argues that "the notion of 'the South African city' easily leads to an un-nuanced view which subsumes important differences between South Africa's cities – differences which should shape specific and appropriate planning and management responses" (Briggs 1994: 35).

The second problem highlighted by Briggs is that the 'characterisation' of South African cities is "too easily substituted for genuine analysis... [of the]...key dynamics, processes and trends unfolding" in the different metropolitan areas in South Africa (Briggs 1994: 36). This viewpoint was

echoed by Smit *et al* (1987: 33), when they observed that "[e]ach of the metropolitan areas have geographies which have evolved in response to a range of influences some of which are quite specific to particular metropolises. Topography has for example had very particular influences on cities such as Cape Town and Durban and will continue to provide both opportunities and constraints on future forms".

A third problem of the 'characterisation' of the South African city is that it "encourages a 'reactive' approach to urban restructuring involving the assertion of opposite urban qualities to those observed through characterisation of the cities in the terms outlined above: high density development instead of low density, compaction instead of sprawl, integration in place of separation, complexity instead of simplification and order, and urbanist instead of suburban imagery. This simplistic methodology limits the scope of enquiry on which urban strategies are based" (Briggs 1994: 36).

This critique is particularly relevant to the development of appropriate strategies for the Durban context. As Dewar *et al* (1990a: i) acknowledge, whilst "[a]ll major South African cities are currently experiencing [unprecedented] growth rates which are...creating entirely new urban management problems...[n]either the scale of growth, nor the nature and scale of the problems emerging, however, are the same from place to place." In the case of Durban, Dewar *et al* (1990a: i) assert that:

"Perhaps the most dramatic cases can be found over large areas in the Durban Metropolitan region. Here the situation is almost totally out of control: unmanaged land invasion is

occurring apace; financial exploitation of the newly urbanising poor is widespread (practices such as the selling of land which people do not own is common); insecurity is the order of the day; and conflicts over land, water and other (limited) resources have become the stage over which complex and violent struggles are being played out. The physical form resulting from this process is uncontrolled sprawl – a form which does not even allow for the efficient provision of utility services such as water, power and sewerage or public transportation, let alone create the conditions for the emergence of a vibrant local economy.”

They acknowledge on the other hand, however, that “the rate and scale of urban growth in Cape Town is less than some of the other South African cities” (Dewar *et al* 1990a: ii). The clear distinction is important since it highlights the different dynamics between Durban and Cape Town and suggests that different strategies may be required to facilitate restructuring and manage urban growth dynamics in different contexts.

### **Constraints to Urban Spatial Restructuring**

In the early 1990's, Hindson *et al* (1992: 41-49) identified a wide range of economic, political, institutional and social factors that may constrain urban spatial restructuring in South African cities. These included the following:

- conflict around core city development whereby low-income housing developments in the central areas are resisted by established middle and high-income residents

- reluctance of the private sector to move away from established and centralised commercial and industrial areas closer to population concentrations due to security and poor environmental conditions
- resistance from upper income suburbanites and informal land invaders to urban containment due to the accessibility and availability of peripheral land
- resistance to mixed use development whereby commercial uses expand into existing residential areas
- political violence on the urban periphery, which slows down the planning and development process and raises costs
- lack of co-ordination within local government structures around development initiatives and public investment
- highly restrictive planning and land use regulations, which have restricted low-income development and created monofunctional land use patterns
- the co-existence of private ownership, tribal land and various forms of government owned land makes coherent macro-planning exceedingly difficult

### **Normalising the Apartheid City**

A key aim of urban spatial restructuring has been to redress the severe inequalities and abnormalities introduced into the urban structure by apartheid spatial planning. From this perspective, it is argued that urban spatial restructuring provides an opportunity to ‘normalise’ the city by contributing to the functional and spatial integration of the previously fragmented components of the city, the deracialisation of the city through

the provision of housing opportunities for black people in the historically white core and access by the urban poor to concentrations of economic and other urban opportunities (Hindson *et al* 1993: 27).

The notion of a ‘normal’ city has been questioned by Briggs (1994: 58) who argues that: “There is an implied image or model contained within the concept, but no particular justification as to why this constitutes the natural, desirable, or ‘normal’ state which a city should reach”. Briggs (1994: 59-60) also questions the ‘normalisation’ of the apartheid city through compaction on the grounds that: the majority of black urban dwellers are unable to afford the relatively high costs of centrally located land and housing (even with a housing subsidy); that social conflict along racial, class and political lines has accompanied many attempts to infill or densify urban areas; and that many communities may resist densification due their preference for suburban-type housing environments and the opportunities these offer in terms of survival strategies such as subsistence agriculture.

#### **d) Implications for Activity Corridors**

The activity corridor concept has been envisaged as a central component of urban spatial restructuring proposals in South Africa. Whilst this has lent additional support to the concept in current debates, it has also not always been consistently supported in spatial restructuring strategies. The activity corridor concept is one mechanism for restructuring and compacting the city, but it is often applied in isolation of these other mechanisms, which makes it potentially less effective. The potential contribution of the activity corridor concept to urban spatial restructuring is explored as a central feature of the enquiry presented in this dissertation.

### **3.2.2 Sustainable Urban Development**

The activity corridor concept has been linked to environmental debates regarding ‘sustainable development’, a notion that emerged internationally but which has become increasingly influential in the South Africa context.

#### **a) Emergence of the Sustainable Development Debate**

The notion of sustainable development emerged in the late 1980’s in response to the international ascendance of environmental concerns and debates after the oil crisis in the early 1970’s. These concerns culminated in the emergence of a new development paradigm – that of ‘sustainable development’. The term was originally defined by the Brundtland Commission (WCED 1987) as: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

In the early 1990’s, this concern with sustainable development gave rise to an increasing awareness in international urban debates regarding the role of land use planning and urban form in contributing to greater urban sustainability. As Breheny (1992a: 2) notes:

“There is a growing realisation that much of the sustainability debate has an urban focus. The world’s cities are the major consumers of natural resources and the major producers of pollution and waste. Thus, if cities can be designed and managed in such a way that resource use and pollution can be reduced, then a major contribution to the solution of the global [sustainability] problem can be achieved”.

### b) Sustainable Urban Forms

A key focus of the urban sustainability debate has been an exploration of the relationships between energy consumption, pollution and urban form, the aim of which has been to assess the potential role of land use planning in contributing to greater urban sustainability. This focus is predicated on the contention that: “Potentially the greatest contribution that planning could make to the reduction of energy consumption is to design urban forms to minimise the need for travel” and encourage public transport patronage (Breheny 1992a: 7). Several authors engaged in this debate have put forward the proposition that certain urban forms are more fuel efficient – and therefore more sustainable – than others. The debate focuses on three different, but interrelated, aspects of urban form – urban densities, urban size and urban structure.

#### Urban Density and Transport Energy Consumption

A number of authors<sup>63</sup> have argued that the available evidence<sup>64</sup> suggests that there is a correlation between higher urban densities and lower fuel consumption. It is argued that higher densities contribute to lower fuel consumption by reducing travel distances and facilitating public transport (Breheny 1992a: 7). This is due to the closer proximity of people, facilities and jobs, which promotes walking and cycling and reduces car trip lengths, and the increased population thresholds, which increases the viability of public transport services (Newman and Kenworthy 1989: 25).

#### Urban Structure and Transport Energy Consumption

A number of authors add that the form of this higher density can further facilitate public transport usage and reduce energy consumption. Whilst a range of different urban form options have been identified by different authors, the three most commonly cited and debated urban forms are the ‘compact city’, ‘decentralised concentration’ and linear development patterns.

One of the most prevalent urban forms that has emerged from international debates regarding sustainable development is the notion of the ‘compact city’. The compact city, as put forward in a number of key policy documents in the United Kingdom and Europe<sup>65</sup>, is characterised by a contained, high density and functionally mixed urban form. It is argued that the compact city will address two major urban problems – the environmental degradation and the poor quality of life in urban areas that result from urban sprawl and the spatial separation of functions (Breheny 1992b: 141).

It is argued that urban sprawl and the spatial separation of functions reduce the quality of urban life by: undermining public life and interaction; necessitating excessive time wasted on commuting; and by creating visually monotonous and functionally isolated urban environments. By contrast, the compact city “offers density and variety; [and] the efficient,

<sup>63</sup> Including Newman and Kenworthy (1989), Banister (1992), Rickaby *et al* (1992), Owens (1992 and 1995) and Barton (1992).

<sup>64</sup> Including a mixture of empirical evidence (particularly a study of per capita fuel consumption in a range of large cities around the world conducted by Newman and Kenworthy), hypothetical modelling and policy proposals.

<sup>65</sup> See, for example, the UK government’s White Paper on the Environment *This Common Inheritance* (Department of Environment 1990) and the European Commission’s *Green Paper on the Urban Environment* (Commission of the European Communities 1990).



time and energy-saving combination of social and economic functions” (Breheny 1992b: 142).

Whilst there has been widespread support for ‘compact cities’, the concept has been critiqued by a number of authors on the grounds that its purported benefits (in terms of improved urban sustainability and quality of life) have been asserted but not proven (Breheny 1992b: 148). The notion of the ‘compact city’ and its purported contribution to urban sustainability and quality of life has been questioned by a number of authors<sup>66</sup>. As a result, certain authors suggest that another urban form that may boost public transport usage and reduce fuel consumption without resorting to the ‘compact city’ approach is ‘decentralised concentration’<sup>67</sup>.

‘Decentralised concentration’ refers essentially to the promotion of urban and suburban nodes with associated intensive activities and high densities (Breheny 1992: 13). Two key types of ‘decentralised concentration’ would be commercial/service nodes serving residential areas and the concentration of employment opportunities and facilities at public transport nodes.

It is argued that ‘decentralised concentration’ is relatively efficient in terms of travel and energy requirements by reducing the physical separation of activities (i.e. residential, economic and service-oriented activities) and therefore minimising travel distances and the need for travel (Owens 1992:

<sup>66</sup> See, for example, Troy (1992), Van der Valk and Faludi (1992), Breheny (1992b) and Briggs (1994).

<sup>67</sup> See, for example, Owens (1992: 90), Banister (1992: 174) and Barton (Breheny 1992a: 15).

90). Owens notes, however, that this approach has also been questioned on the grounds that reduced travel requirements may, in turn, incur costs in terms of amenity or access to a range of jobs and services.

A third possible urban form that has been suggested to promote energy efficiency is the promotion of higher densities adjacent to public transport and cycling routes (Owens 1992: 100) and around the least flexible urban elements, such as rail systems (Breheny 1992a: 15). It is suggested that this linear development pattern will promote public transport and improve access to facilities by increasing thresholds in close proximity to public transport networks and facilities.

#### **Urban Size and Transport Energy Consumption**

Empirical research undertaken in the USA by Newman and Kenworthy (1989: 25) and in the UK by Banister and ECOTEC (Breheny 1995: 85) suggests that urban size does affect energy consumption, though not necessarily to the same degree as urban density and structure. The research indicates that large urban areas are more fuel efficient – and therefore sustainable – than smaller urban areas, and particularly rural areas, due to their higher urban densities, shorter travel distances and public transport facilities (Breheny 1995: 86). Banister notes, however, that “the largest cities are likely to be less efficient than medium-sized and smaller towns, presumably because of the effect of congestion offsetting gains from shorter travel lengths in the largest cities” (Breheny 1992a: 13).

#### **c) Response to Sustainable Urban Form**

A number of questions have been raised regarding urban form, sustainability, efficiency and quality of life.

### Links between Urban Form and Energy Consumption

The notion that planning for higher density, public transport oriented urban forms can reduce energy consumption has been qualified or questioned by a number of authors<sup>68</sup>.

Firstly, questions have been raised regarding the purported links between increased densities and decreased fuel consumption. As Owens acknowledges, at very high densities the energy consumption benefits provided may begin to be outweighed by the disbenefits arising from congestion (Breheny 1992a: 7). It is not clear from the available literature at what densities this would occur, but it would be safe to assume that it would vary depending on a range of factors including, amongst others, the city's size and structure and the urban population's size, income levels and travel behaviour.

Breheny (1995: 92) suggests that the support of higher densities on the basis that it will reduce energy consumption is based on contradictory evidence and that it is not clear exactly what gains will be made in reducing energy consumption through compaction policies. Breheny (1995: 95) poses the question that: "Would advocates of the compact city be so forceful if they knew that the likely gains from their proposals might be a modest 10 or 15 percent energy saving achieved only after many years, and unprecedentedly tough policies?"

Secondly, questions have been raised regarding the purported links between urban form and fuel consumption. A study undertaken by Rickaby and others (Rickaby *et al* 1992: 52-66) using land use/transportation modelling techniques revealed that there were no significant differences in fuel consumption between the five different urban forms<sup>69</sup> selected for the purposes of the study. The study concluded that, whilst higher densities are likely to reduce fuel consumption by reducing journey lengths, the urban form of those higher densities had no significant impact on fuel consumption.

The study is of particular relevance to the activity corridors concept in that an assessment was made of the comparative fuel consumption of two urban form options that involved high-density linear urban development (the one with development concentrated along main roads and the other along secondary roads). The study revealed that, contrary to expectation, these two options did not encourage public transport patronage. This was due to the concentration of car journeys along these linear corridors, which resulted in congestion and slowed the buses (the assumed form of public transport). As a result, public transport did not offer time savings over private vehicles and was therefore unattractive to commuters (Rickaby *et al* 1992: 63).

Thirdly, various authors have questioned the importance attached to land use planning in reducing energy consumption. Owen argues that:

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<sup>69</sup> This included: a) concentrated development in the central city, b) high-density linear development along main roads, c) new satellite towns, d) high-density linear development along secondary roads and e) development dispersed to villages.

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<sup>68</sup> See, for example, Gordon and Richardson (1989), Gomez-Ibanez (1991) Hall (1991), Rickaby *et al* (1992), Breheny (1992b) and Breheny (1995).

“Planning may be able to influence the [need for travel], but possibly not the [actual travel behaviour]” (Breheny 1992a: 7). Planning for the local availability of facilities may therefore make little difference to travel behaviour if the propensity to travel is high as a result of low fuel prices, high levels of car ownership, greater choice in more distant locations, etc.

Rickaby *et al* argue that land use planning alone is unlikely to result in a significant modal shift from private to public transport. They concede, however, that if land use planning were combined with additional measures to discourage car use (such as higher taxation of private vehicles and/or fuel and central area traffic restriction) and the introduction of high-capacity, high-speed public transport (such as light rail) it would be more likely to be effective in encouraging a modal shift to public transport (Rickaby *et al* 1992: 14).

### **Links between Urban Form and Other Objectives**

In addition to questions regarding the impact of urban form on energy consumption and urban sustainability, questions have also been raised regarding contradictions and/or conflicts between urban forms required for sustainability and economic, social and/or political viability (Breheny 1992a: 8).

Firstly, it has been argued that the pursuit of compact cities flies in the face of deep-seated and powerful trends of decentralisation and suburbanisation (Breheny 1992b: 143; Van der Valk and Faludi 1992; Breheny 1995: 87). These trends are underpinned by a number of key factors including, amongst others: congestion, lack of available land and/or high land costs in the central urban areas and the concomitant relocation of businesses to

suburban nodes outside of the central areas; the pursuit of suburban and rural lifestyles; changes in the nature and structure of economic activities; and new communication technologies that facilitate a decentralised lifestyle and business practices (Breheny 1995: 90). Breheny argues that it is questionable whether land use planning centred around urban compaction is capable of reversing these powerful decentralisation trends and suggests that “much more draconian policies, with very serious social and economic ramifications, will be required” (Breheny 1995: 92).

Secondly, the promotion of urban containment and compaction has been questioned on the grounds that it contradicts the pursuit of a suburban quality of life. In the case of Britain, Breheny (1992b: 151) argues that it would not only be impossible to accommodate all new development within the existing urban boundaries (due to the absence of sufficient undeveloped residual land) but that it would also be undesirable (due to the preferences of many urban dwellers for a suburban lifestyle).

Thirdly, the promotion of higher densities has been questioned on the grounds that it may contradict other environmental objectives – that of utilising renewable energy sources and ‘greening the city’. With regard to the first, it has been suggested that “for any large-scale development of solar heating or wind power in cities, lower density development is required” (Breheny 1992b: 155). With regard to the second, it has been argued that, unless ingeniously designed, an increase in densities may lead to a loss of green spaces, which are important not only for recreation but also for the ecological viability of urban areas (Breheny 1992b: 154; Orrskog *et al* 1992: 111). Of significance to a debate regarding activity corridors is the contention put forward by Owens (1992) that a linear

development pattern with 'green fingers' between development spines may be a higher density option that incorporates environmental concerns regarding the retention of green spaces in dense urban areas.

Fourthly, urban compaction has been questioned on the grounds that it may further marginalise the already economically declining rural areas. Breheny (1992b: 156) notes that urban containment policies in Britain have already "deprived rural areas of economic activity that could have sustained them" and this is likely to be exacerbated through future concentration of development and investment in large urban areas.

Clearly, a reduction in energy consumption is not likely to be achieved through an unquestioning pursuit of higher densities or a specific urban size or form. Rather, a more flexible and balanced approach to urban form and density will be required that focuses on a range of planning (and other) interventions in different parts of the city that are appropriate to the city's structure, growth dynamics, etc.

#### **d) Implications for Activity Corridors**

The majority of research around the use of urban form to reduce vehicle emissions and promote public transport has emanated from developed countries. The environmental and transportation sectors in South Africa are starting to engage with this debate, partly through the document Moving South Africa and the Local Agenda 21 Programme.

In Durban, the Environment and Development Study focused on the prospects and strategies for achieving sustainable development in the city

and highlighted the importance of urban form,<sup>70</sup> energy and transport (NSCLC 1996: 26-30). According to the report, "the evolving spatial structure of the DMA displays existing, incipient and potential activity spines which together with its open space systems represents an evolving grid" (NSCLC 1996: 27). The report continues that: "Planning processes which build on this basic grid of inter-connected natural systems and movement routes, it may be argued, will promote sustainable city form" (NSCLC 1996: 27).

In SA low-incomes and high levels of poverty force people to be more dependent on public transport, but the existing public transport systems are not adequate at present. Also, the question of levels of private vehicle ownership does not seem to have been adequately addressed in the activity corridor concept. If intensive activity corridors, spines and streets are established without a commensurate move to public transport, these routes will become increasingly congested. This is particularly problematic in South Africa where travel times are already long. Increasing congestion along a network of secondary roads will only further exacerbate problems.

In Durban, there have been a number of major conflicts around the remaining portions of undeveloped land in the city due to competing demands for this land as a result of its development potential and ecological importance. This has often resulted in considerable conflicts between the Metro Housing Department and the Environmental Management Branch over specific parcels of land.

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<sup>70</sup> See also Kiepiel (1996) *Urban Form and Industrial Ecology* prepared as part of the Environment and Development Study.

Durban currently experiences a number of major environmental problems, including flooding, loss of habitat diversity, loss of tourism assets, etc. Increasing densities within the city will exacerbate many of these problems unless these developments are appropriately planned and designed as part of the natural system and unless the infrastructural or natural systems that mitigate these impacts are improved.

This perspective is not necessarily an argument against the use of activity corridors but rather that the specific environmental issues facing Durban need to be factored into the planning and implementation of corridors. Indeed, it has been argued that linear development forms can accommodate green space if properly designed (Owens 1992).

### 3.2.3 Compact Cities

The notion of activity corridors has become increasingly intertwined with a broader spatial restructuring approach – the ‘compact city’ – over the years and it has therefore been considered necessary for the purposes of the enquiry to provide a brief explanation of the compact city concept.

#### a) Emergence of the Compact City Debate

The compact city notion has developed locally and internationally as one possible response to the need for urban spatial restructuring and sustainable urban development. Whilst there are a number of different interpretations of the compact city, Burgess (2000: 9-10) provides a composite definition of contemporary compact city approaches as:

“To increase built area and residential population densities; to intensify urban economic, social and cultural activities and to

manipulate urban size, form and structure and settlement systems in pursuit of the environmental, social and global sustainability benefits derived from the concentration of urban functions.”

The compact city notion emerged initially in developed countries as a response to the environmental, social and economic impacts of the sprawling forms of cities in America, Australia and the UK<sup>71</sup> and has been increasingly applied in developing countries<sup>72</sup> and in South Africa. As Todes *et al* (2000: 231) note “the compact city has had to be modified in important ways in the South African context in order to respond to the realities of the inherited urban form (namely, racially divided and spatially fragmented cities), and to emerging social, political and economic forces”. The activity corridor concept has played an important role in defining the way that the compact city approach has been articulated in the South African context.

In South Africa, the notion of the compact city is founded on a critique of existing urban environments, which are generally characterised by inefficient, unsustainable and inconvenient urban forms as a result of low-density urban sprawl and fragmented land use patterns. Proponents of the compact city argue that urban densities should be increased to preserve agricultural and natural land on urban peripheries and to increase thresholds for, and improve access to, urban facilities, activities and

<sup>71</sup> See for example, Jenks *et al* (1996) *The Compact City: A sustainable urban form?* and Williams *et al* (2000) *Achieving Sustainable Urban Form*.

<sup>72</sup> See for example, Jenks *et al* (2000) *Compact Cities: Sustainable urban forms for developing countries*.

services. This could be achieved through a variety of interventions, including densification of existing urban areas, infill of strategically located vacant land and/or the establishment of an urban edge.

### b) Compact City Approaches

Whilst there are a number of different structural interpretations of the notion of the compact city, both in South Africa and internationally, a distinction has been drawn between two primary definitions in the South Africa context (Smit *et al* 1987: 19-23).<sup>73</sup> The first is Curries' (1978) notion of 'Cities-within-Cities' and the second is the 'compact integrated city' as put forward by Dewar and others.

The concept of 'Cities-within-Cities' proposes that urban growth be accommodated in "a cluster of compact, walkable, planned communities of sufficient size to be true cities (say 400 000-500 000 in developing countries)" (Currie 1978: 182). The model envisages that each of these 'cities' within the metropolitan area be tightly clustered around the metropolitan core to ensure that the metropolis as a whole has a compact form. Each of these 'cities' would be designed as high-density, pedestrian-oriented environments capable of providing the full range of urban facilities, activities and opportunities for residents.

<sup>73</sup> From an international perspective, Burgess (2000: 21) argues that there are four different structural interpretations of the compact city: high-rise, high-density self-contained new towns and settlements; 'concentrated decentralisation' with a polycentric urban structure; the Curitiba linear 'transit-oriented development' model; and the traditional infill, densification and intensification model.

The concept of the 'compact integrated city', on the other hand, has been specifically developed in response to the spatially fragmented and racially segregated urban form of South African cities. Whilst this concept also advocates compaction and containment, it emphasises different spatial objectives to the 'cities-within-cities' model. In particular, the approach proposes the development of linear mixed use activity corridors supported by high-density residential areas to spatially integrate and connect disparate parts of the city. It also proposes that opportunities for low-income housing development be created in or near the city to improve the access of the urban poor and to promote social integration (Smit *et al* 1987).

According to Dewar (2000: 212), the most commonly cited arguments in favour of compaction include "the need to reduce movement, air pollution and dependency on oil imports; to maximise historic investment in utility infrastructure and social facilities; to increase thresholds and thus levels of service; and to increase convenience". He argues that in the context of South Africa, however, there are even more compelling arguments for compaction.

The first factor is the critical need to generate employment due to the high rate of unemployment in South African cities, particularly for the growing small business sector. Dewar (2000: 212) argues that compaction provides the basis for "intensive, vibrant local markets", which are a "precondition for small business to thrive".

The second factor is the need to "create urban environments that operate efficiently and pleasantly at the pedestrian scale" since "movement on foot is the only mode of travel affordable by a growing majority of urban

dwellers” (Dewar 2000: 212). Dewar argues that compaction is essential in creating such environments.

And finally, the third factor is the need to “resolve the current problems of public transport” since the existing low density sprawling urban structure not only generates enormous amounts of movement but it also undermines the viability of public transport. Dewar (2000: 213) argues that “compaction, greater intensification along more continuous public transportation routes and a more decentralised pattern of urban opportunities” are three spatial preconditions essential “to achieving an efficient and regulated public transport system”.

The ‘compact integrated city’ has become the dominant approach to achieving compaction and promoting urban restructuring in the South African context. As with the activity corridor concept, the ideal urban form represented by the ‘compact integrated city’ has not only been incorporated into a wide variety of urban spatial planning policies and plans, but has also influenced transportation planning and service delivery initiatives.

### c) Response to the Compact City

The compact city has been questioned on a number of theoretical and practical grounds both internationally and in South Africa. Internationally, the compact city has been strongly informed by sustainable development debates and has emerged as one of the most widely supported urban forms for achieving greater urban sustainability. Many of the criticisms levelled at sustainable urban forms in the preceding section are therefore also applicable to compact cities.

In South Africa, the compact integrated city approach has become integrally linked with urban spatial restructuring debates. Many of the criticisms levelled at compaction-oriented spatial restructuring proposals are therefore also applicable to the compact integrated city approach prevalent in South Africa.

There are a number of additional criticisms or limitations of the compact city approach in the South African context that require further consideration. Commentators have recently highlighted a number of cultural and institutional obstacles and social and economic forces that are likely to limit the prospects for compaction in South African cities (Dewar 2000; Schoonraad 2000; Todes *et al* 2000).

From a social and cultural perspective, a number of key trends have been highlighted that are likely to constrain compaction efforts in South Africa. Firstly, it has been argued that: “Planning is occurring in a context of massive social problems such as rising unemployment (estimated at 30%), violence, crime, and AIDS, all of which threaten to dwarf concerns about spatial restructuring” and compaction (Todes *et al* 2000: 241).

Secondly, it has been argued that the “anti-urban values of all groups” is “supporting the low-density, monofunctional sprawl of South African cities” (Schoonraad 2000: 227). New arrivals to the cities have often been displaced from rural areas and have “built-in cultural attitudes to land” and “a number of new needs” (such as the practice of traditional medicine and agriculture) that “tend to underpin a land-extensive mindset” (Dewar 2000: 217). This has been paralleled by the spatial decentralisation of high-

income groups into “walled enclaves and security villages, also on the periphery” (Schoonraad 2000: 221).

Thirdly, ‘nimbyism’<sup>74</sup> appears to be a factor in the resistance of certain groups to particular forms of development. In particular, considerable resistance has been encountered to centrally located low-income housing projects by adjacent higher income communities (Todes *et al* 2000: 234) who suggest that these developments encourage crime, decrease environmental quality and adversely affect property values.

Fourthly, it has been argued that “AIDS is likely to slow household formation, and could limit the extent to which housing is used to restructure the city, and reduce opportunities for compaction” (Todes *et al* 2000: 241). This is likely to be reinforced through reduced in-migration, as a result of stagnant economic growth, and ongoing peripheral settlement, due to the availability of affordable land and the pursuit of survival strategies by the urban poor (Todes 2000: 14).

And finally, recent investigations in Durban have shown that the “amount of well-located vacant land available for low-cost housing development has also been vastly overestimated” (Todes *et al* 2000: 234). This is due to the realisation that significant portions of this land are physically unsuitable for development or have competing claims for its use, such as the open space system.

From an economic perspective, there are a number of trends and forces that are likely to constrain compaction efforts. Firstly, it has been observed that, in the land market, “well-located land is inevitably more expensive” (Dewar 2000: 216) than peripheral land, which encourages private sector speculation and low-income development in these areas, thereby perpetuating urban sprawl.

Secondly, it has been suggested that peripheral residential environments provide opportunities for the urban poor that are not catered for in terms of the compact city (Schoonraad 2000; Todes *et al* 2000). These areas have been a target for migration not only because, unlike central locations, they are affordable, but also because they “enable households to survive through complex urban-rural linkages and marginal local employment” (Todes *et al* 2000: 239). The larger residential plots on the periphery provide opportunities for residents to generate additional income through the construction and rental of backyard units and the utilisation of properties for shops and providing services (Schoonraad 2000: 223). In this way, they also satisfy “a vital need for rental housing stock not provided in significant quantities by any other sector” (Schoonraad 2000: 223).

It has therefore been suggested that compaction efforts that promote a reduction in lot sizes in peripheral low-income housing developments (to increase densities and reduce servicing costs) are counter-productive on the grounds that they do not allow for the survival strategies and lifecycles of low-income groups. In addition, it is suggested that these efforts fail to recognise the high occupational densities currently being achieved on larger lots on the periphery (Schoonraad 2000: 223).

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<sup>74</sup> NIMBY is the acronym for ‘Not In My Back Yard’ (Todes *et al* 243).



Thirdly, it has been suggested that “the freedom and power afforded private landowners and developers within the capitalist market system” (Schoonraad 2000: 228) has allowed cities to be shaped by market forces rather than the compaction goals of public planning and policy in South Africa. As Dewar (2000: 216) argues, “the revenue of local government is entirely based on taxes on land development”, which “tends to foster an attitude that ‘any development is positive’, and private sector developers, continually seeking cheap land, continue to be the central players in determining the urban footprint”.

Fourthly, it has been suggested that the predominant economic development trends in South African cities are not consistent with compaction efforts (Todes *et al* 2000; Turok 2000). The decentralisation of commercial, office and service activities from the CBD mainly towards the middle and upper income suburban areas undermines the access of low-income communities to much-needed shopping facilities and employment opportunities. In addition, “private sector economic initiatives are avoiding township and informal areas” due to the perceptions of low-incomes and thresholds and high levels of crime and violence in these areas (Todes *et al* 2000: 240).

From an institutional and political perspective, a number of factors have been highlighted that are likely to constrain compaction efforts. Firstly, it has been suggested that “the creation and reconstruction of compact cities requires strong control measures” yet the current emphasis on strategic and participatory planning processes in South Africa has resulted in a “neglect of physical planning”, which restricts “the means and ability of

both government and urban planners to dictate urban development” (Schoonraad 2000: 225).

It has also been suggested that “strategic plans and policy documents are vague and unprescriptive” and do not provide sufficient guidance in terms of the “minimum density and intensity of development” to adequately inform the development control system, which “is based on individual lots” (Schoonraad 2000: 226). The resulting “gap between policy and implementation” is further exacerbated by the lack of “effective incentives and measures to promote or enforce densification and intensification of land use of the existing vast, low-density monofunctional areas” (Schoonraad 2000: 226).

It has also been suggested that the new land use management system is still largely based on the zoning and development control-oriented system imported from Britain, which is inappropriate in informal and developing areas and in the context of “lawlessness and a focus on private short-term gain, which currently permeate South African society” (Schoonraad 2000: 226).

Secondly, it has been suggested that “the emphasis on public participation has brought the needs of individual communities to the forefront at the expense of the common good” (Schoonraad 2000: 226). This has been reinforced through the location of decision-making powers with politicians, who tend to focus on the delivery of visible and quantifiable products and services to their communities as a result of constituency politics.

Thirdly, the lack of economic growth in South Africa and increasing competition between regions has been cited as another factor that undermines the ability of government to direct private sector investment in accordance with its plans (Schoonraad 2000: 226). As Dewar (2000: 216) suggests, “the revenue of local government is entirely based on taxes on land development”, which “tends to foster an attitude that ‘any development is positive’, and private sector developers, continually seeking cheap land, continue to be the central players in determining the urban footprint”.

The combination of these factors has restricted the ability of spatial frameworks that advocate compaction and restructuring to guide and direct spatial changes. This is mainly due to the ongoing processes of urban sprawl, socio-economic segregation and urban fragmentation, which are reinforcing the existing inefficient, inequitable and unsustainable urban form of South African cities.

A key outcome highlighted by these observations is that the compact city approach has, in effect, overstated the impacts of apartheid and modernist planning on the structure of the South African city and not given sufficient attention to the influence of market forces and entrenched cultural values in shaping cities. As Todes *et al* (2000: 236) note in the context of Durban, however, the obstacles to compaction efforts and the limitations of the compact city approach “do not imply an abandonment of compaction strategies... but they do imply a greater acceptance of working within the existing spatial structure of the city” and the prevailing social, economic and political trends and conditions.

#### **d) Implications for Activity Corridors**

The particular conception of the ‘compact city’ adopted within the South African context is closely intertwined with the activity corridor concept. Firstly, the activity corridor concept provides one of the main strategies for achieving integration and urban restructuring in the ‘compact integrated city’ approach. Secondly, the activity corridor concept and the ‘compact integrated city’ are both an urban restructuring response to the existing structure and performance of the South African city. And thirdly, both notions share similar concerns with regard to the need for increased urbanity, improved access to urban facilities, activities and opportunities and greater integration between places of work and living, between land use and transport planning and between different land uses and activities.

The activity corridor concept therefore shares many of the same theoretical foundations as the ‘compact integrated city’. It also represents one of the more tangible expressions of planning practice and implementation associated with the ‘compact city’ approach in South Africa.

The activity corridor concept provides an important contribution to the compact city approach as a result of its implication that higher densities should not be pursued across the city as a whole. Rather, overall higher densities should be encouraged through the creation of high densities in particular locations and spatial arrangements (for example, activity corridors), leaving other areas for lower densities, open spaces, etc. This encourages a wider range of options and opportunities in the urban fabric.

The review of the urban restructuring and sustainability debates outlined above has revealed that the argument that compact cities, and by

implication, activity corridors, are the most environmentally sustainable urban forms has not gone unchallenged in international debates (Briggs 1994: 80). Alternative views argue, for example, that the planned dispersal of settlement may be a more environmentally sustainable urban form. Questions have also been asked regarding the ability of compact cities to 'normalise' the apartheid city.

The preceding sections have shown that the activity corridor concept is intertwined with a number of different debates around urban planning, performance and sustainability. These debates are underpinned by a myriad of arguments and counter arguments that are based on extensive research and theoretical arguments and this dissertation has in no way attempted to describe the full complexities of these debates and the intricate arguments that support them. Rather, it has attempted to distil those components of these debates that are relevant to the activity corridor concept and to assess the potential contribution of activity corridors to these broader urban debates and objectives.

### 3.2.4 Emerging Debates and Questions

The activity corridor has been incorporated into these broader urban debates and received substantial support as a result of consensus in favour of these approaches to urban planning and management in South Africa, particularly in the 1990's. Recent trends and emerging urban debates in South Africa and internationally have, however, started to erode this apparent consensus in favour of urban restructuring, compaction and sustainability.

Firstly, there has been increasing recognition of the importance and implications of new economic realities in South Africa, such as "economic stagnation, growing unemployment, and South Africa's marginalisation within current rounds of global economic restructuring" (Todes 1998: 2). This has prompted a reorientation to the market and increasing emphasis on the 'competitive city' rather than the compact or sustainable city, effectively weakening support for urban forms that contradict the market (Todes 1998: 2).

Secondly, postmodern discourses have increasingly questioned the ability of planning policy to bring about urban change. Instead, postmodern visions of the city are becoming more prevalent as "cities everywhere are increasingly characterised by division, fragmentation and sprawl" (Todes 1998: 1).

Thirdly, the emphasis on spatial restructuring has increasingly been displaced by a pragmatic focus on delivery in South Africa. This has been prompted by the major backlogs in housing, community facilities and utility services and has become increasingly prioritised as the public sector attempts to meet its targets and placate its constituencies.

Fourthly, the political dimension of planning has become increasingly prevalent as local government transformation and associated political manoeuvring have led to significant contestation of planning debates and development priorities. Different factions have emerged that favour different development approaches. On the one hand, there is focus on market-driven city and on the other there is a focus on the social city (Domink *pers com* 2001). This points to a new set of planning debates

around the role of politics and planners and the need for conflict resolution, crisis management and an engagement with political decision-making processes.

Together, these emerging urban debates and trends have undermined the apparent consensus in favour of urban restructuring, compaction and sustainability. This has, in turn, called into question the importance attached to activity corridors, which have become increasingly intertwined with these broader urban debates. The notion of activity corridors can, of course, be conceptualised outside of these broader debates, but there is likely to be considerably reduced support for this concept outside of the broader framework.

### 3.3 Key Elements of an Activity Corridor Strategy

The activity corridor concept is premised on a number of key elements including the promotion of public transport, high-density housing, mixed uses, economic development and social facilities along activity routes. These elements have been used as key arguments in support of the activity corridor concept and it is suggested that activity corridor strategies will contribute to the promotion of these elements and their integration along activity routes. At the same, however, these elements are viewed as essential prerequisites without which functional and high-quality activity routes and associated urban environments cannot be achieved. These various aspects are outlined below.

#### 3.3.1 Promoting Public Transport

The activity corridor concept has become increasingly associated with efforts aimed at improving accessibility and public transportation not only

in South Africa but also internationally (albeit in different forms). The promotion of public transportation has been an important feature of the activity corridor concept for some time. In the mid-1980's, Dewar (1984c: 50) argued that:

“Since public transportation systems essentially operate along lines, and since urban development is located between the public transportation line or corridor and the fixed rural-urban edge, it follows that the configuration of the basic building block of urban development is linear, as opposed to the erratically concentric pattern which is associated with sprawl. Only when the essentially linear form is maintained can the related problems of urban development drifting away from public transportation routes towards the urban edge, and the destruction of agricultural land, be contained”.

This prompted Dewar (1984c: 50) to propose the creation of a hierarchy of linear activity spines that would provide one mechanism capable of generating the thresholds necessary to support public transportation systems. The potential contribution of activity corridors and spines to improving the viability of public transport systems has since become an important component of public transport debates in South Africa.

According to research conducted by the Department of Transport<sup>75</sup> and the CSIR<sup>76</sup> in the late 1980's and the 1990's, the concentration of

<sup>75</sup> See, for example, Del Mistro (1988) and Cameron (1998).

<sup>76</sup> See, for example, Naude (1988a, 1988b and 1991).

development along activity corridors and spines has the potential to “reduce travel times, transfers and other forms of inconvenience currently suffered by commuters; reduce transport investment requirements and subsidies; promote public transport and – if developed as part of a network – help to re-channel and reduce traffic congestion on radial routes” (Naude 1991: 2-2).

It is argued that the activity corridor concept will promote public transport in two key respects. Firstly, the very nature of an activity corridor or spine – as a link between residential areas and urban amenities and opportunities – provides a high volume and ‘fixed line’ movement channel along which public transport services can be provided.

Secondly, the development of these activity corridors and spines can increase thresholds for public transport services, thereby making them more viable and affordable. On the one hand, the development of high-density housing adjacent to activity corridors and spines would generate local thresholds for public transport services along these routes. On the other hand, the location of community facilities and economic activities, and the creation of an attractive public environment, along these routes would not only improve access but it would also attract commuters and thereby generate a demand for public transport services along these routes.

The inadequate transport systems in South African cities has long been recognised as a cause for concern. As Gordge *et al* (2000: i) note:

“Compared to the public transport systems of most other developing countries, the public transport systems in South

Africa’s metropolitan areas are highly inefficient and highly subsidised and generally offer poor levels of service. This can primarily be attributed to low-density unmanaged land development, coupled with the spatial inefficiencies created by Apartheid legislation and outdated public transport management systems”.

The public transport environment in Durban reflects these broader trends. For example, it is estimated that almost R400 million is required annually to subsidise public transport services in Durban (Breetzke *pers com* 2001).

A key response in local and international debates has been the integration of land use and transportation planning in an effort to create more efficient, equitable and sustainable urban forms and transport systems. These debates have been reflected in a number of key policies and legislation that advocate greater integration between land use and transportation planning in South Africa<sup>77</sup> and in Durban<sup>78</sup>.

A number of questions and trends have, however, begun to emerge with regard to the ability of land use planning and spatial restructuring along activity corridor lines to promote public transportation. Firstly, from an international perspective, a number of questions have been asked regarding

<sup>77</sup> Including the *White Paper on National Transport Policy* (National Department of Transport 1996), *Moving South Africa* (National Department of Transport 1999), the *Land Transport Act* (1999) and the *National Land Transport Transition Act* (2000).

<sup>78</sup> Including the *High Priority Public Transport Network* (199?) and the *Fundamental Restructuring Project* (Gordge *et al* 2000).

the ability of land use planning to promote public transport in cities in developed countries. Owen argues that: “Planning may be able to influence the [need for travel], but possibly not the [actual travel behaviour]” (Breheny 1992a: 7). Planning for the local availability of facilities may therefore make little difference to travel behaviour if the propensity to travel is high as a result of low fuel prices, high levels of car ownership, greater choice in more distant locations, etc.

Rickaby *et al* (1992) argue that land use planning alone is unlikely to result in a significant modal shift from private to public transport. They concede, however, that if land use planning were combined with additional measures to discourage car use (such as higher taxation of private vehicles and/or fuel and central area traffic restriction) and the introduction of high-capacity, high-speed public transport (such as light rail) it would be more likely to be effective in encouraging a modal shift to public transport (Rickaby *et al* 1992: 14).

In South Africa, the potential for planning to encourage a modal shift to public transport appears to be even more difficult due to a high dependency on private transport, particularly amongst middle and upper income groups, and the highly inadequate public transport systems that currently exist, and which are often regarded as inconvenient and even dangerous by low-income groups.

Secondly, current social, economic and spatial trends in South African cities are also starting to cast some doubt on the ability to promote public transport through land use planning and activity corridors. This includes the ongoing urban sprawl and fragmentation resulting from the

decentralisation of economic activities, ongoing processes of suburbanisation amongst middle to higher income groups and the peripheral location of most low-income housing development due to the government’s current housing subsidy scheme and constraints in the land market (Schoonraad 2000).

The majority of residential and economic development is therefore not occurring along major public transport and activity routes, which is likely to generate an increased need for movement, further undermining the public transport system and contributing to greater inefficiency, inequity and unsustainability in South African cities.

### 3.3.2 Stimulating Local Economic Development

In addition to their association with public transport debates, the activity corridor concept has also been closely linked to debates regarding economic development and upliftment in South Africa.<sup>79</sup> These debates centre on the economic objectives and benefits of activity corridors.

According to a summary report prepared by the CSIR in 1991, activity corridors have the potential to not only improve accessibility and public transport, but to also promote ‘inward industrialisation’<sup>80</sup> as part of the urbanisation process (Naude 1991: 2-2). Naude argued that: “Since

<sup>79</sup> See, for example, *Economic Upliftment through Urban Corridor Development* (CSIR 1991) and *An Evaluation of Alternatives for Managing Growth in Metropolitan Areas* (Smit and Todes 1987).

<sup>80</sup> Which has been defined as “job creation resulting from urbanisation-related demands” (CSIR 1991: 1-1).

activity corridors provide for an increase in densities and passing traffic, they could create the necessary market thresholds for a wider range of economic activities than typically found in isolated settlements. Small enterprises could especially benefit from reduced transportation costs and improved access to markets and suppliers” (1991: 2-2).

According to Green *et al* (2000a: 89), the research by the CSIR identified the principal economic objectives of activity corridors as:

- the integration of the economic activities of adjacent communities at a sub-regional level which creates the necessary thresholds for higher turnover levels, lower prices and a greater variety of economic activities in the sub-region
- the establishment of better metropolitan-wide economic linkages

A number of questions and trends have, however, begun to emerge that appear to contradict or constrain the ability to promote economic development through an activity corridor strategy. Firstly, Briggs (1994: 65) questions the assertions that the ‘compact city’ approach (and, by implication, the activity corridor strategy) “provides optimal economically generative conditions”. Briggs suggests that this approach does not take into account the complexity and diversity of economic trends and locational factors in the urban economy and that the asserted links between the generation of economic development and the ‘compact city’ have not been adequately researched or motivated.

There are also a number of economic trends currently affecting South African cities that are likely to constrain the ability to promote economic

development in the forms and spatial arrangements suggested by activity corridor strategies. This includes the processes of economic decentralisation and polarisation, which are perpetuating urban sprawl and fragmentation and contributing to the concentration of economic investment in upmarket developments and suburban areas and the avoidance of township and informal areas (Todes *et al* 2000: 240; Turok 2000).

### 3.3.3 Supplying High-Density and Low-Income Housing

A key element of activity corridor strategies is the proposed location of high-density and low-income housing in mixed use environments adjacent to activity routes. It is argued that this will provide a mechanism for restructuring the city and extending the benefits of urbanity to a greater number of urban dwellers. This would include improved access to facilities and services, increased thresholds for public transport services and economic activities and the promotion of social integration.

A number of questions and trends have emerged, however, that affect the desirability and viability of supplying high-density and low-income housing through an activity corridor strategy. Firstly, Schoonraad (2000: 223) questions the contention that high-density development will improve the access of the urban poor to housing opportunities and the benefits of urbanity on the grounds that the poor cannot afford to live in such environments due to the operation of the land market and related affordability constraints.

Schoonraad (2000: 223) argues that large residential properties on the urban periphery in fact provide many advantages for the lifestyles and

aspirations of the urban poor. This includes their need to maintain important urban-rural linkages and their ability to derive additional income from the rental of backyard units, the establishment of shops and the practice of urban agriculture.

Secondly, a number of trends in the housing market are likely to constrain efforts to provide high-density and low-income housing along activity routes. This includes the anti-urban values of all population groups, the suburban form and location of most middle and high-income housing development and the low-density form and peripheral location of the majority of low-income housing developed through the national housing subsidy (Schoonraad 2000; Todes *et al* 2000). These factors are perpetuating low-density residential sprawl, which is reinforcing the existing apartheid spatial structure and creating significant obstacles to the development of high-density and low-income housing in central areas and along activity routes.

### 3.3.4 Providing Public Facilities and Services

A key component of the activity corridor concept is that the concentration of thresholds along activity corridors, spines and streets will enable the efficient provision of public facilities and utility services and make them more accessible to lower income residents and commuters. In addition, it has been argued that the concentration of higher densities along activity routes results in more efficient and cost effective service provision.<sup>81</sup> It has also been suggested that public investment in social facilities and utility

infrastructure will help to lever private sector investment by indicating commitment, providing necessary infrastructure and increasing investor confidence.

A number of questions and trends have emerged, however, that are likely to affect the ability to provide public facilities and utility services as part of an activity corridor strategy. Firstly, the numerous factors that have been outlined above that restrict the development of high-density residential development along activity routes are likely to reduce the thresholds available to support public facilities along activity routes and therefore undermine their viability.

Secondly, the purported correlation between higher densities and reduced bulk infrastructure costs have been questioned on the grounds that the relationships between infrastructure thresholds, capacities, location and density are highly complex and dependent on a wider range of variables that may outweigh the impacts of density (Briggs 1994: 79; Biermann 2000: 295).

Research conducted by Biermann (2000: 305) in relation to Pretoria indicates that “bulk infrastructure costs do not simply decrease with increasing density and with decreasing distance from the central areas”. The research revealed that, whilst per capita costs decrease with increasing densities for certain services, the per capita costs of other services, such as electricity, increase with increasing density. The study also “demonstrated that for all services considered, the more central areas can be as costly (or more costly) to develop as certain more peripheral areas, as a result of

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<sup>81</sup> See for example, RERC (1974), Behrens *et al* (1992) and Gallagher *et al* (1988), cited in Briggs (1994).



existing spare capacity and environmental and land use conditions” (Biermann 2000: 305).

These views are generally supported by the findings of a study conducted by Briggs (1994) with respect to the influence of density on service provision<sup>82</sup> in Durban. Briggs (1994: 71) also questions the argument that there is spare capacity in existing infrastructural systems in the established areas of the city to accommodate further development and densification. It is argued that “densification may result in more cost efficient utilisation of the existing system as long as the capacities of the existing system are not exceeded” but that “at the point that the system’s capacities are exceeded costs potentially increase dramatically” (Briggs 1994: 71). In addition, it was noted that areas with low levels or standards of service provision incur substantial costs as a result of densification due to the need to upgrade services to higher level or standards.

These studies are concerned primarily with the issue of density. Clearly the activity corridor concept brings with it the additional factor of structure. Given that both activity routes and the majority of services are directly related to roads, this is an issue that requires further consideration.

### 3.3.5 Creating a Supportive Public Environment

A key argument advanced in support of the activity corridor concept is that it provides a public spine and an associated series of public spaces that support collective activities and social interaction. A related argument is

that this contributes to the creation of safer urban environments due to the concentration of people and activities along activity routes and the associated increase in community interaction and surveillance.

The provision of responsive, pleasant and safe public spaces is clearly an important consideration in South African cities given the fact that many essential urban activities, such as social interaction, cultural practices and economic trade, occur in public space and the high levels of crime that are affecting all levels of society.

The creation of a supportive public environment can be traced back to the notion of a ‘capital web’ (Crane 1960b), which has since been incorporated into the activity corridor concept. The notion presupposes that public sector investment will be directed into the creation of a public spine and an associated series of public spaces and that this will provide the primary structural element to which private sector investment will respond.

It is questionable to what extent this is occurring in urban development processes in South African cities and this will clearly affect the ability of an activity corridor strategy to promote the creation of such supportive public environments.

The contention that surveillance along activity routes contributes to the creation of safe public environments can be traced back to the notion of ‘defensible space’ (Newman 1973), which has also since been incorporated into the activity corridor concept. The notion of ‘defensible space’ has been questioned by Hillier (1973) on the grounds that there is a lack of evidence to support the purported linkages between physical factors and crime levels. Hillier (1973: 541) also asserts that the notion does not

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<sup>82</sup> This included water supply, wastewater disposal, transportation and electricity supply.

adequately explain the nature of relationships between space and human behaviour although he does acknowledge that built form can influence social behaviour and crime levels.

### 3.3.6 Facilitating Spatial and Social Integration

A key argument advanced in support of the activity corridor concept has been the goal of promoting spatial and social integration in the city (Lilleby 1995). It is argued that activity corridors, spines and streets provide variable land prices and opportunities that can not only accommodate a mix of land uses and activities but also a range of housing options and income groups. This creates a spread of income levels that provides sufficient thresholds to support higher levels of services and activities that can then be accessed by lower income groups.

It has also been suggested that activity corridors, spines and streets promote greater social interaction. This is due to the availability of a range of activities and facilities, which attract different socio-economic groups to the activity route, the mix of housing options and income groups, which places different groups in close proximity to one another, and the provision of a supportive public environment, which provides public spaces where social interaction and collective activities can occur.

The ability of activity routes to promote spatial integration has been questioned in relation to the ongoing processes of economic decentralisation, suburbanisation, monofunctional development and resulting urban sprawl. It is suggested that these and other factors represent a significant constraint to the promotion of spatial integration through activity corridor-related development.

The ability of activity routes to promote social integration has been questioned in relation to the potential for conflict over land as a result of infilling within existing urban areas (Hindson *et al* 1992; Meiklejohn 1992; Briggs 1994). It has been suggested that low-income housing projects in existing residential areas have met with considerable resistance from adjacent higher income communities and that this has contributed to social conflict and antagonism.

The prospects for achieving these various elements of activity corridors are explored in Chapter Six.

### 3.4 Key Issues Emerging from the Evaluation

The preceding sections have highlighted a number of theoretical considerations relevant to the activity corridor concept. These issues provide a useful set of criteria for the evaluation of the activity corridor case studies outlined in Chapter Five. Briefly, these include the relationship of activity corridor initiatives with the theoretical foundations and concepts of urbanity and urban form, and the potential contribution of these initiatives to broader urban strategies regarding urban spatial restructuring, sustainable urban development and compact city form.

The chapter has also highlighted the key elements that form part of a potential activity corridor strategy, including: public transport, economic development, high-density and low-income housing, public facilities and services, public spaces and the links with spatial and social integration. The prospects for achieving these requirements are outlined in Chapter Six.

## 4. DURBAN CASE STUDIES

### 4.1 Introduction

The following chapter provides a review of selected activity corridor case studies in Durban. This review is intended to provide an indication of the form and direction of activity corridor practices in Durban and to highlight different experiences with planning and implementing the activity corridor concept in a variety of urban contexts within the city.

#### 4.1.1 Selection of Case Studies

As indicated earlier in Chapter One and Two, there are a wide variety of projects and plans within the Durban area that make reference to activity corridors, spines or streets. The following six case studies have been selected for the purposes of this dissertation:

1. Fundamental Restructuring Project (FRP)
2. Land Use Corridors and Nodes Study (LUCNS)
3. Urban Core Extension Areas Project (UCEAP)
4. Hillcrest/Gillitts Activity Corridor (HGAC)
5. Bellair North Activity Spine (BNAS)
6. Amaoti/Amaotana Activity System (AAAS)

These case studies have been selected in order to provide a relatively representative cross-section of the range of different types of activity corridor-related projects, contexts and issues in Durban. This includes metro-wide applications of the activity corridor concept from both a land use (i.e. the LUCNS) and public transport perspective (i.e. the FRP). It also includes local-scale applications in established, mainly higher income

areas in both an urban (i.e. the UCEAP) and suburban context (i.e. the HGAC). And finally, it includes local-scale applications of the concept in developing, mainly low-income areas in both a central (i.e. the BNAS) and peripheral context (i.e. the AAAS).

#### 4.1.2 Research Methodology

Information pertaining to these case studies has been collected through two main methods. The first has been through the collection and interrogation of available documentation regarding each of the case studies. This interrogation of existing documentation attempted to determine the relationship between the project's proposals and the activity corridor concept and the main mechanisms envisaged for their implementation.

The second element of the case study research process involved a number of structured interviews with key roleplayers in each of the case studies.<sup>83</sup> These interviews were undertaken in an attempt to understand the practical experiences associated with planning these projects and to gauge the success achieved to date in terms of implementation. It has also attempted to provide insight into the main problems experienced as a result of factors or forces that have impeded or affected implementation.

### 4.2 Case Study Descriptions

The following section reviews these six case studies in approximate descending order of scale according to a common format that consists of the following elements:

<sup>83</sup> See Interview Schedule attached as Appendix 8.3.

- Background – provides a background to the origins of the initiative and the area/s and route/s it deals with
- Project Proposals – provides an outline of the main proposals associated with the case study, particularly with respect to activity corridors, spines and/or streets
- Experiences with Planning and Implementation – provides an overview of the implementation prospects and progress achieved to date and identifies some of the main factors that have contributed to success or failure in achieving the objectives of the various project
- Implications for Activity Corridors – provides an outline of the relationship of these plans to the activity corridor concept and a preliminary indication of the prospects for implementation

#### 4.2.1 Fundamental Restructuring Project

##### a) Background

The *Fundamental Restructuring Project* (FRP)<sup>84</sup> was initiated in the year 2000 by the Durban Metropolitan Council, the National Department of Transport and the KZN Provincial Government in order to provide a spatial strategy in support of the High Priority Public Transport Network (HPPTN) planned for Durban. The HPPTN is being planned in order to address Durban's existing inefficient public transport system and will "form

<sup>84</sup> See *A Spatial Strategy in Support of the High Priority Public Transport Network* (Gorge *et al* 2000) and *A Desktop Study of Tools and Measures for the Creation and Sustenance of a Land-Use Regime in Support of the High Priority Public Transport Network* (Oranje *et al* 2001).

the primary grid of the public transport systems and on which a focussed, high-quality, sustainable service will be provided" (Gordge *et al* 2000: i).

The FRP has been prepared as one of the key tasks of this public transport initiative in an effort to provide land use strategies and mechanisms to support the HPPTN. These strategies relate to the appropriate location, type, density, intensity and design of land use corridors identified in Durban as part of the FRP. The methodology adopted in order to formulate these strategies was to: identify 'ideal' land use/transport corridor types; identify the existing corridor types in Durban; and to develop strategies for moving the existing types towards the ideal corridor types (Gordge *et al* 2000: ii).

The conceptualisation and preparation of the FRP has been informed by the need to ensure greater integration between land use and transportation planning in order to transform the existing inefficient urban form and public transport system (Gordge *et al* 2000: 2). More specifically, the FRP is premised on the notion that the development of integrated land use/public transport corridors will help to promote improved public transport systems and land use configurations.

##### b) Project Proposals

Whilst the FRP explicitly acknowledges its links with the activity corridor concept (Gordge *et al* 2000: 5), it extends and builds on this notion using the concept of 'forces of attraction' in order to make it more relevant to public transport concerns and objectives. This concept is founded on the notion that "the development of a corridor is dependent on the presence of attracting forces that, on the macro-scale act as a magnet

for land uses in the metropolitan area, and on the micro-scale, draw people from one point to another” (Gordge *et al* 2000: ii). According to this concept, corridors (or portions thereof) can be classified as ‘senders’ or ‘attractors’ of people, or both. Using the concept of ‘forces of attraction’, the FRP identifies the following five ‘ideal’ corridor types (Gordge *et al* 2000: 14-28):

### 1. Single Attractor

This corridor type consists of two outer nodes with the one acting as an attractor of people and the other as a sender. The primary function of the spine between these two outer nodes is a high-speed movement of commuters to and from work.

### 2. Dual Attractor

This corridor type consists of two outer nodes with both nodes acting as attractors of people. The primary function of the spine is a high-speed movement of commuters between the two outer nodes.

### 3. Multi-Nodal Attractor

This corridor type consists of two outer nodes (one or both of which act as attractors) and one or more inner nodes (that also act as attractors). The primary function of the spine is not only movement between the outer nodes but also to provide strictly regulated access to the inner nodes.

### 4. Strip Attractor

This corridor type consists of two outer nodes (one or both of which act as attractors) and one or more strips that border on the spine (that

act as attractors). The primary functions of the spine are to provide movement and access.

### 5. Total Area Attractor

This corridor type consists of two outer nodes (both of which act as attractors), one or more inner nodes (that act as attractors), strips bordering the spine (that act as attractors) and areas between the two outer nodes but not adjacent to the spine (that also act as attractors). The primary functions of the spine are to provide movement and access.

When this corridor typology was applied to the nine corridor segments<sup>85</sup> identified as part of the HPPTN, it was revealed that none of these corridors fulfilled the requirements of any of these ideal types. The majority of corridors in Durban have been described as “‘Single Attractors in the making’, fulfilling a line haul movement function by transporting passengers to and from the Durban Central and Harbour Area, and to a lesser extent the R102 spine” (Gordge *et al* 2000: ii).

This is largely due to the low thresholds along these corridors and the assertion that: “In terms of the Fundamental Restructuring concept the minimum number of trips required to make a corridor economically viable is more than 30 000 trips/day in a single direction” (Gordge *et al* 2000: ii). According to the FRP, the only node in Durban that has the potential to attract more than 30 000 passengers per day over the short to medium

<sup>85</sup> See Table 1 for an identification of the nine land use/public transport corridors that form part of the HPPTN.

term is the Durban CBD and Southern Industrial Basin. In an “attempt to fill the gap between the ideal and the reality” (Gordge *et al* 2000: ii-iii), the FRP identifies nine land use strategies that have been formulated for the HPPTN. These land use strategies are indicated in Figure 3.

As part of the FRP, “an international and a South African desktop study [was undertaken] of potential tools and measures from which a set of instruments appropriate to the Durban context can be selected or developed” (Oranje *et al* 2001). These instruments are intended to enable the appropriate authorities in the eThekweni Municipality to operationalise the land use strategies identified in the FRP.

Three sets of tools and measures have been identified that could be utilised by the eThekweni Municipality “to ensure that the desired land use at the desired density/intensity, are attracted to, and/or kept in the HPPTN”, including the following (Oranje *et al* 2001: i):

### 1. Curtailing New Development in the HPPTN

This includes “instruments that prevent/limit the approval of new rights for land uses desired in the HPPTN, in the non-HPPTN area”.

### 2. Attracting New Development to the HPPTN

This includes “instruments that ease/remove restrictions, streamline application procedures and/or provide incentives for the location of desired land uses in the HPPTN”.

### 3. Allowing ‘Tolled’ Developments in the HPPTN

This includes “instruments that allow the approval of new rights for land uses desired in the HPPTN, in the non-HPPTN area, but exact some or other ‘levy or toll’ for this consent, for deployment by the Durban Metropolitan Council in the HPPTN”.

The main tools and measures that could form part of each of these three sets of instruments are identified in Table 2. The table also indicates the key limitations, issues and concerns associated with each of these measure and tools.

### c) Experiences with Planning and Implementation

There has been little if any progress to date in terms of applying and/or implementing the FRP, partly due to the nature and immediacy of the project. The FRP is a metro-wide planning initiative that is still in the early stages of development. In addition, the FRP has been prepared as a primarily technical document without public involvement in the development of its typologies and strategies (Breetzke *pers com* 2001). A framework planning process would therefore be required to obtain stakeholder input into the project before its recommendations can become part of public planning policy and implementation efforts.

The lack of progress can also be attributed to the impact of political and institutional changes on the transportation sector. The local government transformation process currently underway in Durban has resulted in significant disruptions to transportation and other public planning functions in the city (Breetzke *pers com* 2001) as councillors and officials contend

with the new institutional structure and political allegiances associated with the recently established eThekweni Municipality.

During this transformation period, conflicts have emerged between different spheres of government and political interests with respect to the transportation sector. Whilst national government is promoting the privatisation of the transport sector and the recapitalisation of the minibus taxi industry, local government in Durban appears to be favouring a stronger public role in transportation<sup>86</sup> (Dominik *pers com* 2001).

This conflict is also being reflected in party political alignments at local and national government levels. Two 'factions' appear to have emerged within the ANC, one with a stronger social emphasis and anti-privatisation stance and the other with a stronger market orientation and pro-privatisation standpoint (Dominik *pers com* 2001). This is generating considerable political uncertainty and a lack of clear direction for policy makers, not only in the transportation sector, but in other areas as well. The delay of the forthcoming ANC party political elections is likely to add to the lack of clarity and direction (Dominik *pers com* 2001).

Despite the lack of progress in implementing the FRP, recent interactions around the project have nonetheless started to highlight a number of important issues relating to implementation. As part of the FRP planning process, a detailed planning exercise was undertaken in conjunction with

planning officials from the Development and Planning Department (DPD) of the eThekweni Municipality to identify the remaining portions of vacant land and emerging development trends along the R102 corridor section between Durban Central and the proposed Link City near KwaMashu. The purpose of this exercise was to identify opportunities and mechanisms for developing portions of this vacant land for higher density, mixed use development (Breetzke *pers com* 2001) in order to support the HPPTN through increased thresholds and public transport ridership.

This exercise raises a number of important issues regarding the feasibility of the FRP proposals in the light of current development trends, existing Town Planning Scheme (TPS) controls and procedures and the development of a Land Use Management System (LUMS). In terms of current development trends, DPD officials highlighted the role of the property market in constraining the proposed higher density, mixed use development of the remaining vacant land along the corridor. In particular, it was observed that there was limited pressure for development along the corridor, that the developments that did occur tended to do so in an isolated and *ad hoc* manner and that these were generally monofunctional in nature due to an apparent resistance to mixed use forms of development in the property market (Breetzke *pers com* 2001).

Perhaps of even greater concern, however, was the observation that the major developments currently occurring in Durban are in fact undermining the potential of developing the land use/public transport corridors identified in the FRP and promoting public transport ridership along the HPPTN. Major developments in the city, such as the new node created by the Gateway shopping and entertainment complex and the La Lucia Ridge

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<sup>86</sup> A case in point concerns the recently proposed privatisation of bus services in Durban, which was halted due to strong resistance from elements within local government (Dominik *pers com* 2001).

Office Park in the north, are not locating in areas that would support the HPPTN and are generating considerable travel, the majority of which utilises private vehicles rather than public transport (Breetzke *pers com* 2001).

These development trends suggest that there is currently limited scope for achieving the objective of fundamental restructuring around integrated land use/public transport corridors as a result of the existing sluggish and unsympathetic private sector investment in Durban.

With respect to the statutory development control system, it was noted that existing Town Planning Scheme zones and development controls are not necessarily suited to higher density, mixed use forms of development (Breetzke *pers com* 2001). This tends to discourage the very forms of development that the FRP is aiming to promote along the HPPTN corridors. There also appears to be resistance amongst development control officials to accommodate new forms of development, including mixed uses, where these do not exactly fit the criteria and stipulations of existing schemes (Breetzke *pers com* 2001).

In addition, existing development application assessment procedures are primarily concerned with an evaluation of site-specific impacts, such as access and parking arrangements. The narrow consideration of traffic and transportation issues is particularly problematic in terms of the need to develop a more strategic view of the cumulative impacts of development on the public transport system and fundamental restructuring objective (Breetzke *pers com* 2001).

Although it is clear from this detailed planning exercise that the fundamental restructuring strategy has not yet been adequately linked to development control mechanisms that will support and encourage the types and intensities of development envisaged along the HPPTN corridors, this is now starting to be addressed through the incorporation of the FRP strategy into the review of the TPS system as part of the LUMS process. The LUMS is intended to provide a new land use management system that will eventually replace the existing TPS system and provide stronger linkages between broad policy objectives and the development control system (TRPC 2000).

In terms of the FRP, this detailed planning exercise is viewed as an important mechanism for educating transportation planners about the importance of integrated land use/public transport corridors and the significance and potential of the LUMS to integrate land use and transportation concerns (Breetzke *pers com* 2001). The challenge will be to develop appropriate land use zones and development controls that address wider transportation concerns and the objective of promoting public transport along the HPPTN corridors identified in Durban.

It is envisaged that this will occur through the identification of a 'preferred set' of land uses and controls by each of the different sectors (i.e. transportation, development control, strategic planning, environment, etc.). These preferred sets can then be used as a starting point for discussion, education and the development of a common set of uses and controls that address the concerns of the different sectors (Breetzke *pers com* 2001).



There are also proposals to link this exercise with the Land Use Corridors and Nodes Study discussed in the following section. This would focus on the identification of different land use typology segments along the R102 and the development of appropriate land use zones and development controls for each of these typologies (Breetzke *pers com* 2001).

As outlined earlier, a set of potential tools and measures have been identified that will form the basis for developing instruments to implement the land use strategies that are intended to support the HPPTN (Oranje *et al* 2001). At the present time, however, there is no overall rating policy that directs where investment should go in the city (Breetzke *pers com* 2001), which is likely to present a major stumbling block to the utilisation of certain of these instruments for the foreseeable future.

#### **d) Implications for Activity Corridors**

The FRP is a metro-wide application of the activity corridor concept from a public transportation perspective that represents a significant contribution to the activity corridor debate. Firstly, whilst the FRP explicitly acknowledges its linkages with the activity corridor concept, it extends this concept through its development of the notion of 'forces of attraction'. This notion approaches the conceptualisation of corridors from a public transport perspective and provides the basis for developing a new typology of corridors that are intended to contribute to the creation of a more efficient public transport system in Durban. The FRP identifies five new integrated land use/public transport corridors, namely 'Single Attractor', 'Dual Attractor', 'Multi-Nodal Attractor', 'Strip Attractor' and 'Total Area Attractor'.

Secondly, the FRP and related initiatives have identified the main public transport routes and supporting land use corridors that are a 'high priority' for the metropolitan area as a whole and which will form the focus of transportation investment and public transport services in Durban. The FRP has developed a number of strategies, tools and measures intended to create corridors that will attract people to these corridors and support the public transport system. This includes strategies to increase public transport ridership by: increasing business and residential densities along corridors and at nodal points, supporting informal and emerging formal businesses and providing government services (such as pension payout points).

Thirdly, experiences with the planning and application of the FRP have highlighted a number of potential constraints to the successful implementation of integrated land use/public transport corridors in Durban. This includes a lack of political and institutional support for spatial restructuring and planning initiatives, economic trends that work against higher density, mixed use development and the lack of integration between strategic and statutory levels of planning.

And finally, as Todes (2000: 14) notes, the FRP and HPPTN "has highlighted how low volumes are on most routes, and is raising questions about the feasibility of nodes and corridors as initially proposed". The original conception of a hierarchy of public transport oriented activity corridors, spines and streets has essentially been "radically pruned back in favour of a high priority transport network where high transport volumes can be supported" (Todes 2000: 14).

Table 1 : HPPTN Corridor Sections in Durban

SECTION NO. AND NAME		ROUTE NUMBER AND NAME	PUBLIC TRANSPORT VOLUMES			
NO.	NAME		Taxi	Bus	Rail	Total
1	Durban Central – KwaMashu Link City	R102, North Coast Road Umgeni Road KwaMashu Highway	13475	8015	4718	26282
2	Durban Central – Mobeni Heights Road	Umbilo and Sydney Roads one-way couplets South Coast Road (R102)	16438	6384	12045	34870
3	Umlazi – Mobeni Section	M30 Spinal Road	8965	3898	10191	23054
4	Pinetown – Durban Section	Berea Road M13 (Jan Smuts Highway and JS Warwick Highway)	6066	0	2905	8971
5	Riverbend/Southmead – Pinetown Central Section	M1 M31	3981	5360	0	9341
6	Mobeni Heights – Riverbend/ Southmead Section	M1 Higginson Highway	3079	3165	1131	7375
7	Malvern – Sarnia Road	M5 Sarnia Road Main Road	501	655	558	1714
8	Sarnia Road – Cato Manor – Berea Road	M10 Bellair Road	2071	1005	0	3076
9	Isipingo – South Coast Section	Old South Coast Road	3666	800	4445	8911

Based on: Gordge *et al* (2000: 43-44)

Table 2 : Summary of Potential HPPTN Tools and Measures

TOOL/MEASURE		LIMITATIONS, ISSUES AND CONCERNS
1	Moratorium on new rights	<b>Area of Intervention – Non-HPPTN:</b> Could create a negative perception of the HPPTN. Requires commitment and co-operation from provincial government. Entails massive interventions in the urban space economy that may be very costly. Could lead to higher land prices, as supply of land is restricted. The existence of symbiotic relationships/networks between firms and communities in localities creates an economic spatial web/structure that is hard to change. Habit and inertia are very strong forces that could frustrate interventions aimed at bringing about new location patterns.
	Urban growth management/containment	
	Parking control	
	Tolling of roads "Area Licensing Schemes"	
	Withholding infrastructure provision	
2	Fast-tracking land development applications	<b>Area of Intervention – HPPTN:</b> The metropolitan population is very heterogeneous. A standardised set of tools/measures will not work. Knowledge of investors and the way they may respond to specific incentives is imperative. The timing of incentive schemes must be right. Incentives should be used only for a fixed period of time. Incentives are only one of a wide range of criteria that determine location choice. Incentive schemes can get bogged down in red tape. Incentives often result only in firms moving from one locality to another, often within the same metropolitan area. Incentive negotiation requires a unique set of skills that officials and consultants may not have and will therefore have to acquire. Matching incentives with desired economic sectors is crucial. Incentives are usually very expensive and could divert money away from the provision of traditional public goods, such as education and health. Incentives should also be used to support existing firms and not only to attract new ones. Urban systems are very complex and interventions can often lead to massive unintended negative consequences. Investment in property is declining and the global economy is also opening up other avenues for non-property-related investment. The perception exists among some people that Special Zones, such as IDZs, are areas in which workers are exploited. Waiving of regulations in Special Zones has been found to be far less attractive to investors than tax incentives.
	Making provision for informal activities	
	"Transfer of Development Rights"	
	Provision of inexpensive, serviced land	
	Removing restrictive land-use controls	
	Facilitating higher densities through a restructuring of the housing subsidy system	
	Facilitating higher densities through tax incentives	
	"Incentive zoning"	
	Focused infrastructure provision	
	Establishment of Special Zones (e.g. IDZs, Enterprise Zones, etc.)	
	Lower municipal, corporate and personal taxes	
	Tax credits on jobs created	
	Property tax-pinning	
Waiving bulk service contributions		
Reduced municipal charges		
Free training of workers		
Debt financing		
Marketing of the HPPTN		
3	Linkage programs	<b>Area of Intervention – Non-HPPTN:</b> These measures are very controversial and have been contested in terms of their legality.
	Planning gain/exactions	
	Higher municipal taxes and service charges	

Based on: Oranje *et al* (2001: 17)

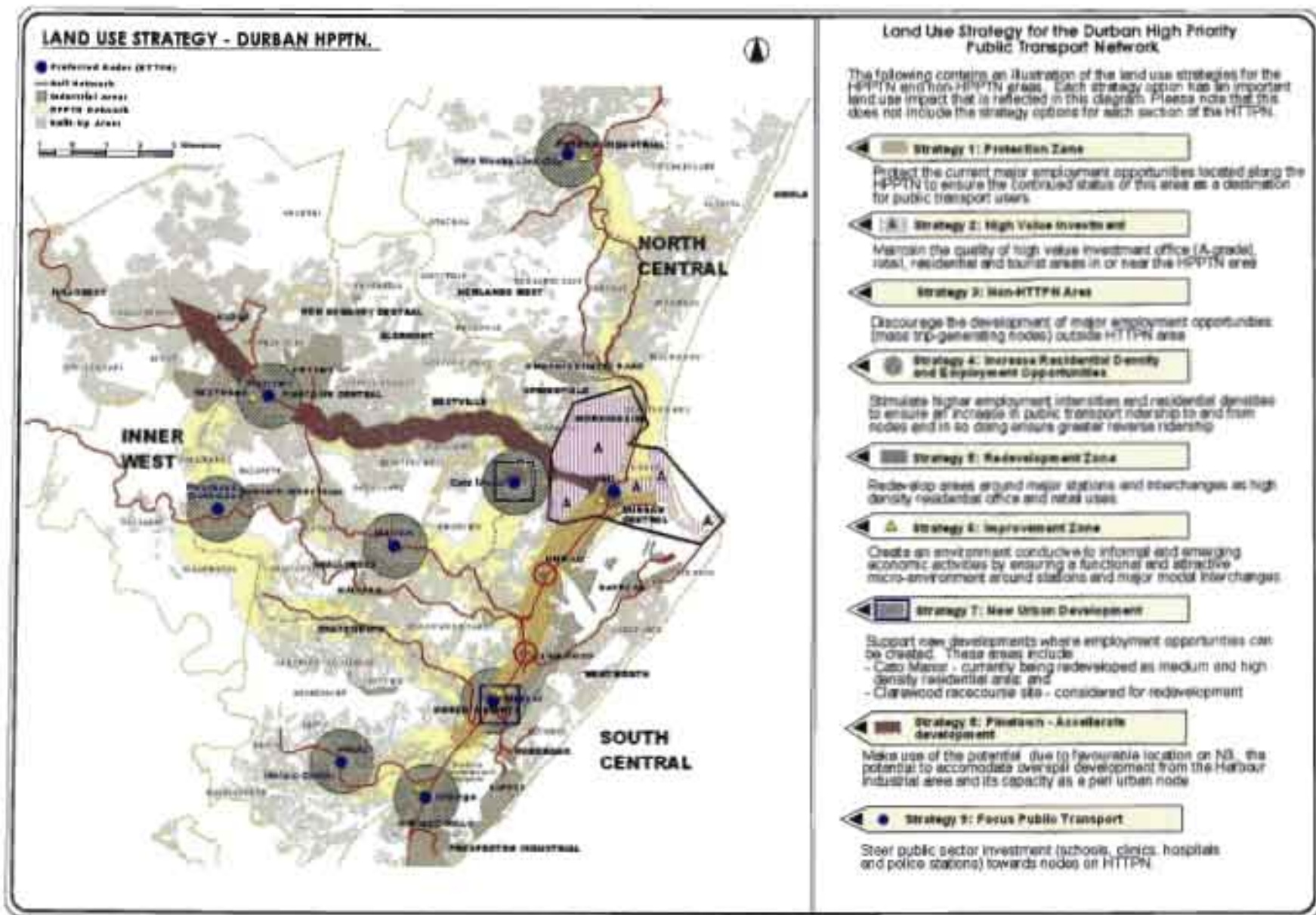


Figure 3 : Land Use Strategy for the Durban HPPTN

## 4.2.2 Land Use Corridors and Nodes Study

### a) Background

The *Land Use Corridors and Nodes Study* (LUCNS)<sup>87</sup> is a recent initiative undertaken by the CSIR and Larry Aberman Town Planning for the eThekweni Municipality between 1999 and 2001 using funding provided by USAID. The LUCNS provides a growth management tool for Durban based on a network of major land use corridors and nodes extending across the city. The project has been undertaken in two distinct stages.

Phase 1 of the study identified an initial corridor typology for the former North and South Central Local Councils (NSCLC) within the previous DMA, based on routes identified in the NSCLC's Integrated Development Plan. Phase 2a and 2b were then prepared in order to "extend the corridor typology assessment [into the new and much larger Durban Municipal Area] and to finalise and specify methodologies and analytical tools for identifying, evaluating and monitoring sustainable growth within high priority corridors containing nodal precincts and corridor segments" (Green *et al* 2001a: 1).

### b) Project Proposals

The LUCNS builds on the conventional definition of activity corridors outlined in Chapter Two and provides a more extensive classification of

land use corridor typologies (and sub-types) that are applicable to the Durban context (Green *et al* 2001a: 19-23):

#### 1. High Streets (Retail or Service Industry Focus)

High Streets with Retail Focus are closest in form to the classic mixed use 'High Street' comprising of a shopping street running through a residential area. The spine road not only functions as a mobility route but also provides property access. The only example identified in Durban is the R103 Old Main Road in Hillcrest.<sup>88</sup>

High Streets with Service Industry Focus are mixed use activity corridors that have a semi-industrial or service industrial component but maintain a fine-grained development pattern. Due to the industrial nature of the Durban economy, most 'high streets' in Durban tend to be of this type. Relevant examples identified in Durban include the Umgeni Road South segment of the R102 and the Jan Smuts-Berea Roads segment of the M13.<sup>89</sup>

#### 2. Industrial Corridors (Old and Modern)

Old Industrial Corridors are characterised by older trends in layout and transportation planning, including: large sites, spine roads provide both metropolitan wide mobility and direct local access, and rail forms an integral part of these corridors. A relevant example identified in

<sup>88</sup> This land use corridor segment forms part of the Hillcrest/Gillitts Activity Corridor case study discussed later in this chapter.

<sup>89</sup> These land use corridor segments form part of the Urban Core Extension Areas Project case study discussed later in this chapter.

<sup>87</sup> See *Phase 1 – Executive Summary* (Green *et al* 2000), *Phases 2a & 2b* Green *et al* 2001a) and *Summary Technical Manual* (Green *et al* 2001b).

Durban is the Umbilo-Gale-Sydney Roads segment of the R102 in the Berea area.<sup>90</sup>

Modern Industrial Corridors are characterised by more recent trends in layout planning practices and transportation planning with: main spines functioning as mobility routes with good access to the metropolitan area and, in some cases, with rail and commercial nodes present.

### 3. Residential Corridors (Mobility, Access and Feeder)

Residential Mobility Corridors, in keeping with neighbourhood planning concepts, have spine roads that are designed as limited access through routes with any commercial development or public facilities in the form of nodes with indirect access to the spine road.

Residential Access Corridors occur in some of the older residential areas and resemble, to some extent, the traditional corridor in its early stages of development. The spine roads provide direct property access but also provide a high level of mobility with non-residential development generally confined to discrete nodes.

Residential Feeder Corridors are generally located at the extremities of the road network/urban area and are typified by developing, low-income residential development with no significant nodes or economic activities apart from occasional informal sector trading. The spine

roads provide both access and mobility and generally carry light traffic with public transport being the major mode of travel for commuters.

### 4. Office and Retail Corridors

These corridors are characterised by the development of high-income office blocks and retail nodes in a greenfields situation and/or within higher income residential areas. The spine road functions as a mobility route and indirect access is provided to developments along the spine.

### 5. Incipient/Connector Corridors

This group of corridors in general have a composite or variable character with most incipient corridors acting as connectors between nodes or areas. A relevant example identified in Durban is the Bellair Road segment of the M10 in Cato Manor.<sup>91</sup>

### 6. Peri-Urban/Inter-Regional Connector Corridors

These corridors are not true land use development corridors but they do serve to connect nodes, towns or tourist attractions through agricultural areas. The spine roads serve mainly as mobility routes and generally provide direct property access.

These corridor typologies have been applied to the main movement routes in Durban to identify each of the land use corridor segments that fit these

<sup>90</sup> This land use corridor segment forms part of the Urban Core Extension Areas Project case study discussed later in this chapter.

<sup>91</sup> This land use corridor segment forms part of the Bellair North Activity Spine case study discussed later in this chapter.

various categories. Table 3 and Figure 4 provide an indication of the various land use corridor segments identified in each category in Durban.

The LUCNS provides specific development guidelines for each of the different land use corridor typologies and sub-types identified. It also provides a preliminary assessment of the performance of each of the corridor segments identified in Durban in terms of environmental constraints, social needs, economic potential, public transport performance and road traffic issues. Based on this assessment, the LUCNS prioritises each of the corridor segments to enable “the local authority to direct funding to those corridors whose development will have the greatest impact on urban restructuring, the use of public transport, economic growth, environmental management and the amelioration of negative environmental impacts” (Green *et al* 2001a: 117).

### c) Experiences with Planning and Implementation

As with the FRP, there has been limited progress with the application or implementation of the LUCNS to date and for similar reasons (the immediacy and metro-wide nature of the project, political restructuring and uncertainty, etc.). Despite these limitations, interactions around the project have started to highlight a number of important issues relating to the planning and implementation of land use corridors in Durban. This includes the implications of the emerging political, economic and social development ‘agenda’ in the city and the links between the LUCNS and other planning initiatives and processes.

With regard to the emerging development agenda in Durban, it has been suggested that current development efforts are being driven by political

restructuring dynamics and social and economic imperatives rather than by spatial restructuring considerations (Dominik *pers com* 2001). The combination of constituency politics, the related emphasis on local community needs and a pragmatic focus on delivery are cited as factors that have sidelined the role of strategic planning and spatial restructuring in the city.

The emerging development agenda in Durban appears to be focusing on the major social and economic priorities of job creation, crime and AIDS (Dominik *pers com* 2001). These social and economic imperatives are currently driving political decision-making in the city rather than the spatial priorities embodied in the LUCNS and other spatial frameworks. This is clearly evident in the fact that the LUCNS was not used to inform the current budgeting process in Durban (Dominik *pers com* 2001). There is, however, pressure from provincial and national government to address spatial issues and incorporate them into the Integrated Development Planning process, although this is not being driven or owned internally (Dominik *pers com* 2001).

It has been suggested that, unless planners can engage more directly and successfully with political decision-making processes and the emerging social and economic priorities in the city, technical arguments in favour of spatial restructuring are likely to continue to be sidelined by constituency politics and pragmatic concerns regarding delivery (Dominik *per com* 2001). This is essential if a growth management tool such as the LUCNS is to be effective in guiding public sector investment and shaping the form and direction of urban growth.

This is likely to be difficult to achieve, however, since planners have traditionally been unwilling to engage in the dynamic and often highly contested political arena, preferring to maintain a technical and advisory role in decision-making processes. In addition, current processes of political restructuring and the new powers and developmental role of local government have further intensified the fluidity of the political and institutional environment within which planning operates in Durban (Dominik *pers com* 2001).

Nonetheless, there are a number of possible spatial planning responses that could be adopted to engage more successfully with the city's development agenda. For example, the role of environmental design in reducing crime needs to be further explored in spatial planning frameworks and initiatives in the city. Also, the spatial impacts of AIDS and possible responses, such as the potential of utilising suitable existing public facilities as centres for counselling and treating AIDS patients, need to be further explored and incorporated into spatial planning frameworks and restructuring initiatives (Dominik *pers com* 2001).

With regard to the LUCNS, it has been suggested that there is a need to undertake a social/political assessment as part of the project to highlight key problem areas (e.g. in terms of crime) and to formulate appropriate responses (Dominik *pers com* 2001). At present, however, there appears to be little direction from Council in terms of a clearly defined social strategy or an adequate underpinning social theory and this makes it difficult to respond from a spatial point of view (Dominik *pers com* 2001).

Another area of concern regarding the LUCNS is the limited attention given to environmental considerations in the document (Dominik *pers com* 2001). Whilst the LUCNS provides a preliminary assessment of environmental policy and the environmental quality of the various corridor segments identified in Durban, it does not consider broader environmental concerns and objectives in the city. In particular, the cumulative impacts of ongoing land use corridor development on the limited carrying capacity of particular river catchments in Durban are not adequately addressed. There is therefore a need to link the LUCNS to broader environmental planning in the city and to develop a more strategic view of land use corridor development (Dominik *pers com* 2001).

This highlights the importance of linking the LUCNS to other levels of planning within the city and integrating it with related planning initiatives. As indicated earlier, a limited form of integration of the LUCNS with the FRP is being pursued despite the diversion of political attention to other development priorities and initiatives in the city. Other linkages that are considered necessary for the implementation of the LUCNS include its relationship with the Area Based Management approach currently being pursued by the eThekweni Municipality, the Land Use Management System process and the metro-wide framework planning exercise to prepare a Metropolitan Spatial Development Framework (MSDF) and IDP for the eThekweni Municipality (Dominik *pers com* 2001).

The Area Based Management approach provides for the demarcation of discrete Planning Units covering the entire Durban Municipal Area. These planning units relate to relatively homogenous settlements that are generally separated by obvious geographical boundaries and which provide

the basic spatial unit for assembling development data and investing in the improvement of these areas. By their very nature, however, these planning units are local in focus and do not provide for metro-wide integration of development efforts (Domink *pers com* 2001).

The LUNCS therefore provides a useful mechanism for considering broader, more strategic development issues and priorities that operate across the city and which affect a number of these planning units simultaneously (Dominik *pers com* 2001). An important component of metropolitan planning in the city is therefore the superimposition of land use corridors over these planning units and the derivation of appropriate strategies and controls for corridors, the areas enclosed by corridors and the interfaces between corridors and these adjacent areas.

An essential prerequisite for the successful implementation of the LUCNS is its incorporation into the Land Use Management System currently being applied in the city. Suitable land use zones and development controls need to be identified that support the strategic intentions of the LUCNS and begin to direct development in a manner that closes the gap between the 'ideal' corridor typologies and the actual corridor environments that currently exist 'on the ground'.

And finally, the LUCNS will need to be incorporated into the broader framework planning exercises to prepare a MSDF and IDP for the eThekweni Municipality if it is to be integrated with other development sectors and concerns in the city. The original deadline for the preparation of the MSDF was June 2002 but the spatial planning process in Durban has wound down as a result of political restructuring and meeting this

deadline is now questionable (Dominik *pers com* 2001). As a result, there is nowhere to 'put' the LUCNS at the present point in time, although there is pressure from national and provincial government to incorporate spatial issues and strategies into the IDP.

The IDP process is, however, largely process driven at the moment and there is little substantive input into this process, particularly in terms of spatial issues and priorities (Dominik *pers com* 2001). The IDP must be finalised by March 2002, however, and this will provide impetus for a more substantive IDP process in Durban in the remaining months. Given the current political climate in the city, however, the role of spatial issues is likely to be downplayed in favour of a greater emphasis on non-spatial social and economic priorities.

#### **d) Implications for Activity Corridors**

As with the FRP, the LUCNS is a metro-wide application of the activity corridor concept, albeit from a land use perspective, that represents a significant contribution to the activity corridor debate. Firstly, the LUCNS has, possibly for the first time, identified the major land use corridors that have metropolitan significance and which should form the focus of land use planning, development and investment in Durban. The LUCNS has been conceptualised as a growth management tool for the city and, provided that it is supported and incorporated into public planning policy and political decision-making in Durban, is likely to become one of the main elements of a spatial planning and restructuring strategy in the city.

Secondly, the LUCNS approaches the issue of corridors from a predominantly land use perspective that focuses on the existing land use



characteristics and the economic and residential development potential of these corridors. The study has developed a new typology of corridors that has been specifically tailored to the Durban context and which considerably extends the previous considerations of the activity corridor concept. This represents a significant departure from the previous concerns with the 'high street' or 'old main road' activity corridor model to encompass a much wider consideration of corridors that have different densities and land use mixes when mature to the conventional model (Green *et al* 20001a: 89).

An important point that has emerged from the LUCNS is that only one corridor segment in Durban has been identified as a 'High Street with Retail Focus' (i.e. Hillcrest R103), the corridor type closest in form to the classic 'High Street' form described by the activity corridor concept. According to Green *et al* (2001a: 19), all of the remaining "commercial strips or 'High Streets' in Durban tend to have a semi-industrial or service industrial component" due to the "industrial nature of the Durban economy".

This is an important observation since it points to the fact that the nature of corridors in Durban are fundamentally different to those identified in Cape Town and that the urban environments created by these corridors are therefore likely to perform differently. It could also be argued that the Hillcrest R103 corridor segment, which has been identified as the segment most closely resembling the theoretical description of an activity corridor,

does not in fact resemble the activity corridor concept that closely in that it functions more as a suburban than an urban corridor.<sup>92</sup>

The LUCNS also classifies a number of additional public transport routes that are relevant to other case studies discussed in this dissertation. This includes a High Street with Service Industry Focus and an Old Industrial Corridor discussed in the Urban Core Extension areas Project and an Incipient/Connector Corridor discussed in the Bellair North Activity Spine case study. This is significant in that it not only points to overlaps between different levels of planning but it also indicates divergent conceptualisations of corridors and strategies for achieving these at the different levels.

Thirdly, the study has developed a number of tools that will guide decision-making around the location and direction of development and investment in the city, including a Geographic Information System and decision-support system. This provides a new and more practical perspective on the issue of activity corridors and the manner in which it is to be operationalised in public planning.

Fourthly, experiences with the planning and application of the LUCNS have highlighted a number of potential constraints to the successful implementation of land use corridors in Durban. This includes a lack of political and institutional support for the project, social and economic trends and priorities that are likely to sideline spatial planning and restructuring efforts and the need for greater integration between strategic

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<sup>92</sup> This issue is addressed in greater detail later in the chapter.

and statutory levels of planning and between the LUCNS and other sectoral planning in the city.

As previously discussed, however, the LUCNS is not without its shortfalls as the social aspects of the study have been largely ignored and environmental issues only partially addressed (Domink *pers com* 2001). In addition, the LUCNS focuses primarily on the major developed or developing land use corridors in the city and ignores many of the local activity streets that are emerging within lower income areas, such as the D403 in Inanda. Whilst this is clearly related to the metro-wide scale of the study, it does appear to contradict the activity corridor concept's goal of developing a hierarchy of activity spines and the integration of low-income areas into the wider metropolitan area.

Table 3 : Land Use Corridor Segments in Durban

CORRIDOR SEGMENT TYPOLOGY		CORRIDOR SEGMENTS IDENTIFIED IN DURBAN	
Type	Sub-Type	No.	Route
A – HIGH STREETS	A1 – High Streets with Service Industry Focus	1	Umgeni Road South R102
		12	Brickfield-Alpine Roads M10
		14	Jan Smuts-Berea Roads M13
		18	Isipingo Old Main Road
	A2 – High Streets with Retail Focus	38	Hillcrest R103
B – INDUSTRIAL CORRIDORS	B1 – Modern Industrial Corridors	7a	KwaMashu Highway East M25
		10	Inanda Road East M21
		11	Umgeni Road West M19
	B2 – Old Industrial Corridors	2	North Coast Road South R102
		15	Umbilo-Gale-Sydney Roads R102
	B3 – Industrial/ Residential Corridors	16	South Coast Road R102
		29	Pinetown-Clermont M32
32		Hans Dettman M34	
C – RESIDENTIAL CORRIDORS	C1 – Residential Mobility Corridors	34	Umhlatuzana Industrial-Pinetown CBD M1
		40	Hammarsdale/Mpumalanga
		4	Phoenix Highway
		7b	KwaMashu Highway West M25
		8	Malandela Road M21
		9	Inanda Road North M21
	C2 – Residential Access Corridors	17	Umlazi Spine Road M30
		19	Higginson Highway M1
		33	Chatsworth-Umhlatuzana Industrial M1
		37	Pinetown-Gillfills M13
		13	Sparks Road M15
		21	Queensburgh Old Main Road West M5
	C3 – Residential Feeder Corridors	23	Sama Road Central
		30	Booth Road-Spine Road
		31	Queensburgh West-Old Main Road West M5
41		Amanzimtoti-Kingsburgh R102	
48		NMR Avenue-Northway	
25		Verulam-Inanda	
D – OFFICE AND RETAIL CORRIDORS	35	Mariann Ridge-Dessenhoek MR559	
	27	La Lucia-Mi Edgecombe M41	
	28	Sherwood-Pinetown M13	
E – INCIPIENT/ CONNECTOR CORRIDORS	36	Nagina-KwaNkengezi MR468	
	42	Amanzimtoti-KwaMakhula M37	
	43	Kingsburgh-Lovu R603	
	44	Umbumbulu Road M35	
	45	Isipingo-Ezimbokodweni Old Main Road	
	3	North Coast Road North R102	
	5	Verulam-Tonga South R102	
	20	Bellair Road M10	
	22	Edwin Swales Central M7	
26	Springfield Flats-Pinetown M19		
F – PERI-URBAN/ INTER-REGIONAL CORRIDORS	47	Pinetown CBD-Bellair M7	
	48	Stapleton-Otto Volek-Dinkelman M5	
	49	Northern Freeway-Umhlanga M4	
	24	Verulam-Tonga North R102	
	39	Botha's Hill-Cato Ridge R103	

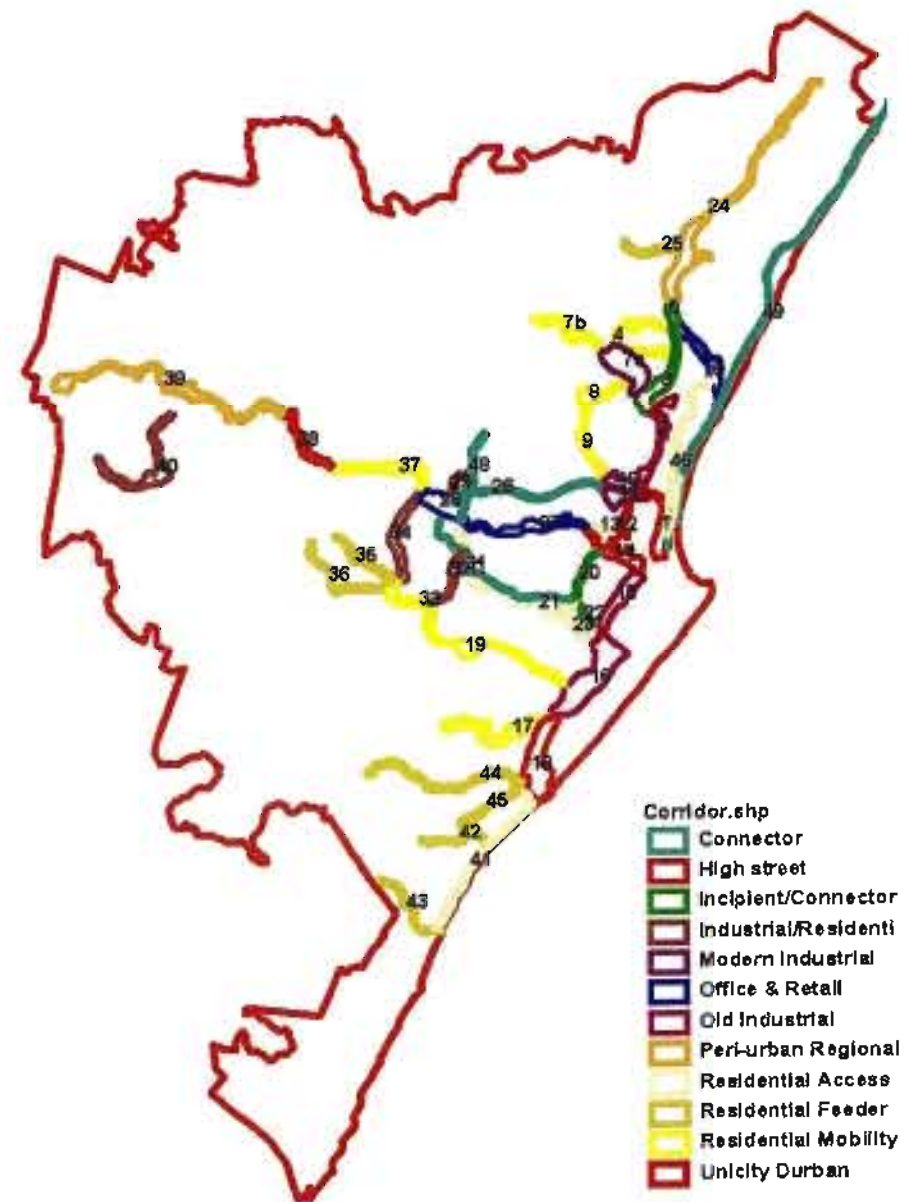
Source: Green *et al* 2001a: 23-24

Figure 4 : Land Use Corridor Segments in Durban

### 4.2.3 Urban Core Extension Areas Project

#### a) Background

The *Urban Core Extension Areas Project* (UCEAP)<sup>93</sup> was initiated by the North and South Central Local Council's Development Planning Department in November 1999 in order to guide the development of the established residential areas of Berea in central Durban. The Berea area covers an area of approximately 3237ha and has a population of some 56 141 people with densities ranging from around 10 people/ha in Berea South to 16 people/ha in Berea North (Jewell *et al* 2000: 1).

The Berea area functions predominantly as a mixed, though mainly medium to higher, income residential area with the major residential areas including the Southern Berea, Central Berea and Northern Berea (Iyer Rothaug 2000: 5). The Berea also contains significant economic activities with employment areas concentrated along major arterials (i.e. the Umgeni Arterial, Western Freeway and the Umbilo Arterial) and the major suburban collector roads (including, amongst others, Ridge, Musgrave, Moore, Windermere and Argyle Roads) and in and around the major shopping centres (including the Davenport, Buxtons, Berea, Musgrave and Overport Shopping Centres). In addition, the Berea area contains a wide variety of local recreational and educational facilities such as parks, golf courses, nature reserves, sports fields and schools.

<sup>93</sup> See *Draft Land Use Analysis Report* (Jewell *et al* 2000) and *Analysis of Development Status Quo* (Iyer Rothaug 2000).

According to the UCEAP, these inner city residential areas "have been under considerable pressure as business and office land uses have sought locations in what are established residential zones" (Iyer Rothaug 2000: 1).

Although there are existing Town Planning Schemes (TPS's) place for these areas, these land use changes have tended to occur in an *ad hoc* manner around established shopping centres and along primary movement corridors due to the absence of any guiding development framework or policy. The intrusion of business and office land uses into these residential zones has impacted on the residential character, amenity and scale of the area and prompted concerns over the future growth and development of the Berea (Iyer Rothaug 2000: 1).

The UCEAP was therefore initiated in order to provide a framework to guide land use changes in the Berea area. According to the UCEAP: "The key objectives of the project include inter alia the development of a common land use vision based on appropriate social, economic, environmental and spatial planning principles, the promotion of integrated land use planning, the protection and maintenance of the built environment and inner City residential stock, the promotion of appropriate land use nodes and precincts" (Iyer Rothaug 2000: 1).

The preparation of the UCEAP has been guided by the existing Berea North and Berea South TPS's and applicable strategic planning frameworks<sup>94</sup>. The existing TPS's are considered to be out of date due to

<sup>94</sup> This includes the metro-wide planning and development guidelines contained within the Integrated Development Plan, the Spatial Development Framework and the Inner City Development Framework. It also includes the D'MOSS Framework Plan and the Inner City Interim Transport Plan (Iyer Rothaug 2000: 4).

the inadequate link between the broad city-wide policy statements and these TPS's. "As a result, the town planning schemes continue to be implemented almost in isolation and development within the area is not guided by a bigger picture or vision" (Jewell *et al* 2000).

The UCEAP has therefore been prepared in response to the inability of existing TPS's to not only deal adequately with the current development trends in the Berea area but also to guide these trends in a direction supportive of the broader city-wide policy statements applicable to the area. The UCEAP provides the first step in the preparation of a LUMS for the Berea area that will not only replace the existing TPS's but also be strongly informed by broader development policies.

#### **b) Project Proposals**

Based on its analysis and synthesis of development issues and objectives, an extensive public participation process and the notion of an 'activity system', the UCEAP provides a broadly supported development vision, a spatial development framework and a land use management plan for the Berea (Iyer Rothaug 2000: 10). The Development Framework (DF) provides an overall framework for the Berea area (see Figure 6) that is not only linked to broader development policy intentions but which has also been strongly informed by the vision of residents and stakeholders for the development of the Berea area.

The UCEAP identifies a hierarchy of activity spines, including primary, secondary and tertiary routes, and activity nodes as part of the establishment of an activity system for the Berea (see Figure 5). These activity spines and nodes are regarded as the main structuring elements for

organising activities and land uses and for guiding the location of both private and public sector investment.

In response to the need to simultaneously protect residential amenity and accommodate the intrusion of economic activities, the DF proposes that the most intensive non-residential land uses and activities be accommodated in the high traffic and high impact zones along the primary and secondary activity spines and around existing shopping centres where residential amenity has already been eroded (Widdowson *pers com* 2001). In addition, interface land uses have been utilised along the most intensive routes, such as Umgeni, Windermere and Moore Roads, and around existing shopping centres, to shield residential areas from high intensity traffic and associated impacts.

The UCEAP also provides a number of proposals intended to protect and enhance the existing residential amenity and environmental character of the Berea area. This includes the retention of existing parks and the extension of existing avenues of trees along many streets to link these open spaces and maintain the current well-vegetated character of the area (Widdowson *pers com* 2001).

The Land Use Management Plan (LUMP) provides for the introduction of new land use zones and controls in accordance with the Comprehensive Planning Scheme option within the LUMS (Jewell *et al* 2000).<sup>95</sup> These new land use zones and controls will direct the location of non-residential development, thereby protecting the residential amenity in existing

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<sup>95</sup> See Appendix 8.2.1 for a definition of the Comprehensive Planning Scheme.

residential areas, and control the built form permitted, thereby maintaining the existing residential character of these areas (Widdowson *pers com* 2001).

The LUMP provides a number of important land use proposals for the Berea North and South areas. Firstly, the LUMP provides for commercial, office and mixed use land use zones along the main activity spines and around shopping centres. Each of these new land use zones incorporate statements of intention that will determine the type of land uses and activities permitted in each zone and direct development towards the strategic objectives for the area.

The UCEAP does not, however, simply allow for the wholesale conversion of properties along the main activity spines and around shopping centres from residential to non-residential uses. Rather, changes in zoning have been based on an assessment of the level of impact on the residential amenity of specific properties or bands of properties (Widdowson *pers com* 2001). If the residential amenity has already been significantly eroded, then a conversion to non-residential will be permitted. This highlights the need for a micro-scale consideration of urban patterns and impacts which has generally not been addressed through the activity corridor concept.

Secondly, the LUMP designates a number of important precincts within the Berea area that require specific consideration and which have a distinct set of policy guidelines or statements that influence and facilitate their development (Jewell *et al* 2000: 4). An example is the Architectural Heritage Precinct identified along Florida Road and its environs, which has

been recognised as particularly important and sensitive due to the existing built form character of the area (with many listed buildings) and the high pressure for development (Widdowson *pers com* 2001).

### **c) Experiences with Planning and Implementation**

Although the UCEAP is a relatively recent initiative, it has highlighted a number of important issues regarding the planning and implementation of local-scale activity corridor initiatives in established areas. This includes the role and importance of public participation, the linkages with the LUMS and the difficulties experienced with implementation.

The UCEAP has involved an extensive public participation process that has attempted to obtain the viewpoints of residents and businesses regarding the Berea area and associated land use changes, to develop a common vision for the management and development of the area and to obtain feedback regarding the project's proposals and incorporate these into the UCEAP (Widdowson *pers com* 2001).

The public participation process revealed that, whilst there was a general appreciation of the Berea area's existing rich mix of opportunities that was easily accessible to residents, major concerns were voiced by residents regarding the intrusion of commercial uses into residential areas and the resulting impacts in terms of "increasing levels of traffic, congestion, parking problems, suggested increases in vagrancy and crime and consequent perceived health and security problems" (Iyer Rothaug 2000: 7). The attitudes in areas surrounding high activity zones, however, were more accommodating with the proviso that intrusions should be small scale

and low impact so that the residential character, scale and amenity was preserved.

The public involvement in the UCEAP has resulted in the development of a collective vision for the Berea, which envisages that the existing residential character, scale and amenity be preserved but that commercial and low impact uses could be accommodated around existing higher activity zones (Iyer Rothaug 2000). This collective vision has been a major influence on the formulation of the UCEAP and underpins the project's main proposals. As a result, the majority of the significant number of public comments received was favourably disposed to the project proposals (Widdowson *pers com* 2001).

A critical component regarding planning and implementation is clearly the incorporation of the UCEAP into the LUMS and the preparation of a Comprehensive Planning Scheme for the Berea. The new LUMS is to be implemented in terms of the KZN Planning and Development Act (Act No. 6 of 1998) (Jewell *et al* 2000: 1) and will provide "a cascade of policy from higher levels to the lower levels and vice versa, with broad policy also being informed by specific needs on the ground" (Iyer Rothaug 2000: 2).

The LUMP marks a divergence from the existing TPS system in a number of important respects. Firstly, it is linked to broader policy statements and strategic frameworks applicable to the Berea area through the statements of intent provided for each land use zone and has been informed by a collective vision for the Berea developed through an extensive public participation process. The Development Planning Department (DPD) is currently struggling to translate the statements of intention within the

LUMP into specific scheme clauses that will not only contribute to achieving the stated intentions but which will also be sufficiently specific and concise to be legally binding (Widdowson *pers com* 2001).

Secondly, the new land use zones are informed by the activity system concept and are defined by the concept of the 'level of impact' of different land use types. The different impact zones identified within the LUMS, i.e. High, Medium and Low Impact, have proved difficult to apply in practice, however, due the lack of clarity concerning whether the level of impact is related to the specific land use category or to the intensity and the performance of that land use (Widdowson *pers com* 2001).

The different types of impact zones have been used to achieve different spatial and functional objectives in different contexts in the UCEAP. In particular, they have been used to shield residential areas from more intensive and potentially disruptive activities, to create an interface between residential and non-residential, or as a device to create mixed use environments (Widdowson *pers com* 2001).

Thirdly, the UCEAP represents the first attempt to build the concerns of other development sectors into the LUMS, such as links with the city's rating system, and to rationalise the development application assessment procedures and systems that will be used to administer the LUMS in Durban (Widdowson *pers com* 2001). The DPD is currently involved in a workshopping process with other key departments in the city, such as health, transport, environment, finance, etc., to incorporate their concerns, ensure greater integration between different development sectors in the

LUMS and to speed-up assessment procedures (Widdowson *pers com* 2001).

Whilst the UCEAP is working towards the creation of a Planning Scheme that will be more relevant and flexible than the current TPS's, it will still be a primarily regulatory document, although it is informed by a collective vision (Widdowson *pers com* 2001). It has been suggested that, without major transformation of the current administrative structure responsible for the development control system, the creation of a more facilitative and proactive scheme would be almost impossible to achieve (Widdowson *pers com* 2001).

Clearly, the ability of the UCEAP to direct land use changes is also related to the social and economic dynamics in the Berea area and the resulting development patterns. A key factor that has been highlighted as an impetus prompting residents to abandon the residential use of their properties and convert to office use in existing mixed use areas has been the perception amongst residents that crime levels are higher in these areas (Widdowson *pers com* 2001).

This is attributed to the vacancy of office buildings at night and the resultant lack of residential surveillance in these areas. A possible counter-argument to this viewpoint, however, is that crime levels are likely to be lower during the day due to the presence of office workers in mixed use areas. The purported links between crime and land use patterns on the Berea have, however, not been confirmed by specific investigations or research (Widdowson *pers com* 2001).

Another key aspect that has been highlighted is that the UCEAP not only works within the existing realities of economic growth and property development trends in the city but that it has also helped to kick-start the real estate market on the Berea (Breetzke *pers com* 2001). This is presumably due to the fact that the UCEAP provides a clear indication of public sector intentions and therefore promotes private investor confidence.

The Berea's central location and its associated high-quality urban environment, high levels of infrastructure and services and large thresholds and buying power are clearly also key factors that promote investor confidence and generate development pressure in the area. It has also been argued that the pressure for development has been fuelled by commercial and office decentralisation from the CBD, although this process is now slowing due to the leakage of economic activities to La Lucia (Breetzke *pers com* 2001).

#### **d) Implications for Activity Corridors**

The UCEAP is a local-scale plan for the Berea area that provides an important perspective on the application of the activity corridor concept in a central and well-established urban area characterised by medium to high-income levels. Firstly, the Berea area contains a number of examples of what could be described as emerging activity streets, such as Windermere Road, Florida Road and Moore Road. The area also contains the dual road system of Windermere/Umgeni Roads and the associated land use pattern, which creates a corridor that, it is suggested, is beginning to resemble the activity corridor theory, although there are still a number of physical 'gaps' in this corridor (Widdowson *pers com* 2001).



These various activity streets do not feature in terms of the LUCNS, but portions of the R102 and the M13 have been classified according to the land use corridor typology outlined in the LUCNS. This includes Umgeni Road South R102 and Jan Smuts-Berea Roads M13, which have been identified as 'High Streets with Service Industry Focus', and Umbilo-Gale-Sydney Roads R102, which has been identified as an 'Old Industrial Corridor' (Green *et al* 2001a: 23).

The emergence of these activity streets and corridors is clearly related to dynamics peculiar to the area. The Berea area is one of the most established, central, accessible and mixed areas in Durban with a higher income resident population than the metropolitan average (Iyer Rothaug 2000: 7). The development patterns in the area have therefore been developed over a long period and benefited from the proximity to the urban core and the high thresholds to support internal commercial activities and social facilities.

In this sense, the activity street environments that have developed within the Berea area are closely related to the activity spine environments in Cape Town that provided the original impetus for the development of the activity corridor concept, albeit at a more localised scale. The proposals of the UCEAP are therefore particularly pertinent to the enquiry in revealing how an established area with existing activity streets is being managed in Durban.

In this regard, it is significant to note that the UCEAP has adopted dual approach. On the one hand, it adopts a theoretical approach of applying a hierarchy of activity corridors, activity streets and neighbourhood streets in

accordance with the activity corridor concept. On the other hand, it is a practical exercise that is concerned with reviewing the existing TPS in the light of actual development trends that are occurring in the Berea area and the specification of revisions to the scheme that will protect residential amenity and accommodate a controlled intrusion of economic activities (Widdowson *pers com* 2001).

A key outcome of this approach is the pragmatic view of activity streets as interface areas to accommodate intensive activities and, more importantly, screen adjacent residential areas and protect their existing amenity. This represents an important feature of activity streets and corridors that has not previously been sufficiently highlighted. The LUMP also uses a selective process to determine which properties should be allowed to convert, rather than identifying particular streets and allowing wholesale conversion along its edges.

Secondly, the LUMP prepared as part of the UCEAP represents the first detailed application of the LUMS proposals in Durban and possibly even KZN as well (Widdowson *pers com* 2001). As the most advanced application of the LUMS, it represents something of a 'pathfinder' for implementing the LUMS and reveals a number of pertinent issues around the incorporation of emerging activity streets and mixed use environments into the regulatory planning framework.

As discussed earlier, the LUMP appears to be primarily concerned with the protection of existing development patterns and the amenity of residents. The LUMP therefore remains a predominantly control-oriented document that appears to entrench the interests of existing stakeholders in the area.

The initiative therefore highlights the difficulties of reconciling broader restructuring frameworks, as embodied in the activity system concept, with development control systems, as embodied in the detailed LUMP. Nonetheless, the UCEAP does appear to have achieved a level of success in terms of balancing the need to accommodate land use changes with the need to protect existing levels of amenity and environmental quality.

Thirdly, experiences with the planning and application of the UCEAP have highlighted a number of important dynamics in these areas that are likely to constrain efforts to create and/or reinforce activity streets in similar urban contexts. In existing mixed residential/office environments along activity streets, the resulting loss of residential amenity, such as traffic impacts and perceptions of crime during the day due to a lack of surveillance, has led to a decline in the value of these residential properties, a deterioration in the physical quality of residential structures and an increased susceptibility to conversion to office uses (Widdowson *pers com* 2001).

This would seem to restrict the possibilities for developing a complementary mix of different land uses, including a residential component, along activity routes. It could be argued, however, that this is partly due to the current built form of existing residential structures and that the proposals in the activity corridor theory for a vertical mixing of land uses would provide a sustainable mixed use development pattern. Nonetheless, the fact remains that there appears to be a critical point at which the ratio of residential to non-residential uses will prompt a major flight of residential uses from activity streets to other areas where residential amenity is not being threatened.

The apparent intolerance of Berea residents to living in mixed use environments is presumably related to factors such as their income levels and life cycle choices and cannot necessarily be extrapolated to all potential activity streets and corridors with different socio-economic groups and thresholds. It seems likely that the emerging mixed use environments along activity routes would tend to attract a different strata of the population than the existing Berea residents, who appear to be accustomed to a particular lifestyle and type of residential amenity and who have generally been unwilling to adjust to emerging mixed use environments.

And finally, whilst the focus of the UCEAP is mainly on the urban environment of the Berea area, the initiative does provide a number of recommendations regarding the area's natural environment. These tend to focus on an aesthetic concern with retaining and enhancing the existing attractive natural features such as parks and treed avenues. There appears to be limited consideration of the impacts of the UCEAP proposals, and potential changes in land use types and intensities, on broader environmental concerns such as the carrying capacity of natural systems in affected catchments.

The establishment of an activity system is intended to create a sense of structure which would serve as a basis to organise activities and land uses. It is intended to inform both private and public investment.

The key structuring elements of the activity structure include:

- A system of activity spines based on the hierarchy of routes, i.e.: a system of primary, secondary and tertiary access translating into activity corridors and streets.
- A system of nodes at the intersections of streets where normally a higher level of visibility and opportunity exists.

Primary corridors would be represented by the Umgeni and Umbilo road systems, and to a different degree by the western freeway. Development within these areas would consist of higher order facilities and activities such as business, office, service industry, commercial, a level of high density residential accommodation, transport facilities etc. This would also include an appropriate level of public and pedestrian environment.

Secondary activity streets would in principle include the major collector roads of the Berea, however not all the roads and not along all portions of the major roads would accommodate activities.

Development along secondary activity streets is envisaged to include some commercial, business and office development, facilities and medium to higher density residential development.

Where possible, activities should in the first hand be confined to nodes at intersections where in most cases a higher level of activities already occurs.

Tertiary streets and nodes are intended to address local levels of activity. This would typically include local shops and local level facilities. Through their accessibility and their contents, they would form centres of activity for local residential neighbourhoods. Typical examples of this would include Frere and Bartle Road.

An essential part of the structuring elements for the Berea would also consist of a system of civic and public open space which would be integrated into the various levels of the activity systems. In this way higher levels of activity would require a higher level of public space, a lower level of activity would suggest the establishment of smaller and more intimate public open spaces.



Figure 5 : Activity System for the UCEAP

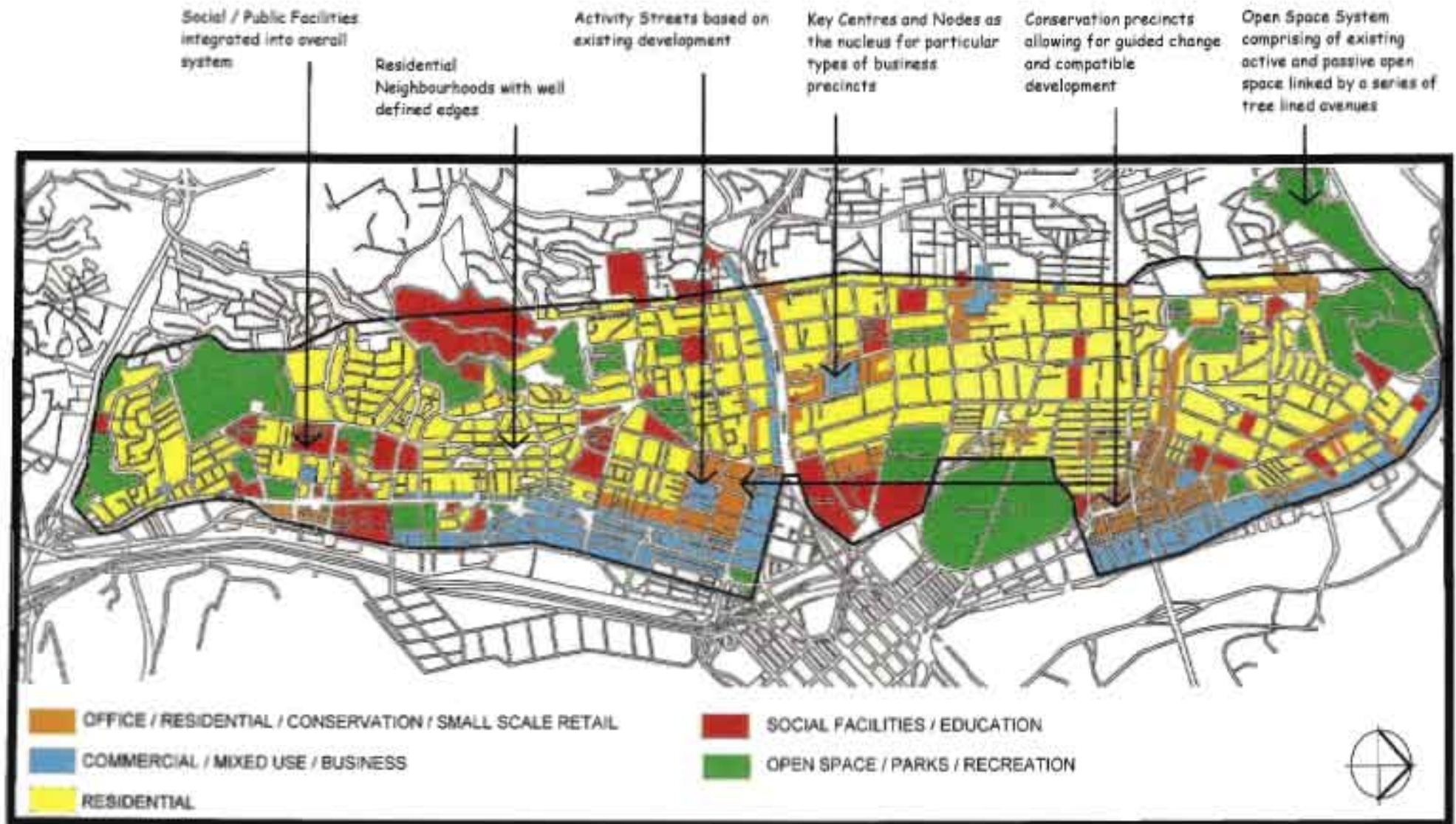


Figure 6 : Spatial Framework Plan for the UCEAP

#### 4.2.4 Hillcrest/Gillitts Activity Corridor

##### a) Background

The *Hillcrest/Gillitts Activity Corridor Local Development Plan* (HGAC LDP)<sup>96</sup> was prepared in 2000 in order to provide a responsive and flexible framework to guide and co-ordinate the development of the segment of the R103 Old Main Road through Hillcrest and Gillitts in the western portion of the eThekweni Municipality (OWLC 2000). This corridor was identified in the former Outer West Local Council (OWLC) Integrated Development Plan as a priority project for the OWLC.

Hillcrest Old Main Road is an existing mixed use suburban corridor that currently performs a number of important roles at different scales within the city (OWLC 2000:3). At a local level, the HGAC is the focus of retail activities and community facilities that serve the needs of adjacent high-income and high expenditure suburban residential areas. At a sub-regional level, the HGAC provides a limited employment destination in the sub-region (due to the concentration of professional office accommodation) and a gateway to the significant tourism activities in the metropolitan area (including the Valley of 1000 Hills tourist route). At a regional scale, the HGAC provides a regional through route and alternative to the N3 as well as providing an important transport interchange node for peripheral low-income communities such as Mpumalanga and Fredville that use the local bus and taxi services provided to access major urban centres such as the Pinetown and Durban CBD's (Markewicz *pers com* 2001).

<sup>96</sup> See the *Hillcrest/Gillitts Activity Corridor Local Development Plan* (OWLC 2000).

These different roles have resulted in significant conflicts between different residential, business and transport interests along the corridor. Together with the ongoing pressure for development and the continued loss of the corridor's 'village' character (OWLC 2000: 4), this has generated considerable concern over the future development of the HGAC and provided the impetus for the preparation of the LDP.

##### b) Project Proposals

A key informant to the development of the LDP proposals has been the identification of the future role of the HGAC. The corridor is viewed as being predominantly local, rather than regional, in function (Markewicz *pers com* 2001) and its primary role is envisaged as being a high-quality local service centre with limited opportunities for sub-regional activities (OWLC 2000: 3).

The LDP's conceptual approach to development focuses on the need to 'repair' the corridor's existing degraded environmental quality, restructure activity within the HGAC to accommodate future growth and change and protect the existing environmental quality of precincts or neighbourhoods that still have their environmental quality intact and which currently function efficiently (OWLC 2000: 3).

Based on the role and approach envisaged and an analysis of the existing environmental, transportation and economic issues affecting the HGAC, the LDP outlines a spatial framework for guiding residential and economic development (see Figure 7), establishing environmental links and corridors and establishing an efficient movement network (OWLC 2000: 4-11).

The LDP also provides land use and zoning proposals for the different areas and properties within the HGAC, guidelines for improving urban environmental quality and service delivery, and a number of programmes to guide the implementation of these proposals. The main proposals of the LDP can be summarised as follows (OWLC 2000: 4-11):

### 1. Economic Development

Due to the primarily local role envisaged for the HGAC, it is proposed that only a limited amount of additional commercial development be permitted along the corridor. This would not only serve to avoid attracting further extraneous traffic into the area but controlled commercial development would also help to regularise and link previous *ad hoc* developments (Markewicz *pers com* 2001). Informal trade has also been accommodated in the HGAC adjacent to the taxi rank facility to serve the low-income thresholds attracted to the area as a result of the corridor's function as a transport interchange (Markewicz *pers com* 2001).

Tourism development also forms an important component of the HGAC and has been addressed in the LDP through the establishment of a tourism node at the existing the Heritage Market and a proposed tourism node at the intersection of the R103 and M13 with additional tourist and related facilities (Markewicz *pers com* 2001). In addition, it is proposed that the built form and environmental quality along the HGAC be maintained and enhanced to form part of the gateway to the OWLC tourism meander that extends along the R103 to the west of Hillcrest.

### 2. Public Transportation

The public transport system along the HGAC is mainly dependent on minibus taxis, since buses are not a widely utilised mode of travel for either lower or higher income commuters, and the primary response of the LDP has been to provide a taxi rank facility and public transport stops along the corridor (Markewicz *pers com* 2001). The commuter rail service along the HGAC has been discontinued but there are limited tourist and goods transport services.

### 3. Residential Development

The main focus of residential proposals is on maintaining and enhancing the existing residential character along the HGAC. It is also proposed that in some areas adjacent to the central spine, residential densities could be increased in response to the impacts of intensive activities along the spine and to screen the lower density outlying residential areas (Markewicz *pers com* 2001).

### 4. Public Space

Existing development patterns along the HGAC have resulted in very little public space developing adjacent to the spine, with most existing public spaces tending to take the form of internalised shopping malls and parking lots. In addition, the high-speed nature of the R103 makes it almost impossible to provide public space adjacent to the spine and the LDP therefore proposes the development of a series of public spaces along a parallel road system on either side of the spine and around the main nodes (Markewicz *pers com* 2001).

### c) Experiences with Planning and Implementation

Whilst the immediacy of the HGAC LDP has not yet produced any real progress in terms of implementation, it has highlighted a number of issues relating to planning and implementation. Firstly, the preparation of the LDP involved a relatively extensive public participation exercise with interested and affected stakeholders in the Hillcrest and Gillitts areas and with outside users of the area, such as minibuss taxi operators. A key outcome of this process was that there was a high level of acceptance of the activity corridor concept and proposals contained within the LDP (Markewicz *pers com* 2001).

Nonetheless, a number of concerns were raised by different stakeholder groupings. The main concern of the residential sector was that the existing retail nodes along the corridor would become a commercial strip as a result of ongoing commercial development along the HGAC (Markewicz *pers com* 2001). This would displace the existing office component along the HGAC and attract additional extraneous traffic into the corridor.

This was echoed by the formal business sector, which was concerned that wholesale rezoning to commercial would dilute their existing retail monopolies in the area (Markewicz *pers com* 2001). A concern was also voiced by existing formal businesses over unfair competition from informal traders, including both 'low end' and 'high end' traders, who were not paying rentals or rates (Markewicz *pers com* 2001). And finally, the minibuss taxi operators raised a concern regarding the levels of congestion along Old Main Road and the associated impact on commuter travel times road-based public transport viability (Markewicz *pers com* 2001).

Given the different roles performed by the HGAC and the propensity for conflict caused as a result of competing or conflicting interests, the public participation process proved to be an essential component of the LDP in providing a common vision for the development of the area that satisfied the various local residents and stakeholders (Markewicz *pers com* 2001). This common vision provided an important informant to the specific proposals developed as part of the LDP.

Secondly, the LDP provides a proposed zoning plan that incorporates a number of new land use zones to guide and control development along the HGAC (OWLC 2000: 14). This zoning plan will form the basis for developing a planning scheme for the HGAC as part of the LUMS process.

Thirdly, the LDP provides an implementation strategy that incorporates the establishment of an Urban Improvement District for the core commercial and mixed use area within the corridor and a series of planning and development programmes that should form the focus of sectoral interventions and investment along the HGAC (OWLC 2000: 26). This includes a communication and marketing programme, an urban infrastructure improvement programme and an open space programme (OWLC 2000: 27-29).

Fourthly, the LDP has highlighted the fact that the HGAC is under considerable pressure for development, particularly in terms of retail activities but also with respect to office uses. This is partly due to investor confidence within the area (Markewicz *pers com* 2001) as result of the large thresholds generated by adjacent higher income residential areas and

significant through flows and the well-developed infrastructure. It is also due to broader processes of decentralisation in the city, particularly from the CBD, and the attraction of lower income communities due to the role of the HGAC as a transport interchange (Markewicz *pers com* 2001). Due to existing conflicts and constraints and the collective vision adopted for the corridor, however, the LDP has limited the extent of commercial development that can occur and it is likely that the demand for commercial land will exceed supply.

#### d) Implications for Activity Corridors

The HGAC LDP is a project for an existing 'activity corridor' in Durban that provides an important perspective on the sub-metropolitan application of the activity corridor concept in an established, mainly higher income suburban context in Durban. The initiative highlights a number of important issues with regard to the conceptualisation of activity corridors and the performance of activity corridor environments in the Durban context.

The Hillcrest R103 spine has been identified as an 'Activity Corridor' in terms of the LDP and, as discussed earlier in this chapter, has also been designated as the only 'High Street with Retail Focus' in Durban in terms of the LUCNS. According to the LUCNS, this is the closest corridor type in Durban to the classic 'high street' model (Green *et al* 2001a: 19), which was initially identified in Cape Town and which has since been encapsulated within the activity corridor concept.

Despite these assertions, it has been acknowledged that the existing HGAC is not a 'classic example' of the activity corridor theory (Markewicz *pers*

*com* 2001) in that it does not provide a high-friction, pedestrian-oriented and integrative linear form in the city. This is due to the suburban location of the HGAC and the peculiar nature of the R103 spine and adjacent development patterns.

Firstly, the major regional importance of the R103 has resulted in the spine becoming a predominantly high-speed, low-friction route that carries large volumes of mainly private traffic (Markewicz *pers com* 2001). This has had a major impact on the nature and structure of the corridor by generating congestion, making it inhospitable to pedestrian movement, adversely affecting public transport services and necessitating the use of a parallel road system to access adjacent activities and facilities.

Secondly, the generally high-income nature of thresholds, the related predominance of private transport and the large, internalised developments with privately provided access arrangements and public spaces along the R103 spine has resulted in the creation of a corridor that lacks defining public spaces and a fine-grained built form (Markewicz *pers com* 2001).

Thirdly, the physical structure of the HGAC does not match the activity corridor concept since there are no by-pass routes and the corridor is imbalanced due to the constriction of development on one side of the corridor by the railway line (Markewicz *pers com* 2001). This exacerbates the problems associated with excessive extraneous through traffic and undermines the continuity of the corridor.

Fourthly, whilst there is a mix of low and high-income thresholds in the HGAC, these different groups tend to use the corridor for different



purposes and through different means, for example low-income taxi commuters use the taxi ranks whilst high-income motorists visit the Heritage Market (Markewicz *pers com* 2001). These different groups consequently do not engage with one other and instead interactions tend to take the form of conflicts. For example, taxi services are adversely affected by congestion resulting from major private traffic volumes along the R103 whilst formal businesses and higher income residents may be unfavourably disposed towards informal trading. This is also exacerbated by the lack of suitable public spaces along the HGAC to support social interaction.

The net result of these factors is that the HGAC functions more as a suburban mobility corridor providing high convenience for motorists than as an urban corridor providing an integrative public environment. The resulting environment is inhospitable for pedestrians, apart from self-contained nodes and shopping developments, and creates a fragmented system that has lost the feeling of a 'village' (Markewicz *pers com* 2001).

This development pattern has also been created and reinforced through the provisions of the existing TPS, which has tended to compartmentalise land uses and activities and promote mobility and transport infrastructure concerns over public transport and pedestrian movement. The entrenched development patterns are very difficult to modify and only limited interventions are possible, such as encouraging a fine-grained development pattern in key nodes along the spine (Markewicz *pers com* 2001).

Despite the constraints that have been built into the HGAC by these factors and the provisions of the existing TPS, the LDP performs an

important function, not only in providing a framework for encouraging more appropriate development patterns, but also in concretising the concept of an activity corridor. Whilst the HGAC was already largely established prior to the preparation of the LDP, the notion of an activity corridor was not previously formalised in planning frameworks or public perceptions (Markewicz *pers com* 2001).

Development applications and pressures along the HGAC were consequently not adequately assessed or directed to create a continuous and integrated corridor system. The LDP now formalises the concept and puts in place a framework for directing development pressures and trends to achieve a more positive corridor environment (Markewicz *pers com* 2001).

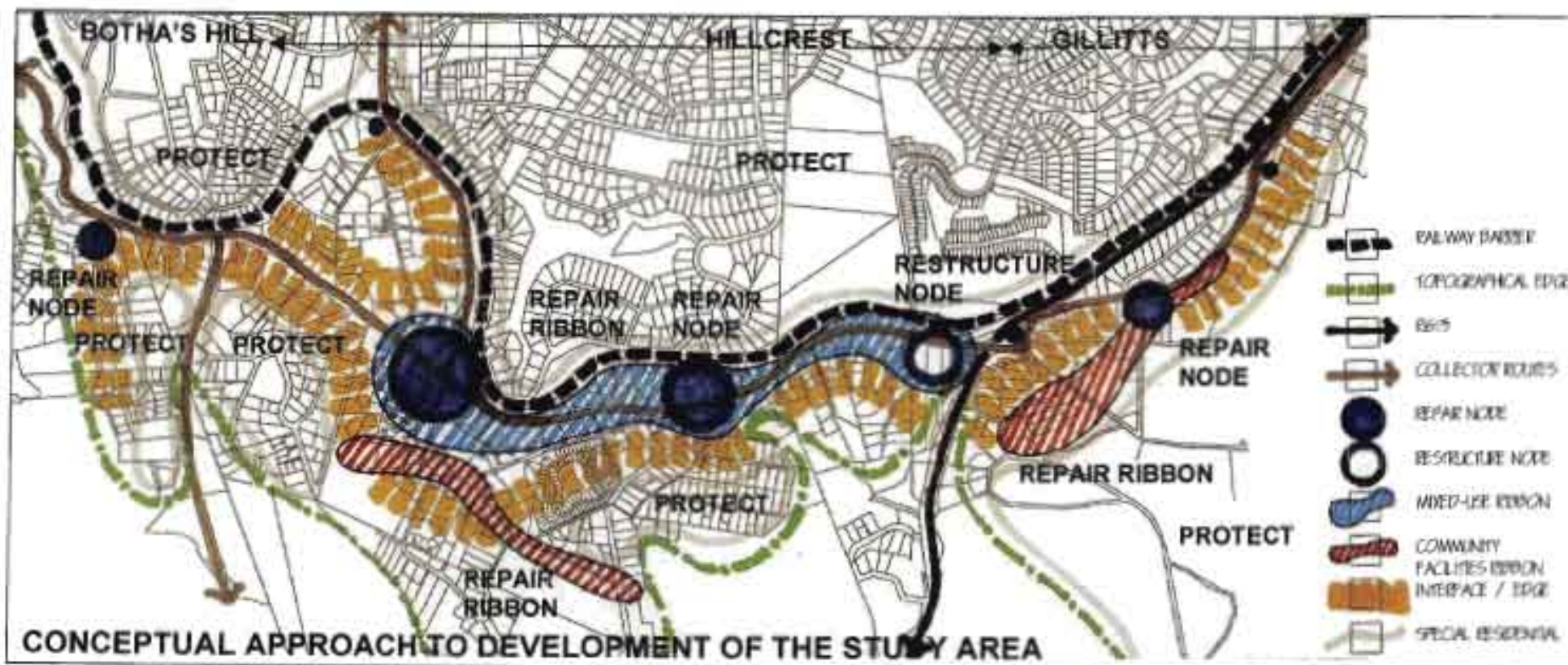


Figure 7 : Conceptual Framework for the HGAC

### 4.2.5 Bellair North Activity Spine

#### a) Background

The *Bellair North Activity Spine Precinct Development Plan* (BNAS PDP) was prepared by Markewicz English & Associates for the Cato Manor Development Association (CMDA) in 1995. The PDP forms part of a package of planning and management tools<sup>97</sup> that will guide and control development initiatives along Bellair Road and in the broader Greater Cato Manor (GCM), all of which have been strongly influenced by the activity corridor concept.

Bellair Road is one of the main movement routes in GCM that links this developing, generally low-income area into the surrounding urban fabric and connects the 'Old Line' residential suburbs and Chatsworth in the south to the central areas of Durban in the north. The route also supports a number of facilities and activities along its length that serve the adjacent informal settlements of Wiggins and Cato Crest and surrounding residents with access to opportunities.

GCM is an area of almost 2000ha (900ha of which is developable) located about 7km from Durban's city centre (Robinson 1994). The GCM area has been recognised as an area of major importance not only for Durban but also nationally due to its considerable size, strategic location,

<sup>97</sup> See for example, *A Policy Framework for Greater Cato Manor* (Greater Cato Manor Development Forum 1993), the *Preliminary Report on Corridors and Nodes in Cato Manor* (Seneque Smit and Maughan-Brown 1994), the *Greater Cato Manor Structure Plan* (CMDA 1997) and the *Horley Road Preliminary Design Plan* (Iyer Rothaug 1999).

substantial development potential and widely acknowledged symbolic significance (CMDA 1997). Historically, the area has been subject to some of the most intensive struggles around land in the city with forced removals occurring in the 1950's and 1960's (Todes 1998: 3). The area remained largely vacant until land invasions began and serious development efforts were initiated in the early 1990's.

The GCM area subsequently received a substantial amount of attention and funding and has been recognised as a Presidential Lead Project. With its ability to house between 157 000 and 179 000 people, it has been recognised that "the Cato Manor project is larger than any integrated urban development project previously undertaken in South Africa" (CMDA 1997: 1).

#### b) Project Proposals

Whilst there have been a number of other planning initiatives undertaken for Bellair Road and Cato Manor, the dissertation focuses on the most recent and detailed exercises undertaken in relation to Bellair Road. This includes the GCM Structure Plan, the BNAS PDP and the Horley Road Preliminary Design Plan.

The first planning initiative is the GCM Structure Plan, which provides an overall planning and development framework for the GCM area as a whole. The Structure Plan provides for the development of a "balanced urban environment" in the GCM area not only incorporating housing but also a full range of urban activities including "industrial and office parks, commercial and manufacturing opportunities, housing, transport, educational, social and recreational facilities" (CMDA 1997: 1).

According to the Structure Plan, the largely greenfields nature of the GCM site “offers a unique opportunity to provide housing for previously disadvantaged groups and to contribute to the restructuring of the Durban Metropolitan Region (DMR) based on the principles of compact city growth and inner city densification” (CMDA 1997: 1).

In attempting to realise the potential of GCM, the Structure Plan provides a spatial framework for the area that includes the main structuring elements of the transport network, mixed use activity spines, activity nodes, residential precincts and an open space system (CMDA 1997: 13). The spatial concept for GCM is based on the identification of a network of activity spines and nodes along major routes and at key intersections, with intervening areas consisting of residential precincts and open spaces (CMDA 1997: 13-15).

The two main activity spines identified in the Structure Plan are Booth/Francois Road and Bellair Road and the main activity node is the Central Node located at the intersection of these two routes. The various streets and spines define a total of nineteen planning precincts and the Structure Plan provides a series of land use proposals for each of these (CMDA 1997: 16). Figure 8 provides an indication of the land use proposals for the GCM area.

According to the Structure Plan, the Bellair Road and Booth/Francois Road activity streets “are intended to be mixed use (vertically and horizontally), mixed income, high density areas with a finely grained urban fabric that operate on the basis of an efficient, affordable public transport system running along their length and a high level of environmental quality

to encourage people to access the opportunities created” (CMDA 1997: 14).

The Structure Plan asserts that the activity spine and node concept offers several opportunities, including (CMDA 1997: 14):

- the creation of economic opportunities for smaller enterprises to enter the market as linear development results in differing land values along its length
- improved access to facilities by a largely public transport reliant population
- higher thresholds which contribute to economic sustainability and a more affordable and efficient public transport system
- integration of GCM with the surrounding urban fabric, rather than becoming an inwardly oriented, low income, ‘no-go zone’, through the encouragement of public transport through the area and attracting non-residents to the economic and social opportunities created along the activity streets

Precinct Development Plans (PDP’s) have been prepared for each of the activity spines and the various residential precincts defined by these spines and other movement routes (Masson *pers com* 2001). With regard to Bellair Road, two precincts are identified: Bellair Road North Activity Spine (north of Booth Road) and Bellair Road South (south of Booth Road).

The second planning initiative is the PDP for the Bellair North Activity Spine, which forms part of the overall package of planning and management tools for Cato Manor and which provides a framework for the development of the Bellair North precinct. The purpose of the PDP is to “identify, initiate and enable the implementation of a range of development projects which will meet the needs of local/surrounding inhabitants as well as the broader community of the City of Durban” (ME 1995: 1).

The PDP is based on a number of conceptual principles relating to the notion of ‘activity systems’, which is essentially an extension of the activity corridor concept to include a more clearly articulated consideration of the nature and impact of thresholds adjacent to activity spines (ME 1995: 2-3). The PDP also advocates an incremental growth path for the development of the activity spine that envisages a gradual, piecemeal but directed and co-ordinated development process over a number of years or even decades (ME 1995: 4).

Using these principles and concepts and an assessment of the site context, the PDP provides a *physical framework plan*, which deals with movement and circulation, public open space and service infrastructure, a *land use plan*, which indicates land use distributions and allocations, and *urban form directives*, which provides detailed building, landscaping and public space guidelines. Figure 9 provides an indication of the key Bellair North Activity Spine proposals.

And finally, the third initiative of relevance to Bellair Road is the Horley Road Preliminary Design Plan (HRPDP) prepared by Iyer Rothaug

Collaborative for the CMDA in 1999. This exercise provides detailed planning and design guidelines for the portion of Bellair Road between Horley Road and Tanda Road. The preparation of the plan was prompted by the need to rectify the loss of access to existing commercial buildings in the vicinity of Horley Road that resulted from the realignment of Bellair Road (Iyer *pers com* 2001).

The HRPDP also provides an indication of the site layout and built form options for the properties alongside the Horley Road portion of Bellair Road (Iyer Rothaug 1999). The plan proposes the development of three to four storey walk-ups along the Bellair Road street edge accommodating a vertical mix of commercial, office and residential uses. The HRPDP also stipulates bulk development controls with respect to the Floor Area Ratio (FAR), coverage, parking and colonnaded building edges proposed along Bellair Road.

In addition, the plan indicates the proposed access and parking arrangements, with parking areas situated behind the proposed building structures away from the street. The HRPDP also provides a number of sections indicating the levelling of the site and the location of retaining walls required to accommodate the proposed structures and parking areas on the relatively steep slopes and narrow sites.

### c) Experiences with Planning and Implementation

The Cato Manor project is one of the highest priority initiatives in Durban and has received a considerable boost from its designation as a Presidential Lead Project and the sustained involvement and management of the CMDA (Todes 1998: 4). It is also one of the longest running integrated

projects within the city and one of the most advanced in terms of planning, implementation and delivery.<sup>98</sup>

Despite considerable support and funding for the Cato Manor proposals, the project has been highly contested and, as a result, the development of the area has been constrained. As Todes *et al* (2000: 234) note: “Land invasions, weak and unstable leadership structures within informal settlements, crime and violence, resistance by adjacent higher income communities, and competing claims to land by past victims of forced removals have all slowed down the rate of development”.

Nonetheless, there has been significant development within GCM, particularly with regard to low-income housing development. According to the CMDA’s Annual Report, some 2000 residential sites had been developed by 1998 and another 8000 were underway (cited in Todes 1998: 4). The vast majority of this housing, however, has taken a low-density form due to the structure of the national housing subsidy scheme (Masson *pers com* 2001). As a result of the lower than anticipated densities being achieved in GCM, the estimated number of people that can be accommodated in GCM has had to be downsized from around 180 000 to 140 000 (Masson *pers com* 2001).

Some success has been achieved in providing higher density housing through the development of approximately 240 units of ‘social housing’

consisting of multi-storey walk-ups within a few minutes walk of the activity spines (Masson *pers com* 2001). This rental stock has, however, required at least 50% top-up from outside funding over and above the housing subsidy to make these developments viable.

In addition, the target market of this housing is generally above the affordability levels of surrounding low-income communities (Masson *pers com* 2001). Nonetheless, the CMDA has made provision for additional social housing should suitable funding become available. First Metro Housing is also investigating options outside of the national subsidy scheme that may facilitate higher density low-cost housing development.

Achieving a mixed use form of development along the designated activity streets that incorporates a residential component has been even more difficult to achieve. The built form envisaged in terms of the BNAS PDP and HRPDP consisted of up to four storey walk-ups with commercial and office uses on the lower floors and residential on the upper floors. In practice, however, this has been impossible to achieve due to the high costs associated with formal building construction (Masson *pers com* 2001). At approximately R2 000/m<sup>2</sup> for multi-storey construction, it is simply not viable to incorporate a low-cost housing component funded through an R18 000 housing subsidy. This multi-storey form of development also requires a high level of construction expertise and this often excludes local building contractors, who are generally utilised for individual house construction in low-income projects.

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<sup>98</sup> See, for example, the *Business Plan 1994 to 2000* (CMDA 1994), the *5 Year Implementation Strategy Plan* (CMDA 1995) and the *8 Year Implementation Strategy Plan* (CMDA 1996).

With respect to the provision of services and community facilities in GCM, a number of investigations have been undertaken<sup>99</sup> and significant improvements have been made in terms of road upgrading and basic service provision within the area. Progress has also been achieved with the provision of community facilities, such as the construction of a Community Health Centre in the Central Node, which will be completed in the near future (Masson *pers com* 2001).

Economic development, on the other hand, has been more difficult to achieve. Despite a number of economic studies<sup>100</sup> and the efforts of the CMDA, GCM has failed to attract private sector investment into local economic development initiatives within the area (Masson *pers com* 2001).

The lack of private sector interest and confidence within GCM has been attributed to low incomes and thresholds and crime and violence within the area (Todes 2000: 6) and the propensity for private sector investors to focus on more upmarket commercial developments (Foster *pers com* 2001) such as the Gateway shopping and entertainment complex and the La Lucia Ridge Office Park.

<sup>99</sup> A number of reports have been prepared by Research and Architectural Projects including *Social Facilities in Cato Manor* (1994), *Wiggins Educational and Social Centre Research Project* (1995a) and *School Space Recommendations for Accommodation Standards in Cato Manor* (1995b).

<sup>100</sup> Including the reports *Strategies for SMME Development* (Briggs 1995a), *A Tourism Route for Cato Manor* (Briggs 1995b), *Local Economic Opportunities* (Scott Wilson Kirkpatrick 1995) and *The Promotion of Economic Opportunities* (Davies Bristow and Associates 1996).

As a result, the rate of take-up of commercial land has been far lower than previously anticipated or provided for in current planning frameworks and initiatives for GCM. The GCM Structure Plan makes provision for approximately 80 000m<sup>2</sup> of commercial floor area given the bulk controls contained within the plan,<sup>101</sup> which far exceeds the actual (and anticipated future) demand in GCM (Masson *pers com* 2001). The development proposals and controls for Bellair North Activity Spine and the other activity streets in GCM have therefore tended to substantially over-supply commercial and mixed use land (Iyer *pers com* 2001).

In response to the lack of outside investment in GCM, the CMDA has adopted the approach of building local economic capacity and investing in key economic facilities to support local economic activities and boost outside investor confidence (Masson *pers com* 2001). The CMDA has committed itself to the provision of capital grants for trading spaces and the provision of economic support facilities, such as the Bellair Market and the Cato Crest Container Park, in an effort to build the capacity and entrepreneurial skills of local communities.

The Bellair Market, situated along Bellair Road, is intended to provide a secure facility for accommodating informal traders currently trading along Bellair Road. The market has not yet become operational, however, due to the delay in realigning Wiggins Road (which will join Bellair Road

<sup>101</sup> Experience with detailed planning and design in the HRPDP has revealed that the commercial floor space bulks proposed along Bellair Road in the Structure Plan cannot be achieved due to the steep topography (and the resulting need for retaining walls), the encroachment of adjacent housing development and the extensive parking requirements (Iyer *pers com* 2001).

adjacent to the market) and the reluctance of traders to be relocated from their current highly visible locations along Bellair Road (Masson *pers com* 2001).

The Cato Crest Container Park provides a number of containers for small business operators in the area and was originally intended to provide a low-cost alternative to formally constructed spaces for accommodating local businesses (Masson *pers com* 2001). The development of the Container Park has shown, however, that this option is not as cost-effective as originally anticipated due to the costs of site preparation and servicing and the provision of adequate access arrangements. As a result, the container park is unlikely to provide a replicable or sustainable model for supporting and promoting community economic development (Masson *pers com* 2001).

In addition, the CMDA has funded the construction of a local shopping centre in an attempt to boost investor confidence and to provide a catalyst for further investment in the GCM area (Masson *pers com* 2001). A commercial feasibility study undertaken in 1998 for the CMDA suggested that the local population of GCM could support 4 500m<sup>2</sup> of shopping space. The shopping centre constructed by the CMDA accommodates 2 500m<sup>2</sup> of commercial floor space, although the high turnover of tenants in the centre suggests that there is currently insufficient commercial demand in GCM even to support this amount of floor space (Masson *pers com* 2001).

With regard to creation of a commercial and/or mixed use activity spine along Bellair Road, the land market imposes additional constraints on

community economic development (Masson *pers com* 2001). Local communities and entrepreneurs generally cannot afford to purchase high value land adjacent to movement corridors such as Bellair Road in order to establish formal or informal trading operations. In addition, the potential for passing trade along Bellair Road to provide a viable market for adjacent businesses does not appear to be materialising, largely due to fears of crime and security and possibly also due to the reluctance of middle and upper income commuters to the utilisation of roadside commercial activities (Masson *pers com* 2001).

The issue of transport has also received considerable attention in GCM with the Cato Manor Transportation Study<sup>102</sup> undertaken in the mid-1990's. The proposed Cato Manor Arterial, which has been on the city's transport plan since at least the 1980's, has been shelved due to previous objections from Manor Gardens residents and more recent objections that it will separate black and white communities in the area (Masson *pers com* 2001). This proposed arterial was to have provided an alternative by-pass route to Bellair Road but it is now proposed that Cato Manor Road be upgraded instead to accommodate the anticipated future growth in vehicular traffic.<sup>103</sup>

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<sup>102</sup> This study consisted of a series of reports prepared by Stanway Edwards Associates and Van Niekerk Kleyn & Edwards including *Transportation Concepts* (1994a), *Brief for Developing the Transportation Concepts* (1994b), *Report on Preliminary Route Investigations* (1994c) and *Public Transport Conceptual Model* (1995).

<sup>103</sup> Cato Manor Road will be upgraded to a four-lane route with two lanes in either direction and a two lane slip road for access to adjacent roads and properties (Masson *pers com* 2001).



With regard to public transport, an earlier proposal to establish a dedicated light rail service between Cato Manor and the inner city has also been shelved due to insufficient commuter thresholds within the GCM<sup>104</sup> (Masson *pers com* 2001). Approximately 90% of public transport travel is currently handled by minibus taxis but there are also a number of bus routes and services serving the GCM. The CMDA is attempting to encourage the local authority to provide taxi and bus stop facilities along the main public transport routes but investment is slow in forthcoming due to development priorities elsewhere in the city and the perception that Cato Manor has already received substantial public sector investment (Masson *pers com* 2001).

With regard to transportation proposals for Bellair Road, the route has been designed with two lanes in either direction, one for traffic and the other for street parking (Iyer *pers com* 2001). The road was designed by the Traffic and Transportation Department with little input from the CMDA and appears to have been grossly over-scaled with a road reserve of 21m (Masson *pers com* 2001). It has been suggested that, as a result of the scale and function of the road, Bellair Road does not perform as an activity street (Iyer *pers com* 2001).

GCM currently forms part of an existing Town Planning Scheme and the area has a bulk zoning of SR650, which requires rezoning or special consent applications for proposed land use changes (Masson *pers com*

<sup>104</sup> It was estimated that a light rail service would require approximately 40 000 passengers per day to be viable (Masson *pers com* 2001).

2001).<sup>105</sup> The existing TPS will be converted into a LUMS in the future and this process will be informed by a policy plan that is currently being prepared to incorporate all of the individual PDP's into a single plan. In approximately 18 months time, the CMDA will relinquish responsibility for the management of GCM and the eThekweni Municipality will assume control of the area (Masson *pers com* 2001).

#### **d) Implications for Activity Corridors**

The planning and development of the GCM area and the Bellair Road activity spine have highlighted a number of important issues regarding the local scale application of the activity corridor concept in a centrally-located but developing, low-income context in Durban.

Firstly, the Cato Manor proposals are possibly the most direct and extensively researched local scale application of the activity corridor concept in a low-income context in Durban and apply to the largest single remaining area of well-located land within the municipal area. The proposed creation of activity spines in GCM have been in place since the early 1990's and significant progress has been made to implement the proposals of the various plans and policies applicable to the area.

Nonetheless, these initiatives do appear to diverge from the activity corridor concept in two respects. The reference to Bellair Road and its environs as an 'activity spine' clearly does not fit the definition of this term

<sup>105</sup> For example, an Islamic school that has closed has been rezoned for commercial uses at street level and for arts and crafts on the top floor and other vacant structures will be similarly recycled.

outlined earlier in Chapter Two since the route does not provide the central spine for an activity corridor of metropolitan significance. Rather, Bellair Road should be regarded as an activity street.

In addition, the removal of the Cato Manor Arterial from the transport plans for GCM has negated the possibility of creating a parallel by-pass route to Bellair Road. As a result, the route does not represent an exact fit with the ideal activity corridor model and there is a possibility that this may lead to increasing traffic congestion and conflicts in the future as the GCM area grows and develops.

Secondly, the BNAS PDP possibly represents the first exposition of the concept of an 'activity system' in Durban. This concept extends the activity corridor notion to focus on the role of thresholds in determining the nature of the spine and the activities and facilities that will develop along the spine. This concept has subsequently been incorporated into other activity corridor case studies in Durban, including the HGAC LDP and planning frameworks and initiatives in Inanda.

Interestingly, Bellair Road has been classed as an 'Incipient/Connector Corridor' in terms of the LUCNS (Green *et al* 2001a). This appears to be the only such route identified in the LUCNS that occurs within a low-income and largely informal context in Durban. This is presumably due to the existing nature of the route, its importance to the city and the progress that has been made in terms of planning and implementation.

Thirdly, despite the substantial attention given to the development of the GCM area and the Bellair Road activity street, the project has revealed

that there are a number of considerable constraints for developing the typical activity street environments envisaged in the literature. Of particular concern is the fact that low-income, high-density housing and mixed use forms of development that include a residential component are simply not viable in terms of the present housing subsidy scheme.

In addition, the levels of investment and economic activity are substantially lower in the GCM area and along activity streets, such as Bellair Road, than previously anticipated due to the lack of investor confidence and the low buying power in these areas. This factor has prompted suggestions that the establishment of planning frameworks that propose and facilitate activity streets in 'areas of need' and the direction of public sector investment into their development are not sufficient preconditions to create activity streets since they will not necessarily attract economic development to these areas (Foster *pers com* 2001).

Given the constraints to economic development, it has been argued that it is unlikely that planners can 'manufacture' a typical activity street along Bellair Road for the foreseeable future and the CMDA has therefore adopted a pragmatic approach of developing what they can and banking the remaining land until such time as demand increases (Masson *pers com* 2001). The CMDA is also considering the possibility of fencing portions of this vacant land and letting it to agricultural co-ops within the area for urban agriculture.

Fourthly, the GCM initiatives have highlighted the question of the type of development process envisaged to develop activity streets. In the earlier PDP, it was envisaged that development would occur on an incremental

basis as resident populations and income levels, generating thresholds for intensified land uses along the activity streets and providing an impetus to establish formal structures for shops and the eventual development of mixed use multi-storey buildings (Iyer *pers com* 2001).

Recent detailed design and implementation experiences in Cato Manor have shown, however, that this incremental process is difficult to accommodate given the need to subdivide and sell land and to charge rates based on the existing land use or zoning of particular properties (Masson *pers com* 2001). There may therefore need to be some form of redevelopment along activity streets to establish key facilities and structures that will support formal activities. Also, because activity streets take a long time to develop, there is a need to identify uses adjacent to activity streets that will not block development options in future (Masson *pers com* 2001).

Given the central location of the GCM and the considerable development and investment being channelled into the area, it is likely to be gentrified in the future as a result of down-raiding (Masson *pers com* 2001). The influx of higher income residents may increase local demand for commercial land and facilities and more mixed use forms of development. This could help to bolster the development of the Bellair Road activity spine but it would also relegate displaced low-income residents to more peripheral locations (Masson *pers com* 2001).

And finally, the GCM initiatives have highlighted the importance of the links between broad policies and detailed design. The width of land reserved for mixed use development adjacent to the Bellair Road activity

street in the PDP was found to be too narrow during the detailed design exercise undertaken as part of the HRPDP (Iyer *pers com* 2001). This was due to the steep topography (and the resulting need for retaining walls), the encroachment of the adjacent housing project and the extensive parking requirements for the proposed four storey mixed use walk-ups, which at 2 bays/100m<sup>2</sup> were more than previously anticipated. This effectively restricted the buildable land and reduced coverage, resulting in a mismatch between the actual designed layout and broader policy proposals, particularly in terms of the inability to achieve the commercial floor space bulks proposed along Bellair Road in the Structure Plan (Iyer *pers com* 2001).



Figure 8 : Land Use Proposals for GCM

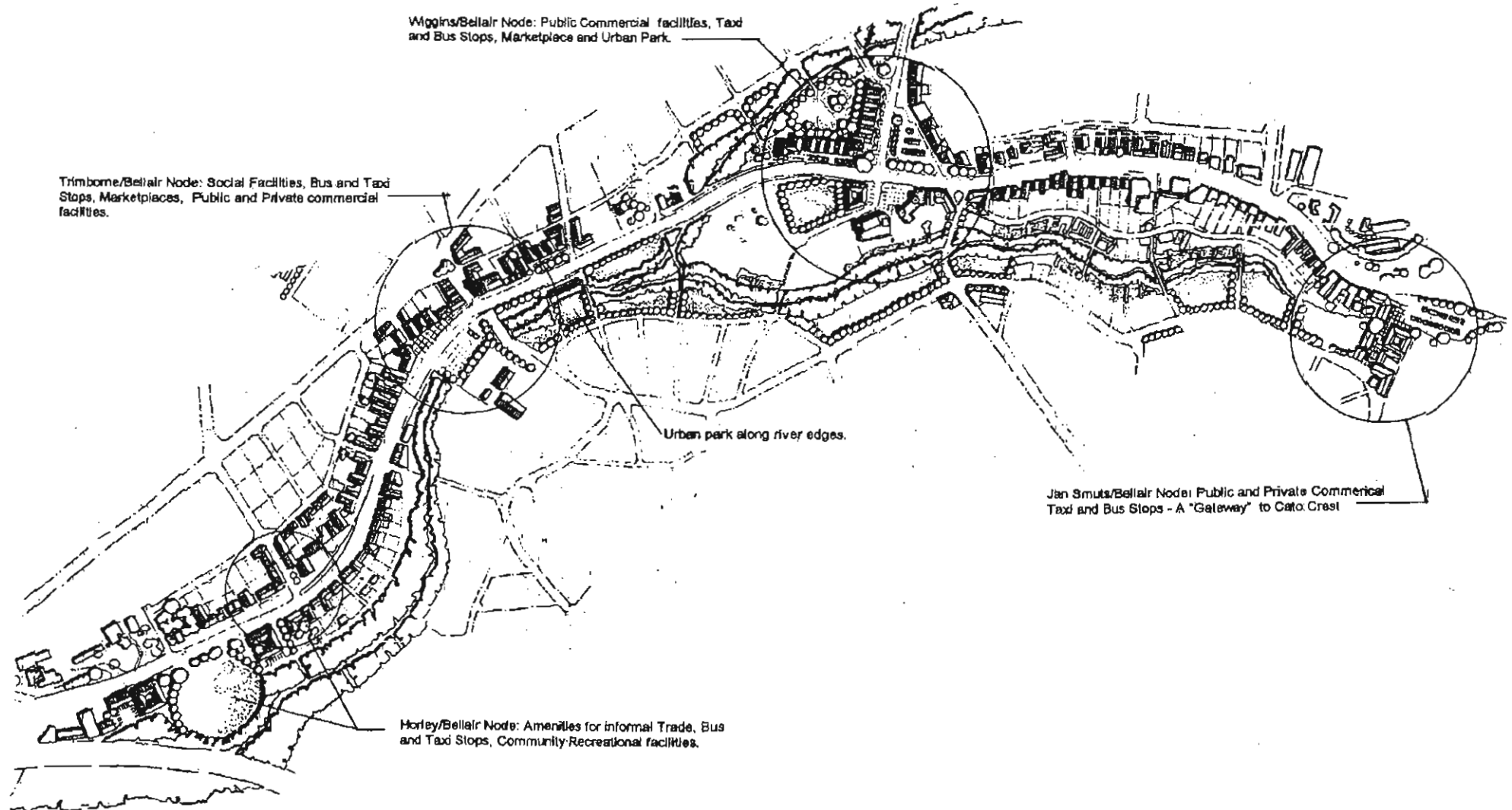


Figure 9 : Bellair North Activity Spine

## 4.2.6 Amaoti/Amaotana Activity System

### a) Background

The *Amaoti/Amaotana Activity System Development Framework* (AAAS DF) was prepared by Iyer Rothaug Collaborative in 1998 in order to provide guidelines for the development of land uses, movement systems, public spaces and built form within the Amaoti/Amaotana Activity System in Inanda. Inanda is a developing and relatively low-income peripheral area on the north-eastern edge of the eThekweni Municipality.

The Development Framework draws on broader plans for the Inanda area, all of which have been strongly informed by the activity corridor concept.<sup>106</sup> In terms of these broader plans, the AAAS is one of six 'activity systems' that have been identified in the Inanda area (IDF 1995). The notion of an 'activity system' expands on the activity corridor concept to explicitly include adjacent residential thresholds and catchment areas in the planning of activity streets and corridors.

The Amaoti/Amaotana Activity System consists of the segment of the D403 spine that passes through the Amaoti and Amaotana community areas together with adjacent activities and residential thresholds. The portions of these two community areas adjacent to the D403 spine largely consist of high-density informal residential areas with a wide range of existing facilities and activities concentrated along the spine in a number of

emerging nodes. This includes a large number of community facilities, such as schools, a police station, clinic, churches and sportsfields as well formal and informal economic activities, such as the formal Mamba Stores complex, informal trading and spaza shops (Iyer Rothaug 1998: 9).

### b) Project Proposals

Based on an assessment of the existing development patterns and needs within the Amaoti and Amaotana areas, and using a number of design guidelines and concepts, the Development Framework provides guidelines for the planning and development of the D403 spine, a series of nodes along the spine, adjacent land uses and thresholds and connections between these and the spine. The main elements are indicated in Figure 10 and outlined below (Iyer Rothaug 1998: 43-50):

#### 1. Land Use Framework

A series of nine nodes are proposed along the D403 spine at key intersections and/or points of high accessibility. The main activities and facilities will be clustered into these nodes with the specific nature of activities and the number of facilities tailored to the needs generated by adjacent thresholds and the linkages with surrounding areas.

#### 2. Movement and Circulation Framework

A hierarchy of routes is proposed to create a clear structure for movement consisting of the D403 high-friction activity street, the proposed parallel high-speed Northern Expressway by-pass route, local collector roads and local access lanes. Public transport is accommodated through a centrally located taxi rank and a series of taxi/bus stops along the D403 associated with each node.

<sup>106</sup> See the *Inanda Development Framework* (Inanda Development Forum 1995), the *Inanda Structure Plan* (Markewicz English 1997b) and *Towards a Development Plan for Inanda* (Development and Planning Department 1998).

### 3. Built Form Framework

Built form guidelines are proposed to encourage particular built/ space relationships including: building to site edges to define the street and promote surveillance within the nodes, using colonnaded edges in intensive commercial areas to provide protection for pedestrians, and using landmarks to accentuate visual axes and structure space.

### 4. Public Space Framework

A system of public spaces is proposed to structure and define important places and activities including: a continuous public space along the D403 activity street, a central civic space in Node 6 and neighbourhood or local level public spaces in the remaining nodes.

The Development Framework also outlines a number of principles and processes to assist with the implementation of the framework. In particular, it is proposed that the framework be taken through to a detail design level to concretise the framework, that lead projects are developed to catalyse development and that progress be monitored on an ongoing basis (Iyer Rothaug 1998: 56).

### c) Experiences with Planning and Implementation

The AAAS case study has highlighted a number of important issues concerning planning and implementation efforts in a developing, low-income peripheral context in Durban. Firstly, the initiative points to the serious levels of underdevelopment in peripheral community areas such as Amaoti and Amaotana and the critical need to provide basic services and shelter, improve access to facilities and services and promote economic upliftment.

Whilst there has been some progress in terms of the provision of low-income housing and basic services in these areas, there are still severe shortages not only in terms of employment opportunities and access to facilities but also in terms of basic needs, which is evident in the absence of a piped water supply for local residents in Amaoti and Amaotana (Iyer *pers com* 2001). The seriousness of such shortages can lead to the marginalisation of spatial planning efforts and objectives as these interventions are often regarded as secondary considerations to access to land, shelter and basic services, not only by communities but by their political representatives as well.

Secondly, a recent development project in the Amaotana community area highlighted a number of key issues regarding the implementation of the Development Framework proposals. One of the first major facilities to be provided in terms of the Development Framework was the proposed development of a community hall in the main civic node (i.e. Node 6) (Iyer *pers com* 2001).

According to the Development Framework, the central feature of this node is a proposed spherical road system with a major public facility and taxi ranks contained within this system (Iyer Rothaug 1998: 52). The location of the community hall in this central position would therefore have provided an ideal opportunity to kick-start the development of the node and the establishment of the associated public space structure (Iyer *pers com* 2001).

The community hall was, however, ultimately located in a less ideal position at some distance from the node and the D403. This was

apparently due to the anticipated costs involved with designing the proposed road system and expected resistance to the requisite relocation of community dwellings from their existing position alongside D403 (Iyer *pers com* 2001). The opportunity to use this facility as a catalyst to establish the structural preconditions for the development of the node was therefore lost.

This appears to point to a lack of political will in local government to make tough decisions that may generate conflict and/or to make funding available for the creation of public spaces, which do not form part of a particular line function departmental budget or mandate. It also highlights a lack of capacity and skills around implementation and the lack of integration between planning, budgeting and implementation (Iyer *pers com* 2001).

A Provincial Housing Board (PHB) housing project is currently underway in the Cuba community area adjacent to this node and efforts are being made to reintroduce the node structure through this project, albeit in a realigned arrangement (Iyer *pers com* 2001).

#### **d) Implications for Activity Corridors**

The Amaoti/Amaotana Activity System Development Framework highlights a number of key considerations involved in the local scale application of the activity corridor concept in a peripheral, low-income context in Durban.

Firstly, the project represents a relatively direct application of the activity street concept with a series of nodes and activities located along the D403

spine at key intersections. The project also proposes the development of a number of elements that are currently absent and which will enable the D403 spine to resemble the activity street concept more closely. This includes the proposed extension of the D403 spine to create a continuous activity street and the proposed development of the parallel Northern Expressway by-pass route to cater for increased through-traffic as the area grows and develops and traffic flows increase.

Secondly, the project expands on the activity street concept through the introduction of the notion of 'activity systems'. This notion builds on the key elements of the activity street concept (spine, activities and thresholds) by placing greater emphasis on the functional relationships between surrounding thresholds and development along the street. For example, in the case of the Amaoti/Amaotana activity system, the existing low-income thresholds, the lack of continuity of the spine and therefore the limited volume of passing trade is likely to constrain the development of commercial activities along the spine. The concept of activity systems therefore represents an important extension to the activity corridor concept in exploring more fully the impact of thresholds on the nature of development along the spine.

Unlike Bellair Road in Cato Manor, the potential D403 activity street has not been identified in the LUCNS as an 'Incipient/Connector Corridor'. This is presumably due to the low order nature of the D403 spine and the current lack of significant concentrations of commercial activities and social facilities located along the route. As this potential activity street grows and develops, however, it would presumably qualify for inclusion in the corridor typologies identified in the LUCNS.



Thirdly, the project highlights the lack of integration between planning, design and implementation in local government and the resultant loss of opportunities for developing high-quality activity street environments and public spaces. Whilst public authorities appear to be committed to the creation of positive activity street environments at a broad planning level, these concerns are overridden by pragmatic considerations regarding implementation costs and a desire to avoid confrontation with communities and their political representatives when the project is translated to detailed design and implementation stages.

Fourthly, and partly in response to the lack of integration, the project introduces the need to undertake form-giving design actions through a redevelopment process to establish the necessary public environment and facilities (Iyer *pers com* 2001). This represents a departure from the incremental growth concept that tends to underpin the activity corridor concept and initiatives. Unless the public sector accepts the responsibility of establishing the public space structure that provides the framework for private sector initiatives, this is unlikely to emerge through the sectoral interventions of line-function departments or the activities of low-income communities and/or small businesses.

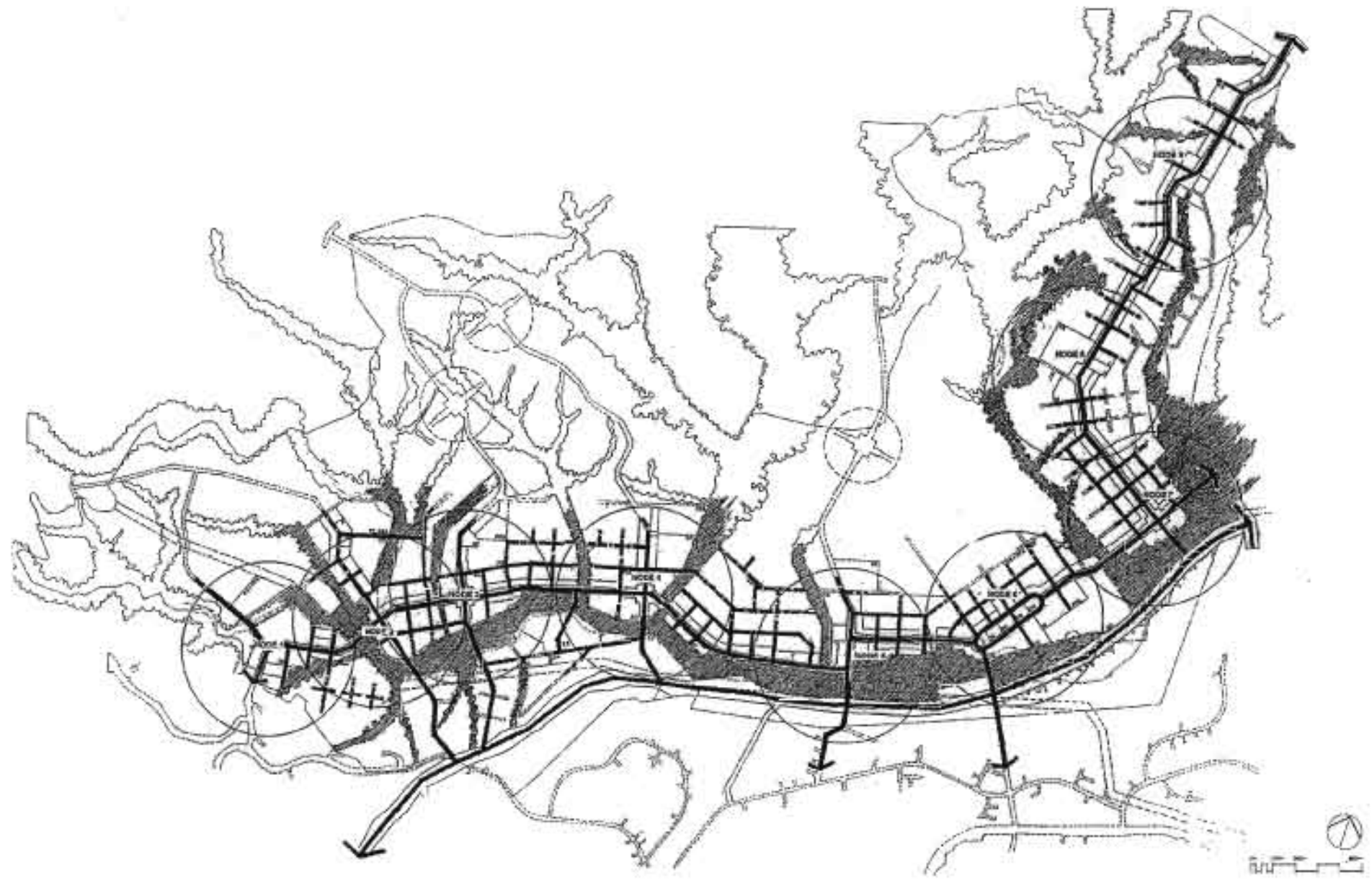


Figure 10 : Amaoti/Amaotana Activity System

### 4.3 Key Issues Emerging from the Durban Case Studies

The Durban Case Studies described in this chapter represent recent practical applications of the activity corridor concept in different contexts in Durban. These planning initiatives are significant in providing an indication of the form and direction of activity corridor theory and practice in a major metropolitan area in South Africa. They also begin to shed some light on the practical issues relating to the implementation of activity corridors, spines and streets and to suggest possible future planning responses to the difficulties associated with implementation.

The key issues highlighted by the case studies in relation to the activity corridor concept are outlined below.

Firstly, whilst the various case studies have all been informed by the activity corridor concept to some extent, there are considerable variations in terms of the contextual circumstances in which the concept has been applied and the particular conceptualisation of activity corridors in each case.

Secondly, whilst the various case studies are clearly a manifestation of a more widespread support for the activity corridor concept in current public planning policy, there does not appear to be unanimous support for activity corridor initiatives in Durban, not only at an institutional and political level but amongst planning practitioners and officials as well.

Thirdly, experiences with the planning and implementation of the various case studies have highlighted a number of social and economic trends and

factors that appear to be working against the creation of activity corridors, spines and streets as envisaged in terms of the activity corridor concept.

Fourthly, the case study experiences have also highlighted different implementation approaches that might be adopted for the creation of activity corridors, spines and streets and which would have different implications for the planning, design and implementation processes envisaged.

Fifthly, the case studies have highlighted the importance of the overall planning framework, and particularly the linkages with more detailed levels of planning such as the land use management system and detailed design, in moving activity corridor projects towards their successful implementation.

## 5. EVALUATION OF DURBAN CASE STUDIES

The preceding chapters have provided a review of activity corridor theory and practice in Durban. This has highlighted a number of theoretical and practical considerations that need to be considered in an evaluation of the various activity corridor case studies in Durban.

Chapter Two provided a commonly accepted definition of the activity corridor concept. This has been used as a basis for evaluating the relationship between the activity corridor case studies and the activity corridor concept, particularly with respect to the level of congruency between the activity corridor concept and the practical applications and interpretations of the concept.

Chapter Three explored, *inter alia*, the theoretical foundations and concepts underpinning the activity corridor concept. This has been used as a basis for evaluating the relationship between the activity corridor case studies and these theoretical foundations and concepts, particularly with respect to the notions of urbanity and appropriate urban forms.

Chapter Four reviewed the selected activity corridor case studies and highlighted a number of factors affecting the implementation prospects of activity corridor initiatives. This has been used as a basis for evaluating the level of support for activity corridor initiatives, for identifying the key trends and factors that affect their implementation, and for identifying their main planning and implementation requirements.

The key theoretical and practical considerations highlighted by these chapters have been used to provide a set of criteria for evaluating the activity corridor case studies. This then provides the basis for evaluating the potential contribution of activity corridor case studies to the broader urban strategies identified in Chapter Three, including urban spatial restructuring, sustainable urban development and compact cities.

### 5.1 Relationships with Key Concepts

The relationships between the activity corridor case studies and the activity corridor concept and its theoretical foundations are outlined below.

#### 5.1.1 Relationship with the Activity Corridor Concept

Whilst it is clear that the various case studies are all informed by the activity corridor concept to some extent, the contexts in which the activity corridor concept have been applied and the particular conceptualisation of activity corridors in each case varies considerably. There has also been a level of refinement and extension of the activity corridor concept through the preparation of the various plans in response to the particular objectives of the project and/or the specific context within which it is being applied.

In the case of the LUCNS and the FRP, the concept has been applied to the entire Durban municipal area and new corridor typologies have been developed to suit the particular requirements of each project. The FRP has substantially extended the activity corridor concept using the concept of 'forces of attraction' to identify a new typology of **integrated land use/public transport corridors** that more closely address public transport objectives. The ideal corridor types identified range from the relatively

simple Single Attractor, the Dual Attractor, the Multi-Nodal Attractor, and the Strip Attractor to the highly complex Total Area Attractor.

The LUCNS has also considerably extended the activity corridor concept to include other types of **land use corridors** besides the typical 'High Street' model embodied in the activity corridor concept. The new land use corridor types include Industrial Corridors, Residential Corridors, Office and Retail Corridors, Incipient/Connector Corridors and Peri-Urban/Inter-Regional Corridors.

A key observation of the LUCNS is that the industrial nature of Durban's economy has had a major impact on the character of the land use corridors that have developed in Durban with the result that the vast majority of 'High Streets' in Durban have a service industrial, rather than a retail, focus. This represents a significant departure from the retail orientation of activity corridors identified in Cape Town, which provided the original model for the development of the activity corridor concept.

The UCEAP and the HGAC are both examples of projects where the activity corridor concept has been applied at a local scale in developed, predominantly higher income urban and suburban areas where the activity corridors, spines and streets are already well established. These areas both have longstanding regulatory frameworks in place and have been subject to major pressures for development and investment, the combination of which has had a significant influence on the nature of development and the character of the activity route environments that have developed.

In the case of the UCEAP, the project is both a practical response to the inability of the existing regulatory and development frameworks to direct ongoing economic growth trends and land use changes as well as a theoretical application of the activity corridor concept. The project highlights the types of social and economic dynamics affecting activity routes in central, established urban areas and provides a framework that is more accommodating of mixed use developments and the intensification of activity routes.

In the case of the HGAC, the suburban location of the project, the high-speed nature of the spine, the *ad hoc* development pattern and the predominance of private transportation are all factors that have resulted in the creation of a 'corridor' that functions as a mobility route providing high convenience for motorists rather than an integrative public environment that supports social interactions and pedestrian access to facilities and activities. Although the HGAC clearly does not provide the benefits of urbanity or integration associated with the activity corridor concept, the LDP does provide a useful vehicle for 'concretising' the notion of a corridor and for establishing a framework that will gradually improve the performance of the HGAC, although it seems likely that it will remain a predominantly suburban, high-speed mobility route in the future.

The BNAS PDP and the AAAS DF are examples of the local-scale application of the activity corridor concept in developing, low-income and largely informal areas where the respective activity streets are only starting to emerge. These areas have not been subject to formal planning controls or significant levels of investment in the past and have low population thresholds, the combination of which has had major a impact on the nature

of development and the low order character of activity streets that are only now starting to emerge.

Whilst the BNAS and the AAAS are both relatively direct applications of the activity street concept, these projects also introduce the notion of an **activity system** as a central feature of their conceptualisation and proposals. This concept highlights the importance of thresholds in determining the character and intensity of the activity spine or street and represents a significant extension to the activity corridor concept in the Durban context.

The BNAS and the AAAS also highlight difficulties experienced with implementation, particularly the tendency for pragmatic factors, such as infrastructure requirements, implementation costs and a desire to avoid conflicts, to override activity street-related proposals and objectives. As a result, development and investment does not support the development or emergence of the types of positive environments envisaged in terms of the activity street concept.

### 5.1.2 Relationship with Theoretical Foundations and Concepts

The activity corridor concept is underpinned by a number of theoretical foundations and concepts that have informed the activity corridor case studies to varying degrees. The relationship between the case studies and the notions of urbanity and appropriate urban forms are discussed below.

#### a) Notion of Urbanity

The notion of urbanity has exerted a strong influence on the development of the activity corridor concept and has been incorporated, either implicitly

or explicitly, into the activity corridor case studies and other spatial planning and restructuring initiatives in Durban and elsewhere. For example, the AAAS Development Framework makes explicit reference to the notion when it states (Iyer Rothaug 2000: 5):

“Activity spines as a spatial structuring tool, has emerged out of a wider debate. Such debate focuses on the performance of an overall system, and the spine represents one part of a strategy which has at its base the development of conditions of *urbanity* and positive living environments” (emphasis added).

Experience with the activity corridor case studies has shown, however, that this consideration generally does not appear to be a central feature of activity corridor practice in Durban (Iyer *pers com* 2001). Instead, the reference to, or utilisation of, activity corridors, spines and streets has tended to focus on other objectives of the concept such as the promotion of public transport or the improvement of access to facilities and opportunities. It is arguable that, given the importance of urbanity to the activity corridor concept, activity corridor-related projects should be more directly informed by notions of urbanity and the creation of positive urban environments.

The activity corridor case studies have also revealed that the different contexts within which the activity corridor concept has been applied has affected the ability to promote urbanity in the various initiatives. For example, the HGAC and the AAAS are both examples where the concept has been applied in suburban and peripheral contexts respectively. The nature of development and the character of the activity routes in these

contexts appear to be quite different to the types of urban environments generally associated with the activity corridor concept.

As a result, these environments do not provide the benefits of urbanity associated with central urban contexts such as the activity streets in the UCEAP. The context, the associated locational, social and economic dynamics and the resulting development patterns are clearly significant factors affecting the ability to promote urbanity in activity corridor-related developments.

#### **b) Appropriate Urban forms**

The notion of appropriate urban forms has also been a strong influence on the development of the activity corridor concept and clearly the defining feature of the activity corridor case studies in Durban is the creation of high performance linear urban forms. There are also a number of overlaps between earlier concerns outlined in Chapter Three regarding the efficiency of linear development forms and the objectives and proposals associated with the activity corridor case studies.

Despite these similarities, the activity corridor case studies generally do not appear to be explicitly concerned with some of the more complex and fundamental notions identified in Chapter Three in relation to appropriate urban forms. The notion of 'homes beyond the fringe' (March 1967), whereby urban development is concentrated into linear regional 'cities', and the 'grid as generator' (Martin 1972), whereby a grid of linear movement routes establishes the structuring framework for cities, is not being pursued in Durban at the macro-scale suggested by these concepts.

The LUCNS perhaps represents the closest interpretation of the 'grid as generator' notion, with the main land use corridors providing the focus for urban growth in Durban. Whilst the various land use corridors have been prioritised to assist with the allocation of budgets and public expenditure, the development of a hierarchy of activity spines does not appear to be a central feature of the LUCNS. The development of these new land use corridor types therefore appears to have downplayed the importance of scale in determining the nature of these routes and the hierarchical relationships between them.

The notion of a 'semi-lattice' (Alexander 1966), whereby complex and overlapping levels of spatial order are promoted, also appears to have been sidelined in the activity corridor case studies. Whilst this notion formed part of the earlier investigation and conceptualisation of activity corridors and nodes in Cato Manor (SSMB 1995: 32), subsequent planning and development efforts in the BNAS (and other case studies) have tended to pursue a more limited conception of activity patterns and relationships.

This apparent divergence from the complexity associated with the 'semi-lattice' can possibly be attributed to the recognition of the difficulty in encouraging even limited forms of development and relatively simple activity patterns along activity streets in these areas, partly due to the low incomes and entrepreneurial capacity of local communities. It is also related to the continued lack of integration in sectoral development projects and the high level of planning control over urban environments associated with the land use zoning approaches being applied in these areas. As a result, activity corridors, spines and streets are being advocated and pursued in a more restricted manner as the focus of diverse

and often *ad hoc* development efforts that do not generate the complex levels of order and interaction previously envisaged.

In addition, the notion of a 'capital web' (Crane 1960b: 38), whereby public sector investment creates the public environment to which private sector investment and creativity responds, does not seem to be sufficiently pursued, let alone achieved, in the planning and implementation of the activity corridor case studies. The concomitant notion of a 'city of a thousand designers' (Crane 1960b: 36) also does not appear to be borne out by the activity corridor case studies with private sector investment often contradicting or undermining public intentions and planning frameworks.

Given the central importance of these and other notions to the activity corridor concept, it is arguable that projects that seek to create activity corridors, spines and streets should be more explicitly informed by these notions and their potential contribution to the creation of positive urban environments.

## 5.2 Factors Affecting Implementation

Whilst the various activity corridor case studies are all relatively recent projects that will be implemented on an ongoing basis in accordance with their respective proposals, initial experiences and interactions around these initiatives have highlighted a number of factors that are currently affecting implementation efforts and which are likely to affect the progress of these initiatives for the foreseeable future. This includes the institutional, social and economic factors that are likely to constrain their implementation and

the planning framework and responses required to address these constraints and improve their prospects for implementation.

### 5.2.1 Support for Activity Corridor Initiatives

The interviews conducted with key planning practitioners and officials in Durban regarding the activity corridor case studies highlighted a number of different attitudes towards the activity corridor concept. This has ranged from strong support for the concept amongst planners, to a more diluted support that acknowledged many of the practical limitations to achieving activity corridors, to a concern that the planning profession now regarded the activity corridor concept as a panacea and that the concept had consequently been too widely and inappropriately applied.

These interviews were also useful in providing an indication of the level of institutional and political support for activity corridor concepts and initiatives in Durban, which is clearly significant in terms of the prospects for implementation. It is clear that there is widespread support for activity corridors in current initiatives and approaches to urban spatial planning, development and management in Durban not only in the activity corridor case studies discussed but also more generally.

This support emanates from planning theorists, practitioners and officials in Durban and has, to some extent been incorporated into other development sectors in the city, particularly in terms of transportation planning and the delivery of community facilities. The notions underpinning the various spatial plans and frameworks (including the activity corridor concept) have also received political support through their dissemination into



development debates, the political approval of these plans and public participation in the preparation of these initiatives.

The case studies have also revealed, however, that there is not unanimous support for activity corridors as part of an overall urban spatial restructuring strategy in Durban. The FRP and LUCNS are metro-wide planning frameworks that have highlighted a number of major political and institutional trends currently occurring within local government that are undermining support for activity corridor initiatives and spatial restructuring strategies.

Firstly, the advent of democratic local government in Durban, whilst both necessary and desirable, has given rise to a form of constituency politics whereby immediate local community needs have been emphasised rather than broader, long-term strategic development objectives such as those embodied in spatial restructuring and activity corridor approaches. Whilst this emphasis is clearly related to the critical need for the development and upliftment of underdeveloped areas such as Umlazi, KwaMashu and Mpumalanga, it has also been informed by a need to ensure political survival and longevity through the delivery of tangible infrastructure and services to communities.

This situation is being compounded by the continuing lack of integration between the planning and service provision efforts of different line function departments in the city. It has also been reinforced as a result of tension and distrust between officials and councillors in local government in Durban and the lack of capacity to plan, implement and manage development in the city (Breetzke *pers com* 2001). The lack of capacity

appears to be contributing to a lack of understanding of the activity corridor and other complex spatial restructuring concepts not only amongst councillors but amongst officials as well.

Thus, whilst there is an apparent consensus regarding the need for urban spatial restructuring at a broad level, budgeting processes and local level implementation efforts tend to be driven by local community needs, political considerations and departmental agendas and priorities. This is clearly evident in the current local government budgeting process in Durban, which has not been informed by the LUCNS or other spatial frameworks for the city (Dominik *pers com* 2001). It is also reflected at a more localised level in Inanda, where the spatial restructuring proposals contained in the AAAS initiative were overridden by pragmatic considerations regarding implementation costs and a reluctance to make tough political decisions.

The result of these factors is that the pattern of public investment in the city has been dispersed, focusing mainly on individual projects in 'areas of need' such as Inanda, Umlazi and Mpumalanga. Very little public investment has been channelled into strategic elements of the city such as the central area, which is now suffering as a result of a lack of maintenance, the development of potholes, etc. (Breetzke *pers com* 2001) or into major integrated development projects. Local government dynamics and investment priorities are therefore effectively undermining the ability to reinforce strategic spatial elements of the city, such as activity corridors and nodes, through public investment.

The second round of local government transformation currently underway in Durban has further politicised the development agenda and priorities in the city. There currently appears to be a split in the political leadership in the city with two opposed standpoints on development (Dominik *pers com* 2001). The one 'faction' favours a socially oriented approach that is anti-privatisation and promotes community economic development. The other 'faction' favours an economically oriented approach that is pro-privatisation and which focuses on major economic projects and the need to make the city competitive in global markets.<sup>107</sup>

This split in the political leadership in Durban not only results in considerable conflict within institutional structures and between different spheres of government, but it also leads to confusion and a lack of direction regarding planning and development in the city (Dominik *pers com* 2001). In addition, neither approach is particularly concerned with the development of activity corridors or other spatial restructuring strategies.

The social approach is predominantly concerned with the delivery of tangible forms of development to local communities including housing, basic services and community economic development, the majority of which is not occurring in activity corridors or nodes. The economic approach, on the other hand, is primarily concerned with creating a

'competitive city' and with major economic projects such as the Point, Gateway, etc. which are also not located in activity corridors.

The process of political restructuring and the associated 'localisation' of the development agenda has effectively diminished the importance attached to metro-wide restructuring strategies such as activity corridors. This has been reflected in local government expenditure with the majority of public sector investment occurring outside of the major urban activity corridors. In addition, current spatial development planning efforts, such as the FRP and the LUCNS are currently on hold as the processes of political restructuring play themselves out.

The current development agenda in Durban also appears to be focusing on the critical socio-economic issues of crime, AIDS and job creation (Dominik *pers com* 2001). This appears to have superseded the previous emphasis on spatial restructuring as the difficulties involved in broad-scale and complex spatial interventions have become apparent and increasing attention has been focused on non-spatial development issues, such as skills development and information systems. This has undermined the importance attached to activity corridors at a metropolitan level and is likely to filter down to local scale activity corridor initiatives as well. These trends have also tended to sideline the role of more rational, information driven planning in Durban (Domink *pers com* 2001).

These trends have highlighted the central role of politics and urban governance in decision-making regarding the development and investment priorities of the public sector. The importance of these factors have generally been underestimated by planners, which has resulted in technical

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<sup>107</sup> This 'split' in local government is reflected at a national level, where these two opposed viewpoints are also being expressed. Whilst the political leadership in local government appears to favour the socially oriented approach, the economically oriented approach appears to be dominant at a national level.

arguments in favour of spatial planning and restructuring being sidelined in favour of political and other non-spatial considerations (Dominik *pers com* 2001).

The local scale activity corridor case studies have not only reflected these broader trends, but have also highlighted a number of important local issues as well. For example, the HGAC and UCEAP initiatives involved extensive public participation processes that provided a platform for addressing the various concerns and needs of different stakeholder groups and which resulted in the development of a collective vision for the respective areas and activity routes.

These development visions have provided an important mechanism for defining the role of the respective areas and developing development proposals for the activity routes contained in accordance with the role envisaged. This has not only generated widespread consensus and local 'ownership' of the respective plans, but the implementation of the associated project proposals are also less likely to create local conflicts between stakeholders and between stakeholders and public authorities.

In the case of the AAAS, however, attempts to establish a new road system and public space structure as part of the provision of a new community facility were undermined by the unwillingness of the local authority to make tough political decisions that would support the spatial proposals espoused by the plan. In this case, a reluctance to relocate existing informal dwellings and concerns regarding implementation costs, prevented the realisation of one of the plan's key spatial restructuring

proposals and negated an opportunity to facilitate the development of an activity street in the area.

### 1.1.1 Trends and Factors Affecting Implementation

The activity corridor case studies have also been useful in highlighting a number of trends and factors within Durban and more broadly that have a significant impact on the prospects for implementing the various project proposals associated with each of these case studies. Certain issues appear to be context specific but the majority seem to be common to the various initiatives selected for the purposes of this dissertation.

The first issue highlighted by the various activity corridor case studies is the impact of economic trends in Durban on the implementation prospects of activity corridor initiatives and strategies. Firstly, the metro-wide LUCNS and FRP initiatives have revealed a number of macro-economic trends that currently appear to be working against the general creation of activity corridors, spines and streets in Durban.

The stagnant urban economy decreases opportunities for using economic development to create intensive spines or nodes of development. There also appears to be a market resistance to mixed use and outwardly focused economic developments. And finally, major economic projects in Durban are tending to take the form of large-scale, up-market developments that are generally not related to the major activity corridors in the city.

Secondly, the local scale UCEAP and HGAC initiatives have revealed that there is considerable economic pressure for development in these established urban and suburban areas. This is not only as a result of the

large thresholds, high incomes and buying power, high levels of infrastructure and high quality environments in these areas but also as a result of the decentralisation of retail and office uses from the CBD. Whilst this pressure creates opportunities for reinforcing activity routes in these areas, this is likely to undermine the viability of the CBD although, in the case of the UCEAP, this will retard the decentralisation of economic activities to more peripheral areas such as Umhlanga and La Lucia Ridge.

This economic pressure is also generating adverse impacts in these areas, such as the erosion of residential amenity on the Berea, due to the intrusion of business uses, and increasing congestion and conflict in Hillcrest, as a result of the attraction of extraneous traffic. These impacts have elicited concerns from local residents and businesses and resulted in the imposition of restrictions on economic growth and associated land use changes in these areas through the respective plans.

Thirdly, the local scale BNAS and AAAS initiatives have highlighted the difficulties of attracting economic development to these developing, largely low-income, informal areas. This is due to a lack of internal investment that is resulting from low-incomes and a lack of entrepreneurial capacity amongst local communities. It is also due to the lack of outside investor confidence in these areas as a result of low thresholds and buying power, high levels of crime and the lack of supporting infrastructure.

The lack of private economic investment in these areas represents a major constraint to the creation of viable activity streets in areas such as Cato Manor and Inanda and the development of mixed uses along these routes. In the case of the BNAS, the CMDA has responded by attempting to build

local entrepreneurial capacity, provide economic support facilities and build investor confidence. These efforts have thus far met with limited success and the main form of economic activity along these routes remains informal sector trading.

The second issue highlighted by the activity corridor case studies concerns the impact of social trends and institutional factors on the prospects for implementation. Firstly, a major factor that is likely to affect all spatial development efforts is the impact of AIDS. The significant reduction in population growth rates as a result of AIDS has decreased the opportunities for directing social and residential development into activity corridors, spines and streets and is likely to be a significant constraint to the development of these activity routes.

AIDS is also likely to impact on a range of other important areas, such the utilisation of existing public facilities and the demand for new types of facilities, economic productivity levels, the social dynamics and travel behaviour of population groups, etc. These impacts will have profound implications for spatial planning and restructuring, which are not yet adequately understood but which will need to inform activity corridor and other spatial restructuring strategies in different contexts.

Secondly, experiences with the AAAS and the BNAS in particular have shown that it is almost impossible to develop high-density, low-income housing in terms of the existing national housing subsidy scheme. The low-incomes of prospective homeowners and the limited housing subsidy provided are simply not sufficient to cover the cost of land along activity streets and high-density housing construction methods. In the case of Cato

Manor, some success has been achieved in terms of the construction of a limited number of higher density walk-ups but this has required considerable top-up funding and is generally outside the affordability range of local communities.

At a broader level, the housing subsidy scheme is actively promoting low-density sprawl, which is perpetuating the existing inefficient, inequitable and unsustainable urban form. This also undermines efforts to spatially restructure the city and dilutes efforts aimed at concentrating development into activity corridors, spines and streets. Without higher density residential development adjacent to activity routes, sufficient thresholds cannot be generated for attracting commercial activities and for providing social facilities and viable public transport services.

Thirdly, the infrastructure and services provided by different local government departments is generally not being adequately co-ordinated or integrated with one other or with the spatial frameworks and proposals for different areas. As a result, public investment is not being concentrated into the activity nodes, corridors, spines and streets that have been identified but is rather being thinly spread across the city and in 'areas of greatest need', generally in more peripheral areas.

This has been reflected at a metropolitan level through the LUCNS and FRP, where it was noted that public investments into certain services, such as water, wastewater and roads, were not supporting the spatial framework embodied in the LUCNS. It has also been reflected in local BNAS and AAAS initiatives in Cato Manor and Inanda. For example, there has not been sufficient co-ordination between the CMDA and the

Traffic and Transportation Department in planning and designing Bellair Road with the result that the route does not function effectively as an activity street. In Inanda, an opportunity for establishing the main node along the proposed activity street was also lost due to a lack of integration between planning, design and budgeting processes.

### 1.1.2 Planning and Implementation Requirements

The activity corridor case studies have also highlighted a number of planning and implementation requirements necessary to ensure that the spatial proposals associated with the various initiatives if the intended environments are to be achieved.

#### a) Requirements of the Land Use Management System

A key issue highlighted in almost every case study is the role of the new Land Use Management System (LUMS) in regulating and facilitating land use changes and development in accordance with the stated objectives of the various development plans or projects. The LUMS policy is a response to the requirements of new national statutes that affect planning and development and operates primarily under the KZN Planning and Development Act (Jewell *et al* 2000: 1).

The LUMS is intended to respond to the new legal framework and replace the existing inappropriate Town Planning Scheme (TPS) development control system in order to (TRPC 2000: 1):

“Provide a single land use management system for municipalities throughout KwaZulu-Natal which links land use management with development planning and which facilitates

the use and understanding of land use planning by means of a flexible and commonly applicable system.”

The LUMS incorporates elements of the existing regulatory system but provides alternatives where appropriate to create a more flexible and facilitative land use management system than previous town planning schemes. The LUMS provides for a continuum of planning schemes that are applicable in different contexts with different levels of development.<sup>108</sup>

The LUMS therefore marks a significant departure from current TPS systems and the activity corridor case studies are all concerned with, or affected by, the LUMS to varying degrees. In the case of the metropolitan scale FRP and LUCNS, attempts are currently being made to translate the proposals of these initiatives into specific land use zones and controls that will support the development of integrated land use/public transport corridors, mixed use forms of development and the intensification of urban development along these routes.

These initiatives have highlighted the difficulties associated with integrating broader development concerns into the LUMS. As the FRP has indicated, transportation issues and concerns have not been explicitly addressed in the LUMS, particularly with regard to the need to improve development application assessment procedures to provide a more strategic view of the cumulative impacts of urban growth and development on public transport systems, catchment systems, economic development potential, etc. In addition, environmental concerns have become increasingly prevalent in

urban development debates and have only recently starting to be addressed in the LUMS. These elements clearly require further investigation before the LUMS can realistically promote broader development priorities and proposals.

The local scale UCEAP and HGAC initiatives are specific attempts to translate broader spatial proposals into detailed land use management and zoning plans that will form the basis for the conversion of their existing TPS's into LUMS's. Established urban and suburban areas such as Berea and Hillcrest have existing, highly restrictive TPS's that assign particular development rights to specific properties and which have provided the basis for private property development and investment over many years. In these areas, the initial application of the LUMS appears to be taking the form of a relatively direct translation of existing TPS zones and development controls into the new LUMS format, with some modifications to accommodate land use changes and regularise development patterns.

This appears to be primarily due to concerns over the existing development rights attached to specific properties and the potential outcry of property owners over reduced rights and/or the difficulties of rezoning properties. In addition, the initial application of the LUMS appears to have taken on board many of the principles underpinning TPS's, namely an overriding concern with the preservation of residential amenity and the need to control and regulate development. In effect, this tends to maintain existing land use configurations and private landowning interests rather than contributing to a new spatial order in line with broader development objectives.

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<sup>108</sup> See Appendix 8.2.1 for a definition of the different types of Planning Schemes.

The local scale BNAS and AAAS initiatives were prepared prior to the development of the LUMS but these areas will be incorporated into the LUMS in the future. There has generally been a lack of development control in developing and informal areas such as Cato Manor<sup>109</sup> and Inanda, which has allowed development to occur on an *ad hoc* basis in the past. It remains to be seen, however, how the new LUMS will be applied in informal and developing areas such as Cato Manor and Inanda, where local communities are unfamiliar with zoning and development control systems, and to what extent it will provide a flexible and facilitative regulatory system for managing land use changes in these areas.

If the activity corridor case studies are to be successfully implemented, they will clearly need to be translated into appropriate land use zones and controls in terms of the LUMS. There is still considerable debate and confusion regarding the manner in which this will occur and this is likely to delay the successful creation of activity corridors, spines and streets in the various initiatives.

#### **b) Implementation Requirements**

The activity corridor case studies have also highlighted a number of different implementation requirements. Firstly, there appears to have been an underestimation of the difficulty of designing and implementing activity corridors and streets in the various case studies. The role of public agencies versus private developers has not been clearly articulated and the

impacts of different types of dynamics in different contexts on the ability to implement project proposals has not been adequately explored (Markewicz *pers com* 2001).

Secondly, the lack of integration of development efforts in Cato Manor and Inanda have shown that there is a need to ensure greater integration between different levels of planning and implementation. In particular, there is a need to improve linkages between framework planning, detailed design and project budgeting to ensure that broad spatial proposals are taken through to detailed design levels and that budgets are made available for their implementation.

Thirdly, the activity corridor case studies have revealed different implementation approaches. The development process originally envisaged for activity streets in Cato Manor and Inanda involved an incremental growth, intensification and formalisation of activities and structures over time as incomes and thresholds increased.

It has now been recognised that there are considerable limitations to this approach and that the public sector may need to intervene more directly to create the public space environment and structural preconditions necessary for the creation of activity streets. It has been suggested that this could involve the redevelopment of key portions of activity streets to create public spaces and establish key facilities and structures that would accommodate important civic and economic activities and catalyse further development (Iyer *pers com* 2001).

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<sup>109</sup> In the case of Cato Manor, the area has an existing TPS in place with a bulk zoning of SR650 and land use changes must occur through the conventional rezoning and special consent application routes.

## 1.2 Contribution to Broader Urban Debates and Strategies

The evaluation of activity corridor case studies outlined above has highlighted a number of constraints to, and requirements for, the implementation of these initiatives. This has also provided some indication of the potential role of activity corridor initiatives in contributing to the broader urban strategies of urban restructuring, sustainability and compaction. The potential contribution these broader urban strategies are explored below.

### 1.2.1 Urban Spatial Restructuring

Activity corridors, spines and streets have been identified as a key mechanism for achieving urban spatial restructuring in South African cities.

The activity corridor case studies have shown, however, that the potential role of activity corridors in contributing to urban restructuring is limited due to the lack of institutional and political support for complex spatial restructuring initiatives and the social and economic obstacles to achieving high-density, mixed use environments along the main activity routes in the city.

In particular, it has been realised that the metropolitan role of activity corridors in 'knitting together' the disparate parts of the city and promoting social integration is likely to be more limited and difficult to achieve than previously anticipated. In addition, whilst there has been significant development of townships and informal areas in terms of public investment in infrastructure, services and facilities, the focus on private sector investment and spatial integration along activity streets has been more elusive (Todes 2000: 6).

Nonetheless, activity corridors, spines and streets are still regarded as valuable mechanisms for linking the urban core and the periphery and for focusing investment into public facilities, utility infrastructure, housing development, public transport services and economic activities.

### 1.2.2 Sustainable Urban Development

The development of appropriate urban forms has been identified as a key mechanism for promoting sustainable urban development not only internationally but in South African cities as well. In Durban, it has been suggested that the creation of a network of activity spines will promote a sustainable city form (NSCLC 1996: 27).

The activity corridor case studies have, however, generally not engaged to any significant degree with the urban sustainability debate. On the one hand, this has been reflected in the lack of specific references to sustainability in the objectives of the case studies and, on the other hand, it is evident in the lack of adequate consideration given to environmental issues and concerns in the planning and implementation of activity corridor initiatives.

Nonetheless, the purported contribution of activity corridor strategies to urban sustainability is largely premised on its ability to restructure and compact the city. The constraints identified to urban spatial restructuring and compaction are therefore likely to also limit the ability of activity corridor initiatives and strategies to promote greater urban sustainability.

Given the increasing importance attached to sustainable development strategies and initiatives in Durban and more broadly, it is critical that



activity corridor initiatives engage more fully with the sustainable development debate and that a clearer understanding of the environmental constraints to, or ramifications of, activity corridor development be developed. In particular, greater consideration needs to be given to the relationship between the intensity of activity routes and the carrying capacity of catchment systems.

### **1.1.1 Compact Cities**

The activity corridor concept is one of the defining features of the local interpretation of the compact city in South Africa. The concern of the various case studies with increasing residential densities and intensifying activities and facilities along the respective activity routes is a clear indication of the interrelationships between the two notions.

The case studies have confirmed the views outlined in Chapter Three, however, that there are significant constraints to achieving compaction as a result of political, economic and social factors in South African cities. Of particular concern with regard to the activity corridor case studies are the serious obstacles to high-density, low-income housing development along activity routes and the difficulties of achieving an intensification of mixed uses along these routes. These factors are likely to limit the potential contribution of activity corridor initiatives to broader compaction efforts in South African cities.

## 6. REQUIREMENTS OF AN ACTIVITY CORRIDOR STRATEGY

The following chapter draws on the review and evaluation of activity corridor theory and practice outlined in the preceding chapters and attempts to synthesise these earlier discussions around the key requirements of an activity corridor strategy. This includes a discussion of the support for activity corridor initiatives in Durban, the prospects for implementing key elements of an activity corridor strategy in the light of social, economic and institutional factors identified earlier and the need for links with other forms and levels of planning.

### 6.1 Institutional Support for an Activity Corridor Strategy

The viability of an activity corridor strategy is clearly dependent on the political will and institutional support required to undertake the necessary planning, allocate the requisite public resources and focus local government development interventions around the implementation of activity corridor proposals.

The preceding chapters have shown that the activity corridor concept has been widely accepted and supported as part of an overall strategy to restructure South African cities in general and Durban in particular. This occurred initially through its inclusion into broad metro-wide spatial development frameworks and through local projects aimed at establishing activity corridors, spines and streets in specific locales in the city. The strategy has subsequently been incorporated into key public policies and pieces of legislation and an attempt is currently being made to incorporate it into the regulatory planning system through its inclusion in the LUMS.

The reasons for the prevalence and importance attached to activity corridors in current debates have not been fully explored by planning theorists or practitioners in Durban or elsewhere. There are a number of possible explanations for its popularity. Firstly, the concept was initially put forward by prominent planning academics and practitioners and subsequently championed by a number of influential organisations, ensuring the wide exposure of the concept and its dissemination into a wide variety of planning debates and development initiatives.

Secondly, the concept provides an apparently elegant and relatively easily understood conceptual tool for structuring urban areas and combining a number of different urban components and development sectors into a single ordering system. The initial expositions of the concept were also compelling in their assertions that the approach would provide an extensive range of benefits for urban systems and urban dwellers, which has undoubtedly added to its appeal.

Thirdly, the activity corridor concept emerged during a period when apartheid planning ideologies and modernist planning constructs were increasingly being questioned. In the absence of alternative influential spatial ordering concepts, the activity corridor concept received wide recognition as a potential post-apartheid structuring device.

Fourthly, planners were not unaccustomed to linear development forms as the phenomena of ribbon development, commercial strips and high streets have long been conspicuous components of urban areas. The familiarity of planners with this form and the emergence of new international

perspectives supporting linear development may also have precipitated the concept's widespread adoption.

Fifthly, the activity corridor concept has been widely interpreted and debated and has been appropriated by almost every development sector. For example, from a transportation perspective it is seen as a device to integrate land use and transportation concerns and promote public transport whilst from an economic perspective it is regarded as a potential mechanism for promoting SMME's and accommodating them in the urban structure. As a result, the activity corridor concept has achieved widespread appeal as a strategy that is capable of simultaneously resolving a range of critical social, economic and spatial problems in urban areas.

And finally, the often vague interpretations of the concept in public planning policies and initiatives resulted in minimal resistance from politicians and communities. Public plans incorporating the concept therefore received widespread political approval and received public support through their dissemination in public participation processes initiated around planning frameworks and projects.

The resulting widespread support and adoption of the concept in government policies and legislation is indicative of a substantial willingness on the part of public agencies in particular to promote the concept and to allocate resources accordingly for its detailed planning and implementation. Experiences with the activity corridor case studies in Durban have shown, however, that political and institutional support for an activity corridor strategy appears to be waning as a result of political and institutional

transformation, the pursuit of sectoral interests and political agendas and a pragmatic focus on delivery.

Local government in Durban and elsewhere in the country is currently undergoing a major transformation process, which is leading to a considerable amount of confusion and conflict regarding the direction of planning and the content of the development agenda in the city. The process of political restructuring has not only effectively suspended spatial planning efforts in Durban, but it has also redirected political and institutional attention away from spatial restructuring towards a non-spatial focus on social and economic issues, particularly AIDS, crime and job creation.

In the current context, local government budgets are not being allocated on the basis of approved plans such as the various IDP's and the MSDP but rather as a result of political decisions based on local community needs, vested economic interests, constituency politics and/or the sectoral objectives of particular departments. For example, the major infrastructural services in the city, such as transport, water and waste and electricity, have developed their own plans and priorities that do not necessarily reflect the spatial frameworks or priorities in the city. As a result, public investment is being dispersed across the city and is not being used to reinforce the strategic or spatial priorities of the city.

With regard to the activity corridor concept, there is often a lack of understanding of the notion amongst local government officials, which results in resistance to its planning and implementation from different sectors such as transport. Councillors, on the other, often have their own

agendas and there is increasing conflict between officials and councillors over development projects and budget expenditure.

These political and institutional factors suggest that there is currently limited institutional support and political will to implement activity corridors as part of an overall spatial restructuring strategy in Durban. Of course, as processes of institutional restructuring play themselves out and as a measure of stability returns to local government, there will be increased opportunities for putting activity corridors and other spatial restructuring proposals back on the development agenda, provided that adequate support can be lobbied for the strategy.

There are already indications that the situation is now starting to change through the ongoing efforts of certain sectors of local government in Durban to entrench spatial planning<sup>110</sup> and through pressure from national and provincial government regarding the incorporation of spatial issues into departmental planning and the IDP and MSDP, which must be completed in early 2002.

The role of effective urban governance in ensuring the successful implementation of activity corridors and other spatial restructuring proposals is an issue that has generally not been adequately addressed in the spatial restructuring debates or activity corridor proposals but it is clearly an essential precondition if the strategy is to be successfully

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<sup>110</sup> Both the Durban Metro Housing and Economic Development Departments are attempting to align themselves to the city's spatial framework and to increase residential densities and activity intensities respectively along activity corridor lines (Todes 2000: 11-12).

implemented. This appears to be symptomatic of a more general underestimation of the importance of politics by planners and an unwillingness to become entangled in political debates and decision-making processes in the city (Dominik *pers com* 2001). Planning will need to engage more effectively with the political dimension of planning and the contestation of resources if technical proposals such as those embodied in an activity corridor strategy are to receive the necessary institutional support and political will to ensure their implementation.

## 6.2 Prospects for Achieving Key Elements of an Activity Corridor Strategy

As outlined in Chapter Three, an activity corridor strategy is premised on a number of key elements without which it cannot be successfully achieved. This includes the need to promote the integration of public transport, economic development, high-density and low-income housing, mixed uses, public facilities, public spaces and social activities along activity routes. These key elements are examined in the light of the emerging social and economic trends identified in Chapter Three and Five.

### 6.2.1 Promoting Public Transportation

A key requirement of an activity corridor strategy is the promotion of viable public transport services along activity routes to serve adjacent residential thresholds and to provide access to the facilities and activities along activity routes for public transport users from surrounding areas. A viable public transport system is essential to the successful performance of these routes and their ability to provide the benefits identified in the activity corridor concept.

The issue of public transportation has received significant attention not only in South Africa but also internationally due to its influence on the efficiency, equity and sustainability of urban systems. The issue has become closely associated with activity corridor strategies and, as Todes *et al* 2000: 237) note: “There is considerable commitment at national level to creating economically viable public transport through the development of corridors and nodes which contain substantial employment in or near to current dormitory areas, enabling commuting into and out of these areas”.

A key argument advanced in support of activity corridor strategies is that they promote public transport through the integration of transportation and land use planning and through the concentration of thresholds along public transport routes. A number of questions and trends have, however, begun to emerge with regard to the ability of land use planning and spatial restructuring along activity corridor lines to promote public transportation.

Firstly, as outlined earlier, the ability of land use planning to encourage a modal shift from private to public transport has been questioned from an international perspective on the grounds that planning can influence the need for travel but not necessarily travel behaviour (Owens cited in Breheny 1992a: 7). It has been suggested that measures to discourage car use (such as higher taxation and restrictions on vehicles and fuel) and to introduce high-capacity, high speed public transport services are likely to be more effective in encouraging a modal shift but could be used in conjunction with land use strategies (Rickaby *et al* 1992: 14).

In South Africa, the potential for planning to encourage a modal shift to public transport appears to be even more difficult due to a high

dependency on private transport, particularly amongst middle and upper income groups, and the highly inadequate public transport systems that currently exist, and which are often regarded as inconvenient and even dangerous by their predominantly lower income users.

Secondly, the emergence of the minibus taxi industry in South Africa has also undermined efforts to encourage more conventional modes of public transport such as rail and bus transport. The minibus taxi industry has emerged as an alternative to these conventional forms of public transport in South African cities in the face of low car ownership levels and the high levels of mobility imposed by existing urban structures. Minibus taxis provide a more flexible service, by covering a larger number of routes, but less reliable service than buses, due to the limited capacity and control of these services.

Intense competition has developed between taxi and bus operators for passengers along the main transport axes across Durban. This has, at times, escalated to the point of violence, affecting not only the lives of commuters but also resulting in wider economic costs for the city such as lost production, lost tourism resources and lost investment.<sup>111</sup>

Minibus taxis therefore provide major competition to conventional public transport services and represent a significant threat to promoting bus and rail services in Durban. The ability to concentrate urban development along fixed line rail and bus routes to intensify and/or create activity

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<sup>111</sup> See Turok (2000: 8) for a discussion of this issue in relation to the Cape Metropolitan Region.

corridors, spines and streets is therefore in doubt. In addition, the potential exists for activity corridors to become the focus of renewed conflicts between taxi and bus operators unless the competition between these operators can be resolved.

The proposed recapitalisation of the taxi industry is an issue that needs to be explored further in terms of its impacts on public transport and the viability of integrated land use/public transport corridors. National government is generally promoting privatisation and recapitalisation, but local government in Durban appears to be more concerned with a social agenda and is resisting efforts at privatising buses and recapitalising the taxi industry (Dominik *pers com* 2001). These issues need to be further explored in terms of their implications for the development of viable public transport systems and activity corridor strategies.

Thirdly, current patterns of property investment and development in Durban and elsewhere are tending to take the form of higher income, decentralised developments that are oriented to the private motor vehicle (Todes 2000: 7). Examples include the Gateway shopping and entertainment complex in Umhlanga, decentralised office developments in suburban locations and townhouse developments on the urban periphery. These development trends promote increased reliance on private transport, undermine the viability of public transport systems and effectively obstruct the access of those reliant on public transport to the amenities and opportunities provided by these developments.

Fourthly, one of the primary mechanisms proposed as part of activity corridor strategies to promote public transport is the development of high-

density housing along activity routes, which is proving difficult to achieve in practice. This is due to the fact that the bulk of residential development is occurring in the form of low-density, low-income housing development on the urban periphery due to the structure of the national housing subsidy. The current reality of peripheral housing development exacerbates the strain on the transport system and undermines public transport.

Housing development is clearly one of the most important sectors affecting public transport viability and it is essential that that this sector is attached to the public transport system. A possible response suggested to reduce the strain on the transport network currently being imposed by peripheral, low-income housing development is the redirection of funding from transport subsidies to top-up housing subsidies in more central locations (Breetzke *pers com* 2001).

And finally, research conducted in Durban, primarily as part of the HPPTN and the FRP, “suggest that there are very few routes that can reach the thresholds that make public transport viable” and this “is raising questions about the feasibility of nodes and corridors as initially proposed” (Todes 2000: 14).

### **6.2.2 Stimulating Local Economic Development**

A key requirement of an activity corridor strategy is the stimulation of economic activities along activity routes to serve adjacent residential areas, attract passing trade and to provide opportunities for local businesses. This is regarded as one of the preconditions necessary for ensuring the successful performance of these routes and their ability to provide the benefits identified in the activity corridor concept.

Local economic development is a critical issue in South African cities given the high rate of unemployment and poverty and the necessity of stimulating economic growth and employment creation. A key argument advanced in support of activity corridors is that they provide opportunities for a range of economic activities (including small businesses and informal traders) due to the variable land prices along activity routes and the concentration of thresholds for economic activities. The activity corridor strategy has been closely linked with spatial efforts to direct the location of economic growth and encourage economic development by improving linkages between economic activities and market thresholds.

The economic arguments that have been put forward in support of activity corridors over the years need to be considered in the light of recent economic trends and forces in Durban and South Africa. These economic trends not only affect the extent of investment in economic development, but also the nature and location of economic investment in the city and therefore the potential for economic investment in activity corridor development.

Firstly, current low rates of economic growth and associated low levels of investment in the South African economy in general, and Durban's economy in particular, not only limits the extent of investment, but it also tends to influence the nature and location of private sector investment. In periods of sluggish economic growth, private sector investors are unlikely to invest in projects that are perceived to be unconventional or high-risk investments, such as mixed use development and integrated development projects adjacent to public transport routes. There is therefore not only a limited amount of economic investment in the city but also limited potential

for the public sector to direct this investment into projects and locations considered to be desirable for the city. The current form and extent of economic growth is effectively limiting the potential for utilising economic development to restructure urban areas along activity corridor lines.

Secondly, ongoing globalisation processes and increased competition between regions has highlighted the need for cities to become more competitive. This has contributed to ongoing economic polarisation in South African cities with community economic development being marginalised in favour of larger, more upmarket commercial projects, that provide major economic injections into urban economies and which are also seen to be providing a more 'world-class' image for cities.<sup>112</sup>

In Durban, for example, economic growth is tending to locate in higher income areas and upper income developments such as the Gateway Shopping Centre in Umhlanga, the La Lucia Ridge Office Park and the northern tourism corridor in the former North Local Council area. This focus is based on the northern growth trend in the city, the proposed international airport at La Mercy, significant investor confidence in these areas due to large thresholds, substantial buying power and lower crime levels in these areas, and the support of local authorities and influential land owning interests.

It has been suggested that these and other upmarket economic decentralisation trends "are at odds with the integrative and urbanist ideas

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<sup>112</sup> See Turok (2000) for a discussion of economic trends and associated polarisation in the Cape Metropolitan Area.

underpinning concepts of spatial restructuring. Not only can they be seen as creating a new form of divided city, but they represent unintegrated forms of development dependent on access by the motor car' (Todes 2000: 4-5). This clearly undermines the access of low-income groups, who are isolated from these developments and generally dependent on public transport, to the facilities and employment opportunities providing by these new development 'nodes' and 'corridors' in the city.

As a result of low economic growth and persistent economic polarisation in Durban, there is little investment in economic development projects along the major land use and public transport corridors. This is resulting in a mismatch between the economic priorities identified in spatial frameworks and the economic projects currently being developed (Dominik *pers com* 2001).

Thirdly, it has been suggested that persistent economic polarisation in Durban is making it almost impossible to attract outside investment into low-income areas such as Cato Manor and Inanda (Foster *pers com* 2001). These areas are perceived to be high-risk environments for private sector investment due to the low thresholds, incomes and buying power and the high levels of crime and violence (Todes 2000: 6).

The land market and the affordability levels of local communities are exacerbating the lack of investment, imposing additional constraints on community economic development in low-income areas. In central locations such as Cato Manor, local communities and entrepreneurs generally cannot afford to purchase high value land adjacent to movement spines such as Bellair Road in order to establish formal or informal trading

operations. There is therefore little opportunity for local investment in economic development within these lower income areas despite significant shortages of shops and other economic facilities.

As a result of these factors, the ability to develop activity streets in low-income areas through the concentration of economic activities is severely limited. This has led to a substantial overestimation of the economic development potential of activity streets in these areas and a resulting oversupply of commercial and mixed use land in development proposals (Masson *pers com* 2001). Recent attempts have been made to address these constraints in Cato Manor by building local entrepreneurial capacity and providing local economic support facilities along activity streets in an effort to stimulate local investment, increase investor confidence and help to kick-start outside investment in these areas but the success of these efforts has thus far been limited (Masson *pers com* 2001).

Fourthly, a key element of economic proposals for activity routes, which contends that public investment along these routes will help to lever private sector investment by indicating commitment, providing necessary infrastructure and increasing investor confidence, does not appear to be borne out in practice. A recent mapping exercise undertaken by the Urban Strategy Department suggests that there is a significant mismatch between private and public investment in Durban (see Figure 11). In addition, private sector investors are not responding to the spatial framework and priorities set by the eThekweni Municipality in terms of activity corridors and nodes and the development of mixed uses (Dominik *pers com* 2001).



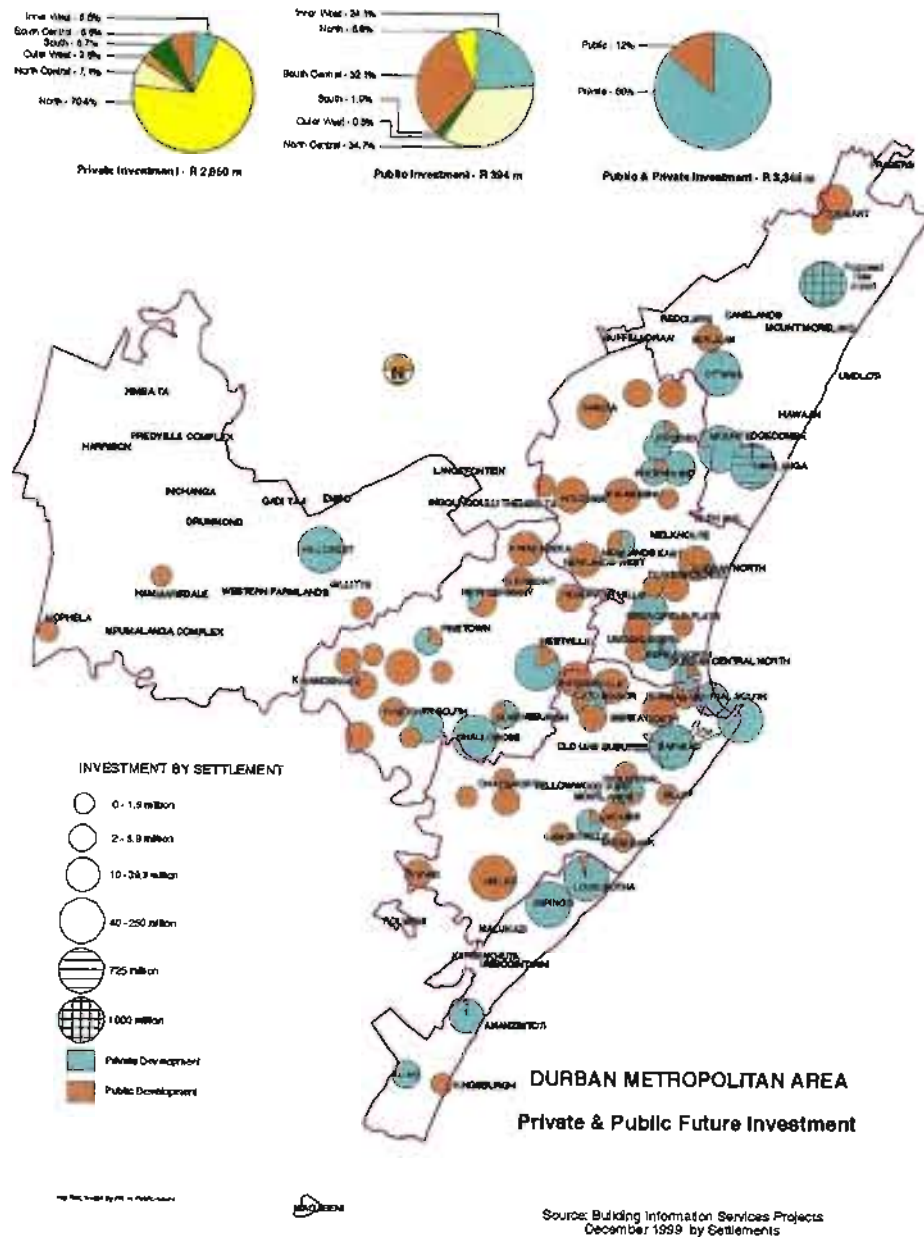


Figure 11 : Future Private and Public Investment in Durban

Local government is therefore not being effective in directing the form or location of private sector investment in the city. Instead, local government appears to be supporting economic decentralisation and polarisation, at least implicitly, through its orientation to the market and its focus on the ‘competitive city’ amidst current processes of globalisation restructuring. This is an issue that must be addressed if public investment is to leverage private sector investment into spatial priorities such as activity corridors, spines and streets.

The discussion outlined above suggests that there are a number of economic trends and factors that are likely to constrain the establishment of activity corridors, spines and streets. This includes persistent economic decentralisation and polarisation processes and the impacts of the land market, low-income levels, a lack of entrepreneurial capacity and high levels of crime and violence.

### 6.2.3 Supplying High-Density and Low-Income Housing

A key requirement of an activity corridor strategy is the development of high-density and low-income housing in close proximity to activity routes to generate the necessary thresholds for economic activities, public facilities and public transport services along these routes and to make these urban amenities more accessible to low-income groups.

The provision of low-income and high-density housing is a critical developmental issue in South African cities given the serious backlogs in low-income housing and the severe impacts of low-density residential sprawl on the urban system. The issue has become a cornerstone of urban

spatial restructuring and compaction approaches in South Africa and has been incorporated as a central feature of the activity corridor strategy.

A key argument advanced in support of activity corridor strategies is that, in providing suitable locations for promoting higher density and/or low-income housing, activity routes provide a means to restructure the city, improve access to facilities, increase thresholds for activities and public transport services, promote social integration and extend the benefits of urbanity to a greater number of urban dwellers.

There are a number of trends currently affecting the urban housing market that impact on the prospects for achieving low-income, high-density and/or mixed use forms of development along activity corridors, spines and streets in Durban and elsewhere.

Firstly, the activity corridor concept was formulated during a period of rapid population growth and urbanisation in South Africa and it was thought that the associated residential growth could be channelled into high-density activity corridors, spines and streets to restructure the city. It has now been realised, however, that current population growth rates are far lower than previously estimated due to the impact of AIDS and the use of more reliable census data. The reduced population growth has significantly reduced the ability to use residential growth to restructure the city and promote activity corridors, spines and streets.

Secondly, the availability of large parcels of strategically located undeveloped land, which was previously identified as a major opportunity for infill development in South African cities in spatial restructuring and

compaction debates, has been called into question. In the case of Durban, more recent and detailed investigations have revealed that: "The amount of well-located vacant land available for low-cost housing development has...been vastly overestimated" (Todes *et al* 2000: 234). This is largely the result of physical constraints (such as oversteep and geologically unstable land), legal constraints (including land ownership and tenure, land claims, etc.), competing demands for the use of this land (particularly its incorporation into the Durban Metropolitan Open Space System) and resistance by adjacent higher income communities. As a result, opportunities for infill development on undeveloped land adjacent to activity routes are likely to be more limited than previously anticipated.

Thirdly, the low-density and peripheral location of the majority of low-income housing development funded through the national housing subsidy scheme has tended to reinforce existing apartheid spatial patterns (Todes 1998: 3). As Todes *et al* (2000: 235-236) point out: "Despite commitment to urban restructuring within the National Urban Development Strategy (Department of Housing, 1997), national housing subsidies based on a capital grant to low-income households are insufficient to cover either the costs of higher density development or higher land costs in well-located areas".

In Durban, this has been reinforced through the emphasis of the Durban Metro Housing Department on the upgrading of existing informal settlements, the majority of which are not located in central areas or along activity corridors (Todes 2000: 7). As a result, very few low-income housing developments have occurred in central areas or along activity corridors. Indeed, Durban's Metropolitan Housing Services Unit

estimates that “only 5% of housing subsidies are likely to be used for medium-density infill on well-located land” (cited in Todes *et al* 2000: 236).

Whilst some success has been achieved in terms of low-income housing development in relatively central areas such as Cato Manor and Pinetown South, these projects have been “highly contested by a range of competing interests – environmental concerns, adjacent communities who fear the lowering of property values and crime, contested claims to land, and to the housing developed there” (Todes 2000: 7). This has slowed the rate of development and resulted in considerable political support and resources being required to implement these projects, which is not necessarily replicable on a larger scale throughout the city.

Experiences in Cato Manor in particular have highlighted the difficulties of developing higher density, low-income housing since the limited subsidy provided is simply not sufficient to cover high-density construction costs. As a result, significant top-up funding has been required to establish the limited number of high-density residential units in Cato Manor, which are, in any event, not affordable to the majority of surrounding low-income communities (Masson *pers com* 2001). The limited housing subsidy and the high costs of land and multi-storey construction have also made it impossible to achieve a vertical mix of uses along activity streets that includes a low-income residential component.

Fourthly, whilst “a level of densification is occurring through the formal market in the form of townhouse complexes and forms of gated communities”, the majority of middle and upper income housing

development has occurred in suburban areas and on available vacant land outside central areas (Todes 2000: 6). This has perpetuated urban sprawl and undermined the potential of increasing residential densities along activity corridors, spines and streets.

Fifthly, the availability of cheap land on the urban periphery makes it almost impossible to achieve centrally located housing (Iyer *pers com* 2001). These peripheral areas also appear to offer certain advantages for the urban poor and new arrivals to the city that would not be available in high-density environments along activity routes. As Cross *et al* (1996) suggest, these peripheral areas “appear to provide important sites for households surviving through complex urban-rural linkages and marginal local employment” (cited in Todes 1998: 2-3).

And finally, the anti-urban values of all population groups, and the lack of successful examples of higher density, mixed use developments, in South African cities has been highlighted as a general factor constraining higher density residential development in urban areas (Schoonraad 2000: 227). This includes the suburban aspirations of most income groups and the space-extensive cultural attitudes and rural practices of new arrivals to the cities (Dewar 2000: 217).

The combined result of these factors has been that very little high-density or low-income housing development has occurred in the central Durban areas and along the main activity routes in the city. Although the majority of housing developments in Durban and elsewhere have tended to occur on the periphery and at low densities, there are examples of higher density housing that have developed in the lower income areas such as Clermont

and KwaDabeka. This housing has not been developed through the housing subsidy scheme but rather through local developers in response to the longstanding freehold tenure in these areas (Iyer *pers com* 2001).

The various trends and factors that have been discussed have a major impact on the form and location of housing delivery in South African cities, which is generating significant obstacles to the provision of high-density and low-income housing as part of an activity corridor strategy. This includes the persistent pattern of low-density residential sprawl and the impacts of the low rate of household formation, the shortage of well-located land, the limited housing subsidy provided and the anti-urban values of urban residents. As a result, there are limited prospects for using activity corridors as part of an urban strategy to restructure the city, improve access to facilities, increase thresholds for activities and public transport services and promote social integration.

#### 6.2.4 Providing Public Facilities and Services

A key requirement of an activity corridor strategy is the provision of public facilities and services along activity routes to serve adjacent residential communities, attract outside users into the area to support these facilities and to provide thresholds for the emergence of economic activities. The provision of public facilities and utility services is clearly a key development issue in South African cities, particularly given imbalances in delivery in the past and the legacy of major backlogs in services and facilities in townships and informal areas.

The key argument advanced in support of the provision of public facilities and services through an activity corridor strategy is that the concentration

of activities and residential densities along activity routes provides thresholds for the more efficient and cost-effective provision of public facilities and utility services. There are a number of trends and factors that affect the prospects for directing public investment into facilities and infrastructure along activity routes as part of an activity corridor strategy. Whilst significant progress has been achieved in recent years with regard to the provision of services and facilities to previously underprovided areas, these have not necessarily occurred in the forms or locations envisaged by, or supportive of, an activity corridor strategy.

Firstly, it has been noted in relation to Durban that “there are still significant disjunctures between policy and implementation” (Todes *et al* 2000: 242) since the actual location of much public investment in facilities and infrastructure does not accord with the spatial development priorities identified in public plans and policies. This is largely due to the emphasis on local community needs in political decision-making processes, the lack of integration between the sectoral interests of different departments<sup>113</sup> and the constraints imposed by certain national policies, such as housing subsidies.

This has resulted in a dispersed pattern of public investment in mainly low-order facilities and infrastructure across the city. This has effectively undermined the opportunity to concentrate public investment along the main spines and around major nodes and is therefore likely to limit the

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<sup>113</sup> Some departments have fared better than others. For example, electricity and water have matched the spatial and economic priorities fairly well but community facilities have been totally out of sync with these priorities and investment is not necessarily going into corridors and nodes (Dominik *pers com* 2001).



Secondly, the sectoral investments of different government departments and service providers have not necessarily occurred in an integrated manner in Durban (Todes 2000: 6). This is particularly evident in township and informal areas such as Cato Manor and Inanda where significant public investment has been directed into infrastructure, services and facilities but where a lack of integration has resulted in lost opportunities for creating structured public environments and facilitating further development.

A concept that has gained support in South Africa and which may contribute to greater integration between departments in providing facilities is the notion of 'social service centres'. This concept provides for a variety of facilities and services to be combined in a specific location, thereby improving access and generating thresholds for local economic activity (Todes 2000: 6). This approach is clearly more limited than the provisions of the activity corridor concept, but it could form a useful part of an activity corridor strategy.

Thirdly, it has increasingly been recognised that the successful functioning of public facilities does not depend so much on their location as it does on operational issues, such as appropriate programmes, skills, capacity, etc. (Dominik *pers com* 2001). This has resulted in greater emphasis on the non-spatial facets of providing and operating public facilities and planning is now starting to incorporate these concerns.

The various trends and factors that have been discussed in relation to the delivery of public facilities and services suggest that the current form and location of provision does not support an activity corridor strategy and that

opportunities to utilise public investment to create and intensify activity routes are not being realised.

### **6.2.5 Creating a Supportive Public Environment**

A key requirement of an activity corridor strategy is the creation of a supportive public environment that not only contains the public spaces that accommodate communal activities and social interaction, but which also provides the public spine to which private investments and initiatives can respond. The provision of responsive, pleasant and safe public spaces is clearly an important consideration in South African cities where private space is often limited and where many essential urban activities, such as social interaction, cultural practices and economic trade, occur in public spaces.

The key argument advanced in support of the provision of public spaces as part of an activity corridor strategy is that the concentration of people and activities along activity routes increases communal interaction and surveillance and contributes to the creation of more responsive and safer urban environments and public spaces. This is clearly a critical issue in South Africa given the high rates of crime and violence. A number of questions and trends have emerged, however, that affect the ability of public spaces to be provided and to perform in the manner envisaged in terms of the activity corridor concept.

Firstly, the provision of public spaces does not appear to be a central feature of local government development and service provision efforts. Whilst built urban elements such as housing, facilities and infrastructure are provided by specific departments with clear mandates and relatively

substantial budgets, the responsibility for the provision of public spaces is not a specific line function of local government and does not appear to particularly well-funded. Various departments have a role to play in providing public spaces, such as the Parks and Recreation Department, which is responsible for open spaces, and the Informal Trade and Small Business Opportunities, which is responsible for informal markets.

As a result, insufficient attention is given to the planning, provision and maintenance of responsive public spaces that can adequately support collective activities and social and economic interaction. For example, the experience in Inanda has shown that, whilst significant funding was provided for the development of housing, community facilities and services in the area, the opportunity to create a supportive public space structure was lost due to a lack of local government support and finance.

Secondly, there has been insufficient research into the links between public space, mixed uses, residential density, public surveillance and crime levels along activity routes. In the case of emerging mixed use activity streets on the Berea, for example, residents cited the intrusion of business uses into formerly residential areas as the cause of increasing levels of crime in these areas, mainly as a result of the lack of surveillance from business properties at night. These contentions have, however, not been confirmed through research and there are likely to a number of variables at work in these environments.

In the absence of compelling research to the contrary, a case could be made that the high levels of activity and exposure along activity routes may in fact attract criminal elements to the associated public environments; that

the high degree of social mixing in these areas could undermine a cohesive community identity, resulting in a lack of control over the area by an identifiable community or set of land owners and a lack of surveillance and/or intervention by the public; and that the high levels of accessibility along activity routes might provide easier avenues of escape when crimes are committed. Clearly this is not a position advocated by the dissertation but it does point to the need for further research around these issues to test the relationships between social behaviour, crime levels and spatial arrangements and to develop spatial policies and strategies accordingly.

There is clearly still a large degree of uncertainty regarding these issues but they are emerging as critical elements of urban planning and management due to the high levels of crime and violence in South Africa and the associated social and economic impacts. A study has been undertaken by the CSIR regarding the role of environmental planning in reducing crime but there does not appear to have been applied to any great degree in actual projects. Spatial planning has yet to engage effectively with this reality and further work needs to be done to extend the previous considerations of 'defensible space' and develop constructs and tools for planning safer and more secure urban environments. This is essential if planners are to advocate particular urban or built forms on the grounds that they promote safety and security with some degree of veracity and confidence.

#### **6.2.6 Facilitating Spatial and Social Integration**

A key requirement of an activity corridor strategy is the facilitation of greater spatial integration of the urban fabric and activities and greater social integration of different socio-economic groups and activities. The

facilitation of spatial and social integration is clearly a critical issue in South African cities where apartheid planning has fragmented urban patterns, segregated racial groups and contributed to considerable social conflict and antagonism between population groups.

The key arguments advanced in support of facilitating spatial and social integration through an activity corridor strategy are that activity routes connect residential areas to economic centres of opportunity; that they provide 'seams' tying separate residential areas together; that variable land prices and dynamics along activity routes can accommodate a mix of complementary land uses and activities; that mixed residential environments can accommodate a range of socio-economic groups; and that the associated public spaces support greater social contact and interaction. Whilst greater spatial and social integration is occurring to a certain extent in South African cities, a number of questions and trends have emerged that are likely to affect the ability to facilitate spatial and social integration through an activity corridor strategy.

Firstly, as identified earlier, the low urban population and economic growth rates have significantly reduced the amount of new residential and economic development that can be utilised to restructure and integrate urban areas through their concentration along activity routes. This is exacerbated by other factors that have also been previously identified, such as the current lack of concentrated public and private sector investment, and the constraints to the establishment of higher density housing, along activity routes.

Secondly, the ability to encourage spatial integration through mixed use development is constrained by the apparent resistance of the private sector to mixed use development forms along activity routes. It is also severely limited by the inability of the public sector to achieve high-density, low-income housing as part of mixed use development in low-income areas due to the limited housing subsidy and prohibitive land and construction costs. And finally, the existing regulatory framework tends to discourage mixed uses, although it will be replaced by the new LUMS, which is intended to provide a more flexible and facilitative development control system.

Thirdly, the ability to encourage the spatial integration of different development projects and urban elements along activity routes has been undermined by the lack of co-ordination between the sectoral investments of different departments and service providers (Todes 2000: 6). As a result, opportunities for using public sector investment to promote integration and facilitate further development have often been missed or diminished.

Fourthly, the ability to facilitate the spatial integration of the urban fabric through the concentration of public and private investment along activity routes has been undermined by the current scattered pattern of private and public sector development in the city. In responding to local community needs, public sector investment in housing, facilities and infrastructure has been dispersed across the city and has not focused on strategic spatial elements. In terms of private sector investment "apart from the North where major developments are being proposed, changes are occurring on a relatively scattered basis, and on a micro-level" (Todes 2000: 11). This is clearly not consistent with the concentration of investment along activity



routes and undermines the potential for utilising private sector investment to promote spatial integration along activity corridor lines.

Fifthly, the ability to achieve social integration along activity routes has been undermined by persistent patterns of socio-economic segregation. These patterns have been perpetuated through the decentralisation of high-income groups to suburban areas and “walled enclaves and security villages” on the periphery (Schoonraad 2000: 221) and the development of major low-income housing and in-situ upgrading projects in and around existing township and informal areas and on the urban periphery. These trends represent the creation of new spatial divides that create serious obstacles to the ability of an activity corridor strategy, or indeed other urban strategies, to promote social integration.

Sixthly, the ability to promote social integration through an activity corridor strategy that incorporates infilling along activity routes has been called into question by the experiences of low-income housing projects in areas such as Cato Manor. These types of projects have met with considerable resistance from adjacent higher income communities who cite decreasing property values and environmental quality and increasing crime as their main objections.

In addition, Cato Manor has witnessed considerable conflict between property owners and land invaders over the years and it has been suggested that: “In light of these and other events the view that compaction through ‘infilling’ and ‘densification’ will facilitate a positive integration of race and income groups—seems somewhat romantic and overly optimistic” Briggs (1994: 46-47). These trends and developments

have generated considerable antagonism and conflict between population groups, which appears to contradict the potential for facilitating social integration through an activity corridor strategy.

Seventhly, the ability to promote social integration through the creation of mixed residential environments that accommodate a range of socio-economic groups along activity routes appears to be limited by “the absence of diversity in lot sizes and housing types within new neighbourhoods, and their monofunctional character” (Schoonraad 2000: 222).

Eighthly, the ability to promote social integration through the juxtaposition and mixing of the activities of different socio-economic groups along activity routes has been called into question by experiences in Hillcrest. Although different socio-economic groups utilise the facilities and activities along the activity spine, there appears to be a persistent lack of social interaction between the various groups and instead there is a tendency for conflicts to emerge between the different stakeholder groups. It has been suggested that this is the result of different groups utilising the corridor for different purposes, but it could also be related to the lack of common facilities and suitable public spaces for interaction and/or entrenched or lingering distrust between different population groups.

And finally, the existing development controls in town planning schemes, and the likelihood that concerns regarding residential amenity are likely to remain a central feature of the new land use management system, are likely to constrain efforts to facilitate spatial and social integration. These control mechanisms have generally not been successful in promoting mixed

uses and the overriding concern with the preservation of residential amenity is likely to maintain existing land use patterns and entrench the existing values of residents and the interests of landowners.

Clearly, the level of social integration along activity routes is not simply related to the physical or functional characteristics of the corridor, spine or street. Social integration is affected by a complex set of variables such as the level of community identity and communal ownership of public spaces, the historic patterns of interaction between population groups, the degree to which social values are common, etc. These are all factors that are likely to have a significant impact on social integration, regardless of the structure of space.

The various trends and factors that have been discussed in relation to spatial and social integration suggest that there are considerable constraints to the utilisation of an activity corridor strategy to facilitate greater spatial and social integration. It is clear, however, that many of these factors would constrain other types of urban strategies aimed at achieving these ends, particularly with regard to the elusive goal of encouraging social integration in South African cities.

### **6.3 Planning Framework for an Activity Corridor Strategy**

An activity corridor strategy will clearly need to be linked to other levels and forms of planning if private and public sector investment is to be directed into appropriate types and forms of development along activity routes.

#### **6.3.1 Land Use Management System**

The incorporation of the various elements of an activity corridor strategy into the Land Use Management System (LUMS) is clearly essential if the application of this new system is to guide and control land use changes in accordance with the requirements of the strategy.

This requirement will be difficult to achieve given the current gulf between the generally reactive and regulatory focus of the development control system and the need for fundamental land use changes espoused by an activity corridor strategy. In particular, the restrictions on mixed use and high-density development would need to be reviewed, as would the current overriding concerns with residential amenity and site-specific impacts.

Despite the current limitations, there are a number of steps that could be taken to begin to address some of the requirements of an activity corridor strategy in the emerging LUMS process.

Firstly, the requirements for mixed uses, high residential densities and intensive levels of activity would need to be translated into specific land use zones and controls that accommodate these elements. This would include the specification of the types of land uses, the maximum and/or minimum densities and the level of impact that may be permitted in each zone.

Secondly, these land use zones would need to be adequately linked to the broader intentions of an activity corridor strategy through the formulation of statements of intent for each zone and for the area or activity route as a

whole. This would outline the policy intention with regard to each zone and its intended contribution to the overall development of high-density, mixed use environments along the relevant activity routes.

Thirdly, key development concerns, which have previously not been adequately addressed through the development control systems, would need to be incorporated either into the controls for a particular zone, the statements of intent or other mechanisms. This would include the level of environmental impact permitted and the environmental or built form qualities intended in each zone.

Fourthly, development application assessment procedures and capacity would need to be developed to ensure that the previous narrow considerations of residential amenity and site-specific impacts were extended to address more strategic and integrative concerns. In particular, this would include the cumulative impacts of development proposals on the viability of public transport systems, on the carrying capacity of affected catchment areas, on the capacity of bulk infrastructural systems and on the density targets set for the activity route, the scheme area and possibly even the metropolitan area as a whole. In addition, narrow considerations regarding the preservation of residential amenity would need to be modified and extended to include more appropriate criteria that facilitated the intended land use changes and environmental qualities along activity routes.

And finally, a better understanding of the intentions and requirements of an activity corridor strategy would need to be encouraged amongst development control officials, transportation planners and other local

government officials in order to adequately inform interactions with the public and the assessment of development applications.

Clearly, an activity corridor strategy and related concerns regarding mixed use and higher density forms of development are not the only elements that need to be addressed in terms of the LUMS. Other considerations would obviously include land use zones appropriate to lower density forms of development, the capacity of local government to implement development control measures, a degree of flexibility to accommodate emerging development trends and a level of certainty to maintain the confidence and amenity of residents and businesses (Briggs 1994: 83).

### **6.3.2 Linkages with Other Levels of Planning and Implementation**

The land use management system as currently envisaged is simply a tool for implementing broader policy objectives and does not provide strategic direction outside of this overarching framework. An activity corridor strategy would therefore need to be linked to broader spatial policies and to more detailed levels of design and implementation if it is to be supported through the public investment directed into urban development by various local government departments

Firstly, an activity corridor strategy would need to be conceptualised as part of the broader spatial planning and restructuring proposals for the city, which would clearly need to incorporate other elements besides activity corridors. This would require the testing of the various intentions and proposals of an activity corridor strategy to determine whether they were appropriate to the sectoral concerns and priorities of particular

departments and might require modifications to ensure greater compatibility.

Secondly, linkages with detailed design and implementation levels would need to be improved to ensure that the intentions and proposals of an activity corridor strategy were taken through to their development 'on the ground'. This would require tough decisions from local government regarding the allocation of scarce resources to urban elements that have not generally been prioritised, such as the creation of responsive public spaces.

Thirdly, it may be necessary for the public sector to adopt a bolder and more direct approach with regard to the creation of viable mixed use, high-density living environments as espoused by an activity corridor strategy. This could involve more direct intervention in the creation of responsive public spaces or perhaps even the development of a pilot project that would serve as an exemplar of mixed use, high-density living in the city.

And finally, an activity corridor strategy and related planning processes would need to engage more successfully with the emerging economic and social realities in the city. This could include, *inter alia*, greater consideration given to the environmental design requirements for the development of safe urban environments and research into the impacts of AIDS on activity patterns and other spatial requirements.

## 7. CONCLUSIONS AND RECOMMENDATIONS

### 7.1 Conclusions

The enquiry presented in this dissertation has attempted to develop a critical understanding of the activity corridor concept and its use as a spatial strategy to restructure urban areas in South Africa. The dissertation has proceeded from a review of the activity corridor theory and specific case studies of activity corridor practice in Durban, to develop an understanding of the key theoretical and practical considerations that underpin the theory and which affect the prospects for urban spatial restructuring along activity corridor lines.

The study has shown that the activity corridor concept has been widely accepted and supported in South Africa, initially in academic planning circles in the 1980's and then increasingly in public planning policy in the 1990's. The widespread support for the concept appears to have emerged due to the apparent logic of its underlying arguments, the support provided by local proponents of international debates regarding urbanity and urban form, the urgent search for more appropriate spatial planning constructs during the collapse of apartheid and the absence of other clearly articulated alternatives for planning and managing the post-apartheid city.

The activity corridor concept has also been lent considerable support through its incorporation into a wide variety of important urban debates in South Africa. The concept has become a central component of urban spatial restructuring and reconstruction proposals that promote urban integration, it has become one of the defining features of the compact city approach as articulated in South Africa, it has been incorporated into

environmental debates regarding sustainable urban development and it has become integrally linked with efforts to improve public transport systems and promote economic development in South Africa.

Whilst the widespread support for the activity corridor concept has resulted in substantial efforts to apply the concept through a range of spatial planning frameworks, integrated development plans, structure plans and precinct development plans and its incorporation into government legislation and the regulatory planning system, there appears to be a certain amount of inconsistency in the manner in which the concept has been conceptualised, articulated and implemented.

In some cases the concept has been relatively faithfully and directly applied, such as in Cato Manor. In other cases, however, the concept has been substantially modified or extended in order to better suit specific contextual conditions or to better fit the particular objectives of the initiative in question. For example, the public transport focus of the Fundamental Restructuring Project has resulted in the development of a new typology of integrated land use/public transport corridors that will form the basis for a high priority public transport network in Durban. This provides a significant extension to the activity corridor concept and a welcome addition to the debate regarding appropriate urban spatial planning constructs and strategies.

There is an emerging concern, however, that the concept has been applied too widely, in inappropriate contexts or without sufficient understanding of the preconditions and/or detailed design considerations required to create successful activity corridor environments. The concept has come to be

regarded as something of a planning panacea with almost every plan at every conceivable scale designating 'activity corridors' or 'activity streets' along movement routes and in areas that are not always suitable, at least not in terms of the activity corridor theory. For example, the low-friction suburban corridor along Hillcrest Old Main Road is a relatively mature corridor in Durban but it could not be described as an 'activity corridor' in terms of the conventional definition of the concept.

The indiscriminate use and application of the activity corridor concept is concerning not only because it is unlikely to produce the benefits or environments intended, but also because it results in a lack of strategic focus around the high priority activity routes and spatial elements in the city. The indiscriminate use of the concept appears to be largely related to the lack of understanding of the theoretical basis of the concept, of its links to a wide range of broader development concerns such as urbanity and of the functional conditions and processes required for developing activity corridors.

The significance of the activity corridor concept and support for activity corridor strategies and initiatives is currently being eroded or redirected on a number of different fronts. Firstly, the concept is being questioned from an academic perspective in terms of its apparent technocratic approach to planning and its modernist assumption that urban change can be controlled by policy, which appears to be ill-founded in the light of continued urban sprawl and spatial fragmentation not only in South Africa but also internationally.

Secondly, the importance attached to strategic planning and spatial restructuring, and by implication the activity corridor concept, is being displaced at a national and local government level as a result of other political priorities, political restructuring processes and the emergence of a new urban development agenda. Public sector investment in urban areas such as Durban is focusing mainly on local community needs, the sectoral development priorities of specific departments and major economic projects as a result of political expediency, a pragmatic focus on delivery and an overriding concern with the critical development priorities of job creation, AIDS and crime.

As a result, there is a clear disjuncture between public spatial policies and the form and location of public sector investment. This is exacerbated by conflicts between the objectives and actions of different local government departments and spheres of government. For example, the Department of Housing supports higher density development yet its housing subsidy scheme actively promotes low-density housing development and associated urban sprawl. This represents a major obstacle to the creation of activity corridors, spines and streets since the location of high-density housing along activity routes is essential to generate the necessary thresholds for economic activities, social facilities and public transport.

Thirdly, economic imperatives in South Africa have resulted in a reorientation to the market and an increasing emphasis on 'competitive cities'. Previous support for community economic development initiatives and the use of activity spines and streets to contribute to economic upliftment, particularly in low-income areas, has therefore been undermined. Instead, major private sector investment is being channelled

into large scale, generally up-market commercial developments, such as the Gateway complex in Durban, that have little bearing on spatial restructuring objectives concerning urban integration or the development of high-density, mixed use activity corridors.

Sluggish urban economic growth rates have also diminished opportunities for injecting private and public sector investment into activity corridors to create the necessary economic conditions for their growth and development. In addition, the low buying power in low-income areas and concerns regarding security, make it almost impossible to attract private sector investment into retail or office developments along activity streets in these areas.

Fourthly, there has been a recognition that current and projected population growth rates are far lower than previously anticipated, largely due to the impact of AIDS. This has undermined the potential for using new residential development as a driver of urban spatial restructuring. This was previously regarded as a key mechanism for developing activity corridors, spines and streets.

It is clear, therefore, that the widespread consensus in favour of using activity corridors as part of an overall strategy to restructure South African cities in the 1980's and 1990's is now increasingly being questioned and eroded as the difficulties of transforming the entrenched apartheid city structure are becoming apparent. It is also clear that the key requirements necessary for the creation of activity routes (economic investment, residential development, public leverage of private sector investment, etc.) are likely to be far more difficult to achieve than previously anticipated and

that, without major public intervention, the ability to promote the establishment of activity corridors, spines and streets is limited.

It is suggested, therefore, that the combination of waning political support for activity corridor strategies and initiatives, unsupportive public sector investment and contradictory economic development trends, has constrained the prospects for using activity corridors as part of an urban strategy to spatially restructure South African cities.

This is not to imply that activity corridor strategies and initiatives should be abandoned or that the concept should not continue to be promoted in spatial planning and restructuring efforts. Indeed, by their very nature, corridors develop over a long period of time and a sustained policy is therefore required if activity corridors are to have any chance of success.<sup>115</sup>

It is clear, however, that the potential contribution of activity corridors to metro-wide spatial restructuring and urban integration, and the potential role of activity streets in integrating and uplifting low-income areas, is likely to be more difficult to achieve and less effective than previously anticipated.

## 7.2 Recommendations

If planners are to successfully promote the use of activity corridors as part of an overall spatial restructuring strategy, then activity corridor strategies and spatial planning in general and will need to become more attuned to

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<sup>115</sup> This is clearly evident in Curitiba, Brazil where the same plan has been in place for over 30 years and the various development axes and public transport spines have taken decades to develop.

the emerging political, economic and social realities and priorities in South African cities. There is also a need to ensure that the overall planning system adequately accommodates and supports an activity corridor strategy and its translation from broad policy to detailed planning and implementation.

Firstly, planning will need to engage more actively and effectively with political and financial decision-making processes to ensure that strategic spatial planning objectives and approaches are entrenched and that public sector investment is directed and co-ordinated to support integrative urban forms such as activity corridors. This is not likely to be easy given that planners have generally been reluctant to engage in political processes and the fact that the institutional environment is currently in a state of flux as a result of political restructuring and the expanded powers and developmental role of local government.

Secondly, spatial planning needs to begin to respond to the emerging development agenda in South Africa, particularly the need to address job creation, AIDS and crime. Further research needs to be undertaken with regard to the contribution of environmental design to increasing the safety of urban areas and reducing crime that goes beyond the concept of 'defensible space' that currently informs activity corridor initiatives, at least implicitly. In addition, the spatial impacts and ramifications of AIDS requires further consideration if spatial planning efforts are to be adequately informed and able to respond effectively.

Thirdly, linkages between different levels of planning need to be improved to ensure that broad proposals are translated into more detailed and

specific projects. Tough decisions will need to be made regarding the allocation of resources to initiatives that improve integration and define public spaces. In addition, appropriate land use zones, development controls and application assessment procedures will need to be established within the LUMS if higher density, mixed use forms of development are to be encouraged along activity routes.

Fourthly, there needs to be more research around the detailed design requirements and functional conditions necessary for the creation of activity corridors, spines and streets. This could, for example, focus on an emerging activity street and provide a detailed assessment of the impacts of key factors, such as property values, the housing market, social dynamics and economic trends, on the ability to implement an activity corridor strategy in low-income areas. This would form an important step in establishing a working example of an activity street that could then provide a precedent for further activity corridor-related research, planning and development.

Fifthly, the preliminary review and evaluation of activity corridor case studies in Durban outlined in this dissertation needs to be extended to include other initiatives that advocate activity corridors, spines or streets as part of their proposals or which highlight specific factors that provide opportunities for, or limitations to, the implementation of specific elements of an activity corridor strategy. This is essential in providing a more comprehensive understanding of the form and trajectory of activity corridor-related practice in Durban, the difficulties that are being experienced in different contexts and the opportunities for implementation.



And finally, an activity corridor strategy needs to be conceptualised as part of a broader urban planning and management approach that goes beyond the urban spatial restructuring and compact city approaches prevalent in public planning policy at the moment. There is a need to respond to the emerging political, economic and social realities in South African cities and to provide a wider range of lifestyle and environmental options than are currently catered for in terms of the dominant restructuring and compaction discourses.

In conclusion, it must be reiterated that this dissertation is not intended to be the last word on activity corridor theory and practice. Rather, it attempts to provide an input into the debates surrounding the usefulness of an activity corridor strategy as part of spatial restructuring interventions in South African cities and to provide a platform for moving the debate and implementation efforts forward. Further research is clearly required in order to test the validity of the theoretical foundations of the activity corridor concept and the viability of an activity corridor strategy. A monitoring process also needs to be established to monitor the progress of implementation efforts in order to assess the success of the activity corridor strategy in practice and to identify emerging obstacles and potential solutions.

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### 8.1.2 Interviews and Personal Communications

As part of the preparation of this dissertation, discussions and/or interviews have been held with the following:

1. Breetzke K (20 September and 8 November 2001) *Personal Communication*. Urban Strategy Department, eThekweni Municipality, Durban.
2. Dominik T (20 September and 15 November 2001) *Personal Communication*. Manager: Spatial Unit, Urban Strategy Department, eThekweni Municipality, Durban.

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### 8.1.3 Sources of Figures and Tables

The various figures and tables included in this dissertation have been obtained from the following sources:

1. Figure 1 : Durban Municipal Area  
Source: Environmental Management Branch (June 2001) *Environmental Services Management Plan*, prepared for the eThekweni Municipality, Durban.
2. Figure 2 : Idealised Activity Corridor  
Source: Dewar D (1984c: 51) *Urban Poverty and City Development: Some perspectives and guidelines*, Part 3, in *Architecture SA*, July/August, 49-52.
3. Figure 3 : Land Use Strategy for the Durban HPPTN  
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4. Figure 4 : Land Use Corridor Segments in Durban

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Source: Iyer N (2001) Iyer Rothaug Collaborative, Durban.
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Source: Masson A (2001) Cato Manor Development Association, Durban.
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Source: Iyer Rothaug (1998: 42) *Amaoti/Amaotana Activity System: Development Framework*, prepared for the North Central Local Council, Durban.
  11. Figure 11 : Future Private and Public Investment in Durban  
Source: Ferreira T (2001) Urban Strategy Department, eThekweni Municipality, Durban.
  12. Figure 12 : Public Investment Hubs in Durban  
Source: Haygarth N (2001) Urban Strategy Department, eThekweni Municipality, Durban.
  13. Table 1 : HPPTN Corridor Sections in Durban  
Based on: Gordge *et al* (2000: 43-44) *Fundamental Restructuring in the Durban Metropolitan Area*, prepared by the CSIR, Pretoria.

14. Table 2 : Summary of Potential HPPTN Tools and Measures  
Based on: Oranje *et al* (2001: 17) *A Desktop Study of Tools and Measures for the Creation and Sustenance of a Land-Use Regime in Support of the High Priority Public Transport Network*, prepared by the CSIR, Pretoria.
15. Table 3 : Land Use Corridor Segments in Durban  
Based on: Green *et al* (2001a: 23-24) *Land Use Corridors and Nodes Study*, prepared by the CSIR, Pretoria.

## 8.2 Glossary of Terms and Abbreviations

The following appendix provides a glossary of the key terms and abbreviations referred to in the dissertation.

### 8.2.1 Definition of Key Terms

The key terms used in this study have been defined as follows:

1. **Accessibility**  
Refers to the ability to “reach a wide range of activities, persons, resources, opportunities... information [and facilities] with the least effort and cost” (WCEDF 1995: iv; Green 1990: 23). Good access is a function of both proximity and mobility: where people have low levels of mobility and are located some distance from facilities and opportunities, their access to those urban resources will be poor.
2. **Activity Corridor**  
An activity corridor is a metropolitan scale linear zone (approximately 2kms wide) of mixed use, high-density urban development concentrated along a public transportation route with residential, commercial, industrial and recreational activities in close proximity to one another.

**3. Activity Node**

Activity nodes are places of high accessibility and advantage (for example, at transport interchanges or traffic intersections) where both public and private investment tends to concentrate. Nodes provide optimal locations for shops, offices, community facilities and the informal sector and act as growth points for the development of activity routes by stimulating movement and passing trade.

**4. Activity Spine**

At the centre of an activity corridor, a continuous activity spine carries the major road-based public transport and consequently provides the best locations for more intensive activities such as businesses and community facilities, as well as high-density housing.

**5. Activity Street**

Activity streets are smaller versions of activity spines where the same principles of linearity, accessibility and market threshold apply but where there are much lower levels of opportunity. Activity streets occur at the residential scale and are primarily of local significance.

**6. Compaction**

Refers to the overall process of discouraging urban sprawl by directing city growth within existing urban boundaries. Compaction incorporates the strategies of infilling, densification, and urban containment (Briggs 1994).

**7. Comprehensive Planning Scheme**

In terms of the LUMS, a Comprehensive Planning Scheme is a statutory planning document that normally applies to larger and more complex urban and metropolitan areas (TRPC 2000: 9).

**8. Connectivity**

Refers to “the degree to which transportation systems connect origins to destinations” (Chittenden 1990: 4).

**9. Densification**

Refers to the intensification of development and increasing population densities within existing urban environments. Densification may occur as a spontaneous process or as a policy specifically aimed at increasing urban densities (Lilleby 1995: 10).

**10. Density**

Refers to “the intensity of human activity in space, typically dictated by the level of proximity to each other of the various elements which make up the urban structure” (Chittenden 1990: 6).

**11. Elementary Planning Scheme**

In terms of the LUMS, an Elementary Planning Scheme is a statutory planning document that normally applies to “rural settlement or settlements, emerging settlements, informal towns, areas where there is settlement but no clearly defined cadastral boundaries or settlement which does not correspond with cadastral boundaries” (TRPC 2000: 8).

**12. Environmental Planning Area**

An Environmental Planning Area is one of four Special Case Zones in terms of the LUMS that “may be located in rural or urban areas where the primary purpose is the protection of the natural environment” (TRPC 2000: 14).

**13. Interim Site Planning Area**

An Interim Site Planning Area is one of four Special Case Zones in terms of the LUMS that provides an interim control measure for transitional

arrangements in areas where a formal Planning Scheme applies or is intended to apply in the future (TRPC 2000: 12-13):

#### 14. Management

“In the human settlements context, management means the whole complex of actions involved in planning, programming, budgeting, developing, operating and maintaining a settlement” (Hyland 1989: 1).

#### 15. Mixed use

Refers to the combined use of building/s and/or site/s for different land uses and activities and could include residential, retail, commercial, institutional, industrial or recreational uses. Mixed uses can occur horizontally (with different uses on a particular property or series of properties) and/or vertically (with different uses in a single building).

#### 16. Mobility

Refers to the “ability of people to move towards a destination without undue hindrance at a certain speed, efficiency and cost-effectiveness” (WCEDF 1995: vi) “using different modes of transport: pedestrian, cycle, private car, bus and train, accessible to the majority of people” (Chittenden 1990: 4). “The need for mobility is the result of a lack of accessibility [or proximity]” (WCEDF 1995: vi; Green 1990: 20).

#### 17. Mobility Route

Refers to a limited access mobility route for “both fast-moving private transport (e.g. a freeway) and public transport on a separate dedicated right of way (e.g. a railway and/or busway) with frequent connections to the activity spine or main road” (Green *et al* 2001a: xvi).

#### 18. Primary Planning Scheme

In terms of the LUMS, a Primary Planning Scheme is a statutory planning document that normally applies to small towns and settlements and which consists of at least ten primary land use zones (TRPC 2000: 8).

#### 19. Proximity

Refers to “the [physical] closeness of destinations to origins” (Chittenden 1990: 4).

#### 20. Special Settlement Area

A Special Settlement Area is one of four Special Case Zones in terms of the LUMS that applies to “existing rural and urban settlement, emerging urban nodes, land reform settlements and existing special zones in urban areas or local councils” (TRPC 2000: 15).

#### 21. Special Site Planning Area

A Special Site Planning Area is one of four Special Case Zones in terms of the LUMS that applies to “urban and rural areas where there is a need for the management of the site specific developments, e.g. casinos, investment areas, economic development zones, airports and harbours” (TRPC 2000: 13).

#### 22. Threshold

Refers to the number of people required to support and sustain a facility or service and is directly linked to their income and level of accessibility to the facility or service (WCEDF 1995: v).

#### 23. Urban Design

Refers to creative interventions in the urban landscape that seek to optimise the environmental and aesthetic qualities of particular places and their contribution to the functioning and appearance of the city as a whole.



**24. Urban Form**

Refers to the three dimensional quality and appearance of urban areas. This includes the height, size and shape of the city as a whole, as well as the relationships between different urban elements, particularly the physical structures and spaces within the city (WCEDF 1995: vii).

**25. Urban Form and Structure**

Refers to the visual appearance and spatial arrangement of the vertical and horizontal elements of a city (typically buildings and the spaces between), the relationships of which determine the qualities of urban space (Chittenden 1990: 6; WCEDF 1995: vii). The form and structure of urban areas is also related to the size and shape of the city and the density or intensity of people and activities within the settlement.

**26. Urbanity**

Urbanity is the generic term used to describe those positive qualities that exist in urban areas as a result of the concentration of people and of social and economic activities and opportunities. Urbanity is promoted through a combination of complexity, density and diversity and is characterised by the opportunity for: direct human interaction; the free exchange of goods; and human freedom as expressed in the multiplicity of choice (Poulsen 1991: 13; Mills 1986: 41).

**27. Urban Planning**

(Physical) urban planning “is concerned with the design, growth and management of the physical environment, in accordance with predetermined and agreed policies, whereby balanced social [environmental] and economic objectives may be achieved” (Franklin, cited in Devas and Rakodi 1993: 41).

Such objectives would include: improving the quality of life of urban

dwellers; conserving and enhancing the natural environment; and increasing urban efficiency and productivity.

**28. Urban Structure**

Refers to the “horizontal and vertical elements of a city (typically buildings and the space between, incorporating movement corridors) which, in relation to one another, make up the qualities of space. ‘Urban structure’ in the context of planning refers to the major movement routes, and associated major land use patterns creating high levels of activity through the city. Structure cannot be detached from ‘movement’, or the temporal flows of people, vehicles and goods as dictated by the arrangements of that structure” (Chittenden 1990: 6).

**8.2.2 List of Abbreviations**

For the sake of brevity, the dissertation makes use of the following abbreviations:

AAS	–	Amaoti/Amaotana Activity System
ANC	–	African National Congress
BNAS	–	Bellair North Activity Spine
CBD	–	Central Business District
CMA	–	Cape Metropolitan Area
CSIR	–	Council for Scientific and Industrial Research
DF	–	Development Framework
DFA	–	Development Facilitation Act
DFR	–	Durban Functional Region
DMA	–	Durban Metropolitan Area
D'MOSS	–	Durban Metropolitan Open Space System
DPD	–	Development Planning Department
DPSU	–	Development and Planning Service Unit

ESMP	-	Environmental Services Management Plan	SDF	-	Spatial Development Framework
FAR	-	Floor Area Ratio	SDP	-	Spatial Development Plan
FRP	-	Fundamental Restructuring Project	SLC	-	South Local Council
GCM	-	Greater Cato Manor	SOI	-	Statement of Intent
GIS	-	Geographic Information System	TPS	-	Town Planning Scheme
HGAC	-	Hillcrest/Gillitts Activity Corridor	UCEAP	-	Urban Core Extension Areas Project
HPPTN	-	High Priority Public Transport Network	UCT	-	University of Cape Town
HRPDP	-	Horley Road Preliminary Design Plan	UF	-	Urban Foundation
IDF	-	Integrated Development Framework	UK	-	United Kingdom
IDF	-	Interim Development Forum	UND	-	University of Natal, Durban
IDP	-	Integrated Development Plan	UPRU	-	Urban Problems Research Unit
IFP	-	Inkatha Freedom Party	USA	-	United States of America
ISER	-	Institute for Social and Economic Research	USAID	-	United States Agency for International Development
IWCC	-	Inner West City Council			
KZN	-	KwaZulu Natal			
LDO	-	Land Development Objective			
LDP	-	Local Development Plan			
LUCNS	-	Land Use Corridors and Nodes Study			
LUMP	-	Land Use Management Plan			
LUMS	-	Land Use Management System			
MSDF	-	Metropolitan Spatial Development Framework			
MSDP	-	Metropolitan Spatial Development Plan			
NIMBY	-	Not In My Back Yard			
NSCLC	-	North and South Central Local Council			
PDA	-	Planning and Development Act			
PDP	-	Precinct Development Plan			
PHB	-	Provincial Housing Board			
NLC	-	North Local Council			
OWLC	-	Outer West Local Council			
SA	-	South Africa			

### 8.3 Interview Schedule

The interview schedule used as a basis for the structured interviews conducted with urban planning practitioners and officials involved in the Durban Case Studies is attached as Appendix 8.3.

### INTRODUCTION

This interview forms part of an enquiry into the use of activity corridors and spines as a spatial strategy to restructure South African cities. The activity corridor concept has become a key component of a wide range of planning initiatives in South Africa in recent years. This includes broad-scale development planning initiatives, such as integrated development plans and spatial development plans, as well as local-scale plans, such as structure plans and precinct development plans.

A review of the existing theory and recent practice regarding activity corridors yields different interpretations and definitions of 'activity corridors'. The following general definition is therefore provided as a starting point for discussion around specific interpretations in the particular projects selected for the purposes of this study:

1. An **activity corridor** is a metropolitan scale linear zone (approximately 2kms wide) of mixed use, high-density urban development concentrated along a public transportation route with residential, commercial, industrial and recreational activities in close proximity to one another. An example of a 'mature' corridor is the Voortrekker Road corridor in Cape Town. In Durban, the R102 southern corridor (extending from the CBD southwards to Amanzimtoti) is perhaps the best example.
2. At the centre of an activity corridor, a continuous **activity spine** carries the major road-based public transport and consequently provides the best locations for more intensive activities such as businesses and community facilities, as well as high-density housing. The most commonly cited example is Old Main Road in Cape Town.
3. **Activity streets** are smaller versions of activity spines where the same principles of linearity, accessibility and market threshold apply but where

there are much lower levels of opportunity. Activity streets occur at the residential scale and are primarily of local significance.

4. **Activity nodes** are places of high accessibility and advantage (for example, at transport interchanges or traffic intersections) where both public and private investment tends to concentrate. Nodes provide optimal locations for shops, offices, community facilities and the informal sector and act as growth points for the development of activity routes by stimulating movement and passing trade. Tongaat and Amanzimtoti are examples of nodes in the Durban context.

#### Sources:

Chittenden (1990: 5), Dewar and Uytendogaardt (1991: 101), Green (1990: 16-17), Seneque Smit and Maughan-Brown (1995: 31-32) and Western Cape Economic Development Forum (1995: iv)

The activity corridor concept has been informed and influenced by a number of different urban debates and spatial planning issues in South Africa and, to a lesser extent, internationally. This includes, amongst others, debates regarding the need for spatial restructuring and growth management, the stimulation of economic development, the facilitation of public transport, the promotion of sustainable urban development and reduced energy consumption, the notion of urbanity, the efficient provision of public facilities and utility services, etc.

This study aims to explore and add to the debates concerning activity corridors through a review of recent planning initiatives that attempt to establish activity corridors or activity streets in the Durban municipal area. The experience of planning practitioners in conceptualising, planning and implementing activity corridors will be used not only to explore the limitations and opportunities for implementing the activity corridor concept, but also to reflect on the theory surrounding activity corridors and to draw out lessons for future planning practice.

### KEY AREAS FOR DISCUSSION

The following questions provide a common format for each of the structured interviews to be conducted. Certain questions may be more relevant to particular projects than others and some could be covered by reference to appropriate documentation rather than through discussion.

#### A. Background to the Planning Initiative

1. Where is the project located? (name of geographic area and route/s along which it is based)
2. What is the nature (development plan, business plan, etc.) and purpose of the project? (economic development, spatial restructuring, improved public transport, etc.)
3. What was in place along the route/s before the project came into being? (number of road lanes and users, nature and extent of adjacent land uses, etc.)
4. How did the project originate? (who initiated the project, who provided the funding, what other plans are in place, etc.)
5. What communities and/or users will it serve? (name of communities and estimated number of users and/or beneficiaries)

#### B. Conceptualisation of 'Activity Corridors' in the Initiative

1. Is the project proposal a direct application of the activity corridor/spine theory? (as defined above)
2. What are the main differences between the project proposal and the activity corridor/spine theory? (have any elements been changed, added or omitted in any way and, if so, why)

#### C. Planning of 'Activity Corridors' in the Initiative

1. How was the plan prepared? (who was involved in preparing the plan, what was the time frame, etc.)

2. What are the main elements of the activity corridor/spine proposal? (mix and extent of land uses, provision for public transport, length and width of the corridor/street, etc.)
3. Why was this particular route chosen for developing an activity corridor or spine?

#### D. Experiences with Implementation of 'Activity Corridors'

1. Who is responsible for implementing the plan's proposals?
2. What were the main processes and sources of investment envisaged for ensuring implementation of the plan? (incremental development projects, redevelopment, etc.)
3. What has been achieved thus far in terms of implementing the activity corridor or spine proposals? (what elements are already in place)
4. What were the implementation targets and how has what has been achieved measured up to this?
5. What elements have been relatively easy to get in place and why?
6. What have been the most difficult elements to establish and what have been the main constraints and problems that have prevented, retarded or changed the implementation of the activity corridor or spine?
7. What lessons can be learnt for future activity corridor and restructuring initiatives in Durban and more broadly?

#### E. Reflections on Activity Corridor Theory

1. Is the activity corridor theory an adequate basis on which to base project proposals?
2. What are the shortcomings of the theory in the light of problems experienced with implementation?
3. What are the main forces or factors that work against the implementation of activity corridor projects?
4. Are there potential solutions or appropriate responses to the forces or factors that work against the implementation of the concept?